THE RADIO ELECTRONIC MASTER

1971

35th Edition



Price: $10.00

OFFICIAL CATALOG

OF ELECTRONIC PARTS,
INSTRUMENTS & EQUIPMENT
SOLD THROUGH DISTRIBUTORS

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

THE RADIO ELECTRONIC MASTER

1971
35th Edition

OFFICIAL Catalog of Electronic Parts, Instruments & Equipment sold through distributors

Other Publications and Services:

eem — *Electronic Engineers Master* • **electronic products** *Magazine*
Office Products News • *United Pricing Reports* • *United Cost Service* • *Audio-File*
Retirement Advisors, Inc. • *National Auto Research Publications, Inc.*
Industrial Machinery News • *Verlan Industries, Inc.*

DESCRIPTIONS • SPECIFICATIONS **ILLUSTRATIONS • PRICES**

UNITED TECHNICAL PUBLICATIONS
Division of Cox Broadcasting Corporation
645 STEWART AVENUE • GARDEN CITY, N. Y. 11530

East Coast — Herman Meyers, 645 Stewart Avenue, Garden City, N. Y. 11530 • (516) 248-9700
James Richardson, 532 Harper Avenue, Drexel Hill, Pa. 19026 • (215) 622-3443
Stephen Friedman, 33 Downing Circle, Bloomfield, Conn. 06002 • (203) 242-7945

Midwest — Gerald Wolfe, Dick Powell, Bill Pattis
The Bill Pattis Group, 4761 W. Touhy Avenue, Lincolnwood, Ill. 60646 • (312) 679-1100

Ohio — Jerry Bush, 27122 E. Oviatt Road, Bay Village, Ohio 44140 • (216) 871-3200

West Coast — Lee Alward, 1 First Street, Los Altos, Calif. 94022 • (415) 941-7393
James Worthen, 1609 Westwood Blvd., Los Angeles, Calif. 90024 • (213) 477-4289

Japan — Sumio Oka, International Media Representatives, Ltd., 1, Shiba Kotohiracho, Minatoku, Tokyo 502-0656

Britain & France — John Ashcraft & Co., 12 Bear Street, Leicester Square, London WC 2, 01-930-0525

Benelux & Germany — John Ashcraft & Co., W. J. Sanders, Manager, Herengracht 365, Amsterdam 020-24.09.08

Copyright UNITED TECHNICAL PUBLICATIONS, INC. • 1970

THE RADIO ELECTRONIC MASTER

1971 — 35th EDITION

FOREWORD

The RADIO-ELECTRONIC MASTER is the Official Buying Guide and Reference Book for electronic parts, instruments and equipment sold by distributors.

IMPORTANT

While most distributors maintain a large and varied stock, they do not represent that they necessarily stock all manufacturers' products cataloged in this MASTER.

Prices are furnished for information only — they are not offered as quotations.

WHERE LIST PRICES ARE SHOWN, TRADE DISCOUNTS APPLY IN MOST CASES . . . PHONE OR WRITE YOUR DISTRIBUTOR FOR LATEST PRICES AND DELIVERY.

Participating manufacturers reserve the right to make changes in specifications, to change prices or withdraw items without notice.

While every precaution has been taken to insure accuracy in content, the publisher cannot be responsible for manufacturers' claims and representations; nor can any guarantee be made against the possibility of error or omission.

When ordering, please mention The MASTER, 35th EDITION, also page number on which the item appears and specific catalog or code number, if any. This will help to expedite the filling of your order and lessen the chance of error.

Copyright **UNITED TECHNICAL PUBLICATIONS, INC. • 1970**
Division of Cox Broadcasting Corporation

No part of this book may be reproduced without express permission of the publishers.

Library of Congress Catalog Card No. 39-15586

PRINTED IN U.S.A.

GUIDE TO PRODUCT SECTIONS

As publishers of The Radio-Electronic MASTER, we take great pride in the fact that this publication has reflected the progress and growth of the electronics industry for more than 35 years.

This MASTER catalog is divided into the **33 Product Sections** described below. These Product Sections broadly categorize related electronic products and services so that you can quickly compare similar items wtihin each section. However, to locate specific items, always refer to the General Index on the following pages. NOTE: Catalog pages are arranged alphabetically by manufacturers' names within each section wherever possible.

Sec. 1200 Pages 21 thru 25	Antennas, Towers & Accessories
Sec. 1300 Pages 26 thru 52	Audio: High Fidelity Tuners, Amplifiers, Sound Systems, Intercoms, Megaphones, Kits
Sec. 1320 Pages 53 thru 94	Audio: Speakers & Systems, Enclosures, Microphones, Headphones, Accessories
Sec. 1340 Pages 95 thru 106	Audio: Recording & Playback Equipment, Magnetic Tape, Accessories
Sec. 1400 Pages 107 thru 168	Cabinets, Chassis, Racks, Containers, etc.
Sec. 1500 Pages 169 thru 257	Capacitors (All Types)
Sec. 1600 Pages 258 thru 265	Chemicals, Adhesives, Cleaners, Coatings, Paints, Varnishes, Lubricants, etc.
Sec. 1700 Pages 267 thru 277	Circuit Assemblies, Circuit Boards, Breadboards & Breadboarding Kits
Sec. 1800 Pages 278 thru 283	Coils (Inductors, Toroids), Assemblies, Forms
Sec. 1900 Pages 284 thru 307	Communications Equipment (Car Radios, Citizen's Band, Amateur)
Sec. 2100 Pages 308 thru 562	Connectors (Electrical): Clips, Plugs, Jacks, Receptacles, Sockets, Terminals, Terminal Boards
Sec. 2200 Pages 563 thru 575	Controls, Timers, Alarms, Counters, Control Components & Systems
Sec. 2300 Page 576	Crystals & Tuning Forks, Mechanical Resonators
Sec. 2400 Pages 577 thru 596	Panel Components (Including Lighting)
Sec. 2600 Page 597	Fans, Blowers, Cooling Equipment
Sec. 2700 Pages 598 thru 601	Filters — General Purpose
Sec. 2800 Pages 602 thru 619	Hardware (Non-Current Carrying): Bolts, Clamps, Fasteners, Nuts, Screws, Washers, etc.
Sec. 2900 Pages 620 thru 717	Instruments (Electrical Measuring & Test)
Sec. 3100 Pages 718 thru 729	Insulators, Insulating Material & Parts
Sec. 3130 Pages 730 thru 733	Integrated Circuit & Hybrid Microcircuits
Sec. 3500 Pages 734 thru 738	Motors, Rotating Components, Accessories
Sec. 3700 Pages 740 thru 749	Photoelectric Equipment, Components & Controls
Sec. 4000 Pages 750 thru 816	Power Supplies, Converters, Inverters, Vibrators, Batteries, Flashlights, etc.
Sec. 4200 Pages 817 thru 820	Publications: Textbooks, Reference Handbooks, etc.
Sec. 4500 Pages 821 thru 928	Relays, Solenoids
Sec. 4700 Pages 929 thru 970	Resistors, Fixed
SEC. 4750 Pages 972 thru 985	Resistors, Variable (Potentiometers, Rheostats)
Sec. 4800 Pages 986 thru 1011	Semiconductor Devices (Diodes, Transistors), Rectifiers (Non-Tube Types), Heat Dissipators for Semiconductors
Sec. 5100 Pages 1012 thru 1076	Switches, Circuit Breakers, Fuses
Sec. 5400 Pages 1078 thru 1119	Tools (Hand & Power), Soldering Equipment
Sec. 5600 Pages 1121 thru 1237	Transformers, Chokes, Reactors, etc.
Sec. 5700 Pages 1239 thru 1295	Tubes, Tube Parts, Shields, Inserts, etc.
Sec. 6000 Pages 1296 thru 1440	Wire, Cable, Lacing Cords, Cord Reels, Plastic Tubing, Harnesses & Harnessing Supplies, etc.

It's so easy to order from this catalog . . .

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**

2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The
RADIO-ELECTRONIC
MASTER
A United Technical Publication

GENERAL INDEX

A

Page

ADC PRODUCTS 331-335
ATR ELECTRONICS, INC. 750-753
Accu-Log Meters 691
Acoustifoam Microphone Windscreens 67
Acrylic Sprays (See Insulating Compounds, Acrylic)
Alligator Clips (See Clips, Alligator)
Alphanumeric Readout Tubes (See Tubes, Readout)
Alphanumeric Readouts (See Readouts As Modified)
Alphlex Lacing Cords & Tapes 1312
Alphlex Tubing 1312-1314
American Beauty Soldering Irons 1078, 1079
Ammeters (See Meters, Ampere)
Adapters (See Connectors, Plugs, Sockets, etc.)
Add-A-Rack Cabinets 110, 116
Adhesives (All Types) 261-265
Admiral Headsets 53
Aero-Kleen Oil Spray 264
AKRO-MILS 107
Alarms & Alarm Systems 563, 748, 749
ALCO ELECTRONIC PRODUCTS
- Display Devices, Pilot Lights, Knobs 577-579
- Relays 821
- Switches 1012-1014

ALLIED CONTROL CO., INC. 822-825
ALPHA WIRE & CABLES 1296-1316
AMERICAN ELECTRICAL HEATER CO. 1078, 1079
AMERICAN GELOSO CORP. 54, 55
THE AMERICAN RADIO RELAY LEAGUE (ARRL) 817
AMERICAN ZETTLER, INC. 829-832
Amp-Clamp AC Ammeter Adapters 689
AMPEREX ELECTRONIC CORP.
- Integrated Circuits, Microcircuits 730-733
- Transistors 986-990
- Tubes 1239-1247

AMPERITE CO., INC. 826, 827
AMPHENOL DISTRIBUTOR DIV.
- Connectors 308-330
- Switches 1016-1017

Amplifiers
- A-F 26-30, 39, 40, 42, 43, 52, 55, 70, 93, 307
- Control 43, 46
- Magnetic 1165, 1230
- Microphone (See Amplifiers A-F)
- Photocell 748, 749
- Power 30, 35, 43, 44, 46, 48, 52, 55, 93
- Public Address 26-30, 34, 35, 39, 40, 42-47, 55, 93
- Recording (See Amplifiers, A-F)
- Servo 30

AMPROBE INSTRUMENT 620-622
Analyzers
- Capacitor (See Testers, Capacitor)
- Circuit (See Testers, Signal Tracing)
- Harmonic 1174

Anniversary Soldering Tips 1109
Antenna
- Dummy Loads (See Dummy Loads)
- Filters (See Filters, Antenna)
- Towers & Supports 25

Antennas
- Airborne 22
- Automobile 22, 23
- Citizen Band 22, 23
- Ground Plane 22
- Mobile 22
- Telescopic 22, 23

Anti-Static Compounds & Coatings (See Coatings, Anti-Static)
ARCOLECTRIC SWITCH CO. 1015
Arcolytic Capacitors 175
Aries Speaker Systems 70
Arresters, Electrical Surge (Also See Suppressors, Arc; Protectors, Surge) 1253
ASTATIC CORP. 56, 57

Page

Astrolite Indicator Lights 587
Astroplated Connectors 316
ATLAS SOUND DIV. 58-61
Atom Capacitors 216, 217
Attenuators, Audio 63, 65, 91
Audio Equipment (See Amplifiers, Microphones, Speakers, etc.)
Audiotex Hi-Fi & Stereo Accessories 98
Autotransformers (See Transformers, Autotransformer)
AUTOTRON, INC. 740-746
AVA ELECTRONICS & MACHINE CORP. 336
Avikrimp Terminals 547-558
Axiohm Resistors 968

B

Baffles, Speaker (See Enclosures, Speaker)
Ballast Tubes (See Tubes, Ballast)
Baluns (See Transformers, Matching)
Banshee Speakers 59
Bars, Shorting 474, 482
Bases, Antenna (See Mounts, Antenna)
Batteries
- Carbon Zinc 766-768
- Dry (Flashlight, Transistor, etc.) 754, 755, 765-768, 806, 807
- Lead-Acid 769
- Manganese Alkaline 806, 807
- Mercury 757, 765, 769
- Nickel-Alkaline 756, 765
- Nickel-Cadmium 757, 765, 769
- Photoflash 754, 766-768, 806, 807
- Silver-Cadmium 766-768
- Silver-Zinc 756
- Standard Cell 754
- Storage 755, 765, 806, 807
- Transistor (See Batteries, Dry, Flashlight, Transistor, etc.)

Battery
- Chargers (See Chargers, Battery)
- Clips (See Clips, Battery)
- Eliminators (See Eliminators, Battery)
- Plugs (See Connectors, Battery)
- Retainers (See Retainers, Battery)
- Testers (See Testers, Battery)

Bearings 286, 373, 500
Bee-Line Switches 1068
Bel Chemical Fuses 934
BELDEN CORP. 1318-1353
Beldfoil Cables 1326-1330, 1336
Bells, Buzzers, Gongs, Sirens & Aural Warning Devices 748, 749, 885, 910
Belts, Drive (All Types) 98
Benches, Consoles, Stools, Tables, Lab & Shop
- (Also See Cabinets & Accessories, Metal) 135, 157

Bezels, Shielded & Unshielded 290-292, 294, 588, 670
Big Jim Lanterns 763
Big Look Elapsed Time Meters 632
Binding Posts (See Posts, Binding)
BIRNBACH CO., INC.
- Jacks, Posts, Plugs, etc. 338-343
- Tubing, Wire, etc. 1354-1367

Birflon Shrinkable Tubing 1354, 1357
Bit-250 Transformers 1226
Bit-P Pulse Transformers 1226
Black Beauty Capacitors 229, 230
Blast Off Tape Head Cleaner 98
Blocks, Terminal 335, 357, 358, 369, 447, 537
Blower Cabinets (See Blowers & Fans & Accessories)
Blowers & Fans & Accessories 110, 137, 139, 165, 166, 503, 597
Blue Jacket Resistors 964
Blue Line VOM's 649
Blue Ribbon Connectors 350
BLUM & CO., INC., JULIUS 728

Page

Boards
Plug-In 268, 270, 276
Printed Circuit (See Printed Circuit Boards)
Programming 273, 465, 466, 1036
Terminal 268, 373, 416-419, 422-429, 445, 497, 821
Bobbins, Winding, Coil & Transformer (Also See Coil Forms) 279
BOGEN DIV. LEAR SIEGLER, INC. 26-31
Bold-Vue Panel Meters 673
Bolts (See Fasteners)
Bonding Jumpers (See Jumpers, Bonding)
Books (See Technical Books)
Booms, Stands, Holders & Accessories,
Microphone 38, 56-58, 60-67, 79, 82, 88, 92, 443
Boxes
Decade (See Decade Boxes)
Junction & Wall Plate 85, 105, 314, 336, 531, 540-545
Metal & Plastic (See Cabinets, Cans, Cases, Containers)
Plug-In (See Plug-In Module Enclosures)
Power Outlet (See Boxes, Junction & Wall Plate)
Brackets, Antenna (See Mounts, Antenna)
Braid, Cable & Wire Shielding 1309, 1310, 1344, 1359, 1400, 1439
Brand Five Cassettes 102
Brand Seven Recording Tape 102
Brazing Flux (See Flux, Brazing & Soldering)
Breadboard Kits (See Kits, Breadboarding)
Breakdown Testers (See Testers, Insulation Breakdown)
Breakers, Circuit (See Circuit Breakers)
Bridges
Capacitance 668
Inductance 668
"Q" 668
Resistance 668
Silicon Cell 1010
Brite-Glo Lamps 578
BRITISH INDUSTRIES CORP.
Garrard Turntables 100
Multicore Solder 1102
Wharfedale Speaker Systems 94
Brown Devil Resistors 952
BUD RADIO, INC. 108-128
Bulbs (See Lamps)
Bumpers 125, 286, 493, 608, 609, 617, 729
BURGESS BATTERY/GOULD, INC. 754-757
Burnishers, Contact 1094, 1095
Bus Bars & Systems 269, 1358, 1394
Bushings, Glass, Plastic, Metal, etc....339, 373, 376, 454, 460, 461, 492, 493, 603
Buss Fuseholders 1022
BUSSMANN MFG. DIV. 1018-1023
Button-Switch Switches 526
Buzzers (See Bells, Buzzers, Gongs, Sirens & Aural Warning Devices)

C

C & K COMPONENTS, INC. 1024-1027
CTS CORP. 972-975
Cabinet Coolers, Blowers & Fans (See Blowers & Fans)
Cabinets & Accessories, Metal 43, 45, 48, 49, 107-116, 118-125, 127, 128, 134, 135, 137, 139-145, 147, 150, 153, 155-158, 160, 542, 545
Cabinets
Metal Shielded 133
Plastic 107, 138
Sliding Drawer 107, 133
Speaker (See Enclosures, Speaker)
Cable
Audio 511, 533, 1305-1308, 1326-1331, 1333-1336, 1364, 1365, 1367, 1371, 1372, 1384, 1385, 1387, 1388, 1407, 1411, 1412, 1414-1417, 1423, 1424, 1427, 1431, 1432
Battery Booster 449
Coaxial 511, 1302, 1330, 1334, 1337-1340, 1369, 1370, 1390-1393, 1417, 1420-1422, 1434, 1439
Control (See Cable, Multiconductor)
Flat, Collated (Flat or Round Conductors) 1301
Heater 1353
High Voltage 1340, 1391, 1395, 1406, 1409, 1410, 1420-1422, 1430, 1433-1436
Low-Capacitance 1299, 1303, 1369, 1370, 1388, 1415, 1421, 1422, 1425, 1433-1436

Cable (continued) Page
Microphone 42, 82, 1303, 1334, 1335, 1371, 1372, 1384-1386, 1415, 1424, 1439
Multiconductor 511, 1297, 1301, 1303-1307, 1327-1333, 1336, 1337, 1347, 1352, 1353, 1362, 1367, 1369, 1371, 1372, 1383-1387, 1389, 1403, 1405, 1407-1411, 1413-1417, 1423-1426, 1428-1430, 1432-1436, 1438, 1439
Power 1308, 1334, 1372, 1411-1413, 1417, 1438
Retractile (See Cords, Retractile)
Rotator, Antenna 1369, 1417
Shielded 98, 1297, 1299, 1301-1304, 1307, 1326-1331, 1334, 1335, 1337-1340, 1346, 1347, 1364, 1365, 1367, 1369-1372, 1383-1387, 1391, 1405, 1409, 1412, 1413, 1415, 1416, 1420-1422, 1424, 1425, 1427, 1430, 1432-1436, 1438, 1439
Solid Dielectric 1302, 1337-1340, 1346, 1370, 1389, 1390, 1420-1422
TFE Insulated 1299, 1327, 1328, 1346, 1347, 1383, 1392, 1393, 1406, 1421, 1436, 1439
TV Camera 1337, 1424
Telephone 1305, 1306, 1308, 1331-1333, 1335, 1388, 1412, 1414, 1415
Transmission Line 1305, 1337-1340, 1346, 1368-1370, 1388, 1389, 1401, 1426, 1434
Triaxial 1391
Cable Assemblies & Harnesses 98, 307, 336, 452, 533, 1089, 1348, 1349
Cable Clamps & Clips (See Clamps & Clips, Cable)
Cadet Switches 1058
Caeon Cleaning Solvent 258
CAIG LABORATORIES, INC.
Cleaners 258
Solder Baths 1082
Calibrators, Crystal 658
Calibrators, Sweep (See Generators, Sweep)
Calling Systems (See Intercommunication Systems)
Cannon-Ball Headsets 53
CANNON CO., C. F. 53
Cans, Relay 419, 495, 905
Cans, Transformer 419
Capacitor Leakage Indicators (See Testers, Capacitor)
Capacitors, Fixed
Bathtub 189-191, 232, 239
Ceramic 183, 253, 254
Ceramic Disc 182, 247-252
Electrolytic (All Types) 175, 189, 192-228, 239
Feedthru 257, 599
Film 229-231, 241-245
Glass 169, 191
High Capacitance — Low Voltage 169, 175, 182, 183, 189, 190, 193-210, 212-228, 239-241, 243, 245, 246, 252-254
High Temperature 173, 176, 189, 190, 198, 199, 201, 203, 204, 209-211, 222, 232-238, 241, 246, 253, 254
High Voltage 176, 183, 190, 191, 216-221, 230-232, 237-239, 241, 247-249, 252
Mica 170-174, 229, 230, 255, 256
Mylar 176
Mylar, Metallized 190
Paper 176, 229, 230, 233-239, 242, 244
Paper, Metallized 240-242
Silvered Mica 171, 174, 255
Tantalum 182, 189, 192-211
Temperature Compensating 245, 250, 251, 253, 254
Capacitors, Variable
Air 180-182, 186-188
Ceramic 182, 183, 186
Glass 184
High Temperature 184, 186, 187
HV (Lab Type) — Also See Decade Boxes, Capacitance 181
Mica 177, 188
Padder 178
Piston (See Capacitors, Variable, Trimmer)
Quartz 184
TFE 187
CARLING ELECTRIC, INC. 1028-1031

 © United Technical Publications

Page

CARTER MOTOR CO.
- Converters 759
- Motors 734

Caps
- Connector 318, 320, 321, 323, 330, 348, 382, 383, 406, 495
- Grid & Plate (See Clips & Caps, Grid & Plate)
- Lens, Indicator Light 582, 583, 587
- Wire-Splicing (See Splicers, Wire, Butt & Cap Types)

Card Holders, Circuit Board (See Racks, Circuit Board)
Cards, Logic (With Discrete Components) 738
Cartridges & Cassettes & Accessories 101-103
Cartridges, Microphone 42
Cartridges, Phono
- Ceramic 56, 57, 95-97
- Crystal 95-97
- Magnetic 95-97

Carts, Instrument & Equipment 136, 151, 159
Cases
- Equipment, Instrument, Meter (Portable) 120, 122, 131, 133, 139, 161, 162, 497, 588, 596, 621, 696, 697, 710
- Equipment, Instrument, Meter (Stationary) 120, 123, 131, 133, 137, 161, 162, 272, 588, 596
- Relay (See Cans, Relay)
- Shielded (See Containers, Shielded)

Casters & Wheels 117, 137, 167
Cat Transformers 1230
Cells, Photoconductive 747, 748, 1000, 1246, 1276
Cements (See Adhesives)
Century Panel Meters 674, 675
Cera-Mite Capacitors 247-251
Challenger Battery Chargers 812
Chanalyst Generators 657
CHANNELLOCK, INC. 1080, 1081
Chargers, Battery 307, 773, 805, 812, 970
Chassis, Circuit Board Mounting 130
Chassis, Metal 120, 123, 124, 130-132, 137, 139, 163
Chassis Slides (See Slides, Cabinet, Chassis & Drawer)
CHEMICAL ELECTRONIC ENGINEERING, INC. 259
CHEMTRONICS, INC. 260, 261
Chemicals
- Anti-Static (See Coatings, Anti-Static)
- Degreasing (See Cleaners & Solvents)
- Etching 267
- Fungicidal (See Coating, Fungicidal)
- Metal Stripping 741
- Photosensitive 267
- Wire Stripping 262

Chestsets (See Handsets, Chestsets & Operator Sets)
Chief Headsets 53
Chief Intercom Systems 52
Chill-it Refrigerant Spray 264
CINCH DIV. OF TRW, INC. 344-368
CLARE & CO., C. P. 834-843
CLAIREX ELECTRONICS, INC. 747
Chokes
- A-F (See Coils, A-F)
- Filter 279, 281, 1121, 1148, 1149, 1170, 1175, 1184, 1185, 1191, 1215, 1218, 1221, 1231, 1234, 1236, 1237
- R-F 279, 281
- Swinging 1148, 1149, 1215, 1231, 1234, 1236

Chro-Bar Generators 656, 988
Chromacolor Picture Tubes 1295
Circuit Analyzers (See Testers, Signal Tracing)
Circuit Board Racks (See Racks, Circuit Board)
Circuit Boards, Stamped (Without Components) 276, 277
Circuit Breakers 970, 1063
Circuit Testers (See Testers, Signal Tracing)
Circuitracer Testers 625
Circuits
- Hybrid, Thin-Film 732
- Integrated, Digital 731
- Integrated, Linear 730-733
- Integrated, Silicon Monolithic, Unpackaged Chips 730

Page

Clamps & Clips, Cable (Also See Wire & Cable Ties) 336, 361, 367, 502, 503, 603, 619, 1419, 1437, 1440
Clamps, Component 287, 414, 616, 1080, 1091, 1117
Classic II Cabinets 111
Classic Gearmotors 734
Classic Speakers 74
Cleaners & Solvents 98, 258-265, 970, 1095
Cleaners, Mechanical, Magnetic Tape 98, 104
Cleap Connectors 503
Clip-AC Voltage Regulators 816
Clip Insulators (See Insulators, Test & Battery Clip)
Clipper Chokes 1134
Clipper Switches 1058
Clips
- Alligator 376, 399, 400, 441, 448-451, 476, 477
- Battery 367, 399, 449, 450, 476
- Board, Harness 379
- Component 946, 1418
- Fahnestock, Spring Wire 503, 606, 616
- Test 379, 401, 448, 449, 477, 1089
- Transistor & Diode (See Retainers, Transistor & Diode)

Clips & Caps, Grid & Plate 444
Clips & Holders, Fuse (Also See Panels, Fuse) 446, 503, 607, 1018-1023, 1063, 1064
Cloverleaf Receptacles 454
Coatings
- Anti-Static 261-264, 621
- Films, Transfers, etc., Etchant-Resisting 268, 274
- Fungicidal 262, 264
- Insulating 258, 261, 262
- Optical 259
- Protective 258-260, 262, 263, 580
- Weatherproofing 262

Cobra-Jector Speakers 59
Cobreflex Speakers 91
Code & Tab Markers (See Wire Markers)
Coil Assemblies & Forms (Also See Bobbins) 279
Coils
- A-F 279, 1130, 1203, 1230, 1236
- Antenna Loading 1168
- Broadcast 280
- Degaussing 1089
- High-Q, Low-Frequency 278, 280, 282, 283, 1168, 1169, 1202, 1203, 1226
- I-F 279
- Metallized Glass 1203
- Oscillator, Phono Test 1203
- R-F 278-280, 1168, 1203
- Saturable Reactor 1168
- Shielded 278, 280
- Toroidal 282, 283, 1121, 1141, 1167, 1202, 1203, 1220, 1221
- Transformer 279, 1196, 1203
- TV (All Types) 280
- Variable 278, 280, 283

COLE-FLEX CORP. 718-725
Cole-Flex Tubing 718-724
Cole-Flex Heat Guns 725
Colorama Picture Tubes 1291
COLUMBIA ELECTRONIC CABLES 1068-1372
Columair Speaker Columns 58
Com-Pak Mark II Power Supplies 792
Combustion Indicators (See Fire Detection & Fighting Equipment)
Commander Flashlights 763
Communication Systems
- Intercom (See Intercommunication Systems)
- Portable (Industrial) 31-33, 39, 40, 42, 46, 47, 50, 71, 72
- Selective Paging 31, 49-52
- Telephone 31, 51, 52

Compact Switches 1058
Compactuner Multigang Tuners 183
Compounds, Antistatic (See Coatings, Antistatic)
Compounds, Weatherproofing (See Coatings, Weatherproofing)
CONCORD ELECTRONICS CORP 370, 371

Page

Con-Hex Connectors 462
Condensers (See Capacitors)
Connector Adapters 106, 307, 317-330, 336, 337, 378-380, 382-388, 401, 405, 406, 467, 481, 482, 512, 531, 533, 534
Connector Boxes & Strips, Power Outlet 118, 137, 167, 540-545
Connectors & Terminals, Push-On, Quick Disconnect 269, 351, 372, 467, 495, 496, 539, 547, 557, 558, 562, 1033
Connectors
- Antenna (See Connectors, R-F, Coaxial)
- Battery 312
- Circular, Audio 45, 48, 83, 105, 314, 315, 337, 367,391, 451, 512-514, 518, 531-534
- Circular, Heavy Duty, Power 352, 391, 467, 1032
- Circular, Hermtic & Pressurized 467
- Circular, Miniature & Subminiature 382, 383, 390, 406, 451, 462-464, 512, 518, 532
- Circular, Quick Disconnect 48, 336, 337, 352, 391, 462, 512-514, 518, 531-533, 1032
- Flat Cable 390
- Integrated Circuit (See Sockets, Integrated Circuit)
- Interlock 445, 531, 1032
- Microphone 45, 48, 106, 312, 314, 315, 336, 337, 401, 405, 406, 438, 495, 512, 533
- Printed Circuit 271, 344-346, 377, 390, 391, 410, 490
- R-F, Coaxial 316-326, 328-330, 336, 347, 348, 367, 383-387, 432, 433, 442, 462-464, 481, 513, 536, 845
- Rectangular, Cable to Chassis 347, 349-356, 377
- Rectangular, High Voltage 347, 353-356
- Rectangular, Miniature & Subminiature 345, 347, 348, 377, 390, 546
- Rectangular, Rack & Panel 347-352, 356, 377, 391, 531
- Rectangular, Test 378-380

Consoles, Cabinet (See Cabinets & Accessories, Metal)
CONSOLIDATED WIRE & ASSOC. CORPS. 1374-1395
Contact Cleaners (See Cleaners & Solvents)
Contact Strips, Finger 443
Contactors (See Relays, Power)
Containers, Shielded (All Types) 272, 452, 453
Contempo Racks & Cabinets 134
Continental Inverters 812
Controls
- Carbon (See Potentiometers, Rheostats)
- Combustion 746
- Counting & Sorting 740, 742-746, 748
- Density 748
- Dimension 741-744, 746
- Door Opening & Closing (Industrial) 741-746, 748
- Hardware, Shafts & Accessories (See Shafts, Dials, etc.)
- Level, Dry Material 740, 742-746
- Level, Liquid 740, 742-746
- Machine Tool 746
- Motor Speed 575, 738, 1079, 1206
- Oscillator 1045
- Photoelectric 740-746, 748, 749
- Positioning 738, 748
- Programmable 572, 573
- Proximity (Also See Controls, Capacitance Operated) 740
- Remote 45, 738, 741, 744, 745, 748, 749, 821
- Smoke & Combustion (See Controls, Combustion)
- Stepping Motor 738
- Temperature (Also See Monitors, Temperature) 1079
- Timing (See Timers)
- Voltage Regulating (See Regulators & Stabilizers, Voltage)
- Volume & Tone 85, 86, 93, 307, 451
- Wire Wound (See Potentiometers, Rheostats)

Converters
- A-C to D-C 307, 813
- D-C to D-C 805, 814, 1165
- D-C to Frequency 759, 812
- Frequency to D-C 1152
- Power Frequency, Electronic 759
- Pulse to Analog 738

Page

Coolants, Circuit & Component 260, 262-265
Cooling Equipment (See Blowers & Fans)
Cooling Packages, Semiconductor (See Transistor & Diode Heat Dissipators)
Cooling Sprays (See Coolants, Circuit & Component)
Cord-Switch Switches 525
Cordette Pendant Switches 526
Cordlite Light Extensions 1351
Cordmaster Pendant Switches 525
Cords & Tapes, Lacing 502, 1312, 1417
Cords
- Line & Set, Extension 307, 540-545, 804, 1108, 1348-1351, 1364, 1366, 1372, 1411, 1417, 1439
- Line, Resistance 1372
- Patch 106, 273, 332, 334, 408, 480, 481, 484-487, 553, 515, 516, 533, 535, 536
- Power (See Cable, Power)
- Retractile 106, 479, 1308, 1335, 1336, 1348, 1350, 1364, 1412, 1413, 1418
- Speaker Extension (See Cable, Audio)
- Twin Lead (See Cable, Multiconductor)

CORNING ELECTRONICS DIV., CORNING GLASS
- Capacitors 169
- Resistors 929

Corrib Resistors 955
Counters
- Digital 564, 565, 668
- Electro-Magnetic 564, 684
- Frequency 668
- Mechanical 565, 684
- Photoelectric 740-742, 746
- Preset 566
- Pulse 564, 565
- Revolution 565

Couplings, Shaft, Rigid & Flexible 285, 500
Covers
- Chassis 45, 130-132, 271
- Jack (See Jack Covers)
- Protective 42, 54

Cradle-Switch Switches 530
Crimping Machines & Tools (See Tools, Crimping)
Crystals
- Frequency Control 576
- Piezoelectric 306, 576
- Quartz 576, 995

CRYSTEK DIV. (Formerly Texas Crystals) 576
Current Sensors (Also See Transducers, Volt, etc.) 875
Cutters, Hole, Hand Operated 1087
Cutters, Wire, Hand (See Wire Cutters, Hand Operated)
CURTIS DEV. & MFG. 369

D

DABURN ELECTRONICS & CABLE CORP.
- Hardware 602, 603
- Insulators, etc. 726, 727
- Jacks, Plugs, etc. 372-376
- Switches 1032-1033
- Tubing, Wire, etc. 1396-1419

Daflex Tubing 1396-1398
Daflon Tubing 1396-1399
DALE ELECTRONICS, INC.
- Connectors 377
- Potentiometers 976, 977
- Resistors 931-933

Dalite Wire 1407
DATAK CORP., THE 580
Datalite Indicator Lights 581, 582
De-Ox-Id Contact Cleaner 262
Decade Boxes, Inductance 282, 600
Decade Boxes, Resistance 959
Decalcomania (Also See Labels, Pressure Sensitive) 505
Decoders, Audio Tone 1045
Decoders, Video 580
Decontaminants (See Cleaners & Solvents)

 © United Technical Publications

Page

Deflection Yokes, Coils & Assemblies (See Yokes, Deflection)
Degreasing Chemicals (See Cleaners & Solvents)
Delay Lines
- Distributed, Constant (Fixed) 182
- Distributed, Constant (Variable) 182
- Lumped-Constant (Electrically Variable) 182
- Lumped-Constant (Fixed) 182

Delays, Time (Excluding Delay Lines) 568, 569, 748
DELCO RADIO DIV. OF GENERAL MOTORS 991-994
DELEVAN 278
Deltafilm Capacitors 246
Demagnetizers 98, 307
DESCO MFG. CO.
- Circuitracer 625
- Miniature Tools 1083

Designer Cabinets & Cases 161
Designer Panel Meters 673
Detectors
- F-M (See Detectors, Frequency)
- Fire & Smoke (Electronic) (See Fire Detection & Fighting Equipment)
- Frequency 989

Detectors, Voltage 810
Determ-Ohm Resistance Boxes 959
DIALIGHT CORP. 581-585
Dial Locks (See Locks, Dial & Shaft)
Dialco Indicator Lights 581, 583, 584
Dials, Instrument, Metal, Plastic, etc. 297, 300, 304, 489, 594, 595, 979
Dials, Turns-Counting 594, 595, 1067
Dies & Taps 504, 1089, 1101
Difilm Capacitors 241
Digital Voltmeters (See Meters, Volts, Digital)
Disk-Whisk Record Cleaner 105
Diode Testers (See Testers, Diode)
Diodes
- Avalanche 1002, 1003
- Germanium 989, 998, 999
- Photoelectric 1245
- Silicon 730, 990, 1000
- Switching 990
- Tunnel 998-1000
- Varactor 990
- Zener 730, 993-995, 1005

Dividers, Voltage (Also See Transformers, Voltage Dividing) 951
Dividohm Adjustable Resistors 951
Dollies & Instrument Carts (See Carts, Instrument & Equipment)
Dolphin Lanterns 757
Doors, Cabinets, Metal (See Cabinets & Accessories, Metal)
Double-Wipe Slide Switches 529
DOW KEY, SUBS. OF KILOVAC 844, 845
Drafting Symbols, Dry Transfer, Pressure Sensitive, etc. 580, 729
DRAKE MFG. CO. 586, 587
DRAKE CO., R. L. 598
Drawers, Sliding 107, 113, 124, 136, 138, 146, 159
Drills & Accessories, Hand & Power 504
Drivers, Nut 1081, 1083, 1098, 1101, 1110-1112, 1114, 1117
Drivers, Speaker 54, 58, 59, 68, 88, 90, 91
Drivers & Decoders for Readouts 579, 990
Drivers, Dial 284, 500, 596
Drivers & Drive Mechanisms 284, 596, 738
Dry-Blow Cleaning Spray 265
Dual-Trol Timers 571
Ducts, Wiring 1437
Dummy Loads 953
Duplex Switches 1059
Dur-Mica Capacitors 170
Dura-Color Cable & Kits 1369
Durafoam Cable 1368
DUTREX INDUSTRIES, INC. 1249-1252
DVM's (See Meters, Volt, Digital)
Dyn-A-Mite Battery Chargers 812

Page

Dynamometers 1094
Dynamotors 759

E

ENM CO. 564, 565
E-Z-Mini-Hook Connectors 378
E-Z-Strip Lamp Cords 1303
Earphones (See Headphones & Headsets)
ECCO CONNECTOR DIV. OF PHAOSTRON INSTR. & ELECT. CO. 382-388
Ecliptic Tachometer Generators 734
Econo-Trim Potentiometers 976
Econoglo Neon Lights 586
Editing Equipment, Tape 103, 104
EDSYN, INC. 1084, 1085
ELCO CORPORATION 390, 391
Electrical Surge Arresters (See Arresters, Electrical Surge)
ELECTRO-MECHANICAL INSTR. CO. 626, 627
ELECTRO PRODUCTS LABS. 760, 761
ELECTRO-VOICE, INC. 62-71
ELECTRONS COMPANY 1253
ELECTRONIC CONTROLS, INC. 833
ELECTRONIC MOLDING CORP. 389
Elfin Neon Indicators 577
Eliminator Speaker Systems 69
Eliminators, Battery (Also See Power Supplies) 753, 770, 771
Emico Meters 626, 627
Empire Headsets 53
Enclosures, Speaker (Excluding Kits) 59, 75, 94, 119
Engineering Reference Books (See Technical Books)
ENTERPRISE DEVELOPMENT CO. 1086
Erasers, Magnetic Tape (Bulk) 104
Ersa Soldering Equipment 1085
Escutcheons 291, 528
ESSEX INTERNATIONAL, INC.
- Controls Div., RBM Controls 847-865
- Controls Div., Stancor Products 1121-1157
- Electronic Wire & Cable Div. 1420-1422

Etchants, Printed Circuit (See Printed Circuit Etchants)
EVEREADY (Union Carbide) 763-769
Ever-Quiet Contact Cleaner 259
Excellite Audio Plugs 314
Executive Switches 1059
Extralytic Capacitors 222-224
Eyelets 416, 417, 606

F

5-Way Binding Posts 467
Falcon Inverters 812
Fans (See Blowers & Fans)
Fastemp Thermometers 621
Fasteners, Metal 151, 167, 349, 366, 373, 376, 406, 419, 460, 493, 500, 504, 603-608, 610, 614-618, 970
Fasteners, Non-Metallic 286, 287, 339, 504, 588, 603, 610, 611, 619
Feather-Lever Switches 527
FEDTRO
- Megaphones 32, 33
- Speakers 72

Feedthrus, Terminal (See Terminals, Feedthru)
Filmite Capacitors 242, 245
Filterol Filters 257, 599
Filters
- A-F 598
- Antenna 598
- Band Elimination 600
- Band Pass 600, 601, 1134, 1166, 1204
- Electric Wave Section 600, 601
- High-Pass 598, 600, 601, 1166, 1204
- I-F 257, 599
- Interference 257, 598, 599
- Line 257, 598-601, 1204

Filters (continued) Page
- Low-Pass 598, 600, 601, 1166
- Optical 295
- Reactor 1134, 1148, 1149
- Telemetering 601, 1166, 1204
- Tone, Telegraph 601

FIRE CONTROL CO. 563
Fire Detection & Fighting Equipment 263, 563, 748
Five-Star Tubes 1257, 1265
Flashlights & Lanterns 757, 763, 764
Flat-Plug Phone Plugs 518
Flats — Electric Wavefilters 600
FLEISCHMAN ELECTRIC 1158-1161
Flexfoam Cable 1371
Flexlife Cable 1371
Flex-Pak Amplifiers 26, 27
Flux, Brazing & Soldering 258, 262, 265, 1085, 1097, 1100, 1102
Footrol Foot Switches 1034
Fotoelectric Controls 748, 749
Frame-Loc Chassis Slides 271
Frames, Cabinet & Rack 109, 110, 118, 119, 127, 128, 135, 140, 142-144, 146, 148, 154
FREED TRANSFORMER CO 1162-1171
Furniture, Electronic Lab. (See Benches, Consoles, Stools, Tables, Lab & Shop)
Fuse Clips (See Clips & Holders, Fuse)
Fuse Panels (See Panels, Fuse)
Fuses 934, 970, 1018-1023, 1060-1062
Fuses, Failure Indicating 1018-1023, 1060-1062, 1064, 1065
Fuses, Time Delay 1018, 1060-1062, 1064, 1065
Fusetron Fuses 1018
Fustat Fuses 1021
Futura Cabinets 116
Fyrguard Detectors 563

G

GC ELECTRONICS
- Audiotex, Hi-Fi Stereo Accessories 98, 99
- Chemicals & Kits 262, 263
- Hardware 604-611
- Jacks, Plugs, etc. 392-406
- Resistive Devices 934
- Telco-TV Hardware Mounts 21
- Tools & Service Aids 1088-1090

GAME INDUSTRIES 95-97
GAMBLE INDUSTRIES, CHARLES T. 935
GARRARD
- Turntables 100

GATES ELECTRONIC CO., INC. 770-773
Gauges, Lead Bending 1091
Gauges, Tension 1095
Gears & Gear Mechanisms (Precision) 284
Gemini Inverters 812
Gemlite Indicator Lights 587
GENERAL CONTROL CO. 1034
GENERAL ELECTRIC CO.
- Panel Meters, Meter Relays 628-633
- Power Supplies, Batteries 774-777
- Semiconductors 995
- Soldering Irons 1092, 1093
- Transformers 1172, 1173
- Tubes 1254-1283

GENERAL TIME CORP., INDUSTRIAL CONTROLS DIV. 566, 567
Generators
- A-M/F-M 636, 653
- Audio 653-655
- Color TV 637, 656
- Cross Hatch 637, 656
- D-C 699
- Emergency Power 759
- F-M 637
- Interference Raster 656

Generators (continued) Page
- Low-Frequency 654, 655
- Marker 636, 657, 658
- R-F 653
- Sawtooth 653
- Signal, Standard Type 636, 637
- Sine-Wave 654, 655
- Square-Wave 654, 655
- Sweep 636, 653, 657
- TV Signal 657
- TV Synch 656

Germanium Semiconductors (See Diodes, Transistors)
Glass-K Capacitors 169
Glo-Bar Thermistors 934
Glo-Button Pushbuttons 519
Glo-Dot Lights 591
Globar Resistors 970
Glues (See Adhesives)
Golden-D Connectors 347
GOTHAM AUDIO CORP. 1174
GOULD INC. (See Burgess/Gould)
Grand Prix Cabinets 116
Greases (Also See Lubricants) 970
GREENLEE TOOL CO. 1087
GRIFFITH PLASTICS CO. 588
Grilles, Speaker 74
GROMMES-PRECISION 34, 35
Grommets 502, 493, 729
GUARDIAN CALIFORNIA 874, 875
GUARDIAN ELECTRIC MFG. CO. 866-873
Guides, Circuit Board 270, 452
Guns, Soldering (See Soldering Guns)

H

HAMLIN INC. 1035
HAMMARLUND MFG. CO., INC. 180, 181
Handles For Cabinets, Circuit Boards, Racks, etc. 125, 137, 141, 167, 168 277, 287, 501
Handsets, Chestsets & Operator Sets 66, 84, 85
Handi-Vom Meters 690
Handiscope Oscilloscopes 695
Hardware (See Bolts, Brackets, Clamps, Fasteners, Terminals, etc.)
Headers, Relay & Transformer 419
Headers, Transistor & Diode 419
Headphones & Headsets 38, 53, 83-85, 307, 451
Heat Dissipators (See Transistor & Diode Heat Dissipators)
Heat Guns, Production 603, 725, 1099, 1109, 1354, 1397
Heat Sinks, Soldering 1080, 1091
HEEGER, INC. (See LMB)
HENRY PRODUCTS CO., INC. 382-388
HEINTZ & KAUFMAN, LTD. 1284
Hercules Lanterns 763
Hercules Switches 1059
HICKOK ELECTRICAL INSTRUMENT CO. 634-637
Hi-D Jax Phone Jacks 512
HI-G INC. 876, 877
Hi-Lite Color Picture Tubes 1291
Hi-Mag Relays 822
Hi-Mag Timers 825
Hipermalloy Transformers 1233
Hippo-Clip Battery Clips 449
Holders & Carriers, IC, LSI (Packaged) 277, 461
Holders (Excluding Retainers) — See Holders, Sockets
Holders, Fuse (See Clips & Holders, Fuse; Panels, Fuse)
Holders, Lamp (See Sockets, Lamp & Lamp Assemblies)
Hole Plugs 367, 493, 503, 515-517, 607, 617
Honey Bee Motors 735
Hoods, CRT Viewing (See Viewing Hoods, Cathode-Ray Tube)
Hook Switches Switches 530
Horns, Speaker 52, 68, 69, 72
Hot Shot Batteries 765

 © United Technical Publications

Page

Housings, Instrument & Meter (See Cabinets, Cases)
Housings, Metal (See Cabinets, Cases)
Housings, Speaker (See Enclosures, Speaker)
HUNTER TOOLS 1091
HURST MFG. CORP. 735
Hush Tuner Cleaner 259
Hy-A-Sil Rectifiers 997
Hypass Capacitors 257, 599
Hypercon Capacitors 252

I

ITT CANNON ELECTRIC, DIV. OF ITT 337
Imperial Soldering Equipment 1105, 1108
Indicator lights (See Lights, Dial, Panel, etc.)
Indicators
- Circuit Condition, On/Off, etc. (Electromechanical) 586, 587, 632, 640, 641, 681
- Elapsed-Time 564-567
- Fire (See Fire Detection & Fighting Equipment)
- Frequency (See Meters, Frequency)
- Smoke & Combustion (Electronic) — Also See Fire Detection & Fighting Equipment 563, 748

Inductors (See Coils)
INDUSTRIAL DEVICES, INC. 590, 591
INDUSTRIAL TIMER CORP. (Singer) 568-574
Inks, Marking 263
INJECTORALL ELECTRONICS CORP.
- Chemicals & Tools 264
- Printed Circuits 267

Inserts (See Bushings)
Instrument Cases (See Cabinets, Cases, Instruments)
Insul-Volt Insulating Spray 263
Insulating Compounds
- Acrylic 263
- Coil Dope 262
- Lacquer 167, 258, 262
- Silicone 263
- Varnish 263

Insulation Materials, Plastic (Misc.) 728
Insulation Materials, Polystyrene 728
Insulation Materials, Rubber (All Types) 746
Insulation Parts, Ceramic 339, 726
Insulation Parts, Glass 726
Insulation Parts, Plastic 400, 475
Insulators, Antenna & Spring Assemblies 23, 726
Insulators, Test & Battery Clip 400, 448, 449, 476
Insulkrimp Terminals 547-558
Integrated Circuit Packaging Systems 389
Intercommunication Systems 31, 49, 50-52, 307
Intervalometers (See Timers)
Inverters, D-C To A-C, D-C To D-C 750-754, 759, 805, 812, 813, 1165
Irons, Soldering (See Soldering Irons)
Isofarad Capacitors 245
Isotap Transformers 662

J

J-B-T INSTRUMENTS, INC.
- Meters, Testers 638-642
- Switches 1037-1045

JFD ELECTRONICS CORP. 182-184
JAN HARDWARE MFG. CO., INC. 284-305
Jack Adapters (All Types) 98, 106, 343, 368, 389, 404, 405, 409, 410, 432, 451, 470, 512-514, 518, 533, 534
Jack Covers 286, 512, 513, 596
Jack Panel Assemblies & Accessories (See Panels, Jack)
Jacks (All Types) — Also See Connectors 98, 106, 307, 312, 331, 333, 334, 343, 367, 368, 374, 375, 389, 394, 396, 397, 401-405, 409-412, 430-434, 442, 443, 451, 458, 470, 471, 473, 488, 496, 510, 512-514, 517, 518, 532-536
Jif Contact Cleaner 262

Page

JOHNSON CO., E. F.
- Capacitors 186-188
- Connectors, etc. 408-412

JONARD INDUSTRIES CORP. 1094, 1095
Jr. Solderless Phone Tips 394
Jumpers, Bonding 361
Jumpers, Circuit Board 480
Jumpers, Wire, Terminated (See Cords, Patch)
Junction Boxes (See Boxes, Junction & Wall Plate)

K

KEDMAN CO. 1098
Kep Fasteners 618
KESTER SOLDER CO. 1096, 1097
Keyboard Pre-punched Terminal Boards 416, 417
Keys, Telegraph 307
KEYSTONE ELECTRONICS CORP. 414-420
KILOVAC CORP.
- Dow Key 844, 845
- Penta Laboratories 1287

Kits
- Breadboarding (For Engineers) 267, 268, 274, 276, 821
- Kits, Connector & Accessories 336
- Marking (Dials, Instrument, Equipment, etc.) 580
- Power Supply 779-788, 803
- Printed Circuit 262, 267, 270, 274, 580
- Receiver 307
- Switch Assembling 527
- Terminal 481, 495, 538, 539
- Training Aid 274

Kliptite Terminal Boards 427
Klipvolt Surge Suppressors 1003
Knives & Knife Sets 1081, 1103, 1116
Knobs 297-301, 307, 489, 519, 577, 588, 592-595
Koolohm Resistors 960-963
Korner Speaker Baffles 75
Krimptite Terminals 547-558
KULKA ELECTRIC CORP. 422-428
KURZ-KASCH, INC. 643
Kynar Wire 1363

L

LMB HEEGER, INC.
- Box Chassis 130-133
- Chemicals 265

Labels, Pressure-Sensitive 101, 103, 415, 580
Laboratory Furniture (See Benches, Consoles, Stools, Tables, Lab and Shop)
Lacing, Cable (See Cords & Tapes, Lacing)
LAMBDA ELECTRONICS CORP. 779-804
Lambda-Pak Power Supplies 799
Lamp Holders (See Sockets, Lamp & Lamp Assemblies)
Lamps
- Dial & Pilot, Incandescent 522, 578, 584, 585, 587
- Miniature & Subminiature 578, 584, 585, 587
- Neon 578, 581-583, 585-587, 591
- Projection 586, 587

Lead Assemblies & Receptacles, High Voltage (Also See Connectors; Cable Assemblies) 1089
Leader Lite Flashlight 764
Leads, Test (See Test Leads)
Lectro-Kleen Tuner/Contact Cleaner 444
Lectro-Lok Switches 1059
LEECRAFT MFG. CO. 589
Lens Kleen Plastic Cleaner 264
Lev-R Switches 526, 528
Lever-Lite Switches 528
LICON DIV., ILLINOIS TOOL WORKS 1046-1056
Lighting Equipment, Emergency 753

Page

Lights
- Dial, Panel, Pilot & Accessories 292, 578, 581-587, 589-591, 1015
- Edge Lighting, Panel 292, 578, 581-586, 591
- Oil-Tight 586, 587
- Stroboscopic Source 698, 699

Limit Stops, Mechanical 284, 287
Limitimer Controls 287
LINE ELECTRIC CO. 878-885
LINEMASTER SWITCH CORP. 1058, 1059
Line-O-Light Lights 591
LITTELFUSE, INC. 1060-1065
Littel-Jax Phone Jacks 512
Littel-Key Switches 527
Littel-Lite Switches 524
Littel-Plug Phone Plugs 518
Littel-Switch Switches 526
Littl-Lytic Capacitors 212
Little Champ Pliers 1081
Little Dandy Soldering Irons 1078
Little Devil Resistors 956, 958
Little Jim Flashlights 764
Lo-Cap Switches 527
Loc-Jaw Adhesive 265
Locks, Dial & Shaft 125, 286, 301, 500
Logilite Lights 578
LORAL DISTRIBUTOR PRODUCTS
- Alpha Wire & Cables 1296-1316
- Elmenco Capacitors 170-178

Loudspeakers (See Speakers)
Lubricants (Also See Greases) 98, 258,-261, 263, 264, 1095
Lug-Plug Phone Plugs 518
Lugs (See Terminals, Lug)
Luma Switches 590

M

Machines, Crimping (See Tools, Crimping)
Machines, Solderability Testing 1102
MAGNECRAFT ELECTRIC COMPANY 886-892
Magnets, Permanent 1035
MANHATTAN ELECTRIC CABLE CORP. 1423-1432
Mark II Converters 759
Marker Strips (See Strips, Marker & Fanning)
Markit Dri-Transfer Lettering 729
Markers, Wire, Tab & Sleeve (See Wire Markers)
Marking Inks (See Inks, Marking)
Marksman Soldering Irons 1119
MASTER APPLIANCE CORP. 1099
Master Headsets 53
Mat Magnetic Amplifiers 1232
Master Antenna TV Systems & Equipment 336
Max-C Trimmer Capacitors 184
Megaphones, Electrical (See Comm. Systems, Portable)
Megohmer Insulation Testers 699
MEMCOR, DIV. LTV ELECTROSYSTEMS
- Components 978, 979
- Resistors 936-943

Meter Cases (See Cases, Equipment)
Meters
- Ampere, A-C 620-622, 626, 631, 667, 669, 672, 675, 677, 686, 687, 689, 690, 694, 699, 713
- Ampere, D-C 626, 627, 629, 630, 632, 633, 648, 667, 670, 673, 674, 676, 712-714, 679, 681, 682, 694, 699
- Ampere, R-F 672, 675, 677, 713
- Audio Level 644, 672, 675, 678, 715
- Capacitance 83, 669
- Decibel Indicating 644, 672, 675, 678, 694, 715
- Edge-Wise 627, 632, 666, 667, 682
- Field Strength 666
- Flutter & Wow 1174
- Frequency 638-641, 658, 680, 699
- Galvanometer 672, 675, 677
- Impedance 83

Meters (continued) Page
- Inductance 83
- Light, (Non Photographic) 666
- Megohm 645-648, 699
- Microampere 622, 629, 631-633, 646, 647, 666, 667, 670, 671, 673, 674, 676-679, 681, 682, 686, 689, 694, 712, 716
- Milliampere 622, 626, 628, 629, 631-633, 647, 648, 667, 670-679, 681, 682, 686, 687, 694, 702, 712, 713, 715
- Milliohm 689
- Millivolt 671, 673, 674, 676, 679, 681, 682, 686, 687, 693, 714
- Miniature 682, 699
- Multitester 664, 665, 668, 694, 702
- Null 715
- Ohm 620, 645, 646, 648, 667, 670-681, 694, 702
- Panel (D'Arsonval Movement) 626-632, 666, 667, 686, 687, 699
- Pocket 621, 666, 667
- Pyrometer 642, 716
- Recording 622
- S-Units 666
- Temperature, Dial-Type (Contacting) 621, 666, 693
- Thermocouple 642, 716
- Time Interval (See Timers, Interval)
- Vacuum Tube Volt (VTVM) 689, 692, 709
- Vibration 699
- Volt 590, 620-622, 626-628, 630-633, 645-648, 666, 667, 670, 672-682, 686, 687, 690, 694, 702, 715, 716
- Volts, Differential (See Meters, Volt)
- Volt, Digital (DVM) & Accessories 668, 683, 708
- Volt, True RMS 645-647, 680
- Volt-Ammeter 622
- Volt-Ohm 645-647, 666, 692, 694, 702, 709
- Volt-Ohm-Milliampere (VOM) 307, 620, 644, 649, 665, 668, 669, 688-692, 702-709, 711
- VU 42, 45, 672, 673, 675, 678
- Watt 598, 672, 675, 677, 694

Metfilm Capacitors 244
METROPOLITAN SUPPLY CO. 1285
Microclareed Relays 840
Microphones
- Aircraft Type 66, 86
- Carbon 66, 86
- Cardioid 56, 57, 62-64, 66-67, 79-82, 87, 92, 307
- Ceramic 56, 57, 65-67, 86
- Condenser 82
- Contact 451
- Crystal 42, 56, 57, 67, 451
- Differential 66
- Dynamic 38, 42, 55-57, 63-67, 79-82, 86, 87, 92, 307, 451
- Handsets, Headset (See Headsets)
- Lavalier 55-57, 62-65, 67, 79, 82, 87, 92
- Noise-Cancelling 56, 57, 66, 80, 81, 87
- Pressure 86
- Ribbon 79
- Transistorized 66, 82, 86

MICROFLAME 1100
Micro-Gator Clips 448, 450
Micro-Klip Terminals 269
Micro-Jax Phone Jacks 512
Micro-Plug Phone Plugs 518
Micro-Ribbon Connectors 350
Microspec Transformers 1199
MICROTRAN COMPANY, INC. 1176, 1177
Midgetester Meters 690
Mighty Midget Soldering Irons 1093
Mike-O-Meter Capacitor Analyzer 701
MILLER CO., J. W. 279
Min-A-Plug Plugs 534
Mini-Bee Motors 735
Mini-Gator Clips 448, 450
Mini-Jones Connectors 351

 © United Technical Publications

Page

Mini-Reed Switches 1035
Mini-Slide Pilot Light Assemblies 591
Mini-Tip Heat Cartridges 1108
Mini-Volt Voltmeters 590
Miniductor Coils 283
Minifilter Electric Wave Filters 601
Miniklip Terminals 269
Minispec 1198
Mixers, Audio 29, 30, 44, 46, 93, 307
Modu-Rak Cabinet Racks 156
Modutrim Variable Capacitors 183
Monarch Converters 759
Monitors, Phase Sequence & Loss 621
Monitors, Power, A-C & D-C 650
Monochrome Picture Tubes 1256
Monolythic Capacitors 253, 254
MOODY MACHINE PRODS. CO., INC. 1101
Motors
- A-C & D-C 734
- Control 734
- Fractional HP (including 400 CPS) 734, 735
- Gearhead 377, 734, 737
- Hysteresis 377, 735
- Induction 734
- Permanent Magnet 734, 736, 737
- Stepping 736, 737
- Synchronous 377, 735-737
- Torque 735, 737
- Vacuum 737

Mounts
- Antenna 21-25
- Integrated Circuit (See Sockets, Integrated Circuit)
- Shock & Vibration 61

MUELLER ELECTRIC CO. 448-450
MULTICORE SOLDER 1102
Multi-Mod Cases 272
Multi-Slide Switches 519
Multi-Switch Switches 520, 523
Multipliers, Meter 685
Musi-Kleen Cassette Tape Head Cleaner 99
Musicaster Speakers 69
Mustang Speakers 91
Mustang Switches 1013
Nanospec Transformers 1200
Nautilus Switches 1059
Needlepoint Test Leads 401

N

NT•T SALES, DIV. OF NATIONAL TEL-TRONICS CORP. 429-447
NATIONAL WIRE & CABLE CORP. 1433-1436
Networks
- Crossover 91
- Ladder 935
- LC 183
- Phase 183
- Pulse 935
- Resistance 935

NEWCOMB AUDIO PRODUCTS 37-49
No-Arc HV Insulation 261
No-Mar Clamps 287
NORTH HILLS ELECTRONICS, INC. 280
Nu-Base Power Semiconductors 991
Nurl-Loc IC Packaging Panels, Terminals & Jacks 389
Nuvi-Tran Tuner Cleaner 263
Nylakrimp Terminals 547-558

O

OAKTRON INDUSTRIES, INC. 73-75
OHMITE MANUFACTURING CO.
- Chokes, Suppressor, Meter Saver 281
- Controls 575

Ohmite Manufacturing Co. (continued) Page
- Relays 894-898
- Resistors 945-959
- Switches 1066, 1067
- Transformers 1178-1180
- Trimmers, Potentiometers 981-984

Ohmitran Transformers 1178
Ohmitrol Motor Speed Controls 575
Omni-Glow Lights 591
Orange Drop Capacitors 231-243
ORYX (See Telvac)
Oryx Soldering Equipment 1103
Oscilloscope Probes 651, 652, 697
Oscilloscopes, General Purpose 636, 651, 652, 695
Oscilloscopes, Wide-Band 636, 651, 652
Ouncer Transformers 1235
Outlets 105, 427, 505, 540-545

P

Pacer Capacitors 242
Pads, Transistor Mounting 461
Paints, Luminous 264
Paints, Metallic 264
PAMOTOR, INC. 597
Panduct Wiring Duct 1437
PANDUIT CORP. 1437
Panels
- Fuse 1063
- Jack 331, 332, 515, 516, 535, 536
- Meter (See Cases, Equipment, Instrument, Meter)
- Patch (See Panels, Jack)
- Relay Rack 133

Paraformer Power Conditioners 814
PARAGON ELECTRIC CO., INC. 623
Paraswitcher Power Supplies 814
PAR-METAL PRODS., DIV. OF EON CORP. 134-137
Patch Cords (See Cords, Patch)
Pathfinder Public Address Equipment 47-49
Patrician Speaker Systems 70
Pedaline Foot Switches 885
Penline Soldering Irons 1092
Pentaflow Fans 597
PENTA LABS., DIV. OF KILOVAC 1287
Permafoam Cable 1369, 1370
PETERSEN RADIO CO., INC. 306
PHILMORE MFG. CO., INC. 307
Phones (See Headphones & Headsets)
Phonograph Parts & Accessories 34, 35, 37, 38, 42, 98, 105, 262, 375, 403, 404, 533
Phonograph 37-40, 42, 46, 70, 93, 100
Photomod Photocell-lamp Assemblies 747
Picoline Delay Lines 182
Picoreed Relays 839
Piggy-Back Snap Switch Modules 522
Pin Straighteners, Tube 1089
Pins, Electrically Conductive 277, 354
Pip Transformers 1228
PLASTIC CAPACITORS, INC.
- Capacitors 190, 191
- Power Supplies 778

Plasti-Grip Solderless Terminals 496
Plates, Switch Mounting 1014, 1029
Pliers 1080, 1081, 1089, 1091, 1094, 1095, 1103, 1111, 1112, 1117
Pliobond Cement 262
Plug Adapters 98, 340-343, 368, 374, 375, 382-383, 385-388, 393, 405, 408, 410, 439, 452, 453, 467-469, 476, 478, 482-488, 514, 518, 533, 534
Plug & Jack Sets 375, 376, 409, 513, 514, 518, 533, 534
Plug Caps & Shells 312, 532
Plug-In Module Enclosures 272, 419, 495
Plugbord Plug-In Boards 270

Page

Plugs, Electrical (All Types) 98, 106, 173, 180, 181, 272, 273, 312, 313, 332, 334, 337, 339-343, 367, 368, 374-376, 385-388, 392-397, 402-404, 408-411, 429, 430, 433, 434,440, 441, 443, 451-453, 467-470, 472, 473, 475, 481, 482, 484, 486-488, 514, 518, 531-536
Plugs & Receptacles, Line Cord 531
Poly-Pedance Transformers 1134
Polychromatran Transformers 1135
POMONA ELECTRONICS CO. 452, 453
Portacab Instrument Cases 120
Posts
- Binding 338, 339, 376, 389, 395, 397-399, 412, 440, 445, 451, 453, 467, 474-476, 482-484, 486, 588
- Harness Board 338, 398, 474, 475
- Spring Binding 338, 376, 444, 474-476

Potentiometers
- Carbon Film 976
- Ceramic-Metal (Cermet) 972, 973, 982, 983
- Composition, Carbon 973, 974, 984
- Hot Molded 981, 984
- Rectilinear 305, 972, 976, 977
- Servo Mount 305
- Trimmer, Carbon Composition 973, 974, 981, 984
- Trimmer, Carbon Film 976, 977
- Trimmer, Ceramic-Metal (Cermet) 972, 973
- Trimmer, Wirewound 975-977, 981
- Wirewound 305, 975, 976, 981-983

POTTER & BRUMFIELD 900-924
Pow' Riveter Riveting Tools 1112
Power Line Amplifiers 93
Power Supplies
- A-C Output — 60 CPS 761, 804, 812, 814, 1207
- A-C Output — 400 CPS 814, 1207
- D-C Output, Other Than 60 or 400 CPS Input 771, 776
- 60 or 60/400 CPS Input, Up to 30 VDC Output Voltage Regulated 307, 661, 760, 761, 770-773, 776, 778, 782-788, 793-796, 798, 800-803, 805, 809, 814, 815
- 60 or 60/400 CPS Input, Up to 150 VDC Output, Voltage Regulated 661, 760, 770-773, 776, 778, 782,-785, 793-796, 802, 803, 805, 809, 815
- 60 or 60/400 CPS Input, Up to 1,000 VDC Output, Voltage Regulated 770-773, 776, 778, 802, 803, 805, 809
- 60 or 60/400 CPS Input, Up to 10,000 VDC Output, Voltage Regulated..778
- 60 or 60/400 CPS Input, Up to 50,000 VDC Output, Voltage Regulated..778
- 60-400 CPS Input, Unregulated D-C Output 772, 793
- 400 CPS Input Only, D-C Output, Voltage Regulated 793, 803
- 60 or 400 CPS Input, D-C Output, Current Regulated 803, 809
- 28 VDC Input, Up to 10,000 VDC Output, Voltage Regulated 985
- CRT 804
- Electroplating Equipment 771, 773
- Integrated Circuit 792, 797-800, 815
- Lab, Multiple Output 661, 760, 761, 801-803, 805
- Operational 771, 797-800, 815
- Programmable 778, 793, 797, 802-804
- Readout & Display 579
- Switch-Over Automatic (Self-Contained Battery) 759

Powerhouse Speakers 72
Powerhouse Megaphones 32
Powerkote Coils 1207
Powerlytic Capacitors 225-228
Powerstat Variable Transformers 1206, 1208, 1209
Powr-Rib Resistors 955
Preamplifiers, Microphone 29, 30, 43, 44, 46, 48, 93
Prebonding Etchants (See Chemicals, Etching)
PRECISION ELECTRONICS (Grommes) 34, 35
PREMAX PRODUCTS 22, 23
PREMIER METAL PRODUCTS CO. 139-168
Prem-O-Kool Fans & Blowers 165, 166
Press-Fit Receptacles 454
Press-Fit Spacer/Bushings 454
Press-Fit Terminals 454-461

Page

Prestige Racks & Cabinets 118, 121
Princess Soldering Equipment 1105, 1107
Printed Circuit Boards, Etched Process (Without Components) 267, 268, 276, 452, 491
Printed Circuit Etchants 267, 490
Pro-Glo Circuit Testers 623
Probes
- High-Voltage 342, 401, 478, 644, 697, 710, 1089
- R-F 710
- Temperature (Also See Thermocouples, Transducers) 697
- Test Lead 341-343, 375, 376, 379, 380, 401, 435, 436, 451, 458, 468, 471, 478, 510, 621, 623, 625, 643, 697, 710, 1089

Protectors, Surge
(Also See Suppressors, Arc; Arresters, Electrical Surge) 281, 796
Public Address Systems 31, 33, 38-40, 42-44, 46, 47, 49-52, 68-72
Pullers
- Circuit Board 1095
- Fuse 1062, 1064, 1089
- Lamp 1089, 1094
- Tube 1089

Pulleys 607
Push-lite Switches 511, 522, 1087, 1088
Push-Push Switches 524
Pyrometers
- Recording 622
- Resistance-Type 684, 686
- Thermocouple-Type 642, 1082

Q

QUAM-NICHOLS CO. 76, 77
Quick-Clamp Terminals 361
Quick Snap Antenna Clips 1089
Quick-Wedge Screwdrivers 1098
Qwik Microphone Connectors 315

R

RBM CONTROLS (See Essex International)
RAACO CORP. 138
Racks
- Cabinet 45, 49, 108-116, 118, 119, 121, 134, 139, 142-146, 148-151, 155, 156
- Desk & Console 137, 146, 147, 154, 1089
- Circuit Board 160, 270, 272, 390, 490
- Module (Also See Racks, Circuit Board) 160, 272
- Relay & Mounting 116-118, 136, 139, 152, 153

RCA CORPORATION, ELECTRONIC COMPONENTS
- Batteries 806, 807
- Meters, Test Equipment 644-663
- Microphones 79-81
- Recording Tape & Accessories 101
- Semiconductors 998-1001
- Technical Literature 820
- Tubes 1288-1293

Reactors, Filter 1148, 1149, 1163, 1168, 1191, 1213
Readi-Made Terminal Boards 418
Readouts
- Edge-Lighted 579
- Electro Mechanical 564
- Lighted, Segmented 579, 1253

Receivers
- A-M 70, 307, 598
- Communication & Amateur 306, 598
- F-M 70, 307, 598
- Headphone (See Headphones)
- Monitoring, Communications 42, 49, 306
- Search & Countermeasure 306
- Short Wave 598
- UHF & VHF 306
- VLF 598

Receptacles (See Connectors; Jacks; Sockets)
Receptacles, Plug 313, 314, 1075

 © United Technical Publications

Page

Recorders
- Event 622, 669
- Magnetic Tape (Inc. Cassette Recorders) 37, 48
- Strip-Chart 622, 669, 696
- Temperature (Electronic) 622, 669, 693

Rectifier Power Units (Power Supply Type) 770-773, 1218

Rectifiers
- Germanium 989, 995, 1010
- Selenium 995, 996, 1011
- Selenium Stack 996, 1010
- Silicon 990, 995, 997, 1002
- Silicon Controlled (See Thyristors)
- Silicon Stack 997, 1010

Red-X TV Corona Dope 262

Red Hi-Volt Insulator 264

Red Seal Tapes 101

Regent Motors 734

Regulators, Current 812

Regulators & References, Silicon (Also See Diodes, Zener) 1005

Regulators & Stabilizers, Voltage
(Also See Transformers, Voltage Regulating) 774, 775, 777, 808, 810-812, 815, 816, 1082, 1158, 1206-1208, 1237

Relays
- Current Sensing 912
- Differential 875, 912
- Frequency Selective 641, 875, 1045
- General Purpose 821, 822, 830, 832, 833, 843, 847, 852-854, 866-868, 878-883, 886, 887, 894-898, 902-906, 908, 926
- High-Speed 825, 836, 837, 839-841, 847, 862, 883, 889, 890, 915, 924
- High Voltage 844, 882, 891
- Impulse 910, 911
- Indicating Light 867, 878, 894, 895, 905
- Latching, Magnetic 887, 890, 894-898, 910, 911, 914, 917, 926
- Latching, Mechanical 882, 927
- Mercury-Wetted Contacts 834-838, 891, 918, 919
- Meter 633, 687
- Miniature & Subminiature 812, 824-827, 829-830, 840, 841, 847, 861, 862, 868, 876-881, 884, 885, 888-891, 902, 911, 914, 916, 917, 926
- Motor Driven 377
- Multi-Pole (8 or More Poles) 833, 868, 903
- Overload 868, 898, 910
- Over-Voltage & Under-Voltage 875
- Phase-Sensing 875
- Photoelectric 740, 743-746
- Plate Circuit 824, 866, 878-881, 883, 894-896, 898, 911
- Plunger 833, 853, 855, 859
- Polarized 914, 915, 924
- Power 821, 823, 837, 838, 844, 847, 854, 856-859, 866-869, 881, 882, 884, 886, 887, 891, 892, 895, 898, 905, 908, 909, 913
- Pulse & Telegraph 869, 910
- R-F (Including Antenna & Coaxial) 844, 845, 888, 911, 1016
- Reed 825, 839, 840, 847, 855, 862, 883, 889, 890, 891, 916, 917
- Reverse-Current 847, 857, 911
- Rotary 927
- Sensitive 824, 829, 832, 834, 847, 860, 861, 876, 877, 880, 890, 898, 906, 907, 911, 912, 915, 924
- Sequence 910
- Solenoid (See Relays, Plunger)
- Solid-State 825, 858, 869, 875, 884, 892, 920, 921, 923, 924
- Stepping, Ratchet 377, 842, 873, 875, 910, 911, 927
- Telephone 840, 841, 885, 888, 912, 913
- Thermal 826, 827, 858
- Time-Delay 566, 567, 740, 743, 744, 825, 826, 827, 838, 847, 858, 874, 884, 892, 915, 920-923
- Vacuum Contact 844
- Vibrating Reed 1045
- Voltage Sensitive 875, 902, 912, 924

Resistors
- Adjustable (Also See Potentiometers) 940, 941, 951, 955, 969, 982, 983
- Ceramic 945
- Composition, Carbon 933, 956-958, 967

Resistors (continued) — Page
- Film, Metal 929, 933
- Fuse 970
- Glass 929
- High Frequency 929
- High Megohm 929, 933, 956-958
- High Temperature 929, 933, 942, 946
- High Voltage 932-934, 941
- Hot Molded 932, 942, 943, 947-949, 956-958
- Integral Heat Dissipator 933
- Low Temperature Coefficient 929, 933, 935, 945
- Non-Inductive 929, 931, 932, 935, 953, 960-964
- Power 929, 931-935, 937-943, 950-953, 955, 963, 966, 968, 969, 978, 979
- Suppressor 938
- Tapped 935, 942, 950
- Tin Oxide 929
- Wirewound 931-933, 935-937, 939-942, 946, 948-950, 952-955, 959-966, 968-970

Retainers
- Battery 414, 415
- Relay 831, 903, 904, 906, 928
- Transistor & Diode 727, 917

Retractile Cords (See Cords, Retractile)

Reverberation Systems 83

Rheostats 936, 978, 979, 981-983

Rib-Loc Jacks & Terminals 409, 412

Riteohm Resistors 948, 949

Rivet-Loc Terminals 459

Rivets 606, 1112

ROBERTSHAW CONTROLS CO. 1068, 1069

ROBINS ELECTRONICS CORP. 102-106

Rob-O-Stat Record Cleaning Kits 105

Rods & Clamps, Ground 23, 336, 449

Rotomite Steppers 873

Ruf-Koat Wrinkle Varnish 262

Rugged Seal Panel Meters 679

RUSSELL INDUSTRIES, INC.
- Bumpers, Grommets, etc. 729
- Tubing 612, 613

RYE INDUSTRIES, INC. 451

S

Sal-Met Soldering Flux 265

SAMS & CO., INC., HOWARD W. 818, 819

Safari Lite Lanterns 757

MILLER CORP., SANFORD
- Rectifiers 996, 997
- Transformers 1175

SANWA CORPORATION OF AMERICA 664, 665

SARKES TARZIAN, INC. 1002-1005

Savbit Solder 1102

SAXTON PRODUCTS, INC. 1438, 1439

Scales & Reticles, Optical 295

SCHRACK ELECTRICAL SALES CORP. 926-928

Scissors 1091, 1103

Scott-T Transformer 1228

Screwdrivers 1081, 1083, 1089, 1091, 1098, 1101, 1103, 1110, 1111, 1113-1117

Screws (See Fasteners)

Scrulok Phone Tips 342

Sealectroboard Program Boards 465, 466

SEALECTRO CORP. 454-466

Seizer Needle Nose Pliers 1117

Selectakrimp Crimping Tools 560

Senior Switches 1059

SENNHEISER ELECTRONIC CORP. 82, 83

Sentry Speakers 63

Shadow Cabinets 121

Shaft Couplings (See Couplings, Shaft)

Shafts & Adapters, Flexible (Also See Couplings, Shaft) 286, 500

Shafts, Threaded 502

Page

Shav-Pak Inverters 753
Shielded Jax Jack Shields 512
Shields
- Cathode-Ray Tube 292-296
- Indicator Light 434, 503, 528
- Magnetic 293-296, 1033
- R-F (Also See Gaskets, Shielding, R-F) 293-296
- Switch 1033
- Tube 293, 312, 365, 366, 503

Shock Mounts (See Mounts, Shock)
Shunts, Meter 685, 697, 710, 713
SHURITE METERS 666, 667
SIGNAL TRANSFORMER CO. 1182-1192
- Fleischman Electric 1158-1161

Siltab Rectifier Stacks 1010
Silverama Picture Tubes 1290, 1291
SIMPSON ELECTRIC CO. 668-697
SINGER, INDUSTRIAL TIMER CORP. 568-574
Single D Microphones 64
Slidelite Indicator Lights 589
Slide'N Switch Programming Circuit Selector 465
Slides, Cabinet & Chassis 123, 126, 136, 137, 271
Slim-Jim Test Leads 479
Slimline Relays 907
Slimline Wall Baffles 75
Slo Blo Fuses 1060-1062
Slo-Syn Motor Controllers 738
Slo-Syn Motors 736, 737
Smitty Wrenches 1091
Snap-In Switches 1029
Snips (See Wire Cutters)
SLAUGHTER CO. 698
SMITH, INC., HERMAN H. 468-511
Sockets
- Adapters 273, 1089, 1115
- Breadboard 269, 273
- Capacitor 365
- Crystal 365, 366, 391, 503
- Diode 451, 970
- Integrated Circuit 269, 272, 362, 389, 391, 461, 490
- Lamp & Lamp Assemblies 389, 503, 537, 581, 586, 587, 589, 1015
- Miniature & Subminiature (See Sockets, Diodes; IC; Transistor) 451, 587
- Relay 302, 303, 309, 311, 364, 366, 369, 391, 831, 843, 867, 868, 894, 895, 904, 906-908, 928
- SCR Section 312
- Test 269, 273, 362, 970, 1089
- Transistor 271, 361, 364, 389, 391, 461, 490, 970
- Transmitting & Industrial Tube 311, 363
- Tube 273, 308-310, 363, 365, 366, 391, 503, 1287
- Turret 271

SOLA ELECTRIC, DIV. SOLA BASIC IND.
- Power Supplies 808, 809
- Transformers 1181

Solatron Line Voltage Regulators 808
Soldapullit Desoldering Tools 1084
Solder (All Types) 258, 261, 1096, 1097, 1102
Solder Pots 1079, 1082, 1107
Soldering Accessories 258, 262, 263, 265, 1078, 1079, 1082, 1085, 1086, 1090-1093, 1103, 1105-1109, 1118, 1119
Soldering Equip., Printed Circuit 1078, 1092, 1093, 1107, 1109, 1118, 1119
Soldering Equip., Resistance 1079, 1093
Soldering Equip., Temperature Controlled 1078, 1092, 1107, 1118, 1119
Soldering Flux (See Flux, Brazing & Soldering)
Soldering Guns 1085, 1105, 1106, 1109, 1118, 1119
Soldering Irons 1078, 1079, 1085, 1091-1093, 1103, 1105-1109, 1118, 1119
Solenoids, Linear 870-872
Solenoids, Rotary 870
Solistrand Solderless Terminals 496
Solvents (See Cleaners & Solvents)
Sonoramic Cassettes 102
SOUTH RIVER METAL PRODS. CO. 24, 25
Spacers 288, 289, 339, 389, 419, 420, 610, 611

Page

Spark Gaps 252, 1253
Speaker Drivers (See Drivers, Speaker)
Speaker Enclosures) (See Enclosures, Speaker)
Speaker Systems (Industrial) 41, 47, 58, 63, 68-70, 76, 77, 94, 506
Speakers
- Ceramic 73, 74
- Column 41, 47, 54, 58, 69
- Dynamic, Electric 68
- Dynamic, P-M 58, 59, 63, 70, 73, 74, 76, 77, 88-91
- Explosion & Flame Proof 59, 61
- Hi-Fi & Stereo, & Systems 59, 70, 73, 74, 90, 91, 94, 307
- Horn 41, 52, 54, 58, 59, 61, 68, 69, 72, 76, 77, 88, 91
- Paging & Talk Back 58, 59, 69, 76, 77, 89
- Weatherproof 32, 33, 54, 58, 59, 69, 72, 73, 76, 77, 88, 90

SPECIALTIES MFG. CO. 1070-1075
Speedex Wire Strippers 1088
Speedi-Mount Jacks 470
Spemco Switches 1070-1075
Sphericon Speakers 91
Splicers, Wire (Butt & Cap Types) 396, 495, 496, 503, 547, 555, 559, 560
Splicing Equipment, Magnetic Tape 98
Spotlight Relays 878
SPRAGUE PRODUCTS CO.
- Capacitors 192-257
- Filters 599
- Resistors 960-966
- Semiconductors 1006-1009
- Test Equipment 701
- Transformers 1193

Spra-Kleen Cleaning/Lubricant Spray 262
Springs (All Types) 607
Sta-Strap Cable Ties 1437
Stabiline Voltage Regulators 810, 811
Stabiltron AC Voltage Stabilizers 775
STACKPOLE CARBON CO. 967
STACO, INC. 1205
STANCOR (See Essex International)
Standco Meters & Tachometers 699
Stangard Capacitors 182
STERLING TRANSFORMER CORP. 1194-1204
STICHT CO., INC., HERMAN H. 699
Stik-It Glue 264
Stik-Klip Fasteners 603
Strain Reliefs, Cable & Wire 488
Stripohm Resistors 969
Strips, Marker & Fanning 359, 360
Strips, Terminal 361, 373, 410, 422-428, 445, 446, 497, 607, 821
Stubby Phone Plugs 402
Styli, Recording & Playback 95
Subminax Connectors 328, 329
Subouncer Transformers 1235
Super-Flex Coaxial Cable 1370
Super Frost Aid Component Cleaner 260
Super Trol Aid Cleaner/Lubricant 261
Supercon Connectors 467
SUPERIOR ELECTRIC CO.
- Connectors, Posts 467
- Regulators, Controllers 810, 811
- Synchronous Motors 736-738
- Transformers 1206-1209

Suppressors, Arc 934
Suppressors, Noise 934
Suppressors, Transient Voltage (Rectifier Type) 1003, 1004
Surge Arresters, Electrical 139, 164, 167
SWITCHCRAFT, INC. 512-533
Switches
- Cam 1047, 1069
- Canopy 506, 1073
- Coaxial Cable 845, 1016
- Crossbar 1036
- Foot-Pedal, Mat, Ribbon, etc. 60, 885, 1012, 1034, 1058, 1059
- High Voltage 1035

 © United Technical Publications

Switches (continued) Page
- Illuminated 519-525, 528, 589, 590, 872, 1014, 1029, 1030, 1050-1054, 1074, 1076
- Keyboard 1012, 1014
- Key-Lock 537, 1032, 1073
- Lever 451, 519, 526-528, 530, 872, 1013, 1015, 1025, 1034, 1043, 1044, 1046-1049, 1068-1071, 1075
- Limit 1034, 1056, 1069
- Lock (See Switches, Key-Lock)
- Magnetic Reed 1035
- Magnetically Actuated 1012-1014, 1033
- Motor-Driven 572, 573
- Motor-Reversing 1012
- Power 509, 1032, 1066, 1067, 1070-1073
- Program 465, 466
- Proximity 1012, 1013, 1033, 1056
- Pushbutton (All Types) 506-508, 519-526, 537, 590, 833, 872, 1012, 1014, 1027, 1031, 1032, 1034, 1041 1046-1054, 1068, 1069, 1072-1076
- R-F 845, 1016, 1017
- Reed 847, 862, 1012, 1035, 1277
- Rocker 529, 530, 1013, 1025, 1030
- Rotary 506, 975, 1014, 1031, 1032, 1042-1045, 1066, 1067, 1073
- Slide 507, 519, 529, 530, 1013, 1031, 1033, 1073, 1075
- Snap-Action (All Types) 1046, 1048, 1068, 1069
- Solid State 740
- Step Type 842, 873, 875, 911
- Thumbwheel 1036
- Time Delay 892
- Toggle 307, 506-509, 833, 1013, 1024-1029, 1032, 1033, 1037-1043, 1054, 1055, 1070-1074
- Trigger 1031

Synchro-Lab Turntables 100

T

T-Bar Switch/Relays 833

Tab-Pak Power Supplies 805

Tabtran Rectifier Transformers & Chokes 1010

Tachometers
- Electrical (Non-Generating) 565, 699, 734
- Electrical (Self-Generating) 699, 734
- Electronic, Indicating 699
- Stroboscopic 698

TALK-A-PHONE CO. 50-52

TANSITOR ELECTRONICS, INC. 189

Tantalex Capacitors 192-197, 200, 201, 205-211

Tape Recording Accessories 37, 98, 99, 101, 261

Tapes, Recording, Magnetic (All Types) 101, 102

TECHNICAL APPARATUS BUILDERS
- Power Supplies 805
- Rectifiers, Transformers, Chokes 1010

Technical Books 817-820

Teksel Selenium Rectifier Stacks 1010

TEK-TEST CO., INC. 378-380

Tel-Ohmike Capacitor Analyzers 701

Telecap Capacitors 230

Telephone Handsets (See Handsets)

Telerite Jacks & Plugs 368

Telever Switches 528

TELVAC INSTRUMENT CO. 1103

Tempest Inverters 812

Tempmatic Soldering Tools 1119

TERADO CORP. 812

Terminal Boards, Prepunched 416-418

Terminals
- Feedthru 370, 371, 389, 412, 417, 418, 454, 456, 457, 459, 510
- Lug ....37, 373, 376, 399, 400, 418, 434, 438, 445, 461, 474 ,475, 496, 538, 547-555, 604, 618
- Miniature & Subminiature 412, 418, 457, 459, 461, 547
- Printed Circuit Board 269, 370, 371, 412, 416, 417, 491, 554
- Solderless 269, 372, 416-418, 494, 496, 538, 539, 547-560, 562

Terminals (continued) Page
- Standoff 269, 288, 289, 370, 371, 389, 412, 420, 455, 456, 459, 461, 492, 505, 510
- Threaded 371, 389, 461
- Turret 269, 339, 370, 371, 389, 412, 416-418, 454, 474, 498, 499

Test Equipment, Color TV 660, 695

Test Equipment, Component Substituting 663

Test Lead & Adapters 307, 378-380, 401, 436, 437, 478-480, 486, 487, 697, 710, 1089, 1418

Testers
- Battery 666, 694
- Burn-In (Aaging) 623, 625
- Capacitor 695, 701
- Diode 625, 635, 663-665, 1103
- Insulation Breakdown 698, 699
- Integrated Circuit (Manual) 643
- Leakage 695, 698
- Resistivity 690
- Shock 292
- Signal Tracing 590, 621, 623, 625, 695, 970, 1089, 1091, 1111
- Transistor 625, 635, 659, 663-665, 689, 970, 1103
- Tube 634, 635, 660

TEXAS CRYSTALS (See Crystek)

Thermistors 934

Thermocouples, Elements & Accessories 642, 685

Thermometers, Resistance 621

Thermostats 506

Thin Resistors 954

Thin-Finger Phone Plugs 402

Thin-Line Relays 917

Thinpak Relays 829

Thriftfoam Cable 1369

Thrifty Test Leads 401

Thyristors (Includes Silicon Controlled Rectifiers) 993-995, 998-1001

Ties, Wire & Cable (See Wire & Cable Ties)

Tilt-A-View Cabinets 119

Timers
- Cycle 566-569, 571-573
- Interval 566-568, 570, 571, 574, 632, 699, 915
- Programmed 287, 466, 572, 573
- Reset 566-568, 570, 571, 574, 915
- Sequence 466, 566, 740, 743, 744, 1216
- Solid State 567, 825
- Thermal 569

Timing Switches (See Timers)

Tini-Jax Phone Jacks 512

Tini-Plug Phone Plugs 518

Tini-Telephone Jack Panels 516

Tiny Mighty Fuses 1061

Tiny-Switch Pushbutton Switches 525

Tinylite Indicator Lights 587

Tip-O-Dyke Wire Cutters 1091

Tippette Switches 1030

Titan Inverters 812

Titelite Indicator Lights 587

Tool Handle Insulators 1081, 1101

Tool Holsters 1081, 1116

Tool Kits & Sets 1081, 1083, 1089, 1091, 1094, 1095, 1101, 1103, 1111, 1115, 1116

Tools
- Alignment & Tuning 264, 438, 1088, 1110, 1111
- Contact Insertion/Removal 1095
- Crimping 327, 336, 351, 391, 463, 495, 539, 561, 1083
- Hand or Mechanical (See Cutters, Screwdrivers, Wrenches, etc.)
- Parts-Handling, Vacuum Operated 1103
- Pin Insertion 277
- Relay Servicing 1094
- Resistance Soldering (See Soldering Equip., Resistance) 1112
- Riveting, Hand Operated 1112
- Soldering (See Specific Types)

Toroids (See Coils, Toroidal)

Trans-Aire Blowers 110

Page

Transceivers, Amateur, CB, Industrial & Marine 50
Transceivers, Infrared 1217
Transformers
- Audio 1121, 1128-1130, 1132-1137, 1162, 1163, 1174, 1176, 1198, 1199, 1200, 1210-1213, 1215-1219, 1226, 1227, 1231, 1233-1236
- Autotransformer 662, 1121, 1154, 1157, 1159-1161, 1170, 1178, 1179, 1186, 1187, 1201, 1205, 1213, 1214, 1216, 1218, 1234, 1237
- Bias 1145, 1229, 1234, 1236
- Bridging 45, 1152, 1186, 1212, 1215
- Chopper 1176, 1219, 1227, 1235
- Constant Voltage 1165, 1181, 1188, 1189, 1213
- Control 1010, 1121, 1145, 1153, 1154, 1172, 1176-1178, 1190, 1194, 1237
- Converter, D-C To D-C 1165, 1176, 1177, 1211,1227
- Driver 1134-1139, 1164, 1200, 1218, 1221, 1226, 1228, 1236
- Filament 1121, 1146, 1147, 1163, 1170, 1173, 1176, 1177, 1181, 1211, 1212, 1214-1216, 1219, 1229, 1230, 1236
- 400 CPS 1150, 1163, 1165, 1176, 1177, 1181, 1194, 1195, 1229
- HUM Reducing 1174, 1233
- HV 1176, 1177, 1209, 1215
- Input 45, 1134-1140, 1142-1145, 1176, 1177, 1199, 1218, 1219, 1221, 1227, 1228, 1231, 1235, 1236
- Instrument 685, 687, 713, 875, 1153, 1164, 1176-1180, 1182, 1183, 1185, 1186, 1189, 1196, 1206-1209, 1214, 1219
- Interstage 1134-1140, 1163-1164, 1176, 1177, 1199, 1200, 1211, 1215, 1218, 1221, 1226, 1227, 1228, 1230, 1231, 1233, 1235
- Isolation 662, 1010, 1121, 1135, 1139, 1155, 1159, 1161, 1170, 1176, 1177, 1187, 1189, 1194, 1195, 1200, 1201, 1205, 1213-1215, 1218, 1221, 1226, 1227, 1232, 1233, 1239
- Line 68, 1131-1133, 1161-1163, 1199, 1208, 1212, 1213, 1215, 1218, 1219, 1231-1233, 1235
- Linear 1176, 1177, 1233
- Matched, Precision 1233
- Matching 65, 68, 93, 970, 1133, 1134, 1137, 1138, 1162-1164, 1176, 1177, 1211, 1218, 1219, 1226-1228, 1231, 1233, 1235, 1236
- Matrix 1155
- Metered 1179, 1180, 1205, 1209, 1213
- Microphone 1133, 1140, 1162, 1174, 1198, 1215, 1219, 1231
- Miniature, Subminiature & Microminiature 1121, 1135, 1137-1140, 1153, 1162, 1164, 1174, 1176, 1177, 1181, 1190, 1191, 1193, 1196-1200, 1210-1212, 1221, 1226-1229, 1232, 1235, 1237
- Mixing 1162, 1212, 1231, 1233, 1235
- Modulation 1134, 1135, 1218, 1236
- Output 93, 1128-1133, 1137-1140, 1163, 1164, 1176, 1177, 1181, 1190, 1191, 1199, 1200, 1212, 1216-1219, 1221, 1226, 1227, 1230, 1231, 1233, 1235
- Photoflash Power 1145, 1213, 1237
- Plate 1121, 1134-1136, 1156, 1162, 1163, 1181, 1211, 1215-1217, 1219, 1230, 1231, 1233, 1236
- Power 1121, 1142-1145, 1150, 1152-1155, 1159, 1163, 1172, 1173, 1176-1180, 1182, 1183, 1187, 1190, 1205-1209, 1212, 1217, 1230, 1231, 1233, 1234, 1237
- Printed Circuit Mounting 1176, 1177, 1190, 1191, 1196-1200, 1211, 1221, 1226, 1228, 1229, 1235
- Pulse 1164, 1176, 1177, 1193,1213, 1226, 1228-1232
- Rectifier 1010, 1121, 1150-1154, 1175-1177, 1182, 1183, 1186, 1212, 1214, 1217, 1218
- Reference 1190, 1228
- Saturable 1135, 1145, 1148, 1149, 1154, 1165, 1227, 1232
- Servo 1176, 1177, 1194, 1195
- Step-Down, Step-Up 662, 1093, 1103, 1130, 1133, 1142-1147, 1150, 1152, 1157-1160, 1170, 1172, 1173, 1175-1177, 1182, 1183, 1185-1187, 1190, 1191, 1194, 1195-1201, 1212-1214, 1228-1230, 1237
- Toroidal 1174, 1176, 1177, 1206, 1210, 1213, 1220
- Transistor 1121, 1134-1140, 1151, 1152, 1162, 1163, 1176, 1177, 1208, 1210, 1211, 1215, 1219, 1221, 1227-1230, 1232, 1235, 1237

Transformers (continued) Page
- Variable 662, 1172, 1173, 1178-1180, 1205-1209, 1234
- Vibrator 1121, 1147, 1151
- Voltage-Dividing 1142, 1153, 1154, 1179
- Voltage-Regulating (Also See Regulators & Stabilizers, Voltage) 774, 777, 808, 1145, 1155, 1178-1181, 1186-1188, 1205-1208, 1214

Transi-Lytic Capacitors 215
Transicase Instrument Cases 120
Transistor & Diode Heat Dissipators 727, 917, 993
Transistors
- Dual 987
- Field-Effect 731, 995
- Germanium, Photo 990
- Germanium, Power 970, 986, 991-993, 998-1000, 1006, 1007
- Germanium, R-F 986, 995, 998-1000, 1006, 1007
- Germanium, Switching 998-1000, 1006, 1007
- Silicon, Power 970, 988, 991, 992, 998, 999, 1006, 1007, 1294
- Silicon, R-F 987-989, 995, 998-1000, 1006, 1007
- Silicon, Switching 970, 989, 1000, 1006, 1007

Trantracer Semiconductor Testers 625
Treadlite Switches 1058
Tri-R Reed Relays 825
TRIAD DISTRIBUTOR DIV., LITTON INDUSTRIES 1210-1224
Trig-R-Heat Soldering Guns 1109
Trigate Pulse Transformers 1193
Trigger-Quiq Plugs 394
Trijet Transformers 1210
Trimmer Potentiometers (See Potentiometers, Trimmer)
TRIMM, INC.
- Adapters, Jacks, Plugs, etc. 534-537
- Headphones, etc. 84, 85

TRIPPE MFG. CO. 813
TRIPLETT CORP. 702-717
Tron Fuses 1018, 1020
Tube Parts 272
Tube Testers (See Testers, Tube)
Tubes
- Ballast 1284
- Battery Charger 1284
- Cathode-Ray, Data-Storage 1249-1252, 1284
- Cathode-Ray, Instrument Use 1249-1252, 1284
- Cathode-Ray, Multiple Gun 1249-1252
- Cathode-Ray, Projection 1249-1252
- Cathode-Ray, Shaped-Beam 1249-1252
- Cathode-Ray, Studio or Theatre 1266, 1267
- Cathode-Ray, TV Picture & Color ..1256, 1266, 1267, 1285, 1290, 1291, 1295
- Ceramic (Electron) 1239-1242, 1244, 1274, 1275, 1284
- Counting 1245, 1284
- Diode, Temperature Limited 1249-1252, 1284
- Electrometer 1284
- Electron Multiplier 1240, 1241, 1244, 1249-1252, 1284
- Flash 1284
- Gas 1242, 1257-1259, 1269, 1271-1273, 1284, 1285, 1288, 1289, 1294
- Ignitron 1271-1273, 1284, 1288
- Image Converter 1249-1252, 1266, 1267, 1284, 1288, 1289, 1294
- Indicator 1243, 1245, 1284, 1294
- Industrial Power 1239-1242, 1244, 1249-1252, 1257-1263, 1267-1270, 1284, 1288, 1289
- Infrared 1249-1252, 1284
- Ionization 1249-1252, 1284
- Magnetron 1239-1242, 1244, 1246, 1247, 1284, 1288, 1289
- Microwave 1239-1242, 1244, 1268, 1284, 1288
- Noise Source 1249-1252, 1284
- Photomultiplier 1246, 1249
- Radiation Detection 1249-1252
- Readout (CRT), Cold-Cathode, Vacuum Fluorescent, etc. 579, 1245, 1284
- Receiving 1239-1245, 1254, 1255, 1257-1263 1284, 1285, 1289, 1294
- Rectifying, Gas-Filled 1242-1245, 1249-1252, 1257-1259, 1269, 1271-1273, 1284, 1288, 1289, 1294
- Rectifying, Vacuum 1243-1245, 1249-1252, 1257-1262, 1269 1284, 1288
- Switching 1284

 © United Technical Publications

Tubes (continued) Page
- TV Camera Pickup 1266, 1267, 1288, 1289
- Thyratron 1242, 1253, 1257-1260, 1269, 1270, 1284, 1288, 1294
- Transmitting 1241, 1249-1252, 1257-1263, 1267-1269, 1284, 1287, 1288
- Traveling Wave Amp. 1241, 1247, 1288
- Voltage Reference Or Regulating 1246, 1257, 1284

Tubing
- Glass Fiber Insulation 719, 1356, 1397, 1398
- Heat Shrinkable 612, 613, 721-724, 1315, 1316, 1354, 1397-1400
- Plastic (Also See Tubing, Spaghetti) 718, 728, 1313, 1315, 1316, 1354, 1357, 1396, 1397
- Precious Metal 1355
- Shrinkable (See Tubing, Heat Shrinkable)
- Spaghetti 505, 602, 718, 720, 1089, 1313-1316, 1355-1357, 1396-1398
- TFE 505, 720, 1314, 1354, 1357
- Zipper 1312

Tun-O-Brite Tuner Spray 260
Tun-O-Foam Tuner Lubricant Cleaner 260
Tun-O-Wash Cleaner Degreaser 260
Tuners, AM/FM 70, 93, 307
Tuners, TV & FM 183
TURNER MICROPHONE CO. 86, 87
Turntables, Recording & Transcription 100
Tweezers, Hand & Vacuum 1089, 1103
Twist-Lok Capacitors 218-221
Ty-Clip Tools 1437
Tykon Connectors 345

U

Ucinite Jacks & Plugs 368
Ultracolor Picture Tubes 1256
Ultracompact Transformer 1233
UNGAR, DIV. OF ELDON INDUSTRIES 1105-1108
Uniceram Capacitors 183
Unijax Phone Jacks 512
UNION CARBIDE CORP., CONSUMER PRODUCTS DIV. (Eveready) 763-769
Uniline Speaker Columns 90
Uniswitch Switches 524
UNITED PAGE, INC. 1294
UNITED TRANSFORMER CO., DIV. OF TRW
- Coils & Inductors 282, 283
- Filters 600, 601
- Transformers 1226-1237

UNIVERSITY SOUND, DIV. OF LTV LING ALTEC 88-93

V

Vac-U-Sel Double/Diodes 995
Vacombo Tool Kits 1112
VACO PRODUCTS CO.
- Terminals, Connectors 538, 539
- Tools 1110-1112

Vam Variable Capacitors 182
Variductor Coils 283
Variflex Speaker Systems 94
Varipak Card Enclosures 390
Varipower Autotransformers 1234
VARO SEMICONDUCTOR DIV. 1011
VECTOR ELECTRONICS, INC. 268-274
Vectorbord Breadboards 268
VERO ELECTRONICS, INC. 276, 277
Versa Cabinets 116
Versakrimp Terminals 547-558
Verti-Lytic Capacitors 214
Vibrakrimp Terminals 547-558
Vibrators (Frequency Converting) 753, 812, 970
Viewing Hoods, Cathode Ray Tube 287
Vitamin Q Capacitors 233, 234
Vitrohm Resistors 969
Volt-Pac Variable Transformers 1172, 1173
Volt-Pac Voltage Regulators 777
Voltab Power Supplies 805

Page
Voltmeters (See Meters, Volt)
Voltohmyst Meters 645-648
Voltprobe Voltage Testers 621

W

WABER ELECTRONICS, INC. 540-545
WALDOM ELECTRONICS, INC.
- Connectors, Terminals 546-562
- Fastening Devices 1440
- Hardware 614-619
- Knobs, Dials, Drives 592-596
- Switches 1076

WALL MFG. CO. 1109
WANLASS ELECTRIC CO. 814-816
WARD LEONARD ELECTRIC CO.
- Power Rheostats 985
- Resistors 968, 969

Washers (See Fasteners)
Welding Equipment and Accessories
- (Also See Controls, Welding; Timers, Welding) 1100

WELLER ELECTRIC CORP.
- Soldering Guns 1119
- Soldering Tools 1118

Wescolite Solder Kits 258
WHARFDALE SPEAKERS 94
Wide-Vue Panel Meters 670-672
Wire, Antenna (All Types) 1358, 1368, 1369, 1401, 1438
Wire
- Bare, Copper 1358, 1394, 1401
- Bare, Copper-Clad 1438
- Bare, Nickel-Chrome 1394
- Bare, Silver-Plated 1363
- Glass Insulated 1296, 1300, 1311, 1342, 1343, 1360, 1378, 1379, 1402, 1405
- Guy 25, 602
- High Temperature 1300, 1344, 1362, 1403-1409, 1417
- High Voltage 1300, 1341-1344, 1360-1363, 1378-1382, 1402-1406, 1416, 1439
- Hookup-Pushback (All Types) 511, 1296-1298, 1300, 1311, 1336, 1341-1345, 1360-1363, 1378-1383 1401-1404, 1409, 1407, 1416, 1438
- Lead-In & Ground 25, 1383, 1408, 1416
- Litz 1439
- Magnet 1358, 1394, 1401, 1439
- Resistance & Filament 1394
- Shielded 1296, 1298, 1342, 1344, 1360-1362, 1378, 1379, 1381, 1403, 1404, 1408, 1416, 1438
- TFE Insulated 1300, 1345, 1382, 1405, 1407, 1417
- TestLead 511, 1112, 1308, 1336, 1363, 1395, 1413, 1416, 1439

Wire & Cable Ties 502, 619, 1418, 1419, 1437, 1440
Wire Cutters, Hand Operated 1080, 1091, 1117
Wire Markers (All Types) — Also See Strips, Marker & Fanning 1437
Wire Measuring & Cutting Machines 1359
Wire-Measuring Gauges 1094
Wire Shielding 1344, 1359, 1395, 1400
Wire Strippers, Hand Operated 539, 1079, 1080, 1088, 1091, 1103
Wire Strippers, Thermal 1091
WORKMAN ELECTRONIC PRODUCTS, INC. 970
WORNER ELECTRONIC DEVICES 748, 749
Wrapid Jacks 333
Wrenches 1081, 1089, 1095, 1101, 1103, 1111, 1112, 1114
Wrapid Terminal Blocks 335

X - Y - Z

XCELITE, INC. 1113-1117
Yokes, Deflection, Cathode-Ray Tube 1089
Zener Diodes (See Diodes, Zener)
ZENITH SALES CO. 1295
Zero-Mist Coolant Spray 263
Zipper Tubing (See Tubing, Zipper)

THE RADIO-ELECTRONIC MASTER

GUIDE TO PRODUCT SECTIONS

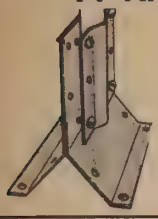
As publishers of The Radio-Electronic MASTER, we take great pride in the fact that this publication has reflected the progress and growth of the electronics industry for more than 35 years.

This MASTER catalog is divided into the **33 Product Sections** described below. These Product Sections broadly categorize related electronic products and services so that you can quickly compare similar items wtihin each section. However, to locate specific items, always refer to the General Index on the following pages. NOTE: Catalog pages are arranged alphabetically by manufacturers' names within each section wherever possible.

Sec. 1200 Pages 21 thru 25	Antennas, Towers & Accessories
Sec. 1300 Pages 26 thru 52	Audio: High Fidelity Tuners, Amplifiers, Sound Systems, Intercoms, Megaphones, Kits
Sec. 1320 Pages 53 thru 94	Audio: Speakers & Systems, Enclosures, Microphones, Headphones, Accessories
Sec. 1340 Pages 95 thru 106	Audio: Recording & Playback Equipment, Magnetic Tape, Accessories
Sec. 1400 Pages 107 thru 168	Cabinets, Chassis, Racks, Containers, etc.
Sec. 1500 Pages 169 thru 257	Capacitors (All Types)
Sec. 1600 Pages 258 thru 265	Chemicals, Adhesives, Cleaners, Coatings, Paints, Varnishes, Lubricants, etc.
Sec. 1700 Pages 267 thru 277	Circuit Assemblies, Circuit Boards, Breadboards & Breadboarding Kits
Sec. 1800 Pages 278 thru 283	Coils (Inductors, Toroids), Assemblies, Forms
Sec. 1900 Pages 284 thru 307	Communications Equipment (Car Radios, Citizen's Band, Amateur)
Sec. 2100 Pages 308 thru 562	Connectors (Electrical): Clips, Plugs, Jacks, Receptacles, Sockets, Terminals, Terminal Boards
Sec. 2200 Pages 563 thru 575	Controls, Timers, Alarms, Counters, Control Components & Systems
Sec. 2300 Page 576	Crystals & Tuning Forks, Mechanical Resonators
Sec. 2400 Pages 577 thru 596	Panel Components (Including Lighting)
Sec. 2600 Page 597	Fans, Blowers, Cooling Equipment
Sec. 2700 Pages 598 thru 601	Filters — General Purpose
Sec. 2800 Pages 602 thru 619	Hardware (Non-Current Carrying): Bolts, Clamps, Fasteners, Nuts, Screws, Washers, etc.
Sec. 2900 Pages 620 thru 717	Instruments (Electrical Measuring & Test)
Sec. 3100 Pages 718 thru 729	Insulators, Insulating Material & Parts
Sec. 3130 Pages 730 thru 733	Integrated Circuit & Hybrid Microcircuits
Sec. 3500 Pages 734 thru 738	Motors, Rotating Components, Accessories
Sec. 3700 Pages 740 thru 749	Photoelectric Equipment, Components & Controls
Sec. 4000 Pages 750 thru 816	Power Supplies, Converters, Inverters, Vibrators, Batteries, Flashlights, etc.
Sec. 4200 Pages 817 thru 820	Publications: Textbooks, Reference Handbooks, etc.
Sec. 4500 Pages 821 thru 928	Relays, Solenoids
Sec. 4700 Pages 929 thru 970	Resistors, Fixed
SEC. 4750 Pages 972 thru 985	Resistors, Variable (Potentiometers, Rheostats)
Sec. 4800 Pages 986 thru 1011	Semiconductor Devices (Diodes, Transistors), Rectifiers (Non-Tube Types), Heat Dissipators for Semiconductors
Sec. 5100 Pages 1012 thru 1076	Switches, Circuit Breakers, Fuses
Sec. 5400 Pages 1078 thru 1119	Tools (Hand & Power), Soldering Equipment
Sec. 5600 Pages 1121 thru 1237	Transformers, Chokes, Reactors, etc.
Sec. 5700 Pages 1239 thru 1295	Tubes, Tube Parts, Shields, Inserts, etc.
Sec. 6000 Pages 1296 thru 1440	Wire, Cable, Lacing Cords, Cord Reels, Plastic Tubing, Harnesses & Harnessing Supplies, etc.

TV HARDWARE - MOUNTS

TV ANTENNA ROOF MOUNTS



TELCO ALL-PURPOSE ANTENNA MOUNT

Mast will mount vertically on roof or horizontally on house wall

For angle of flat roofs and corners. Will support masts up to 1¾" diameter. Made of extra heavy gauge steel, zinc plated, clear chromate dipped — doubly protected against rust. Salt spray and corrosion resistant.

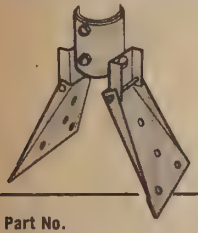
Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
8575	All purpose antenna mount	30 lbs.	12	2.83



HEAVY DUTY ALL-POSITION MAST BRACKET

Mast holder swivels 360 degrees to mount bracket in any posiiton. Ideal for ground-up mast installations. For use with push-up (telescoping) masts. Made of heavy duty steel stock, accommodates large masts up to 3" O.D.

Part No.	Description	Std. Pkg.	Net
9028	Heavy duty all-position bracket	6	2.40

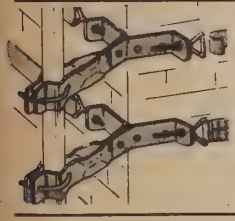


TELCO HINGED TYPE RIDGE MOUNT

Adjustable to peaked or flat roofs and side walls. Made of extra heavy gauge steel with heavy pipe supports. Zinc plated and clear chromate dipped for double rust protection.

Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
9021	Fits masts up to 1½"	19 lbs.	12	2.00
9022	Fits masts up to 2"	22 lbs.	12	3.83
9019	Fits masts up to 2¼"	28 lbs.	12	3.29

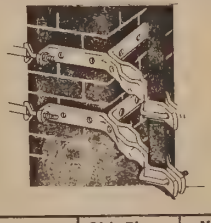
CHIMNEY MOUNTS



TELCO "SNAP-IN" CHIMNEY MOUNT

Fits masts up to 1¾" diameter. Extra heavy gauge steel construction. Doubly protected against rust. Zinc plated and clear chromate dipped for long life. Chimney clearance of 4". Simply "Snap" mast in place and tighten bolts. Easy to handle. Complete with straps and necessary hardware.

Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
	GALVANIZED STEEL STRAPPING—Heavy Duty Strap Clamp			
8612	Mount with Two ¾" x 10' Straps	43 lbs.	12	3.00
8610	Mount with Two ¾" x 12' Straps	43 lbs.	12	3.09
8610-L	Mount with Two ¾" x 18' Straps	49 lbs.	12	3.70
	GALVANIZED STEEL STRAPPING—Speed-E Strap Clamp			
8610-F	Mount with Two ¾" x 12' Straps	43 lbs.	12	3.10
8610-LF	Mount with Two ¾" x 18' Straps	49 lbs.	12	3.70
	STAINLESS STEEL STRAPPING—Heavy Duty Strap Clamp			
8614	Mount with Two ¾" x 10' Straps	43 lbs.	12	3.66
8930	Mount with Two ¾" x 12' Straps	43 lbs.	12	4.46
8930-L	Mount with Two ¾" x 18' Straps	44 lbs.	12	5.54
	STAINLESS STEEL STRAPPING—Speed-E Strap Clamp			
8930-F	Mount with Two ¾" x 12' Straps	43 lbs.	12	4.46
8930-LF	Mount with Two ¾" x 18' Straps	44 lbs.	12	5.54

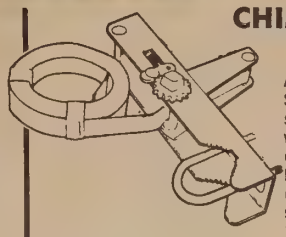


HEAVY DUTY GOLD FINISHED SNAP-IN CHIMNEY MOUNTS

Zinc di-chromate gold finish for long life and beauty. Steel strapping and mounting hardware included.

Part No.	Description	Std. Pkg.	Net
	GALVANIZED STEEL STRAPPING		
8646	Mount with two ¾" x 12' straps	12	3.09
8646-L	Mount with two ¾" x 18' straps	12	3.70
	STAINLESS STEEL STRAPPING		
8946	Mount with two ¾" x 12' straps	12	4.46
8946-L	Mount with two ¾" x 18' straps	12	5.54

CHIMNEY MOUNTS

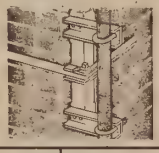


RATCHET-TYPE CHIMNEY MOUNT

A new concept in antenna mounts. Easily installed Supplied with 2 brackets per set. A quality constructed chimney mount designed to withstand high winds and adverse weather conditions. Requires only a wrench to fasten to chimney. The Ratchet Mount is chromate dipped—for long life. Accepts masts up to 1½" in diameter. Available in stainless steel or galvanized strapping in 12 or 18 foot lengths.

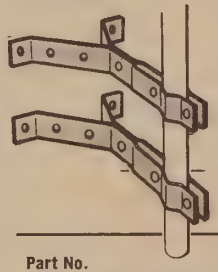
Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
	GALVANIZED STRAPPING ¾"			
8006	Mount with Two 12' Lengths of Strapping	42 lbs.	12	4.33
8006-L	Mount with Two 18' Lengths of Strapping	48 lbs.	12	4.94
	STAINLESS STEEL STRAPPING ¾"			
8008	Mount with Two 12' Lengths of Strapping	42 lbs.	12	5.18
8008-L	Mount with Two 18' Lengths of Strapping	48 lbs.	12	6.17

HEAVY DUTY SINGLE STRAP CHIMNEY MOUNT WITH RATCHET



One piece rugged construction, single triple-duty ratchet strap. Faster, easier, safer and neater than regular two bracket type mounts. All materials are extra heavy duty. Includes aluminum chimney corner guards.

Part No.	Description	Std. Pkg.	Net
8010	Dual mount with ratchet and 12' of stainless steel strapping	6	7.21
8010-L	Dual mount with ratchet and 18' of stainless steel strapping	6	7.65

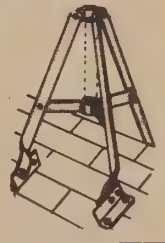


TV ANTENNA WALL MOUNTS

TELCO "SNAP-IN" WALL MOUNT

Simply snap mast into brackets, tighten, and the job is done. brackets made of heavy gauge steel, zinc plated and clear chromate dipped for long life. Individually boxed, all hardware included. Accepts masts up to 1¾" diameters.

Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
8302	Wall Mounts, 2¼" Clearance	35 lbs.	24	1.36
8304	Wall Mount, 4" Clearance	21 lbs.	12	1.76
8306	6" Snap-In Wall Mount	28 lbs.	12	2.22



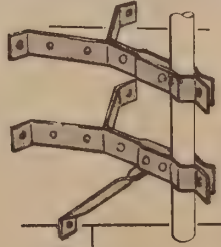
TRI-POD TOWER ANTENNA BASES

1¼" diameter galvanized steel legs offer superior strength and quality. Mount accepts masts up to 1¾" in diameter to support large antenna configurations.

EASY INSTALLATION:

1. Mount tower on roof.
2. Remove nut and bolt from leg.
3. Tilt tower to install antenna.
4. After installing antenna, raise tower, replace nut and bolt.

Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
9143	5 ft. Tower	13 lbs.	1	9.10
9144	3 ft. Tower	11 lbs.	1	5.25



TELCO MASTER DELUXE "SNAP-IN" WALL MOUNT

Brackets are spaced 16" wide for fastening to 16" 2 x 4 centers. Eliminates "side sway" of antennas. Made of extra heavy gauge steel zinc plated and clear chromate dipped for duble weather protection. Will accept masts up to 1¾" diameter. Individually boxed, all hardware included.

Part No.	Description	Wt. per Std. Ctn.	Std. Ctn.	Net
8308	8" Snap-In Wall Mount	40 lbs.	12	3.09
8312	Wall Mount, 12" Clearance	57 lbs.	12	3.78
8318	Wall Mount, 18" Clearance	72 lbs.	12	5.03
8324	Wall Mount, 24" Clearance	62 lbs.	6	6.92

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

© United Technical Publications

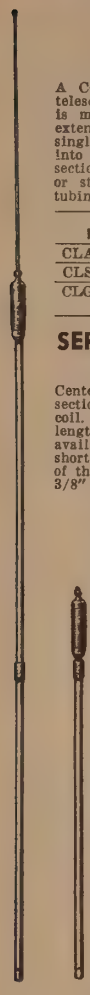
Net

PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

SERIES C CENTER-LOADED MARINE ANTENNAS

A Center-Loaded Collapsible type Antenna, consisting of two telescoping, adjustable base sections on which the loading coil is mounted, with a tapered top whip section, giving a total extended length of about 19 feet. This Antenna collapses to a single unit with the whip section telescoping through the coil into the lower section, making a collapsed length of 7 feet. The sections are of seamless aluminum, polished or gold anodized, or stainless steel and the coil is wound on low-loss bakelite tubing and treated after assembly with weatherproof coating.

No.	Type	Base O.D.	Base I.D.	Wt. Lbs.	Net Selling Price
CLA-619	Aluminum	1.000"	.834"	5	$36.00
CLS-1119	Stainless	1.000"	.900"	7	66.00
CLGA-619	Gold Anodized Aluminum	1.000"	.834"	5	39.00



SERIES C

SERIES B CENTER-LOADED ANTENNAS FOR MOBILE & MARINE USE

Center-Loaded Whip-Type Antennas consist of a standard base section or spring-type on which is mounted a special Premax coil. The top is a taper-ground stainless steel whip 6 ft. in length, giving a total overall height of 9 ft. Various coils are available or the standard 75-meter coil can be adapted by shorting out turns on the coil. Antennas can be used with any of the Standard Premax Mountings shown below, or will fit any 3/8" x 24-thread mounting.

NO.	FREQ.	Net Selling PRICE
BXS-14	14,000 kc. (20M.)	$15.00
BXS-23	2374 kc. (CAP)	15.60
BXS-31	3105 kc. (APT)	15.60
BXS-38	3800 kc. (75M)	15.60
BXS-43	4325 kc. (CAP)	15.60
BXS-46	4585 kc. (CAP)	15.60
BXM-25	2000 to 3000 kc. (Marine)	15.60
	(Same as BXS but with Spring)	
BSS-14	14,000 kc. (20M.)	25.20
BSS-23	2374 kc. (CAP)	27.00
BSS-31	3105 kc. (APT)	27.00
BSS-38	3800 kc. (75M.)	27.00
BSS-43	4325 kc. (CAP)	27.00
BSS-46	4585 kc. (CAP)	27.00
BSM-25	2000 to 3000 kc. (Marine)	27.00



Style B Coil

BX Mast Extension

Type BXS

Type BSS

SERIES B COILS

Premax also supplies the Series "B" coils in the standard frequencies above. Special frequencies available on request.

List Price .....$9.00 ea.

MAST EXTENSIONS

Polished Stainless Mast Extensions—threaded 3/8"-24 on both ends and supplied with stainless nuts and lockwashers. Available in 12", 18", 24", 30" and 36" lengths.

Prices range from $3.90 to $9.00 each

MOBILE VHF WHIPS

Style CD-11 Series—Permanent type. Porcelain insulator mounts thru 1/2" hole in rooftop.

Style CD-21 Series—Emergency type. Attaches by heavy duty suction cup.

NO.	FREQ.	Net Selling PRICE
CD-112	108 to 120 mc.	$3.60
CD-114	144 mc.	3.60
CD-115	152 to 162 mc.	3.60
CD-212	108 to 120 mc.	2.52
CD-214	144 mc.	2.52
CD-215	152 to 162 mc.	2.52



CD-11



CD-21

GROUND PLANE ANTENNAS FOR POINT-TO-POINT USE

For point-to-point installations, Premax has two VHF Antennas: The Style GP-3 which has elements of heavily-plated spring steel with skirt wires that can be bent down to any angle to match coax cable. Mounting is within a water-proof housing that fits standard 1/2" pipe. Cable carries down thru pipe.

NO.	FREQ.	USE	PRICE
GP-312	120 mc.	For aircraft and CAP.	$7.20
GP-314	140 mc.	For 2 meter and CD.	7.20
GP-315	150 mc.	For police and taxi	7.20

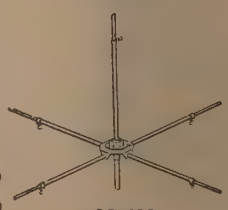


GP-3

PREMAX ADJUSTABLE GROUND PLANE ANTENNAS 20-60 mc

Another low-cost type Ground Plane Antenna is adjustable from 20 to 40 mc. or 40 to 60 mc. Standing wave ratio matching to 52-ohm line is 1.07 to 1.13 and to 72-ohm line is 1.27 to 1.23 depending on type of transformer cable. All-aluminum construction employing adjustable tubular elements.

GP-430	Adjustable 20-40 mc.	$45.00
GP-450	Adjustable 40-60 mc.	36.00



GP-400 Series

MOBILE MOUNTINGS FOR USE WITH WHIPS WITH 3/8"—24 MALE THREAD



Type CA

CA BUMPER MOUNTING

"Chain Style — clamps on any bumper with 1" clearance; no drilling; theft-proof.

Price $9.00



Type SA-2

SA-2 SPRING ADAPTOR

Stainless steel Spring Adaptor—can be attached to types R-2, R-3, L-1, CA and NA-1 to provide greater flexibility. Height 4 1/4", diameter 2 3/8".

Price $9.60



Type R-2

R-2 UNIVERSAL COAX TYPE MOUNTING

Solid Polished Aluminum splitball can be adjusted to any angle. Has shielded coax connection and stainless hardware.

Price $11.40



Type R-3

R-3 UNIVERSAL MOUNTING

Solid Polished Aluminum Swivel Ball. Heavy stainless steel backup plate with grounding screws. Stainless steel hardware.

Price $14.40



Type NA-1

TYPE NA-1

Bumper mounting with ceramic cone insulator and steel bracket.

Price $8.40



Type RS-2

TYPE RS-2 COMBINATION

Similar to R-2 except has spring as shown under SA-2.

Price $24.00



Type F

TYPE F

30° adjustable mounting for fender, cowl or gravel pan. Chromeplated brass with phenolic insulation.

Price $13.80



Type V

TYPE V

Thru-deck mounting designed for Style BX and BS Center-Loaded Marine Antennas. White porcelain cones with a maximum opening for 1-1/2" deck. Stud threaded 7/16"-24.

Price $8.40

MINI-MOBILE ANTENNAS

Model CBMSF-27 25-50 MHz
New from Premax — Mini CB Spring and Chrome-plated Adjustable 30° Mounting for roof, fender or trunk. Overall height only 27". Stainless steel Whip, chrome-plated brass base with heavy phenolic insulator. Complete with 16' RG-58/U 50-OHM coaxial cable with connector and adapter.
Price $22.20

Model CBMS-25
Same as CBMSF-27 but without Adjustable Mount.
Price $13.50

Model CBF-24
Same as CBMSF-27 but without Spring.
Price $19.50

CITIZENS BAND 27 MHz WHIP MOBILE ANTENNAS

Model CB-4 includes type RS-2 Mobile Mounting and Style VS-9108 Whip Antenna.
Price $32.10

Model CB-5
Same as above but with type S-2 Mobile Mounting and Style TS-8108 Whip Antenna.
Price $22.20

Model CB-3
Same as CB-4 but without spring.
Price $18.60



CB-4



CBMSF-27

ALSO AVAILABLE: CITIZEN BAND BUMPER MOUNTINGS WITH FULLY ADJUSTABLE CHAIN TO FIT ANY BUMPER CONTOUR. AVAILABLE WITH OR WITHOUT SPRING.

PREMAX PRODUCTS DIV., CHISHOLM-RYDER CO., INC.

Net

© United Technical Publications

PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

VERTICAL TELESCOPING ANTENNAS
PREMAX STAINLESS STEEL ANTENNAS

Premax stainless steel antennas, fully telescoping and adjustable, have a locking device that holds the sections firmly at any desired point insuring a perfect electrical contact. Made of a high grade polished stainless steel tubing, hard-drawn to an extremely high tensile and yield strength, they are well suited for the most severe strains from high seas or winds.

PREMAX ALUMINUM ANTENNAS

Premax aluminum antennas are lightweight, corrosion resistant and have adequate strength to meet practically all needs for marine, commercial and mobile installations that demand convenience in erecting and dependable performance. They are constructed of highly polished, specially tempered aluminum tubing engineered to withstand wind velocities up to 60 miles per hour. Also available in gold anodized finish.

SPECIFICATIONS & DESCRIPTIONS OF TELESCOPING VERTICALS

NO.	DESCRIPTION	EXTD.	COLL.	BASE O.D.	BASE I.D.	WGT.	PRICE
SS-1118	3-Sec. Stainless	18'4"	6'3"	.750"	.680"	6	$ 54.00
SS-1124	4-Sec. Stainless	24'3"	6'3"	1.000"	.900"	9	81.00
SS-1130	5-Sec. Stainless	30'0"	6'4"	1.250"	1.120"	13	111.00
SS-1135	6-Sec. Stainless	35'7"	6'4"	1.500"	1.370"	19	153.00
AL-312	2-Sec. Aluminum	12'4"	6'4"	.500"	.334"	1½	9.00
AL-518	3-Sec. Aluminum	18'5"	6'4"	.750"	.584"	3	18.00
AL-324	4-Sec. Aluminum	24'4"	6'4"	1.000"	.834"	5	27.00
AL-530	5-Sec. Aluminum	30'0"	6'5"	1.250"	1.084"	7	36.00
AL-535	6-Sec. Aluminum	35'8"	6'5"	1.500"	1.310"	12	51.00

Gold anodized aluminum finish ..... $12.00 to $58.50

BASE MOUNTINGS FOR VERTICALS



TYPE 1 BASE INSULATOR

Heavy-duty type Base Mounting Insulator with compression rating up to 10,000 lbs. Has wet-process brown-glazed porcelain cones. Available in galvanized malleable iron, gold anodized aluminum, and chrome-plated brass, in rigid-post, hinged-post. Ht. to post base, 7 to 9 inches. Wt. 8 lbs. Alum. 5 lbs.

Price ..... $33.00 to $66.00



TYPE 6 BASE INSULATOR

For marine, mobile unit, roof-top or tower. Lead-thru construction permits connections below deck. Flanges 6" in diameter with 6 bolts on a 5" circle. For ½" to 3" deck. Available in galvanized malleable iron, gold anodized aluminum, and chrome-plated brass. Rigid post, and hinged post styles. Ht. from flange to post base, 3" to 5". Wt. 11½ lbs. Alum. 8 lbs.

Price ..... $48.00 to $102.00

STANDOFF INSULATORS



TYPE 10-S

A heavy-duty Insulator with chrome-plated brass base and head caps—regular or hinged clamps. Insulator is brown-glazed porcelain in extra heavy style. Ht. to center of clamp, about 4½". Wt., 3 lbs.

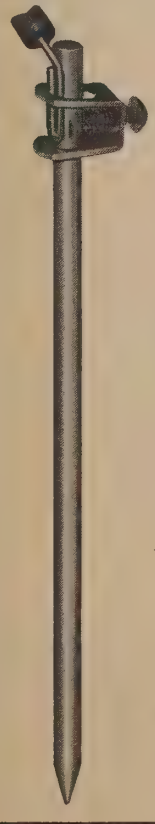
Price ..... $43.20 to $78.00



TYPE 13-S

Heavy, rugged cast caps and base plates in aluminum, plain or gold anodized, or chrome-plated brass. Heavy brown-glazed porcelain insulator, 3 inches in diameter. Ht. to center of clamp, 4¾". Wt., 2½ lbs.

Price ..... $12.00 to $31.80



GET POSITIVE PROTECTION FOR YOUR EQUIPMENT WITH A PREMAX GROUND ROD

High quality, low cost Premax Ground Rods make it impractical to fuss with makeshift grounding methods. Made of smooth drawn steel with newly designed pencil-point tip for easier driving. Heavy copper plate prevents rust and assures sensitive electrical contact. Available in 4 ft. to 8 ft. lengths; ⅜", ½" and ⅝" diameters. Styles J and G have simple clamp with set-screw for attaching ground lead. Style H has a ⅛" hole drilled in rod through which ground lead can be fastened. Style X is a plain rod to which ground lead can be clamped or soldered.

Size	Weight per 100 Pieces	STYLE J & G Screw Clamp No.	Price	STYLE H With Hole No.	Price	STYLE X Plain No.	Price
⅜"x4'	160	J-64	.90				
⅜"x6'	230	J-66	1.14				
⅜"x8'	320	J-68	1.35				
½"x6'	400	G-86T	1.83	H-86T	1.86	X-86T	1.71
½"x8'	540	G-88T	2.22	H-88T	2.25	X-88T	2.04
⅝"x6'	630	G-106T	2.67	H-106T	2.70	X-106T	2.58
⅝"x8'	840	G-108T	3.30	H-108T	3.33	X-108T	3.21

GALVANIZED RODS QUOTED ON REQUEST

Freight Allowance of up to $2.00 per cwt. granted on all Ground Rods based on lowest rail freight rate.

MOBILE WHIP ANTENNAS

HEAVY DUTY TAPERED STAINLESS—TYPE ES

Solid one-piece taper-ground whips, ¼" at base tapering to 3/32" at tip with top ball. High-tensile stainless steel fabricated by special formula, comparing favorably with the best spring steel, yet having excellent corrosion-resistant properties.

STANDARD WEIGHT TAPERED STAINLESS WHIP WITH NON-REMOVABLE ADAPTOR—TYPE TS

Stainless steel whips of extremely high tensile strength with a permanent type stainless adaptor, with ⅜" male thread.

STANDARD WEIGHT WHIP WITH REMOVABLE ADAPTOR—TYPE VS

Same whip as above except supplied with a removable adaptor locked in place by dual set screws.

NO.	LENGTH	PRICE
ES-760	60"	$ 6.30
ES-772	72"	6.30
ES-784	84"	7.20
ES-796	96"	7.20

AD-700 — Separate Stainless Adaptor with ⅜" male thread for ES and ES series whips. $2.04

NO.	LENGTH	PRICE
TS-860	60"	$ 6.30
TS-872	72"	6.30
TS-884	84"	6.75
TS-896	96"	6.75
TS-8108	108"	7.20
VS-960	60"	7.20
VS-972	72"	7.20
VS-984	84"	7.65
VS-996	96"	7.65
VS-9108	108"	8.10

AD-900 Same as AD-700 except drilled for VS series whips. $2.04

PRICES EFFECTIVE AT TIME OF PRINTING AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

PREMAX PRODUCTS DIV., CHISHOLM-RYDER CO., INC.

South River — THE COMPLETE QUALITY LINE OF ANTENNA MOUNTING ACCESSORIES

Since the inception of commercial television 25 years ago, South River Metal Products Co., Inc. has been the originator and pioneer developer of the most popular Antenna Mountings and Accessories in use today. South River's design and quality of workmanship have become the accepted standard for excellence. Each product has been specifically designed to make the installer's job easier, quicker and safer.

Only South River makes such a broad line of Antenna Mounting and Accessories to meet every conceiveable requirement for mounting a TV or FM Antenna.

CHIMNEY MOUNTS

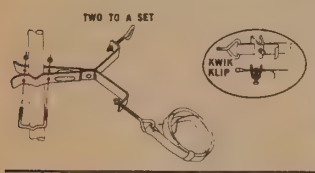
HEAVY DUTY "Y" TYPE CHIMNEY MOUNTS ("U"-BOLT TYPE MAST HOLDER)



Heavy steel construction, Hot-Dip Galvanized. Assembled with 3 large rivets. Furnished with speedy Kwik Klip banding fasteners.

DM-36-ST ¾" x 12 Ft. Stainless Steel Straps .....**Retail Price $7.98**

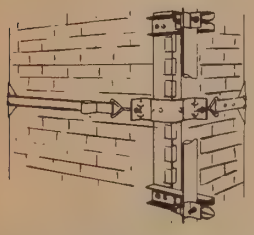
HEAVY-DUTY "Y" TYPE CHIMNEY MOUNTS ("SNAP-IN" TYPE MAST HOLDER)



Heavy gauge embossed steel construction, Hot-Dip Galvanized. Exclusive wide-flared, rounded edge lips on mast holder, facilitates mast installation. Special "U"-bolt on mast socket eliminates "difficult-to-install" screws and nuts.

SN-50-ST ¾" x 12 Ft. Stainless Steel Straps .....**Retail Price $7.98**

RCA TYPE — SINGLE STRAP CHIMNEY MOUNTS

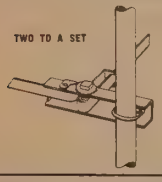


One piece, completely preassembled, heavily embossed, riveted steel construction, Hot-Dip Galvanized. Extra heavy stainless steel strap. Furnished with aluminum chimney corner protectors and stainless stel eye bolts. Utilizes stainless steel fold-over banding fastener.

UM-1-ST ¾" x 12 Ft. Stainless Steel Straps ....**Retail Price $10.97**

UM-1-ST-XL ¾" x 18 Ft. Stainless Steel Straps ....**Retail Price $11.67**

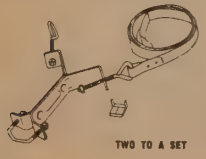
RATCHET TYPE CHIMNEY MOUNTS



Simplest and fastest installing chimney mount available. Major components factory assembled. Heavy gauge embossed steel zinc-plated with a golden iridite finish. Ratchet of high strength, forged aluminum.

RT-ST ¾" x 12 Ft. Stainless Steel Straps **Retail Price $8.60**

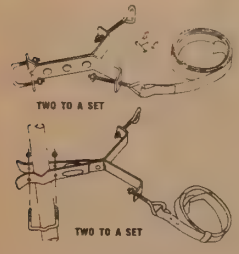
COMPLETELY STAINLESS STEEL CHIMNEY MOUNTS



The ultimate in corrosion resistance and strength. Mount and all components fabricated of rustproof stainless steel. Embossed for extra strength. "U"-bolt type mast socket. Utilizes stainless steel fold-over banding fasteners. Lifetime warranty against rust.

ST-DM ¾" x 12 Ft. Stainless Steel Straps **Retail Price $14.88**

GOLD VINYL COATED CHIMNEY MOUNTS



Heavy-duty steel riveted construction brackets. Coated with 25 year warranteed gold vinyl finish. All remaining hardware and components of Stainless Steel for a completely rustproof installation. Gold vinyl coated under Pat No. 2844489.

V-DM-ST "Y" type ¾" x 12 Ft. Stainless Steel Straps..**Retail Price $9.53**

V-SN-ST Snap-In type ¾" x 12 Ft. Stainless Steel Straps **Retail Price $9.68**

Many other Chimney Mounts are available — Mounts with Galv. straps, extra long straps, plated models etc. Write for our latest complete catalog.

WALL BRACKETS — EAVE MOUNTS

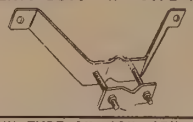
"Y" TYPE ALUMINUM 3" WALL BRACKETS



Heavily embossed one piece extruded non-rusting aluminum construction. "U"-bolt type mast socket. Serrated extruded teeth on bracket prevents mast tube from turning into high winds. Lifetime warranty against rust.

WB-3 3" Clearance.....**Retail Price $3.01**

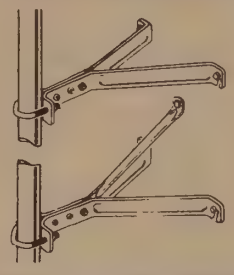
HEAVY DUTY "W" TYPE WALL BRACKETS (3" and 4")



Heavily embossed steel construction. Reverse "U"-bolt and "V"-plate facilitates installation of antenna mast.

NT-3 3" Clearance.....**Retail Price $1.84**
NT-4 4" Clearance.....**Retail Price $2.02**

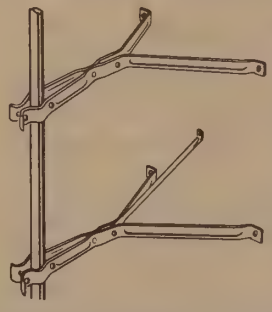
"Y" TYPE 9", 12", 15", 18", 24" AND 36" WALL BRACKETS ("U" BOLT TYPE MAST HOLDER)



Heavy gauge embossed steel, Hot-Dip Galvanized. Riveted construction. Tubular tripod support legs for additional rigidity. Factory preassembled. "U"-bolt type mast holder. Feet with snap lock feature for easy wall mounting.

WB-9 9" Clearance, One Support Leg **Retail Price $4.50**
WB-12 12" Clearance, One Support Leg **Retail Price $6.29**
WB-15 15" Clearance, One Support Leg **Retail Price $7.43**
WB-18 18" Clearance, One Support Leg **Retail Price $8.16**
WB-24 24" Clearance, Two Support Legs **Retail Price $11.17**
WB-36 36" Clearance, Two Support Legs **Retail Price $14.15**

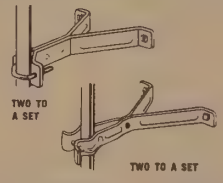
"SNAP-IN" TYPE WALL BRACKETS



Heavy gauge embossed steel, Hot-Dip Galvanized. Riveted construction tubular tripod support legs for additional rigidity. Factory preassembled. Wide-flared, rounded-edge lips on mast holder. facilitates mast installation.

SN-6 6" Clearance, No Support Legs **Retail Price $3.22**
SN-8 8" Clearance, No Support Legs **Retail Price $3.80**
SN-9 9" Clearance, One Support Leg **Retail Price $4.50**
SN-12 12" Clearance, One Support Leg **Retail Price $6.29**
SN-15 15" Clearance, One Support Leg **Retail Price $7.43**
SN-18 18" Clearance, One Support Leg **Retail Price $8.16**
SN-24 24" Clearance, Two Support Legs **Retail Price $11.17**

GOLD VINYL COATED 6" WALL BRACKETS

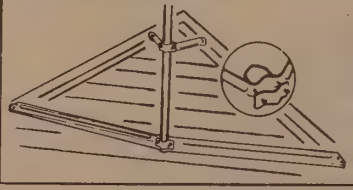


Heavy-duty steel riveted construction brackets. Coated with 25 year warranteed gold vinyl finish. All remaining hardware and components of Stainless Steel for a completely rustproof installation. Gold vinyl coated under Pat No. 2844489.

"Y" TYPE WITH "U" BOLT MAST SOCKET
V-WB-6 6" Clearance....**Retail Price $4.06**
SNAP-IN TYPE
V-SN-6 6" Clearance....**Retail Price $4.21**

Wall Brackets are available in sizes from 3" to 36". EXTRA HEAVY DUTY, and Adjustable models are also available. Refer to latest catalog for complete information.

ONE-PIECE EAVE MOUNTS



Heavy gauge embossed steel construction, Hot-Dip Galvanized. Reverse "U"-bolt and "V"-plate type mast holder.

EM-30 30" Spread with 3" Upper Bracket **Retail Price $6.37**
EM-48 48" Spread with 3" Upper Bracket **Retail Price $8.74**
EM-60 60" Spread with 4" Upper Bracket **Retail Price $10.97**

Special Under Eave Mounts are also available for installations. Refer to our latest catalog for complete information.

THIS FIRM MANUFACTURES A LARGE VARIETY OF MOUNTINGS AND ACCESSORIES NOT SHOWN ABOVE.
Write for Complete TV Accessory Product Catalog.

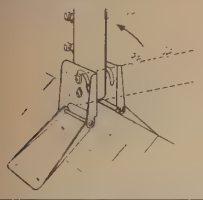
SOUTH RIVER METAL PRODUCTS COMPANY, INC.

© United Technical Publications

South River — THE COMPLETE QUALITY LINE OF ANTENNA MOUNTING ACCESSORIES

ROOF MOUNTS — PARAPET MOUNT

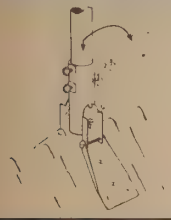
HEAVY DUTY COMBINATION PEAK AND FLAT ROOF MOUNT WITH EXCLUSIVE SOUTH RIVER "WALK-UP DROP-LOCK," (Pat. #2,734,708)



Steel riveted construction. Zinc plated golden iridite finish. Furnished with two 5/16" set screws and locking nuts. Mast socket of heavy wall pipe. Factory assembled. Must be guyed.

PFM-30 Fits Masts Up To 1½" O.D. with Steel Mast Socket
Retail Price $4.20

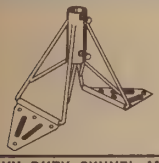
MEDIUM DUTY COMBINATION PEAK AND FLAT ROOF MOUNT



Steel riveted construction. With ear lock to hold mast in vertical position. Furnished with two 5/16" set screws and locking nuts. Zinc plated finish. Mast socket of heavy wall pipe. Factory assembled. Must be guyed.

PFM-90 Steel Mast Socket, Take Masts Up To 1½" O.D.
Retail Price $2.87

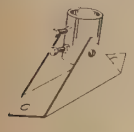
SELF-SUPPORTING PEAK AND FLAT ROOF MOUNT



Steel welded construction hot dip galvanized. Will support masts up to 10' without guying.

PFM-71 Steel Mast Socket. Accommodates Masts Up To 1½" O.D.
Retail Price $5.00

HEAVY DUTY SWIVEL MOUNT



Steel construction. Zinc plated with golden iridite finish. Mast Socket of heavy wall pipe. Furnished with two 5/16" set screws and locking nuts. Factory assembled. Must be guyed.

RM-80 Fits Masts Up To 1½" O.D.
Retail Price $2.25

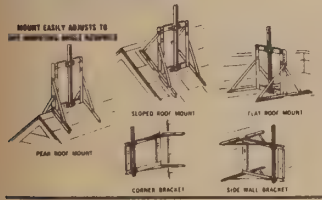
ECONOMY SADDLE MOUNTS



Steel construction. Heavy wall mast socket welded to base. Factory assembled. Furnished with two 5/16" set screws and locking nuts. Must be guyed.

PM-5 Fits Masts Up To 1½" O.D.
Retail Price $3.74

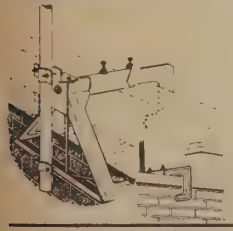
ALL POSITION MOUNT



Easily adjustable for use as a peak roof mount, flat roof mount, sloped roof mount, side wall bracket or corner bracket. Made of heavy gauge steel permanently arc-welded for extra strength and rigidity. Hot-dip galvanized.

APM Fits Masts To 1½" O.D.
Retail Price $6.93

PARAPET MOUNT



Mounts quickly, safely and securely by simply rightening one clamping bolt. Made of heavy gauge embossed steel, arc welded for additional strength and rigidity. Hot-dip galvanized. Adjustable to accommodate parapet walls from 4" to 13" in thickness.

PM Fits Masts To 1½" O.D.
Retail Price $14.05

Additional types of Roof Mounts are available. Refer to our latest catalog.

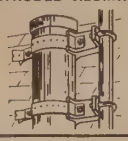
Customary trade discounts apply.
Prices subject to change without notice.

THIS FIRM MANUFACTURES MANY OTHER TYPES OF MOUNTINGS AND ACCESSORIES NOT SHOWN. Write for Complete TV Accessory Product Catalog.

→ **SOME OF THE MANY ADDITIONAL ANTENNA MOUNTING ACCESSORIES AND HARDWARE AVAILABLE FROM SOUTH RIVER**

VENT PIPE MOUNTS — TOWERS — WIRE

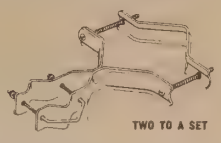
EXTRUDED ALUMINUM VENT PIPE MOUNT



Installs on vent pipes, poles, trees, up to 6" O.D. Guy wires recommended on mast installations higher than 5 ft. when mounted on small residential vents.

P-1-ST Stainless Steel Straps Fits Masts To 1½" O.D.....**Retail Price $4.47**

STEEL VENT PIPE MOUNT



Fits vent pipes from 2" to 5" O.D. Heavy gauge embossed steel — zinc plated. Snap-in mast socket. Guy wires recommended on mast installations higher than 5 ft. on small residential vents.

P-6 Steel Vent Pipe Mount Fits Masts To 1½" O.D.....**Retail Price $4.30**

Additional types of vent pipe mounts available. Refer to latest catalog.

HEAVY DUTY TRI-POD ROOF TOWERS



Available in a hot-dip galvanized or gold baked enamel finish. Heavy-duty, self-supporting tri-pod towers eliminate guying. Heavy tubular (1¼" O.D.) construction. All components embossed for extra strength and rigidity. Adjustable leg spacing. Can be mounted on peak or flat roofs. Recommended for color TV installation where heavy multi-element antennas are used. Complete with pitch patches and hardware. Individually boxed.

Hot-Dip Galvanized Models		Gold Baked Enamel Models		Retail Price H.D. Galv.	Retail Price Gold
HDT-2	2 Ft.	HDT-2G	2 Ft.	$ 8.50	$ 9.13
HDT-25	2½ Ft.	HDT-25G	2½ Ft.	9.46	10.14
HDT-3	3 Ft.	HDT-3G	3 Ft.	10.65	11.32
HDT-5	5 Ft.	HDT-5G	5 Ft.	16.57	17.92
HDT-75	7½ Ft.	HDT-75G	7½ Ft.	23.13	24.48

TRI-POD ROOF TOWERS



Heavy duty 10 ft. self-supporting, welded tri-pod towers. Heavy tubular construction. All components embossed for extra strength and rigidity. No guy wires required. Can be mounted on peak or flat roofs. Recommended for color TV installations where heavy, multi-element antennas are used. Shipped folded; 95% assembled. Individually boxed. Complete with pitch patches and hardware.

HDT-100 10 Ft. Hot-dip Galvanized Steel.....**Retail Price $31.92**
HDT-100G 10 Ft. Gold Baked Enamel Steel.....**Retail Price 33.62**

TRI MOUNT TOWERS



Made of hot-dip galvanized tubing completely assembled ready for installation. Opens like an umbrella. Single wing nut secures Tri-mount in desired mounting position. Complete with mast, hardware, pitch patches and special annular threaded roof nails.

TRM-520 Tri-Mount with 5' x 20 Ga. Mast.....**Retail Price $7.98**
TRM-518 Tri-Mount with 5' x 18 Ga. Mast.....**Retail Price 8.54**
TRM-716 Tri-Mount with 7½' x 16 Ga. Mast.....**Retail Price 10.58**

Additional models of towers are available. Refer to our latest catalog.

GUY WIRES — ALUMINUM GROUND WIRES



Alclad Aluminum Guy Wire — 7/17 gauge — 500# Break Strength.
Economy Alclad Aluminum Guy Wire — 7/18 gauge.
Galvanized Steel Guy Wire — 6/20 gauge.
Galvanized Steel Guy Wire — 6/18 gauge.
Gold Vinyl Coated Steel. Galvanized Guy Wire — 6/20 gauge.
Aluminum Ground Wire — #8 E.C. grade — Dead Soft.
Aluminum Ground Wire — #12 E.C. grade — Dead Soft.

Above wires are available in different put ups. Refer to our latest catalog.



SOUTH RIVER METAL PRODUCTS COMPANY, INC.

BOGEN SOUND SYSTEMS

SERIES "NT" FLEX-PAK® SOLID STATE PA AMPLIFIERS

Unmatched at any price, by any maker, these solid state Flex-Pak series "NT" packaged units are adaptable to a wide variety of applications once served only by custom-designed and custom-fabricated equipment.

Bogen Flex-Pak series "NT" packaged amplifiers will accommodate virtually any audio signal source and provide the flattest response with very low distortion.

Series "NT" Flex-Pak offers the largest combination of features and accessories; to mention a few, individual speech filters for each microphone, panel-calibrated notch filter, output limiting, microphone precedence, remote volume control.

Series "NT" — the "state-of-the-art" in packaged solid state P.A. amplifiers.



■ All-silicon transistors: designed for continuous operation at full output,—20° C. to +55°C. (131°F.); optimum performance assured at extreme temperatures. ■3mic. inputs (Hi-Z) convert to Lo-Z with plug-in transformers, 2 inputs convert to mag. phono/tape inputs. ■ PXA-2 panel-mounting preamplifier provides 2 additional Hi-Z mic. inputs (convertable to Lo-Z) with speech filters and optional remote control, mic. precedence. ■ Remote volume control of each mic. and aux. input with accessories LVP-1 and RVC-2. ■ Optional CMP-1 limiter (adjustable) provides relatively constant output level despite variations in input levels; reduces feedback.

	NT 120 ▩	NT 60 ▩	NT 30 ▩
POWER OUTPUT	120 watts at 1 KHz at less than 2% distortion.	60 watts at 1 KHz at less than 2% distortion.	30 watts at 1 KHz at less than 2% distortion.
POWER RESPONSE	120 watts from 40 Hz to 12 KHz ±2 db at less than 5% distortion.	60 watts from 40 Hz to 12 KHz ±2 db at less than 5% distortion.	30 watts from 40 Hz to 12 KHz ±2 db at less than 5% distortion.
FREQ. RESPONSE	20 Hz to 20 KHz ±1.5 db	20 Hz to 20 KHz ±1.5 db	20 Hz to 20 KHz ±1.5 db
INPUTS	3 High-impedance mic. inputs (XLR connectors), each convertible to 50Ω, 200Ω, 500Ω low-impedance input by means of Model TM200, TM500, TM50 input transformers no. of mic. inputs expandable to 5 by addition of PXA-2 pre-amp accessory; no. of inputs further expandable by means of RPK-30; two inputs convertible to mag. phono by means of jumpers. 2 AUX. inputs (Fader control). 1 Bridging Input, 1 600 ohm, balanced telephone line input by addition of optional WMT-1 transformer, input for remote volume control or mic. precedence, one for each mic. channel plus AUX. channel; input for PXA-2 optional pre-amp, input from limiter.	3 High-impedance mic. inputs (XLR connectors), each convertible to 50Ω, 200Ω, 500Ω low-impedance input by means of Model TM200, TM500, TM50 input transformers no. of mic. inputs expandable to 5 by addition of PXA-2 pre-amp accessory; no. of inputs further expandable by means of RPK-30; two inputs convertible to mag. phono by means of jumpers. 2 AUX. inputs (Fader control). 1 Bridging Input, 1 600 ohm, balanced telephone line input by addition of optional WMT-1 transformer, input for remote volume control or mic. precedence, one for each mic. channel plus AUX. channel; input for PXA-2 optional pre-amp, input from limiter.	3 High-impedance mic. inputs (XLR connectors), each convertible to 50Ω, 200Ω, 500Ω low-impedance input by means of Model TM200, TM500, TM50 input transformers no. of mic. inputs expandable to 5 by addition of PXA-2 pre-amp accessory; no. of inputs further expandable by means of RPK-30; two inputs convertible to mag. phono by means of jumpers. 2 AUX. inputs (Fader control). 1 Bridging Input, 1 600 ohm, balanced telephone line input by addition of optional WMT-1 transformer, input for remote volume control or mic. precedence, one for each mic. channel plus AUX. channel; input for PXA-2 optional pre-amp, input from limiter.
HUM and NOISE (below rated output)	**Mic.** 62 db (with 3 MV input for rated output). **Aux.** 75 db.	**Mic.** 62 db (with 3 MV input for rated output). **Aux.** 75 db.	**Mic.** 62 db (with 3 MV input for rated output). **Aux.** 75 db.
SENSITIVITY	**Mic.** 3 MV-high impedance 0.3 MV with low impedance input transformer. Bridging Input Sensitivity: 150 MV. Bridging Output: 85 MV. **Aux.** 150 MV/1.5-v for rated output.	**Mic.** 3 MV-high impedance 0.3 MV with low impedance input transformer. Bridging Input Sensitivity: 150 MV. Bridging Output: 85 MV. **Aux.** 150 MV/1.5-v for rated output.	**Mic.** 3 MV-high impedance 0.3 MV with low impedance input transformer. Bridging Input Sensitivity: 150 MV. Bridging Output: 85 MV. **Aux.** 150 MV/1.5-v for rated output.
OUTPUTS	Speaker Outputs: 5.2 ohms (suitable for 4-ohm output); 8 ohm; 16 ohm; 25-vC.T. balanced; 70-v balanced WMT-1, Tape booster, Limiter, Bridging.	Speaker Outputs: 8Ω, 16Ω,-25-vC.T. balanced, 70-v balanced. WMT-1, Tape booster, Limited, Bridging.	Speaker Outputs: 5.2Ω (suitable for 4Ω output); 8Ω; 25-vC.T. balanced, 70-v balanced (Note: 25v tap can be used for 16-ohm output). WMT-1, Tape booster, Limiter, Bridging.
LIMITER OUTPUT	150 MV	150 MV	150 MV
REGULATION	2½ db	2½ db	2½ db
TONE CONTROL ACTION	Treble: at 10 KHz-12 db boost; 12 db cut. Bass: at 50 Hz-15 db boost; 15 db cut.	Treble: at 10 KHz-12 db boost; 12 db cut. Bass: at 50 Hz-15 db boost; 15 db cut.	Treble: at 10 KHz-12 db boost; 12 db cut. Bass: at 50 Hz-15 db boost; 15 db cut.
CONTROLS	3 mic. volume controls, each with voice filter pull switch, 1 Aux. control, 2 inputs (fader); 1 notch filter freq. control; 1 master control; 1 treble; 1 bass; notch filter switch (ganged with filter control); high frequency filter switch (ganged with treble control); power switch.	3 mic. volume controls, each with voice filter pull switch, 1 Aux. control, 2 inputs (fader); 1 notch filter freq. control; 1 master control; 1 treble; 1 bass; notch filter switch (ganged with filter control); high frequency filter switch (ganged with treble control); power switch.	3 mic. volume controls, each with voice filter pull switch, 1 Aux. control, 2 inputs (fader); 1 notch filter freq. control; 1 master control; 1 treble; 1 bass; notch filter switch (ganged with filter control); high frequency filter switch (ganged with treble control); power switch.
INDICATORS	Power ON lamp; Overload Indicator Lamp.	Power ON lamp; Overload Indicator Lamp.	Power ON lamp; Overload Indicator Lamp.
PWR. RQMTS.	105-125 volts AC, 50/60 Hz, 360 w.	105-125 volts AC, 50/60 Hz. 180 w.	105-125 volts AC, 50/60 Hz, 120 w.
TRANSISTORS & RECTIFIERS	25 silicon transistors, 2 silicon power diodes, 2 zener diodes, 3 thermal diodes.	23 silicon transistors, 2 silicon power diodes, 2 zener diodes, 3 thermal diodes.	23 silicon transistors, 2 silicon power diodes, 2 zener diodes, 3 thermal diodes.
DIMENSIONS	16⅞" W, 13¼" D, 5¼" H	16⅞" W, 13¼" D, 5¼" H	16⅞" W, 13¼" D, 5¼" H
SHIP. WEIGHT	44 lbs.	36 lbs.	32 lbs.
NET PRICE	$285.00 (Zone 2: $288.95)	$240.00 (Zone 2: $243.25)	$210.00 (Zone 2: $212.90)

Accessories: transformers, limiter-compressor, rack panel kit, remote controller, phono-top, locking plate, etc.

(▩ SOLID STATE)

LEAR SIEGLER, INC. / ISi® BOGEN DIVISION

© United Technical Publications

FLEX-PAK® PA AMPLIFIERS

BOGEN SOUND SYSTEMS

Behind the black and silver panels of these professional quality amplifiers, you'll find circuitry that represents the finest in packaged tube sound equipment.

Flex-Pak, without question, is the industry standard for professional packaged tube amplifiers. Incorporating the most advanced principles of design, these amplifiers offer functions and features that are readily adaptable to a wide variety of applications.

Bogen Flex-Pak amplifiers will accommodate virtually any audio signal source and provide the flattest response with the lowest distortion.

The controls, logically grouped, include individual volume for each microphone and auxiliary input, master volume, bass, treble and power switch. Output jacks for driving tape recorders and booster amplifiers are located on the rear of the chasses. A host of accessories is available for utmost operating flexibility. Flex-Pak . . . engineered for maximum performance.



MX60A/MX30A/ MTX30B Shown with MMS-1



M330A/M60A Shown with MSK-1



M120

	*MTX30B ▩ All Transistor	MX60A	MX30A	M330A	M60A	M120
POWER OUTPUT	30 w. rms @2% (Full pwr: 30-20,000 Hz ±1 db)	60 w. rms @ 2% (Full pwr: 21 30,000 Hz + 1 db)	30 w. rms @2% (Full pwr: 21-30,000 HZ ±1-1/2 db)	30 w rms @ 2%	60 w. rms @ 3%	120 w rms @ 3%
PEAK POWER	50 watts	85 watts	50 watts	50 watts	100 watts	200 watts
POWER CONSUM.	60 watts	180 watts	125 watts	120 watts	160 watts	320 watts
FREQ. RESPONSE	±1 db, 15-25,000 Hz	+1½ db, 10-38,000 Hz	±2 db, 10 - 40,000 Hz	±2 db, 20-20,000 Hz	±2 db, 20-20,000 Hz	±1 db, 20-20,000 Hz
SENSITIVITY	**Mic.:** 2 MV (high imp); **Mag.:** 3 MV; **Aux.:** 0.3-v	**Mic.:** 3.5 MV (high imp); **Mag.:** 2 MV; **Aux.:** 0.15-v	**Mic.:** 3.5 MV (high imp); **Mag.:** 2 MV; **Aux.:** 0.15-v	**Mic.:** 6 MV; **Mag.:** 50 MV; **Aux.:** 0.3-v	**Mic.:** 9 MV **Mag.:** 24 MV; **Aux.:** 0.4-v	**Mic.:** 9 MV; **Mag.:** 24 MV; **Aux.:** 0.4-v
GAIN	**Mic.:** 125 db; **Mag.:** 120 db; **Aux.:** 95 db	**Mic.:** 125 db; **Mag.:** 120 db; **Aux.:** 85 db	**Mic.:** 125 db; **Mag.:** 120 db; **Aux.:** 85 db	**Mic.:** 120 db; **Mag.:** 105 db; **Aux.** 95 db	**Mic.:** 122 db; **Mag.:** 115 db; **Aux.:** 96 db	**Mic.:** 125 db; **Mag.:** 118 db; **Aux.** 99 db
HUM and NOISE (below rated output)	**Mic.** — 70 db; **Mag.** —65 db; **Aux.**—85 db.	**Mic.** — 70 db	**Mic.** — 70 db	**Mic.** — 65 db; **Aux.** — 80 db	**Mic.:** — 65 db; **Aux.** — 80 db	**Mic.** —65 db; **Mag.** — 65 db; **Aux.** — 80 db
INPUTS	4 mic. (convert to low impedance, with T200, T500 or T50 transformer); 2 mic. (high imp.); 2 mag. phono or tape playback heads; 2 aux. (high imp., high level); 1 600-ohm balanced telephone line with WMT1 transformer; 2 bridging. Note: 4 mics. and any two of the other nine inputs may be simultaneously mixed and faded.	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 1 mic. (high imp. or mag. tape); 2 aux. (high imp. high level/fader); 1 600-ohm balanced telephone line with WMT1 transformer; 1 bridging input/output. Note: 6 inputs can be simultaneously mixed and faded.	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 1 mic. (high imp. or mag. tape); 2 aux. (high imp. high level/fader); 1 600-ohm balanced telephone line with WMT1 transformer; 1 bridging input/output. Note: 6 inputs can be simultaneously mixed and faded.	3 mic. (convert to low impedance with T200, T500 or T50 transformer or 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WMT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.	3 mic. (convert to low impedance with T200, T500 or T50 transformer or 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WMT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.	3 mic. (convert to low impedance with T200, T500 or T50 transformer or 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WMT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.
OUTPUT IMPEDANCE	4, 8, 16 ohms, tape and booster jack, 25-v, balanced (21 ohms), 70-v. balanced (163 ohms)	4, 8, 16 and 83 ohms, balanced 25-v. line, balanced 70-v. line; tape/booster jack	4, 8, 16 and 163 ohms, balanced 25-v. line, balanced 70-v. line; tape/booster jack	4, 8, 16 ohms, balanced 25-v (16 ohms), 70-v (163 ohms); tape/booster jack	4, 8, 16 ohms, balanced 25-v (16 ohms), balanced 70-v (82 ohms); tape/booster jack	8, 16 ohms, bal'd 25-v (5 ohms), bal'd 70-v (41 ohms), bal'd 25-v center tap (1.25 ohms); tape/booster jack
CONTROLS	4 individual mic. (each with speech filter or wide-range switch) • 1 high imp. mic./mag. phono/tape head/aux.-fader control with speech filter switch • 1 high imp. mic./mag. phono/tape head/aux.-600 ohm line fader control with speech filter switch • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of any of 6 inputs • provision for remote control or precedence of all six inputs and master vol.	4 individual mic. (each with speech filter switch) • 1 mic./mag./tape with speech filter switch • aux. 1/aux. 2 • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of all inputs • provision for remote control or precedence of all six inputs and master vol.	4 individual mic. (each with speech filter switch) • 1 mic./mag./tape with speech filter switch • aux. 1/aux. 2 • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of all inputs • provision for remote control or precedence of all six inputs and master vol.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.
TONE CONTROL ACTION	Treble (10 KHz) + 12 db to —14 db; Bass (50Hz) + 15 db to —9 db	Treble (10 KHz) + 13 db to —15 db; Bass (50Hz) +15 db to —10 db	Treble (10 KHz) + 13 db to —15 db; Bass (60Hz) + 15 db to —10 db	Treble (10 KHz) + 10.5 db to —14.5 db; Bass (50 Hz) + 13.5 db to —9 db	Treble (10 KHz) + 12 db to —15.5 db; Bass (50 Hz) + 15 db to —9.5 db	Treble (10 KHz) + 12 db to —14.5 db; Bass (50 Hz) + 15 db to —9.5 db
TRANSISTORS or TUBES	All Silicon 32-transistors, 3-diodes, 2-zener diodes	8 tubes: 3—12AX7A, 3—7247, 2—8417 plus 5-silicon rectifiers	8 tubes: 3—12AX7A, 3—7247, 2—7868 plus 5-silicon rectifiers	5 tubes: 2—7868, 1—7247, 2—6EU7 plus 2-silicon rectifiers and 1-bias silicon diode	5 tubes: 2—8417, 1—7247, 2—6EU7 plus 2-silicon rectifiers and 1-bias silicon diode	7 tubes: 4-8417, 1-7247, 2-6EU7 plus 3-silicon rectifiers
DIMENSIONS	16½" W, 12" D, 4¾" H	16½" W, 12" D, 4¾" H	16½" W, 12" D, 4¾" H	14⅞" W, 9⅞" D, 5¾" H	14⅞" W, 9⅞" D, 5¾" H	16½" W, 12" D, 4¾" H
SHIP. WEIGHT	31 lbs.	35 lbs.	34 lbs.	23 lbs.	29 lbs.	36 lbs.
NET EACH	$277.50 (Zone 2: $280.30)	$241.05 (Zone 2: $244.20)	$196.95 (Zone 2: $200.00)	$132.30 (Zone 2: $134.35)	$173.25 (Zone 2: $175.85)	$228.45 (Zone 2: $231.70

* Operates on 105-125 VAC or 12-15 VDC — from —20°C to +70°C (158°F)

(▩ SOLID STATE)

All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.

BOGEN SOUND SYSTEMS

"CHS" SOLID STATE PA AMPLIFIERS

These new "CHS" p.a. amplifiers feature ruggedness, flexibility and dependable performance. Every day their systems-tested circuitry and unique features gain growing acclaim from users in professional sound studios, government, industry, churches and schools throughout the world.

The degree of reliability achieved through advanced, conservative solid-state design could not be realized with conventional tube amplifiers . . . so, Bogen created "CHS" . . . the popular-priced series of solid-state amplifiers to suit every p.a. need. Safe continuous operations from −20°C. (−4°F.) to +65°C. (149°F.).

Unique features: optional panel-mounted preamp. provides 2 additional mic. inputs • hi or lo imped. mic. inputs (no transformer required) • all solid-state (CHS100, CHS50 are all-silicon) • automatic wave-soldered printed circuit boards • AC/DC operation (12 v. battery) with CHS35, CHS20 • provision for mic. precedence and remote vol. control.






	CHS 100 ▩	CHS 50 ▩	CHS 35 ▩	CHS 20 ▩
POWER OUTPUT	100 W.	50 W.	35 W.	20 W.
PEAK POWER	200 W.	100 W.	70 W.	40 W.
FREQ. RESPONSE	40-20,000 Hz ±2db	40-20,000 Hz ±2db	60-15,000 Hz ±2db	50-15,000 Hz ±2db
SENSITIVITY	Mic. (Lo-imp.): 0.3 mv. Mic. (Hi-imp.): 4.0 mv. Aux.: 0.3 v. Bridging: 1.0 v.	Mic. (Lo-imp.): 0.5 mv. Mic. (Hi-imp.): 3.0 mv. Aux.: 0.2 v. Bridging: 1.0 v.	Mic. (Lo-imp.): 0.6 mv. Mic. (Hi-imp): 4.0 mv. Aux.: 0.5 v. Bridging: 1.0 v.	Mic. (Lo-imp.): 0.6 mv. Mic. (Hi-imp): 4.0 mv. Aux.: 0.5 v. Bridging: 1.0 v.
INPUTS (impedance)	2 Mic. (Hi or Lo imp. unbal.) Hi imp.: 100k ohms Lo imp.: 200 ohms Aux.: (2 inputs on fader): 300k ohms Bridging: Hi imp. (1.0 v.)	2 Mic. (Hi or Lo imp. unbal.) Hi imp.: 100k ohms Lo imp.: 200 ohms Aux.: (2 inputs on fader): 300k ohms Bridging: Hi imp. (1.0 v.)	2 Mic. (Hi or Lo imp. unbal.) Hi imp.: 100k ohms Lo imp.: 200 ohms Aux: (2 inputs on fader): 300k ohms Bridging: Hi imp. (0.6 v.)	1 Mic. (Hi or Lo imp. unbal.) Hi imp.: 100k ohms Lo imp.: 200 ohms Aux: (2 inputs on fader): 300k ohms Bridging: Hi imp. (1.0 v.)
CONTROLS	2 indiv. mic. (plus 2 on PMA-2 preamp.) 1 vol. (fader) for Aux. 1 and 2 Master Volume Bass Treble Power Switch Provision for remote control or mic. precedence (all inputs)	2 indiv. mic. (plus 2 on PMA-2 preamp.) 1 vol. (fader) for Aux. 1 and 2 Master Volume Bass Treble Power Switch Provision for remote control or mic. precedence (all inputs)	2 indiv. mic. (plus 2 on PMA-2) preamp.) 1 vol. (fader) for Aux. 1 and 2 Master Volume Bass Treble Power Switch Provision for remote control or mic. precedence (all inputs)	1 mic. (plus 2 on PMA-2 preamp.) 1 vol. (fader) for Aux. 1 and 2 Master Volume Bass Treble Power Switch Provision for remote control or mic. precedence (all inputs)
OUTPUT IMPEDANCE	2, 8, 16 ohms 25 v. bal. (c.t.) = 6 ohms 70 v. bal. = 49 ohms 2 quick-disconnect sockets and screw terminals. Tape/Booster: 10k ohms 5.0 v. Bridging: Hi imp. at 0.5v.	4, 8, 16 ohms 25 v. bal. (c.t.) = 12 ohms 70 v. bal. = 100 ohms 2 quick-disconnect sockets and screw terminals Tape/Booster: 10k ohms 5.0 v. Bridging: Hi imp. at 0.5v.	4, 8, 16 ohms 25 v. = 16 ohms 70 v. = 143 ohms 2 quick-disconnect sockets and screw terminals Tape/Booster: 10k ohms 5.0 v. Bridging: Hi imp. at 0.5v.	4, 8, 16 ohms 25 v. = 31 ohms 70 v. = 250 ohms 2 quick-disconnect sockets and screw terminals Tape/Booster: 10k ohms 5.0 v. Bridging: Hi imp. at 0.5v.
TONE CONTROLS	Bass: +10db to −10db at 50 Hz Treble: +10db to −10db at 10 KHz	Bass: +10db to −10db at 50 Hz Treble: +11db to −12db at 10 KHz	Bass: +8db to −23db at 50 Hz Treble: +8db to −15db at 10 KHz	Bass: +8db to −19db at 50 Hz Treble: +12db to −15db at 10 KHz
HUM & NOISE (below rated output)	Mic.: 65db Aux.: 70db	Mic.: 67db Aux.: 70db	Mic.: 64db Aux.: 67db	Mic.: 66db Aux.: 70db
POWER CONSUMPTION	105-125 v. 50-60 Hz	105-125 v. 50-60 Hz	105-125 v. 50-60 Hz 12-15 VDC at 3A	105-125 v. 50-60 Hz 12-15 VDC at 2A
SEMI-CONDUCTORS	All-silicon, 10 transistors, 2 diodes	All-silicon, 10 transistors, 2 diodes	7 silicon transistors, 2 germanium, 3 diodes	6 silicon transistors, 2 germanium, 3 diodes
DIMENSIONS	5½"Hx10½"Dx15¼"W	5½"Hx10½"Dx15¼"W	5½"Hx10½"Dx15¼"W	5½"Hx10½"Dx15¼"W
SHIPPING WEIGHT	23 lbs.	21 lbs.	17 lbs.	15 lbs.
NET EACH	$160.20 (Zone 2: $162.25)	$129.90 (Zone 2: $131.80)	$106.95 (Zone 2: $108.50)	$94.05 (Zone 2: $95.40)

Accessories: PMA-2 Preamplifier — panel mounts to provide 2 additional high or low impedance microphone inputs (no transformers required for low impedance). Knobs come through front panel of amplifier.

Matching phono-top. Control-guard locking plate. Plug-in remote volume controllers. Rack panel mounting kits. Carrying cases. WMT-1 transformer—provides 500/600 ohm telephone line input for wired background music.

(▩ SOLID STATE)

LEAR SIEGLER, INC. / ISi® BOGEN DIVISION

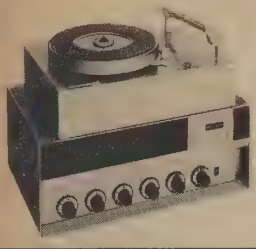
Net

© United Technical Publications

"CHB" SERIES PA AMPLIFIERS

BOGEN SOUND SYSTEMS

Models CHB100, CHB50 and CHB35A share these outstanding features: systems-tested circuitry for continuous, heavy-duty operation; protected against circuit damage caused by accidental shorting or disconnecting of loudspeaker lines; no "double duty" control devices; built-in remote control circuit permits volume adjustment from up to 2,000 feet away; Memory Level Markers; tape output/booster jack.



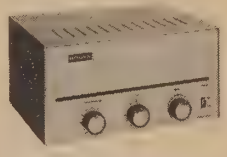
CHB100 Shown with phono-top



CHB50/CHB35A



CHB20A



CHB10A

	CHB100	CHB50	CHB35A	CHB20A	CHB10A
PWR. OUTPUT	100 w.	50 w.	35 w.	20 w.	10 w.
FREQ. RESP.	±2 db, 20 to 20,000 Hz	±2 db, 20 to 20,000 Hz	±2 db, 20 to 20,000 Hz	±2 db, 20 to 20,000 Hz	±2 db, 40 to 12,000 Hz
INPUTS	**2 Mic.** (hi-imped.) **1 Mag. Phono 2 Aux.** (hi-imped. hi-level) Provision for WMT-1	**2 Mic.** (hi-imped.) **1 Mag. Phono 2 Aux.** (hi-imped. hi-level) Provision for WMT-1	**2 Mic.** (hi-imped.) **1 Mag. Phono 2 Aux.** (hi-imped. hi-level) Provision for WMT-1	**1 Mic.** (hi-imped.) **2 Aux.** (hi-imped. hi-level) Provision for WMT-1	**1 Mic.** (hi-imped.) **1 Phono** (hi-imped. hi-level) Provision for WMT-1
HUM & NOISE	**Mic.** −70 db **Aux.** −80 db	**Mic.** −70 db **Aux.** −80 db	**Mic.** −65 db **Aux.** −80 db	**Mic.** −65 db **Aux.** −80 db	**Mic.** −60 db **Phono** −75 db
SENSITIVITY	**Mic.** 5 mv **Aux.** .3-v **Mag. Phono** 15 mv	**Mic.** 5 mv **Aux.** .3-v **Mag. Phono** 15 mv	**Mic.** 4 mv **Aux.** .2-v **Mag. Phono** 12 mv	**Mic.** 3 mv **Aux.** .5-v	**Mic.** 6 mv **Phono** .2-v
OUTPUT IMPEDANCE	4, 8 and 16 ohms, 25-v line bal., (6 ohms) 70-v line (50 ohms) 2 speaker sockets, screw terminals; tape/booster jack	4, 8 and 16 ohms, 25-v line (12 ohms) 70-v line (100 ohms) 2 speaker sockets, screw terminals; tape/booster jack	4, 8 and 16 ohms, 25-v line (18 ohms) 70-v line (143 ohms) 2 speaker sockets, screw terminals; tape/booster jack	4, 8 and 16 ohms, 25-v line balanced (31 ohms), 70-v line (250 ohms) 2 speaker sockets, screw terminals; tape/booster jack	4, 8 and 16 ohms, 25-v line (62 ohms), 70-v (500 ohms) 1-speaker socket and screw terminal; tape/booster jack
TONE CONTROL ACTION	Treble (10 KHz) +12 db to −15 db Bass (50 Hz) +14 db to −9 db	Treble (10 KHz) +10 db to −15 db Bass (50 Hz) +11 db to −10 db	Treble (10 KHz) +10 db to −16 db Bass (50 Hz) +14 db to −10 db	Treble (10 KHz) +10 db to −16 db Bass (50 Hz) +14 db to −10 db	Treble (10 KHz) −24 db
TUBES	Total of 7 tubes and silicon rectifier: 1—6EU7, 1—12AX7, 4—7868, 1—6C4	Total of 5 tubes and silicon rectifier: 1—6EU7, 1—12AX7, 2—6L6GC, 1—6C4	Total of 5 tubes, 2 silicon rectifiers and 1- silicon diode: 1—6EU7, 2—7868, 1—12AX7, 1—6C4	Total of 3 tubes, 2 silicon rectifiers and 1-silicon diode: 1—6EU7, 2—6GW8	Total of 2 tubes and silicon rectifier: 1—12AX7/ECC 83, 1—7868
POWER CONSUMPTION	300 w. 105-125 VAC 50-60 cycles	150 w. 105-125 VAC 50-60 cycles	125 w. 105-125 VAC 50-60 cycles	90 w. 105-125 VAC 50-60 cycles	50 w. 105-125 VAC 50-60 cycles
DIMENSIONS	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	5¾" H, 11¼" W, 8¼" D
SHIP. WGHT.	25 lbs.	22 lbs.	20 lbs.	17 lbs.	12 lbs.
NET EACH	$140.25 (Zone 2: $142.50)	$108.75 (Zone 2: $110.75)	$89.85 (Zone 2: $91.65)	$74.10 (Zone 2: $75.65)	$44.85 (Zone 2: $45.75)

Accessories: matching phono-top, control-guard locking plate, rack panel mounting kits, carrying cases, remote volume controls and more. WMT-1 transformer provides 500/600 ohm telephone line input for wired background music.

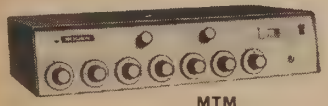
MIXER-PREAMPLIFIERS



MXM-A

MXM-A MIXER-PREAMPLIFIER −20°C to +70°C (158°F).

Professional, broadcast quality, self-powered unit which accommodates 7 mixed input signals simultaneously (5 may be from high or low impedance mics.) One mic. input converts to an equalized mag. phono cartridge or tape playback head. Two aux. (high imped., high level) are connected to a fader control. Bridging input accepts signals from a remote preamplifier or a zero level line. Up to 3 MXM-A's may be paralleled to provide 21 inputs (up to 15 mics.). Output level may be monitored aurally and visually by headset and built-in VU meter. Panel-controlled speech filters for all mic. inputs; separate bass and treble tone controls. Provision for converting high imped. to balanced low imped. microphone inputs by using plug-in transformers. Sockets accept remote control and precedence plug-in units. Panel-controlled calibrated low frequency (notch) filter effectively "tunes out" hum, turntable rumble, etc. **Output:** 20 V. into high imped. load at 1%; 4 V. into 600 ohms at 1%; (from bridging output) 0.1 V. into 1 Meg. **Freq. Response:** 18-38,000 Hz ±1 db. **Output Imped.:** high imped. (less than 3,000 ohms); 500/600 ohms with TL 600 (broadcast quality) plug-in transformer. **Sensitivity:** high imped. 2 MV.; low imped. 0.1 V.; Mag., 1 MV.; bridging 0.5 V.; Aux., 0.1 V. **Hum:(below rated output)** Mic. 60 db. **Tone Controls:** treble: (10 KHz) +12 db to −12 db; bass: (50 Hz) +14 db to −8 db. **Tubes:** 4-12AX7A, 1-7247, 1-12AU7A plus 3 silicon rectifiers. **Power Consumption:** 47 watts, 117 VAC; 50/60 Hz. **Dimen.:** 16½"W, 12"D, 4¾"H. **Ship. Wt.:** 23 lbs. **Net Each: $196.95** (Zone 2: $199.00).



MTM

MTM ALL-SILICON TRANSISTOR MIXER-PREAMPLIFIER ⊡ −20°C to +70°C (158°F)

Professional, all-silicon transistor, self-powered unit (operates from 120 VAC or 12-15 VDC). Mixes 6 input signals (4 may be low impedance microphones). Unbalanced low impedance microphone inputs convert to balanced (50-600 ohms) with T525U plug-in transformer — or convert to mag. phono/tape input with PMC-1 plug-in module. 2 aux. (high impedance, high level) are connected to a fader control. Up to 3 MTM's may be paralleled to provide 18 inputs. Output level may be monitored aurally (head set) and visually (built-in meter). Sockets accept individual remote control, precedence and compressor plug-in units. Speech filters in mic. channels 1 and 2. R.F. filters in all mic. channels. **Output:** at 0 db: 1.8 V. into 500 ohms (0.5%); at +12 db: 7 V. into 500 ohms (2.5%); output transformer is built-in; no high impedance output. **Freq. Response:** 40-15,000 Hz ±1½ db. **Output Imped.:** (split output) 125/150 ohms and 125/150 ohms or 500/600 ohms balanced. **Input Imped.:** Mic.: low imped. unbalanced (balanced with T525U transformer): Aux.: 0.2 Meg. **Sensitivity:** low imped. Mic. 0.1 MV.; Aux. 0.15 V. **Gain:** Mic. 75 db; Aux. 60 db; Bridging 60 db. **Bass Cut:** −15 db at 50 Hz. **Treble Cut:** −15 db at 10 KHz. **Hum:** Mic.: −65 db; Aux. −70 db. **Power Consum.:** 5 watts at 117 VAC; 50/60 Hz; .12 A at 12 VDC. **Transistors:** 11 silicon plus 5 silicon diodes. **Dimen.:** 16¼"W, 8½"D, 3¾"H. **Ship. Wt.:** 13 lbs. **Net Each: $149.85** (Zone 2: $151.00).

(⊡ SOLID STATE)

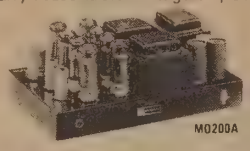
All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.

BOGEN SOUND SYSTEMS

BOOSTER AMPLIFIERS

Bogen's booster amplifiers embody the most advanced developments in design and techniques of construction. These units deliver maximum power from a small package. They are ideal for sound systems in industrial plants, airports, stadia, schools ... wherever undistorted power is required. Note their exceptionally wide-range response characteristics. Built-in provision permits paralleling any number of power amplifiers to multiply power output. The Bogen models described below are ideal preamplifiers for these boosters.

The MO200A, MO100A, MT100 and NTB250 units are unsurpassed for both PA and industrial uses. Their 115-volt output makes them adaptable to unique applications. With a variable frequency audio generator input, they represent relatively inexpensive power sources – any frequency or voltage within their power range – capable of driving servos, motors, vibration(shake) tables, ultrasonic equipment. The unique all-silicon transistor model MT100 may be operated from a 12-16 VDC source as well as from 117 VAC; NTB250 may be operated from a 24 VDC source. Highly flexible in combination, inputs of identical amplifiers can be paralleled; outputs can be wired in series or parallel to provide any reasonable voltage or power (except MBT60 outputs). No case is furnished with MO200A.


MO200A


MO100A
MO30A
MBT60

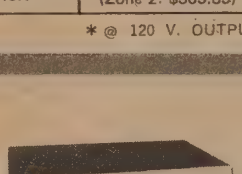

MT100


NTB250

	MO200A	MO100A	MO30A	ALL-SILICON TRANSISTOR MBT60 ▨	ALL-SILICON TRANSISTOR MT100 ▨	ALL-SILICON TRANSISTOR NTB250 ▨
POWER OUTPUT	200 w. rms at less than 2% distortion (Full power: 21-50,000 Hz ±1 db at 5%)	100 w. rms at less than 2% distortion (Full power: 21-50,000 Hz ±1 db at 5%)	30 w. rms at less than 2% distortion (Full power: 21-40,000 Hz ±1½ db at 5%)	60 w. rms at less than 3% distortion −20°C to +70°C (158°F)	100 w. rms at less than 1% distortion −20°C to +70°C (158°F)	350 w. rms at less than 5% 50-12,000 Hz.; 250 w. rms at less than 5% 35-20,000 Hz.; 250 w. rms at less than 3% 40-5000 Hz *
FREQUENCY RESPONSE	8-50,000 Hz ±1 db	8-50,000 Hz ±1 db	10-40,000 Hz ±2 db	12-20,000 Hz ±1 db	15-35,000 Hz ±1 db	20-30,000 Hz ±1 db
OUTPUT IMPEDANCE	Bal. 8 ohms, bal. 25-v (3 ohms) C.T., bal. 70-v (25 ohms) C.T. and 115-v (66 ohms) (for industrial uses)	Bal. 16 ohms, bal. 25-v (6.25 ohms) C.T., bal. 70-v (49 ohms) C.T. and 115-v (132 ohms) (for industrial uses)	Bal. 4, 8, 16 ohms, bal. 25-v (21 ohms), bal. 70-v (163 ohms)	Bal. 2.6, 8 and 16 ohms, bal. 25-v (10.4 ohms) C.T., bal. 70-v (82 ohms)	16 ohms, bal. 25-v (6 ohms) C.T., bal. 70-v (49 ohms) C.T., and 115-v (132 ohms) bal. (for industrial uses)	Bal. or Unbal. For 250 w. output: 25 V.C.T. (.625Ω), 25v. (2.5Ω), 70 V.C.T. (5Ω), 70v. (20Ω), 120v. (57Ω), 8Ω (44.7v.) For 350 v. output; 70v. (14.3Ω), 8Ω (53v.)
SENSITIVITY	High imped: better than 2v. Low imped: with TL600 transformer, better than 0.5 v	High imped: better than 2 v. Low imped: with TL600 transformer, better than 0.5 v	High imped: better than 2 v. Low imped: with TL600 transformer, better than 0.5 v	High imped: 0.15 v Low imped: with TL600 transformer, 0.04 v	High imped: 0.75 v Low imped: with TL600 transformer, 0.2 v	High imped: 1.4v. for 250 w. output; 1.8v. for 350 w. output. Low imped: 600 Ω with TL600 transformer, 0.3v. for 250 w. output, 0.35v. for 350 w. output
DIMENSIONS	16" W, 11½" D, 6" H	8" W, 13" D, 6¾" H	8" W, 13" D, 6¾" H	8" W, 13" D, 6¼" H	8" W, 13" D, 6" H	17⅛" W (19" with furnished brackets), 11¾" D, 9¼" H
SHIP WEIGHT	65 lbs.	33 lbs.	23 lbs.	22 lbs.	31 lbs.	75 lbs.
NET EACH	$300.00 (Zone 2: $305.85)	$165.00 (Zone 2: $167.95)	$107.25 (Zone 2: $109.30)	$129.75 (Zone 2: $131.75)	$255.00 (Zone 2: $257.80)	$525.00 (Zone 2: $531.75)

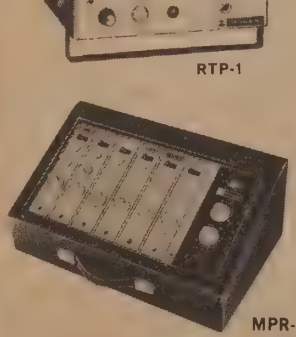
* @ 120 V. OUTPUT TAP, POWER CURVE IS 35 TO 5000 Hz.

MIXER-PREAMPLIFIERS


RTP-1

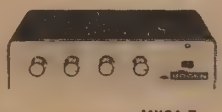
RTP-1 ALL-SILICON TRANSISTOR PREAMPLIFIER ▭

Designed for true broadcast quality, the RTP-1 will drive any number of booster amplifiers or packaged amplifiers over a 500/600 ohm line – even several miles away. Inputs include 2 Mic. (high or low impedance), 2 Aux. on fader control, 1 bridging. Two RTP-1's can be paralleled to provide 6 mixed inputs. Extremely low battery drain. Features include: Headphone monitor jack on front panel; built-in output meter calibrated in VU and db; 117 VAC or 12 VDC operation with internal batteries or external DC power supply; built-in battery tester. **Output:** at 0 db: 1.8 V. into 500 ohms (1%); at + 12 db: 7 V. into 500 ohms (2.5%); output transformer is built-in; no high impedance output. **Freq. Response:** 20-20,000 Hz ± 1 db. **Output Imped.:** (split output) 125/150 ohms & 125/150 ohms or 500 600 ohms balanced. **Input Imped.:** Mic.: high or low imped. (with T50, T200, T500 transformers); Aux.: 0.1 Meg. **Sensitivity:** low imped. (500 ohms) Mic. 0.5 MV; high imped. Mic. 5 MV.; Aux. .25 V. **Gain:** Mic. 72 db; Aux. 55 db; Bridging 60 db. **Bass Cut:** −12 db at 50 Hz **Hum:** Mic.: −65 db; Aux. −70 db. **Power Consum.:** 5 watts at 117 VAC 50/60 Hz 0.3 amps at 12 VDC. **Transistors:** 9 silicon plus 3 silicon diodes. **Dimen.:** 9" W, 9¼" D, 3½" H. **Ship. Wt.:** 7 lbs. **Net Each:** $144.75 (Zone 2: $145.40)


MPR-6

MPR-6 ALL-SILICON TRANSISTOR MIXER-PREAMPLIFIER ▨

All-silicon solid state, 6 channel vocal preamplifier with built-in selective reverb. Will mix six mics. and accept a signal from a phono, tape player, tuner, guitar or other electronic instrument. Two audio output jacks simplify connection to the proper booster amplifier, public address or musical instrument amplifier. Complete with leather carrying strap, mounting feet and provision for mounting on any standard microphone floor stand. **Inputs:** 6 mics. (high imped: 100,K Ω) 1 aux. (high: 100 K Ω). **Controls:** 6 volume, 6 bass, 6 treble, 6 reverb on/off, 1 master vol., 1 reverb intensity, 1 power switch (illuminated). **Connectors:** Mics. standard phone jacks for both high and low level output. Aux. phono jack. **Tone Controls:** Treble 10 db to −10 db at 10KHz. Base −10 db to +10 db at 50 Hz. **Outputs:** High level, 5 v. at 1% distortion (10,000 Ω) Low level, 0.07 v. at 1% distortion (2200 Ω). **Sensitivity:** For 2 v. output — Mic. 8 mv — Aux. 0.3 v. **Freq. Response:** ±2 db from 50 Hz to 20 KHz. **Hum and Noise:** −70 db. **Semiconductors:** 17 silicon transistors, 2 silicon diodes. **Power Requirements:** 105-125 v., 50-60 Hz, 3.6 watts. **Dimen.:** 18¾" x 11¼" x 7¼". **Ship Wt.:** 19 lbs. **Net Each:** $200.85 (Zone 2: $202.55)


MX6A-T

MX6A-T MIXER-PREAMPLIFIER ▭

Adds inputs to any amplifier. Ultra reliability is assured by use of all-silicon semiconductors and printed circuits. The MX6A-T has inputs for 4 high or low impedance microphones with individual volume controls. Two of the four channels will accept tuner or crystal cartridge signals. This mixer is excellent for electric guitars and other electronic musical instruments. The output of the MX6A-T is adequate to drive any packaged amplifier. Up to three MX6A-T units may be paralleled to provide 12 inputs with individual volume controls. **Freq. Response:** 50-20 KHz ±2 db. **Output:** 6 v. at 2%; 4 v. at 1%; 2 v. at 0.5%. **Inputs:** 4 mic. (hi-imp. 150 K) (low-imp. 200 ohms nominal; works well with 50 ohm or 500 ohm mics.) 2 aux. (250 K). **Gain:** mic, (hi-imp. 60 db) 4 mv. at 4 v. output, (low-imp. −80 db) 0.4 mv. at 4 v. output. **Aux.** 20 db 0.4 v. at 4 v. output. **Power Consump.:** 1.2 w. at 117 VAC 50-60 Hz. **Hum/Noise:** 68 db below 5 v. **Dimen.:** 9¼" x 6" x 2⅝". **Ship. Wt.:** 6 lbs. **Net Each:** $50.25 (Zone 2: $50.80)

(▭ SOLID STATE)

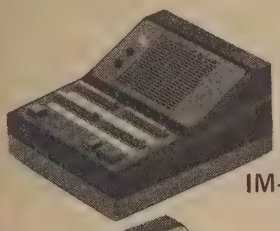
LEAR SIEGLER, INC. / ISi ® BOGEN DIVISION

Net

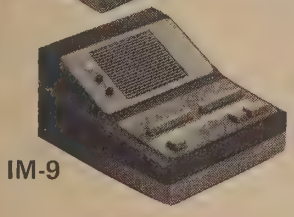
© United Technical Publications

BOGEN SOUND SYSTEMS

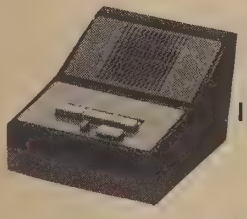
INTERCOMS



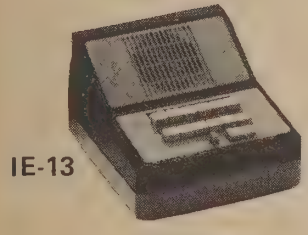
IM-17



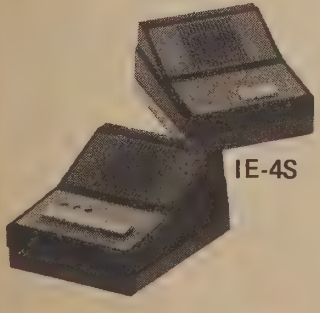
IM-9



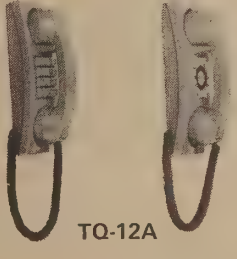
IE-7



IE-13



IE-4S



TSL-16 TQ-12A

Bogen intercoms include a wide variety of systems — each designed to answer a specific need.

SERIES IM INTERCOMS — One of the most versatile, powerful solid-state intercoms of its type — the Series IM is everything an intercom should be. And then some. At lower cost than a leased system. And without tying up valuable (and expensive) telephone lines and switchboard. You get instant high quality voice communication between office, stockroom, factory, loading dock. With no dialing, no buzzing, no waiting. Up to 17 stations, in any combination of masters and remotes you want. Master stations are completely private. That means you can't be eavesdropped on. But when you're called, you can switch to "hands-free" operation without the need to operate switches. Unlimited flexibility provides up to eight simultaneous private conversations in a seventeen station system. Remotes can be either — best for inter-office use — or non-private, so the shop foreman, for example, can answer you "hands-free" from anywhere in the area without interrupting his work. Up to six watts of peak output power from the master means he'll hear you — and vice versa — without the addition of an optional amplifier.

IM-9 MASTER STATION for systems up to 9 stations — all masters or one master and remotes or many masters and remotes. **Net Each: $109.45** (Zone 2: $110.05). **IM-17 MASTER STATION** for up to 17 stations. **Net Each: $133.45** (Zone 2: $134.15). **RIM-1 REMOTE** has a non-selective call-initiation switch (to one master), volume control, privacy switch. **Net Each: $19.20** (Zone 2: $19.45). **RIM-3 REMOTE** similar to RIM-1 but with selective call-initiation switch to three masters. **Net Each: $27.55** (Zone 2: $27.80). **TBS-45 OUTDOOR/INDOOR REMOTE** speaker functions as a remote in high noise level areas. With CS-1 or CS-3 switch, remote can initiate calls to one or three masters. **Net Each: $23.00** (Zone 2: $23.00). **WX-6 WALL MOUNTING REMOTE** for office, hall or shop. With CS-1 or CS-3 switch, remote can initiate call to either one or three masters. **Net Each: $10.23** (Zone 2: $10.47).

SERIES IE INTERCOMS — One of the hardest-working intercoms you'll find anywhere. With it you can choose an All-Master System that gives you single or conference-call communications with up to thirteen stations, anywhere in your company. In a thirteen station system, six simultaneous private conversations can be held. You can substitute one or two remotes in a stockroom or plant, so that personnel can answer "hands-free" without interrupting their work. You can even cut into your P.A. system for direct paging. And with the addition of our optional TBR-1 relay, the man you call can reply "hands-free" directly through the P.A. loudspeaker — as clearly as if he were in the same room.

IE-7 MASTER STATION for systems up to 7 stations — all masters or single master/multiple remote. **Net Each: $37.45** (Zone 2: $37.85). **IE-13 MASTER STATION** for up to 13 stations. **Net Each: $46.45** (Zone 2: $46.80). **RIE-1 REMOTE** has a non-selective call initiation switch to master. **Net Each: $11.95** (Zone 2: $12.20).

IE-4S ANNUNCIATOR INTERCOM SYSTEM — The most intercom for your dollar, if your requirements are limited to a few stations. Sophisticated, yet simple. Hard working, yet easy to operate. Functional, yet beautiful. The IE-4S may very well be all the intercom you need. One master and one remote station give you instant, direct and clear communication anywhere in the organization. Add a second or third remote, if your needs call for them. Call any or all remotes, just by pushing the appropriate buttons. For convenience, the remotes can be either private, which prevents eavesdropping, or non-private, for "hands-free" reply with no interruption of work. Unlike other intercoms in its class, calls from remote stations to the master are announced by a discreet beep, and a small annunciator shows which station is calling. If the master is unattended when the call comes in, the annunciator remains on, indicating at a glance who called. It's like having an electronic secretary. **Net Each: $44.95** (Zone 2: $45.50).

INTERNAL PHONE SYSTEMS — Extremely flexible telephone systems that provide simultaneous conversations without a costly central exchange. No switching, no dialing, no switchboard delay.

SERIES TSL — As many as eight separate conversations may take place at the same time in a 16-station system. Up to sixteen individuals can converse in a conference call. 100% trunkage is provided — stations can be used simultaneously without interference.

TSL-16 with 1 ring button and 15 station selector buttons. **Net Each: $48.25** (Zone 2: $48.60). **TSL-8** with 1 ring button and 7 station selector buttons. **Net Each: $40.75** (Zone 2: $41.10). **TRC** Phone Page Adapter allows paging from TSL phones. **Net Each: $31.65** (Zone 2: $31.90).

SERIES TQ — Up to 13 stations in a low-cost, fast operating system. Features selective ringing with common-talk line for single conversation or conference call, Series TQ Bogen-Phones are available in three models.

TQ-1A for 2 station systems. **Net Each: $43.75** (Zone 2: $44.40). **TQ-6A** phone for up to 7 station system. **Net Each: $29.05** (Zone 2: $29.40). **TQ-12A** phone for up to 13 station system. **Net Each: $32.65** (Zone 2: $33.00). **TRA** Phone Page Adapter allows paging from TQ phones. **Net Each: $31.65** (Zone 2: $31.90).

PRS-16 Power supply for TSL Phones. **Net Each: $41.55** (Zone 2: $42.00). **PRS-1A** Power supply for TQ Phones. **Net Each: $25.00** (Zone 2: $25.25).

Request Catalogs 431 and 432 for complete details of Bogen Intercom and Phone Systems.

(SOLID STATE) All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.



Take it from Mickey Mantle†

"ON LAND... AT SEA... there's a new wonderful, exciting world of sound... at your command!"

FEDTRO® POWERHOUSE MEGAPHONES

FEDTRO MEG-3600 DELUXE POWERHOUSE TRANSISTORIZED MEGAPHONE

• Waterproof • Impactproof • Rustproof



SPECIAL FEATURES

- Superior Power Range
- Tonal Quality and Clarity of the Highest Fidelity
- Perfectly Balanced Pistol Grip with Trigger Switch and Fingertip Volume Control
- All Aluminum Construction
- All Weather Durable Handy Carrying Strap
- Instant Battery Loading
- Special Blast Signal Stops and Starts the Action... Marine Signal... Boat Horn... Fog Horn..."Mayday" ...Designed to meet U.S. Coast Guard Distress Signalling Regulations

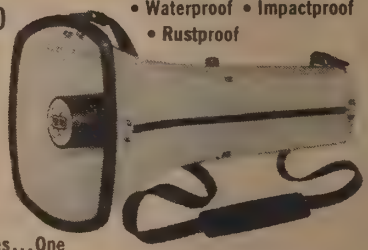
$79.95*

*Suggested selling price. Slightly higher in Western states.

magnificently finished in gleaming harmonious tones of brilliant red and lustrous ivory

FEDTRO MEG-3300 DELUXE POWERHOUSE TRANSISTORIZED MEGAPHONE

• Waterproof • Impactproof • Rustproof



SPECIAL FEATURES

- Two Dynamic Microphones...One Built-In and Additional "Plug-In" Detachable Microphone
- Use 4 Ways:
  Over Shoulder • Trumpet Grip
  • *Thru Regular Mike*
  • *Thru Detachable Mike*
- Super Power Range
- Superior Clarity
- Perfect Tonal Quality
- Hi-Impact PVC Construction
- Fingertip Volume Control
- Adjustable Carrying Strap & Shoulder Cushion
- Instant Battery Loading

$59.95*

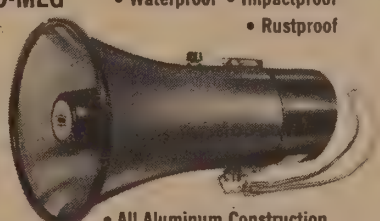
*Suggested selling price. Slightly higher in Western states.

magnificently finished in gleaming harmonious tones of lustrous ivory and ebony black

FEDTRO MEG-1200 MICRO-MEG POWERHOUSE TRANSISTORIZED MEGAPHONE

the ultimate in transistorized miniaturization

• Waterproof • Impactproof • Rustproof



SPECIAL FEATURES

- Transistorized
- Miniaturized...only 8½ inches long
- Power Packed Amplification
- All Aluminum Construction
- Fingertip Volume Control
- Elegant Wrist-Strap Swivel Chain
- Noise-Cancelling Microphone

$44.95*

*Suggested selling price. Slightly higher in Western states.

magnificently finished in gleaming harmonious tones of iridescent Imperial silver smartly trimmed with ebony black.

FEDTRO MEG-1000B POWERHOUSE TRANSISTORIZED MEGAPHONE

• Waterproof • Impactproof • Rustproof



SPECIAL FEATURES

- All Aluminum Construction
- Superior Clarity and Tonal Quality
- Durable Handy Carrying Strap
- Instant Battery Loading
- Noise-Cancelling Microphone
- Fingertip Volume Control
- Power Packed Amplification

$44.95*

*Suggested selling price. Slightly higher in Western states.

magnificently finished in gleaming harmonious tones of brilliant red and elegant ebony black

FEDTRO® POWERHOUSE CHOSEN BY THE MEXICAN ORGANIZING COMMITTEE FOR USE AT THE OLYMPIC GAMES

FEDTRO® proven sound around the world®

® © COPYRIGHT 1968 • FEDTRO INC • MICKEY MANTLE ENDORSES ALL FEDTRO AUDIO PRODUCTS

"FEDTRO...the proven sound of champions"

THE WORLD'S LEADING SUPPLIER OF TRANSISTORIZED MEGAPHONES

FEDTRO®





FEDTRO POWERHOUSE MEGAPHONE SPECIFICATION GUIDE

MODEL NO.	FEDTRO MEG-5000	FEDTRO MEG-3600	FEDTRO MEG-3300	FEDTRO MEG-1200	FEDTRO MEG-1000B
ELECTRIC POWER SOURCE	9 Volts	6 Volts	6 Volts	6 Volts	6 Volts
OUTPUT	25 Watts	16 Watts	14 Watts	5 Watts	5 Watts
BATTERIES	6 Flashlight "C" cells*	4 Flashlight "D" cells**	4 Flashlight "D" cells**	4 Flashlight "C" cells*	4 Flashlight "D" cells**
DIMENSIONS	Diameter 8⅝", Length 13½"	Diameter 7⅛", Length 12¾"	Diameter 7", Length 12¾"	Diameter 5¼", Length 8½"	Diameter 7¼", Length 12¼"
WEIGHT	5½ lbs.	3 lbs.	2¼ lbs.	1 lb. 10 ozs.	2.7 lbs.
POWER RANGE	Up to 5000 feet†	Up to 3600 feet†	Up to 3300 feet†	Up to 1200 feet†	Up to 1200 feet†
EXCLUSIVES	Built-in Blast-Signal	Built-in Blast-Signal	Two Dynamic Microphones	Ultra Miniaturization	Economy plus

*Eveready #1035 or equivalent.
**Eveready #950, Burgess #2 or equivalent.
†Depending on environment, climatic conditions and existing area noise levels.

The bell of Fedtro Powerhouse Megaphone model numbers 5000, 3600, 3300 and 1000B are protected and cushioned with a rubber bumper rim, and the bell of model number 1200 is protected and cushioned with a poly-vinylchloride bumper rim.

All Fedtro Powerhouse Megaphones are magnificently packaged in an attractive re-usable, multi-color, sturdy compartment... ideal for quick, easy storage of the unit.

FEDTRO MEG-5000 ULTRA DELUXE POWERHOUSE TRANSISTORIZED MEGAPHONE

the finest instrument of its kind in the world



• Waterproof • Rustproof • Impactproof

SPECIAL FEATURES

- Super Range & Power
- The Ultimate in Clarity and Tonal Quality
- Versatility • Detachable Mike
- All Aluminum Construction
- Fingertip Volume Control
- Adjustable Carrying Strap and Shoulder Cushion
- Instant Battery Loading
- Special Blast Signal Stops and Starts the Action... Boat Horn... Fog Horn..."Mayday"... Designed to meet U.S. Coast Guard Distress Signalling Regulations

magnificently finished in brilliant red and lustrous ivory

- Use 4 Ways: *Pistol Grip • Over Shoulder • On its own legs • Tripod Mount*

$119.95*

*Suggested selling price. Slightly higher in Western states.





FEDTRO®

proven sound around the world®

© COPYRIGHT 1968 • FEDTRO INC.

FOR FEDTRO POWERHOUSE TRUMPET SPEAKERS, SEE PAGE 72

Grommes-Precision

PRECISION AMPLIFIERS BY PRECISION ELECTRONICS

NEW SUPERIOR LINE

PUBLIC ADDRESS

S SERIES



MODEL: S10



MODELS: S20; S35; S60; S100



ST20 w/Phone Top



MODEL S30 MAC

MODEL	S-10	S-20	S-35	S-60	S-100	S-30 MAC
POWER OUTPUT	10 Watts	20 Watts	35 Watts	60 Watts	100 Watts	30 Watts
FREQUENCY RESPONSE	±2 db 40-15,000 Hz	±2 db 30-15,000 Hz	±2 db 20-15,000 Hz	±2 db 20-15,000 Hz	±2 db 20-15,000 Hz	±2 db 40-15,000 Hz
INPUTS	1 Mic. 2 Aux. (Hi Imp.)	2 Mic. 2 Aux. (Hi Imp.)	2 Mic. 2 Aux. (Hi Imp.)	2 Mic. 2 Aux. (Hi Imp.)	2 Mic. 2 Aux. (Hi Imp.)	1 Mic. Lo Imp. 2 Aux. Hi Imp.
HUM & NOISE (Below rated output)	Mic. 55 db Aux. 65 db	Mic. 60 db Aux. 70 db	Mic. 60 db Aux. 70 db	Mic. 63 db Aux. 73 db	Mic. 65 db Aux. 75 db	Mic. 65 db Aux. 75 db
SENSITIVITY	Mic. 4 mv Aux. .3 v	Mic. 4 mv Aux. .3 v	Mic. 3 mv Aux. .25 v	Mic. 4 mv Aux. .3 v	Mic. 5 mv Aux. .4 v	Mic. 1 mv Aux. .25 v
OUTPUT IMPEDANCE	4, 8, 16 ohms 25 v (62 ohms) 70 v (500 ohms)	4, 8, 16 ohms 25 v (62 ohms) 70 v (250 ohms)	4, 8, 16 ohms 25 v (18 ohms) 70 v (143 ohms)	4, 8, 16 ohms 25 v (10.4 ohms) 70 v (84 ohms)	4, 8, 16 ohms 25 v (6.2 ohms) 70 v (50 ohms)	4, 8, 16 ohms
TONE CONTROL RANGE	Treble −10 db	Bass −15 db Treble −15 db	Bass ±10 db Treble±10 db	Bass ±10 db Treble ±10 db	Bass ±10 db Treble ±10 db	Bass −15 db Treble −15 db
TUBES SEMICONDUCTORS	6EU7, 2-6BQ5, 6V4	6EU7, 2-6BQ5, 6V4	2-6EU7, 6C4, 2-7868 5 Diodes	2-6EU7, 6C4, 2-6GT5, OA2, 5 Diodes	2-6EU7, 6C4, 4-6GT5, OA2, 5 Diodes	6 Transistors 3 Diodes
POWER SOURCE	110-125 volts AC 50-60 Cy.	110-125 volts AC 50-60 Cy.	110-125 volts AC 50-60 Cy.	110-125 volts AC 50-60 Cy.	110-125 volts AC 50-60 Cy.	110-125 volts AC 12 volts DC
DIMENSIONS	10½" W 5" H 6½" D	15¼" W 6" H 10" D	15¼" W 6" H 10" D	15¼" W 6" H 10" D	15¼" W 6" H 10" D	11" W 3½" H 9" D
SHIPPING WEIGHT	11 lbs.	19 lbs.	23 lbs.	26 lbs.	30 lbs.	14 lbs.
LIST PRICE	$79.50	$118.50	$142.00	$181.00	$236.00	$182.50
NET PRICE	$47.70	$71.10	$85.20	$108.60	$141.60	$109.50

Grommes-Precision

Trade Discount Applies To List Prices Only

© United Technical Publications

Grommes-Precision

PRECISION AMPLIFIERS BY PRECISION ELECTRONICS

NEW SUPERIOR LINE SOLID-STATE

PUBLIC ADDRESS

ST SERIES



ST-10



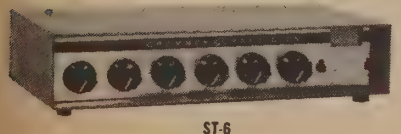
ST-20



ST-35 ST-50 ST-100



ST-20 PHONO TOP



ST-6

MODELS	ST-6	ST-10	ST-20	ST-35	ST-50	ST-100
POWER OUTPUT	Distortion 1%	10 watts Distortion 5%	20 watts Distorton 2%	35 watts Distortion 5%	50 watts Distortion 2%	100 watts Distortion 2%
FREQUENCY RESPONSE	± 1 db 20-20,000 Hz	± 1 db 20-20,000 Hz	± 1 db 20-20,000 Hz	± 1 db 20-20,000 Hz	± 1 db 20-20,000 Hz	± 1 db 20-20,000 Hz
INPUTS	4 Mic (low imp.) Aux. Hi Imp. Hi Level	1 Mic (low imp.) 2 Aux. Hi Imp. Hi Level	2 Mic (low imp.) Mag. Phono 2 Aux. Hi Imp. Hi Level	4 Mic (low imp.) Mag. Phono 2 Aux. Hi Imp. Hi Level	4 Mic (low imp.) Mag. Phono 2 Aux. Hi Imp. Hi Level	4 Mic (low imp.) Mag. Phono 2 Aux. Hi Imp. Hi Level
HUM & NOISE (Below rated output)	Mic—50 db Aux.—60 db	Mic—60 db Aux.—70 db	Mic—63 db Aux.—73 db	Mic—65 db Aux.—75 db	Mic—67 db Aux.—77 db	Mic—70 db Aux.—80 db
SENSITIVITY	Mic—0.5 mv Aux.—0.15 mv	Mic—0.5 mv Phono-Aux. 0.15 v	Mic—0.5 mv Phono-Aux. 0.15 v Mag. Phono 5 mv	Mic—0.5 mv Phono-Aux. 0.15 v Mag. Phono 5 mv	Mic—0.5 mv Phono-Aux. 0.15 v Mag. Phono 5 mv	Mic—0.5 mv Phono-Aux. 0.15 v Mag. Phono 5 mv
GAIN	Mic—70 db Aux.—15 db	Mic—110 db Aux.—55 db	Mic—113 db Aux.—58 db	Mic—115 db Aux.—60 db	Mic—117 db Aux.—62 db	Mic—120 db Aux.—65 db
OUTPUT IMPEDANCE	Hi Imp. Hi Level and Hi or Lo Imp. Mic	4.8-16 ohms 25 v Line (62.5 ohms) 70 volt (500 ohms)	4.8-16 ohms 25 v Line (31 ohms) 70 volt (250 ohms)	4.8-16 ohms 25 v Line (18 ohms) 70 volt (143 ohms)	4.8-16 ohms 25 v Line (12.5 ohms) 70 volt (100 ohms)	4.8-16 ohms 25 v Line (6.25 ohms) 70 volt (50 ohms)
TONE CONTROL RANGE		Treble (10 kc) —10 db	Bass ± 15 db 50 cps Treble ± 15 db 10,000 cps	Bass ± 15 db 50 cps Treble ± 15 db 10,000 cps	Bass ± 15 db 50 cps Treble ± 15 db 10,000 cps	Bass ± 15 db 50 cps Treble ± 15 db 10,000 cps
SEMI-CONDUCTORS	6 Transistors 2 Diodes	5 Transistors 2 Diodes	10 Transistors 2 Diodes	14 Transistors 2 Diodes	14 Transistors 4 Diodes	16 Transistors 4 Diodes
POWER SOURCE	105-125 volts AC 50-60 Cy.	105-125 volts AC 50-60 Cy.	105-125 volts AC 50-60 Cy.	105-125 volts AC 50-60 Cy.	105-125 volts AC 50-60 Cy.	105-125 volts AC 50-60 Cy.
DIMENSIONS	13¾" W 2½" H 6½" D	10½" W 5" H 6½" D	15¼" W 6" H 10" D	15¼" W 6" H 10" D	15¼" W 6" H 10" D	15¼" W 6" H 10" D
SHIPPING WEIGHT	6 lbs.	9 lbs.	18 lbs.	19 lbs.	25 lbs.	31 lbs.
LIST PRICE	$157.75	$108.50	$159.95	$187.50	$224.95	$274.50
NET PRICE	$94.65	$65.25	$95.95	$112.50	$134.95	$164.70

Grommes-Precision

© United Technical Publications

Trade Discount Applies To List Prices Only

whatever electronic products
you require...

▼

▼

▼

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



NEWCOMB

SCHOOL CLASSROOM PHONOGRAPHS AND TAPE RECORDERS

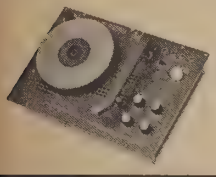
RT & R SERIES

MODEL RTS-40

transistorized
stereophonic phonograph
10 transistors, 40 watts



Compact and easily carried, the RTS-40 is an all-solid-state transformer-powered phonograph with a high compliance plug-in turnover type cartridge that reproduces stereophonic discs in full stereo and also plays monophonic. In the 20-20,000-cycle-response amplifiers, output transistors are specially heat sinked for low distortion and long life. Each of the two 6" x 9" dual-cone high fidelity loudspeakers is equipped with a 10' cord stowed on ball-point hooks. Controls are ganged and have numbered calibrations. It has separate bass and dual-range treble controls, balance, compensated volume control, glow-lighted Pausemaster, jacks for two stereo headphone sets, an output-to-tape-recorder jack that permits full use of the RTS-40's controls. 9⅜" x 10½" x 16¼", 20 pounds. **PROFESSIONAL NET $159.95**



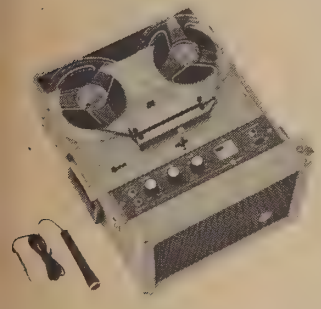
MODEL RTS-40L

40-watt stereophonic library deck
supplied without speaker, headphones or case fits hole 10⅞" x 15⅝". Ventilated bottom cover extends 2⅝" below deck. It has jacks for 4 sets of stereo headphones.

PROFESSIONAL NET $149.95

MODEL RTM-73

transistorized
monophonic tape recorder
13 solid-state elements
25 watts, 3 speeds — 7½, 3¾, 1⅞ IPS



Ruggedly built for dependable daily service in school, church, recreation, and industry, the RTM-73 with up to twice as many transistors as ordinary recorders in this price range has recording ability and audio fidelity to rival far more complex and heavier machines. With its central joystick control, operation is virtually intuitive. 25 clean watts and a big 6" x 9" speaker supply excellent coverage in large classrooms. It has a quartz-gap laminated head, stainless steel tape guides, teflon pressure pad, lighted true meter, 3-digit button-reset counter. Speed selector automatically provides proper speed-frequency equalization. It records from mike and auxiliary inputs simultaneously. NAB record curve. Controls include compensated volume, wide-range dual acting tone control which adjusts for all program material from voice to full symphony, function switch, and an on-off-or-monitor switch for internal speaker. There is an output jack for headphones, speaker, or listening center; input jacks for mike and auxiliary source. Supplied with Newcomb DM-18H omnidirectional mike with lavalier and standard phone plug. 13⅞" x 17¼" x 8½", 25½ pounds.

PROFESSIONAL NET $229.95



MODEL RTM-73L

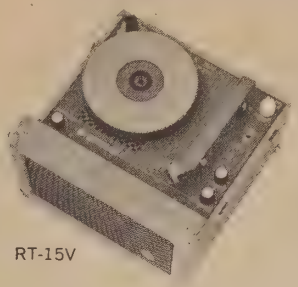
25 watt monophonic library tape deck
supplied without speaker, microphone, or case fits hole 11⅝" x 11¾". Ventilated bottom cover extends 6" below deck.

PROFESSIONAL NET $214.95

RUGGEDLY BUILT, Newcomb RT and R model cases are ⅜" plywood that is crackproof and warp-proof and covered with heavy gauge, warm gray, washable vinyl. Corners are protected with metal. Come-apart hinges eliminate one of the most vulnerable parts of cabinet construction. Die-formed grilles of perforated metal protect speakers. Phonographs and players rest on spring-floated non-scratch feet to prevent needle skipping due to bumping. Turntables have rubber mats; new cast metal tone arms have finger lift; and an advanced pickup-and-stylus guard stops needle from hitting deck or being put down on wrong side of record. Cases are generously ventilated and provide easy access for servicing.

ALL NEWCOMB RT & R MODELS ARE TRANSFORMER POWERED FOR SAFETY AND PERFORMANCE. ALL ARE UL APPROVED. ALL PRICES AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

ALL MONOPHONIC MODELS ARE STEREO COMPATIBLE



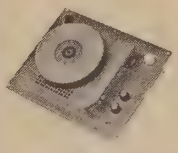
RT-15V

MODEL RT-15

transistorized
monophonic phonograph
6 solid-state elements,
20 watts

Operational simplicity with only the most basic necessary controls, combined with very good coverage and ruggedized construction make the RT-15 an outstanding value. 20 watt output is carefully matched to a big 6" x 9" oval speaker. Ceramic plug-in turnover cartridge safely plays stereo as well as mono records. Equipped with Newcomb's glow-lighted Pausemaster power-pause-pilot switch, highly effective dual-acting tone control, compensated volume control, headphone jack. 14" x 14" x 8", 17 pounds.
4-speed fixed-speed RT-15 **PROFESSIONAL NET $82.95**

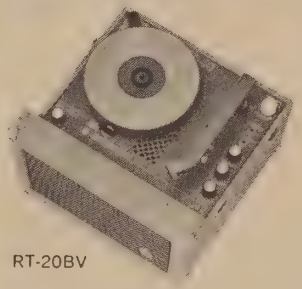
MODEL RT-15V *variable speed* has number-calibrated control for reducing speed from normal to −20%. **PROFESSIONAL NET $94.95**



MODEL RT-15L

20-watt monophonic library deck
supplied without speaker, headphones, or case fits hole 11⅛" x 13¼". Ventilated bottom cover extends 2⅝" below deck. Jack accommodates magnetic headphone set with 8 ohms or more impedance.

PROFESSIONAL NET $77.95



RT-20BV

MODEL RT-20B

transistorized
monophonic phonograph
7 solid-state elements,
25 watts

Deluxe features and excellent coverage are combined with economy in this 20-20,000 cycle response model. 6" x 9" oval speaker is driven by an all-transistorized amplifier. It is stereo compatible, has separate wide-range bass and treble tone controls, compensated volume control, numbered calibrations, glow-lighted Pausemaster, output jack for headphones or external speaker, auxiliary input jack, and output-to-tape jack that permits full use of tone and volume controls. 14" x 14" x 8", 17 pounds.
4-speed fixed-speed RT-20B **PROFESSIONAL NET $87.95**

MODEL RT-20BV *variable speed model* has +5% to −15% tempo control and neon-lighted strobe. **PROFESSIONAL NET $103.95**

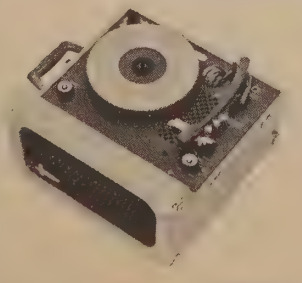


RT-20V

MODEL RT-20 *transistorized*

deluxe monophonic
phonograph, 7 solid-state
elements, 25 watts

A small additional premium procures sizable advances in audio realism and dynamic range which make the RT-20 an excellent choice for music study. Stereo compatible. Output transistors are super-cooled for long life, low distortion, and maximum performance. Controls include a Newcomb glow-lighted Pausemaster, separate wide-range bass and treble tone controls, compensated volume control. It has a headphone or external speaker jack, auxiliary input jack, output-to-tape recorder jack that permits full use of volume and tone controls. 14" x 14" x 8", 18 pounds.
4-speed fixed-speed RT-20 **PROFESSIONAL NET $92.95**
MODEL RT-20V *variable speed model* has +5% to −15% tempo control and neon-lighted strobe. **PROFESSIONAL NET $108.95**



MODEL R12-C4

vacuum-tube 10-watt
monophonic phonograph
4-speed fixed-speed

A transformer-powered utility model, the widely used R12-C4 offers safety, dependability, and high performance at low cost. It has a 6" x 9" oval speaker, wide-range dual-acting tone control, compensated volume control, output jack for headphones or external speaker. 14⅛" x 14⅛" x 8¼", 19 pounds.

PROFESSIONAL NET $74.95

NEWCOMB AUDIO PRODUCTS CO. **NEWCOMB**

NEWCOMB

SCHOOL PORTABLE COMBINATION RECORD PLAYER/P.A. SYSTEMS, HEADPHONES, MICROPHONES

RT & R SERIES



RT-1225V

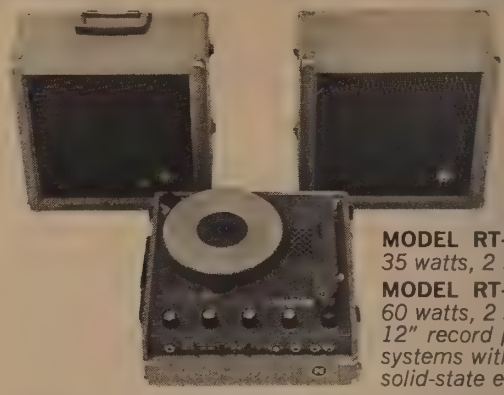
MODEL RT-1225 *monophonic 12" record player/p.a. system 9 solid-state elements, 25 watts*

Newcomb introduces a new series of players so compact and light weight that they can be conveniently used instead of phonographs for daily classroom service as well as for special occasions that call for high power and extensive coverage. This new versatility is the result of Newcomb's ultra-modern solid-state circuitry and designing for 12" records instead of the waning 16" transcription. Carefully matched to the RT-1225's 25 watt amplifier is a fine 12" dual-cone speaker. Controls include the Newcomb glow-lighted Pausemaster, mike volume mixer, compensated phono volume mixer, treble tone, special bass tone that doesn't affect mike, switched voice filter that dosen't affect phono. There are jacks for a high impedance dynamic microphone, auxiliary input, 2 speaker jacks. 13¼" x 13¼" x 11⅛", 19 pounds. 4-speed fixed- speed RT-1225 **PROFESSIONAL NET $129.95**

MODEL RT-1225V *variable speed model* has +5% to −15% tempo control and neon-lighted strobe.
PROFESSIONAL NET $145.95



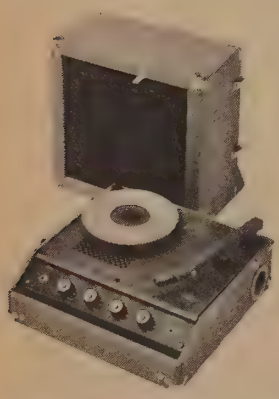
MODEL RT-112 *accessory loudspeaker* for use as a supplementary speaker with RT-1225 or RT-1225V is a 12" speaker in its own case with removable back, 25' cord. 13¼" x 13¼" x 7⅜", 9 pounds.
PROFESSIONAL NET $44.95



MODEL RT-1235V-2
35 watts, 2 speakers
MODEL RT-1260V-2
60 watts, 2 speakers
12" record player/p.a. systems with 13 solid-state elements.

Models in both power ratings have the same features, high performance, superior heat sinking. They have a +5% to −15% tempo control and neon-lighted strobe. Controls include Newcomb glow-lighted Pausemaster, mike volume mixer, compensated phono volume mixer, phono bass tone (doesn't affect mike), two-way treble phono tone, mike high or low impedance selector, 3-position mike control switch for "music," "voice," or "anti-feedback." There are jacks for mike input, auxiliary input, output-to-tape, 2 speakers. Offered only in two-case, two-speaker versions; both have same dimensions: player unit with cover — 13¼" x 13¼" x 7", 15 pounds; speakers snapped together back to back — 13¼" x 13¼" x 10¾", 15 pounds. Total weight 30 pounds.

MODEL RT-1235V-2 PROFESSIONAL NET $195.95
MODEL RT-1260V-2 PROFESSIONAL NET $234.95



MODEL R-164 *vacuum tube monophonic portable combination 16" transcription player/p.a. system*

This versatile 12 watt combination plays any size record up to 17¼" masters. It has a 12" dual-cone speaker mounted in case lid with 25' cord. Separate mike and phono volume mixing controls, separate treble and bass tone controls. Phono bass does not affect mike. Output jack for speaker or headphones; mike input jack. Separate power switch also retracts idler. Jeweled pilot light. 15½" x 15½" x 11", 25 pounds. 4-speed fixed-speed R-164 **PROF. NET $109.95**

MODEL R-164V *variable speed model* has a tempo control that varies standard speeds as much as 20%.
PROFESSIONAL NET $124.95



combination portable

MODEL RS-1620V-2
vacuum tube stereophonic





16" transcription player/p.a. system

The RS-1620V-2 plays any size record up to 17¼" masters in full stereo —or mono at the flip of a switch. Combined channels deliver 20 watts to a pair of 12" dual-cone speakers. It has a neon-lighted strobe and +5% to −15% tempo control. There are 2 mike inputs and left and right input jacks for radio or tape. On slanted panel are separate volume mixers for each mike and phono, voice filters, separate bass and treble ganged tone controls; bass does not affect mike channel. Player unit: 15½" x 16½" x 8", 26½ pounds. Speakers snapped together: 16¾" x 16¼" x 13⅛", 21 pounds. **PROFESSIONAL NET $249.95**

NEWCOMB HEADPHONES AND LISTENING CENTER ACCESSORIES



MODEL HP-2
monophonic headphones
Good sound, rugged construction, low cost, HP-2 headphones have plated metal parts, plastic covered spring headband, generous 6' cord designed for easy replacement, standard phone plug.
PROFESSIONAL NET $5.50



MODEL HDPS
stereophonic headphones
Economical general purpose stereo phones with good response, colored red and black, have plastic-covered cables, plated hardware, standard stereo phone plugs, soft neoprene ear cushions that are comfortable on ears, form sound-tight seal.
PROFESSIONAL NET $7.75



MODEL LC8BP *listening center*
Kit includes an 8BP adapter, 8 sets of HP-2 headphones, compartmented carrying case 14¼" x 8-15/16" x 7¾", 10 pounds. **PROFESSIONAL NET $74.95**

MODEL 8BP *circular adapter*
Convenient and space saving, the free-standing 8BP adapter has 10' cord and phone jack for source connection, 8 jacks for HP-2 headphones, an additional jack for another adapter.
PROFESSIONAL NET $17.50



MODEL R-HDB8C *listening center with controls.* Eight sets of HP-2 headphones in vinyl-covered compartmented case with 8 standard headphone jacks and 8 level controls in end panel, 10' source cord and output jack for additional adapter. 14¼" x 8-15/16" x 7¾", 11 pounds. **PROFESSIONAL NET $76.95**

MODEL R-HDB8 *listening center without controls.* This is the same kit as R-HDB8C but without individual volume controls in the end panel. Same dimensions. **PROFESSIONAL NET $66.95**



MODEL RHS-4C *stereophonic listening center.* This deluxe kit contains 4 sets of HDPS phones in compartmented case that has connector panel on one end. There are 4 standard stereo phone jacks on panel and 8 level controls providing volume adjustment for each ear. 10' source cord and plug. Output jack for additional RHS-4C kit. 14¼" x 8-15/16" x 7⅞", 10 pounds.
PROFESSIONAL NET $69.95

NEWCOMB MICROPHONES



MODEL UD-83
unidirectional dynamic
Its wide-range response makes the UD-83 useful for music as well as voice. Supplied with a stand adapter and standard shielded phone plug. Available with either high impedance (Model UD-83H) or low impedance (Model UD-83L).
PROFESSIONAL NET $24.50



MODEL DM-18
omnidirectional dynamic
Smooth response over wide frequency range makes the DM-18 ideal for general purpose use—music as well as voice. Supplied with lavalier and standard shielded phone plug. Offered in two impedances: high (Model DM-18H), low (Model DM-18L).
PROFESSIONAL NET $12.50



MODEL DM-1
microphone stand
An attractive desk stand of modern design in brushed silvery metal and black, the DM-1 accepts either DM-18 or UD-83 models. Mike holder unscrews to serve as stand adapter for DM-18 models.
PROFESSIONAL NET $5.00

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

NEWCOMB

TR SERIES

HIGH POWER, PORTABLE, COMBINATION TRANSCRIPTION PLAYER PUBLIC ADDRESS SYSTEMS

...outstanding for their highest quality sound, intelligibility, portability, versatility, and simplicity of operation...



features common to all TR models:

FOUR SPEED, VARIABLE SPEED, play any size record up to 17¼" masters.

AMERICAN-MADE MOTOR delivers full starting torque at any speed setting, no warm-up required, stable under all conditions, requires no more attention than conventional fixed-speed motors.

INDEPENDENT MOTOR SWITCH automatically retracts idler.

TEMPO CONTROL, separate from speed selector, varies speed +5% to −15%. No flutter-producing friction discs or cone drives.

SPEED-O-SCOPE neon strobe.

BIG TURNTABLE—10", 2 lbs.

STA-KLEEN, deep-ribbed rubber mat, special groove for handling 45's.

LONG TONE ARM, one-piece, cast metal, raises upright for stylus inspection, mounted on resilient acoustical filter, has stylus pressure adjustment for 78's or LP's.

RUGGED STOP POST prevents putting arm in wrong position.

LOCK SCREW secures arm during transportation.

DROP PAD, rubber-covered, protects stylus and cartridge.

PHONO PICK-UPS: GE twist-needle with individually replaceable sapphire styli in "M" models. High fidelity ceramic in others.

STEREO CONVERSION: ceramic cartridge may be replaced with stereo cartridge. Then a patch cord is connected between stereo output jack to auxiliary input jack on second player for perfectly balanced, fully controllable stereo.

HIGH POWER AMPLIFIERS, low distortion, inverse feedback, some have ultra-linear circuits, all engineered for optimum performance with speakers used. Frequency response ±2 db 20—20,000 cycles.

TRANSFORMER-POWERED for safety and performance.

BROAD-BAND OUTPUT TRANSFORMERS humidity-protected with mylar or acetate. Impedance selector—4 or 8 ohms (16, 8, & 4 on TRS-1680).

FUSE POST accessible from front panel.

COMPLETE, FLEXIBLE CONTROLS: separate volume mixers for phono and mike; voice filter, scratch filter; phono bass control does not affect voice mike; bass controls electrically interlocked with phono volume to automatically protect against bass overload at high levels, greatly reducing operating experience required for perfect results.

OUTPUT JACKS: "ALL" used to feed entire program to external amplifier, amplified monitor, or tape recorder. "PHONO" delivers phono signal only; useful for caller or m.c. who wants to monitor music only without interference from own voice. "STEREO" on ceramic models.

INPUT JACKS: One for each mike; number depends on model. "AUXILIARY" for signal from radio, tape machine, or stereo channel.

ILLUMINATED, SLOPING OPERATING PANEL.

TWO JEWELED PILOT LIGHTS.

RUGGED CASE made of warp-proof, crack-proof ⅜" plywood, glue-blocked, covered with scratch-resistant, washable, gray vinyl.

METAL CORNER PROTECTORS.

COME APART HINGES.

SPRING-FLOATED FEET.

HEAVY #18 GAUGE STEEL MOTOR BOARD, reinforced.

THROUGH VENTILATION for long parts life.

EASY ACCESS. Hinged motor board raises to reach tubes and motor. Perforated bottom plate unscrews to check wiring.

KICKPROOF GRILLES of die-formed metal and armored baskets protect speakers.

25' SPEAKER CORDS with stowage provisions. Straps for wall hanging.

HIDEAWAY COMPARTMENT for 8' power cord.

FULL-SIZE HANDLES on all cases and a hand-hold slot on player units for assistant carrier.

PERMANENT SERIAL NUMBER stamped in metal and riveted to motor board.

TRANSPARENT PLASTIC CARD HOLDER on each case.

PRINTED INSTRUCTION BOOK with each system.

CONDENSED INSTRUCTIONS sealed in plastic permanently attached inside lid.

BID SPECIFICATIONS AVAILABLE from factory to authorized personnel.

MADE IN U.S.A.



TR-1625 SERIES 25 WATT CERAMIC PICKUP STEREO JACK

TR-1625 Series player-amplifier units are carefully matched to the reproducers for great efficiency and better coverage than has heretofore been possible with a system in this class. It is equipped with a plug-in, "power point" type, high fidelity ceramic cartridge with separate jeweled standard and microgroove styli. It has a separate treble tone control, bass control that does not affect mike, phono volume mixer, mike volume mixer, scratch filter switch, voice filter switch. There are output jacks for 2 speakers, "Phono," "All," stereo; input jacks for one mike and another for auxiliary equipment.

	PROF. NET
MODEL TR-1625 in a single split case with one 12" dual-cone 30-watt speaker, 35 lbs.	$169.95
MODEL TR-1625-2, two cases, includes one S-212, 50 lbs.	208.95
MODEL TR-1625-NE2, three cases, two N-12ET, 63 lbs.	279.45
MODEL TR-1625-CS2, three cases, two CS-48, 73 lbs.	302.35
MODEL TR-1625-SCS2, three cases, two SCS-412, 124 lbs.	413.50

Stereo compatible pickup safely plays stereo records monophonically.



TR-1625M SERIES 25 WATT MAGNETIC PICKUP

When monophonic music reproduction is to be a player's primary function, a Newcomb TR model equipped with a magnetic cartridge is your best choice. The TR-1625M is equipped with a GE variable reluctance, twist-needle cartridge with sapphire styli and necessary preamplifier built in. Motor is a 4-pole deluxe unit. Player has a separate treble tone control, bass control that does not affect mike, phono volume mixer, mike volume mixer, scratch filter switch, voice filter switch. There are output jacks for 2 speakers, "Phono," and "All"; input jacks for mike and auxiliary.

	PROF. NET
MODEL TR-1625M in a single split case with one 12" dual-cone 30-watt speaker, 36 lbs.	$189.95
MODEL TR-1625M-2, two cases, includes one S-212, 51 lbs.	224.95
MODEL TR-1625M-NE2, three cases, two N12ET, 64 lbs.	295.45
MODEL TR-1625M-KN, two cases with one KN-200 speaker, 65 lbs.	293.20
MODEL TR-1625M-CS2, three cases, two CS48, 74 lbs.	328.35
MODEL TR-1625M-SCS2, three cases, two SCS-412, 125 lbs.	439.45

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

NEWCOMB

HIGH POWER PORTABLE
TRANSCRIPTION PLAYER
P.A. SYSTEMS

TR SERIES

TR-1640 SERIES 40 WATT CERAMIC PICKUP · STEREO JACK



TR-1640 models provide impressive audience coverage at moderate cost. Motor is a heavy-duty, four-pole unit. Player is equipped with a plug-in, "power point" type, high fidelity ceramic cartridge with separate jeweled standard and microgroove styli, ultra-linear amplifier. It has a treble tone control for all channels, bass tone for phono, phono volume mixer, mike volume mixer, bass tone for mike, impedance switch for speakers, scratch filter switch. There are output jacks for 2 speakers, "Phono," "All," stereo. Inputs for one mike auxiliary.

	PROF. NET
MODEL TR-1640 in a single split case with one 12" 50-watt speaker, 36 lbs.	$209.95
MODEL TR-1640-E2, two cases, includes one S-212, 51 lbs.	239.95
MODEL TR-1640-E4, three cases, one S-212, One S-212E, 72 lbs.	304.45
MODEL TR-1640-2, two cases, one S-212H, 51½ lbs.	252.95
MODEL TR-1640-4, three cases, one S-212H, one S-212E, 72½ lbs.	317.45
MODEL TR-1640-NE2, three cases, two N12ET, 64 lbs.	310.45
MODEL TR-1640-NE4, five cases, four N12ET, 98 lbs.	445.45
MODEL TR-1640-NH2, three cases, two N12HT, 78 lbs.	374.45
MODEL TR-1640-NH4, five cases, four N12HT, 126 lbs.	573.45
MODEL TR-1640-CS2, three cases, two CS48, 74 lbs.	343.35
MODEL TR-1640-CS4, five cases, four CS48, 118 lbs.	511.25
MODEL TR-1640-SCS2, three cases, two SCS-412, 125 lbs.	454.45
MODEL TR-1640-SCS4, five cases, four SCS-412 220 lbs.	733.45

Stereo compatible pickup safely plays stereo records monophonically.

TR-1640M SERIES 40 WATT MAGNETIC PICKUP



A more powerful music room model which handles with ease four speakers, the TR-1640M player unit has an ultra-linear output system, two-way crossover-network loudspeaker systems, and the GE variable reluctance cartridge. The phono circuit is converted to a second mike channel by flipping a selector switch. It has a treble tone control for all channels, phono volume mixer, phono bass tone control, mike bass tone, mike volume mixer, impedance switch for speakers, scratch filter. There are output jacks for 2 speakers, "Phono," and "All"; input jacks for 2 mikes and auxiliary.

	PROF. NET
MODEL TR-1640M-HF in a single split case with 2-way speaker system including a 12" 50-watt woofer, crossover and separate 3½" tweeter, 36½ lbs.	$244.95
MODEL TR-1640M-E2, two cases, includes one S-212, 52 lbs.	259.95
MODEL TR-1640M-E4, three cases, one S-212, one S-212E, 73 lbs.	324.45
MODEL TR-1640M-HF2, two cases, one S-212HF, 54 lbs.	284.95
MODEL TR-1640M-HF4, three cases, one S-212HF, one S-212E, 75½ lbs.	373.45
MODEL TR-1640M-KN, two cases, one KN-200, 66 lbs.	328.20
MODEL TR-1640M-KN2, three cases, two KN-200, 101 lbs.	460.95
MODEL TR-1640M-NE2, three cases, two N12ET, 65 lbs.	330.45
MODEL TR-1640M-NE4, five cases, four N12ET, 99 lbs.	465.45
MODEL TR-1640M-NH2, three cases, two N12T, 79 lbs.	394.45
MODEL TR-1640M-NH4, five cases, four N12HT, 127 lbs.	583.45
MODEL TR-1640M-NN2, three cases, two N12NT, 86 lbs.	434.45
MODEL TR-1640M-NN4, five cases, four N12NT, 141 lbs.	673.45
MODEL TR-1640M-CS2, three cases, two CS48, 75 lbs.	363.35
MODEL TR-1640M-CS4, five cases, four CS48, 119 lbs.	511.25
MODEL TR-1640M-SCS2, three cases, two SCS-412, 126 lbs.	474.45
MODEL TR-1640M-SCS4, five cases, four SCS-412, 221 lbs.	753.45

TR-1656M SERIES 56 WATT MAGNETIC PICKUP



These fully integrated systems achieve phenomenal acoustic output. They include 56 watts peak output system, four-pole deluxe motor, GE variable reluctance cartridge. The phono channel converts to a *third* microphone channel by flipping a switch. First mike channel has separate bass attenuating control for voice clarity. Second mike is flat. Phono tone controls regulate third mike. There are a separate treble tone control for all channels, bass tone for phono, phono volume mixer, mike 2 mixer, mike 1 mixer, mike 1 bass tone, speaker impedance switch, scratch filter. Output jacks for 2 speakers, "Phono," and "All"; input jacks for 3 mikes and auxiliary.

	PROF. NET
MODEL TR-1656M-HF2, two cases, includes one S-212HF, 57 lbs.	$309.95
MODEL TR-1656M-HF4, three cases, one S-212HF, one S-212HFE, 80 lbs.	398.45
MODEL TR-1656M-NF2, two cases, one S-212NF, 63 lbs.	350.95
MODEL TR-1656M-NF4, three cases, one S-212NF, one S-212NFE, 92 lbs.	480.45
MODEL TR-1656M-KN2, three cases, two KN-200, 104 lbs.	486.95
MODEL TR-1656M-KN4, five cases, four KN200, 176 lbs.	752.45
MODEL TR-1656M-NE2, three cases, two N12ET, 68 lbs.	356.45
MODEL TR-1656M-NE4, five cases, four N12ET, 102 lbs.	491.45
MODEL TR-1656M-NH2, three cases, two N12HT, 82 lbs.	420.45
MODEL TR-1656M-NH4, five cases, four N12HT, 130 lbs.	619.45
MODEL TR-1656M-NN2, three cases, two N12NT, 89 lbs.	460.45
MODEL TR-1656M-NN4, five cases, four N12NT, 144 lbs.	699.45
MODEL TR-1656M-CS2, three cases, two CS48, 78 lbs.	389.35
MODEL TR-1656M-CS4, five cases, four CS48, 122 lbs.	557.25
MODEL TR-1656M-SCS2, three cases, two SCS-412, 129 lbs.	500.45
MODEL TR-1656M-SCS4, five cases, four SCS-412, 224 lbs.	779.45

DIMENSIONS OF NEWCOMB TR PLAYERS

Single speaker TR players form a single case with the speaker mounting used as the lid. They measure 16¾" x 16¼" x 13¼". In multiple-speaker models (except TRS-1680) the phono-amplifier unit closed measures 16¾" x 16¼" x 8½". Speaker dimensions are given on facing page. Accessory speakers may be added to one-or two-speaker models at any time.

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

NEWCOMB

PORTABLE LOUDSPEAKERS

TR SERIES

Newcomb makes many types of portable loudspeakers for use with Newcomb Portable Combination Transcription Player/Public Address Systems. They vary in portability, directivity, efficiency, and frequency response. For example, the column speaker is highly directive, but not nearly as easy to carry as the compact S-212 Series models. The KN-200 reproducer combines widest frequency range with highest efficiency and exceptional intelligibility. The N-12 Series speakers are highly efficient, directive, intelligible and portable. All are excellent instruments, built to withstand rough treatment. Construction and finish matches player units.

ON THIS PAGE ARE SHOWN THE VARIOUS LOUDSPEAKER MODELS USED WITH NEWCOMB TR SERIES SYSTEMS



NEWCOMB S-212 SERIES

These open-back designs are the most popular of all square dance system reproducers because they provide a unique combination of light weight, high output per watt input, and low cost. Their wide-range response makes them ideal for general use. Each model includes two independent reproducers in a split case. Speakers snap together back-to-back for carrying. Case size: 16¾″ x 16¼″ x 13⅛″. 25′ cords stow on hooks inside case.

- **MODEL S-212** includes two 12″ dual-cone wide range 30 watts peak reproducers of good conversion efficiency. Impedance per speaker is 8 ohms. Weight: 21 lbs. **PROFESSIONAL NET: $64.50**
- **MODEL S-212E** is same as S-212 but has series extension jacks. **PROFESSIONAL NET: $64.50**
- **MODEL S-212H** includes two 50 watts peak 12″ reproducers of wide-range and excellent conversion efficiency. Impedance per speaker is 8 ohms. Weight 21½ lbs. **PROFESSIONAL NET: $77.50**
- **MODEL S-212HE** is same as S-212H but has series extension jacks. **PROFESSIONAL NET: $77.50**
- **MODEL S-212HF** includes two 50 watt speak 12″ woofers and two 3½″ tweeters with crossover. Impedance per reproducer is 8 ohms. Weight 23 lbs. **PROFESSIONAL NET: $88.50**
- **MODEL S-212HFE** is same as S-212HF but has series extension jacks. **PROFESSIONAL NET: $88.50**
- **MODEL S-212X** includes two 60 watts peak super-power, aluminum-dome 12″ dual-cone loudspeakers of superior efficiency and very wide range. Impedance per speaker is 8 ohms. Weight: 25 lbs. **PROFESSIONAL NET: $110.65**
- **MODEL S-212XE** is same as S-212X but has series extension jacks. **PROFESSIONAL NET: $110.65**
- **MODEL S-212NF** includes two 60 watts peak super-power woofers and two 3½″ tweeters with crossover. These systems combine exceptional response range with super efficiency. Impedance per reproducer is 8 ohms. Weight: 29 lbs. **PROFESSIONAL NET: $129.50**
- **MODEL S-212NFE** is same as S-212NF but has series extension jacks. **PROFESSIONAL NET: $129.50**

MODELS WITH "E" SUFFIX are only for use with other speakers and are not intended for use alone.



NEWCOMB KN-200 REPRODUCER

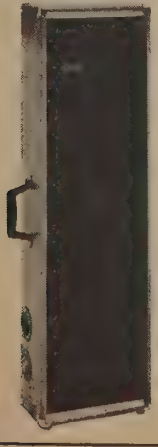
Designed to give you all the sound, all the quality, all the range, all the coverage inherent in your fine Newcomb sound system, the KN-200 is a fully-enclosed, ducted-port, two-way speaker system of advanced design. It is highly efficient, delivers the widest frequency response possible with a portable speaker...full music reproduction plus crisp high frequency intelligibility. The KN-200 includes a massive 12″ woofer, crossover, horn tweeter and treble control. It includes a parallel extension jack and impedance change switch for 8 or 16 ohms. 25 foot cord stows into "Hideaway" compartment. Size: 10¼″ x 16⅞″ x 23½″. Weight: 35 lbs. **PROFESSIONAL NET: $132.75**



NEWCOMB N-12 SERIES SPEAKERS

Most unusual for a portable speaker, Newcomb N-12 models are back-loaded, dual-labyrinth reproducers for those who want high directivity, firm bass, crisp and clean highs. They provide the advantages of a closed-back reproducer in problem halls and auditoriums. 25 foot cord stows in "Hideaway" compartment. Enclosure measures 7⅞″ x 18¼″ x 19½″. Offered in three models...

- **MODEL N12ET** is a 30 watts peak system using an efficient 12″ woofer and two 3½″ tweeters and crossover. Included is a series-type extension jack with shorting switch which permits using the N12ET as either a regular or extension speaker. Impedance is 8 ohms. Weight 17 pounds. **PROFESSIONAL NET: $67.50**
- **MODEL N12HT** is a 50 watts reproducer with a 12″ heavy duty woofer, a directional horn tweeter and crossover network. This reproducer provides highest sound output per watt input. Included are a parallel extension jack and impedance changing switch. Impedance: 8 and 16 ohms. Weight: 24 pounds. **PROFESSIONAL NET: $99.50**
- **MODEL N12NT** is a 60 watts peak reproducer with an extra heavy duty 12″ woofer, a directional horn tweeter and crossover network. This reproducer provides highest sound output per watt input. Included are a parallel extension jack and an impedance changing switch. Impedances: 8 and 16 ohms. Weight 27½ pounds. **PROFESSIONAL NET: $119.50**



NEWCOMB COLUMN SPEAKER, MODEL CS48

This is one of the most practical of all column speakers. It combines exceptional directivity with portability, has good efficiency and greater effective range than most columns. Power handling capacity is 60 watts peak. 25 foot cord and plug tuck into "Hideaway" cord compartment. It has an extension jack and switch for use with extension speakers. Size: 39⅞″ x 11¼″ x 6⅜″. Weight: 22 lbs.

PROFESSIONAL NET: $83.95

NEWCOMB SUPER COLUMN, MODEL SCS-412

Here's the best column speaker you've ever heard. The Newcomb SCS-412 gives you super intelligibility, super efficiency, super power handling capacity. It contains four *twelve-inch* speakers specially developed for column use. Its peak power handling capacity of 120 watts makes for dependability and unusually low distortion when used with conventionally-powered systems. Each amplifier watt is converted into more sound than is available from any other column. The SCS-412 makes small amplifiers sound like big ones. It will project your voice clear as crystal, syllable-perfect over the noisiest big crowd. It takes a man-size system to produce these results. The SCS-412 stands 56″ high, is 15″ wide, 7½″ deep, weighs 42½ pounds. Impedance is 8 ohms. It has a 25 foot cord, "Hideaway" cord compartment, series type jack with shorting switch. **PROFESSIONAL NET: $139.50**

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

NEWCOMB

STEREOPHONIC SYSTEMS
MICROPHONES, ACCESSORIES

TR SERIES





Built with a great reserve of power for most uses – 40 watts peak per channel – the Newcomb TRS-1680 is perhaps the most complete and flexible portable sound system ever built. It reproduces stereo or mono with the turn of a knob. Stereo or mono tape or radio can be fed to the system. Live music and speech are reproduced either stereo- or monophonically.

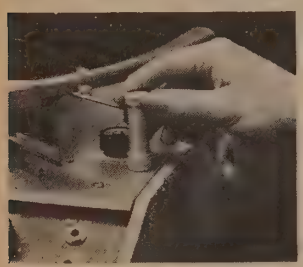
TRS-1680 SERIES 80 WATT

It has three mike channels. The central mike puts the speaker or square dance caller in the middle, midway between the reproducers. There are separate treble, bass, and volume controls for phono or other reproduced sound. Each mike channel has its own, individual tone and volume controls. Mike tone controls are rotated for treble adjustment, pushed or pulled for bass. There is a blend control to provide any degree of stereo you wish. There are "Left" and "Right" inputs for radio, tape, or auxiliary; a scratch filter; "All" or "Phono" monitor jacks; jacks for two or four speakers with an impedance-matching switch. Turntable-amplifier unit DIMENSIONS: 9¼" x 17⅞" x 18⅝"; 43 lbs. POWER CONSUMPTION: 180 watts, 117 volts, 60 cycles a.c. A wide choice of reproducers to meet specific assignments is offered...

	PROF. NET
MODEL TRS-1680-NF2, two cases, includes one S-212NF, 72 lbs.	$429.00
MODEL TRS-1680-NF4, three cases, two S212NF, 101 lbs.	$558.50
MODEL TRS-1680-KN2, three cases, two KN-200, 113 lbs.	$565.00
MODEL TRS-1680-KN4, five cases, four KN-200, 183 lbs.	$830.50
MODEL TRS-1680-NH2, three cases, two N12HT, 91 lbs.	$498.50
MODEL TRS-1680-NH4, five cases, four N12HT, 139 lbs.	$697.50
MODEL TRS-1680-NN2, three cases, two N12NT, 98 lbs.	$538.50
MODEL TRS-1680-NN4, five cases, four N12NT, 153 lbs.	$777.50
MODEL TRS-1680-CS2, three cases, two CS48, 87 lbs.	$467.40
MODEL TRS-1680-CS4, five cases, four CS48, 131 lbs.	$635.30
MODL TRS-1680-SCS2, three cases, two SCS-412, 138 lbs.	$578.50
MODEL TRS-1680-SCS4, five cases, four SCS-412, 233 lbs.	$857.50

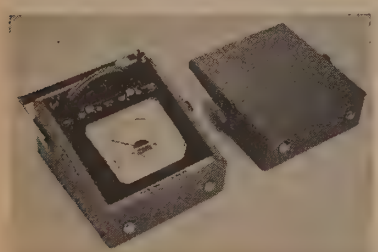
ACRA-SET TONE ARM LIFTER AND RECORD-CUEING DEVICE

MODEL A-1



Acra-Set is an accessory available at additional cost for repeating passages and protecting records. You simply twist the knob on top to gently lift or lower tone arm. Lifter has a 100-division scale and a traveling stop with a pointer. It is simply installed by drilling a 3/16" hole which is readily located with a template. Holes are predrilled at the factory on current transcription players. Specify your model number when ordering; correct template and C-1 cue sheets will be supplied. **PROF. NET: $12.50**

MODEL VU-1 PORTABLE VISUAL OUTPUT METER



Model VU-1 Output Meter permits you to see that your voice is being amplified to the proper level, helps you make the most of your fine Newcomb TR system. Meter is high quality instrument with jeweled d'Arsonval movement and a scale calibrated in both db and volume units from 0 to 100 over the working range of the system. Also indicates overloading. Simple internal adjustment matches meter to any TR player; instructions are permanently mounted in lid. One end of the supplied patch cord connects player to "All" monitor jack, other end to "Input" on meter. Supplementary "All" monitor jack on meter. **PROF. NET: $29.95**



AMPLIFIED MUSIC MONITORS

With a Newcomb Amplified Monitor you can hear reproduced music without interference or feedback squeal from caller's or speaker's voice. Connected to "Phono" channel of transcription player, monitor reproduces music only, not mike channels. Or, it may be connected to "All" jack to reproduce voice and music. It can also be used as a stereo channel with a TR-1625 or TR-1640.

MODEL M-12: 12" speaker; 10 watt amplifier; 17⅞" x 13⅜" x 7½"; 17¼ lbs. **PROF. NET: $79.50**

MODEL M-9: 9" oval, dual-cone speaker; 10 watt amplifier; 13¼" x 10⅛" x 7"; 10 lbs. **PROF. NET: $69.50**

PROTECTIVE CANVAS COVERS



Made of tightly woven, fleece-lined, rubberized mackintosh covert, with stout zipper closure and flap that tucks under handle. Transparent slot for identification.

No. CA-102 for use with TR-1625, TR-1625M, TR-1640, TR-1640M amplifier sections only. **PROF. NET: $7.95**

No. CA-103 for use with S-212 type split case speaker assemblies and all TR series systems with single speaker in case lid. **PROF. NET: $7.95**

No. CA-104 for use with TRS-1680 amplifier section only. **PROF. NET: $8.95**

No. CA-110 for use with KN-200 or K-400 reproducers. **PROF. NET: $10.95**

No. CA-111 for use with C-100 or J-200 reproducers. **PROF. NET: $10.95**

No. CA-119 for use with M-12 monitor. **PROF. NET: $8.95**

No. CA-132 for use with M-9 monitor. **PROF. NET: $8.95**

No. CA-136 for use with all N-12 series reproducers. PROF. **NET: $10.95**

No. CA-137 for use with CS48 column speaker. **PROF. NET: $10.95**

No. SCS-412 for use with SCS-412 column speaker. **PROF. NET: $14.95**

MICROPHONES



Model N-30 Crystal Microphone with lavaliere cord, stand adapter, switch, and shielded plug. **PRO. NET 13.95**

Model N-30D Desk Mounting for N-30 only. **PRO. NET 1.85**

Model N-36 Dynamic Professional Quality Microphone is the perfectionist's choice with any TR system, especially intended for use with TR-1640M, TR-1656M and TRS-1680 series models. Supplied with shielded cord and plug and on-off switch. **PRO. NET 50.00**

Model N-23 Dynamic Microphone of very high quality with switch and shielded plug, recommended for general purpose use with all TR series systems. **PRO. NET 39.50**

Model MS-23 Accessory Bag of heavy plastic, zippered, for microphones, etc., can be attached inside lid of speaker case. **PRO. NET 2.10**

Model PP-81 Stereo Conversion Pickup Cartridge, plug-in type, for any TR series player equipped with stereo output jack and plug-in ceramic cartridge. **PRO. NET 4.65**

Model WC-84 Connecting Cable, four feet long with plugs for connecting two TR ceramic models together for stereo. **PRO. NET 4.65**

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

Net

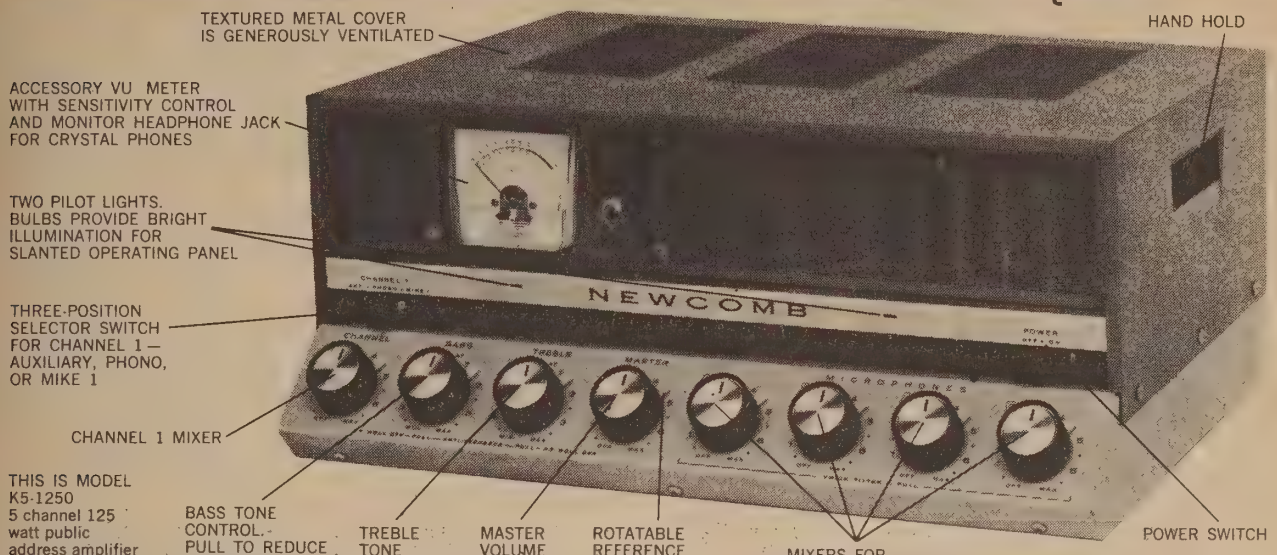
© United Technical Publications

NEWCOMB

MODULAR PUBLIC ADDRESS AMPLIFIERS

CUSTOM SERIES K

MODULAR PUBLIC ADDRESS AMPLIFIERS OF THE VERY BEST QUALITY



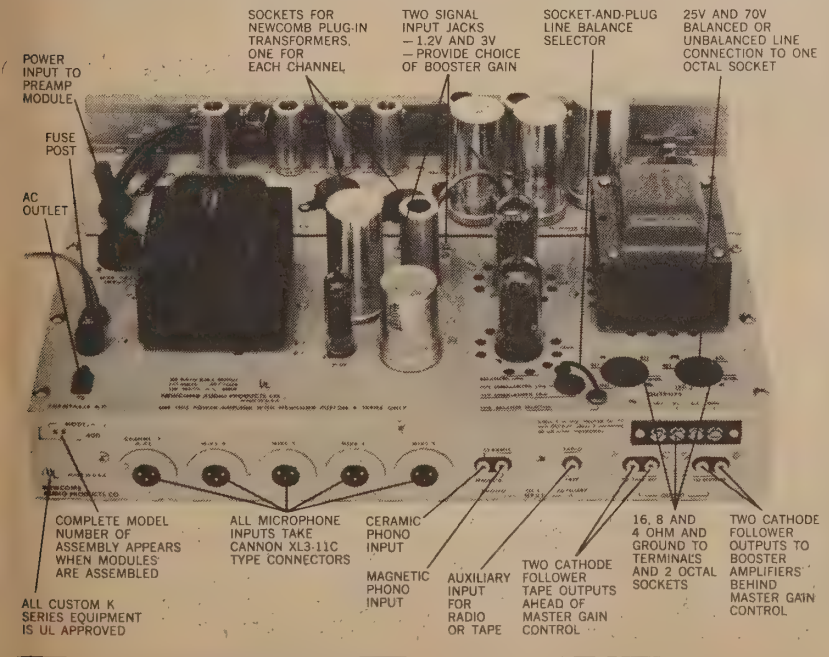
Flexibility and performance without equal are provided by Newcomb Custom K Series public address amplifiers. "Custom" has a very real meaning in this instance. Within minutes you can assemble exactly the right combination of channels, power and features to custom fit a particular situation. You are not faced with the hours of assembly labor and testing necessary with conventional modular designs. You simply select the Newcomb Custom K mixer/preamplifier with the number of channels — three, four, or five — you need. Then choose the power amplifier module — 40, 60, or 125 Watts — needed for the location. Drop the power amplifier into the preamplifier chassis. Two plug-in connections. No soldering. Drive a few sheet metal screws and you're in business. Take your choice of a well-ventilated cabinet cover or a rack panel mount. A VU meter accessory with a phone jack is available and can be quickly added to any front end. A remote control accessory is available for the four-channel module.

Any preamplifier may be used as a mixer by itself by inserting a Model P Power Supply instead of a power amplifier module. Any power output module becomes a straight power amplifier when it is mounted in the Newcomb Model KB Booster Chassis. The Newcomb Custom K modular system is so simple and straightforward that it's a wonder public address amplifiers weren't made this way to begin with.

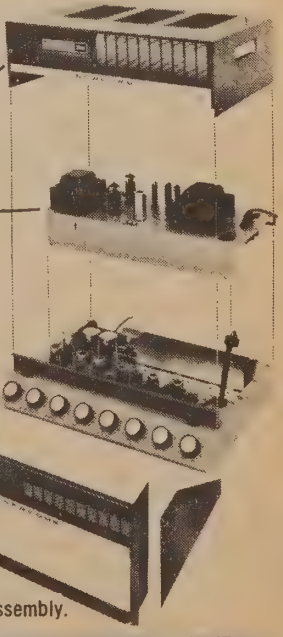
All modules are completely interchangeable.

The latest developments in vacuum tube technology and skilled hand craftsmanship are united to produce superb performance. Performance of Newcomb Custom K Series amplifiers has no equal. They operate with extremely low distortion at all power levels, supply unusually high useful power, run unbelievably cool. Vacuum tube design was chosen for the Custom K Series because no other method of amplification today provides the same combination of maximum performance, stability, reliability, extended life, and outright value. With vacuum tubes, repairs are easier and faster to make, cost less.

Visually, Custom K Series assemblies are exceedingly handsome, finished in soft, light shades of green. The control panel is slanted for convenient operation either seated or standing, and it is well illuminated. Custom K Series models abound with such refinements as movable reference markers on all knobs. To cut in a voice filter you simply pull the appropriate mixer knob. To kill feedback, pull tone control knobs. When you're out to prove what you can do, when you're putting in a model job, a job you'll be proud to put your nameplate on, that's the time to build with Newcomb Custom K.



INSTANTLY PUT TOGETHER EXACTLY THE FEATURES YOU NEED FOR A GIVEN INSTALLATION



NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

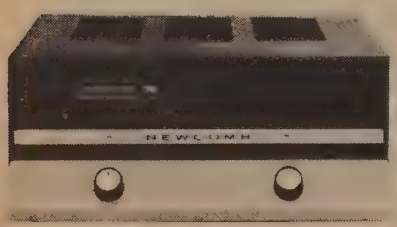
NEWCOMB

MODULAR PUBLIC ADDRESS AMPLIFIERS

CUSTOM SERIES K

70 COMBINATIONS FROM 14 UNITS

The modular concept makes it possible for you to get exactly the features you need without delay. Four chassis and four power units combine to form **15** basic assemblies. The VU meter may be added to **12** assemblies. **8** models (K4R assemblies with and without VU meter) become remote-control units with the addition of the RB4 accessory. All **35** may be rack panel mounted or covered for free-standing use. (UL requires that they be purchased with one or the other.)



MODEL KB BOOSTER CHASSIS WITH MODEL KCB COVER

AS SIMPLE TO SPECIFY AS THEY ARE TO ASSEMBLE

Model number of a basic assembly consists of a combination of preamp model number and power amplifier model number as follows:

Preamp Mixer ↓ / Power Amp →	Model 1250 125 watts	Model 600 60 watts	Model 400 40 watts	Model P Power Supply
Model K5 5 Channel	K5—1250 $519.00	K5—600 $459.00	K5—400 $419.00	K5—P $299.00
Model K4R 4 Channel	K4R—1250 $504.50	K4R—600 $444.50	K4R—400 $404.50	K4R—P $284.50
Model K3 3 Channel	K3—1250 $479.00	K3—600 $419.00	K3—400 $379.00	K3—P $259.00
Model KB Booster Chassis	KB—1250 $329.45	KB—600 $269.45	KB—400 $229.45	↑ Complete Mixer-Preamp Only / ← Complete Power Amplifier Only

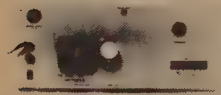
Specifications For Complete Mixer-Preamplifier Power Amplifier Assemblies				
	Mike Gain	133 db	130 db	128 db
	Auxiliary Gain	85.4 db	82.4 db	80.4 db
	Hum, input shorted: Mike, −60 db below full output Magnetic pickup, −50 db below full output Auxiliary input, −60 db below full output All controls off, −80 db below full output			

List prices of combinations are shown without cover, rack mounting or VU meter.

SPECIFICATIONS — K3, K4R, K5 MIXER-PREAMPLIFIERS

All of the Newcomb Custom K mixer-preamplifier modules have space at the back of the chassis into which may be inserted either a Model 400, 600 or 1250 power amplifiers or the Model P power supply. Power is normally supplied to the front end by the power amplifier module; Model P is used when the preamp section is to be used as a separate mixer-control unit. Mixer models differ principally in the number of input channels. Each has one mike channel that is convertible by switch to use with a magnetic or ceramic phono pickup (preamp provides full RIAA response curve) or with a flat tuner or tape input. **Outputs:** 2 from each of two cathode followers, one before and one after the master control. Maximum output from followers: 10 volts into high impedance load. **Distortion:** less than ½%. D.C. on all filaments. **Frequency response:** ±1 db 20-20,000 cycles. **Bass tone control range:** −18 db to +18 db. **Low frequency roll off:** 3 db at 100 cycles, −12 db at 20 cycles. **Treble tone control range:** −18 db to +18 db. **High frequency roll off:** 3 db at 5,000 cycles, −12 db at 20,000 cycles. **Microphone impedance:** 2 megohms convertible to low impedance by Newcomb hum-free plug-in transformer. **Input volts required** for 1 volt output from cathode followers: **Mikes,** .0028 volts, gain 54* db, 2 megohms. **Magnetic,** .0022 volts, 100,000 ohms. Equalized to full RIAA curve. **Ceramic pickup,** .086 volts. Equalized to RIAA curve. **Tuner or Tape input** (Aux.), .34 volts, ½ meg., gain 6.4* db. *Gain stated is with 1 meg. output load. With 600 ohm output using TR-100 add 13 db. **Hum** below 10 volts output (inputs shorted): **Mikes,** −80 db. **Magnetic pickup,** −70 db. **Aux. input,** −80 db. **All controls off,** −100 db. Socket supplies power for VU-2T volume indicating meter. Note: K4R provides for remote control of all inputs. **Dimensions,** all models: 17" x 13⅝" x 7⅜" (height dimension includes KC cover). **Weight,** all models: 7 pounds. All microphone inputs require Cannon XL3-11C type connectors.

	Model K3	Model K4R	Model K5
Number of Channels and mixing controls	3	4	5
Number of Channels with voice filters	2	3	4
Tubes	two 6AB4 three 12AX7	three 6AB4 three 12AX7	four 6AB4 three 12AX7
LIST: (with tubes, without cover)	$199.50	$225.00	$239.50



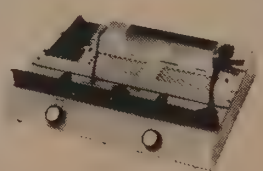
FOR SEPARATE MIXER-PREAMPLIFIER ONLY...

MODEL P POWER SUPPLY takes the place of the power amplifier in the space provided in the K3, K4R, and K5 preamp modules, and supplies power to them through an octal socket. (It is never needed when a Model 400, 600, or 1250 power amplifier is used.) Model P includes a socket for a plug-in output transformer and output terminals for a balanced or unbalanced 600 ohm line. **Maximum 600 ohm output** = 0 VU. **Input power:** 117 volts, 60 cycles, 22 watts. **Wt.** 4½ lbs. **List:** (with tubes) $59.50

SPECIFICATIONS — 400, 600, 1250 POWER AMPLIFIER MODULES

The power amplifier modules in Newcomb's Custom K Series are not usable alone; they must be installed in a K3, K4R, or K5 mixer-preamplifier chassis. If they are to be used simply as a booster amplifier, they can be mounted in a Model KB Booster Chassis. Circuits in all power amplifier modules are resistance-capacity coupled, screen-regulated, with fixed bias and inverse feedback. They include power supply for K3, K4R, and K5 preamps. All have an a.c. outlet and an external fuse post. All three models have some identical specifications: **Input impedance:** 1 megohm convertible to low impedance with hum-free plug-in line or bridging transformers. **Output impedances:** 4, 8, and 16 ohms to a terminal strip and two octal sockets; 25 and 70 volts balanced or unbalanced line to one octal socket. **Hum and noise:** 80 db below steady state power rating.

	Model 400	Model 600	Model 1250
POWER OUTPUT: steady state RMS at less than 5% T.H.D.	40 watts	60 watts	125 watts
POWER OUTPUT: at less than 1% T.H.D.	35 watts	50 watts	110 watts
PEAK POWER: (Note: Music power peak rating is higher)	80 watts	120 watts	250 watts
INPUT—1.2 V or 3 V required for maximum rated steady state power output			
GAIN: at 1 meg. 1.2 V input tap 3 V input tap	74 db 70 db	76 db 72 db	79 db 75 db
GAIN: at 600 ohms input using TR-100 and 1.2 V input tap 3 V input tap	61 db 57 db	63 db 59 db	66 db 62 db
FREQUENCY RESPONSE: ±2 db 25-15,000 cps at	35 watts	50 watts	110 watts
all ±0 db 20-20,000 cps at	1 watt	1 watt	1 watt
POWER CONSUMPTION: 117 volts, 60 cycles a.c.	110 watts	145 watts	185 watts
TUBES: All models include 5 silicon rectifiers	one 7199 two 6878 one 6CU5	one 7199 two 6L6GC one 6CU5	two 12AU7 two 6550 one 6CU5
WEIGHT:	16½ lbs.	21¼ lbs.	30½ lbs.
LIST: (with tubes)	$179.50	$219.50	$279.50



FOR COMPLETE POWER AMPLIFIER ONLY

MODEL KB CHASSIS is the same size as the K3, K4R, and K5 preamp modules and accommodates Model 400, 600, or 1250 power amplifier modules when they are to be used as boosters. Model KB includes volume control, low frequency roll-off switch, power switch, and pilot lights. It has a lighted, slanted operating panel and factory-wired socket for Newcomb plug-in, hum-free transformers. **Dim.:** 17" x 13⅝" x 7⅜". **Wt.:** 5 lbs. (without cover). **List:** $49.95

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

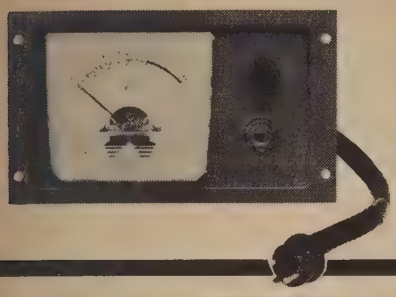
Trade Discount Applies To List Prices Only

© United Technical Publications

NEWCOMB

MODULAR PUBLIC ADDRESS AMPLIFIERS

CUSTOM SERIES K



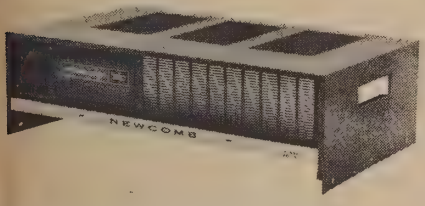
MODEL VU-2T ACCESSORY TRANSISTORIZED VU METER

for use with Newcomb Custom K Model K3, K4R or K5 mixer/preamp, the VU-2T has sensitivity control and a monitor headphone jack for wide-band crystal headphones only. The VU-2T obtains power from the preamp, is installed in place of the removable front plate, simply plugs into the socket provided. LIST: $59.50



MODEL RB4 ACCESSORY REMOTE CONTROL UNIT

for use with the K4R only. A four-channel unit, it may be placed up to 2,000 feet from the amplifier. A 5 wire unshielded cable is required. Cable extra. Dimensions: 3" x 9" x 1⅜". Weight: 1½ pounds. LIST: $19.50

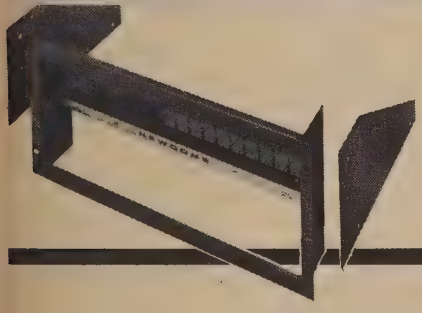


MODEL KC COVER

for assemblies incorporating Model K3, K4R, or K5 mixer-preamplifier modules. Size: 17⅞" x 12⅞" x 5⅞". Weight: 5 pounds. LIST: $25.00

MODEL KCB COVER

for booster amplifier assemblies incorporating Model KB Booster Chassis. Size: 17⅞" x 12⅞" x 5⅞". Weight: 5 pounds. LIST: $25.00

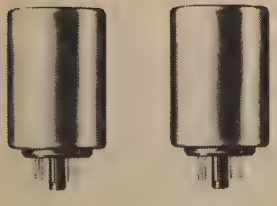


MODEL KR-875 RACK PANEL ADAPTER

for assemblies incorporating Model K3, K4R, or K5 mixer-preamplifier modules. Size: 19" x 8¾". Weight: 5 pounds. LIST: $25.00

MODEL KR-875B RACK PANEL ADAPTER

for assemblies incorporating Model KB Booster Chassis. Size: 19" x 8¾". Weight: 5 pounds. LIST: $25.00



HUM-FREE PLUG-IN TRANSFORMERS

MODEL TR-91 input transformers are designed for all Newcomb amplifiers wired to accept them. They provide 30/50 ohms or 200/250 ohms input impedance depending on wiring of transformer socket. Normal Newcomb amplifier wiring connects the TR-91 for 30/50 ohms. Frequency response: 20 to 20,000 cycles. Wt. 1¼ lbs. LIST: $37.50

MODEL TR-100 input transformers are identical to TR-91 models. They provide 125/150 ohms or 500/600 ohms impedance depending upon wiring of socket with 125/150 ohms normal. Frequency response: 20 to 20,000 cycles. Weight: 1¼ pounds. LIST: $37.50

MODEL TR-92B is a bridging transformer, otherwise identical to above models. Weight: 1¼ pounds. LIST: $37.50



CONNECTORS

MODEL PW-157 is a phono, tape, or radio input plug for all Custom K mixer/preamplifiers. LIST: $.75

MODEL PW-139 is a Cannon XL3-11C type microphone connector. LIST: $2.50

MODEL PW-156 is an octal plug for speaker line outputs. LIST: $.45

MODEL PW-142 is a two-contact shielded phone plug for monitor phones. LIST: $1.50

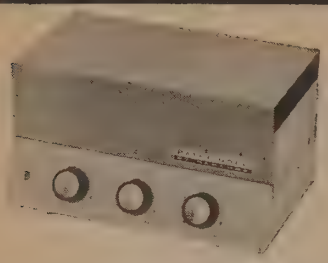


THE RICHEST-LOOKING RACK PANEL INSTALLATIONS IMAGINEABLE

are provided by Newcomb Custom K amplifiers. The two-tone soft green tints of the finish, recessed panels, the stimulating design of the equipment combine to give an impression of professionalism and permanence. Mounted in the Model 70-19 Cabinet Rack illustrated above, top to bottom, are a Newcomb louvered panel, Newcomb TB2-525G Intercom, K3 Mixer-preamp, lever key panel, AFM-750-875G AM-FM Radio, E2-525G Industrial Preamplifier, two KB-1250 complete power amplifiers, 1050CG Phono Changer Drawer, louvered panel. All Newcomb rack panel equipment, except Custom K series, is listed in the last two Newcomb Pathfinder pages in this section.

© United Technical Publications

NEWCOMB PATHFINDER PUBLIC ADDRESS EQUIPMENT

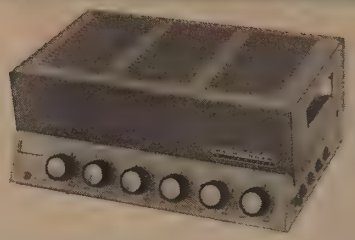


MODEL E-10B

10 watt amplifier
Low priced, deluxe, full push-pull output

The Newcomb E-10B offers a surprising number of deluxe features for so compact and economical an amplifier. It has the slanted operating panel and control markers which distinguish all Pathfinder models. The E-10B has separate mixers for microphone and ceramic phono pickup (or radio or tape). Mike input is a standard 3-contact phone jack suitable for high or low impedance mike. The E-10B is wired for plug-in transformers for instant conversion for use with low impedance mike. Output impedances to socket are 4, 8, 16 ohms, plus 25 and 70 volt line taps. Output jack for recorder or booster amplifier. Unit has a wide-range treble tone control, 25,000 hour pilot light. UL approved.

SPECIFICATIONS: Power Output: 10 watts RMS, 20 watts peak at less than 5% distortion. **Frequency Response:** ±2 db 30 through 15,000 cycles. **Mike Gain:** 118 db at 2 meg. .0055 volts delivers full power. **Phono Gain:** 79 db at 1 meg.; 33 volts delivers full power. **Output To Tape Jack:** Delivers 4.4 volts max. or 1 volt at ½ watt output. **Hum:** Fundamental, 70 db below rated output. **Power Response:** ± 3 db, 70 through 13,000 cycles at 5% distortion. **Size:** 10¼" x 6½" x 5¾" high. **Weight:** 9 lbs. **Power Consumption:** 60 watts, 117 volts, 60 cycles. **Tubes:** 1-12AX7, 1-6AU6, 2-6V6, 1-6X4.
LIST: (with tubes) $84.95.



MODEL E-5P

5-channel mixer preamplifier

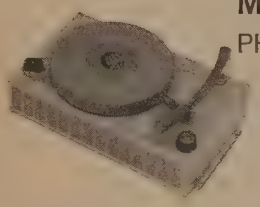
The Newcomb E-5P is a high performance, low-priced, multi-purpose mixer-preamplifier with 4 microphone channels (one convertible to magnetic phono), one high level channel with two inputs (chosen by selector switch) — one for ceramic phono pickup, the other for tape or radio. Master gain control. Each mike input jack is standard 3-contact phone jack. Each mike channel is wired for plug-in transformers for instant conversion to low impedance microphone usage. The E-5P has a VU meter with concealed sensitivity adjustment, outputs for tape, booster, and a.c., 25,000-hour pilot lamp. Operating panel is slanted for easy viewing and operating sitting or standing. Performance is excellent with individual mike input tubes for minimum crosstalk and d.c. on all filaments. UL approved.

SPECIFICATIONS: Cathode Follower Outputs: 6 volts at less than 2% into high impedance load. **Volume Indicating Meter:** Adjustable from 2 to 6 volts. **Frequency Response:** ±2 db 30 through 20,000 cycles. **Mike Inputs:** 2 meg.; .0025 volts for 2 volts out. **Ceramic Phono or Radio or Tape Input:** 1 meg. .32 volts for 2 volts output. **Magnetic Phono Input:** .011 volts for 2 volts output. **Hum:** Fundamental, 80 db below 6 volts output. **Size:** 14⅛"x8 5/16"x5" high. **Weight:** 11¾ lbs. **Power Consumption:** 31 watts 117 volts 60 cycles A.C. **Tubes:** 4-12AV6, 1-12AU6, 5-0C5, 1 power silicon rectifier.
LIST: (with tubes) $139.50.

HIGH QUALITY, LOW PRICE PUBLIC ADDRESS AMPLIFIERS WITH MANY DELUXE FEATURES

MODEL P-4

PHONO TOP



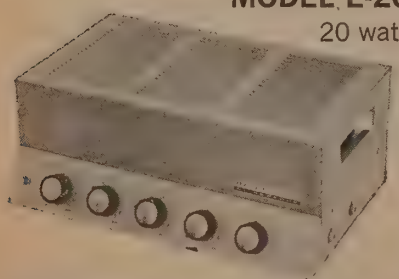
The Newcomb P-4 is a 4-speed record player that is designed to fit on top of the E-20, E-40 or E-75 Pathfinder amplifier. It includes an automatic idler release on the power switch to prevent flat spots, a plug-in turnover-type dual-sapphire-styli ceramic cartridge, pickup hold-down screw and drop pad. Dimensions: 8 5/16" x 14" x 5" high over all. Weight: 6 lbs. **LIST: $49.95.**



All Newcomb Pathfinder power amplifiers and the E-5P preamplifier have slanted operating panels for convenient control in either a sitting or standing position. This feature is important, too, with rack mounted installations where units may be mounted near the floor as well as at eye level. All control knobs have white, rotable reference markers for quick return to a pre-determined setting. All have a 25,000 hour pilot light. All are UL approved. Newcomb public address amplifiers Models E-20, E-40, and E-75 all have the following features: Each has two microphone channels with mixer controls and one high level channel with mixer for ceramic phono pickup, radio or tape. Mike channels are wired for Newcomb plug-in transformers for instant conversion to use with low impedance microphones. High level control is compensated; as volume is reduced, bass is proportionately sustained. Mike not affected by this control. There are separate bass and treble master tone controls. Output taps on terminal strip and two sockets are for 25 volt balanced or unbalanced line plus 70 ohms unbalanced, and 16, 8, and 4 ohms. There is an output jack for recorder or booster and an a.c. output receptacle. Pathfinder equipment has a distinctive two-tone finish in soft tints of olive-gray and spruce.

MODEL E-20

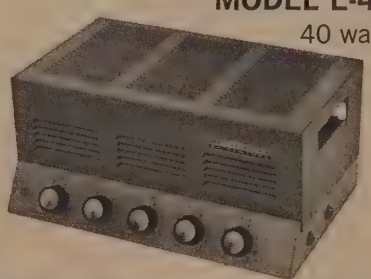
20 watt



SPECIFICATIONS: Power Output: 20 watts RMS, 40 watts peak at less than 5% distortion. **Frequency Response:** ±2 db 30 through 15,000 cycles. **Mike Gain:** 122 db at 2 meg.; .005 volts delivers full power. **Phono Gain:** 83 db at 1 meg. .315 volts delivers full power. **Output To Tape Jack:** Delivers 6 volts max. or 1 volt at ½ watt output. **Hum:** Fundamental, 70 db below rated output. **Power Response:** ±3 db 50 through 20,000 cycles at 5% distortion. **Size:** 14⅛" x 9½" x 5¾" high. **Weight:** 14¼ lbs. **Power Consumption:** 80 watts, 117 volts, 60 cycles A.C. **Tubes:** 1-12AX7, 1-6BR8, 2-EL-84, 1-5Y3.
LIST: (with tubes) $119.95

MODEL E-40

40 watt



SPECIFICATIONS: Power Output: 40 watts RMS, 80 watts peak at less than 5% distortion. **Frequency Response:** ±2 db 30 through 15,000 cycles. **Mike Gain:** 125 db at 2 meg.; .005 volts delivers full power. **Output To Tape Jack:** Delivers 6 volts max. or 1 volt at 1 watt output. **Hum:** Fundamental, 70 db below rated output. **Power Response:** ±2 db 40 through 20,000 cycles at 5% distortion. **Size:** 14⅛" x 9½" x 6¾" high. **Weight:** 19¼ lbs. **Power Consumption:** 160 watts, 117 volts, 60 cycles A.C. **Tubes:** 1-12AX7, 1-6BR8, 4-EL84, 1-5U4.
LIST: (with tubes) $159.95.

MODEL E-75

75 watt



SPECIFICATIONS: Power Output: 75 watts RMS, 150 watts peak at less than 5% distortion from a fixed bias, screen regulated, output system. **Frequency Response:** ±2 db 30 through 15,000 cycles. **Mike Gain:** 128 db at 2 meg.; .005 volts delivers full power. **Phono Gain:** 88 db at 1 meg.; 3 volts delivers full power. **Output To Tape Jack:** Delivers 6 volts max. or 1 volt at 1.87 watts output. **Hum:** Fundamental, 70 db below rated output. **Power Response:** ±2 db 50 through 20,000 cycles at 5% distortion. **Size:** 7" x 13½" x 14⅛". **Weight:** 26 lbs. **Power Consumption:** 185 watts, 117 volts 60 cycles. **Tubes:** 2-12AX7, 1-6C4, 2-7027A, 1-6V6GT, 3 power silicon rectifiers.
LIST: (with tubes) $199.50.

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

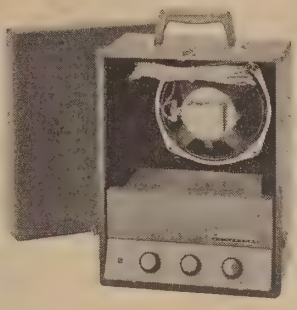
Trade Discount Applies To List Prices Only
© United Technical Publications

NEWCOMB PATHFINDER PUBLIC ADDRESS SYSTEMS

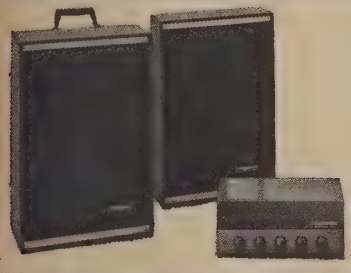


MODEL E-1008S

10 watt PORTABLE system



The Newcomb E-1008S System consists of one E-10B amplifier and one P-108 speaker assembly. The P-108 contains an efficient 8" loudspeaker protected by a kickproof, perforated metal grille, microphone carrying straps (but no mike), and space for carrying the E-10B amplifier. Size: 11¼" x 14¾" x 9" deep. System weight: 17½ lbs.
LIST: $124.95



MODEL E-20-212R

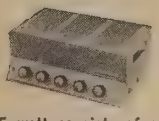
20 watt PORTABLE system

This 20 watt system consists of one Newcomb E-20 amplifier and one P-212R dual speaker assembly which also acts as a carrying case for the amplifier. The P-212R includes two efficient 12" dual-cone loudspeakers, each with a 25 foot cord and plug. Speaker baffles snap together back to back. Inside are mike carrying straps but no microphone. Speakers are protected by kickproof perforated metal grilles. System closed measures 13½" x 15¼" x 23", weighs 37 lbs.
LIST: $219.95

MODEL E-40-212H 40 watt PORTABLE system. Included in the E-40-212H are one Newcomb E-40 amplifier and one P-212H dual speaker case assembly which also acts as a carrying case for the amplifier. There are two 12" heavy duty loudspeakers each with a 25 foot cord and plug, kick-proof perforated metal grilles and mike carrying straps but no microphone. Size 13½" x 15¼" x 23", weight 44 lbs.
LIST: $272.45

COLUMN SPEAKER PERMANENT SYSTEMS





MODEL E-20-2C8F 20 watt consists of one E-20 amplifier, two Model C-8 column speakers, and 100 feet of speaker cord. No microphone. Weight: 54¾ lbs.
LIST: $404.85

MODEL E-40-2C8F 40 watt consists of one E-40 amplifier, two Model C-8 column speakers, and 100 feet of speaker cord. No microphone. Weight: 60 lbs.
LIST: $444.85

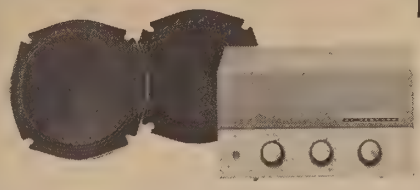
MODEL E-75-4C8F 75 watt consists of one E-75 amplifier, four Model C-8 column speakers, and 200 feet of speaker cord. No microphone. Weight: 107 lbs.
LIST: $769.30.

MODEL E-20-2C12F 20 watt consists of one E-20 amplifier, two model C-12 super column speakers, and 100 feet of speaker cord. No microphone. Weight: 93¼ lbs.
LIST: $589.95.

MODEL E-40-2C12F 40 watt consists of one E-40 amplifier, two model C-12 super column speakers, and 100 feet of speaker cord. No microphone. Weight: 98½ lbs.
LIST: $629.95.

MODEL E-75-2C12F consists of one E-75 amplifier, two model C-12 super column speakers, and 100 feet of speaker cord. No microphone. Weight: 105 lbs.
LIST: $669.50

MODEL E-75-4C12F 75 watt consists of one E-75 amplifier, four model C-12 super column speakers and 200 feet of speaker cord. No microphone. Weight: 184 lbs.
LIST: $1139.50



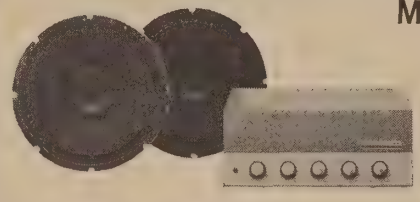
MODEL E-10-28F

10 watt PERMANENT system

This system includes one Newcomb Model E-10B amplifier, two eight-inch extended range loudspeakers, and 100 feet of speaker cord. No microphone included. System weight: 12 lbs.
LIST: $108.95

MODEL E-20-48F

This is a 20 watt sound system for permanent installation consisting of one Newcomb Model E-20 amplifier, four 8" extended range loudspeakers, and 200 feet of speaker cord. No microphone. System weight: 20¼ lbs.
LIST: $167.95



MODEL E-20-212F

20 watt PERMANENT system

This twenty watt system includes one Newcomb E-20 amplifier, two 12" dual-cone loudspeakers, and 100 feet of speaker cord. No microphone included. System weight: 20¾ lbs.
LIST: $163.95

MODEL E-40-212FH 40 watt PERMANENT system includes one Newcomb E-40 amplifier, two heavy duty 12" loudspeakers, and 100 feet of speaker cord. No microphone. System weight: 28 lbs.
LIST: $214.95

MODEL E-40-412F 40 watt PERMANENT system includes one Newcomb E-40 amplifier, four dual-cone loudspeakers, and 200 feet of speaker cord. No microphone. System weight: 32½ lbs.
LIST: $247.95

MODEL E-75-412FH 75 watt PERMANENT system includes one Newcomb E-75 amplifier, four heavy duty 12" loudspeakers, and 200 feet of speaker cord. No microphone. System weight: 43 lbs.
LIST: $309.50

SPEAKER ASSEMBLIES

MODEL P-108 is an 8" speaker in a portable case fitted for carrying the Newcomb E-10B amplifier. It has a kickproof, perforated metal grille, 25 foot cord with octal plug and microphone straps. Dimensions: 11¼" x 14¾" x 9" deep. Weight: 9 lbs.
LIST: $40.00.

MODEL P-212R consists of two efficient 12" dual-cone speakers, each with 25 foot cord and octal plug. in a split portable case designed to carry the E-20 amplifier with or without the P-4 phone top. Case is covered with gray vinyl, has kickproof, perforated metal grilles, and microphone-carrying straps. Dimensions: 13½" x 15¼" x 23". Weight: 22½ lbs.
LIST: $100.00.

MODEL P-212H consists of two heavy duty 12" loudspeakers, each with 25 foot cord and octal plug, in a split portable case designed to carry the E-40 amplifier with or without the P-4 phono top. Case is covered with gray vinyl, has kickproof, perforated metal grilles, and microphone-carrying straps. Dimensions: 13½" x 15¼" x 23". Weight: 24½ lbs.
LIST: $112.50.

MODEL C-8 COLUMN SPEAKER combines exceptional vertical directivity with broad horizontal coverage. Enclosure tapered front to back for ganging. Contains four efficient 8" speakers. Dimensions: 6½"D x 11⅜"W 40" H. Weight: 20¼ lbs.
LIST: $139.95.

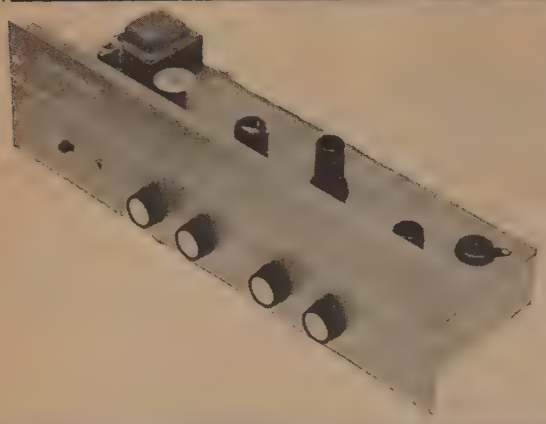
MODEL C-12 SUPER COLUMN SPEAKER with four 12" speakers provides super intelligibility, super efficiency, super power handling capacity — 120 watts peak. Dimensions: 7½" D x 15¼" W x 56" H. Weight: 39½ lbs.
LIST: $232.50.

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

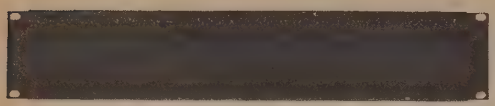
NEWCOMB PATHFINDER PUBLIC ADDRESS EQUIPMENT



MODEL E2-525G INDUSTRIAL PREAMPLIFIER

Designed for industrial sound systems, the Newcomb E2-525G has 125 to 600 ohm balanced line output. Maximum output at 600 ohms = 10 volts line output. Inputs: one mike at 2 meg impedance, convertible to low impedance by means of Newcomb plug-in transformer (socket provided) · one high level crystal phono; one radio or tape. At 600 ohm line output: mike output of .0015 volts delivers 1 volt; phono input of .15 volts delivers 1 volt out. Frequency response: ±2 db 30 to 15,000 cycles. Electronic remote switching turns mike on and music off when paging. Remote switching line may be unshielded 3-conductor cable up to several thousand feet long. No relays required. There are separate tone controls for mike and phono. Mike input socket is a standard 3-contact phone jack usable with low or high impedance microphones. Tubes: 1-6SF5, 1-6SN7, 1-6J5, 1-6X5, 25 watts, 117 volts, 60 cycles a.c. Dimensions: 19″ x 5¼″ x 6⅛″ deep. Weight: 9 lbs. **LIST: $129.50.**

PANELS FOR CABINET RACK



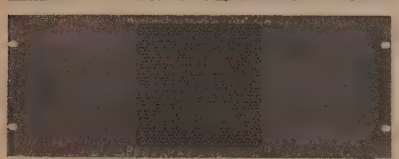
BLANK PANELS

Model Number	Dimensions	Weight lbs.	List
175G	1¾″ x 19″	1¾	$3.00
350G	3½″ x 19″	1¾	$3.50
525G	5¼″ x 19″	2½	$4.00
700G	7″ x 19″	3	$4.50
875G	8¾″ x 19″	3½	$5.00
1050G	10½″ x 19″	4¼	$5.50



LOUVERED PANELS

Model Number	Dimensions	Weight lbs.	List
L-525G	5¼″ x 19″	2½	$5.00
L-700G	7″ x 19″	3	$5.75
L-875G	8¾″ x 19″	3½	$6.50
L-1050G	10½″ 19″	4¼	$7.25



MONITOR PANEL

MODEL 700MPG measures 7″ x 19″, has perforated metal grille, requires 6″ speaker, weight 3 lbs. (See also radio panels.)
LIST: $10.00.



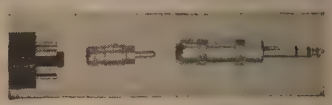
LEVER KEY PANELS

All lever key panels have 1″ slots 1″ apart wtih 1⅝″ mounting holes. Each panel measures 3½″ x 19″. Weight of each panel is 1¾ lbs.

Model No.	No. of slots	LIST
LK-350-6G	6	$5.00
LK-350-8G	8	$5.50
LK-350-10G	10	$6.00
LK-350-12G	12	$6.50
LK-350-14G	14	$7.00
LK-350-16G	16	$7.50

Name strip Model No.	LIST
SR-6	$2.50
SR-8	$2.60
SR-10	$2.70
SR-12	$2.80
SR-14	$2.90
SR-16	$3.00

CONNECTORS



MODEL PW-156 is an octal speaker plug for all Pathfinder models. **LIST: $.45.**
MODEL PW-157 is a phono tap or radio input plug for all Pathfinder models. **LIST: $.75.**
MODEL PW-144 is a three contact, shielded mike plug for all Pathfinder models. **LIST: $1.75.**



TX-10 SERIES STEREO TAPE RECORDERS

Essentially a machine for the perfectionist, the TX-10 is probably the most foolproof and easiest-on-tape stereo recorder made. It takes any size reel — 3″ to 10½″. Cybernetically engineered, tape transport is controlled with a single central joystick. It permits sound-on-sound recording, can be monitored before or after recording, has three heads, four-digit counter, stainless steel tape guides, hysteresis motor, differential braking, pointer-to-pointer illuminated meters which show both recording and playback levels. The TX-10 is a two-speed machine — 7½ and 3¾ ips — selected by push button with speed-frequency correction. (15/7½ ips machines available on special order). Response is ±2 db 30-18,000 cps at 7½ ips. There are separate "mike" and "line" inputs and mixing controls for each channel, a balance control, a ganged volume control, pilot light. It accepts Cannon XLR-3-12C male connectors and has easily accessible sockets for Newcomb plug-in transformers to permit use of low impedance microphones.

PROFESSIONAL USERS NET: $750.00 unmounted.
CA-133 CARRYING CASE $25.00.
SR-85 MOUNTING FRAME FOR HI-FI CABINETS $10.00.
SR-86 FRAME FOR RACK MOUNTING in Newcomb Model 35-19 or 70-19 cabinet racks (cannot be used with door) $15.95
SR-97 PAIR OF RACK BRACKETS FOR MOUNTING IN STANDARD 19″ RACKS $3.95.

MODEL SA-80B — 2 CHANNEL POWER AMPLIFIER WITH TONE, VOLUME AND BALANCE CONTROLS.
A stereo/mono amplifier designed especially for use with the TX-10, the Newcomb SA-80B amplifier puts out 40 peak watts per channel. Response: ±1 db 20-20,000 cps. Distortion per channel at 20 watts rms less than 1%. Hum below —65 db. It has a balance control and ganged bass, treble, and volume controls. Output impedances per channel — 16, 8, and 4 ohms. 8½″ x 16¾″ x 16⅜″, 32 pounds. **PROFESSIONAL NET $199.50.**

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

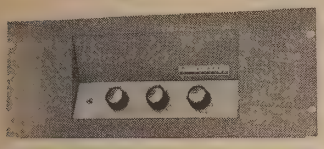
NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

Trade Discount Applies To List Prices Only
© United Technical Publications

NEWCOMB PATHFINDER PUBLIC ADDRESS EQUIPMENT

RACK AND PANEL EQUIPMENT

AMPLIFIER PANELS — MODEL E-10-700PG

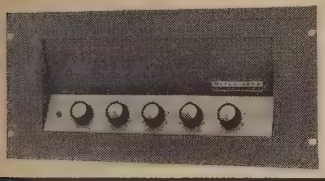


Panel only for rack mounting a standard Newcomb E-10B amplifier. Dimensions: 19″ x 7″. Weight: 3 lbs.
LIST: $17.50.



MODEL E-52040-700PG

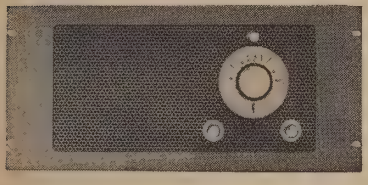
Panel only for either the Newcomb E-5P preamplifier, the E-20 or E-40 amplifier. Dimensions: 19″ x 7″. Weight: 3½ lbs.
LIST: $18.50.



MODEL E75-875PG

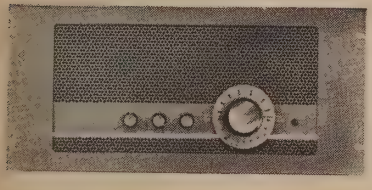
Panel only for rack mounting a standard Newcomb E-75 amplifier. Dimensions: 19″ x 8¾″. Weight: 4 lbs.
LIST :$19.50.

PANEL MOUNTED RADIOS—MODEL AM-500-875G AM RADIO

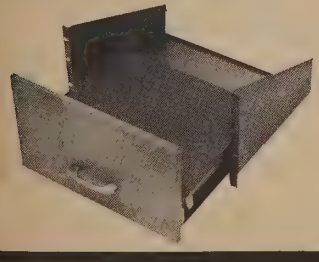


This is a complete, transformer-powered AM radio in which the output amplifier and 8″ oval speaker act as a monitor. The output to external amplifiers is taken off ahead of the volume control so adjustment of monitor volume has no affect on output to sound system or tape recorder. The AM-500-875G is a dependable, rugged, continuous duty receiver with a large, direct-driven tuning dial with conelrad markings, lighted index. 40 watts, 117 volts, 60 cycles a.c. Dimensions: 19″ x 8¾″ x 7½″ deep. Weight: 12¼ lbs.
LIST: $136.88

MODEL AFM-750-875G AM-FM RADIO

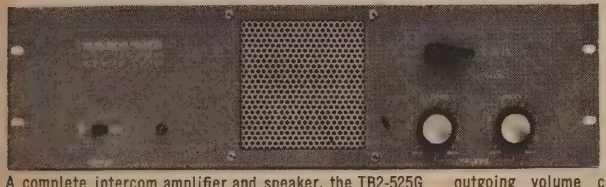


A complete, transformer-powered AM-FM radio in which the output amplifier and 8″ oval speaker act as a monitor, the AFM-750-875 has AFC (and defeat switch) and temperature-compensated oscillators for exceptionally stable performance. Output to external amplifier is taken off ahead of the volume control so adjustment of monitor volume has no affect on output to sound system or recorder. 54 watts, 117 volts, 60 cycles a.c. Dimensions: 19″ x 8¾″ x 7½″ deep. Weight 14½ lbs.
LIST: $249.00.



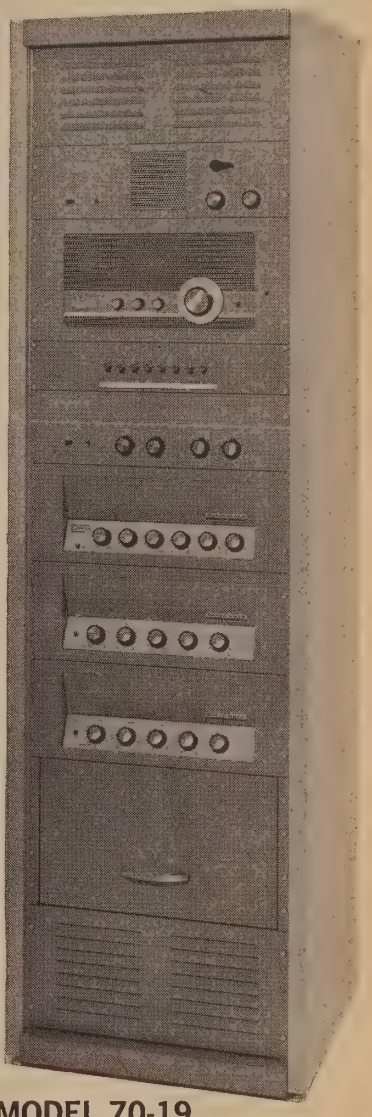
MODEL 1050CG
PHONO CHANGER DRAWER

The front panel dimensions of the 1050CG phonograph changer drawer is 19″ x 10½″. It has a 16½″ x 15″ removable motor board. Depth from the top of the motor is 3¾″. Clearance above top of motor board is 6⅛″. Weight 19¼ lbs. Finest double-extension, roller bearing glides provide a stable level platform for player.
LIST: $65.00.



MODEL TB2-525G
PANEL-MOUNTED INTERCOM

A complete intercom amplifier and speaker, the TB2-525G is designed for industrial installations wherein paging speakers are used for intercommunication. Input and outgoing impedances: 500 ohms. Separate incoming and outgoing volume controls. Talk-listen switch. Pilot light. Tubes: (3) 1-6SL7, 1-6v6, 1-6X5. 40 watts, 117 volts, 60 cycles a.c. Dimensions: 19″ x 5¼″ x 6⅛″ deep. Weight: 9¼ lbs. **LIST: $219.50.**



MODEL 70-19
CABINET RACK

Contemporarily styled, solidly built, beautifully finished in an olive-gray tint compatible with Newcomb Pathfinder equipment, the 70-19 has a ventilated back, provides 70″ of panel space. Panels are standard 19″ width. Last three digits of model number indicate panel depth. e.g. "875" stands for 8¾″ panel depth. Dimensions: 21⅞″ x 74″ x 18½″ deep. Weight 84 lbs. **LIST: $262.00.**



MODEL 70D Door with lock for front of 70-19 cabinet. Weight: 23 lbs. **LIST: $50.00.**

MODEL 35-19 CABINET RACK A short cabinet rack with ventilated back, 35″ of panel space. Dimensions: 21⅞″ x 39″ x 18½″ deep. Weight: 52 lbs. **LIST: $229.50.**

MODEL 35D Door with lock for front of 35-19 cabinet. Weight: 12 lbs.
LIST: $29.50.

NEWCOMB AUDIO PRODUCTS CO. NEWCOMB

© United Technical Publications

TALK-A-PHONE WIRELESS INTERCOM SYSTEMS

TWO WIRELESS SYSTEMS

Two high-quality wireless intercoms, featuring the exclusive TALK-A-PHONE "SONIC GATE" circuit. Provides communication where permanent or wired systems are not practical. For use in offices, factories, stores, homes, apartments, nurseries, farms, etc. Distinctively styled cabinets combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray with brushed chrome side panels. Each station has a translucent indicator which illuminates when "On." All stations must be connected to outlets on the **same electric company service transformer.** Built-in Ground Adapter provides greater sensitivity where electrical wiring is routed over long paths. U.L. Listed.

TALK-A-PHONE 12-STATION SELECTIVE WIRELESS* SYSTEM

• 6 Separate 2-Way Conversations Simultaneously • Selective Paging with Reply! • Push-Button Channel Selector • Start a System with any number of Masters and Staffs • With "Sonic-Gate" Circuit

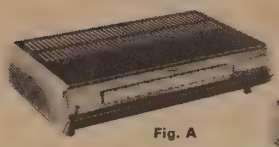


Fig. A

• No Installation
• No Wiring

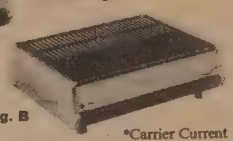


Fig. B

• No Cables
• Just Plug-in and Talk

*Carrier Current

TLCM-8912. 12-Station Selective Wireless Master. (Fig. A) Complete with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size 14"w x 8¾"d x 3⅛"h. Shipping weight, 12½ lbs.
List Price Per Station $207.00 ..... Net **121.00**

TLCM-8906. 6-Station Selective Wireless Master.
As above except for 6-Station Capacity. Shpg. Wt. 10 lbs.
List Price Per Station $184.50 ..... Net **108.00**

Wireless Staff Stations. (Fig. B) Receive and reply on a single channel only. Does not originate calls.

T-LCS-901 Channel 1	T-LCS-903 Channel 3	T-LCS-905 Channel 5
T-LCS-902 Channel 2	T-LCS-904 Channel 4	T-LCS-906 Channel 6

Complete with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size, 10½"w x 8¾"d x 3⅛"h. Shipping weight, 7 lbs.
List Price Per Station $106.00 ..... Net **62.00**

TALK-A-PHONE 2-STATION WIRELESS* SYSTEM (Fig. B)

A complete system of 2 stations, ready to use. Simply place each unit where desired, plug each into nearest electrical outlet, and talk! Add more stations anytime. All stations will receive any messages transmitted from any point. Move units anywhere, plug into electrical outlet and use—no re-wiring or new installation necessary. The original TALK-A-PHONE UNI-TRANS is built in—provides continuous one-way transmission; ideal for dictation, or listening-in on baby. 110-120 V. AC-DC. Size, 10½"w x 8¾"d x 3⅛"h.

T-LC-33. (2 stations). Complete with tubes and instructions. Weight 16 lbs.
List Price Per System $184.50 ..... Net **108.00**

T-LC-17. Additional Single Station. Weight 8 lbs. List Price Each $92.25 ..... Net **54.00**

CRADLEPHONE—Optional for all units above. Add H to model No. when ordering.
List Price per Station add $65.00 ..... Net add **38.00**

TALK-A-PHONE APARTMENT HOUSE INTERCOM SYSTEMS



TA-1

TA-2

The features, the safety, the control, essential in Apartment Buildings. 1 or 2 talking circuits, 1 or 2 door opener buttons.

Provides instant and direct 2-way conversation between any Apartment and Vestibule . . . Greater Performance with Exclusive Talk-A-Phone Features:

• Ample Volume—Whispers, shouts and normal voice are heard clearly without "boom" • Automatic Privacy—On all Apartment Units • Volume Selector—Each Apartment selects own volume. Concealed yet easily accessible • Built-in Buzzer—Pleasant sound, in each Apartment Unit • With one or two independent talking circuits and one or two independent door opener buttons.

TA-1 Apartment Intercom Unit. Less Back Box. 1 talking circuit, 1 door opener button. Front Panel Size 4 13/16"w x 7 5/16"h. Wall opening 4⅛"w x 6½"h x 1⅞"d. Wt., 2 lbs. List, Ea. **24.50**

TA-2 Apartment Intercom Unit. Less Back Box. 2 talking circuits, 2 door opener buttons. Front Panel Size 4 13/16"w x 7 5/16"h. Wall opening 4⅛"w x 6½"h x 3¼"d. Wt., 2 lbs. List, Ea. **29.95**

A-PR Back Box for TA-1 complete with terminal block. Wall opening 4⅛"w x 6½"h x 1⅞"d. Wt., 2 lbs. List, Ea. **3.90**

A-PR-2 Back Box for TA-2 complete with terminal block. Wall opening 4⅛"w x 6½"h x 3¼"d. Wt., 2 lbs. List, Ea. **5.20**

TA-R Vestibule Intercom Unit. Less Back Box. Front Panel Size 4 13/16"w x 4 13/16"h. Wall opening 4⅛"w x 4⅛"h x 1⅞"d. Wt., 3 3/4 lbs. List, Ea. **20.20**

A-PRS Back Box for TA-R. Wall opening, 4⅛"w x 4⅛"h x 1⅞"d. List, Ea. **2.65**

TA-S Speaker mounts on back of bell button panel. Wt., 2 lbs. List, Ea. **6.85**

TA-40 Amplifier-Power Supply Unit. With 50 ft. of #8202 Cable. List, Ea. **129.50**

A-SM Surface Mounting Accessory for TA-R. Wt., 1 lb. List, Ea. **6.35**

A-SML Surface Mounting Accessory for TA-1. Wt., 2 lbs. List, Ea. **7.15**

CABLES: Weatherproof vinyl-plastic 175° F individually covered conductors with overall plastic jacket.

8202 (1 twisted pair) for TA-R or TA-S. Apprx. O.D. 3/16". List, 100 ft. **6.40**

9705 (1 twisted pair #22; 1 single #22; 2 singles #18) for TA-1. Apprx. O.D. ¼". List, 100 ft. **16.00**

9710 (2 twisted pair #22; 2 singles #22; 4 singles #18) for TA-2. Apprx. O.D. ⅝". List, 100 ft. **32.00**

TALK-A-PHONE All-Transistor HOME INTERCOM-RADIO SYSTEMS



HI-9 or HI-8



HI-9R or HI-29R



HI-SM
Housing Assembly with HI-17 or HI-16



HI-4



HI-1



K-LR-2R

This TALK-A-PHONE Intercom System saves the housewife and homeowner miles of tiresome steps, hours of time . . . Makes home life easier, more comfortable and more enjoyable . . .

LISTEN-IN ON BABY, CHILDREN OR SICK ROOM . . . from any room in the house, day or night • ANSWER OUTSIDE DOORS FROM ANY ROOM . . . in any part of the house—without opening doors to strangers • TALK FROM ROOM TO ROOM . . . back and forth, upstairs or downstairs, any time, day or night • YOUR FAVORITE RADIO PROGRAMS . . . follow you throughout the house with the flick of a switch.

TALK-A-PHONE All-Transistor Home Intercom units are beautifully finished in gold, polished and satin silver tones. All Masters and Staff Stations are designed for flush mounting; or with optional Housing Assembly, these stations can be mounted on walls, cabinets, or set on tables, shelves, etc. Plaster Ring included for 8 and 16-Station units require 14 1/16"w, 4⅜"h, 3 1/16"d wall opening. Front panel size: 15¼"w, 5¼"h. HI-4 requires 4½"w, 6½"h, 2"d wall opening. Front Panel size: 4 13/16"w x 7 5/16"h. Sub-Stations are designed for flush mounting only, do not need Plaster Ring. Requires 2" square wall opening, 2" deep. Front Panel size: 3 5/8"w, 5 5/8"h. Stations do not plug into electrical outlet. Operates from HI-PS Power Supply Unit or battery. Total capacity: up to 16 stations including Central Master. With full instructions.

CENTRAL MASTER STATIONS. Only one used per system. Contains the All-Transistor Amplifier (and radio when built-in). Place in any room. Master can call and converse with any other station (or stations) in system; can listen-in to any Station that user makes "non-private". If system has Model HI-9R Central Master (built-in radio), the Master and any Staff can listen to standard AM radio broadcasts. "Additional" Masters can be used in rooms where it is desired to listen to AM radio programs different from those tuned in at Central Master.

HI-9 Central Master Station. Without radio, less battery
List Price, Each, $105.00 ..... Net Each **61.50**

HI-9R Central Master Station. With built-in radio. Less battery.
List Price, Each, $163.00 ..... Net Each **95.50**

HI-17 Central Master Station. Same as HI-9 except has total 16 station capacity. Without built-in radio.
List Price, Each, $156.00 ..... Net Each **91.50**

HI-29R Additional Master Station. With built-in radio. Less battery.
List Price, Each, $163.00 ..... Net Each **95.50**

STAFF STATIONS. 4, 8 and 16-Station Capacity Staff Stations can be combined within the same system and used with choice of one 8-station capacity or one 16-station capacity Central Master Station. (When HI-9R is used, any HI-4, HI-8 and HI-16 staff, can listen to radio of HI-9R).

HI-4 Staff Station. Provides same operation as Master. Can call 3 other stations. Can listen to radio of HI-9R.
List Price, Each, $36.00 ..... Net Each **21.00**

HI-8 Staff Station. Provides same operation as Master. Can call 8 other stations. Can listen to radio of HI-9R.
List Price, Each, $59.95 ..... Net Each **35.00**

HI-16 Staff Station. Provides same operation as Master. Can call 16 other stations. Can listen to radio of HI-9R.
List Price, Each, $110.00 ..... Net Each **64.40**

HI-SM HOUSING ASSEMBLY. For enclosing any 8 or 16-Station Capacity Master or Staff, to permit mounting on walls or cabinets, or placing on tables, shelves, etc.
List Price Each $22.00 ..... Net Each **12.90**

HI-1 OUTDOOR SUB-STATION. For front and rear entrance applications. Complete with push-button for connection to regular house chime, bell or buzzer. Has illuminated nameplate. When caller rings bells, any Master or Staff may reply and converse with caller. Caller operates no controls.
List Price, Each, $31.00 ..... Net Each **18.20**

O-SM Surface Mounting Accessory for HI-1. Custom-styled metal casting of satin silver finish. Provides an attractive, coordinated base for mounting HI-1 on surface of wall. 3 3/16" x 5 13/16" x 5/8". List Price, Each, $6.30 ..... Net Each **3.70**

K-LR-2R ALTERNATE OUTDOOR SUB-STATION. For flush mounting. Requires wall opening 4½" square, 2" deep. Stainless steel front panel measures 4 13/16" square. Complete with plaster ring. Without push button or illuminated nameplate.
List Price, Each, $28.50 ..... Net Each **16.60**

Model K-SM Optional accessory for surface mounting K-LR-2R on wall.
List Price, Each, $7.95 ..... Net Each **4.65**

Model K-SM-L Optional accessory for Surface mounting HI-4 Staff on wall.
List Price, Each, $8.95 ..... Net Each **5.25**

HI-JB8 JUNCTION BOX for connecting Masters and Staffs up to a total of 8 stations. See #2 of "How to Determine Cable Needs."
List Price, Each, $9.40 ..... Net Each **5.50**

HI-JB16 JUNCTION BOX Same as above except for up to 16 stations.
List Price, Each, $16.50 ..... Net Each **9.70**

HI-PS POWER SUPPLY UNIT. One required per system (only when battery is not used). Plugs into any 120 volt, 60 cycle AC electrical outlet in basement, attic, etc.
List Price, Each, $31.00 ..... Net Each **18.20**

BATTERY. Use any 9-volt dry battery, such as ignition or telephone battery; or six standard #6 dry cells in series—available from local sources. *Note: When battery is used, power supply is not required.*

HOW TO DETERMINE CABLE NEEDS

Masters and Staff Stations. Use #6226 cable in one of 2 ways: (1) Measure from 1st unit to 2nd unit only; from 2nd unit to 3rd unit only, etc., until last unit is reached—then total. Cable between last and 1st unit not needed. (2) Place a Common Junction Box (Model HI-JB) in attic, basement, closet, etc. Measure from each Master and Staff to Junction Box and total. Double length #6226 required for 16-Station units. Connect HI-4 to nearest 8 or 16-Station unit or to HI-JB with #6214 cable.

Outdoor Sub-Stations: Connect to nearest Master or Staff only with #6202 cable.

Battery or Power Supply Unit: Connect with #6202 cable to Master Stations only.

CABLE. For indoor or outdoor use.

Type No.	No. Pairs	Approx. O.D.	LIST, Per Ft.	NET, Per Ft.
6226	13	5/8"	76c	44c
6214	7	1/2"	39c	23c
6202	1	3/16"	8c	4½c

All prices slightly higher west of Rockies—All prices and specifications subject to change without notice.
Manufactured under exclusive TALK-A-PHONE Patents.

TALK-A-PHONE CO.

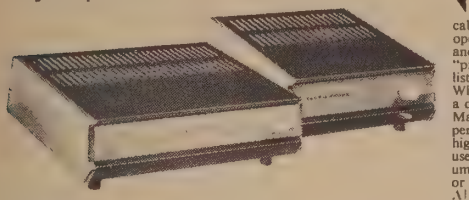
© United Technical Publications

TALK-A-PHONE Deluxe Intercom Systems

Quality intercommunications systems designed for the Office, Business, Plant, House, Farm, Professional Man, or any other private or commercial application. A flick-of-a-finger gives you instant and direct two-way conversation between any two points—anywhere. Masters have translucent indicator which illuminates when system is "on." In cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray and brushed chrome. Resists industrial liquids and atmospheres. Size: Masters, 10½"w x 8½"d x 3¼"h.; Subs, 7½"w x 8¼"d x 2½"h. U.L. Listed.

TALK-A-PHONE 2-STATION SYSTEM

2-way voice communication between any two points



K-LC-2 A complete, high-quality intercommunication system. Includes a Master Station, a Sub-Station and 50 feet of interconnecting cable. Additional cable available for distances up to 2000 feet. Easy to install and operate. Master and Sub-Station can originate calls to each other and carry on a 2-way conversation. Sub-Stations can be used "privately" or "non-privately". When "private", Master cannot listen-in on Sub-Station; yet Sub can answer and originate calls. When "non-private", persons at Sub-Station can answer calls at a distance without operating controls, as well as originate calls. Master is equipped with a translucent indicator, illuminated by permanent-type bulb, to show when system is "on". Rugged, high-gain transistorized amplifier is built to withstand continuous use and to require a minimum of maintenance. Adjustable Volume. Only Master plugs into electrical outlet, 110-120 volts, AC or DC. Master in deluxe cabinet finish, Sub-Station cabinet is of same style and color, but is in grained, baked enamel finish. U.L. Listed.

Model K-LC-2 2-Station System complete with easy-to-follow instructions, and 50 feet of cable. Wt. 13 lbs.
List Price complete $84.00.....Net complete **49.00**

No. 6303 (3 conductor)cable. 175°F. individually covered conductors with overall plastic jacket and milar shield. Provides noise-free cable lines in Industry, Office and Home. For indoor and outdoor use where additional lengths are required between the Master and Sub-Station.
List Price per foot 11c.....Net per foot **6½c**

No. 5303 (3 conductor) cable for indoor use.
List Price per foot 7c.....Net per foot **4c**

Optional Wall Mounting Brackets for Model K-LC-2 Sub-Station are available. See description below

Above system is transistorized and comes complete with easy to follow instructions, ready to install.

TALK-A-PHONE MASTER SELECTIVE SYSTEMS

A system of one Master Station which can communicate with from one to ten Sub-Stations. Subs can call Master, but not each other.





K-ML A system consisting of one Master Station and from one to ten Sub-Stations. Master Station can talk and listen to any one Sub-Station, several Sub-Stations or with all Subs simultaneously. Sub-Stations do not communicate with each other. Only the Master Station plugs into an electrical outlet. You may start with only one Master and one or two Sub-Stations and then add later when necessary. Installation of system has optional feature whereby Sub-Stations can be connected "privately," or "non-privately" and still originate calls to the Master under either application. Once a conversation has been initiated with a "non-private" system, persons at Sub-Stations need operate no controls and can reply from a distance. When the system is connected "privately," Master unit cannot "listen in" on Sub-Stations. However, they can reply when called, and also originate calls to the Master. Operates universally on 110-120 volts, AC-DC. U.L. Listed.

K-AC The K-AC-5406 and K-AC-5411 Master Stations operate as above with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for paging. Operates on 120 volts, AC only. U.L. Listed.

Use only one Master in each System.

Optional Wall Mounting Brackets for Models K-LR-3 and K-LR-3M are available. See description below.

Model K-ML-5 Master for 5 Sub-Stations. Wt. 8 lbs.
List Price each $82.50.....Net each **48.40**

Model K-ML-10 Master for 10 Sub-Stations. Wt. 8 lbs.
List Price each $101.00.....Net each **59.20**

Model K-AC-5406 Master Station. 5 Sub-Station capacity. High Volume Output. Wt. 8 lbs.
List Price each $101.00.....Net each **59.20**

Model K-AC-5411 Master Station. 10 Sub-Station capacity. High Volume Output. Wt. 8 lbs.
List Price each $121.00.....Net each **71.00**

Model K-LR-3 Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs.
List Price each $36.00.....Net each **21.00**

Model K-LR-3M Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs.
List Price each $28.50.....Net each **16.60**

Model K-LR-3R Flush mounted Sub-Station for use with any of above Masters. Requires wall opening 4⅜" W. x 6½" H. Stainless steel front panel measures 4¹³⁄₁₆" W. x 7³⁄₁₆" H. Complete with plaster ring.
List Price each $28.50.....Net each **16.60**

Model K-SM-L Optional accessory for surface mounting K-LR-3R on wall. List Price each $8.95.....Net each **5.25**

Model K-HP-3 Hi-Power Staff Station for wall mounting. Charcoal Gray metal case. Wt. 8 lbs.
List Price each $37.70.....Net each **22.00**

Model K-HP-3V Same as above, but with built-in volume control, adjustable to full output.
List Price each $46.00.....Net each **27.00**

Model K-C-20 Nine-inch weather proof re-entrant horn. Charcoal Gray color. Wt. 5 lbs.
List Price each $53.00.....Net each **31.00**

Model K-C-20V Same as above, but with built-in weather resistant volume control, adjustable to full output.
List Price each $69.95.....Net each **41.00**

K-S-100 Wall Switch for origination of call through K-C-20 or K-HP-3. List Price each $8.20.....Net each **4.75**

Model K-S-111 Wall Mounted Cradle Phone. (Optional accessory). For noisy areas and listening privacy. Use with K-HP-3, K-C-20 and K-S-100. Speaker disconnects when in use.
List Price each $79.00.....Net each **46.00**

No. 6303 (3 conductor) cable. 175°F. individually covered conductors with overall plastic jacket and milar shield. Provides noise-free cable lines in Industry, Office and Home. For indoor and outdoor use to connect Sub-Station to Master.
List Price per foot 11c.....Net per foot **6½c**

No. 5303 (3 conductor) cable for indoor use.
List Price per foot 7c.....Net per foot **4c**

All systems above are transistorized and come complete with easy to follow instruction, ready to install.

TALK-A-PHONE SUPER SELECTIVE SYSTEMS

A system of up to ten Master-Stations. Each station can call and communicate with any other. Each station operates controls when in conversation.



K-LS A system of all Master Stations. Any Station can call any other Station in system. Several completely private 2-way conversations are possible at same time. A versatile, low cost intercom system offering extreme flexibility, meeting many requirements in industry, offices, homes, etc. Any Station can call and carry on a conversation with any other Station or Stations in the system with absolute "privacy." Have a visitor in your office and your mind is at ease that no one can eavesdrop on your conversation. Stations can be located even 1000 feet apart. Variable volume, adjustable at each unit, controls incoming voice. You can start with two or three masters, and then add later as required. Operates universally on 110-120 volts, AC-DC. U.L. Listed.

K-AC The K-AC-505 and K-AC-510 Master Stations operate as above but provides a system with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for calling many stations at once. K-AC-505 and K-AC-510 Masters cannot be intermixed with any other master. For 120 volts, AC only. U.L. Listed.

Model K-LS-5 Master for five Masters. Wt. 8 lbs.
List Price each $82.50.....Net each **48.40**

Model K-LS-10 Master for ten Masters. Wt. 8 lbs.
List Price each $101.00.....Net each **59.20**

Model K-AC-505 Master for 5 Masters. Hi-Volume Output. Wt. 8 lbs. List Price $101.00.....Net each **59.20**

Model K-AC-510 Same as K-AC-505 except for 10 Masters. List Price each $121.00.....Net each **71.00**

No. 5506 (6-conductor) Cable for connecting K-LS-5 or K-AC-505 Masters. List Price per foot 19c. Net per foot **11c**

No. 9911 (11-conductor) Cable for connecting K-LS-10 or K-AC-510 Masters. List Price per foot 36c. Net per foot **21c**

All systems above are transistorized and come complete with easy to follow instructions, ready to install.

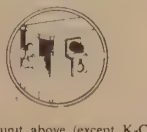
TALK-A-PHONE COMBINATION SYSTEMS

A system combining one or more Master Stations with one or More Sub-Stations up to a combined total of ten. Masters call any station. Subs reply but Subs cannot originate calls.









K-CL For the more flexible type of communication system requiring the operation of more than one Master Station, along with Sub-Stations which need not originate calls. Personnel can answer incoming calls even though they are 25 to 40 feet from their unit. Master Stations may talk to each other and to all Sub-Stations in the system selectively; or you can have one or more Sub-Stations which are exclusive to only one Master Station (as illustrated in the diagram at left). Master Stations have the option of making themselves "private" or "non-private" at will. You can begin with two stations (at least one must be a Master) and add other units as required. Model K-CL-5 Master Station has a total inter-connecting capacity of five stations, including Masters and Sub-Stations: while Model K-CL-10 Master Station has a total capacity of ten stations. Sub-Stations are not plugged into electric current. U.L. Listed. 120 volts. AC-DC.

Optional Wall Mounting Brackets for Models K-LR-2 and K-LR-2M are available. See description below.

K-AC The K-AC-605 and K-AC-610 Master Stations operate as above but provides a system with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for calling many stations at once. K-AC-605 and K-AC-610 Masters cannot be intermixed with any other master. For 120 volts, AC only. U.L. Listed.

Model K-CL-5 Master for five station use. Wt. 8 lbs.
List Price each $98.00.....Net each **57.50**

Model K-CL-10 Master for ten station use. Wt. 8 lbs.
List Price each $118.50.....Net each **69.50**

K-AC-605 Master for 5-Station use. Hi-Volume Output. Wt. 8 lbs. Complete with instructions.
List Price each $118.50.....Net each **69.50**

K-AC-610 Same as K-AC-605 except for 10-Station use.
List Price each $136.50.....Net each **79.95**

Model K-LR-2 Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs.
List Price each $36.00.....Net each **21.00**

Model K-LR-2M Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs.
List Price each $28.50.....Net each **16.60**

Model K-LR-2R Flush mounted Sub-Station for use with any of above Masters. Requires wall opening 4½" square. Stainless steel front panel measures 4¹³⁄₁₆" square. Complete with plaster ring. List Price each $28.50. Net each **16.60**

Model K-SM Optional accessory for surface mounting K-LR-2R on wall. List price each $7.95.....Net each **4.65**

Model K-HP-3 Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs.
List Price each $37.70.....Net each **22.00**

Model K-HP-3V Same as above, but with built-in volume control, adjustable to full output.
List Price each $46.00.....Net each **27.00**

Model K-C-20 Nine-inch weather proof re-entrant horn. Charcoal gray color. List price ea. $53.00. Net each **31.00**

Model K-C-20V Same as above, but with built-in weather resistant volume control, adjustable to full output.
List Price each $69.95.....Net each **41.00**

Model K-S-111 Wall Mounted Cradle Phone. (Optional accessory). For noisy areas and listening privacy. Use with K-HP-3 and K-C-20. Speaker disconnects when in use. List price each $79.00.....Net each **46.00**

No. 6210 (5 pair) Cable for interconnecting K-CL-5 or K-AC-605 Masters. List Price per foot 34c. Net per foot **20c**

No. 6226 (13 pair) Cable for interconnecting K-CL-10 or K-AC-610 Masters. List Price per foot 76c Net per foot **44c**

No. 6902 (2-conductor) Cable for connecting Sub-Station to K-CL-5, K-CL-10, K-AC-605 or K-AC-610. List Price per foot 4¾c.....Net per foot **2¾c**

No. 6202 Cable. Use in place of No. 6902 where an overall jacket is required.
List Price per foot 8c.....Net per foot **4¾c**

All systems above are transistorized and come complete with easy to follow instructions, ready to install.

A CRADLEPHONE—Optional for any unit above (except K-CL-5, K-CL-10, K-AC-605, K-AC-610, K-C-20(V), K-HP-3(V), K-LR-3R and K-LR-2R.) Add "H" to Model No. when ordering.
List Price Per Station, add $65.00 .....Net, add **38.00**

B. WALL MOUNTING BRACKETS—Optional accessory for use with TALK-A-PHONE Models K-LR-3, K-LR-3M, K-LR-2, K-LR-2M, K-C-41, K-C-41M, K-C-42, K-C-42M, and K-LC-2 Sub Station to enable mounting on wall, side of desk, etc. One pair required per station. Permits mounting with front panel upward, downward or sideward.
Model K-W1 Mounting Brackets, per pair. List Price $1.00 Net **60c**

HOW TO DETERMINE CABLE REQUIREMENTS

For Master Selective Systems measure from each Sub-Station to the Master and order total. For **Super Selective Systems**—measure from first Master to second Master only, from second Master to third Master only, etc., and total. Cable between first and last Master not necessary. For **Combination Systems**—Master cable; measure from first Master to second Master only, from second Master to third Master only, etc., and total; Sub-Station cable; measure from each Sub-Station to nearest Master only. Connect K-S-111 at any convenient point between remote speaker and Master Station.

TALK-A-PHONE CO.

All prices slightly higher west of the Rockies. All prices and specifications subject to change without notice. Manufactured under exclusive TALK-A-PHONE Patents.

© United Technical Publications

THE ALL-TRANSISTOR TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" INTERCOMMUNICATION SYSTEMS



"Has Everything . . . Does Everything"

One Model Meets Every Requirement

Setting a high standard in quality, design and performance, the TALK-A-PHONE "CHIEF" and "CHIEF REDI-POWER" meets the intercom needs of office, factory, institution, or any other commercial or private application. "CHIEF" Master Stations of 6, 12, 20, 30, 40 or 50 station capacity can be intermixed with "CHIEF REDI-POWER" Masters of different capacities, together with Staff Stations and Horns within the same system in any desired combination. Masters can talk with any other Master or Staff . . . page . . . and can utilize other optional equipment shown as well. Staffs can answer any Master and can originate calls to one Master, or to two Masters selectively.

ONLY THE TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" GIVE YOU ALL THESE FEATURES

• **DISTINCTIVELY STYLED**—Less than 3-inches high. In cabinets that combine the look and feel of fine-grained leather with the strength and rigidity of steel. Attractively finished in charcoal gray and brushed chrome.

• **"PRIVATE" OR "NON-PRIVATE" MASTERS AND STAFFS**—Exclusive Dynasonic Design enables stations to perform "privately" (so no one can listen-in), or "non-privately" (for reply without use of controls). A Master can be "private" to one or more Masters and "non-private" to others, where Staffs need not originate calls to that Master. Staffs can originate only to "private" Masters.

• **INCOMING CALL CHIME**—A standard feature of Masters. Indicates that your station is being called. Caller talks, voice follows.

• **MONITORING SIGNAL**—A standard feature of Masters and Staffs. Visually indicates to a "non-private" station that it is being monitored.

• **BUSY SIGNAL**—A standard feature of Masters and Staffs. Visually indicates when station you call is "busy." All units have facility to override "busy signal" for important calls.

• **DYNASONIC SELECTOR**—An exclusive TALK-A-PHONE feature that permits intermixing of stations and variation of performance. Add to system at anytime without discarding original equipment.

• **MULTI-MAGIC STATION SELECTOR**—A patented, exclusive TALK-A-PHONE feature that enables selection of up to 30 stations with only 12 push buttons . . . 40 and 50 stations with 14 push buttons . . . in the same attractive cabinet style and size.

• **UNI-TRANS DICTATION CONTROL**—No need to operate or hold down controls when one-way transmission is desired or when Cradle Phone is used.

• **EXTERNAL RELAY CONTROL**—A standard feature of Masters. Enables Master to activate external relays for operating siren, gong, light, etc. Use in extremely high noise level areas to signal personnel, who can then communicate with caller from Master in quieter location or in sound booth. Operates simultaneously with chime within Master.

• **RECIPROCAL POWER SUPPLY**—Each Master operates on 120 volts, AC only, and should be plugged-in. Where no electrical outlet is available, up to 30% of the "Chief" Masters in the system can operate without being plugged-in.

• **NOISE-FREE VOICE RANGE POWER**—The rugged, all-transistor high-gain amplifier provides unsurpassed clarity and naturalness of tone. The exclusive, patented TALK-A-PHONE circuit enables performance without noise, hum or distortion when used with TALK-A-PHONE cable.

• **HI-POWER STAFF STATIONS AND HORNS**—For use with any TALK-A-PHONE Master where high volume at Staff locations is needed. Ideal for paging speakers. K-HP-3 provides more than twice the volume of universal Staff; K-C-20 provides about 4 times greater volume . . . more with REDI-POWER Masters.

• **WALL SWITCH**—Combine with TALK-A-PHONE Horn or Hi-Power Staff to add origination-of-call feature.

• **"LD" LONG DISTANCE**—(optional accessory on Masters). For use over cable lines of 2,000 ft., 5,000 ft., 10,000 ft. or more without loss of volume. Functions only between Masters with LD . . . not between an LD Master and Staff. Built-in at factory at additional cost.

• **CRADLE PHONE**—(optional accessory on Masters or Staffs). Has live microphone. Provides listening privacy and greater speaking convenience. Diminishes background noises in noisy areas. Eliminates use of controls in conversation between Masters. Cuts off incoming voice from loudspeaker when in use.

• **WALL MOUNTED CRADLE PHONE**—(optional accessory). For noisy areas and listening privacy. Use with K-HP-3, K-C-20 and K-S-101 or K-S-102. Speaker disconnects when in use.

• **RIGHT-OF-WAY RELAY**—(optional accessory). Use with "CHIEF REDI-POWER" Masters to page any group of stations with a single button. Paged stations can also be used for intercommunication. K-RW-10 capacity, 10 stations, K-RW-20 capacity, 20 stations. Connects to one Master, other Masters also utilize facilities.

• **POWER PAGING BOOSTER**—(optional accessory). Use with "CHIEF" Masters to page a group of speakers with a single button. 50 watts output. Requires its own paging speakers (as K-C-20, K-HP-3). Provides paging facility only . . . paged stations cannot reply or originate calls through paging speakers. Connects to one Master, other Masters can also utilize facilities.

All "CHIEF" and "CHIEF REDI-POWER" Master Stations come complete with junction box and built-in power supply attached by 6' flexible cable. Master size: 14"w, 3⅛"h, 8¾"d. For 120 volts, AC only. U.L. Listed.

K-C-4906 Master 6 station capacity. Wt. 13 lbs.
List Price Per Station $184.50.....Net **108.00**

K-C-4912 Master 12 station capacity. Wt. 14 lbs.
List Price Per Station $207.00.....Net **121.00**

K-C-4920 Master 20 station capacity. Wt. 17 lbs.
List Price Per Station $246.00.....Net **144.00**

K-C-4930 Master 30 station capacity. Wt. 20 lbs.
List Price Per Station $285.00.....Net **167.00**

K-C-4940 Master 40 station capacity. Wt. 23 lbs.
List Price Per Station $324.00.....Net **190.00**

K-C-4950 Master 50 station capacity. Wt. 26 lbs.
List Price Per Station $363.00.....Net **212.00**

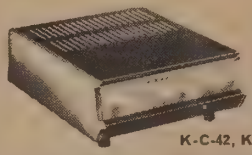
How to Determine Cable Requirements. To inter-connect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., until the last unit in the system is reached, and total. For K-C-4920 and K-CRP-5920, use two lengths of 6226 Cable; and for K-C-4930 and K-CRP-5930 use three lengths of 6226 Cable, etc. To connect K-C-41, K-C-42 or K-HP-3 Staff Stations, measure from Staff Station to the one Master to which Staff Station originates calls. To connect the K-C-42 Staff Station measure a separate length of cable from Staff Station to each Master Station to which Staff originates calls (for each K-C-41 or K-C-42, follow same procedure). Connect K-S-111 at any convenient point between remote speaker and Master Station.

TALK-A-PHONE ALL-TRANSISTOR "CHIEF REDI-POWER" MASTERS These units have all the operational features of the "CHIEF," plus the additional feature of built-in extra power (up to 30 watts) for use when and as needed. Provides additional volume for calling many stations at once, or noisy locations singly. Needs no separate power booster, which would eliminate return speech. Return speech is received at normal room volume. REDI-POWER Masters have a self-compensating amount of volume, whether you call 2, 10 or 20 stations simultaneously. Each station receives its pre-determined volume with no division of output as you call more stations at once. Use REDI-POWER Masters with "CHIEF" Masters and Staffs in same system. Add K-RW-10 or K-RW-20 and REDI-POWER Masters can page any group of stations with a single selector button. Paged stations can also be used for intercommunication. Operates on 120 volts, AC only. U.L. Listed.

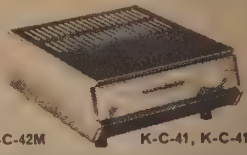
K-CRP-5912 Redi-Power Master station 12 station capacity. Wt. 18 lbs.
List Price Per Station $315.00.....Net **185.00**

K-CRP-5920 Redi-Power Master 20 station capacity. Wt. 21 lbs.
List Price Per Station $354.00.....Net **207.00**

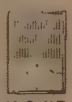
K-CRP-5930. Redi-Power Master 30 station capacity. Wt. 23 lbs.
List Price Per Station $393.00.....Net **230.00**



K-C-42, K-C-42M



K-C-41, K-C-41M



K-C-41R

TALK-A-PHONE "CHIEF" UNIVERSAL STAFF STATIONS For use with any "CHIEF" or "CHIEF REDI-POWER" Master. Like Masters, Staff Stations can be connected "privately" or "non-privately", and can originate calls. When "non-private", calls can be answered at a distance from Staff without using controls. Persons at "non-private" Staffs may reply to all Masters in the system (whether directly connected to them or not). Connected "privately" no one can listen-in to Staff, but any Master can call. "Private" or "Non-Private" Staffs can originate calls to one or two "Private" Masters. Each Staff has "busy signal" and "monitoring signal" features. Staffs do not connect to an electrical outlet . . . are distinctively styled in modern cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Finished in charcoal gray and brushed chrome. Size: 7½"w x 8¾"d x 2⅛"h.

K-C-41. Staff Station for origination-of-call to one Master. Wt. 8 lbs.
List Price, Each $49.00.....Net **28.50**

K-C-41M. Same operation as K-C-41 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each $39.95..Net **23.50**

K-C-42. Staff Station for origination-of-call to two Masters. Wt. 8 lbs.
List Price, Each $61.00.....Net **35.50**

K-C-42M. Same operation as K-C-42 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each $52.50..Net **30.50**

K-C-42R. Same as K-C-42, but for flush wall mounting. Stainless Steel Front Panel, 4¹³⁄₁₆" x 7¾₁₆". Wall Opening: 4⅛" w x 6½" h x 2" d. Wt., 5 lbs.
List Price, Each $52.50.....Net **30.50**

K-C-41R. Flush mounted Staff Station for use with any of above Masters. Requires wall opening 4⅛" W. x 6½" H. Stainless steel front panel measures 4¹³⁄₁₆" W. x 7¾₁₆" H. Complete with plaster ring. List Price, Each $39.95.....Net each **23.50**

K-SM-L Optional accessory for surface mounting K-C-41R and K-C-42R on wall. List price, each $8.95.....Net each **5.25**

K-HP-3. Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs. List Price, Each $37.70.....Net **22.00**

K-HP-3V. Same as above, but with built-in volume control, adjustable to full output. List Price, Each $46.00.....Net **27.00**

K-C-20. Nine-inch weatherproof re-entrant horn. List Price, Each $53.00....Net **31.00**

K-C-20V. Same as above, but with built-in weather resistant volume control, adjustable to full output. List Price, Each $69.95.....Net **41.00**

Optional Wall Mounting Brackets for Models K-C-41, K-C-41M, K-C-42 and K-C-42M are available. See description on preceding page.

Optional Equipment

Cradle Phone Available on all Models except K-C-41R, K-C-42R, K-HP-3(V) and K-C-20(V). Add "H" to Model No. when ordering.
List Price, Each—add $65.00.....Net add **38.00**

Model K-S-111 Wall Mounted Cradle Phone. List Price, Each $79.00.....Net **46.00**

LD Long Distance Feature Available on Master Stations. Add "LD" to Model No. when ordering. List Price, Each—$24.00.....Net add **13.95**

Model K-S-101 Wall Switch For origination of call to one Master through K-C-20, or K-HP-3, in Chief systems. List Price, Each $16.80.....Net **9.80**

K-S-102 WALL SWITCH. For origination of call to two Masters through K-C-20, or K-HP-3, in Chief systems. List Price, Each $27.25.....Net **15.95**

K-RW-10 Right-of-Way Relay. List Price, Each $84.00.....Net **49.00**

K-RW-20 Right-of-Way Relay. List Price, Each $155.00.....Net **91.00**

K-HP-50 Power Booster. List Price, Each $167.50.....Net **98.00**

CABLE. For indoor or outdoor use.

6206 Cable for connecting K-C-41, K-C-42, K-HP-3, K-C-20 with origination of call. List Price per Ft. 19c.....Net per Ft. **11c**

6214 Cable for inter-connecting K-C-4906 Masters.
List Price per Ft. 39c.....Net per Ft. **23c**

6226 Cable for inter-connecting K-C-4912, K-C-4920, K-C-4930, K-C-4940, K-C-4950, K-CRP-5912, K-CRP-5920 and K-CRP-5930 Masters.
List Price per Ft. 76c.....Net per Ft. **44c**

6902 Cable for connecting K-HP-3, K-C-20 without origination of call.
List Price per Ft. 4¾c.....Net per Ft. **2¾c**

6202 Cable. Use in place of No. 6902 where an overall jacket is required.
List Price per Ft. 8c.....Net per Ft. **4¾c**

TALK-A-PHONE CO.

All Prices Slightly Higher West of Rockies—All Prices and Specifications Subject to Change Without Notice. Manufactured under exclusive TALK-A-PHONE Patents.

© United Technical Publications

HEADPHONES By C. F. CANNON CO.



BRANDES "SUPERIOR"
Matched Tone Headset

A rugged headset, millions of which are in use all over the world. Large size diaphragms of 2 1/8" diameter assure efficient performance. Outside terminals, with polished aluminum cases and bakelite caps. Double coils, two in each receiver. Chrome steel magnets. Steel headband with permanent adjusment. 4 1/2 ft. cotton covered cord.

BS-2—2000 ohms D.C.....Net $3.27

BRANDES "ADMIRAL"
Matched Tone Headset

The Brandes "Admiral" is of the same general construction as the Brandes Superior, but has terminals on the inside.

BA-2—2000 ohms D.C.....Net $3.27
BA-3—3000 ohms D.C.....Net 3.45
BA-5—5000 ohms D.C.....Net 3.99

THE "CHIEF"
Cannon-Ball Bakelite Headset

A high quality headset of durable molded black plastic. Attractive in appearance, it is a sensitive and practical phone for every headset use. Inside terminals. Diameter of diaphragm is 2 1/8". Double coils, two in each receiver. Alnico permanent magnets. Supplied with vinyl plastic covered headband with permanent adjustment and no removable parts. Cotton covered cord, 4 1/2 ft. long.

CC-2—2000 ohms D.C.....Net $3.18
CC-3—3000 ohms D.C.....Net 3.33
CC-5—5000 ohms D.C.....Net 3.84
CC-11—11 ohms D.C.....Net 3.18





CANNON-BALL ALNICO MAGNETIC No. 25

A New Headset of Unusual Quality, Efficiency and Durability, powered by Alnico V magnets.

The headband is covered by attractive black extruded vinylite and provides utmost wearing comfort. Limits turn of phone to prevent twisting of cord. Cap and case of molded plastic. Large size diaphragm 2 1/8". Equipped with sanitary moisture-resistant plastic cord with riveted crotch piece.

AM-25-2 .....Net $4.14
AM-25-3 .....Net 4.44
AM-25-5 .....Net 5.10

ALNICO MAGNETIC No. 15

A new, small size, extra sensitive double headset, light in weight. Diameter of diaphragm 1 7/8". Molded cap and case. Steel adjustable headband. 4 1/2 ft. cord.

AM-15-2 .....Net $2.88
AM-15-3 .....Net 3.03



CANNON-BALL "ALNICO"
Single Headphone

Equal in clarity and volume to most double headsets, efficient and attractive. Permits listening while being addressed by others. Concealed terminals. Diaphragm 1 7/8". Bakelite case and cups. Alnico magnet, double coils. 4 1/2 ft. cord. Spring steel headband permanently attached.

AM-15-1—1000 ohms D.C.....Net $1.56

THE "MASTER"
Cannon-Ball Headset

Used extensively in hospitals and other institutions as well as for general purposes, and is especially recommended for institutions. Inside terminals Aluminum cases with black bakelite caps. Spring steel adjustable headband with no removable parts. Diaphragm 2 1/8" diameter. Double coils. Chrome steel magnets. 4 1/2 ft. cotton-covered cord.

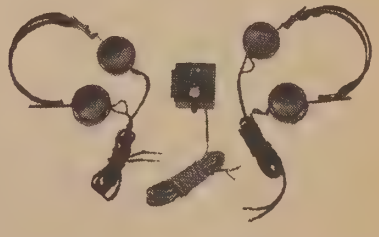
MC-2—2000 ohms D.C.....Net $3.27
MC-3—3000 ohms D.C.....Net 3.45
MC-5—5000 ohms D.C.....Net 3.99

CANNON-BALL "EMPIRE"
Lightweight Headset

A low-priced light-weight headset with large magnet and double coils. Reproduces with clarity and good volume. Diameter of diaphragm is 1 7/8". Polished aluminum cases with bakelite caps. Steel adjustable headband. 4 1/2 ft. cord. Inside terminal connections.

EC-2—2000 ohms D.C.....Net $2.97
EC-3—3000 ohms D.C.....Net 3.12

Phones can be supplied with any resistance required or with variations to meet special requirements. Sanitary plastic covered cords available for institutional use. Write for special quotation.



CANNON-BALL HEARING AID FOR TELEVISION

Provides private listening without disturbing others. Excellent for persons hard of hearing. Can be attached to any television set and permits listening to phones alone, speaker alone, or both together.

FOR TELEVISION

Kit complete with 15 foot cord and phone volume control.

With 2 headsets.....Net $10.50
With 1 headset.....Net 7.95

MOLDED RUBBER CUSHIONS



Fit standard size headsets. Molded-in air chamber provides maximum wearing comfort.

per pair .....Net $ .66

GELOSO

AMERICAN GELOSO ELECTRONICS, INC.

REFLEX TRUMPETS



The Geloso Reflex Trumpets, in a variety of configurations, shapes and sizes, are the best produced and most complete line available for commercial sound and public address. Each basic horn design can be coupled with a group of drivers to provide the most efficient and economical unit to suit the individual requirement. The Geloso Trumpets made out of high impact non-deforming MOPLEN (Nylon compound) have a removable re-entrant column that can be loosened to accommodate a driver unit, and retightened to provide an air-tight seal for maximum efficiency and power transfer. The Geloso reflex trumpets are fully weatherproof, built to withstand stress and hazards normally found in severe environmental conditions. Protected against rust and corrosion to provide long trouble-free operation without variations in performance with time. Each trumpet is supplied with a driver cover for additional protection of the driver unit when used outdoors.

REFLEX TRUMPETS DATA

Horn Model	Low Frequency Cut-off	Sound Distribution	Air Column Length	Dimensions (Overall) Length	Dimensions (Overall) Bell	Shipping Weight	Net Price
2536	250 HZ.	65°	2½ FT.	12″	9¾″	3	$10.74
2537	250 HZ.	120° x 60°	2½ FT.	12½″	13¼″ x 6¼″	3	11.28
2556	150 HZ.	120° x 60°	3½ FT.	18″	18¾″ x 10¼″	8	23.73
2551	200 HZ.	75°	3½ FT.	17″	17¼″	8	22.77
2552	150 HZ.	80°	4 FT.	19″	21½″	10	26.97

Note: Low frequency cut-off is based on the capability of the driver used. If the horn cut-off figure is higher than the rated low frequency limit of the driver, the horn cut-off will be the determining factor

DRIVERS



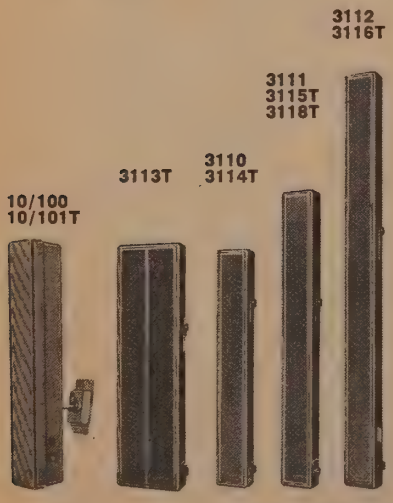
Rugged Construction • High Efficiency • Field Replaceable Diaphragms • Dual Weather Protection

Driver Model	Frequency Response	*Power Rating (I.P.M.)	Impedance (Ohms)	Power Taps 70 V. System	Dimensions (Overall) Length	Dimensions (Overall) Diam.	Shipping Weight Lbs.	Net Price
2567	85-10,000 HZ.	30 Watts	16	—	2¾″	3¼″	3	$14.64
2534T	85-10,000 HZ.	30 Watts	Variable 16-167-335-500-1000	30W-15W-10W-5W	6″	3⅞″	5	22.95
2531	80-12,000 HZ.	40 Watts	16	—	2⅞″	3⅞″	3½	17.37
2532T	80-12,000 HZ.	40 Watts	Variable 16-125-250-500-1000	40W-20W-10W-5W	6″	3⅞″	5½	23.97
2521	70-12,000 HZ.	60 Watts	16	—	3¾″	4⅜″	4½	24.75
2522T	70-12,000 HZ.	60 Watts	Variable 16-80-165-250-500	60W-30W-20W-10W	6¾″	4⅜″	7	31.80

*Capacity in Watts I.P.M. (integrated speech and music power).

SOUND COLUMNS — Directional

- Uniform Sound Intensity
- High Efficiency
- Reverberation-free
- Weatherproof



Geloso Sound Columns feature in-line array of elliptical speakers contained in modern, handsomely styled acoustic weatherproof enclosures for indoor and outdoor use. This construction provides directional and controlled sound dispersion with concentration to the area served. Feedback "Howl" and Reverberation resulting when sound bounces from ceilings and wall surfaces are greatly reduced, thus permitting the use of greater amplification power. The Geloso sound columns are ideally suited for all sound applications, night clubs, auditoriums, churches, restaurants, etc. Each column is supplied with mounting brackets. Accessories are available to suit any application.

Model No.	*Power Rating Watts (IPM)	Speakers	Impedance Ohms	Frequency Response	Sound Dispersion Angle Horiz.	Sound Dispersion Angle Vert.	Dimensions (Overall) Inches H.	W.	D.	Case Material	Ship. Weight Lbs.	Net Price
10/100	20W	3 3″x7″	16-20	150 10,000 HZ.	120°	35°	27″	4¾″	4¼″	Nylon	7	$28.59
10/101T	20W	3 3″x7″	16-125-250 350-400-500	150 10,000 HZ.	120°	35°	27″	4¾″	4¼″	Nylon	8	38.40
3110	36W	4 5″x8″	12-16	100 10,000 HZ.	120°	30°	39″	5½″	4″	Steel	20	62.79
3111	45W	5 5″x8″	16-20	100 10,000 HZ.	120°	25°	48″	5½″	4″	Steel	24	71.13
3112	60W	7 5″x8″	16-20	100 10,000 HZ.	120°	18°	67″	5½″	4″	Steel	33	89.34
3113T	50W	3-8″ 1-4″	16-125-250 350-400-500	50 18,000 HZ.	120°	35°	39½″	10″	6″	Steel	32	81.60
3114T	36W	4 5″x8″	16-125-250 350-400-500	100 10,000 HZ.	120°	30°	39″	5½″	4″	Steel	22	68.94
3115T	45W	5 5″x8″	16-125-250 350-400-500	100 10,000 HZ.	120°	25°	48″	5½″	4″	Steel	26	75.30
3116T	60W	7 5″x8″	16-125-250 350-400-500	100 10,000 HZ.	120°	18°	67″	5½″	4″	Steel	35	95.40
3118T	45W	5 5″x8″	16-500-1000 2000-3000-5000	100 10,000 HZ.	120°	25°	48″	5½″	4″	Steel	26	77.25

*Capacity in Watts I.P.M. (integrated speech and music power).

ACCESSORIES

80784 — Collapsible floor stand. Adjustable height from 36″ to 52″. This stand can be used only with Nos. 3110, 3111, 3114, 3115, 3118. Net $20.97

18535 — Support for mounting columns on floor stand (for columns 3110, 3111, 3114, 3115, 3118). Net $2.73

18573 — Wall mount Swivel support for all columns. Net $1.41

10/200 — Ball type swivel support. Permits horizontal as well as vertical orientation of column. For models 10/100 and 10/101T ONLY. Net $7.59

10/201 — Stacking bracket. Permits stacking of two Mini-columns 10/100 and 10/101T ONLY. Net $2.79

Net

© United Technical Publications

AMERICAN GELOSO ELECTRONICS, INC.

GELOSO

GT SERIES PUBLIC ADDRESS TUBE AMPLIFIERS



G1/1020U



G1/1040U



G1/1070U



G1/1110U

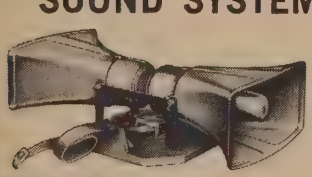
The new Geloso "GT" Public Address Amplifiers are compact, rugged, versatile units expressly designed for commercial sound, public address, music applications. Four models are available with an output power ranging from 35 to 180 watts max. Field-tested, heavy-duty components are used throughout to provide long, trouble-free operation. Features such as protective circuit against accidental shorting of speaker lines or overload, 16 adjustable output impedances including 25 volt and 70 volt lines, standby-operating switch, separate bass and treble controls, bridge silicon rectifiers for maximum reliability of the power supply, separate power supply for grid bias in push-pull output stage to assure maximum stability and low distortion, low temperature operating tubes for maximum life, and many, many more, have made the Geloso "GT" amplifiers the finest of their class today.

TECHNICAL DATA

Model No.	G1/1020U	G1/1040U	G1/1070U	G1/1110U
Power Output	20W. at 5% 35W. Max.	50W. at 5% 75W. Max.	75W. at 5% 110W. Max.	125W. at 5% 180W. Max.
Frequency Response	20 ÷ 20,000 HZ. ±2 DB	20 ÷ 20,000 HZ. ±2 DB	20 ÷ 20,000 HZ. ±2 DB	20 ÷ 20,000 HZ. ±2 DB
Sensitivity	Mic. 4 Mv. Aux. 130 Mv.	Mic. 4 Mv. Aux. 200 Mv.	Mic. 4 Mv. Aux. 150 Mv.	Mic. 4 Mv. Aux. 250 Mv.
Gain	Mic. +118 DB Aux. +90 DB	Mic. +120 DB Aux. +90 DB	Mic. + 125 DB Aux. + 95 DB	Mic. +130 DB Aux. +100 DB
Hum & Noise (below rated output)	Mic. −70 DB Aux. −80 DB	Mic. −75 DB Aux. −85 DB	Mic. −75 DB Aux. −85 DB	Mic. −75 DB Aux. −85 DB
Inputs	2 Mic. High Imp. (In parallel) 2 Aux. High Imp. (In parallel)	2 Mic. High Imp. 2 Aux. High Imp. High Level w/selector switch.	2 Mic. High Imp. 2 Aux. High Imp. High Level w/selector switch.	2 Mic. High Imp. 2 Aux. High Imp. High Level w/selector switch.
Output Impedance	From 1.25 to 500Ω Adjust. 25V. Line (30 Ohms) Bal. 70V. Line (300 Ohms) Bal.	From 1.25 to 500Ω Adjust. 25V. Line (10 Ohms) Bal. 70V. Line (125 Ohms)	From 1.25 to 500Ω Adjust. 25V. Line (7.5 Ohms) 70V. Line (75 Ohms)	From 1.25 to 500Ω Adjust. 25V. Line (5 Ohms) Bal. 70V. Line (30 Ohms) Bal.
Controls	1 Mic. Volume 1 Aux. Volume 1 Tone	Volume Mic. 1 Volume Mic. 2 Volume Aux. Aux. Selector switch. Bass Treble Stand-by operating switch.	Volume Mic. 1 Volume Mic. 2 Volume Aux. Aux. Selector switch. Bass Treble Stand-by operating switch.	Volume Mic. 1 Volume Mic. 2 Volume Aux. Aux. Selector switch. Bass Treble Stand-by operating switch.
Tone Controls Action	Treble at 10 KHz. 0 to −23 DB	Bass at 50 HZ. −10 to +10 DB Treble at 10 KHz. −20 to +10 DB	Bass at 50 HZ. −10 to +10 DB Treble at 10 KHz. −20 to +10 DB	Bass at 50 HZ. −15 to +16 DB Treble at 10 KHz. −16 to +14 DB
Tubes and Diodes	Total of 4 Tubes 8 Silicon Rectifiers 2-12AX7, 2-6BQ5	Total of 5 Tubes 8 Silicon Rectifiers 2-12AX7, 1-12AT7 2-6CA7	Total of 5 Tubes 8 Silicon Rectifiers 2-12AX7, 1-12AT7 2-8278 (EL503)	Total of 7 Tubes 8 Silicon Rectifiers 2-12AX7, 1-12AT7 4-8278 (EL503)
Power Required	105-125 Vac 50-60 HZ. Fuse - 2A	105-125 Vac 50-60 HZ. Fuse - 3A	105-125 Vac 50-60 HZ. Fuse - 3A	105-125 Vac 50-60 HZ. Fuse - 3A
Power Consumption	50 ÷ 50 VA	90 ÷ 220 VA	90 ÷ 210 VA	120 ÷ 475 VA
Dimensions	13″W. 7″D. 6″ H.	16″W. 9″D. 8″H.	17″W. 10″D. 8″H.	17″W. 10″D. 8″H.
Weight	15.8 lbs.	25 lbs.	34 lbs.	42 lbs.
Net Price	$86.49	$135.51	$158.97	$187.05

Note: The microphone inputs accept the standard Cannon XLR-3 type connector; the Auxiliary inputs, the standard RCA type phone plug.

MOBILE SOLID STATE SOUND SYSTEMS



2506 and 2507

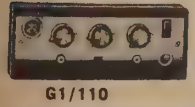
The Geloso Mobile Sound Systems are specifically designed for all mobile applications, available in three complete systems. Superior sound penetration. Simplified installation. Rugged construction. Fully weatherproof. Each mobile system consists of a Geloso solid state amplifier, two Geloso wide angle horns with driver pre-mounted and prewired on a support base with mounting strap and a Geloso dynamic lavalier microphone. The system can be mounted in 60 seconds, no drilling or special tools required.

MS35 — Consists of G1/110 Solid State Amplifier, 2506 Speaker System, and dynamic lavalier microphone. Output Power: 35 Watts IPM. Power Source: 12 V.D.C. Ship. Wt: 21 lbs. Net $153.51

MS50 — Consists of G1/120 Solid State Amplifier, 2506 Speaker System and dynamic lavalier microphone. Output Power: 50 Watts IPM. Power Source: 12 V.D.C. Ship. Wt: 23 lbs. Net $169.02

MS75 — Consists of G1/140 Solid State Amplifier, 2507 Speaker System and dynamic lavalier microphone. Output Power: 75 Watts IPM. Power Source: 12 V.D.C. Ship. Wt: 37 lbs. Net $219.15

MOBILE AMPLIFIERS



G1/110

G1/110 — Solid State Mobile Amplifier. Output Power: 25 Watts Max. Power Source: 12 Volts DC. Inputs: 1 Microphone (Hi-Z) 2 aux. with switch. Controls: Microphone Volume, Aux. Volume, Tone. Output: 4-8-16-32 ohms. Size: 7½″ w. x 3″ h. x 5½″ d. Wt: 4 lbs. Net $64.14



G1/120-G/140

G1/120 — Solid State Mobile Amplifier. Output Power: 40 Watts. Max. Power Source: 12 Volts DC. Inputs: 2 Microphones (Hi-Z) 2 aux. with switch. Controls: Microphone Volume, Aux. Volume, Tone. Output: 4-8-16-32 ohms. Size: 9½″ w. x 3¾″ h. x 6″ d. Wt: 6½ lbs. Net $87.66

G1/140 — Solid State Mobile Amplifier. Output Power: 65 Watts Max. Power Source: 12 Volts DC. Inputs: 2 Microphones (Hi-Z) 2 aux. with switch. Controls: Microphone Volume, Aux. Volume, Tone. Output: 4-8-16-32 ohms. Size: 9½″ w. x 3¾″ h. x 7½″ d. Wt: 10 lbs. Net $114.33

Note: The microphone inputs accept standard XL-3 type connector; the aux. input, the standard RCA type phone plug.

THE ASTATIC CORPORATION

DYNAMIC, CRYSTAL AND CERAMIC MICROPHONES



800 SERIES PROFESSIONAL DYNAMIC MICROPHONES

810s ULTRA-CARDIOID

No other microphone so completely provides the answers to feedback and reverberation problems. Sintered bronze acoustic filter assures outstanding directional characteristics, with a front-to-back ratio of 25 db. Response of 40-15,000 Hz is tailored for faithful reproduction of voice and music. **Output:** —50 db (HiZ) and —54 db (LoZ). On-off switch built into swivel assembly positionable from vertical to beyond 90° for performer control. Factory set at high impedance (40,000 ohms), easily changed to low impedance (150 ohms) with a simple solderless connection. **Finish:** Non-reflecting, brushed satin chrome with black chrome trim.

Model 810s Ultra-Cardioid — List Price **$89.00**

Model 810s Gold — Finished in gold. List Price **$94.00**

Model 810 — Same model as 810s with an exclusive Astatic "Easy-On" swivel adaptor in place of the on-off switch assembly. List Price **$85.00**

Model 810 Gold — Finished in gold. List Price **$90.00**

811 ULTRA-CARDIOID

ASTATIC's exclusive sintered bronze acoustic filter assures maximum cancellation of unwanted background noise. A perfect Ultra-Cardioid pattern provides a 25 db front-to-back ratio. The DuPont MYLAR® diaphragm provides stability and long life even at extreme temperatures of —80° to 300° F. An ideal top-quality paging and communications desk stand microphone. Reliable and rugged, finished in brushed satin chrome with wear-resistant, black chrome trim. The 811 is designed for use with "G" or "UG8" grip-to-talk stands. **Output:** —50 db (HiZ), —54 db (LoZ). **Size:** 1-5/16" d. x 5-9/16" l. **Net Weight:** 13½ oz.

List Price **$75.00**

820s OMNI-PROBE

The ultimate in sensitive, omnidirectional pickup, assuring consistent volume and clarity for talking, singing, and instrumental groups. Perfectly concentric pattern, with 40-18,000 Hz response. The 820s offers complete performer control with a swivel that positions easily from vertical to beyond 90° and, a built-in on-off switch. A simple solderless connection changes the impedance from high (EIA 40,000 ohms) to low (EIA 150 ohms). **Output:** —61 db. **Finish:** non-reflecting brushed satin chrome with black satin chrome trim. **Size:** ¾" d. x 9" l. **Net Weight:** 14½ oz.

Model 820s Omni-Probe — List Price **$85.00**

Model 820s Gold — Finished in gold. List Price **$90.00**

Model 820 — Same as Model 820s with "Easy-On" Swivel adaptor in place of the on-off switch assembly. **Net Weight:** 17 oz. List Price **$79.50**

Model 820 Gold — Finished in gold. List Price **$84.50**

840s LAVALIER

Low impedance, light weight, diminutive lavalier with 50-12,000 Hz response is specially engineered to prevent chest cavity resonance problems. **Output:** —59 db. **Finish:** in brushed satin chrome. The 840s has recessed on-off switch, neck cord, spring clip, and 30' of superflexible shielded cable; easily converted from lavalier to an omnidirectional hand held microphone. 50-16,000 Hz as hand held. **Size:** ¾" d. x 3⅝" l. **Net Weight:** 5 oz.

Model 840s Lavalier — List Price **$90.00**

Model 840s Gold — Gold finish. List Price **$95.00**

840 LAVALIER

Smaller than 840s without an on-off switch, the 840 offers the same top performance either hand held or as a lavalier. Furnished with 30 feet of superflexible shielded cable, neck cord, and spring clip. **Finish:** Brushed satin chrome. **Size:** ¾" d. x 2⅝" l. **Net Weight:** 5 oz.

Model 840s Lavalier — List Price **$85.00**

Model 840 Gold — Finished in gold. List Price .. **$90.00**

850s "BALL HEAD" ULTRA-CARDIOID MICROPHONES

ASTATIC's "Ball Head" filter eliminates "pop", "blast" and wind noise, making this microphone ideal for indoor, outdoor use, and for extremely close work. **Finish:** in nonreflecting satin chrome, black satin chrome trim. ASTATIC's exclusive SIBROPHASE acoustic phasing system provides an unsurpassed 25 dB front-to-back ratio. "Ball Head" screen encloses acoustic filters, foam filter and a magnetic protective screen. **Impedance change:** By a simple solderless connection. **Response:** 40 Hz to 15,000 Hz. **Output:** —50 db (LoZ), —54 db (HiZ). **Size:** 2-1/16" d. x 6⅛" l.

Model 850s — On-off DPDT switch provides speaker or performer control. An 18 foot 2 conductor, shielded cable is included. Connector is interchangeable with Cannon XLR-4. **Net Weight:** 2 lbs. (with cable).

List Price **$99.00**

Model 850 — Same as Model 850s but with ASTATIC "Easy-On" swivel adaptor in place of on-off switch. Quickly and quietly changeable from stand mount to hand held. **Net Weight:** 1 lb., 6 oz. List Price **$95.00**

860s "BALL HEAD" OMNIDIRECTIONAL MICROPHONES

These omnidirectional probes incorporate ASTATIC's integral "Ball Head" filter that eliminates "pop" and "blast" from explosive breath noises. Perfectly concentric polar pattern assures uniform omnidirectional pick-up. Ideal for sports events, close talking, on-the-scene broadcasting, and outdoor entertainment. **Response:** 40 Hz to 18,000 Hz. **Output:** —61 db (HiZ), —60 db (LoZ). **Size:** 1⅝" d. x 10" l.

Model 860s — Positive swivel positioning from vertical through more than 90° and an integral on-off switch allow performer control. A broadcast-type connector (interchangeable with Cannon XLR-4) is fitted with 18 feet of ultra-flexible cable. **Net Weight:** 1 lb., 13 oz. (with cable). List Price **$95.00**

Model 860 — Same microphone as Model 860s except with "Easy-On" swivel adaptor in place of the on-off switch. Has permanently attached cable. Quickly and quietly changeable from stand mount to hand held. **Net Weight:** 1 lb., 2 oz. List Price **$89.50**



SERIES 330 AND GOOSENECK SERIES 330-GS

330 Series (See next page for matching stand)
Small, slim mikes with quality performance for various applications at low price. Model 331 has momentary on, spring-return switch, furnished with hangup bracket. Cable provides for audio and relay connections. All other models have slide switch with "lock-on" position complete with lavalier and stand adapter with ⅝"-27 thread. High impedance except Model 335L.

330-GS
Professional, all-purpose goose-neck microphones for intercommunications, tape recording, amateur, language laboratories and many other applications. Gooseneck is permanently attached. 13" in length. Complete with 7' single conductor, shielded cable (355L-GS, 2-cond. for balanced line).

MODEL 77 DYNAMIC CARDIOID

A positive anti-feedback microphone. Unidirectional design has suspended cartridge; eliminates external shock mounts. Built-in impedance selector. **Front-to-Back Pickup:** 18 db differential. **Output:** —48 db. **Frequency Response:** 80-15,000 Hz. **Impedance:** Low-Z, 30-50 ohms; medium 150-250 ohms; high, 40,000 ohms. **Shipping Weight:** Approximately 2 lbs., 6 oz., less stand.

Model 77 — With on-off switch and provisions for locking in "on" position. List Price **$82.50**

Model 77 Gold Finish — List Price **$92.50**

Model 77-L — Head only for mounting on G Stand. List Price **$72.50**

Model 77-L Gold Finish — List Price **$82.50**

Model G-77 — Includes G Stand and 8' cable. List Price **$97.45**



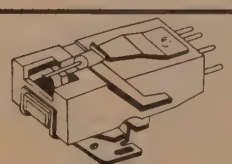
Model	Type	Output	Freq.	Body	Grille	Cap	Goose Neck	List
331	Ceramic	—58db	300- 7000	Black	Black	Chrome	—	$17.90
332	Crystal	—54db	30-15000	T.V. Gray	Black	Chrome	—	17.90
332GS	Crystal	—54db	30-15000	T.V. Gray	Chrome	Chrome	Chrome	24.50
333	Ceramic	—58db	30-10000	Black	Black	Chrome	—	17.90
333GS	Ceramic	—58db	30-10000	Black	Black	Black	Chrome	24.50
335H	Dynamic	—56db	100-12000	T.V. Gray	Chrome	Chrome	—	26.50
335H-GS	Dynamic	—56db	100-12000	T.V. Gray	Chrome	Chrome	Chrome	33.00
335L	Dynamic	—57db	100-12000	T.V. Gray	Chrome	Chrome	—	23.50
335L-GS	Dynamic	—57db	100-12000	T.V. Gray	Chrome	Chrome	Chrome	30.00



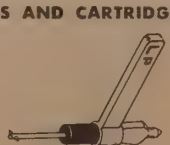
MODEL	DESCRIPTION	LIST
DN-50	50 OHM Impedance, 10 Foot Cable	$33.50
GDN-50	50 OHM Impedance, with Model G Stand and 6 Foot of Shielded Cable	52.70
UG8-DN50	Same as above but with Model UG8 Stand	57.70
DN-HZ	25,000 OHM Impedance, 10 Foot Cable	39.70
GDN-HZ	Same as above, with Model G Stand and 5 Foot of Shielded Cable	59.90

See next page for description of G and UG8 Stands.

ASTATIC PHONOGRAPH NEEDLES AND CARTRIDGES



■ For over 35 years Astatic has maintained its number one position as the world's leader in supplying the most complete line of phonograph cartridges for O.E.M.'s and Distributors.



■ Needle for needle, Astatic always has the highest quality and the most complete line of needles. Regardless of the original manufacturer of the phonograph, Astatic has the replacement needle for the cartridge on hand and ready for immediate delivery.

Trade Discount Applies To List Prices Only

© United Technical Publications

ASTATIC Microphones and Accessories



D-104



GD-104

SERIES D-104 "PREMIER"

The radio amateur's first choice. Balanced performance. Machined brass parts; heavy mesh grille; chrome finish. Standard ⅝"-27 thread mounting; adaptable to SC-11 lock-switch adapter or can be mounted on Model G (grip-to-talk) stand. Metal seal crystal offers protection against moisture and dryness. Ceramic immune to excessive heat and humidity. 3" dia., 1⅜" deep. Weight, 14 oz. Complete with 5' single conductor shielded cable.

Model D-104 Crystal — Output: —46 db; **Impedance:** 1-5 megs; **response:** 30-7,500 Hz; **rising:** 500-4,000 Hz. List **$31.00**

Model D104C Ceramic — Output: —49 db; all other characteristics similar to D-104. List Price **$31.00**

Model SC-11 Adapter — List Price ..... **$ 9.00**

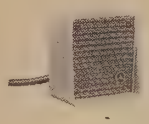
Model GD-104 Crystal — D104 complete with Model G grip-to-talk stand. List Price **$51.20**

Model GD-104C Ceramic — Same as above except ceramic element. List Price **$51.20**

Model UG8-D104 Crystal — D104 complete with Model UG8 grip-to-talk stand. List Price **$56.20**



200-S



150



T3



JT-30



10DA

"VELVET VOICE" CRYSTAL MICROPHONES

For PA, home recording, ham, paging, radio. Use with floor or desk stand or in hand. Gold finished housing and handle; chrome grille; brown detachable base. ⅝"-27 mounting. 8" high, 2½" grille dia. 5½" base dia. Weight, 24 oz.

Model 200 — Output, —50 db; impedance, 1-5 megs; response, 30-7,000 hz. With 8' cable. List Price **$19.50**

Model 200-S — With on-off switch in handle. List Price **$21.50**

Model 241-S — Same as 200-S except response 30-10,000 hz with rising response from 1,500-5,500 Hz. List Price **$21.50**

SERIES 150 RECORDER MIKES

For tape recorder use. Low cost; high output; outstanding performance; compact in size. **Size:** 2-3/16" sq. x 1¼" d. Plastic housing with rigid metal grille. With 5' cable.

Model 150 Crystal Mike — Frequency response, 30-10,000 Hz. **Output:** —48 db. List Price **$6.50**

Model 151 Ceramic Mike — Frequency response, 30-8,000 Hz. **Output:** —48 db. List Price **$6.50**

MODEL T-3 CRYSTAL

For studios, Intercom, amateur, PA, recording. **Response:** 30-10,000 Hz. **Output Level:** —54 db. Semi- or non-directional. With connector, 10' cable. All chrome finish.

Model T-3 Crystal Microphone — List Price **$29.50**

SERIES JT-30 "SPOKESMAN"

Streamline die-cast alloy housing; gray Hammerlin finish with chrome grille and fittings; including handle and interlocking base. Concentric cable connector. For general PA, recording and communication. 8" high, 2-5/16" grille dia. 5⅛" base dia. Weight 21 oz.

Model JT-30 Crystal — Output: —49 db; **Impedance:** 1-5 megs; **Response:** 30-10,000 Hz. Complete with 8' single-conductor shielded cable. List Price **$18.40**

Model JT-30-C Ceramic — Same as JT-30 except with —54 db output and 5' cable. List Price **$18.90**

Model JT-30-F Crystal (Head Only) — Same as Model JT-30, except less handle and desk stand. Threaded ⅝"-27 for mounting. List Price **$15.90**

Model JT-30-CF Ceramic (Head Only) — Same as Model JT-30-C, except less handle and desk stand Threaded ⅝"-27 for mounting. List Price **$16.40**

MODELS 10-C, 10-DA "THE VOICE"

Ideal for SSB, AM transmitters, paging and industrial applications. High impedance. **Output:** 300-3,000 Hz. Plug-in ⅝"-27 thread mounting with 5' cable.

Model 10-C Ceramic — Gray chrome grille. List Price **$29.70**

Model G-10-C Ceramic — Same as above, but with "G" (grip-to-talk) stand. List Price **$49.90**

Model 10-DA Dynamic — Chrome body and grille. List Price **$39.70**

Model G-10-DA Dynamic — Same as above, but with "G" (grip-to-talk) stand. List Price **$59.90**

Model UG8-10-DA Dynamic — Same as above, but with "UG8" stand. List Price **$64.90**



551



539



531



513H, 511



10M5A

MODEL 551 INDUSTRIAL MICROPHONE

Dynamic industrial mike provides high intelligibility in noisy areas. Fully shielded. Withstands temperatures to 200° F; 180° F indefinitely. Moisture-sealed. Semi-directional polar pattern. **Frequency Response:** 300-6,000 Hz, high impedance; 300-6,500 Hz, low impedance. **Output Level:** —50 db, low impedance; —46 db, high impedance. **Impedance:** 150 or 40,000 ohms, adjustable. With press-to-talk switch, virtually unbreakable Delrin* housing, and four-conductor (shielded mike, two relay) coiled cord extends to 8' long. **Size:** 1⅞" x 2" x 6⅞". **Weight:** 23 oz.

Model 551 Industrial Mike — List Price **$69.50**

* Dul'ont trademark.

NEW MODEL 539 NOISE CANCELLING MIKE

Super talk power, ceramic mike is highly recommended for CB or ham operations. High output for effective use in noisy locations, features 360° differential cancellation of background noise for sharp, clear speech. Lip bar maintains uniform, close spacing for high modulation and maximum cancellation. **Frequency Response:** 100-3,500 Hz with mike held for close talking using lip bar. **Output Level:** —50 db. **Impedance:** 250,000 ohms, approx. at 1 kc (EIA, 100,000 ohms). With press-to-talk DPDT switch; wired for relay or electronic switching. Coiled 3 cond. (one cond. shielded) cable extends to 5 ft. High impact plastic housing. **Size:** 2⅝" w. x 1-5/16" d. x 3⅝" h.

Model 539 — Noise Cancelling Mike — List Price **$17.50**

MODEL 10M5A "COMMUNICATOR"

For mobile, ship-shore, etc. Sensitive and rugged. **Response:** 100-4,000 Hz. **Output Level:** —40 db at 1 v./microbar. Press-to-talk DPST switch. Retracting cable 12-in. coiled extends to 8'. Gray finish.

Model 10M5A Carbon Microphone — List Price **$29.50**

MODEL 531 MOBILE MICROPHONE

High performance ceramic mike for amateur and Citizens' Band applications. Carefully calculated response characteristic for maximum clarity and intelligibility. Semi-directional polar pattern. Fully shielded to minimize hum pickup. **Frequency Response:** 150-3,500 Hz with 6 db rise in 2,000 Hz range. **Output Level:** —50 db. **Impedance:** 250,000 ohms, approx. at 1,000 Hz (EIA, 100,000 ohms). With press-to-talk switch, molded high impact plastic housing and three-conductor (one-shielded) coiled vinyl cord. 5' long extended. **Size:** 2⅝" w. x 1-5/16" d. x 3⅝" h. **Weight:** 7¼ oz.

Model 531 Mobile Mike — List Price **$12.75**

MODEL 511 MOBILE MICROPHONE

Ceramic element mike for Citizens' Band and similar uses. Low background noise, feedback and hum. Semi-directional polar pattern. **Frequency Response:** 200-4,000 Hz. **Output Level:** —50 db. **Impedance:** 250,000 ohms (1,000 Hz). With press-to-talk switch, snap-removal mounting bracket and three-conductor (one shielded) coiled cable extending to 5½' long. **Size:** 2¼" w. x 2½" d. x 6" h. **Weight:** 7 oz.

Model 511 Ceramic Mike — List Price **$19.95**

MODEL 513H MOBILE MICROPHONE

Dynamic mike for Citizens Band and other communications. Low background noise, feedback and hum. Semi-directional polar pattern. Wide temperature range; humidity-proof. **Frequency Response:** 200-9,000 Hz. **Output Level:** —50 db. **Impedance:** 40,000 ohms. With press-to-talk switch, snap-removal mounting bracket and three-conductor (one shielded) coiled cable 5½' long, extended. **Size:** 2¼" w. x 2½" d. x 6" h. **Weight:** 10 oz.

Model 513H Mobile Mike — List Price **$34.59**

STANDS AND LINE TRANSFORMER



A-7



E-1



G, UG8



A-8

Model A-7 Desk Stand — With adjustable swivel. Use with 330 series. List Price **$2.45**

Model A-8 Desk Stand — Designed for 810, 820, 840, 850, 860 and "Futura" series microphones. Has ⅝"-27 thread mounting. List Price **$8.25**

Model G Desk Stand — Has grip-to-talk SPST on-off switch, sliding bar for "lock-on." Use with DN-50, DN-HZ, T3, D-104, D-104C, 10-C, 10-DA and 77L. **Finish:** Bright chrome, gray Hammerlin base. List Price **$24.95**

Model UG8 Stand — Same as Model G, with DPDT switch for balanced or unbalanced line. **Thread:** 13/16" x 27; eight-terminal strip in base adapts to any circuit. List Price **$29.95**

Model E-1 Desk Stand — Finish: Gray Hammerlin base, bright chrome trim. Has ⅝"-27 thread. **Overall height:** 5½". List Price **$8.25**



MODEL LT-6 LINE-MATCHING TRANSFORMER

Matches low impedance microphone to high impedance amplifier input; and vice versa. Permits long length of cable on the low impedance side of the transformer. Eliminates high frequency loss and objectionable hum pickup, completely shielded. **Input:** 30-50 or 150-250 ohms. **Output:** 40,000 ohms or higher. **Response:** ±1 db, 20-20,000 Hz. Supplied with Amphenol 91-852 and 75-MCIF end connectors. **Size:** ⅞" dia.

Model LT-6 Transformer — List Price **$17.50**

REPLACEMENT MICROPHONE CARTRIDGES

Model	Use With Astatic Mike Model	List
MC 151	CX, CX-1, 200, 241, JT-30, JT-30-F, JT-40, T-3	$7.00
MC 127	CC, CC-1, VC, VC-1, JT-30-C, JT-30-CF, JT-40-C, T-3C	7.00
MC 451	10M5, 10M5A, 11M5	8.75
MC 563	DN-50, DN-500, DN-HZ, DN-MZ, 10-D	16.50
MC 320	D-104	9.50
MC 321	D-104-C	7.00
MC 558*	332	7.00
MC 559-2*	331	7.00
MC 560*	335H, 335L	7.75

* Mikes without screw-fastened caps should be returned to factory for repairs.

ASTATIC CORPORATION

© United Technical Publications

Trade Discount Applies To List Prices Only

ATLAS SOUND

ATLAS SOUND PAGING AND TALK BACK SPEAKERS

HU and **CJ** models are equipped with the "Versalock" mounting bracket. Rigid, rugged, dependable bracket is completely adjustable on both a horizontal and vertical plane, affording "pin-point" directivity and simple secure mounting. HU horns are constructed of aluminum, while the CJ horns are molded of indestructible Fiberglass. Rugged diecastings and tough steel parts add strength. All are 100% weatherproof.



HU-12N

HU-12N Small in size, low in cost. Excellent for low power paging and talk-back systems where limited coverage is required.



HU-15N
HU-24N

HU-15N The most popular all-purpose, trouble-free speaker of its type and size.

HU-24N Similar to HU-15N. Larger horn improves low frequency response, increases over-all efficiency. For paging and talk-back systems that are also required to reproduce music.

CJ-14N Wide angle speaker with rectangular horn opening for broad sound dispersion in horizontal plane while maintaining good vertical coverage.

EC-10 Lowest priced American-made speaker designed specially for low power systems requiring limited coverage. Gives improved results and high efficiency for intercom and other applications formerly using cone speakers.

Horn sections molded of new tough, all-weather, acrylic plastic. Handsome beige-brown color combination blends with any decor. Tough steel bracket is adjustable and makes mounting simple and secure. Unmatched where size, weight, appearance and high efficiency combined with low cost are factors.

CJ-30N Similar to CJ-14N, except power handling capacity is increased. Larger, wide angle horn improves low frequency response.



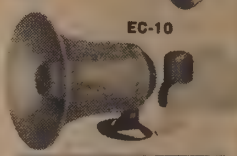
CJ-14N
CJ-30N

TP-15N
TP-24N



TP-15N One high efficiency driver unit does the work of two for low cost bi-directional coverage in long corridors and outdoors. Universal bracket mounts dual horns at a 10° angle down or out from wall surface or pole.

TP-24N Same as TP-15N but equipped with oversized horns for improved low frequency response. Excellent for bi-directional paging locations required to reproduce music.



EC-10



REVOLUTIONARY NEW ATLAS SOUND MOUNTING BRACKET! For quick, convenient, durable strapping of paging, public address and new column speakers to I-Beams and pillars. Incorporates "Versalock" features for 3-way horizontal and vertical adjustment plus new strapping feature. Easy to use. You just insert the banding through the bracket, around the pillar or I-beam and snip off with a cutting tool. Banding tool and materials available for easy mounting.

MODEL	POWER	IMPEDANCE (specify)	FREQUENCY cps	SOUND LEVEL#	DISPERSION	DIMENSIONS	SHIPPING WEIGHT	NET PRICE
EC-10	6 Watts	8 or 45 ohms	400-13,000	112 db	125°	6¼" Bell dia. 6⅜" deep	2½ lbs.	8Ω$17.40 45Ω$18.90
HU-12N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	120°	7½" Bell dia. 7¼" deep	3½ lbs.	8Ω$20.70 45Ω$22.20
HU-15N	25 Watts	8 or 45 ohms	250-13,000	123 db	100°	9¾" Bell dia. 8¾" deep	6 lbs.	8Ω$25.20 45Ω$26.70
HU-24N	25 Watts	8 ohms	200-13,000	124 db	95°	11¼" Bell dia. 12" deep	6 lbs.	8Ω$28.50
CJ-14N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	120° x 60°	5½" high 9½" wide 8" deep	3½ lbs.	8Ω$23.85 45Ω$25.35
CJ-30N	25 Watts	8 ohms	250-13,000	121 db	120° x 60°	6" high 14" wide 11¼" deep	7 lbs.	8Ω$30.60
TP-15N	25 Watts	8 or 45 ohms	250-13,000	120 db Each horn	100° Each horn	9¾" Bell dia. 16½" long	7½ lbs.	8Ω$41.25 45Ω$42.75
TP-24N	25 Watts	8 ohms	200-13,000	121 db Each horn	95° Each horn	11¼" Bell dia. 23" long	8 lbs.	8Ω$45.75
DU-12N	7.5 Watts	8 ohms	350-13,000	115 db	110°	7" Bell dia. 14" long	4 lbs.	8Ω$27.75
DC-5	6 Watts	8 ohms	120-7,000	105 db	—	7" Bell dia. 14" long	3 lbs.	8Ω$17.85

Measured at 4 ft. on axis rated power.

ATLAS SOUND Columair SOUND COLUMNS

(with exclusive EASY-MOUNT Universal Bracket)

In-line array of 6 frequency adjusted cone speakers. Configuration produces a sound pattern having a broad horizontal and narrow vertical distribution. Uniform sound intensity even at varying distances from the sound column. EASY-MOUNT swivel bracket permits optimum adjustment of critical beam pattern.



C-66

C-46

SPECIFICATIONS	C-46	C-66	WR-7
Speaker Array	Six, Four-Inch	Six, Six-Inch	
Frequency Range	200-10,000 Hz	125-10,000 Hz	70-15,000 Hz
Power Capacity	20 Watts	40 Watts	15 Watts
Vert. Distribution Angle	26-36 Degrees	22-32 Degrees	
Hor. Distribution Angle	120-160 Degrees	120-160 Degrees	
Impedance (Total)	16 Ohms	16 ohms	8 ohms
Dimensions	28" x 5¼" x 5"	42" x 7¾" x 6"	18" x 8" x 5½"
Net Weight	8¼ Lbs.	18½ Lbs.	8 lbs.
Net Price	$46.50	$69.30	$25.95

Model MK-1 Columair stand attachment kit .....**Net Price $ 1.83**
Model SS-4 Speaker stand for Columair .....**Net Price $18.33**
Model TK-1 Transformer and Switch Assembly. Selectormatic kit for 25V-70V and variable impedance requirements. Transformer, switch and all hardware included. **Net Price $10.50**

SPECIFICATIONS		C-80	C-120
Column Size	Height	45½"	57½"
	Width	8¾"	11½"
	Depth	6⅜"	7½"
Speaker	Size	6"	8"
	Number	6	6
Power Rating		80 Watts	120 Watts
Dispersion —	Vertical	36°	30°
	Horizontal	120°	120°
Impedance		16 Ohms	16 Ohms
Frequency Range Hz		100-15,000	70-15,000
Weight		28 lbs.	34 lbs.
*Sound Pressure		121 db.	123 db.
Net Price		$94.50	$129.00

*4' on axis, re .0002 Dynes/CM², at rated power.

SPECIFICATIONS		PL-150	PL-250
Size —	Height	57½"	64"
	Width	11½"	14½" Max.**
	Depth	7½"	11" Max.**
Speaker	Size	8"*	8"*
	Number	6	6
Music Power		150 Watts	250 Watts
Impedance		16 Ohms	16 Ohms
Frequency Range		50-15,000 Hz	50-19,000 Hz
Weight		35 lbs.	43 lbs.
Net Price		$142 50	$213.75

*This is an 8" power range speaker.
**Basic column size 57½" x 11½" x 7½".

ATLAS SOUND HIGH POWER ELECTRONIC SIREN AND MOBILE SPEAKERS



HPC-75

HPC-75 For electronic siren applications and high power mobile power address use. Low silhouette public glass, cobra-flare horn gives widedispersion. Rigid, one-piece cast bracket for fail-safe mounting. Weatherproof. Power: 75 watts. Impedance: 16 ohms. Response: 225-8,000 Hz. Dispersion: 120° x 160°. Dimensions 6" high x 14" wide x 11¼" deep. Shipping wt: 8½ lbs. **Net Price $68.10**



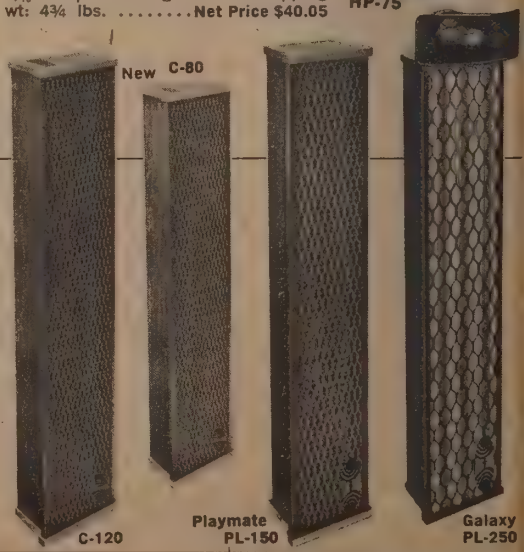
HPR-75

HPR-75 Same as HPC-75 except with round horn and 100° dispersion. Dimensions: 9" bell diameter, 8¾" deep. Wt: 7 lbs. .....**Net Price $60.60**



HP-75

HP-75 High power public address and electronic siren driver unit only. 1⅜"-18 driver threads for use on any industry-standard horn. Power: 75 watts. Impedance: 16 ohms. Response: 125-8,000 Hz Dimensions: 4⅜" diameter, 3⅛" deep including threads. Shipping wt: 4¾ lbs. .....**Net Price $40.05**



New C-80

C-120

Playmate PL-150

Galaxy PL-250

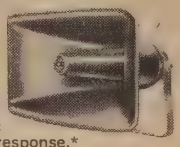
ATLAS SOUND,
Division of American Trading and Production Corporation,
In Canada: Atlas Radio Corp.
ATLAS SOUND . . . YOU CAN HEAR THE DIFFERENCE

© United Technical Publications

ATLAS SOUND

ATLAS SOUND COBRA-JECTOR

Model CJ-44 All Purpose Wide Angle Projector—FibreGlass Construction Complete with Super Power Driver—



All weather speaker with "Acousti-Matched" built in driver unit. The projector and reproducer are in single package, matched design resulting in maximum conversion efficiency. (Power input in watts versus sound pressure output.) The CJ-44 controlled response has been carefully restricted within frequency limits most useful in PA and high level music reproduction. Power: 40 watts continuous, 60 watts equalized response.* Impedance: 16 ohms. Response: 115-12,000 Hz. Dispersion: 120° x 60°. Dimensions: 23" wide, 13" high, 19" deep. Shipping wt. 19 lbs. **Net Price $61.20**

ATLAS SOUND DR PROJECTORS

NON-RESONANT—STURDY—WEATHERPROOF

Without acoustical or mechanical equal. All acoustical sound paths are clean and uniform without steps or pockets to disturb normal function of the horn. Critical design features eliminate conditions of turbulence, frequency cancellation and resultant signal distortion.

All are equipped with a heavy duty "U" bracket, securely fastened to a main body casting. Will not fail when subjected to extreme conditions of stress, strain, vibration.



SPECIFICATIONS	DR-54	DR-42	DR-32
Air Column	4½ ft.	3½ ft.	2½ ft.
Low Frequency	115 Hz	140 Hz	190 Hz
Bell Diameter	26 inches	21 inches	16½ inches
Length (less driver)	19 inches	16 inches	12½ inches
Shipping Weight	23 lbs.	14 lbs.	10 lbs.
Net Price	$40.20	$29.10	$24.75

ATLAS SOUND AP PROFESSIONAL SPEAKERS

BUILT-IN TRANSFORMERS WATTS/IMPEDANCE SWITCH SCREW-TO-LINE TERMINALS



A screwdriver is the only tool required to mount, connect and adjust new AP-30 Series with exclusive ATLAS SOUND VARI-TAP CONTROL/CONNECT CENTER. Screw line terminals, built-in transformers and externally adjustable watts/impedance switch save time and costs of installation. Silver plated switch contacts, varnish impregnated transformers and AP-30 driver units are sealed in against water, dirt and corrosion. Terminal/switch cover plate is cable-strain relief and omni-directional mounting bracket adjusts in three planes.

New driver unit provides high efficiency needed with low wattage amplifiers, rugged 30 watt power handling when needed for noise penetration and distance coverage. Professional, metal construction with special corrosion-proofing and melamine enamel finish. Voice/coil diaphragm assembly field replaceable without soldering.

ATLAS SOUND BANSHEE

CJ-125 125-watt voice speaker. For vocals that cut right through crowd and instrument amplification noise. Ebony fiberglass horn is practically indestructible. Exclusive easy-off adapter mates it with any mike stand. Exclusive quick-connect receptacle fits standard phone plug—needs no splicing, slicing, soldering or tightening. Response: 100-12,000 Hz. Impedance: 16 ohms. **$78.60**



ATLAS SOUND BABY BANSHEE

CJ-40 40-watt voice speaker. Smaller version of BANSHEE. Response: 140-14,000 Hz. Impedance: 8 ohms. **$39.45**

SPECIFICATIONS	AP-15	AP-15T	AP-30	AP-30T
POWER—Continuous†	15 Watts		30 Watts	
POWER—Equalized††	20 Watts		40 Watts	
IMPEDANCE—Vari-Tap Selector Switch on Transformer Models	8 ohms	5000, 2500 1300, 666 333, 89, 45 ohms	8 ohms / 45 ohms	4000, 2000 1000, 666, 333, 167 ohms
POWER TAPS—Vari-Tap Selector Switch on Transformer Models		70V Line Watts .9, 1.8, 3.8, 7.5, 15.0. 25V Line Watts .48, .94, 1.8, 7.0, 15.0		70V Line Watts 1.2, 2.5, 5, 7.5, 15, 30
FREQUENCY—Hz	275-14,000		225-14,000	
SOUND LEVEL	121 db measured 4' on axis at 15 watts input		125 db measured 4' on axis at 30 watts input	
DISPERSION	110°		100°	
DIMENSIONS	8" W x 8" H x 9" D		10" W x 9½" H x 10½" D	
SHIPPING WEIGHT	4½ lbs.	5 lbs.		6½ lbs.
NET PRICE	$22.35	$30.60	$27.30 / $28.80	$35.40

SPECIFICATIONS	AP-30T-25	APC-30T	APT-34T	PD-30T
POWER—Continuous†	30 Watts			30 Watts
POWER—Equalized††	40 Watts			40 Watts
IMPEDANCE—Vari-Tap Selector Switch on Transformer Models	500, 250 125, 83, 42, 21 ohms	2500, 1300, 666, 333, 167, 89, 45 ohms		
POWER TAPS—Vari-Tap Selector Switch on Transformer Models	25V Line Watts 1.2, 2.5, 5, 7.5, 15, 30	70V Line Watts: 1.8, 3.7, 7.5, 15, 30 25V Line Watts 1.8, 3.7, 7.5, 15		
FREQUENCY—Hz	225-14,000	250-14,000	225-14,000	120-14,000
SOUND LEVEL	125 db measured 4' on axis at 30 watts input	123 db	121 db each horn	126 db**
DISPERSION	100°	120° x 60°	100° Each Horn	Driver Only
DIMENSIONS	10" W x 9½" H x 10½" D	6"Hx14"W x12¾"D	16½"lg. x9¾" Bell Dia.	4¾" Dia. x4⅞"D
SHIPPING WEIGHT	6½ lbs.	8¾ lbs.	9 lbs.	4¾ lbs.
NET PRICE	$35.40	$38.40	$49.80	$26.35

†Integrated speech and music, full range. **Measured on axis at 30 watts input
††Limited to frequencies above horn cutoff. with DR-42 horn.

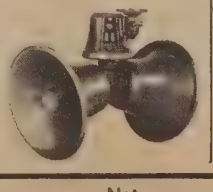
Series AP-30: FREQUENCY RESPONSE: 225-14,000 Hz. SOUND LEVEL 125 db. DISPERSION: 100°. DIMENSIONS: 10" wide, 9½" high, 10½" deep.
APC-30T 25V LINE WATTS: 1.8, 3.7, 7.5, 15. FREQUENCY RESPONSE: 250-14,000 Hz. SOUND LEVEL: 126 db*. DISPERSION: 120° x 60°. DIMENSIONS: 6" high x 14" wide x 12¾" deep.

NEW ATLAS SOUND APT-34T TWIN-HORN SPEAKER

APT-34T Bi-directional addition to the AP series incorporating the PD-30T 'driver'. Includes all the exclusive, Professional Series design features and screwdriver adjustable watts/impedance switch. Built-in combination 70.7/25 volt line transformer has 45 ohm intercom tap.

BX-1 Armored cable adapter for AP-30
Net Price $1.83

BX-2 Armored cable adapter for AP-15
Net Price $1.83



ATLAS SOUND HEAVY DUTY SPEAKERS



SPB-1 Industrial duty speaker with heavy gauge bell, protective screen and fully adjustable Versalock bracket. Weatherproof. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 Hz. Dispersion: 110°. Dimensions: 7¼" bell diameter, 6⅛" deep. Shipping wt. 5½ lbs.
Net Price $29.85

SPB-3C Ruggedized, weatherproof speaker with cast aluminum conduit/armored cable box for industrial service. Combination bulkhead mounting plate and adjustable U bracket adapts to any surface. Power: 25 watts. Impedance: 16 ohms. Response: 300-13,000 Hz. Dispersion: 130°. Dimensions: 6-11/16" wide, 9⅛" high, 4¾" deep. Shipping wt. 6½ lbs. ..... **Net Price $40.80**

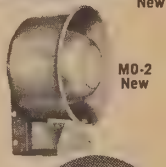


ATLAS SOUND MOBILE SPEAKERS



MO-1 Weatherproof speaker with special, rigid, one-piece cast bracket for fail-safe use on vehicles. Concealed wiring and special, one-piece horn discourage tampering. High efficiency for use with mobile radio transceivers. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 Hz. Dispersion: 120°. Dimensions: 7¼" bell diameter, 6⅜" deep. Shipping wt. 4½ lbs. ..... **Net Price $29.40**

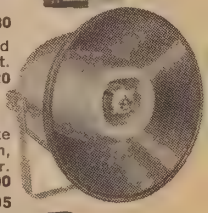
MO-2 Compact mobile communications speaker with welded steel, bracket for concealed, limited space use in vehicles. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 Hz. Dispersion: 130°. Dimensions: 6⅝" wide, 8" high, 4¾" deep. Shipping wt. 5 lbs. ..... **Net Price $29.10**



ATLAS SOUND ALL WEATHER HI-FI SPEAKERS

WT-6 Weatherproof, high fidelity type two-way system. Attractive beige color for indoor and outdoor use wherever wide range, clean music reproduction is important. Adjustable bracket. Power: 15 watts. Impedance: 8 ohms. Response: 100-15,000 Hz. Dispersion: 120°. Dimensions: 15" bell diameter, 12" deep. Shipping wt. 16 lbs.
Net price $43.80

Model W-6 identical to WT-6, but less tweeter. Extended range to 8,000 Hz with special cone speaker. Shipping wt. 14 lbs. ..... **Net Price $34.20**



ATLAS SOUND BI-DIRECTIONAL BAFFLES

TW-8 Grill openings on both sides gives coverage in opposite directions with any 8" cone speaker. Decorative beige finish, 9" diameter and 5" thin, adjustable bracket. Less speaker. Shipping wt. 3½ lbs. ..... **Net Price $9.00**

TW-10 Same as TW-8, but with speaker ... **Net Price $13.05**

TW-9 with 5" x 6" bracket. Less speaker. Shipping wt. 4 lbs. **Net Price $11.10**

TW-11 Same as TW-9, but with speaker ... **Net Price $15.15**

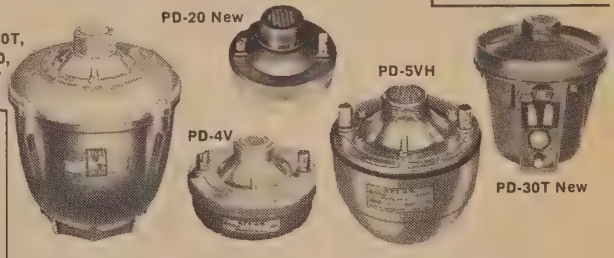




ATLAS SOUND DRIVER UNITS

SUPER POWER—SUPER EFFICIENT

New designs, materials and double weather sealing give the ultimate in response, efficency and trouble-free, reliable service. Models PD-5VH, PD-5VT, PD-60 and PD-60T feature self-aligning, field replaceable diaphragm assemblies. Excellent for replacement in any trumpet with standard 1⅜" x 18" driver threads.



Specifications	PD-60T	PD-5VT	PD-5VH	PD-4V	PD-20	PD-30T
Power (continuous)*	60 watts	40 watts	40 watts	30 watts	20 watts	30 watts
Power (equalized response)†	100 watts	60 watts	60 watts	50 watts	25 watts	40 watts
Voice Coil Impedance	16 ohms	16 ohms	16 ohms	16 ohms	16 ohms	Built-in Transformer
Sound Intensity#	136 db	131 db	131 db	128 db	125 db	126 db
Frequency Response Hz	70-12,000	80-12,000	80-12,000	85-7,000	120-7,000	120-14,000
Transformer Imp. ohms	16, 85, 125, 250, 500, 1,000 2,000	16, 125, 250, 500, 1000, 2000				2500, 1300, 666, 333, 167, 89, 45
Trans. Power Taps. Watts 70 Volt Line	60, 40, 20, 10, 5, 2.5	40, 20, 10, 5, 2.5				1.8, 3.7, 7.5, 15, 30
Shipping Weight	8 lbs.	7 lbs.	5 lbs.	4 lbs.	2¾ lbs.	4¾ lbs.
Net Price	$48.00	$37.50	$28.70	$22.05	$17.25	$28.35

PD-60 Same as PD-60T Less Transformer $39.00 PD-30T 25V line watts: 1.8, 3.7, 7.5, 15.
*Integrated speech and music full range. †Input range limited to frequencies above horn cut off.
#Measured 4 ft. on axis 6 ft. air column with integrated full power input.

ATLAS SOUND,
Division of American Trading and Production Corporation,
In Canada: Atlas Radio Corp.
ATLAS SOUND . . . YOU CAN HEAR THE DIFFERENCE

ATLAS SOUND

ATLAS SOUND MICROPHONE DESK STANDS AND ACCESSORIES

DS-4 Highly polished molded phenolic base is light beige in color with chrome upright tube. The smooth base will not scratch or mar table tops. Upright tube can be easily removed from base. Base diameter 5", height of tube 4", thread size 5/8"-27. Shipping weight ½ lb. ..... **Net Price $1.92**

DS-5 Non-Adjustable Desk Stand Base cast iron, finished in black wrinkle. Base diameter 6", tube height 4" chrome finish. Shipping Weight 2 lbs. **Net Price $2.84**

DS-7 Same as above but equipped with upright adjustable from 8 to 13 inches. Shipping Weight 3 lbs. ..... **Net Price $4.59**

DS-10 "Stream Liner" Desk Stand. Features "Rear Cable Exit". Bright chrome trim. Rubber bumpers. Shipping Weight 1½ lbs. ..... **Net Price $5.00**

TS-8 Adjustable Banquet Stand. Low silhouette base. Upright adjustable from 14½" to 26". In full super-chrome. Shipping Weight 5½ lbs. .. **Net Price $8.51**

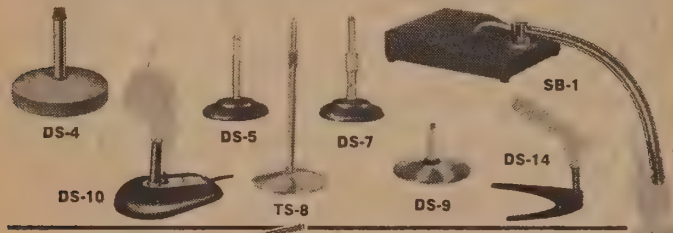
DS-9 Professional Desk Stand. Handsome appearance of modern, low silhouette base and tapered upright, both finished in satin chrome, complements the finest microphones. Stable 8" diameter base protects against accidental microphone damage. 4" upright tube. 5 felt base pads (4 lbs.) **Net Price $6.66**

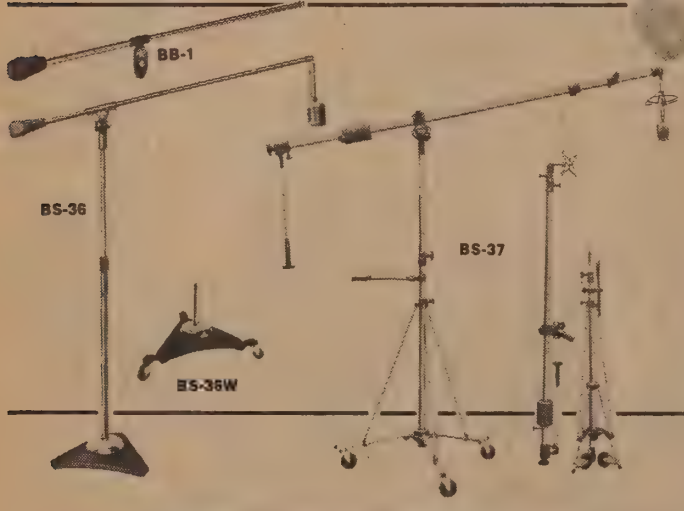
DS-14 Desk stand is functionally and aesthetically suited to slim, elongated microphones. Black wrinkle finished base with protective felt pads and 3" polished chrome upright tube with 5/8"-27 thread. (2 lbs.) .... **Net Price $3.50**

SB-1 Dispatcher and Switchboard Mike Support. 12 inch long, flexible, chrome plated "goose neck" arm mounted on spring loaded swivel, can be swung aside when not in use. Feed thru hole located at the mike end of the "goose neck" so that mike cable can be concealed within flexible arm. Base casting is rear loaded so the base will not tip forward. Finish—Black wrinkle. Shipping Weight 13 lbs. ..... **Net Price $13.83**

SW-1 Gyromatic Swivel permits microphone to be adjusted to any angle. Locks in any position. Die cast finished in chrome ..... **Net Price $4.17**

LO-2 "Lock-On" accessory for instantaneous microphone attachment or removal without threading on or off any stand or support. One half of LO-2 remains fastened to the microphone, the other half stays on the stand. Excellent where microphones must often be removed. Positive lock holds microphone safely in hanging positions on booms, ceiling supports, stage battens. Chrome finish ..... **Net Price $3.00**





SO-1 "Snap-On" accessory. Identical to LO-2 but less locking feature. Spring loaded, ball bearing design for secure, safe microphone attachment and quick disconnect on any upright floor stand ..... **Net Price $2.51**

FS-1 Foot Switch for press-to-talk paging applications using any microphone with a single ended input. May also be hand operated on desks and switchboards. Easily rewired for press-to-open circuit application. .. **Net Price $10.50**

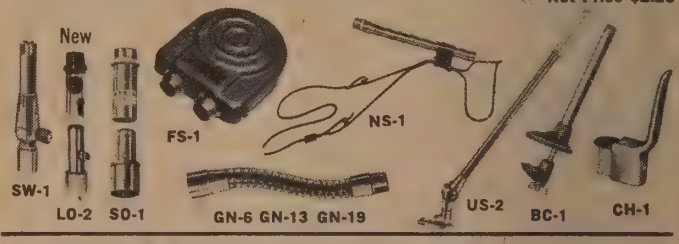
NS-1 "The Chesty" Neck Supported Mike Holder. Permits quick, simple "three way" adjustment. Mike is always in suitably "close talking" position reducing acoustic feedback problems. Wide comfortable chest support prevents rolling due to sudden movement. Cool and lightweight. 6 oz. **Net Price $5.00**

GN "Goose Necks" can be attached to any microphone stand or fixture; ends have 5/8"-27 male and female threads—all finished in bright chrome, model numeral indicates overall length of "goose neck" in inches. **Net Price GN-6 $1.67, GN-13 $2.25, GN-19 $3.17**

US-2 Multi-Purpose microphone support. For use with language laboratories, dispatcher desks, telephone switchboards, pulpits, etc. Boom arm vertical adjustment and rotation motion is spring loaded and will "float" the mike in desired position without requiring a locking adjustment. Microphone cable may be concealed within boom arm and will feed thru swivel assembly and base flange. A small opening is provided at microphone end of the boom for cable entry. Finished in "super-chrome". Boom arm length 12¾"; vertical adjustment of boom 180°; rotation 360°; base length 2⅝" ... **Net Price $7.50**

BC-1 Bracket Clamp. Can be used with a boom arm, goose neck, etc. Chrome tube 6" long. Clamp can be removed and top flange screwed or bolted in position. 5/8"-27 thread ..... **Net Price $3.17**

CH-1 Cable Hanger. Fits all tubes ⅞" to 1¼" diameter. Mike cable can be quickly coiled and looped over the cable hanger when moving, storing or transporting the mike and stand. Finished in polished chromium. **Net Price $2.25**



ATLAS SOUND STANDS

BB-1 "Baby Boom" Attachment. Versatile device can be attached to any floor stand. All swivel parts are precision die castings for smooth operation and secure positioning. Boom 31"—Chrome plated 5/8"-27 thread. Shipping weight 3½ lbs ..... **Net Price $6 92**

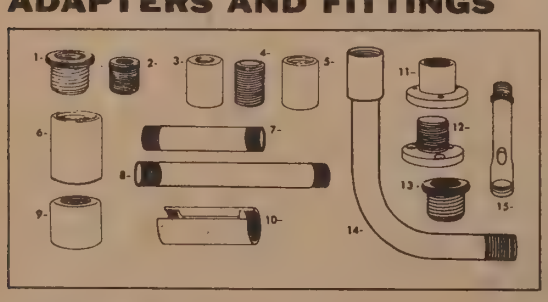
BS-36 Professional Boom Stand with "Safety Air Lock Cushion" offers all advantages of "Floating Action" plus secure and dependable locking adjustment. Air Lock built into vertical section prevents any accidental or sudden slippage of the upright section. A gyromatic swivel joint is provided at the microphone end. Base casting equipped with shock absorbent chrome plated, "domes of silence". Boom length 62" (extension may be added). Vertical extension from 48" to 72".

All tubular sections super-chrome plated. Base finished in polished chrome and black wrinkle. Shipping weight 36 lbs. ..... **Net Price $55.83**

BS-36W Mobile Model. Identical to BS-36 except that base is supplied with ball bearing swivel casters, permitting entire stand to be wheeled to various positions in the studio. Shipping weight 40 lbs. ..... **Net Price $63.33**

BS-37 Porto Boom. For most exacting TV studio, sound motion picture application, etc., ideal for portable service. Fully collapsible to fit automobiles. Air check prevents any accidental collapse of the upright. Upright retracted 5¼ ft., extended 9 ft. Boom retracted 7 ft., extended 18 ft. All tubular sections aluminum processed in "Alumilite". Counter weight cast iron with bronze locking mechanism. Base casters 4" swivel type. Base spread 42" on radius. Shipping weight 73 lbs. ..... **Net Price $600.00**

ATLAS SOUND MICROPHONE ADAPTERS AND FITTINGS



Model	Description	Net Price
AD- 1	5/8"-27 female to ½" pipe thread male (RCA Adapter)	$ .80
AD- 2	⅛" pipe female to 5/8"-27 male	.57
AD- 3	⅛" pipe female to 5/8"-27 female	.63
AD- 4	¾" long, 5/8"-27 male running thread	.47
AD- 5	5/8"-27 female to 5/8"-27 female, coupling	.63
AD- 6	⅞"-27 female to ⅞"-27 female, coupling	1.14
AD- 7	3" long tube 5/8"-27 male each end	.78
AD- 8	6" long tube 5/8"-27 male each end	.80
AD- 9	⅞"-27 female to 5/8"-27 female	.86
AD-10	5/8"-24 female to 5/8"-27 female (W. E. Adapter)	1.25
AD-11	Flange, 5/8"-27 female. Base Diameter 1¾"	.86
AD-12	Flange, 5/8"-27 male. Base holes on 1¼" mounting centers	.86
AD-13	⅞"-27 male to 5/8"-27 female	.86
AD-14	Right angle bent tube: 5/8"-27 male and female each end	1.34
AD-15	Cable "Feed-Thru" adapter: 5/8"-27 male and female each end	1.25
AD-16	Stand Adaptor: ⅞" clearance hole. 5/8"-27 female thread	3.26
AD-17	½" Pipe Thread Adaptor: Mates with ½" male pipe thread	1.83

Note: Thread sizes specified as ½" pipe is I.P.S. (Electrical fitting) Measures Approx. ⅜" dia. All adapters chrome plated.

ATLAS SOUND,
Division of American Trading and Production Corporation,
In Canada: Atlas Radio Corp.
ATLAS SOUND . . . YOU CAN HEAR THE DIFFERENCE

© United Technical Publications

ATLAS SOUND

ATLAS SOUND MICROPHONE STANDS AND ACCESSORIES

New, low profile bases with modern, slim silhouettes are less conspicuous and more functional. Improved designs concentrate base weight at the outer edge for maximum stability. Additional anti-tip bumpers are located between self-leveling, shock-absorbing pads which protect desk, table and floor.

Superchrome plated finishes are lifetime wear and rust resistant. All models have standard 5/8"-27 threads for microphone attachment.

MS-10C Popular, budget-priced floor stand with sturdy, black wrinkle base with stability for average weight microphones.

LOW PROFILE BASES

MS-4 Three tubes with two clutches adjust from standard height for adults to the special low of 25" for children and seated performers. Low silhouette black base.

MS-11C All chrome design with low profile base and more weight for greater stability.

MS-14G Identical to MS-11C, but all gold finished.

MS-11S Automatic version of MS-11C with unique, automatic clutch for effortless, instantaneous changes in height. Adjusted by simply grasping the decorative black control sleeve and raising or lowering the microphone. Removing hand automatically locks the position.

MS-12C Same as MS-11C, with black base.

MS-12S Same as MS-11S with black base.

MS-20 Heavy duty stand for heavier microphones. Larger 12", low contour black wrinkle base has more anti-tip weight. Oversize 1⅛" tube assembly includes adapter for 5/8"-27 threaded microphones. Will support small speakers.

MS-25 Professional floor stand. Integral air suspension system counter-balances microphone weight to prevent out of control crashdown. Heavy duty, black and chrome base contacts floor on large, 17" circle. Triangular shape and concave sides make it easy to handle. Oversize 1⅛" tube combination includes 5/8"-27 thread adapter.

CS-1 Tripod base infinitely adjustable from 10" to 42" circle flat on floor. Reverse-collapses to compact 23" for storage. Useful for clustering microphones and supporting small speakers.

CS-52 Handsome, three-legged floor stand. Large, 15" black base stability. Packaged in one, reshippable carton.

CS-42 Similar to CS-52 in design, except that base is readily collapsible for portable use or convenient storage. Packaged in one, reshippable carton.

Model	Type	Height	Base	Tube	Weight	Net Price
MS-10C	Economy	35" to 63"	10" Gray	Chrome	10 lbs.	$8.67
MS-4	Wide range	25" to 65"	10" Gray	Chrome	10 lbs.	13.01
MS-11C	General use	34" to 62"	10" Chrome	Chrome	13 lbs.	11.16
MS-14G	Gold Special	34" to 62"	10" Gold	Gold	12 lbs.	14.34
MS-11S	Auto-locking	39" to 62"	10" Chrome	Chrome	13 lbs.	19.50
MS-12C	General use	34" to 62"	10" Gray	Chrome	12 lbs.	9.17
MS-12S	Auto-locking	39" to 62"	10" Gray	Chrome	12 lbs.	17.84
MS-20	Heavy duty	37" to 66"	12" Gray	Chrome	15 lbs.	14.00
MS-25	Professional	38" to 67"	17" Gray	Chrome	22 lbs.	22.67
CS-1A	Collapsible	23" to 62"	Cadmium	Chrome	5 lbs.	17.00
CS-52	Three-legged	34" to 62"	15" Gray	Chrome	9 lbs.	9.84
CS-42	Portable	34" to 62"	16" Gray	Chrome	9 lbs.	11.16

CS Type Demountable Microphone Floor Stands—quick and simple "Come Apart" base design. Stand within the amplifier or speaker carrying case. Legs are chrome plated, tipped with skid-proof rubber shock absorbent bumpers.

Model	Finish	Height Adj.	Shipping Weight	Net Price
CS-32	Full Chrome	36" to 64"	5 lbs.	$10.34
CS-33	Full Chrome	26" to 64"	4 lbs.	$12.09

Each stand is individually packed complete in a single carton. Model CS-33 can be collapsed to a total length of only 22½".

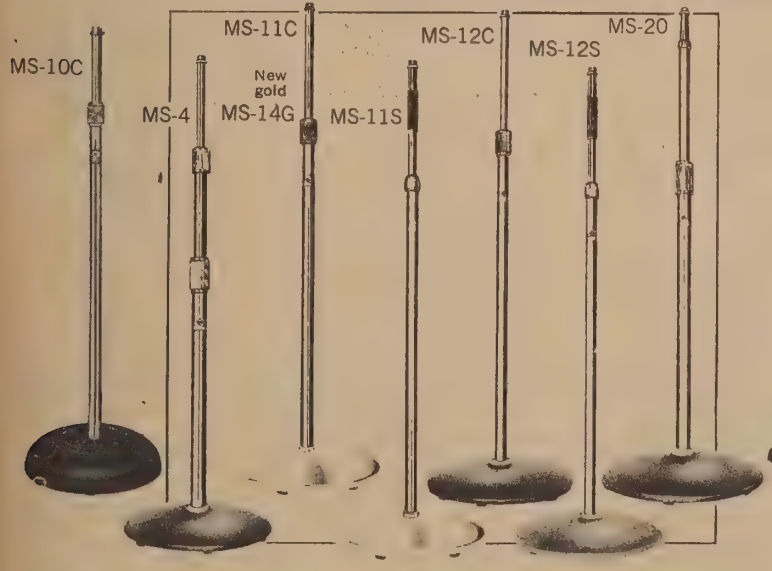
NEW! ATLAS SOUND PORTO-STAND

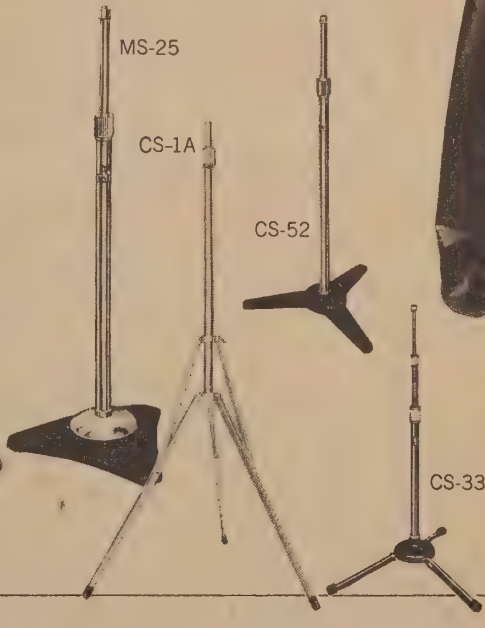
The first of its kind and only Atlas makes it. Porto-Stand is assembled only once, then connects and disconnects fast. The mike floor stand, baby boom, cable hanger and two lock-on attachments are easily packed and carried in a rugged vinyl case. Available with Model MS-11C or MS-12C stands.

Model PS11C ..... **Net Price $31.17**
Model PS12C ..... **Net Price $29.16**



NEW LOW PROFILE BASES





ATLAS SOUND HEAVY DUTY SPEAKERS

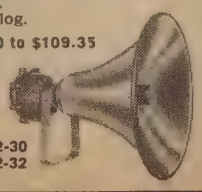
ATLAS SOUND EXPLOSION-PROOF HIGH EFFICIENCY SPEAKERS

Listed by Underwriters Laboratories for use in hazardous locations where explosive atmospheres exist
Highly efficient due to exclusive design of explosion barrier. CLASS 1 speakers for use in atmospheres containing ethyl ether, cyclopropane, gasoline, naphtha, benzine, butane, acetone, lacquer, natural gas, etc. CLASS 2 can be used in Class 1 conditions as well as in atmospheres containing dust of magnesium, coal, coke, flour, starch, grain, etc.
Complete specifications in ATLAS SOUND catalog.

Net Prices from $90.00 to $109.35



HLE-1-30
HLE-1-32



HLE-2-30
HLE-2-32

NEW! ATLAS SOUND SECTORAL HORNS



WCH-100 Extremely rugged cast aluminum sectoral horn for difficult environmental or atmospheric locations. Ideal for stadiums, factories, mills, industrial yards, etc. For use with any Atlas Sound driver or unit having 1⅜"-18 thread. Unique mounting bracket permits adjustment in two planes. Dispersion: 120° x 50°. Dimensions: 18" high x 23" wide x 15" deep. Weight 17 lbs.

WCH-200 Same as WCH-100 except designed to accommodate flanged mounted drivers.

WCH-100 ..... **Net Price $72.00**
WCH-200 ..... **Net Price $73.80**

ATLAS SOUND,
Division of American Trading and Production Corporation,
In Canada: Atlas Radio Corp.
ATLAS SOUND . . . YOU CAN HEAR THE DIFFERENCE

Electro-Voice®

CARDIOID UNIDIRECTIONAL PROFESSIONAL BROADCAST, P. A., AND RECORDING MICROPHONES



RE15: Highest quality super cardioid "Continuously Variable-D"® (maximum off-axis rejection at 150° from front).† Most uniform polar pattern at all frequencies ever offered in a cardioid microphone. Integral bass compensation switch. Response: 80 to 15,000 Hz. Acceptance angle: 150°. Impedance: 150 ohms. Output level: −56 dB. Finish: Fawn beige Micomatte. Net Each $159.00
APPLICATIONS: On stand, hand-held, or portable boom use/Fishpoled for dialogue in motion picture recording/Individual instrument (or section) pickup for orchestral recording/In professional public address controls effects of resonance and reverberation.

RE10: Similar in design and construction to RE15, but for applications with slightly less rigid performance tolerances. Response: 80 to 13,000 Hz. Impedance: Lo-Z. Output: −55 dB. Net Each $93.60

RE16: Similar to RE15 except has integral blast and pop filter around head. For close-up vocal use on stand or hand-held. Virtually eliminates pickup of breath noises. Strong metal screen prevents damage. Specs same as RE15. Net . . . $165.00

RE11: Similar to RE10 except with integral blast and pop filter around head. Virtually eliminates breath noises when used for close-up vocals. Strong metal protective screen around filter. Same specifications as RE10. Net $99.60

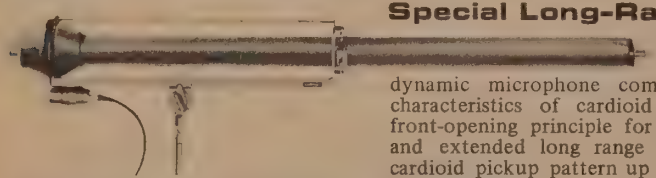
RE20: Wide-Range Cardioid—Rugged, high quality unit. Widest, most uniform response curve of any cardioid dynamic microphone, comparable to high quality condensers. Excellent transient response. Uniform cardioid polar pattern; off-axis response virtually identical to on-axis, maximum rejection. Built-in shock mounting and electrical shielding. Handles extremely high sound input. Stable characteristics. Built-in pop filter, bass tilt-down switch, mounting clamp. Finished in non-reflecting fawn beige Micomatte. Response: 45 to 18,000 Hz. Impedance: 50, 100, 150 ohms (selectable). Output: −57 dB. Net $255.00



NEW
309: Suspension shock mount for RE20. For boom or stand. Net $27.75



Special Long-Range Microphone



643: A highly directional dynamic microphone combining the best characteristics of cardioid and distributed front-opening principle for more specialized and extended long range pickup. Provides cardioid pickup pattern up to 100 Hz and is highly directional over balance of range. Impedance: 50, 150, and 250 ohms selected by changing internal connector pin. Light weight extruded and cast aluminum case with integral shock mount and removable wind filter. Output: −48 dB. Response: 30 to 10,000 Hz. Net Each $1020.00

BOOM MICROPHONES



642: Most used professional quality microphone for boom, floor stand, or special mounting where "on mike" sound at extended working distance is required*. Nominal acceptance angle (for speech and vocals) 80°. Two position low-frequency compensation. Response: 40 to 10,000 Hz. Impedance: 50, 150, 250 ohms. Output level: −48 dB. Finish: Non-reflecting gray. Must be used with 308 or 324. Net Each $255.00
APPLICATIONS: TV studio booms/Sound track recording/Dialogue and vocals/Multiple footlight mounting for theatrical productions/Educational classroom television.

668: "Continuously Variable-D"® microphone designed for boom and fishpole use for broadcast and motion pictures.† Extremely smooth cardioid pattern for maximum reduction of ambient noise and reverberation. Built-in equalizer provides choice of 36 response variations to tune microphone to environment. Acceptance angle: 150°. Frequency response: 40 to 10,000 Hz. Impedance: 50, 150, and 250 ohms selectable at computer panel. Output level: −51 dB. Finish: TV gray. Net Each $297.00
APPLICATIONS: Boom use in TV and on motion picture location/Fishpoled for dialogue in motion picture recording/Professional public address to control effects of auditorium resonance and reverberation.

667A: 668 with six response variations for less demanding applications. Net Each . . $207.00

368: Windscreen for 667A & 668 used outdoors. Also fits over 308 or 309 mount. Net $58.50

324: Boom suspension mount for model 642, will accept windscreen. Net $43.80

308: Suspension shock mount for 642. Net $24.90

326: Windscreen blast filter for 642. Net $30.00

327: Kit includes 324 and 326. Net $69.00

†U.S. Patent No. 3,115,207 *U.S. Patent No. 3,095,084

© United Technical Publications

Electro-Voice®

OMNIDIRECTIONAL PROFESSIONAL BROADCAST, P.A., AND RECORDING MICROPHONES



RE55: Smooth, peak free wide-range response combined with functional styling makes this the most versatile professional quality omnidirectional dynamic ever offered. Response: 40 to 20,000 Hz. Lo-Z. Output level: −55 dB. Finish: Fawn beige Micomatte. Net Each $132.00
APPLICATIONS: Recording symphony orchestra/Close instrument miking/Hand held for audience participation and interview use/On-the-spot news coverage.

RE50: Noiseless Hand & Stand–For vocals, interviewing, instrumental broadcast, and recording. Extremely low susceptibility to mechanical shock, handling, and cord noise, or breath pops due to unique double case design separated by rubber isolation mounting. Non-reflecting fawn beige Micomatte finish. Same ruggedness and electrical characteristics of the 635A. Response: 80 to 13,000 Hz. Output: −55 dB. Impedance: Lo-Z. Net $72.00

635A: Most popular professional quality performer's microphone. Smooth, carefully shaped response yields "flat effect" when used close up. Built-in four-stage pop and breath blast filter. Response: 80 to 13,000 Hz. Lo-Z. Output level: −55 dB. Finish: Fawn beige Micomatte. Net Each $52.80
APPLICATIONS: Stage performance/Wide dynamic range, freedom from proximity effect, assures consistent results regardless of working distance/No windscreen necessary.

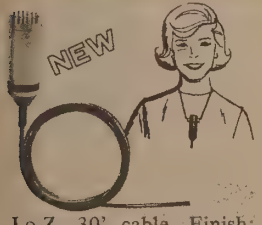
654A: Slim-trim broadcast dynamic, can be used stand mounted, hand held, or as lavalier. Matches all low impedance inputs. Frequency response: 50 to 15,000 Hz. Output level: -57 dB. Non-reflecting gray finish. Net Each $63.00



NEW **RE51:** Unique dynamic microphone allows hands-free announcing. Mike assembly clips on eyeglass frame or headband furnished. Avoids clothing and handling noise; provides clear, unchanging voice pickup and background noise reduction. Transistor amplifier has on/off switch, cough button, battery test lamp, output level adjustment. Battery life virtually as long as shelf life. Response: 80–10,000 Hz. Output: −56 dB (max.). Lo-Z. Nonreflecting black finish. Net $80.40

513: Filter for use with low impedance microphones has switch to match 50, 150, or 250 ohms. When used in line between microphone and preamp, rejects unwanted noise below 100 Hz. Terminals provided for cable connections. Net $63.60

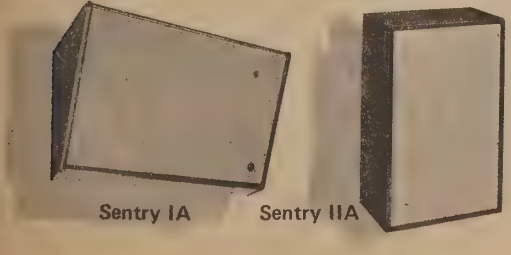




RE85: Quiet Lavalier–extremely free from friction or shock noise. Internal element suspended in compliant rubber; hard, smooth case finish; specially designed, smooth cable isolated from inner capsule. Extremely flat response in chest-lavalier position: 90–10,000 Hz. Output: −61 dB. Omnidirectional. Lo-Z. 30' cable. Finish: Non-reflecting champagne. Length, 2-5/8". Dia., 15/16". Neck cord assembly, tie clasp assembly, belt clip, and zipper pouch furnished. Net $79.80



649B: Smallest dynamic lavalier. Designed for the most demanding professional applications. Response is carefully tailored to compensate lavalier acoustic conditions so resulting signal perfectly matches signal from other microphones. Response: 70 to 10,000 Hz. Impedance: 150 ohms. Output level: −61 dB. Finish: Non-reflecting gray. Net $69.00
APPLICATIONS: Live performances, allows artist greatest freedom of movement/Concealed on person or in set/Consistent "on mike" sound through accurately tailored response.



Studio Monitor Loudspeakers

SENTRY IA: Wall or ceiling mounted system designed specifically for monitor use in recording and broadcast studios. Extremely wide, very flat response. Walnut finished cabinet. Frequency response: 30 to 20,000 Hz. 8 ohms impedance. Permits precise monitoring and use as reference standard. Net Each $180.00

SENTRY IIA: Floor model, similar to Sentry IA above. For free standing floor position. Net Each $180.00

Electro-Voice® MICROPHONES FOR P.A., TAPE RECORDING,

Cardioid Dynamic





674: Radically new design brings truly professional quality to public address, recording, communications, and other general purpose microphone applications. An exclusive Continuously Variable-D® microphone† which assures uniform symmetrical cardioid pattern at all frequencies. Highest discrimination against feedback and unwanted sound. Exclusive three position switch offers controlled low-frequency attenuation to overcome rumble and feedback when microphone is used at a distance. Slim design permits full view of person speaking. Rugged high pressure die-cast construction. Dual Lo-Z and Hi-Z. E-V QC^{tm}-4M cable connector allows easy change of impedance without tools by moving a single pin. Frequency response: 60–15,000 Hz. Output: –57 dB. Satin chrome finish. Net $57.00

APPLICATIONS: Public address/Base station communications/Quality tape recording in the home and in schools.

674A: Non-reflecting gray finish. Shipped wired for Lo-Z. Net . . . $57.00

674G: Gold finish. Net $60.00

674P: 674 with phone plug at end of cable. Net $58.80

676: Similar to 674, without mounting stud and on/off switch. For use with stand mounting clamp (supplied) so microphone can easily be removed and used hand-held during performance. Very uniform polar pattern across audio spectrum. Three position bass tilt selector adjusts low frequency response to suit environment. Response: 60–15,000 Hz. Output: –57 dB. Dual Lo-Z and Hi-Z. New E-V QC^{tm}-4M cable connector allows easy change of impedance without tools by moving a single pin. Satin chrome finish. Net $57.00

676A: Non-reflecting gray. Net . $57.00

676G: Gold finish. Net $60.00

676P: 676 with phone plug at end of cable. Net $58.80

* U.S. Patent No. 3,095,084
† U.S. Patent No. 3,115,207

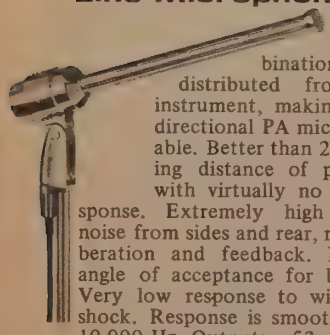
664: Designed for quality tape recording, communications, and public address applications. Cardioid pattern at all frequencies, with Variable-D® feature†. Permits close talking without "booming" or bass attenuation. Provides better discrimination against unwanted sound. Blast filter minimizes wind effect. Acoustalloy® diaphragm shielded from dust and magnetic particles. Response: 60–15,000 Hz. Output: –58 dB. On/off switch. Dual Lo-Z and Hi-Z. E-V QC^{tm}-4M cable connector allows easy change of impedance without tools by moving a single pin. Satin chrome finish. Net $53.40

664A: Non-reflecting gray. Net . $53.40

664G: Gold finish. Net $56.70

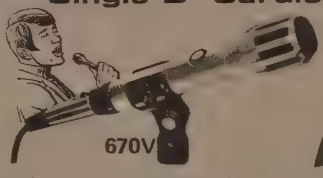
664P: 664 with phone plug at end of cable. Net $55.20

Unidirectional Line Microphone



644: Combination cardioid and distributed front opening* instrument, making it the most directional PA microphone available. Better than 2½ times working distance of pressure types with virtually no change in response. Extremely high rejection of noise from sides and rear, reducing reverberation and feedback. Narrow front angle of acceptance for best isolation. Very low response to wind noise and shock. Response is smooth from 40 to 10,000 Hz. Output: –53 dB. Dual Lo-Z and Hi-Z. E-V QC^{tm}-4M cable connector permits impedance change without tools by moving a single pin. High pressure die cast case, satin chrome finish. Acceptance angle: 90°. Net $73.80

"Single D" Cardioid Entertainers Microphones







670: Deluxe "Single-D" cardioid provides bass boost when used close up. Use on stand or hand held. Lightweight, but rugged, with new anodized Top Brass finish. Resistant to shock noises, damage with hardest use. Built-in superior pop filter. Very high degree of cancellation of sounds from sides and rear of microphone plus extremely smooth and flat response reduce possibility of feedback and allow increased gain from sound system. On/off switch. Response: 60–14,000 Hz. Output: –58 dB. Hi-Z or Lo-Z selectable. With cable and stand clamp. Net $45.90

670P: Model 670, wired Hi-Z with phone plug on end of cable. Net $48.00

670V: Volume Control Microphone–Identical to model 670 with volume control instead of on/off switch. Control knob easily operated by thumb while using microphone. Control turns microphone off in lowest position. Net $50.10

670VP: Model 670V, wired Hi-Z with phone plug at end of cable. Net $52.20

627A: Improved response and increased output level. Lightweight, rugged construction with built-in pop and dust filter. Response shaped for voice presence. On/off switch, black satin chrome finish. Response: 60 to 13,000 Hz. Output: –58 dB. Hi-Z or Lo-Z, must be specified. With cable and stand clamp. Net $36.00

627AP: 627A (Hi-Z) with phone plug at end of cable. Net $37.50

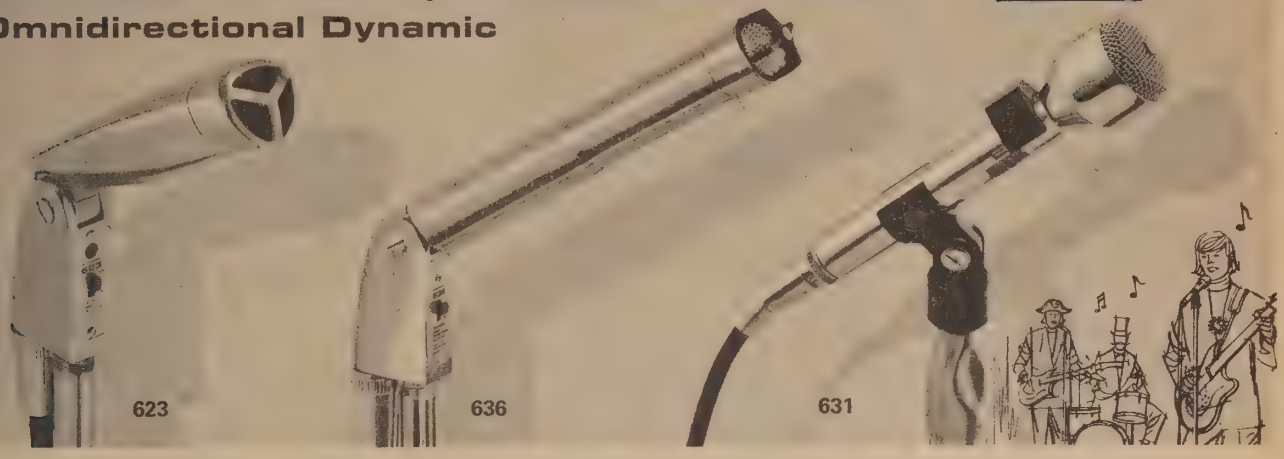
626: Similar to 627A but for less exacting applications. Cable integral with microphone. Impedance: Dual Hi-Z or Lo-Z (unbalanced to ground), selectable. Response: 70–12,000 Hz. Output: –58 dB. Fawn beige Micomatte finish. Net $29.40

626P: 626 (wired Hi-Z) with phone plug at end of cable. Net $31.50

© United Technical Publications

ENTERTAINMENT, EXPERIMENTERS

Omnidirectional Dynamic



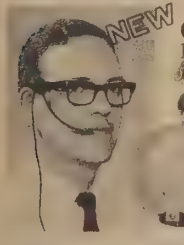
623: Ideal for PA, recording, and general use. Use on stand or hand-held. On/off switch and tiltable head. Response: 60 to 12,000 Hz. Output: −56 dB. E-V QC^{tm}-4M cable connector allows easy change of impedance without tools by moving a single pin. Satin chrome finish. Acoustalloy® diaphragm. Net . . $36.00

636: Slim dynamic, exceptionally fine for PA, recording, and general use. Response: 60 to 13,000 Hz. Output: −58 dB. Pop-proof head and wide pickup range. On/off switch and satin chrome finish. Dual Lo-Z and Hi-Z. E-V QC^{tm}-4M cable connector allows easy change of impedance by moving a single pin. Net $48.60

636G: Gold finish. Net $48.60

631: High quality hand or stand dynamic is lightweight, rugged, and shockproof. Effective 4-stage filter allows close up use without blasting, pops, or distortion. Silent, magnetic on/off switch with removable actuator button. Satin chrome, one-piece case. Response: 80–13,000 Hz. Output: −55 dB. Hi-Z or Lo-Z must be specified. Net . . . $36.00

631P: 631 (Hi-Z) with phone plug at end of cable. Net $37.50



651: Unique dynamic microphone which allows hands-free use for lecturing, sports announcing, two-way radio communications, paging, etc. Mike assembly clips on eye-glass frame or headband furnished. Avoids clothing and handling noise; is always same distance from mouth for clear, unchanging voice pickup; provides background noise reduction. Transistor amplifier has on/off switch, cough button, battery test lamp. Battery life virtually as long as shelf life. Response: 80–8,000 Hz. Output: −56 dB. Dual Hi-Z and Lo-Z, selectable. Non-reflecting black finish. Net $60.00

For those "On-the-Go"

Microphones in Handy Carrying Cases



Sturdy plastic case holds single microphone and cable. Microphone nests in contoured foam plastic insert for complete protection from bumps and scrapes.

626PC: One 626 (Hi-Z) with phone plug in carrying case. Net $33.60

627APC: One 627A (Hi-Z) with phone plug in carrying case. Net $39.90

631PC: One 631 (Hi-Z) with phone plug in carrying case. Net $39.90

664PC: One 664 (wired Hi-Z) with phone plug in carrying case. Net . . $58.20

670PC: One 670 (wired Hi-Z) with phone plug in carrying case. Net . . $50.10

670VPC: One 670V (wired Hi-Z) with phone plug in carrying case. Net $54.30

674PC: One 674 (wired Hi-Z) with phone plug in carrying case. Net . . $61.80

676PC: One 676 (wired Hi-Z) with phone plug in carrying case. Net . . $61.80

456: Single case only with foam insert. Specify for model 626, 627A, 631, 664, 670, 670V, 674, or 676. Net $5.40

457: Deluxe double music instrument type case only with foam insert. Holds two microphones and cables. Specify for 626, 627A, 631, 664, 670, 670V, 674, or 676. Net $15.00

648: Extremely versatile paging, intercom, or talk-back microphone. Omnidirectional with Acoustalloy® diaphragm. Non-reflecting gray. Does not include cable. Hi-Z or Lo-Z must be specified. Net $37.50



630: Famous for quality at low cost. Unaffected by heat or humidity. Acoustalloy® diaphragm and tiltable head. Dual Lo-Z or Hi-Z. E-V QC^{tm}-4M cable connector allows easy change of impedance by moving a single pin. Response: 60 to 11,000 Hz. Output: −55 dB. On/off switch. Satin chrome finish. Net $34.80



611: Traditional styling, fine performance. Response: 50–9,000 Hz. Output level: −55 dB. Omnidirectional. On/off switch, satin chrome finish. Dual Lo-Z and Hi-Z. Net $28.20



641: Modern dynamic. Integral on/off switch. Wide-range response: 70 to 10,000 Hz. High output level: −57 dB. 15' cable. Case is chrome plated die-cast zinc and gray high impact plastic. Hi-Z or Lo-Z must be specified. Net $26.40



634A: Similar to 641 less stud and on/off switch. Fits any stand, boom, or gooseneck with complete cable concealment. Ideal for electronic teaching aids, amateur and commercial communications, and paging systems. Hi-Z or Lo-Z must be specified. Net $19.80



COMMUNICATIONS AND PAGING MICROPHONES



602FTR: Transistorized noise cancelling dynamic mobile with built-in transistor amplifier. Provides level for direct replacement of carbon units. Maximum output: –43 dB with 250 ohm load and 27 V supply. Output adjustable from exterior. Response: 100 to 5,000 Hz. Press-to-talk switch and coiled cord with phone plug at terminal end. Lo-Z. FAA approved. Net $45.00



NEW

967M: Transistorized dynamic microphone for hands-free private aircraft communications. Clips on eyeglass frames or headband furnished. Clear, unchanging voice pick-up; background noise reduction. Dynamic element is rugged, provides audio quality superior to magnetics. Transistor amplifier built into PJ-068 type plug matches Lo-Z carbon inputs. Response: 300 to 4300 Hz. Output level: –40 dB (¼" from tip of tube). Nonreflecting black finish. FAA approved. Net ... $68.40

967ME: Same as model 967M with addition of earphone for talkback in aircraft not having a cabin speaker. Net $78.60

367: Push-to-talk switch for 967M and 967ME, mounts on steering post. Energizes microphone and relay circuits. Net $15.00



603TR

603TR: Transistorized noise cancelling mobile providing all dynamic advantages for direct replacement of carbon units. Built-in transistor amplifier matches level of carbon circuits. Output adjustable with internal potentiometer up to –44 dB. FAA approved for aircraft applications. Response: 200 to 4,000 Hz. Lo-Z. Press-to-talk switch and coiled cord. Magnetic hanger bracket furnished. Net $88.20



602TR

602TR: Similar to 603TR but different case design. Uses conventional hanger bracket. Fixed output level: –48 dB (carbon equiv.) Response: 100 to 5,000 Hz. FAA approved. Net $64.20



600E

600E: Dynamic mobile of rugged construction. Lo-Z has "open circuit" wiring for multiple paging installation. Hi-Z provides "straight-through" circuit for VOX operations. Output level: –55 dB. Response: 100 to 7,000 Hz, matched to high intelligibility requirements. Gray. With hang-up bracket. Specify Hi-Z or Lo-Z. Net $27.00

205STCKK: Noise cancelling, single button carbon for aircraft and emergency communications. FAA approved. Blast-proof, waterproof, and shock resistant. Output at ¼": –50 dB. Lo-Z. Black phenolic case. Press-to-talk switch and coiled cord. Net $34.50



205STCKK

205STCKKP: With PJ-068 phone plug. Net $37.80

210E: Similar to 600E but single-button carbon. Output: –50 dB. Lo-Z. Press-to-talk switch closes microphone and relay circuit. Coiled cord. Net $24.00



602F

602F: Similar to 602FTR, less transistor amplifier. For circuits designed for dynamic microphones. Output: –60 dB. Hi-Z or balanced Lo-Z must be specified. Net $39.00

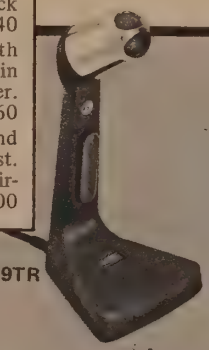


714

714: Ceramic hand-held unit for paging, ham radio, and CB. Cycolac case for long life and protection from shock. High impedance output: –55 dB. Response tailored for high intelligibility: 100 to 7,000 Hz. DPDT switch. Coiled cord. Bracket included. Net $11.10

717: Similar to 714, except cardioid pickup. Aperture on either side of diaphragm provides attenuation of sound arriving from rear and sides. Output: –55 dB. Response: 100 to 7,000 Hz. Net $13.20

Dynamic Transistorized Compressor Microphone



619TR

619TR: Base-station microphone has transistor amplifier and speech compressor. Provides high value of average modulation (P.E.P.). Use with any impedance or input level. Controls for level and degree of compression. Rugged die-cast stand in nonreflecting gray with chrome plated die-cast head. Grip-to-talk switch in stand-riser, compression meter in base. Switch operates mike and relay. Response: 150–10,000 Hz. Output (at compression threshold): Hi-Z –42 dB; 3000 ohm –44 dB; 150 ohm –58 dB; (Maximum output: –40 dB). Coiled cord cable extends to 5'. Size: 4½" w. 9¾" h. 4¾" d. Net weight: 2 lbs. Net $45.00



619: Similar to 619TR less compressor and amplifier. For base station paging and two-way. Press-to-talk switch in base movable to upper stand for grip-to-talk use. Switch allows relay operation. Response: 70–10 kHz. Output: –57 dB. Hi-Z or Lo-Z must be specified. Net $31.80



719: Similar to 619 with ceramic element. Response 70–7 kHz. Output: –57 dB. Hi-Z. Net $18.00

620: Noise cancelling base station microphone, similar to 607 built into rugged die-cast stand. Push-to-talk switch in base may easily be moved to riser for grip-to-talk operation. Switch shorts microphone in "off" position and provides for relay operation. Hi-Z or Lo-Z must be specified. Non-reflecting gray stand, chrome finished Cycolac head. Net $42.00



607: Differential dynamic is close talking, noise cancelling. Accepts sounds of close origin (¼") and rejects sounds of distant origin. Response: 300 to 3,800 Hz. Output at ¼": –54 dB. Acoustalloy® diaphragm. Has built-in connector. Chrome finish. Hi-Z or Lo-Z must be specified. 15' cable. Net $34.80

625TRSKK: Transistorized noise cancelling handset. Phenolic case holds Lo-Z microphone and 150 ohm magnetic receiver. FAA approved. Response: 100 to 5,000 Hz. Output: –48 dB (carbon equiv.). Five-conductor coiled cord. Net $84.90



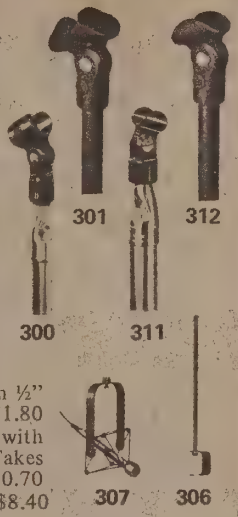
625SKK: Same as 625TRSKK but without transistor amplifier. Output: –55 dB. Net $58.80

Net

© United Technical Publications

MICROPHONE ACCESSORIES

Stand Clamps



300: Allows removal of microphone while in use. Fits any 1" to 1-1/8" diameter cylindrical microphone. Provides positive mounting to 5/8"–27 desk or floor stand. Black. Net $4.80

301: Similar to 300 but cut back for easy snap-in, snap-out. Net $4.80

310: Similar to 300 but designed for ¾" diameter microphones. Net $3.90

310A: Same as above except gray, as furnished with professional microphones. Net . . $3.90

311: Similar to 310 except cut back for easy snap-in, snap-out. Net $3.90

311A: Same as above except gray, as furnished with professional microphones. Net . . $3.90

312: For ¾" dia. microphones. Holds microphone firmly, yet allows easy snap-in, snap-out use. Black. Net $3.90

312A: Same as 312 except gray. Net . . $3.90

305: Adapter for mounting 5/8"–27 threads on ½" stand. Net $1.80

307: Suspension mount adapts any microphone with ¾" dia. shank to boom or shock-mounted use. Takes 314 windscreen. Net $20.70

306: 13-7/16" extension for 307, 308, 309. Net $8.40

Acoustifoam® Windscreens

Protect against mechanical shock, dust, and wind and breath noises.



314: Windscreen blast filter for RE10 and RE11. Acoustifoam™. Zippered for easy installation. Net $8.40

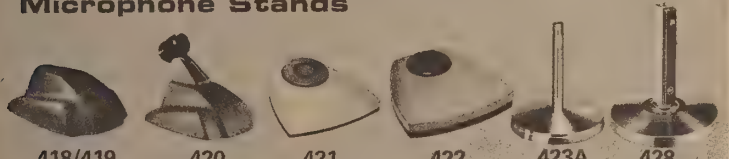
335A: Acoustifoam. Use on 630, 641, 634A microphones. Net . $8.40

337: For use on 626, 627A microphones. Net $4.80

355: Acoustifoam. Protects against mechanical shock and pickup of dust and magnetic particles. For use with models RE55, 654A, 636, and 623 microphones. Net $7.50

376: Acoustifoam sleeve for 676 and 674 microphones. Net . . . $9.60

Microphone Stands



418: Desk stand for microphones with small type studs such as 611, 623, 630, 641, 636, 674, and new style (after early 1968) 644 and 664. Net $8.70

418S: 418 with switch. Net $12.00

418G: 418 in gold finish. Net $10.80

419: Desk stand for use with microphones having large type studs such as 665 and older style (before early 1968) 644 and 664. Net . $8.70

419S: 419 with switch. Net $12.00

419G: 419 in gold finish. Net $10.80

420: Die-cast stand for use with 666, 654A, 655C, 676, RE50, or other 1" diameter models. Clamp accepts 1" to 1-1/8" mikes without tools. Net $13.20

420G: Same as above except gold finish. Net $17.40

421: Small size. Interchangeable rubber shock mounts to accept ¾" or 1" stand clamps. Net $11.10

422: Similar to 421 but larger to accommodate heavier microphones. Net $11.10

423A: 5-1/8" dia. base with 5" riser. 5/8"–27 thread. Rests firmly on rubber base buttons. Net $4.20

428: Touch to talk lever type DPDT switch. Closes or opens instantly or locks in "talk" position. Fits standard 5/8"–27 thread. Net . . . $19.80

Transformer and Attenuator



380: Attenuator for use in microphone line, attenuates signal 10 dB. Net $15.60

502B: 150 ohm line transformer, matches Lo-Z microphones to high impedance output. Response: 30–20,000 Hz. Net $10.50

LAVALIER MICROPHONES



624: Most economical dynamic lavalier on the market. For chest or hand use. Response: 100 to 7,000 Hz. Output: –56 dB. Wire mesh head acoustically treated for wind and moisture protection. Hi-Z or Lo-Z must be specified. Lo-Z not balanced to ground. Non-reflecting gray finish. Net $29.40

924: Crystal lavalier. Same in appearance as 624, except has chrome finish. Response: 60 to 8,000 Hz. Output: –60 dB. Net $15.60

647A: Smallest high quality lavalier in PA field delivers big microphone performance. Extremely rugged construction assures long life. Frequency response: 70 to 10,000 Hz. Output: –60 dB. Weighs only 2 oz. Non-reflecting gray finish. Hi-Z or balanced Lo-Z must be specified. Net $54.00



Crystal Microphones



920: Omnidirectional pickup. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Hi-Z. AC-DC insulated (case not grounded). Satin chrome finish. Frequency response: 60 to 10,000 Hz. Output: –50 dB. Excellent for group or conference applications or use where wide angle pickup is desired. Net $18.00

805: For guitar, banjo, other stringed instruments. Hi-Z. Sealed crystal. Chrome finish. 15' cable. Net $13.50



Low-Cost Ceramic Microphones



715: Omnidirectional. 60–7,000 Hz. Output: –55 dB. Hi-Z. 5' cable. Non-reflecting gray finish. Rugged, lightweight. AC-DC insulated. With 5/8"–27 adapter. Net $9.90

721: Inexpensive ceramic features high output level and light weight for recording, experimenting, and general use. High impact gray plastic case. May be used handheld or with integral fold-out stand. Response: 100 to 5,000 Hz. Output: –52 dB. Hi-Z. 5' cable included. Net . $4.35





729: Ceramic cardioid reduces random noise. For PA, paging, home recording, and general communications. Tailored for single sideband. Output: –60 dB. Response: 60 to 8,000 Hz. Hi-Z. 8½' cable. Net $16.20

729SR: Relay switch. Net $17.70

727: Omnidirectional, similar in appearance to 729. Withstands extremes of temperature and humidity. Hi-Z. Response: 60 to 8,000 Hz. Output: –55 dB. Net $13.50

727SR: Relay switch. Net $14.70

ELECTRO-VOICE, INC.
A GULTON *Subsidiary*

Electro-Voice® PUBLIC ADDRESS HORNS AND DRIVERS

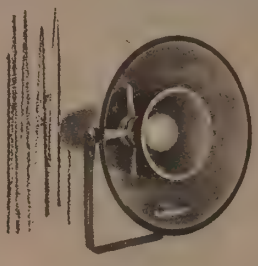


848A



Exclusive E-V Compound Horns permit widest range at lowest distortion, plus complete directional control of both highs and lows. Best wide-angle coverage with exclusive diffraction horns means better sound through entire coverage area. Natural voice and music reproduction results in higher intelligibility without annoying peaks.

848A: Combines FC100 Horn and 1828C driver for finest wide-angle sound, low distortion, and highest quality of any projector. Frequency response: 150 to 10,000 Hz. Impedance: 8 ohms. Dispersion: 90° x 120°. Power handling capacity: 30 watts. Sound pressure level: 120 dB.† 20½" h x 10½" w x 20" d. Net . . $57.00 (Zone 2: $60.00)





HC400: Wide-angle round reentrant horn. As used in 844A. Use with any E-V driver. High articulation. Rugged diecast body. Weatherproof. Nominal dispersion 90°. Low frequency cutoff 250 Hz. Taper 250 Hz. Air column length 16". Mesa tan baked enamel finish. 10" dia., 5¼" d. Net . . . . . $10.80 (Zone 2: $11.40)

AC100: Concentrating version of CDP®. Uses round horns for most concentrated coverage. Use with any E-V convertible driver. Low frequency horn cutoff: 100 Hz, taper: 100 Hz. Air column length: 56", sound distribution 80°. High frequency sound distribution: 30°. Crossover: 1,000 Hz. 21" dia., 21" d. (less driver). Net $63.00 (Zone 2: $66.15)

FC100: Provides two diffraction horns for uniform wide-angle coverage. Flexible coverage control by individual adjustment of each horn. Use any E-V convertible driver. Low frequency horn cutoff: 100 Hz, taper: 100 Hz. Air column length: 58", sound distribution 90° x 120°, high frequency sound distribution, 90° x 120°. Crossover: 1000 Hz. 20½" h x 10½" w, x 20" d.(less driver). Net . . . . . $35.40 (Zone 2:$37.00)

REENTRANT HORNS



AR150: Round concentrating horn for maximum penetration. E-V ring reflector plus new exponential design contributes to wide range. High intelligibility and remarkably natural voice and music quality. High efficiency design. Low frequency horn cutoff: 150 Hz, taper 150 Hz. Air column length, 41". Sound distribution, 85°. 21" dia. x 17" d. (less driver). Net . . . . . $29.10 (Zone 2: $30.50)



FR150: Medium-angle, low-cost rectangular horn provides good coverage. Fiberglass horn has Mesa Tan color molded in. Adjustable mounting angle. Can be stacked for multiple speaker applications; ideal for car-top installation. Low frequency cutoff: 150 Hz, taper 150 Hz. Air column length, 45". Sound distribution, 70° x 100°. 20½" x 10½" x 21" d. (less driver). Net . . . . . $35.40 (Zone 2: $37.00)

NEW



AR400: Rugged reentrant horn designed as siren horn but versatile for high-level public address. Excellent response and dispersion from small horn. Thermal black (can be painted over). Low-frequency cutoff: 400 Hz. Dispersion: 110°. 8½" dia., 6-1/8" d. (less driver). Net . $18.00 (Zone 2: $18.90)

AR500: Similar to AR400, with low-frequency cutoff at 500 Hz. 7-3/8" dia., 3-5/8" d. (less driver). Net . . . . . $16.20 (Zone 2: $17.10)

VERSATILE CONVERTIBLE DRIVERS

	1828R*	1828C	1828T	1829	1829T	1823*
Program Power Capacity—Watts	30	30	30	60	60	110
Frequency Response—Hz	150-10,000	150-10,000	150-10,000	140-11,000	140-11,000	140-8,000
Sound Pressure Level† FC100	—	120 dB	120 dB	127 dB	127 dB	—
Sound Pressure Level† AR150	127 dB	127 dB	127 dB	133 dB	133 dB	133 dB
Voice Coil Impedance—ohms	8	8	8	16	16	8
Transformer Impedance—ohms	—	—	167,333,667 1337	—	83,167 333,667	—
Transformer Power Taps-watts	—	—	30,15,8,4	—	60, 30, 15,8	—
Dimensions (overall)	4" dia. 2¾" d.	4" dia. 3¼" d.	5" h 4" w 5¼" d.	6"dia. 4-1/16"d.	6"dia. 6-3/8" d.	4¼"dia. 3-7/16"d.
Net Price (Zone 2)	$21.90 ($23.00)	$21.90 ($23.00)	$31.80 ($33.50)	$39.00 ($41.00)	$47.40 ($50.00)	$39.60 ($41.70)

E-V P.A. drivers offer smooth, peak-free response with maximum efficiency for greatest possible long term economy. Reentrant Driver model 1828R will produce maximum intelligibility with E-V AR150, FR150, and HC400. Convertible Drivers may be used with Reentrant Horns but are especially effective with the exclusive Electro-Voice Compound Diffraction Projectors (CDP®), FC100, and AC100. Model 1823 is a heavy-duty driver designed for siren applications with AR400 or AR500, but can be used with any E-V reentrant horn; Faston terminals. For use in constant voltage systems, order 1828T or 1829T. All drivers have 1-3/8"-18 threads for attaching horn.



NEW



1823

† Measured at 4' on axis with full rated power.
* Reentrant style only.

E-V Diaphragm replacement kits are available for all Electro-Voice public address drivers.

ACCESSORY LINE TRANSFORMERS

For use in Constant-Voltage PA Systems

TR Series—70.7 V, 4 wattage taps. Secondary impedances 4,8,16 ohms.

TM Series—Dual 25 & 70.7 V, 4 wattage taps. Secondary impedances 8 & 16 ohms.

Watts	Model	Net[1]	Model	Net[1]
5	TR5	4.80	TM5	6.60
15	TR15	5.10	TM15	7.20
30	TR30	5.40	TM30	10.95
50	TR50	9.90	—	—
60	—	—	TM60	12.90



TH Transformer Housing: Weatherproof, eliminates soldering. Wattage indicator dial. Size: 4" h x 5" w x 3½" d. Net $6.30[1]

[1] Slightly higher in Zone 2

ELECTRO-VOICE, Inc.
A GULTON Subsidiary

© United Technical Publications

Electro-Voice® HIGH POWER-CAPACITY LOUDSPEAKER SYSTEMS

Eliminator 1: A three-way, full-range loudspeaker system for extremely high audio level, high quality sound reinforcement and playback. 15" loudspeaker in folded horn cabinet. 8HD midrange Diffraction Horn and driver. Two special vhf drivers and horns, level controls for vhf and midrange drivers. Rugged enclosure. Response: 55–15,000 Hz. 100 watts RMS. Dispersion: 100°. Sound pressure level: 122 dB.† Impedance: 8–16 ohms. 37½" h, 22½" w, 23-1/8" d. Net $465.00
(Zone 2: $488.00)

Eliminator 2: For even higher midrange power-handling capacity and sound pressure output. Ideal for Acid Rock groups, etc. Same cabinet as Eliminator 1. Heavier midrange driver, less vhf speakers. Response: 55–10,000 Hz. 100 watts RMS. Sound pressure level: 124 dB.† Net $370.00
(Zone 2: $384.00)

SuperCaster: For instrument amplification or p.a. outdoors or in. Heavy duty 12" speaker. Same case as Musicaster, below, with black and chrome finish. Response: 80–8,000 Hz. 80 watts RMS. Sound pressure level: 115 dB.† Impedance: 8 ohms. 21½" h, 21½" w, 8½" d. Net $119.40
(Zone 2: $125.50)





ELIMINATOR 1



NEW SUPERCASTER

SOUND REINFORCEMENT LOUDSPEAKERS

LR7: E-V Line Radiator.™ Uses nine 5" by 7" speakers and two T35 vhf drivers for frequency range of 200–17,000 Hz. Coverage: horizontal 160° vertical 60°, 50 watts. Impedance, 8 ohms. Non-resonant, curved* wood enclosure finished in Mesa Tan. 60" h., 11" w., 14" d. Net $195.00
(Zone 2: $205.00)

LR4A: Curved design* overcomes unwanted high frequency dispersion at ends, eliminates echo and feedback. Uses nine 3" x 5" and three 3½" cone speakers. Dispersion: 160° horizontal, 60° vertical. Response: 200–10,000 Hz. 25 watts program. Impedance, 8 ohms. 48" h., 7" w., 13" d. Mesa tan wood enclosure. Net $138.00
(Zone 2: $145.00)

LR4SA: Weatherproofed for outdoor or indoor installation. Extruded aluminum case is finished in Faun metallic. Electrical filters remove end speakers from circuit as frequencies increase, eliminating high frequency lobes. Response: 200–10,000 Hz. Impedance, 8 ohms. 40 watts program. Dispersion, 30° vertical, 160° horizontal. Sound pressure level: 116 dB.† 48-3/8" l., 6-5/8" w., 4-7/8" d. Net . . $108.00
(Zone 2: $113.50)

LR4SAT: With 25/70.7-V. line transformer–4 taps. Net $123.00
(Zone 2: $129.00)

LR2SA: Short LR4SA. Greater vertical dispersion (45°). Response: 200–10,000 Hz. Impedance, 8 ohms. 20 watts program. 24½" l., 6-5/8" w., 4-7/8" d. Net $63.00
(Zone 2: $66.15)

LR2SAT: With 25/70.7-V. line transformer–4 taps. Net $76.20
(Zone 2: $80.10)

M253: Multicellular horn (less driver) weatherproof for indoor or outdoor use. Dispersion uniform at all frequencies (60° vertical, 120° horizontal). Two rows of five steel cells. Accepts any E-V driver. Low frequency cutoff, 300 Hz. Mounting hardware supplied. Driver-throat built in. 17½" h., 30½" w., 36½" d. Net $189.00
(Zone 2: $198.50)

Musicaster IA: High fidelity performance in a compact, weatherproof system. 12" Radax dual-cone, wide-range driver in rugged, compression-molded housing. Bass reflex design. Acoustifoam between speaker and grille repels water without affecting sound dispersion. Olive finish. Response: 80–10,000 Hz. Impedance 8 ohms. Dispersion: 120°. 60 watts peak. Sound pressure level, 111 dB.† 21½" h., 21½" w., 8½" d. Net $75.00

Musicaster IIA: Musicaster IA with addition of vhf tweeter for extended high-frequency response and more uniform dispersion above 5000 Hz. Response: 80–16,000 Hz. Net $94.50

*U. S. Patent No. 3,125,181





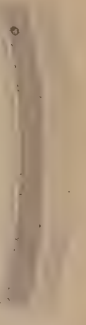
LR7



LR4SA



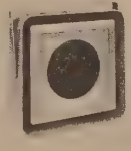
LR2SA



LR4A



M253 MULTICELL



MUSICASTER IA

Paging Speakers



PA30AT-7: 30-watt projector with integral 70.7 V line transformer. Externally switchable line power taps at 30, 15, 8, 4, and 2 watts. Rugged Implex horn. Smooth response for voice or music: 250 to 14,000 Hz. Dispersion: 120° x 90°. EIA sensitivity rating: 60 dB. Sound pressure level: 127 dB.† 11½" h., 6½" w., 9¾" d. Net $32.10
(Zone 2: $33.70)

PA30AT-2: With 25-volt transformer. Net . $32.10 (Zone 2: $33.70)

PA30A: Same as PA30AT but no line transformer. Impedance: 8 ohms. 11" h., 6½" w., 8½" d. Net . . . . . $23.70 (Zone 2: $24.90)

PA30A-45: 45-ohm voice coil for intercom systems. Net . . $25.20
(Zone 2: $26.50)



PA30RT-7: 30-watt reentrant projector with round spun-aluminum bell. Integral 70.7-V transformer, switchable power taps at 30, 15, 8, 4, and 2 watts. Response: 250–14,000 Hz. Impedance: 8 ohms. Dispersion: 105°. EIA sensitivity rating: 60 dB. Sound pressure level: 127 dB.† 11" h., 9¾" d., 10" dia. Net . . . . . $32.40 (Zone 2: $34.00)

PA30RT-2: With 25-V transformer. Net . . $32.40 (Zone 2: $34.00)

PA30R: Same as PA30RT but no line transformer. Impedance: 8 ohms. 10" h. Net . . . . . $25.20 (Zone 2: $26.50)

PA30R-45: With 45-ohm voice coil. Net . . $26.70 (Zone 2: $28.00)

†Measured at 4' on axis with full rated power.

NEW



PA12



844A



847A

PA12: Computer-calculated horn flare provides excellent response characteristics and dispersion. Implex horn, Kapton voice coil, and phenolic diaphragm. Response: 325–14,000 Hz. 12 watts RMS. Dispersion: 130°. Sound pressure level: 119 dB.† 7-1/8" d. Net $16.20
(Zone 2: $17.00)

TR12-7: 70.7-V line transformer for PA12. 5 power taps. Net $4.35
(Zone 2: $4.50)

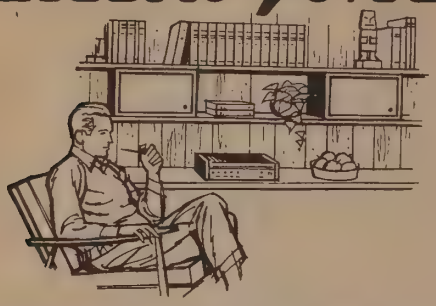
TR12-2: Same as above but 25-V. Net $4.35
(Zone 2: $4.50)

PA12F: Flush-mounting version of PA12. Fits between studs. Response: 500–14 kHz. 6" dia., 3-7/16" d. Net $19.80
(Zone 2: $20.70)

844A: Smooth response with better lows to provide natural paging without feedback. Handles 30 watts. Rugged die-cast horn, field replaceable voice coil. Frequency response: 250–13,000 Hz. Impedance: 8 ohms. Dispersion: 90°. EIA sensitivity rating: 54 dB. Sound pressure level: 123 dB.† 9-7/8" dia., 7-7/8" d. Net $27.00
(Zone 2: $28.50)

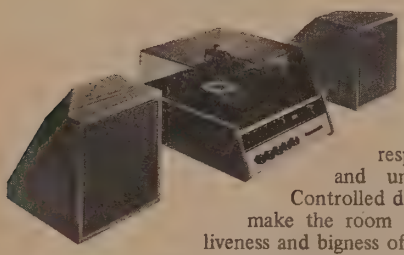
847A: CDP® wide angle speaker provides high articulation over uniform 120° x 90° area. Uses TWO diffraction horns. Power handling capacity: 25 watts. Frequency response: 250–10,000 Hz. Sound pressure level: 114 dB.† Impedance: 8 ohms. Fiberglass Mesa Tan horn. 11¾" l, 7¾" w., 10¼" d. Net $39.30
(Zone 2: $41.00)

Electro-Voice® HIGH FIDELITY PRODUCTS



Since the earliest days of the high fidelity industry, Electro-Voice has been in the forefront of the field. The company's intensive engineering experience in all phases of electro-acoustics and solid-state research, coupled with excellent manufacturing facilities, produce the finest componentry at surprisingly modest cost. E-V high fidelity components will bring the thrilling, "you-are-there" performance of a concert hall into your living room. Whether your system is for a small dormitory room, modest family room, extra-large living room, even the office – E-V has the models for your taste and budget. Write for our complete high fidelity brochure to Electro-Voice.

INTEGRATED MUSIC SYSTEM



The amazing Electro-Voice Landmark 100 is a complete AM/stereo FM/record music system with a wealth of engineering breakthroughs resulting in truly fine sound quality, thrilling bass response, almost negligible distortion, and unmatched installation versatility. Controlled directional reflective-sound speakers make the room a part of the sound system for a liveness and bigness of sound like a concert hall. Speaker distortion is cancelled out through the Servo-Linear feedback circuit link back to the amplifier. An exceptionally fine amplifier, tuner, and magnetic cartridge are provided. Overall sound performance is superb compared to any component system, much less an integrated system of this modest size and cost.

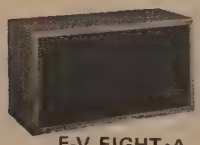
ELECTRONICS



E-V 1382

A complete line of AM/stereo FM receivers, tuners and amplifiers is available from E-V. In any price range, operating specifications are never sacrificed for appearance-only add-ons. Extra control functions and increasingly fine performance are found in higher priced units. All E-V electronics meet the same rigid quality standards and are protected by a meaningful warranty.

SPEAKER SYSTEMS



E-V EIGHT·A



E-V SEVEN·C



E-V FIVE·C



E-V FOUR·A

E-V hi-fi speaker systems are available from the miniscule E-V EIGHT·A two-way, 6" acoustic suspension model, only 8¼" high by 15¼" wide at $49.95 to the superb and incomparable Patrician 800, incorporating four different speakers and including the exclusive E-V 30" woofer, long acknowledged the absolute standard of the industry, at $1250.00. Every size and price category between these is represented, including bookshelf and console styles, and each is a value and performance leader in its price class.

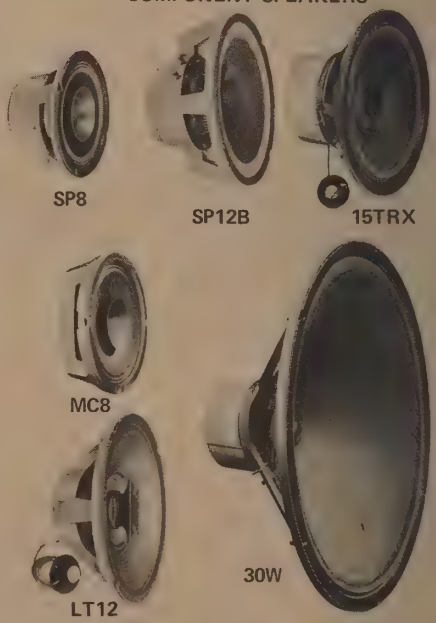


PATRICIAN 800



ARIES Traditional

COMPONENT SPEAKERS



Electro-Voice separate speakers allow the ultimate in versatility in a hi-fi system. Units are easily installed in walls, ceilings, your favorite furniture piece, or a custom hi-fi cabinet. Every room in your home can be wired for top-quality sound. A system can be built up over a period of time, in line with the budget, by adding midrange and high-frequency units to a basic speaker at any time. E-V speakers are available from 8" to 30" in size and in single, coaxial, and three-way types.

© United Technical Publications

Electro-Voice®

Transistorized POWER MEGAPHONES





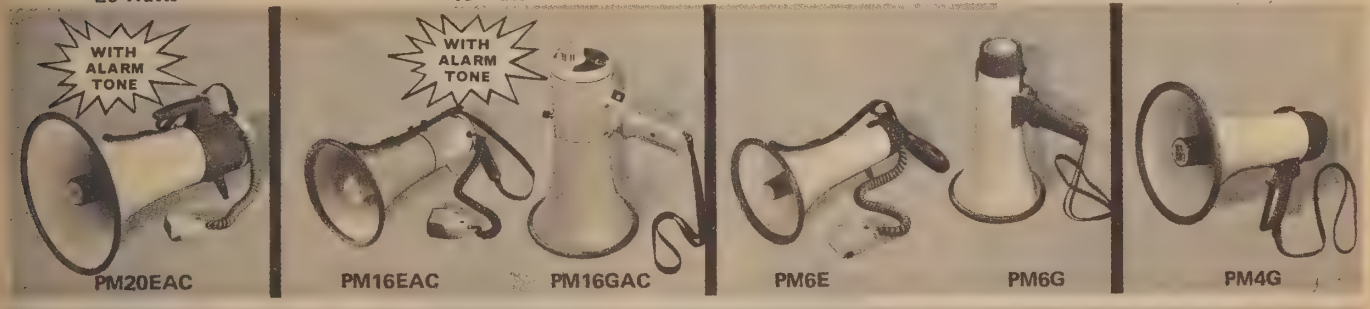
New Electro-Voice Power Megaphones are extremely rugged, waterproof, weatherproof, and salt spray proof for the most severe uses: safety services, construction, sports, tour guides, marine, all emergency applications, etc.

All units include low-distortion, all-transistor amplifiers for high intelligibility and long term, trouble-free operation. Two styles are available: pistol-grip trigger with built-in microphone for instant readiness in any situation; and separate microphone with coil-cord for semi-permanent installation or for resting heavier models. Pistol grip models are well balanced for ease of holding and have volume control easily reached by thumb (except PM4G). Most models have noise cancelling microphone which reduces unwanted background sound and feedback for higher operating volume. All models have convenient carrying strap.

16 and 20 watt models incorporate an alarm tone signal, push-button operated, useful for attracting attention, as a distress signal, or boat fog horn. These models carry a bright International Yellow – recognized emergency color. When nickel-cadmium batteries are used in 16 and 20 watt models, they can be recharged without disassembly with the C1215 plug-in recharger listed below, for semi-permanent life.

All E-V Power Megaphones are protected from defect by warranty. Parts will be repaired or replaced within one year, and there is no charge for labor within 90 days of purchase. (Transportation prepaid to Electro-Voice or warranty station.) Parts and service are always available quickly.

20 Watts | 16 Watts | 6 Watts | 4 Watts



SPECIFICATIONS

	PM20EAC	PM16EAC	PM16GAC	PM6E	PM6G	PM4G
Type:	Ext. Mic	Ext. Mic	Pistol grip	Ext. Mic	Pistol grip	Pistol grip
Output-peak:	20 watts	16 watts	16 watts	6 watts	6 watts	4 watts
Intelligibility Range:	1 mile	¾ mile	¾ mile	2000 ft.	2000 ft.	1200 ft.
Batteries:*	10 C size	8 C size	8 C size	6 C size	6 C size	4 D size
Color:	Int. Yellow & Cream	Int. Yellow	Int. Yellow	Red & Cream	Red & Cream	Red & Cream
Size:	11¾" dia. 18" long	8¼" dia. 13-5/8" long	8¼" dia. 14½" long	7½" dia. 13" long	7-5/8" dia. 12¾" long	8¾" dia. 12-1/16" long
Net Weight (Less Batteries):	6 lb.,10 oz.	4 lbs.	4 lbs.	3 lb.,5 oz.	3 lb.,5 oz.	2 lb.,14 oz.
Special Features:	★Alarm tone ★Rechargable ★Noise cancelling microphone ★Volume control	★Alarm tone ★Rechargable ★Noise cancelling microphone ★Volume control	★Alarm tone ★Rechargable ★Noise cancelling microphone ★Volume control	★Noise cancelling Microphone ★Volume control	★Volume control	
Net Price:	$97.20	$78.90	$70.20	$54.00	$47.40	$34.20

*Not furnished: C1215 Battery Charger – For recharging nickel-cadmium batteries in 16 and 20 watt megaphones without removing from unit. Plugs into AC outlet and receptacle on megaphone. Net $28.80

ELECTRO-VOICE, INC.

A Subsidiary of Gulton Industries, Inc.

POWERHOUSE TRUMPET SPEAKERS

proven sound around the world®



® Take it from Mickey Mantle†

"FEDTRO...the proven sound of champions"

"proven sound around the world".® from the blistering humid depths of Equatorial Africa...to the frigid waters of the Arctic Seas, Fedtro Powerhouse Speakers are ruggedly constructed to guarantee optimum performance, even under the most brutal of climatic extremes. Shockproof, rustproof, and totally weatherized, the entire Fedtro series is ideally suited for the most trying applications of Marine and Mobile use...Public Address, Paging and Talkback Systems. The diaphragm is constructed with a special resinification process, which permits it to withstand higher than 30% power input overloads. Engineered and designed to afford the highest degree of clarity and intelligibility over the complete frequency spectrum, from the compact S-5RD to the mammoth S-16RD, there's a perfect Powerhouse available for your specific needs. Greater efficiency...increased power output...higher intelligibility ...and almost indestructable durability...all add up to why they are **"proven sound around the world".®**



MODEL S-5RD



MODEL S-6RD



MODEL S-8RD



MODEL S-8BX







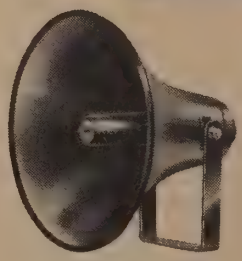
Ruggedly Constructed for Outdoor, Indoor, Marine and Mobile Use

■ WATERPROOF ■ SHOCKPROOF
■ RUSTPROOF ■ CORROSIONPROOF

DYNAMIC 3-COLOR CUSTOM PACKAGING



MODEL S-12RD



MODEL S-16RD

FEDTRO POWERHOUSE TRUMPET SPEAKER SPECIFICATION CHART

Model No.	Power Rating		Voice Coil Impedance	Frequency Range	Bell Diameter (Horn Opening)	Overall Length	Net Weight
	Program	Peak					
S-5RD	8 watts	12 watts	8 ohms	200 to 13,000 cps.	5 inches	5 inches	approx. 1 lb.
S-6RD	10 watts	15 watts	8 ohms	200 to 13,000 cps.	6 inches	6½ inches	approx. 2 lbs.
S-8RD	15 watts	25 watts	8 ohms	200 to 13,000 cps.	8 inches	8½ inches	approx. 2½ lbs.
S-8BX	15 watts	25 watts	8 ohms	200 to 13,000 cps.	8 inches x 5 inches	8 inches	approx. 2.4 lbs.
S-12RD	30 watts	65 watts	8 ohms	150 to 13,000 cps.	12 inches	11¾ inches	approx. 4.2 lbs.
S-16RD	40 watts	75 watts	8 ohms	150 to 13,000 cps.	16 inches	13 inches	approx. 5.3 lbs.

GET MORE SOUND FOR YOUR DOLLAR WITH FEDTRO POWERHOUSE SPEAKERS!

SUPERIOR QUALITY...

. . . at the lowest prices in the industry

proven sound around the world®

POWERHOUSE
CHOSEN BY THE MEXICAN ORGANIZING COMMITTEE FOR USE AT THE OLYMPIC GAMES



THE OFFICIAL MEGAPHONE OF THE N.Y. WORLD'S FAIR
FEDTRO

© COPYRIGHT 1968 • FEDTRO INC.

†MICKEY MANTLE ENDORSES ALL FEDTRO AUDIO PRODUCTS

FOR FEDTRO POWERHOUSE TRANSISTORIZED MEGAPHONES, SEE PAGE 32 & 33

AKTRON REPLACEMENT SPEAKERS

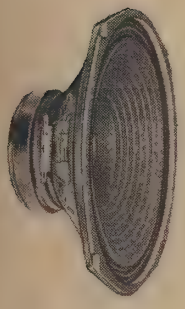
• ALUMINUM VOICE COILS • ALNICO 5 MAGNETS • SPECIALLY TREATED BLUE CONES • BLUE LUMINESCENT BAKED ENAMEL FINISH



4" SQUARE CUP HOUSING



5" PIN CUSHION



8" CERAMIC MAGNET



5" x 8" "FOOTBALL SHAPE"

Size and Shape	Part No.	Magnet Weight Ounces	Voice Coil Dia. Inches	Voice Coil Impedance (Ohms)	Power In Watts	Max. Depth In Inches	Suggested Dealer Prices
2¼" Round	23A8C	.53 cup	1/16	8	1	1 1/16	$1.96
2¾" Round	28A8C	.53 cup	1/16	8	2	1	1.96
3" Square	3A3C	.53 cup	1/16	3.2	2	1 5/16	1.76
3" Square	3C3	1.00	1/16	3.2	3	1 1/16	2.03
3½" Square	35A3C	.53 cup	1/16	3.2	2	1 3/8	1.76
3½" Square	35C3C	1.00	3/4	3.2	4	1 5/16	2.03
4" Square	4A3C	.53 cup	1/16	3.2	2	1 5/16	1.60
4" Square	4B3	.68	1/16	3.2	2	1 7/8	1.82
4" Square	4C3C	1.00 cup	3/4	3.2	4	1 1/16	2.02
4" Square	4D3	1.47	1/16	3.2	3	2 3/16	2.25
4" Square	4C8C	1.00 cup	3/4	8	4	1 1/16	2.02
5" Pin Cushion	5A3C	.53 cup	1/16	3.2	2	1 1/16	1.78
5" Pin Cushion	5C3C	1.00 cup	3/4	3.2	4	1 5/16	2.14
5" Pin Cushion	5D3	1.47	1/16	3.2	4	2 3/16	2.36
5" Pin Cushion	5D8S	1.47	1/16	8	5	2 3/16	2.50
5" Round	R5A3C	.53 cup	1/16	3.2	2	1 3/4	1.82
•5" Round	R5C3C	1.00	3/4	3.2	4	1 7/8	2.14
5" Round	R5EU8	*3.00	3/4	8	5	1 3/4	3.04
5¼" Pin Cushion	53C3C	1.00 cup	3/4		4	1 5/16	2.14
•5¼" Pin Cushion	53E8	2.18 cup	1	8	6	2 1/8	3.20
•5¼" Pin Cushion	53GU8	*6.00	1	8	8	2 1/8	4.48
‡5¼" Round	†RL53E8C	2.18 cup	1	8	6	2 1/4	3.55
‡5¼" Round	†RL53GU8	*6.00	1	8	8	2 1/4	4.97
6" Pin Cushion	6C3C	1.00 cup	3/4	3.2	5	2 3/16	2.45
6" Pin Cushion	6D3	1.47	1/16	3.2	5	2 3/4	2.61
6" Pin Cushion	6E3C	2.18 cup	1	3.2	7	2 3/8	3.01
6" Pin Cushion	6E8C	2.18 cup	1	8	7	2 3/8	3.01
8" Pin Cushion	8E3C	2.18 cup	1	3.2	6	2 13/16	3.98
8" Pin Cushion	8F3	3.16	3/4	3.2	8	3 1/16	4.43
8" Pin Cushion	8E8C	2.18 cup	1	8	7	2 13/16	3.98
8" Pin Cushion	8EU8	*3.00	3/4	8	6	2 5/8	4.07
8" Pin Cushion	8F8	3.16	3/4	8	8	3 1/16	4.43
8" Pin Cushion	8G8	4.64	1	8	10	4	5.85
8" Pin Cushion	8GU8	*6.00	1	8	10	2 7/8	5.63
8" Pin Cushion	8H8	6.80	1	8	12	4	6.23
8" Pin Cushion	8HU8	*10.00	1	8	12	3	6.14
10" Round	10F3	10.10	3/4	3.2	8	4 3/16	5.80
10" Round	10F8	3.16	3/4	8	8	4 3/16	5.80
12" Round	12F3	3.16	3/4	3.2	8	4 7/8	6.37
12" Round	12F8	3.16	3/4	8	8	4 7/8	6.37
12" Round	12H8	6.80	1	8	12	5 1/2	8.42
12" Round	12HU8	*10.00	1	8	12	4 1/2	8.33
12" Round	12K8	10.10	1 1/4	8	20	5 13/16	11.21
2" x 6"	26A3C	.53 cup	1/16	3.2	2	1 1/16	2.02
3" x 5"	135A3C	.53 cup	1/16	3.2	2	1 5/8	1.91
3" x 5"	135C3C	1.00 cup	3/4	3.2	4	1 1/16	2.14
•3" x 5"	135C8C	1.00	3/4	8	4	1 1/16	2.14
•3" x 5"	135EU8	*3.00	3/4	8	6	1 1/16	3.04
2½" x 10"	210D3	1.47	1/16	3.2	5	2 3/8	3.94
4" x 6"	46A3C	.53 cup	1/16	3.2	2	1 1/2	2.03
4" x 6"	46C3C	1.00 cup	3/4	3.2	5	1 3/16	2.32
•4" x 6"	46C8C	1.00	3/4	8	5	1 3/16	2.32
4" x 8"	48E3C	2.18 cup	1	3.2	5	2 1/8	3.47
•4" x 8"	48E8C	2.18 cup	1	8	5	2 1/8	3.47
4" x 10"	410E3C	2.18 cup	1	3.2	6	3	3.67
4" x 10"	410E8C	2.18 cup	1	8	6	3	3.67
•4" x 10"	410GU8	*6.00	1	8	9	2 5/16	5.33
•4" x 11"	†F411E8C	2.18 cup	1	8	6	2 1/16	4.63
5" x 7"	57A3C	.53 cup	1/16	3.2	2	2 1/8	2.32
5" x 7"	57C3C	1.00 cup	3/4	3.2	5	2 3/16	2.68
5" x 7"	57E3C	2.18 cup	1	3.2	7	2 3/8	3.22
5" x 7"	57C8C	1.00 cup	3/4	8	5	2 3/16	2.68
•5" x 7"	57E8C	2.18	1	8	7	2 3/8	3.22
5" x 8"	†58C8C	1.00 cup	3/4	8	5	2 3/16	3.31
6" x 9"	69A3C	.53 cup	1/16	3.2	2	2 1/16	2.57
6" x 9"	69C3C	1.00 cup	3/4	3.2	5	2 13/16	2.86
6" x 9"	69D3	1.47	1/16	3.2	5	3 3/8	3.22
6" x 9"	69E3C	2.18 cup	1	3.2	7	2 7/8	3.58
6" x 9"	69H3	6.80	1	3.2	10	4 1/4	6.07
6" x 9"	69C8C	1.00 cup	3/4	8	5	2 13/16	2.86
6" x 9"	69E8C	2.18 cup	1	8	7	2 7/8	3.58
6" x 10"	†F610E8C	2.18 cup	1	8	7	3 1/16	4.61

* Ceramic Magnet—All others Alnico 5. † Has two mounting holes—Crinoline dust screen, "Football Shape."
• Indicates New Item ‡ Use with SG53A and SG53C snap-on grills.



6" x 9" MULTI-IMPEDANCE

MULTI-IMPEDANCE SPEAKERS 10-20-40 OHM

Oaktron's new "three in one" multi-impedance series

- Specially developed heavy voice coil winding for maximum power handling.
- Dual solderless terminal strip arrangement with jumpers for simplified hook up.
- Complete wiring diagram accompanies each speaker.

6" x Pin Cushion	6EMC	2.18 cup	1	10-20-40	6	2¼	$3.53
4" x 10"	410EMC	2.18 cup	1	10-20-40	6	3	4.23
5" x 7"	57EMCF	2.18 cup	1	10-20-40	7	2 1/16	4.07
6" x 9" Flat	69EMCF	2.18 cup	1	10-20-40	7	2¼	4.30
6" x 9" Free Edge Cone	FE69UMW	*10.00 oz.	1	10-20-40	10	3 1/16	8.08



4" WEATHERPROOF

NOTE—Transformer Mounting Boss on all 4", 5" Round, 8" and 12" Speakers.

EIA WARRANTY APPLIES TO ALL OAKTRON SPEAKERS.

WEATHERPROOF SPEAKERS

Specially Impregnated Cones, Gaskets and Dust Caps

3½" Square	35D8M	1.47	1/16	8	3	2	$2.68
4" Square	4D8M	1.47	1/16	8	3	2 3/16	2.65
5" Round	RFD8M	1.47	1/16	8	3	2 3/8	2.74
8" Pin Cushion	8F8M	3.16	3/4	8	8	3 1/16	4.84

TRACTOR REPLACEMENT SPEAKERS

Special Heavy Duty Construction with Weatherproof Cones

•4" Square	4EU8M	*3.00	3/4	8	6	1 1/16	$3.40
•6" Pin Cushion	6GU8M	*6.00	1	8	9	2 3/8	4.86
4" x 8"	48GU8M	*6.00	1	8	9	2 1/16	6.46
•5" x 7"	57GU8M	*6.00	1	8	10	2 1/2	4.39
6" x 9"	69H8M	6.80	1	8	12	4 1/2	7.02

© United Technical Publications

Net

STEREO SPEAKER KITS

Easy to install—Complete instructions, wire aand hardware come with each kit.

Part No.	Kit Size	Speaker	Grill Finish	Sugg. Dealer Price
VS35CA	3" x 5"	135C8C	Aluminum Paint	$4.00
VS35CC	3" x 5"	135C8C	Chrome Plated	4.21
VS35EA	3" x 5"	135EU8	Aluminum Paint	4.72
VS35EC	3" x 5"	135EU8	Chrome Plated	4.93
VS53EA	5¼" Round	RL53E8C	Aluminum Paint	6.19
VS53EC	5¼" Round	RL53E8C	Chrome Plated	6.55
VS53GA	5¼" Round	RL53GU8	Aluminum Paint	7.42
VS53GC	5¼" Round	RL53GU8	Chrome Plated	7.90

NOTE: Each Kit contains one speaker, one grill, mounting hardware and instruction sheet. Use two kits for stereo. Aluminum painted grills may be repainted to match any decor.

ACCESSORIES/SPEAKERS

Part No.	Size	Magnet Weight Ounces	VOICE COIL Size	VOICE COIL Imped. Ohms	Over-All Depth	Power Watts	Sugg. Dealer Price
V135C8C	3" x 5"	1.00	¾"	8	1 1/16	4	$2.33
V135EU8	3" x 5"	*3.00	¾"	8	1 1/16	6	3.20
5D8S	5" Pincushion	1.47	¾"	8	2 5/16	5	2.50
R5EU8	5" Round	*3.00	¾"	8	1 3/16	6	3.04
53E8C	5¼" Pincushion	2.18 Cup	1"	8	2 1/16	6	3.20
53GU8	5¼" Pincushion	*6.00	1"	8	2 1/16	8	4.48

* Ceramic Magnet — All others Alnico 5.

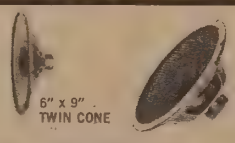
ACCESSORIES/GRILLS

Part No.	Size	Finish	Sugg. Dealer Price
VSG35A	3" x 5"	Aluminum Paint	$1.06
VSG35C	3" x 5"	Chrome Plated	1.24
VSG53A	5¼"	Aluminum Paint	1.88
VSG53C	5¼"	Chrome Plated	2.25

Grills can only be used with RL prefix speakers.

TWIN CONE SPEAKERS

Matched dual cones for true high fidelity sound reproduction.



6" x 9" TWIN CONE — 12" ROUND TWIN CONE

Size and Shape	Part Number	Magnet Weight Ounces	Dia. Inches	VOICE COIL Imped-ance (Ohms)	Power in Watts	Max. Depth in Inches	Sugg. Dealer Price
8" Pin Cushion	8F8W	3.16	¾	8	8	3 5/16	$4.82
8" Pin Cushion	8H8W	6.80	1	8	12	4	6.66
8" Pin Cushion	8HU8W	*10.00	1	8	12	3	6.57
12" Round	12H8W	6.80	1	8	12	5½	8.66
• 5" x 7"	57GU8W	*6.00	1	8	8	2 5/8	5.66
6" x 9"	69E8WC	2.18 cup	1	8	6	2 7/8	3.98
6" x 9"	68HU8W	*10.00	1	8	10	3 5/16	6.46
6" x 9"	△69HU8WD	*10.00	1	8	10	3 5/16	7.69
4" x 10"	410GU8W	*6.00	1	8	9	2 5/16	5.76

△Dual 8 ohm voice coil. Auto radio and stereo tape player will operate from same speakers when used in rear seat application. Eliminates need for complicated switching.

* Ceramic Magnet — all others Alnico 5

INTERCOM SPEAKERS

Size and Shape	Part No.	Magnet Weight Ounces	Dia. Inches	VOICE COIL Imped-ance (Ohms)	Power in Watts	Max. Depth in Inches	Sugg. Dealer Price
3½" Square	35A45C	.53 cup	¾	45	2	1 3/4	$1.96
4" Square	4A45C	.53 cup	¾	45	2	1 3/4	1.82
4" Square	4D45	1.47	¾	45	3	2 3/16	2.42
5" Pin Cushion	5D45	1.47	¾	45	3	2 3/16	2.57
8" Pin Cushion	8F45	3.16	¾	45	8	3 5/16	4.64

TWEETER SPEAKERS

These speakers are true compression type, using totally enclosed baskets and molded curvilinear cones for maximum high frequency radiation, 8 ohm aluminum voice coils and Alnico 5 magnets—Blue luminescent enamel finish.

Size and Shape	Part Number	Imped-ance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Max. Depth in Inches	Sugg. Dealer Price
3" Square	3C8T		1.00 oz.	¾"	4	3000-16,000	1 1/16	$2.25
3½" Square	35D8T		1.47 oz.	⅞"	5	3000-16,000	2	2.57
4" Square	4D8T	8 Ohms	1.47 oz.	⅞"	5	3000-15,000	2 5/16	2.57
5" Round	5D8T		1.47 oz.	⅞"	5	2000-15,000	2 5/16	2.68
4" x 6"	46D8T		1.47 oz.	⅞"	6	2000-17,000	2 5/16	3.01

SYSTEMS — HIGH FIDELITY

Matched Trio for Multi-Speaker Application

Size in Inches	Part Number	Imped-ance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Max. Depth in Inches	Sugg. Dealer Price
12 6x9 4x6 Harness with Crossover	ST-124	8 Ohms	12" Woofer 6.80 oz. 6"x9" Mid Range 3.16 oz. 4"x6" Tweeter 1.47 oz.	1" ¾" ⅞"	12	35-15,000	5 5/16 3 5/16 2 5/16	$19.53

REAR SEAT SPEAKER KITS & ACCESSORIES

Featuring Oaktron's High Energy cup housing speakers. Solderless hookup — No special tools required for installation. Includes all necessary hardware.



Model	Speaker	Grille	Control	Speaker	Max. Depth in Inches	Sugg. Dealer Price
RK57	5 x 7	Gray	3 Pos. Switch	57C3C	2 3/16	$5.56
RK57C	5 x 7	Chrome	3 Pos. Switch	57C3C	2 3/16	5.87
RK57F	5 x 7	Gray	Fader	57C3C	2 3/16	5.78
RK57CF	5 x 7	Chrome	Fader	57C3C	2 3/16	6.08
RK69	6 x 9	Gray	3 Pos. Switch	69C3C	2 13/16	5.72
RK69C	6 x 9	Chrome	3 Pos. Switch	69C3C	2 13/16	6.05
RK69F	6 x 9	Gray	Fader	69C3C	2 13/16	5.96
RK69CF	6 x 9	Chrome	Fader	69C3C	2 13/16	6.26
MK69	6 x 9 Multi Imped-ance	Gray	3 Pos. Switch	69EMCF	2¼	7.18
MK69C		Chrome	3 Pos. Switch	69EMCF	2¼	7.49
MK69F		Gray	Fader	69EMCF	2¼	7.40
MK69CF		Chrome	Fader	69EMCF	2¼	7.70

ACCESSORIES:

Part No.	Description	
FA-1	Fader Control with Presoldered Wire and Hardware	$1.62
SW-1	Switch Control with Presoldered Wire and Hardware	1.42
CH57	5 x 7 Chrome Grill with Hardware	1.46
CH69	6 x 9 Chrome Grill with Hardware	1.46
GY57	5 x 7 Gray Grill with Hardware	1.15
GY69	6 x 9 Gray Grill with Hardware	1.15

Grills listed above supplied individually visual packed.

HIGH FIDELITY SPEAKERS

ALL OAKTRON HI-FIDELITY SPEAKERS ARE ENCLOSED IN A PLASTIC COVERING AND INDIVIDUALLY BOXED TO INSURE MAXIMUM PROTECTION.

COAXIAL SPEAKERS

Oaktron's coaxial type speakers are superbly engineered to produce a flat response over a wide range of frequencies. These speakers are finished in a glossy royal blue luminescent enamel and feature a unique cross over network, solid basket compression type tweeters, specially treated aluminum voice coils and Alnico 5 magnets. These features combined with Oaktron's superior workmanship offer the finest in coaxial speakers.



12" COAXIAL

Size in Inches	Part Number	Imped-ance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Max. Speaker Depth in Inches	Sugg. Dealer Price
8	CA-8	8 Ohms	8" Woofer 3.16 oz. 3" Tweeter .53 oz.	¾" ¾"	8	60-14,000	4½	$ 9.27
8	‡CA-8-HD	8 Ohms	8" Woofer 6.80 oz. 3" Tweeter .53 oz.	1" ¾"	10	50-14,000	4½	12.15
12	CA-12	8 Ohms	12" Woofer 6.80 oz. 3" Tweeter 1.00 oz.	1" ⅞"	12	35-14,000	6 1/16	13.59
12	‡CA-12-HD	8 Ohms	12" Woofer 10.10 oz. 3½" Tweeter 1.00 oz.	1¼" ⅞"	20	25-14,000	6 1/16	17.91
15	‡CA-15-HD	8 Ohms	15" Woofer 10.10 oz. 5" Tweeter 1.00 oz.	1¼" ⅞"	20	20-13,000	7 1/16	24.39
6x9	CA-69	8 Ohms	6x9" Woofer 2.15 oz. 3" Tweeter .53 oz.	¾" ⅝"	6	70-14,000	3 5/16	8.37
6x9	CA-69-HD	8 Ohms	6x9" Woofer 6.80 oz. 3" Tweeter .53 oz.	1" ⅝"	10	60-14,000	4 5/16	11.25

CLASSIC SERIES

Twin cone speakers:

- Perrectly matched dual cones
- Smooth Response
- Heavy magnets
- Large voice coils



6" TWIN CONE

SAME GENERAL APPEARANCE AS COAXIAL SPEAKERS

Excellent woofer characteristics combined with a perfectly matched twin cone to complete a truly exceptional full range high fidelity speaker.



8" TWIN CONE

Size in Inches	Part Number	Imped-ance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Max. Speaker Depth in Inches	Sugg. Dealer Price
6	‡FE6W Free Edge Cone	8 Ohms	*6.00 oz.	1"	12	40-15,000	3 5/16	$ 8.91
8	‡FE8KW Free Edge	8 Ohms	*10.10 oz.	1¼"	20	30-14,000	4 3/16	13.59
8	‡FE-8W Twin Cone	8 Ohms	6.80 oz.	1"	12	40-16,000	4½	10.71
12	‡12K8W	8 Ohms	10.10 oz.	1¼"	20	25-13,000	6 5/16	16.11
15	‡15K8W	8 Ohms	10.10 oz.	1¼"	20	20-13,000	7 7/16	22.41
6x9	FE-69UW Twin Cone	8 Ohms	*10.00 oz.	1"	10	35-16,000	3 5/16	8.19

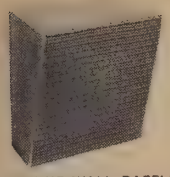
‡Chrome Finished Dust Cover. *Ceramic Magnet.

OAKTRON INDUSTRIES, INC.

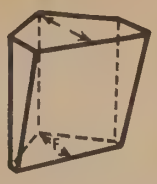
Net

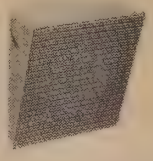
© United Technical Publications

Oaktron Baffles are smartly designed to complement any decor. Rugged one half inch cabinet hardwood construction assures longer service even under the most severe conditions. Beautifully finished in a natural blonde or walnut these baffles represent the ultimate in appearance and sound reproduction. Speaker and baffle mounting hardware included.

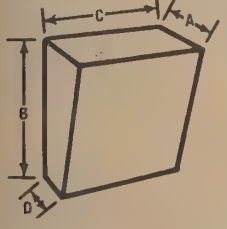


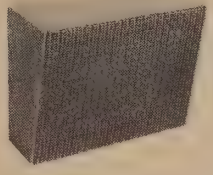
DELUXE WALL BAFFLE





DELUXE "KORNER" BAFFLE





CUSTOM WALL BAFFLE

DELUXE WALL BAFFLES

Speaker Size	Part No.	Furniture Finish	Material	DIMENSIONS A	B	C	D	Sugg. Dealer Price
4"&5"	WB4/5-B	Blonde	Cabinet Hardwood	4½"	6¼"	6½"	2½"	$4.16
4"&5"	WB4/5-W	Walnut	Cabinet Hardwood	4½"	6¼"	6½"	2½"	4.16
6"	WB6-B	Blonde	Cabinet Hardwood	4⅝"	8"	9⅜"	2⅝"	4.96
6"	WB6-W	Walnut	Cabinet Hardwood	4⅝"	8"	9⅜"	2⅝"	4.96
* 8"	WB8-B	Blonde	Cabinet Hardwood	6¼"	10⅝"	9½"	3½"	5.36
* 8"	WB8-W	Walnut	Cabinet Hardwood	6¼"	10⅝"	9½"	3½"	5.36
12"	WB12-B	Blonde	Cabinet Hardwood	9⅛"	14⅛"	13¾"	5⅜"	8.72
12"	WB12-W	Walnut	Cabinet Hardwood	9⅛"	14⅛"	13¾"	5⅜"	8.72

* Also available notched for use with B-8 baffle bracket. Add 15¢ per unit to baffle price. Specify notched when ordering.

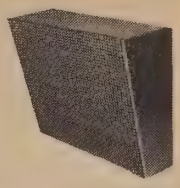
DELUXE "KORNER" BAFFLES

Speaker Size	Model	Furniture Finish	Material	DIMENSIONS A	B	C	D	E	F	Sugg. Dealer Price
8"	KB8-B	Blonde	Cabinet Hardwood	4"	10⅝"	9½"	1"	8¼"	5⅛"	$8.72
8"	KB8-W	Walnut	Cabinet Hardwood	4"	10⅝"	9½"	1"	8¼"	5⅛"	8.72
12"	KB12-B	Blonde	Cabinet Hardwood	5⅜"	14"	13½"	1¾"	11¾"	8⅛"	12.56
12"	KB12-W	Walnut	Cabinet Hardwood	5⅜"	14"	13½"	1¾"	11¾"	8⅛"	12.56

CUSTOM WALL BAFFLES

Speaker Size	Part No.	Furniture Finish	Material	DIMENSIONS A	B	C	D	Sugg. Dealer Price
‡ 8"	CWB8-B	Blonde	Cabinet Hardwood	6"	9⅝"	12"	4¼"	$7.12
‡ 8"	CWB8-W	Walnut	Cabinet Hardwood	6"	9⅝"	12"	4¼"	7.12

SLIMLINE WALL BAFFLES



Speaker Size	Part No.	Furniture Finish	Material	DIMENSIONS A	B	C	D	Sugg. Dealer Price
‡ 8"	SWB8-B	Blonde	Cabinet Hardwood	4½"	9⅝"	12"	2⅞"	$6.32
‡ 8"	SWB8-W	Walnut	Cabinet Hardwood	4½"	9⅝"	12"	2⅞"	6.32

‡ Also available notched for use with B-8A baffle bracket. Add 15¢ per unit to baffle price. Specify notched when ordering.

CEILING BAFFLES









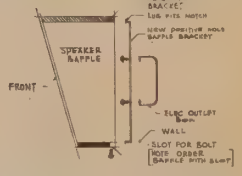
Oaktron's Ceiling Baffles possess qualities and design achieved only after years of engineering in this field. The extremely high efficiency and wide sound dispersion of these units result in superior acoustical sound reproduction. One piece construction eliminates vibration and rattle. Mount directly to the ceiling or to the convenient plaster ring. Available in satin aluminum and white baked enamel steel. Speaker mounting hardware included.

Speaker Size	Model	Finish	Shape	Material	Dimension A	Sugg. Dealer Price
8"	CR8-S	Satin	Round	Aluminum	12¾"	$3.24
8"	CR8-W	White	Round	Steel	12¾"	3.06
8"	CS8-S	Satin	Square	Aluminum	12⅛"	3.24
8"	CS8-W	White	Square	Steel	12⅛"	3.06
PLASTER RING						
8"	PR8	Grey	—	Steel	—	$2.25

CONSTANT VOLTAGE LINE TRANSFORMERS
Supplied with 6" Pigtail Leads — Individually Packaged Transformers Can Be Mounted at Factory

Part No.	Primary Power (Watts)	Secondary Impedance (Ohms)	Nominal Watts	Mounting Centers (In.)	Suggested Dealer Price
70.7 VOLT CONSTANT VOLTAGE LINE					
T-71	2/1/.5	8/4	2	1¾	$2.07
T-72	5/2.5/1.25/.62/.31	8/4	5	2	2.61
25 VOLT CONSTANT VOLTAGE LINE					
T-25	2/1/.5	8/4	2	1¾	$2.07
T-26	5/2.5/1.25/.62/.31	8/4	5	2	2.61

NEW, POSITIVE HOLD, BAFFLE BRACKET



Used To Mount Notched Deluxe Wall Baffle to Standard Electrical Outlet Box

Part No.	Material	Finish	Sugg. Dealer Price
B-8	3/32" Steel	Aluminum Painted	$ .57
†B-8A	3/32" Steel	Blue Painted	$ .57

† Used To Mount Notched Custom And Notched Slimline Wall Baffles To Standard Electrical Outlet Box.

Note — Baffles can be supplied with speaker and transformer installed at a total cost of the units supplied plus 60¢ for installation.

OAKTRON INDUSTRIES, INC.

QUAM *Quality Line* SPEAKERS


Fig. R

REPLACEMENT SPEAKERS

Voice coil impedance 3.2 ohms ±10%

Model No.	Size	Magnet Weight (ounces) and Type	Power Handling Watts	Depth (inches)	Shipping Weight (pounds)	Dealer Net
46A07*	4″ x 6″	.65 oz. Alnico V	3.5	1 15/16	¾	$3.21
46A1*	4″ x 6″	.65 oz. Q/8	3.5	1 15/16	¾	3.33
46A15	4″ x 6″	1.47 oz. Alnico V	3.5	2¼	1	3.69
48A2*	4″ x 8″	1.2 oz. Q/8	4.5	2 1/16	1	4.80
410A2	4″ x 10″	1.2 oz. Q/8	6	2 11/16	1	5.52
5A05*	5″	.55 oz. Alnico V	3	1 11/16	½	2.16
5A1*	5″	.65 oz. Q/8	3.5	2	1	3.09
5A15	5″	1.47 oz. Alnico V	3.5	2 5/16	1	3.39
52A1*	5¼″	.65 oz. Q/8	4	1 7/8	1	3.27
52C10	5¼″	10.0 oz. Ceramic	10	2¼	2⅛	6.57
57A1*	5″ x 7″	.65 oz. Q/8	5	2⅜	1	3.42
57A15	5″ x 7″	1.47 oz. Alnico V	5	2 11/16	1	4.11
57A21	5″ x 7″	2.15 oz. Alnico V	5	2 61/64	1¼	4.56
6A1	6½″	1.0 oz. Alnico V	5	2 5/8	1	3.60
6A15	6½″	1.47 oz. Alnico V	5	2 5/8	1	3.87
6A31	6½″	3.16 oz. Alnico V	6	3 11/64	1¾	5.10
69A1*	6″ x 9″	1.2 oz. Alnico V	6	2¾	1¼	3.69
69A2	6″ x 9″	1.2 oz. Q/8	8	2¾	1¼	4.59
69A3	6″ x 9″	3.2 oz. Alnico V	10	2 5/16	2	5.97
7A21	7″	1.4 oz. Alnico V	6	2 31/32	1	4.92
8A1*	8″	1.2 oz. Alnico V	6	2 11/16	1	4.29
8A21	8″	2.15 oz. Alnico V	7	3 13/32	1½	4.98
8A31	8″	3.16 oz. Alnico V	9	3 21/32	2	5.88
10C5	10″	4.8 oz. Ceramic	9	3 17/32	2¼	7.98
12A31	12″	3.16 oz. Alnico V	10	4 13/32	3¾	8.13
12A6A	12″	6.8 oz. Alnico V	14	5¼	4½	10.65

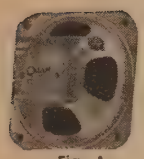

Fig. A


Fig. B

MINIATURE SPEAKERS

Impedance in ohms, indicated by digit following "Z" in number. Model numbers without "Z" impedance is 3.2 ohms ±10%.

2A05	2″	.52 oz. Alnico V	.25	7/8	⅛	$3.39
23A05	2″ x 3″	.52 oz. Alnico V	.25	1 3/32	⅛	3.84
22A06Z8	2¼″	.45 oz. Alnico V	.1	1	¼	3.21
22A06Z100	2¼″	.45 oz. Alnico V	.1	1	¼	3.54
25A07	2½″	.65 oz. Alnico V	1.5	1¼	¼	2.43
25A07Z45	2½″	.65 oz. Alnico V	1.5	1¼	¼	2.88
27A06Z12	2¾″	55 oz. Alnico V	.25	1 1/16	¼	3.18


Fig. C

GENERAL PURPOSE SPEAKERS

Impedance in ohms, indicated by digit following "Z" in number. Model numbers without "Z" impedance is 3.2 ohms ±10%.

26A07*	2″ x 6″	.65 oz. Alnico V	2	1 9/32	½	$2.88
26A07Z8*	2″ x 6″	.65 oz. Alnico V	2	1 9/32	½	3.12
30A05*	3″	.55 oz. Alnico V	2	1 3/16	½	2.13
30A05Z8*	3″	.55 oz. Alnico V	2	1 3/16	¼	2.31
30C25	3″	2.35 oz. Ceramic	2.5	1 3/16	¾	3.87
3A05*	3½″	.55 oz. Alnico V	2	1 9/32	¼	2.13
3A05Z8*	3½″	.55 oz. Alnico V	2	1 9/32	¼	2.58
35A05*	3″ x 5″	.55 oz. Alnico V	2	1½	½	2.58
35A05Z8*	3″ x 5″	.55 oz. Alnico V	2	1½	½	3.00
4A05*	4″	.55 oz. Alnico V	2.5	1½	¼	1.86
4A1*	4″	.65 oz. Q/8	3	1¾	¾	2.85
4A1Z8*	4″	.65 oz. Q/8	3	1 9/16	¾	3.27
4A15	4″	1.47 oz. Alnico V	3	2 1/16	¾	3.18
4C25	4″	2.35 oz. Ceramic	3	1 5/8	¾	3.69
46A1Z10*	4″ x 6″	.65 oz. Q/8	3.5	1¾	1	3.96
46C3	4″ x 6″	3.0 oz. Ceramic	4	1 31/32	1	4.14
5A1Z8*	5″	.65 oz. Q/8	4	2 5/16	½	3.39
52A1Z8*	5¼″	.65 oz. Q/8	3.5	1 7/8	1	3.72
57C3	5″ x 7″	3.0 oz. Ceramic	5	2 13/32	1	4.80
69C5	6″ x 9″	4.8 oz. Ceramic	10	2 7/8	1½	5.19


Fig. D


Fig. E

AUTOMOTIVE SPEAKERS

Model No.	Size	Magnet Weight (ounces) and Type	Power Handling (Watts)	Depth (inches)	Voice-Coil Impedance (Ohms)	Dealer Net
48A2Z20CT	4″ x 8″	1.2 oz. Q/8	4.5	2 1/16	20 CT	$5.55
410A2MT#	4″ x 10″	1.2 oz. Q/8	6	2 11/16	10-20 40	6.39
410A2Z10	4″ x 10″	1.2 oz. Q/8	6	2 11/16	8-10	6.36
5C3Z8	5″	3.0 oz. Ceramic	4.0	2 1/32	8 10	4.02
57A1Z8	5″ x 7″	.65 oz. Q/8	5	1 3/16	8 10	3.72
57A2MT#	5″ x 7″	1.2 oz. Q/8	5	2 5/16	10-20-40	4.38
58A15Z8	5″ x 8″	1.47 oz. Alnico V	5	2¾	8 10	4.77
6A1Z8	6″	.65 oz. Q/8	5	2 5/8	8-10	3.90
6A15MT#	6½″	1.2 oz. Q/8	5	2 5/8	10-20-40	4.56
69A1S	6″ x 9″	1.2 oz. Alnico V	6	2 1/16	3.2	5.22
69A2MT#	6″ x 9″	1.2 oz. Q/8	8	2 15/16	10-20-40	5.67
69A2Z10	6″ x 9″	1.2 oz. Q/8	8	2 15/16	8-10	5.37
610A1Z8	6″ x 10″	1.2 oz. Alnico V	8	2 13/16	8-10	5.73


Fig. F

REAR SEAT AUTO SPEAKER KITS

These kits contain everything required for the installation of the speaker. They include a dash-mounting fader control, cable, flocked screen grill, baffle plate, all necessary hardware and complete installation instructions.

AS-1	6½″	1.2 oz. Q/8	5	Shipping Wt. 2 lbs.	3.2	$6.09
AS1MT■	6½″	1.2 oz. Q/8	5	Shipping Wt. 2 lbs.	10-20-40	7.38
AS-2‡	6″ x 9″	2.15 oz. Alnico V	9	Shipping Wt. 3 lbs.	3.2	8.58
AS-4	6″ x 9″	1.2 oz. Alnico V	6	Shipping Wt. 1½ lbs.	8-10	4.65
AS5MT■	6″ x 9″	1.2 oz. Q/8	8	Shipping Wt. 3 lbs.	10-20-40	9.48

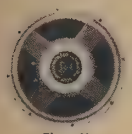

Fig. G

* Cup pot; very shallow construction. ‡ Illustrates magnet construction; see same size standard speaker or basket shape.
* Center Tapped. # Multi-Tap Speakers. ■ Multi-Tap Speaker. § Sponge rubber baffle plate gasket.

Net

© United Technical Publications

QUAM *Quality Line* SPEAKERS


Fig. H

These long-life speakers have the improved Humi-Gard Cone which utilizes a Mylar plastic film to provide maximum resistance to moisture and dirt and sand abrasion, yet does not interfere with response characteristics. Air gap surfaces cadmium plated and enameled. Quantity quotations on request.

All Quam speakers are available weather-proofed for an additional 70c list. When ordering weather-proofed speakers use part numbers appearing in this catalog and add suffix "OT" to part number. (Humi-Gard Cone available only on 3½", 4" 5", and 6½" speakers.)

OUTDOOR SPEAKERS

Voice coil impedance 3.2 ohms ±10%


Fig. I

Model No.	Size	Figure	Magnet Weight or Field	Power Handling (Watts)	Depth (inches)	Shipping Weight (pounds)	Dealer Net
3A07 OT*	3½"	A	.65 oz. Alnico V	2.5	1 33/64	½	$2.61
4A05 OT*	4"	I	.55 oz. Alnico V	2.5	1½	¼	1.86
5A05 OT*	5"	I	.55 oz. Alnico V	3	1 11/16	½	2.16
8A31PA OT	8"	C	3.16 oz. Alnico V	10	3 9/16	2	6.60

PUBLIC ADDRESS SPEAKERS

Voice coil impedance 8 ohms ±10%


Fig. J

8A1PA	8"	C	1.2 oz. Alnico V	6	2 11/16	1¼	$4.32
8A21PA	8"	C	2.15 oz. Alnico V	8	3 9/16	2	5.85
8A31PA	8"	C	3.16 oz. Alnico V	10	3 9/16	2	6.75
8A6PA	8"	B	6.8 oz. Alnico V	12	3 7/8	3¼	8.82
8C6PA	8"	O	6.0 oz. Ceramic	12	3	2½	7.23
8C10PA	8"	O	10.0 oz. Ceramic	12	3⅛	3	7.98
10C10PA	10"	L	10.0 oz. Ceramic	14	3 25/32	3¼	9.78
12A31PA	12"	B	3.16 oz. Alnico V	12	5	3¼	8.88
12A6PA	12"	B	6.8 oz. Alnico V	15	5¼	4	10.92
12C12PA	12"	O	12 oz. Ceramic	25	4½	4½	13.44

INTERCOM SPEAKERS

Voice coil impedance 45 ohms ±10%


Fig. K

25A07Z45	2½"	A	.65 oz. Alnico V	1.5	1¼	¼	$2.88
30A05Z45	3"	A	.55 oz. Alnico V	2	1 3/16	½	2.61
3A07Z45*	3½"	A	.65 oz. Alnico V	2.5	1 33/64	½	2.88
3A07Z450T§	3½"	A	.65 oz. Alnico V	2.5	1 33/64	½	3.21
4A1Z45*	4"	A	.65 oz. Q/8	3.0	1 5/16	¾	3.27
5A1Z45*	5"	C	.65 oz. Q/8	3.5	1 27/32	1	3.42
8A31Z45	8"	C	3.16 oz. Alnico V	10	3 9/16	2	6.63

COLOR TV SPEAKERS

Voice coil impedance 3.2 ohms ±10%


Fig. L

35A2C§	3" x 5"	R‡	1.2 oz. Alnico V	4	1 11/16	½	$3.36
4A2C§	4"	R‡	1.2 oz. Alnico V	4	1 5/8	½	3.21
46A2C§	4" x 6"	R‡	1.2 oz. Alnico V	4	1 11/16	1	3.57
52A2C§	5¼"	R‡	1.2 oz. Alnico V	5	1 7/8	1	3.69

BACKGROUND MUSIC SPEAKERS

Voice coil impedance 8 ohms


Fig. M

Model No.	Size	Figure	Frequency Response Cps	Magnet Weight	Power Handling (Watts)	Depth (inches)	Shipping Weight (lbs.)	Dealer Net
8C5PAX#	8"	P	50-20000	4.8 oz.	10	2 25/32	2	$6.75
8C6PAX#•	8"	P	50-20000	6.0 oz.	12	3	2½	7.35
8C10PAX#•	8"	P	50-20000	10.0 oz.	15	3⅛	2¾	8.73
8C6PAS#	8"	Q	50-6000	6.0 oz.	10	2⅛	2½	7.23
12C6PAS#•	12"	Q	40-12000	6.0 oz.	15	3½	4	10.11
12C10PAX#•	12"	P	50-15000	10.0 oz.	15	4⅜	4¼	11.46

HIGH FIDELITY SPEAKERS


Fig. N

Model No.	Size	Figure	Speaker Type	Frequency Response Cps	Power Handling (Watts)	V.C. Impedance	Shipping Weight (lbs.)	Dealer Net
15C12CO#	15"	G	Coaxial, 2000 cps. Xover	25-18,000	25	8	8	$35.31
12C10CO	12"	G	Coaxial, 2000 cps. Xover	50-15,000	14	8	6½	23.28
8C6CO	8"	G	Coaxial, 2000 cps. Xover	50-15,000	10	8	2¾	15.42
12C12X#•	12"	H	Extended range dual cone	30-16,000	18	8	5½	15.42
8C12X#	8"	H	Extended range	50-14,000	15	8	3¼	11.96
69C6X#•	6" x 9"	D	Extended range dual cone	50-15,000	12	8	2½	9.36
15C12L#	15"	H	Low frequency woofer	20- 4,000	15	8	7	23.58
12C12L#	12"	H	Low frequency woofer	30- 3,000	15	8	5½	15.42
5A15T	5"	A	High frequency tweeter	2,000-15,000	10	8	1	4.38
3A15T	3½"	A	High frequency tweeter	2,000-15,000	10	8	¾	3.87
CO5-25			Crossover Unit for use with 5A15T&3A15T				⅛	.48


Fig. O

UNIVERSAL REPLACEMENT SPEAKERS

These ingenously designed speakers fit directly into original equipment without sheering or notching. This eliminates the creation of metallic particles which might otherwise lodge in the voice coil gap.


Fig. P

Model No.	Size	Figure	Magnet Weight	Power Handling (watts)	Shipping Weight (lbs.)	Depth (inches)	Dealer Net
26A07U	2" x 6"	K	.65 oz.	2	½	1 13/32	$3.06
3A05U	3½"	K	.55 oz.	2	¼	1 13/32	2.19
35A05U	3" x 5"	K	.55 oz.	2	½	1½	2.76
4A05U	4"	K	.55 oz.	2.5	¼	1½	2.04
4A05XR*	4"	K	.55 oz.	2.5	¼	1½	3.24
46A07U	4" x 6"	K	.65 oz.	3.5	¾	1 15/16	3.33


Fig. Q

Ceramic magnet. • Dual cone. § Cup pot; very shallow construction. * Includes premounted 2500 ohm transformer.
‡ Illustrates magnet construction; see same size standard speaker for basket shape.
Q/8 — New high energy magnet material.

© United Technical Publications

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

RCA

MICROPHONES AND ACCESSORIES









POLYDIRECTIONAL RIBBON — 77DX

The quality microphone standard of the broadcast industry, the RCA 77DX, is available in two models: one with a low-gloss finish for TV, the other a satin chrome finish for AM and FM. The 77DX offers a choice of unidirectional, bidirectional, or nondirectional pickup patterns which are easily changed by a selector switch. Three frequency-response variations on the basic pickup patterns may also be obtained, thus a total of nine different directional characteristics may be ultilized. The 30- to 20,000-Hz frequency response of the 77DX makes it suitable for every high-fidelity broadcasting and recording application. Output impedance is factory connected for 250 ohms; however, it may be easily reconnected for a 30- or 150-ohm output impedance. This 77DX mounts on a standard ½-inch pipe thread, and comes with 30 feet of three-conductor shielded cable, less plug.

77DX Satin Chrome Finish **$224.00***
77DX-G Low Luster Gray Finish **199.00***

NONDIRECTIONAL DYNAMIC — BK-1A

Ideal for outdoor use or wherever constant handling is required, the BK-1A offers smooth response for both voice and music. The BK-1A is also an excellent unit for sports, panel shows, interviews, and remotes. It provides uniform response from 50 to 15,000 Hz. The swivel mounting of the BK-1A can be used to control directional characteristics. The vertical position is nondirectional; the horizontal position is semidirectional. The output impedance is 250 ohms, but 30- and 150-ohm connections are included. The BK-1A may be mounted on any type stand having ½-inch pipe thread and is perfect for use with the MA-06 desk stand. Thirty feet of three-conductor cable is supplied, less connector.

BK-1A **$95.00***

UNIAXIAL RIBBON — BK-5B

The BK-5B is a high quality ribbon instrument designed especially for use in high noise areas, as well as being suitable for general studio purposes. Maximum sensitivity of the BK-5B is in the major mechanical axis, and this produces an extremely directional cardioid pattern. Frequency response from 30 to 20,000 Hz permits using the BK-5B for all types of high fidelity voice and music pickups. The output is connected for 250 ohms, but may easily be changed to 30 or 150 ohms. It is supplied with thirty feet of three-conductor cable, less connector. A wind-screen is available for outdoor use. The BK-5B is supported by a fork mounting which has ⅛-inch pipe thread.

BK-5B **$172.00***

LAVALIER — BK-6B

The BK-6B is a lightweight microphone with excellent speech balance, ideal for remotes, interviews, and other applications where an inconspicuous microphone is needed. The 2.3-ounce unit is only 2 9/16 by 15/16 inches. Wide-range frequency response (60-15,000 Hz) permits using the microphone for all speech applications. The 250-ohm output impedance may be changed to 30 or 150 ohms by a simple change of cable connections. The small size and lanyard mounting make the BK-6B extremely versatile. Thirty feet of three-conductor shielded cable is supplied, less connector.

BK16B with lanyard and fastener **$95.00***

SUBMINIATURE LAVALIER — BK-12A

The RCA BK-12A is a high-quality subminiature microphone weighing just 20 grams and measuring only ¾" x 1½". It has a wide-frequency response of 60 to 18,000 Hz, which has been tailored for proper speech balance. A line impedance voice coil permits use with 30- to 250-ohm unloaded inputs. The BK-12A is essentially nondirectional to 6,000 Hz, and as a result, ordinary errors in orientation have negligible effect upon response. It is supplied with lanyard, tie-clip holder, cable clip and 30 feet of two-conductor cable (less connector).

BK-12A **$99.00***

HIGH-OUTPUT UNIDIRECTIONAL RIBBON — KU-3A

The KU-3A is a high-quality microphone for TV, motion picture and recording studio line pickup or wherever boom operation is used. It provides uniform response from 30 to 15,000 Hz. Output impedance is factory connected for 250 ohms; however, it may be easily connected for a 30- or 150-ohm output impedance. It is supplied with voice/music switch, resilient mounting and 12 feet of pigtail cable, less connector.

KU-3A **$604.00***

UNIDIRECTIONAL DYNAMIC — HK-106

A dual-impedance (200/15000 ohms) dynamic microphone having a unidirectional ("super" cardioid) pickup characteristic with excellent off-axis rejection at 180°, and a gentle roll-off characteristic at low frequencies. Useful for broadcast-studio, outdoor broadcasting, stage, and video-sound-track recording applications. Frequency response from 150 to 10000 Hz. Features a rotatable 5-pin connector to select low- or high-impedance output. Includes metal desk stand, adjustable microphone holder, and attache-type carrying case. Housed in a die-cast metal case, the HK-106 has an attractive black- and satin-chrome finish.

HK-106 ..... **$44.00***

OMNIDIRECTIONAL DYNAMIC — HK-111

Professional microphone well suited for broadcast-studio, stage, and monaural-and-stereophonic-recording applications. Flat frequency response throughout its response range of 50 to 20000 Hz contributes to the excellent sound-reproduction capability. Supplied wind screen, special 5-pin connector for changing low- to hi-impedance, and dual thread adjustable microphone holder. Die-cast metal case with an attractive black- and satin-chrome finish.

HK-111 ..... **$54.00***

OMNIDIRECTIONAL DYNAMIC — HK-115

Dual-impedance (15000/200 ohms) dynamic microphone having an omnidirectional pickup characteristic. Allows sounds originating from any direction to be picked up by the microphone. Designed for radio and TV broadcast studio, theatre and stage, and hi-quality music and voice recording applications. Frequency response from 70 to 16000 Hz. Features on-off switch, removable wind screen, adjustable microphone holder, special hi-low impedance 5-pin rotatable connector, and attache-type carrying case. Housed in die-cast metal case. Attractive black- and satin-chrome finish.

HK-115 ..... **$44.00***

* Optional professional net

© United Technical Publications

RCA

MICROPHONES AND ACCESSORIES



UNIDIRECTIONAL DYNAMIC — HK-96

An excellent microphone for use on stage, for recording, or in broadcast applications. Excellent frequency response (50 to 15,000 Hz) and features a 3-position bass roll-off switch to reduce rumble and unwanted background noise. The cardioid (unidirectional) pick-up pattern effectively reduces feedback and unwanted audience and off-stage sounds. The special 5-pin connector permits switching from low to high impedance (200 or 15,000 ohms) by merely rotating the connector. The unit has a black and chrome finish. Comes complete with wind-creen, slip-on swiven mount, 20 ft. of 2-conductor shielded balance line (less connector) and attractive black attache case.

HK-96 ..... **$50.00***

UNIDIRECTIONAL DYNAMIC — HK-97

Excellent unit for stage use by individual performers or by groups in which each individual has his own microphone. It has excellent frequency response (50 to 15,000 Hz), a good cardioid (unidirectional) pick-up pattern to reduce feedback and screen out unwanted off-stage sounds, and on-off muting switch. Special 5-pin connector for low and high impedance. Black and chrome finish. Comes complete with windscreen, slip-on mount, 20 ft. of 2-conductor shielded balance line (less connector) and attractive black attache case.

HK-97 ..... **$40.00***

OMNIDIRECTIONAL DYNAMIC — HK-98

This omnidirectional microphone is the perfect unit for on stage, recording, and broadcast use where two or more individuals are using the same microphone. Excellent frequency response (40 to 17,000 Hz) and features an on-off muting switch. Used in conjunction with several microphones, utmost flexibility is obtained when performers switch from group to solo. The special 5-pin connector permits switching from low to high impedance (200 to 15,000 ohms). Mounting with any 5/8"-27 fixture thread permits the use of low cost stands. Black and chrome finish unit. Comes complete with wind-screen, slip-on mount, 20 ft. of 2-conductor shielded balance line (less connector) and attractive black attache case.

HK-98 ..... **$40.00***

UNIDIRECTIONAL DYNAMIC HK-99, HK-116, HK-117, & HK-118

Especially designed for the home recording enthusiast who needs a replacement, or who prefers a better quality microphone, these units are low impedance (500 ohms) microphones with good frequency response (80 to 10,000 Hz). The cardioid (unidirectional) pick-up pattern reduces feedback and unwanted background noises. They have an on-off switch; HK-99 and -118 have tape recorder remote-control capability. The 2.4 oz. (less cable) units have a black and chrome finish. Included is a desk stand and cable. These microphones have the same electrical characteristics but have different terminations and switching features.

HK-99 ..... **$8.00***

HK-116, HK-117, & HK-118 ..... each **$9.00***

OMNIDIRECTIONAL DYNAMIC — HK-100, HK-119, & HK-120

Designed for the home recording enthusiast who desires a good omnidirectional microphone as a replacement for the cardioid types which usually accompany tape recorders. Ideal microphones for recording groups of two or more persons simultaneously without passing the microphone around. The units are high impedance 50,000 ohms) microphones with good frequency response (100 to 8,000 Hz) for voice reproduction. They all have an on-off switch; HK-100 has tape recorder remote control capability. Finish is black and chrome, and weighs 3.9 oz., less cable. Comes complete with a desk stand and a 6-ft. cable. These microphones have the same electrical characteristics but different terminations and switching features.

HK-100 ..... **$8.00**

HK-119 & 120 ..... each **$9.00***

DYNAMIC — HK-101 & 109

Dependable performance and attractive styling (metallic silver and satin chrome finish) make these units ideal for use in ham, CB, base-station mobile communications, and paging applications. The HK-101 features an output impedance of 50,000 ohms and a frequency response of 70 to 9,000 Hz, the HK-109 — 400 ohms and 400-8,000 Hz. The cardioid pick-up pattern effectively reduces feedback and unwanted background noises. The base of the microphone has a press-to-talk switch, a press-to-lock and press-to-unlock switch and a lift switch (only on HK-101) which activates the microphone when it is picked up. Wiring changes can be made quickly and simply for use with various types of transmitters.

HK-101 ..... **$44.00***

HK-109 ..... **$49.00***



ACCESSORIES—10 No. 20

Wind-screen — **MA-25** — For use with BK-5B microphone **$16.50***

Boom Mount — **MA-24** — Shock mounting to isolate BK-5B microphone from vibration **$36.50***

Adapter — **MA-08** — 5/8"-27 female fitting — 1/2" male pipe thread, to adapt a 5/8"-27 microphone to a 1/2" pipe thread stand ..... **$ .60***

Adapter — **MA-09** — 1/2" female pipe thread, 5/8"-27 malme fitting, to adapt a 1/2" microphone to a 5/8"-27 stand **$3.75***

Desk Stand — **MA-06** — 1/2" pipe fit-male, 4 3/8" dia., 1 3/8" high. For use with BK-1A microphone **$7.75***

Desk Stand — **MA-05** — 1/2" pipe fit-male, 4 1/2" wide, 6 5/8" long, 3/4" high or 1 3/4" (incl. Stem). Crinkle and chrome finish. 4 lbs. For use with 77DX and BK-5B microphones **$16.75***

Desk Stand — **MA-01** — 5/8"-27 male thread, 7" to 11" chrome tube, 8" dia. Crinkle base. About 6 lbs. Use MA-08 Adapter for 1/2" pipe thread microphone. **$5.20***

Banquet Stand — **MA-02** — 5/8"-27 male thread, 13" to 25" chrome tube, 8" dia. Crinkle base. About 6 lbs. Use MA-08 Adapter for 1/2" pipe thread microphone. **$5.85***

Floor Stand — **MA-03** — 5/8"-27 male thread, 7/8" dia., 35" to 65" chrome tube, 12" dia. Crinkle base. Use MA-08 Adapter for 1/2" pipe thread microphone. **$9.00***

Floor Stand (Deluxe)—**MA-04**—5/8"-27 male thread, 1 1/8" dia., 37" to 66" chrome tube. Triangular 17" dia. Crinkle base. Use MA-08 Adapter for 1/2" pipe thread microphone. **$16.50***

Swivel Adapter — **MA-32** — Fits conventional 5/8" 27 thread floor and desk stands **$3.40***

Cable — **MA-27** — 20-ft. cable with special "Hi Z/Low Z" chrome connector **$4.10***

Cable — **MA-27V1** — 20-ft. cable with special "Hi Z/Low Z" gold connector **$5.25***

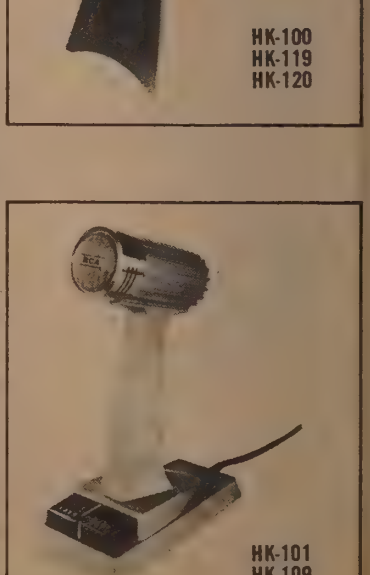
Connector — **MA-35** — 5-pin female **$1.50***

Connector — **MA-39** — 3-pin female **$1.15***

Transformer — **MA-41** — Impedance matching transformer with two connectors **$17.00***

Connector — **MA-44** — 5-pin male **$1.15***





Net

© United Technical Publications

RCA

MICROPHONES AND ACCESSORIES


HK-103

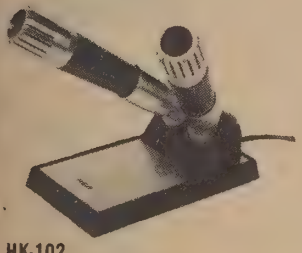

HK-105


HK-112


HK-110


HK-107

HK-108


HK-102


HK-104


HK-113

UNIDIRECTIONAL DYNAMIC — HK-103

The unidirectional (cardioid) HK-103 is designed for vocalists, very high-quality voice applications, and orchestral pickup, where high off-axis rejection is needed. Finished in gold. With a frequency response from 100 Hz to 15000 Hz, the HK-103 has excellent off-axis rejection between 135° and 180°. Supplied with a special 5-pin rotatable connector which permits changing from low-to-high impedance. Also supplied with the microphone is a dual-thread (5/8"-27 thread and 5/16"-18 thread) microphone holder, a gold-and-black weighted metal desk stand, and an attache-type carrying case.

HK-103 ..... **$64.00***

OMNIDIRECTIONAL DYNAMIC — HK-105

General-purpose microphone for use in applications such as public-address and ungrading of home tape recorders. Frequency response from 70 Hz to 12000 Hz. Supplied with 10 feet of permanently attached cable, a desk stand and a lanyard. The HK-105 is housed in a die-cast metal case having a smart black-and-chrome finish.

HK-105 ..... **$14.00***

OMNIDIRECTIONAL DYNAMIC — HK-112

Especially useful for general-purpose monaural and stereophonic high-fidelity home recording of voice, music or choral arrangements. Frequency response from 100 Hz to 13000 Hz. A special 5-pin connector supplied with the microphone permits switching from low- to high-impedance. Also supplied with a dual-thread (5/8"-27 thread and 5/16"-18 thread) adjustable microphone holder which makes the microphone suitable for use with a wide variety of microphone stands. Housed in a die-cast metal case and has an attractive satin-chrome finish.

HK-112 ..... **$34.00***

UNIDIRECTIONAL DYNAMIC — HK-110

The unidirectional (cardioid) HK-110 is designed for close vocal work, "rock" bands and combos, and high-fidelity home-recording applications. Finished in satin black and gold. Frequency response of 100 Hz to 12000 Hz, and features an on-off switch and an integral wind screen. Supplied with a special 5-pin connector which can be used to select low- or high-impedance output, a dual-thread (5/8"-27 thread and 5/16"-18 thread) gold-finished microphone holder, and an attache-type carrying case. Housed in a die-cast metal case.

HK-110 ..... **$54.00***

DYNAMIC — HK-107

This omnidirectional, hand-held, high-impedance microphone is designed for general voice and mobile communications applications. The special tapered high-and-low frequency response characteristic reduces background noise and rumble. The HK-107 has a switch for push-to-talk remote-control operation, and is housed in a high-impact black plastic case.

HK-107 ..... **$12.00***

DYNAMIC — HK-108

Especially designed for use in high-noise-level locations, the HK-108 is a unidirectional (cardioid), noise-cancelling microphone. This dual-cartridge, hand-held, microphone is intended for close-talk applications such as public address, paging, and mobile communications, and effectively reduces sound pickup from sources more than a few inches away. The HK-108 features a switch which can be used for push-to-talk remote-control operation, and is housed in a high-impact black plastic case.

HK-108 ..... **$17.00***

UNIDIRECTIONAL DYNAMIC — HK-102

Twin dynamic microphones especially designed for stereophonic home-recording, conference and panel discussions, and general-meeting recording applications. Output impedance of 10000 ohms and a frequency response from 150 to 10000 Hz. Supplied with a desk stand, wired for two-channel output, and two swivel-type microphone holders which can be angled to provide the separation required for stereophonic recording. These versatile microphones can be removed from the stand and used as hand-held units. In addition to the desk stand and twin cables, the HK-102 microphones are also supplied with two lanyards and two slip-on desk stands. The HK-102 microphones have a die-cast metal case with an attractive black- and satin-chrome finish.

HK-102 ..... **$62.00***

UNIDIRECTIONAL DYNAMIC — HK-104

Dual-channel dynamic microphone especially useful in two-channel home-recording, conference and panel discussions, and general-meeting recording applications. Output impedance of 10000 ohms and a frequency response from 150 Hz to 10000 Hz. Features a unique, attractive design which incorporates two unidirectional microphones in a single die-cast metal housing having a satin-chrome finish. Supplied with a gray metal desk stand, and ten feet of two-conductor, shielded, ivory cable.

HK-104 ..... **$45.00***

DYNAMIC — HK-113

A very small, omnidirectional, 10000 ohm microphone, the HK-113 is especially useful in service counter, voice recording, public address and paging applications. The small flexible goose-neck base fits a standard microphone stand, and the push-to-talk/lock switch can also be used for remote control. Because of its high-style and unobtrusive appearance, the HK-113 is particularly well suited in public places where sound re-enforcement is needed.

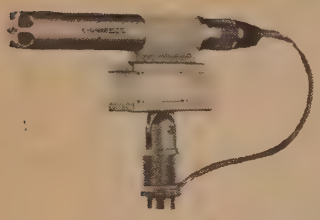
HK-113 ..... **$29.00**

© United Technical Publications

Net

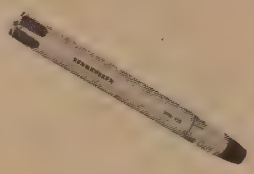
SENNHEISER ELECTRONIC CORPORATION

TRANSISTORIZED CONDENSER MICROPHONES



MKH 105

Omnidirectional, frequency range 20-20000 Hz, minimum matching load 200 Ω, output −27 dB.
Without Shockmount **$290.00**



MKH 405

Cardioid polar pattern, frequency range 40-20000 Hz, minimum matching load 200 Ω, output −27 dB. **$331.00**



MKH 805

Shotgun boom microphone for long range pick up, frequency range 50-20000 Hz, output −21 dB. **$446.00**



MKH 125

Smallest condenser lavalier microphone, frequency range 20-20000 Hz.
Microphone **$210.00**
Electronic Unit **$213.50**

CONNECTION CABLES FOR CONDENSER MICROPHONES

KAT 15 to Nagra line input **$83.00**

KA 7 to respective power supply **16.00**

MC1/CF or **CM**, 15 ft. one side female Tuchel, other side either XLR female or male connector **14.50**

MC1/CP from MZN 5-1 power supply to amplifier input with XLR connector, 20 dB built-in pad **21.00**

MC 45 for MKH 125 to power supply **14.50**

Connection cables to any other sound equipment, please inquire.

ACCESSORIES FOR TRANSISTORIZED CONDENSER MICROPHONES

MZA 6-2 Battery adapter **$35.00**

MZF 5 Roll off filter **55.00**

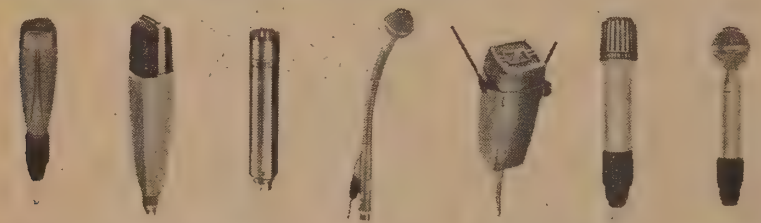
MZN5/1 AC power supply **104.00**

MZW 804 Windscreen for MKH 805 to be used with MZS 805 shockmount **99.00**

MZS 805 Shockmount for MKH 805 ..... **66.00**

MZA 216 Thread adapter ⅜-⅝" **1.20**

DYNAMIC MICROPHONES



MD 21 N **MD 421 U** **MD 211 U** **MD 408 L** **MD 214** **MD 420 2** **MD 406 L**

MD 21 N Omnidirectional, 40-18000 Hz ±3 dB, output −53 dB, MC 1 cable + thread adapter ..... **$ 87.70**

MD 421 U Studio cardioid microphone, 30-17000 Hz ±2, 5 dB, output −53 dB, MC 22 cable plus MZA 216 thread adapter **123.20**

MD 211 U Omnidirectional, 40-20000 Hz, output −56 dB plus cable **143.00**

MD 408 L Super cardioid, 60-14000 Hz, output −56, 8 dB, cable + thread adapter, 200 Ω **77.70**

MD 408 H Same microphone + cable transformer TM 515 S, high impedance **89.20**

MD 214 Lavalier microphone with integrated shockmount and equalizing filter, 60-15000 Hz, output −59 dB, 200 Ω **130.00**

MD 406 L Cardioid, 50-15000 Hz ±3 dB, output −55 dB, MC 2 cable + clamp + thread adapter, 200 Ω **71.45**

MD 406 H Same microphone + cable transformer TM 514, S, high impedance **83.45**

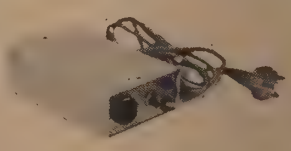
MD 420 2 Super cardioid, 200-10000 Hz, noise cancelling microphone, output −54 dB, + MC 2 cable **68.00**

MD 420 T Same microphone but with on/off switch **75.00**

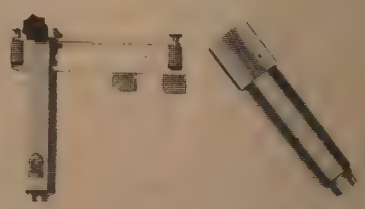
ACCESSORIES



MZA 6-2 **MZW 804**



MZN 5/1

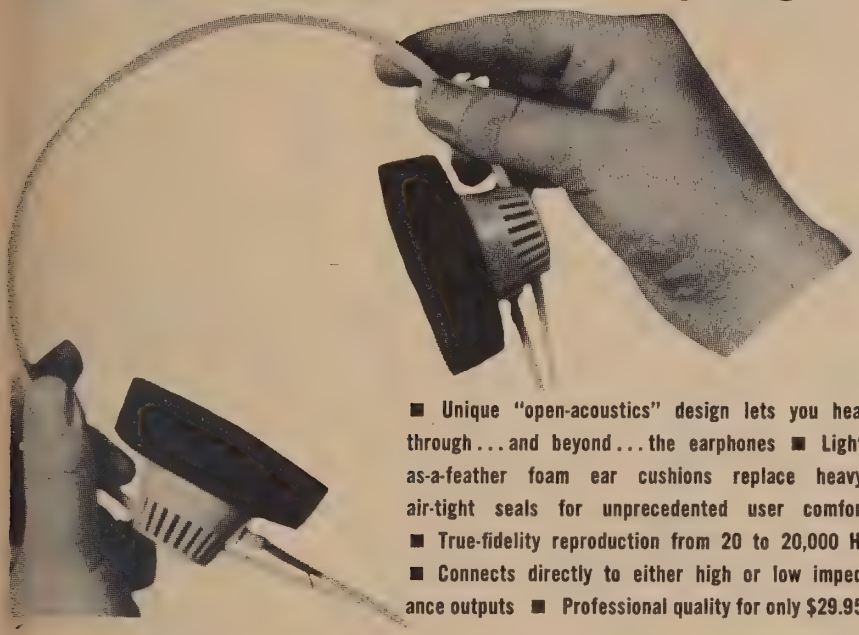


MZS 805 **MZF 5**

© United Technical Publications

SENNHEISER ELECTRONIC CORPORATION

HD 414 STEREO HEADPHONES



■ Unique "open-acoustics" design lets you hear through . . . and beyond . . . the earphones ■ Light-as-a-feather foam ear cushions replace heavy, air-tight seals for unprecedented user comfort ■ True-fidelity reproduction from 20 to 20,000 Hz ■ Connects directly to either high or low impedance outputs ■ Professional quality for only $29.95.

BINDER DIN CONNECTORS

		QUANTITY					QUANTITY		
		1-19	20-99	100-499			1-19	20-99	100-499
2 POLE									
T 3200 cable plug	m	$2.60	$2.11	$1.62	T 3202 chassis receptacle	m	$2.55	$2.06	$1.59
T 3201 cable plug	f	2.06	2.98	1.48	T 3203 chassis receptacle	f	2.51	2.02	1.56
3 POLE									
T 3260 cable plug	m	2.64	2.15	1.66	T 3263 chassis receptacle	m	2.50	2.11	1.64
T 3261 cable plug	f	2.11	1.72	1.41	T 3262 chassis receptacle	f	2.55	2.06	1.59
4 POLE									
T 3300 cable plug	m	2.69	2.18	1.70	T 3302 chassis receptacle	m	2.64	2.15	1.67
T 3301 cable plug	f	2.15	1.77	1.44	T 3303 chassis receptacle	f	2.60	2.11	1.64
5 POLE (240°)									
T 3360 cable plug	m	2.74	2.23	1.74	T 3362 chassis receptacle	m	2.64	2.15	1.66
T 3361 cable plug	f	2.42	1.93	1.48	T 3363 chassis receptacle	f	2.66	2.11	1.64
5 POLE (180°) STEREO									
cable plug	m	2.86	2.35	1.85	chassis receptacle	m	2.73	2.24	1.74
cable plug	f	2.64	2.15	1.67	chassis receptacle	f	2.64	2.15	1.67
6 POLE									
T 3400 cable plug	m	2.86	2.33	1.84	T 3402 chassis receptacle	m	2.86	2.33	1.84
T 3401 cable plug	f	2.46	1.97	1.59	T 3403 chassis receptacle	f	2.69	2.20	1.70
7 POLE									
T 3475 cable plug	m	2.96	2.44	1.93	T 3477 chassis receptacle	m	2.91	2.40	1.88
T 3476 cable plug	f	2.76	2.25	1.76	T 3478 chassis receptacle	f	2.87	2.35	1.85
12 POLE									
T 3635 cable plug	m	4.59	3.95	3.14	T 3637 chassis receptacle	m	4.48	3.79	3.02
T 3636 cable plug	f	4.57	3.92	3.09	T 3638 chassis receptacle	f	4.42	3.75	2.98

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

MAGNETIC MICROPHONE MODULES



MM 301

MM 21 Frequency response 400-4000 Hz, 0.33 x 0.75 x 0.49. Price **$9.00**

MM 22 Frequency response 250-4000 Hz, 0.33 x 0.75 x 0.49. Price **9.80**

MM 26 Frequency response 200-7000 Hz, 0.33 x 0.75 x 0.49. Price **9.80**

MM 301 Frequency response 500-5000 Hz. Price **18.50**

MAGNETIC EARPHONE CAPSULES

HM 35 Frequency response 100-3000 Hz, 500 Ω. Price **$5.00**

HM 401 Frequency response 100-5000 Hz. Price **17.50**

IMPEDANCE TESTER ZP 2



Transistorized portable tester for impedance, capacitance and inductance. Frequencies 250 Hz, 1000 Hz, 4000 Hz.
Range 1 Ω-1 MΩ
40 pf-650 μf
40 μh-650 Hy
Weight 5.5 lbs.

Price **$256.00**

REVERBERATION UNIT CV 571 T



Compact spring unit for recording studios and sound systems, improved transducers, IC and semiconductor circuitry, afford low noise and distortion. Unity gain 600 Ω in and out. Dimensions for 19" rack 3½" high.

Price **$525.00**

TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

HEADSETS: GENERAL PURPOSE, COMMERCIAL, MILITARY, AMATEUR, EDUCATIONAL, STEREO

Since 1922 TRIMM has manufactured a complete line of the finest electro-acoustic equipment and components. Engineered to fill the broadest applications; from the experimental crystal set to rugged field use, from industrial test equipment to home high-fidelity and stereo — these headsets are quality constructed and value priced.

ACME 24, 25, 27

A superior low-cost headset most suitable for Geiger counters, crystal sets, toys and radio systems. Black bakelite shell and cap. No. 24 has a black vinyl covered double headband and cotton tinsel conductor "Y" cord with pin tips. No. 25 headband is black enameled. No. 27 has a black enameled single headband and plastic covered stranded wire cord with pin tips.

REX 30, 32

Lowest cost BIPOLAR type headset. Increased sensitivity. A 6 oz. lightweight for code training and institutional radio systems. Black bakelite shell and cap. Black vinyl covered headband. No. 32 has a single headband and plastic covered stranded wire with pin tips.

DEPENDABLE 70, 71, 72

Combines the best qualities of Acme and Rex; simple, rugged, sensitive and low cost. Ideal for electronic organs, code training and language labs. Black bakelite shell and cap, black vinyl covered headband, mercerized cotton tinsel "Y" cord and pin tips. No. 70 has double headband; No. 71 has plastic covered stranded wire cord; and No. 72 has single headband and single cord with pin tips.

• STEREO

All models available for stereo use, ranging from the least expensive Acme to the top quality, extended range "L" headset. Stereo types have two different plug terminations. Those with "-14" in code number have single 3-circuit plug such as No. 513 or No. 516; and those with "-15" in code number have 2-circuit plugs, one red, other black.



Highest quality headset of conventional construction. Individually tuned acoustic cavities assures faithful sound reproduction. Top performance under all environmental conditions. Black bakelite shell and cap. No. 50 has black rubber covered double headband and waterproof nylon tinsel conductor, "Y" cord and No. 501 plug. No. 56 has a vinyl covered double headband with over-the-head molded neoprene cord and No. 501 plug.

STANDARD "L"

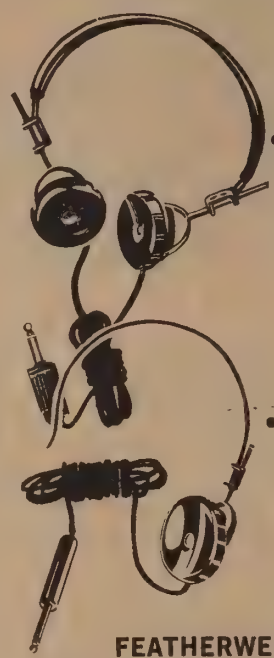
50-08	$23.00	56-2M	$27.65
56-08	27.65	50-5M	23.00
50-06	23.00	56-5M	27.65
56-06	27.65	50-12M	24.00
50-2M	23.00	56-12M	28.65

STEREO "L"

50-14-08	27.00	56-14-16	30.65
56-14-08	30.65	50-14-6M	28.00
50-14-16	27.00	56-14-6M	30.65
50-15-08	28.00	56-15-16	31.65
56-15-08	31.65	50-15-6M	29.00
50-15-16	28.00	56-15-6M	31.65

REPLACEMENT PARTS

For a nominal charge all TRIMM manufactured products can be restored to top working condition at the factory. Nearly any part that is required for manufacture is also available as a replacement part. In addition, worn or broken headset cords for almost any make can be made to order.



ACME

				With 511 plug	
24-03	$4.10	25-2K	$3.85	24-9-03	$5.25
25-03	3.70	24-4K	4.60	24-9-2K	5.40
27-03*	2.20	25-4K	4.20	25-9-2K	5.00
24-15	4.15	27-1K*	2.35	27-9-03	3.35
24-2K	4.25	27-2K*	2.55		

• STEREO

24-14-03	$8.70	24-15-03	$9.60		

REX

				With 511 plug	
30-03	$5.05	30-3K	$5.55	30-9-03	$6.15
30-06	5.05	32-03*	2.80	30-9-06	6.15
30-2K	5.25	32-1K*	2.90	30-9-2K	6.35
				32-9-03*	3.90

DEPENDABLE

					With 511 plug	
70-03	$5.80	70-4K	$6.40			
70-06	5.80	71-2K	6.90			
70-08	5.80	72-03*	3.70		70-9-03	$6.90
70-15	5.80	72-1K*	4.00		70-9-06	6.90
70-2K	6.10	72-2K*	4.10		70-9-2K	7.20
70-3K	6.10				70-9-4K	7.50

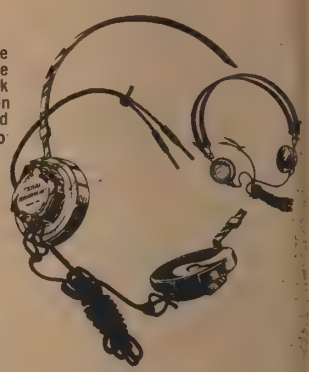
• STEREO

70-14-03	$7.60	70-14-2K	$7.90	70-15-08	$8.00
70-14-08	7.60	70-15-03	8.00	70-15-2K	8.30

Headsets are listed by their model number and by their impedance or D.C. resistance; 3.2 ohms (03); 8 ohms (08); 600 ohms (06); 1500 ohms (15); 2000 ohms D.C. (2K); 2000 ohms (2M); 3000 ohms D.C. (3K); 4000 ohms D.C. (4K); 5000 ohms (5M); 12000 ohms (12M); 17000 ohms (17M); and 24000 ohms (24M). Single earphones (*). List prices included are for single purchases at retail. Consult your distributor for quantity discounts.

FEATHERWEIGHT 5 OZ.!
WORLD FAMOUS-PROVEN IN USE
100, 101, 102, 104, 106, 107

Highly recommended for amateur radio use, language training and electronic testing. Nos. 100 and 106 have a fully adjustable nickel plated single headband. Black bakelite shell and cap. Waterproof mercerized cotton tinsel conductor "Y" cord with pin tips. Nos. 104 and 107 have black vinyl covered double headband at no increase in price.

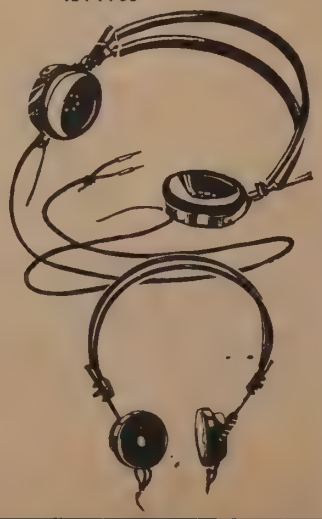


$12.50 List With Pin Tips		$14.50 List With 501 Plug	
100-03	100-2K	100-9-03	100-9-4K
104-03	104-2K	104-9-03	104-9-4K
100-06	100-4K	100-9-06	106-9
104-06	104-4K	104-9-06	107-9
100-15	106	100-9-2K	
104-15	107	104-9-2K	

With Pin Tips List $13.00		With 501 Plug List $15.00	
101-03	102-03	101-9-03	102-9-03
101-06	102-06	101-9-06	102-9-06
101-2K	102-2K	101-9-2K	102-9-2K

• STEREO

104-14-03	$18.00	104-15-08	$18.00
104-15-03	18.00	104-14-2K	18.00
104-14-08	18.00	104-15-2K	18.00



ARMY — NAVY 28, 29

Built for severe use. Satin chrome brass shell, black bakelite cap. Black rubber covered double headband with thumbscrew lock for yoke adjustment. Waterproof nylon tinsel conductor "Y" cord, pin tips or plug.

With Pin Tips		With 501 Plug	
28 (W) 600 ohm	$20.00	28-9 (W) 600 ohm	$21.65
29 (K) 20M ohm	20.00	29-9 (K) 20M ohm	21.65

COMMERCIAL 155, 156, 157, 158, AND 159

Very rugged TRIMM headset — yet very lightweight. Developed for marine and aircraft radio use. All types have black bakelite shell and cap; waterproof, tinsel conductor cord. No. 156 (600 ohm) and No. 157 (17M ohm) have rubber covered double headband with a "Y" cord and 501 plug. No. 158 (600 ohm) and No. 159 (17M ohm) same with pin tips on end of cord. No. 155 especially suited for educational use, has black vinyl covered headband, somewhat smaller than normal adult size and suitable for children. Complete with 501 plug.

155-03	$15.00	156	$16.00
155-06	15.00	157	16.00
155-2K	15.00	158	14.00
		159	14.00

Trade Discount Applies To List Prices Only
© United Technical Publications

TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

HEADSETS: GROUP AND INDIVIDUAL LISTENING, AUDIO KITS, STEREO



Telephone Operators Headset

A high quality transmitter/receiver unit commonly used in switchboard applications. Lightweight construction and complete adjustability assures wearing comfort and proper transmitter positioning.

RECEIVER	275 ohm impedance at 1000 cps.
TRANSMITTER	25 ohm impedance, carbon type. Frequency range—300 to 5000 cps.
PLUG	Standard twin 2 circuit plug, TRIMM No. 505

252AW List $77.75

"85" PILLOW PHONE



Sealed, waterproof ultra-thin disk for very local listening applications. Highly sensitive magnetic unit only 2" in diameter, 1/16" thick. Stainless steel face, pearl gray plastic shell. Replaceable vinyl tinsel cord with plug. Gray neoprene snap-on hanger ring, as shown: $0.50

With 514 plug		With 536 plug	
85-03 3.2 ohm	$12.00	**86-03** 3.2 ohm	$12.00
85-2M 2M ohm	12.00	**86-2M** 2M ohm	12.00

GROUP HEARING AID COMPONENTS—SINGLE EARPHONES

For installations where the listening requirements of many individuals must be served two basic types of earphones are used: the headband model for theatres and auditoriums and the hand held lorgnette for churches and mortuaries. Both Featherweight and "L" models are used. All have a 6 ft. waterproof mercerized cotton tinsel conductor cord. Standard impedances: 3.2, 8, 300, 1K and 2K ohms.

"L" Model (With 512 flat plug)

Headband		Lorgnette	
51-08	$13.00	**52-08**	$16.00
51-3	13.00	**52-3**	16.00
51-1K	13.00	**52-1K**	16.00

FEATHERWEIGHT (With pin tips)

Headband		Lorgnette	
110-03	$7.50	**120-03**	$10.50
110-3	7.50	**120-3**	10.50
110-1K	7.50	**120-1K**	10.50
110-2K	7.50	**120-2K**	10.50

FEATHERWEIGHT (With 512 flat plug)

114-03	$9.50	**124-03**	$12.50
114-3	9.50	**124-3**	12.50
114-1K	9.50	**124-1K**	12.50
114-2K	9.50	**124-2K**	12.50

VOLUME CONTROL AND OUTLET BOXES

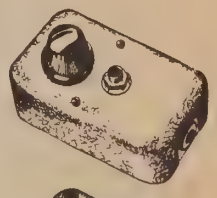
Formed metal boxes measuring 3¾" x 2⅛" x 1¼". All edges and corners are rounded. Available in Brown or Gray Hammertone and in Gloss Ivory.

Single Control — Single Jack Outlet Boxes

Resistance	Brown	Ivory	Gray	
1K	**460-1K**	**461-1K**	**462-1K**	$6.00
10K	**460-10K**	**461-10K**	**462-10K**	6.00
25K, 50K, 100K, 500K	Any of the above three types, these ohmages			$6.50
				6.50

Dual Control — Dual Jack Outlet Boxes

1K	**467-1K**	**469-1K**	$9.75
10K	**467-10K**	**469-10K**	9.75
25K	**467-25K**	**469-25K**	11.00



Dual Jacks — No Control

477	Brown	$4.00
478	Ivory	4.00

(With load resistor)

480	Brown	$5.00
481	Ivory	5.00
482	Gray	5.00

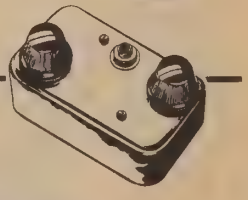
Single Jacks — No Control

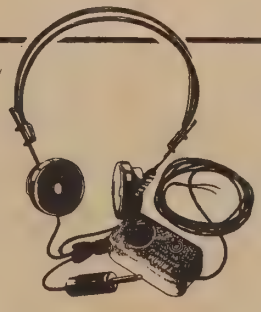
484	Brown	$3.50
485	Ivory	3.50
486	Gray	3.50



Audio Junction Box — Four Jacks

490	Brown	$6.00
492	Gray	6.00





STEREO CONTROL BOX

Designed for stereo headsets with No. 513/516 three circuit plugs. Has two volume controls of suitable value for independent volume adjustment of both channels.

464-1C Brown Hammertone $10.00

Headset Kits For TV and Radio

Provides a simple means of attaching headsets or extension speakers to TV or radio sets. Has remote on-off switch for loudspeaker, a volume control for the headset and two jacks for multiple listening. Complete kit includes headset or single earphone with plug, control box and 15 ft. of connecting cord.

KIT		
632	(Double ACME Headset)	$13.15
632-1	(Single ACME Headset)	11.20
632-2	(Two double ACME Headsets)	18.30
633	(Double DEPENDABLE Headset)	14.45
634	(Double FEATHERWEIGHT Headset)	22.00
635	(Single FEATHERWEIGHT Headset)	16.60
637	(Single PILLOW-PHONE)	19.30
631	(Control Box Only)	8.00
631-1	Control Box Only but with miniature jack	8.00
631-2	Control Box Only but with sub-miniature jack	8.00



EAR CUSHIONS

For comfort, cleanliness and noise control. Formed of sponge rubber, solid rubber, sponge and solid rubber, or chamois. Prices, per pair, range from $1.60 to $16.95 list.

654	Sponge rubber, Military type MC-162. Fits all TRIMM headsets but Dependable and Army-Navy.	$2.00
660	Sponge rubber. Fits Dependable and Army-Navy.	$2.50

© United Technical Publications

MICROPHONES BY TURNER

SUBSIDIARY OF CONRAC CORPORATION



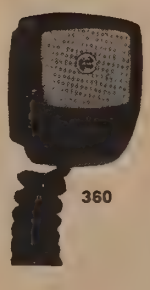


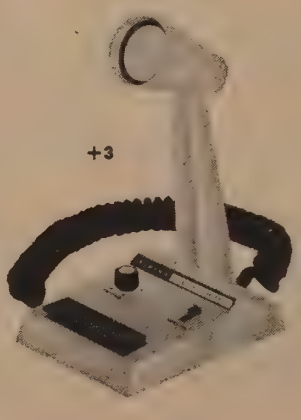


M + 2/U
JM + 2/U









350C
350C



355C



SR90D
SR90R

CUSTOM INTERIORS

Turner has complete facilities for designing and manufacturing all kinds of special application microphone interiors, soft speakers for dictating machines, anything you need. Write for full information on this service.

COMMUNICATIONS AND CITIZENS BAND MICROPHONES
BASE STATION

MODEL 254X — It features push-to-talk front touch bar and locking on-off lever switch. May be wired for relay operation or electronic switching. Deluxe light grey hammertone finish. Output level: −48 db for more clear signal strength. Response: 100-8000 cps. 7′ three-conductor (shielded) cable. Size is 7¾″ in height x 5½″ in depth. Net price.....**$19.20**

MODEL 254C — Same as 254X except with famous 21C ceramic interior. Output level: −54 db. Net price.....**$19.20**

MODEL 454X — Designed for the voice range, it's extra hot. Output level: −48 db. Response: 300-3000 cps. Attractive telephone black finish. Your choice of VOX or PTT switch operation. Comes complete with 3-conductor (one shielded) cord. Net price.....**$21.60**

MODEL 454C — Same as Model 454X except has ceramic interior. Output level: −52 db. Net price.....**$21.60**

MODEL +2 — Revolutionary new microphone which allows manual control of output volume by a twist of a dial. Two transistor pre-amp built into the microphone for up to **50 times** the output level of conventional ceramic base station microphones. World's best and most popular base station microphone. Exclusive touch-to-talk or lock on-off switching with a frequency response of 300-3,500 cps. Self contained 9 volt battery included. Net price.....**$33.00**

MODEL +3 — Bold new styling coupled with modern electronic circuitry stamps the Turner Plus Three as the professional base station microphone. The Plus Three has a newly designed transistorized pre-amp with volume control plus Modu-Gard — a new compression amplifier circuit. With the volume control set for the level of modulation desired, the user can then talk close or far from the mike without varying the output signal or transmitter modulation. It's a good way to avoid violating FCC regulations against interfering with adjacent channels. The Plus Three has a 300-3000 Hz frequency response for absolute best voice transmission. This is achieved by Turner's exclusive new ceramic interior design. Three-conductor (1 shielded) coiled cord; touch-to-talk front touch bar; switching with slide-lock when desired for extended transmitting. Comes complete with wiring instructions for more than 100 popular transceivers. Shipping weight: 3 lbs. Net price..**$45.00**

MOBILE

MODEL M +2/U — Mobile companion to the +2 Model. 10 position output level control. Two transistor built-in pre-amp. Wired for relay switching. Net price.....**$27.00**

MODEL JM +2/U — Same as M +2 except wired for sets that use electronic switching. Net price.....**$27.00**

Model 360 is a small mobile type communications microphone, ceramic type designed to reduce size and weight to a minimum. Looks very good with the new small solid state sets. Also recommended for use with portable P.A. applications. Rugged cycolac case and heavy duty coiled cord. Response is 300-3000 cps; output level −54 db. Wired for relay switching. **Model J-360** is the same as Model 360 except wired for sets that use electronic switching.

MODEL 360, Net.....**$10.20**
MODEL J-360, Net.....**$10.20**

MODEL 360Lo — A new low impedance ceramic mike for the new solid state transistorized sets like III, 323 etc. **$10.80**

MODEL 350C — Most used as original equipment. This low-cost ceramic microphone with on-off switch is familiar to most mobile radio operators. More 350C microphones are used as original equipment on citizens band and marine transceivers than any other microphone. Extra-tough cycolac case. Rugged ceramic interior allows you to use the 350C in any climate. Complete with hanger button and standard dash bracket for easy mounting. Ideal for citizens band, amateur use, mobile rigs and paging. Wired for relay operation. Response: 80-7000 cps. Output level: −54 db. Net price.....**$9.00**

Model +350 — Is a transistorized dynamic mobile microphone in a dark gray 350 style case. It's an ideal replacement microphone for many sets using carbon microphones and will improve the intelligibility of your signal and provide consistent modulation. Silicon transistors are used for maximum dependability. Complete instructions are included. Response: 300-5000 cps; Output level: −40 db at 12 v dc using 600 ohm load; Coiled cord: 3 conductor (1 shielded), Model +350. Net price.....**$24.00**

MODEL 355C — Inexpensive mobile microphone with grip-to-talk switch. More comfortable to hold — more comfortable to use. The 355C features an output level of −50 db. It's extra hot for a high gain signal. Response: 80-7000 cps. Net price.....**$10.20**

MODEL SR90D — The Model SR90D (pressure operated dynamic) features a slender die cast zinc alloy case with the Turner exclusive front hanger button. (Satin chrome finish.) Dynamic models are available in two impedances, hi or 200 ohms. Relay switching is standard. Three-conductor (one shielded) 11″ retracted, 5′ extended coiled cord on hi impedance models and 4-conductor (two shielded) on 200 ohm units. Output level: −52 db. at hi impedance. Response: 200-10,000 Hz. Net price.....**$27.00**

MODEL SR90R — Is equipped with a high quality telephone type carbon interior to give you maximum voltage output and high intelligibility as well. Same general appearance and features as Model SR90D. Output level: −40 db. Response: 200-4000 cps. Choose the Model SR90R wherever maximum output with a minimum of distortion is specified . . . taxicabs, police, etc. Net price.....**$21.60**

Net

© U.C.P., Inc.

MICROPHONES BY TURNER

SUBSIDIARY OF CONRAC CORPORATION

CARDIOID MICROPHONES

MODEL 500 — An outstanding cardioid dynamic microphone featuring combination Hi or 50/250 ohms impedance, satin chrome finish with 20 ft. cable. Model 500 units are interchangeable in any system, with no testing for possible variations in frequency response or front-to-back ratio necessary. The 500 is a highly sensitive unit, with smooth, uniform response from 40 to 15,000 cps. and excellent front-to-back ratio of 20-25 db.

Model 500	Net price	$60.00
Model S-500 (with off-on switch)	Net price	$63.00
Model 500G	Net price	$69.60
Model S-500G	Net price	$72.00

MODEL 505 — Similar to Model 500, but with the acoustical advantages of a bass response control. In the "normal" position, response is 40-15,000 cps.; in the "less bass" position, 100-15,000 cps. Specifically recommended for auditorium work and recording. Net price $72.00

MODEL 600 — The econoline model which sets new quality standards for popularly priced cardioid units. Easy to hold or use, either by hand or with stand, and made from 100% American-made parts. 6" in length, with on-off switch, 12 ft. cable, and 50-15,000 frequency response. (For low impedance specify Model 602.)

Model 600	Net price	$36.00

Model 700 — The style and sound standard, professionally reengineered at no increase in price! A four-pin female connector has been added to the tail of the microphone, thus a removable cable. Now in the top quality class. Hi-low impedance combination, unidirectional cardioid dynamic, pop-blast filter, quality "dynaflex" interior, 70-15,000 frequency response output level −55 db, typically 20 to 25 db discrimination over the entire frequency range, built-in broadcast wind screen, satin chrome finish, on-off switch, 20-foot cable. Net price $57.00

MODEL 777 — Quality cardioid performance with maximum noise rejection. Rolled-off bass response permits very close-to-mouth use, and new rotary on-off switch can be clearly seen even in dim light. Rugged all metal die cast case, satin chrome plated, allows hand or stand use night after night, and full fidelity assures faithful voice or music reproduction. Low impedance only. Net price $72.00

MODEL 510 — Broadcast cardioid dynamic with 40-15,000 cps. frequency response. Combination 50 or 200 ohms impedance selected at the free end of the cable. Professional broadcast blue finish. 20 ft. cable supplied. Connector is cannon XLR-4-11C. Cardioid discrimination is typically 25 db over the entire range. Furnished complete with stand adapter and matching shock-mounted desk stand. Net price $90.00

GENERAL PURPOSE AND PUBLIC ADDRESS MICROPHONES

750 SERIES microphones are designed to match the decor of today's office furniture and consoles and have a rugged die-cast metal case which incorporates a touch-bar to actuate leaf spring switches and a "flick of the finger" slide lock to permit either momentary or "locked-on" use of the touch bar. Leaf switches are rigidly mounted to the base of the microphone to prevent them from getting out of adjustment. Base is designed to accommodate additional switch contacts for maximum switching flexibility. Modern, professional, brown metallic finish with chrome trim, non-marking rubber feet for desk protection.

MODEL 750* — High impedance. 20 foot, three-conductor (two shielded) cable. Normally open switching for relay control. Output level: −52 db (0 = 1 volt/microbar). Frequency response: 60-10,000 Hz. Net price $45.00

MODEL 751* — 150 ohm impedance. 20-foot, four-conductor (two shielded) cable. Normally open switching for relay control. Output level: −52 db (0 = 1 mw./10 microbars). Frequency response: 60-10,000 Hz. Net price $45.00

MODEL 758* — 150 ohm impedance. 20-foot, four-conductor (two shielded) cable. Line shorting switching on the microphone with normally opened relays for relay control. Output level: −52 db (0 = 1 mw./10 microbars). Frequency response: 60 to 10,000 Hz. Net price $45.00

Model 35 — One of the smallest Hi quality lavalier microphones in the public address field. Only ¾" dia x 3" in length. Combination Hi-Low Impedance. 25 foot cable. 70-10,000 Hz response, output level of −63 db. works with any amplifier. Beautiful champagne finish. Net price $42.00

Model 35A — Broadcast Lavalier. Only 2½" in length. 150 ohm only. 25 foot cable. 60-12,000 Hz response. Net price $48.00

MODEL 2300 — Very high quality omni-directional dynamic microphone. Excellent frequency response of 50-15,000 Hz. Hi impedance output level or −55 db. Also available in low impedance. (Please specify when ordering.) This is a superb recording and broadcast interview microphone because of its excellent "presence." May also be used for general purpose P.A. and entertainment functions. Lightweight yet very rugged. It features a satin chrome finish on a machined steel case. Professional 3 pin connector — detachable cable, on-off switch. Shipping weight 3 lbs. Net each $45.00

MODEL P9D — This handy dynamic hand-held or stand microphone is well suited for paging, P.A., amateur and mobile use. Extremely rugged, heavy case. Push-to-talk switch. High or 200 ohms (specify when ordering). 7' cable supplied. Amphenol MC1M (MC2M on 200 ohms) connector in microphone. Output level: −52 db. Dimensions: 2½" x 5" in length x 1¾" in depth. Shipping weight: 2 lbs. Net price $33.00

MODEL 250 — A dynamic microphone ideal for dispatch, paging, P.A., control tower and amateur use. Wired to operate both relay and mike circuits at a touch. Features on-off push-to-talk and lock switch. Also features Turner's "lift-switch." Response from 60 to 10,000 cps. Output level: −52 db. Complete with single unit satin chrome case and 20 ft. three-conductor (one shielded) cable. Net price $39.00

* Models 750, 751, and 758 carry Turner's exclusive Five Year Guarantee.



MODEL 251 — The Model 251 is the industrial and commercial sound contractors' favorite in the 250 family. Rugged-one piece die-cast case (no other accessories needed), gleaming satin chrome finish — three-way switching and 150 ohm impedance all add up to the paging microphone of the commercial sound industry. Why fuss with grip-to-talk devices when it's so easy to touch the 251's front bar or just simply pick it up? Convenient lock on-off switch, too. Airports, clubs, high schools, reception desks, dining rooms, are all favorite installations of 251 convenience. Comes wired for relay operation, too, with 20' four-conductor (two shielded) cable. Response: 70-10,000 cps. Output level: −52 db. Size is 7¾" high x 5½" in depth. Shipping weight: 4 lbs. Net Price $39.00

MODEL S2850 — Dynamic Cardioid Microphone — A new addition to the line and an outstanding value. May be used in the hand, or, utilizing the handy accessory included, as a lavalier, or place it on a table-top. Highly directional, it effectively cancels sounds arriving from the rear. Smooth, peak-free response to sounds arriving from the front. Range 70 to 12,000 Hz. Tough, durable Cycolac housing. High/Low impedance. 12 ft. cable. On-off line shorting switch. Output level: Hi imp. −60 db (0 = 1 volt/microbar). Net price $26.40

MODEL SR-585D — Dynamic microphone with push-to-talk switch. Designed for fixed mounted applications, ideal for grocery call stations, switchboards, paging, dispatching, etc. The switch is line-shorting and is designed to actuate a relay. Impedance is 150 ohms. The cable extends 4' from the base and is 4-conductor (two shielded). Response from 70 to 12,000 cps. Output level: −58 db. Overall length: 22". Shipping weight: 3 lbs. Net price $30.00

© U.C.P., Inc.

UNIVERSITY® SOUND
A quality company of LTV Ling Altec, Inc.

Drivers

MODEL ID-20 (20 watts) For speech and music systems requiring moderate sound power. Designed to deliver maximum output, the ID-20 is highly efficient, produces a clear, penetrating and distortion-free sound.

MODEL ID-30/ID-30T (30 watts) Exceptional for installations requiring single medium power units or multiple driver/horn combinations. These high quality drivers produce musical balance and speech penetration with a performance superior to higher cost competitive models. Tropicalized voice coil, completely weatherproof. Model ID-30T has a built-in line matching transformer tapped for impedances of 167/335/500/1000/2000/4000 ohms and 25 and 70 volt power taps at 30/20/10/5/2.5 watts.

MODEL ID-40A/ID-40T(40 watts) Extended range, high quality and excellent efficiency produce an essentially uniform response and natural quality of speech and music reproduction. Moderately high power for penetrating through high ambient noise levels. Tropicalized voice coil and fully weatherproofed. Model ID-40T has a built-in line matching transformer tapped for impedances of 45/122/250/500/1000/2000 ohms and 25 and 70 volt power taps at 40/20/10/5/2.5 watts. ID-40T housing is rugged, die-cast aluminum with dural gland nut water tight cable entrance.

MODEL ID-60/ID-60T (60 watts) A premium high power compression driver. Wide range response, high efficiency and high quality construction for natural speech and music reproduction with maximum penetration in high noise areas. Rugged, weatherproof housing for trouble-free performance in any environmental application. Model ID-60T has high impact cycolac outer case and built-in line matching transformer tapped for impedances of 16/80/165/500/1000/2000 ohms and 25 and 70 volt power taps at 60/30/20/10/5/2.5 watts.

MODEL ID-75 (75 watts) New, higher power in a compact case. Ideal for both Public Address and electronic siren applications. Peak efficiency, super power for effective penetration into exceptionally high noise areas.


ID-20


ID-30


ID-30T


ID-40A


ID-40T


ID-60


ID-60T

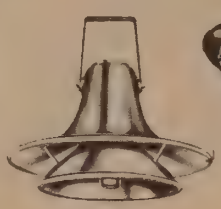

ID-75

DRIVER MODEL	FREQUENCY RESPONSE	POWER RATING	VOICE COIL IMPEDANCE	DIMENSIONS (Overall)	SHIP. WT.	NET PRICE
ID-20	120-6500 Hz	20 watts	16 ohms	3½" dia. 3¾" d.	2½ lbs.	17.33
ID-30	85-7500 Hz	30 watts	16 ohms	4⅛" dia. 3¾" d.	3 lbs.	22.05
ID-30T	85-7500 Hz	30 watts	variable*	4⅛" dia. 6" d.	4 lbs.	31.83
ID-40A	80-12000 Hz	40 watts	16 ohms	4½" dia. 4⅞" d.	4¼ lbs.	26.78
ID-40T	80-12000 Hz	40 watts	variable*	5" dia. 6¼" d.	5¼ lbs.	37.26
ID-60	70-12000 Hz	60 watts	16 ohms	4-11/16" dia. 5" d.	5¾ lbs.	39.54
ID-60T	70-12000 Hz	60 watts	variable*	6¾" dia. 6¾" d.	6¾ lbs.	48.35
ID-75	150-7000 Hz	75 watts	16 ohms	4¼" dia. 3¾" d.	5 lbs.	40.14

*Also available in 8 ohms order as model ID-75-8.

Trumpets


GH, LH, PH, SMH


RLH, RPH, RSH


CLH


COBREFLEX©


2 WP


SH

DIRECTIONAL MODELS GH, LH, PH, SMH For maximum noise penetration and distance of projected sound. Reflex design for highest conversion efficiency. Fully weatherproof, baked finish.

RADIAL MODELS RLH, RPH, RSH For uniform 360° overhead dispersion in high ceiling installations. Rugged construction, baked finish.

WIDE ANGLE COBREFLEX Patented twin folded exponential horns with two air columns in a single assembly. High efficiency and smooth radiation pattern. Can be used in cluster arrays. Rugged, fully weatherproof.

WIDE ANGLE MODEL CLH Patented design and construction. Wide angle bell and long air column for maximum low frequency response. Omnidirectional bracket for vertical and horizontal rotation to eliminate feedback and overshoot "dead spots". Can be used in cluster arrays. Rugged fiberglass horn.

HORN MODEL	LOW FREQUENCY CUT-OFF	SOUND DISTRIBUTION	AIR COLUMN LENGTH	DIMENSIONS (Overall) LENGTH	BELL	SHIP. WT.	Net Price
GH	85 Hz	65°	6½ ft.	28"	31"	22 lbs.	63.18
LH	120 Hz	75°	4½ ft.	19"	25¾"	16½ lbs.	41.25
PH	150 Hz	85°	3½ ft.	15¾"	20⅜"	11¾ lbs.	29.22
SMH	200 Hz	95°	2½ ft.	12"	16¼"	8¼ lbs.	24.77
RLH	120 Hz	360°	5 ft.	18½"	28⅛"	25 lbs.	59.07
RPH	140 Hz	360°	4 ft.	13¾"	25⅛"	19 lbs.	44.85
RSH	180 Hz	360°	3 ft.	11"	19"	13 lbs.	39.38
COBREFLEX†	200 Hz	120°x60°	2½ ft.	10¼"	18½"x9¼"	10¼ lbs.	31.73
CLH	120 Hz	120°x60°	4½ ft.	20"	21½"x11½"	13¼ lbs.	37.26
SH	350 Hz	100°	1½ ft.	7"	8¾"	2¾ lbs.	23.91
2WP	350 Hz	120° each horn	1½ ft.	20½"	8½"	4½ lbs.	24.59

Accessories



PMA ADAPTER Fits standard ½' dia. threaded pipe to any University "U" mounting bracket—for special applications requiring pipe mounting. Net $3.12

RTA ADAPTER Fits University trumpets to Western Electric and RCA drivers having 1 7/16—16 threads. Shpg. wt., ½ lb. Net $3.27

WEA ADAPTER Fits University drivers to Western Electric and RCA trumpets having 1 7/16—16 threads, Shpg. wt., ½ lb. Net $2.61

MODEL 5433 TRANSFORMER 30 watt capacity. Use with ID-20, ID-30 or to feed a number of smaller paging speakers. Primary impedance: 45/165/200/250/500/1000/2000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 30/25/20/10/5/2.5 watts. Dimensions: 1 15/16" x 2 5/16" x 1¾". Mtg. hole centers: 2⅜". Shpg wt., 1 lb. Net $6.57

MODEL 5434 TRANSFORMER. Has a 15 watt capacity. Will fit in the CTR. Primary: 45/165/200/250/500/1000/2000 ohms. Secondary: 4/8/16 ohms. 70 v. line power taps: 15/10/5/2.5/1.25/.65 watts 2" mtg. centers. Shipping wt., ½ lb. Net Price $5.04

MODEL CTR TRANSFORMER/JUNCTION HOUSING Die cast aluminum. Weatherproof. Houses models 5433, 5434, or other transformers up to 2⅜" x 2⅞" x 2⅞". Adjustable slotted adapter mounts transformer with centers 1½" to 2⅞". Junction box for speaker lines. Bar strap for mounting to "U" brackets. Screws to wall. Also holds University paging speakers. Shpg. wt., 1½ lbs. Net $7.10

2YC CONNECTOR Allows use of two driver units on a single radial, directional, or wide-angle trumpet. Shpg. wt., 1 lb. Net $9.93

Net
© United Technical Publications

UNIVERSITY® SOUND
A quality company of LTV Ling Altec, Inc.

Paging/Talk-Back Speakers


DLC


DLCT


UH/UHT


IB-A/MIL-A


IB-T/MIL-T


CIB-A/ CMIL-A


CIB-T/CMIL-T


IBR-A


IBR-T


MIS

MODEL	FREQUENCY RESPONSE	POWER RATING (1)	IMPEDANCE (VOICE COIL)	DISPERSION	SOUND PRESSURE LEVEL (6)	SENSITIVITY AS MICRO (7)	DIMENSIONS (8)	SHIPPING WEIGHT	NET PRICE
DLC-8	400-10,000 Hz	7½ w.	8 ohms	120°	104 dB	-30 DBM	5⅞" dia. x 4" d. (A)	1¾ lbs.	12.57
DLC-45			45 ohms						12.57
DLC-T			8 ohms (2)				5⅞" dia. x 6⅛" d (A)	2⅔ lbs.	19.46
UH-8	220-16,000 Hz	32 w.	8 ohms	120° (9)	126 dB	-26 DBM	10½" dia. x 10⅞" d. (P) (10)	5 lbs.	29.13
UH-45			45 ohms					5 lbs.	30.42
UHT			8 ohms (3)					5¾ lbs.	38.19
IB-A4	250-13,000 Hz	30 w.	4 ohms	105°	126 dB	-20 DBM	10¼" dia. x 9" d. (A)	4½ lbs.	27.06
IB-A8			8 ohms						25.17
IB-A45			45 ohms						27.06
IB-T			8 ohms (4)				10¼" dia. x 11 7/16" d. (A)	5¼ lbs.	32.13
CIB-A4	250-13,000 Hz	30 w.	4 ohms	120°x60°	126 dB	-22 DBM	14" w. x 7⅜" h. x 12" d. (A)	6 lbs.	31.88
CIB-A8			8 ohms						30.99
CIB-A45			45 ohms						31.88
CIB-T			8 ohms (4)				14" w. x 7⅜" h. x 14½" d. (P)	6¾ lbs.	37.95
MIL-A4	350-13,000 Hz	10 w.	4 ohms	120°	119 dB	-23 DBM	7 13/16" dia. x 6⅞ d. (A)	3¼ lbs.	23.00
MIL-A8			8 ohms						20.76
MIL-A45			45 ohms						23.00
MIL-T			8 ohms (5)				7 13/16" dia. x 9 13/16" d. (A)	4 lbs.	30.21
CMIL-A4	350-13,000 Hz	10 w.	4 ohms	120°x60°	119 dB	-26 DBM	9½" w. x 6¼" h. x 8½" d. (P)	4 lbs.	24.59
CMIL-A8			8 ohms						23.91
CMIL-A45			45 ohms						24.59
CMIL-T			8 ohms (5)				9½" w. x 6¼" h. x 10 7/16" d. (P)	4¾ lbs.	32.45
IBR-A8	300-10,000 Hz	30 w.	8 ohms	360°	120 dB	-28 DBM	13" dia. x 10¼" d. (A)	5½ lbs.	33.71
IBR-T			8 ohms (4)				13" dia. x 12 11/16" d. (A)	6¼ lbs.	42.81
MIS-4	50-13,000 Hz	7½ w.	4 ohms	150°	115 dB	-22 DBM	5½" o.d., 4 7/16" d. (P) 6 Holds on 4⅞" mtg. dia.	2½ lbs.	25.17
MIS-8			8 ohms						23.63
MIS-45			45 ohms						25.17

1) Capacity in watts IPM (Music Power).

2) Voice coil impedance 8 ohms. Integral transformer terminals are labeled in wattage consumed and impedance on 70.7 and 25 volt constant voltage lines. Taps: 7.5/5/2.5/1.25/.65 watts.

3) Voice coil impedance 8 ohms. Integral switch selected transformer is labeled in wattage consumed and impedance on 70.7 and 25 V. "constant voltage" lines. Wattage taps: 32/15/10/5/-1.25 W. Transformer Impedances (70.7 V.): 161/335/500/1000/2000/-4000 ohms.

4) Voice coil impedance 8ohms. Integral transformer terminals are labeled in wattage consumed and impedance on 70.7 and 25 v. "constant voltage" lines. Wattage Taps: 30/15/10/5/2.5/1.25 w. Transformer Impedances: 167/335/500/1000/2000/4000 ohms.

5) Voice Coil impedance 8 ohms. Integral transformer terminals are labeled in wattage consumed and impedance on 70.7 and 25 v. "constant voltage" lines. Wattage Taps: 10/7.5/5/2.5/1.25/.65 Transformer Impedances: 500/667/1000/2000/4000/8000 ohms.

6) SPL reading taken 4 ft. on axis with "Full-Range" power input. Reduce by 6 dB each time distance is doubled. Reduce by 3 dB if power input is halved; increase by 3dB when power input is doubled.

7) DBM re 10 dynes/cm².

8) An (A) after a dimension indicates a horn of spun aluminum with baked-on acrylic paint. A (P) after a dimension indicates a horn of color-impregnated high-impact plastic.

9) Dispersion in all planes without unique Sound Deflector. With Adjustable Deflector, dispersion may be adjusted to suit environment.

10) Dimensions are without Sound Deflector. With Deflector, add ¼" to diameter and 4-1/16" to length.

© United Technical Publications

UNIVERSITY® SOUND
A quality company of LTV Ling Altec, Inc.

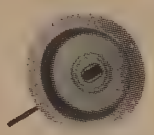
Special Purpose Loudspeakers


MSR


MM-2


MM-2TC


MM-2F


UW-30


ELC


MLC


CLC


WLC

	Frequency Response	Power Rating (1)	Impedance (2)	Dispersion	Sound Pressure Level (3)	Dimensions	Shipping Weight	Net Price
ES-75	400-7,000 Hz	75 watts	16 ohms	90°	126 dB	9½" h. x 8¾" w. x 10" l.	9 lb.	62.96
MSR	250-10,000 Hz	25 watts	16 ohms	360°	114 dB	10¾" h. x 6 7/16" w. x 8¼" d.	10¼ lb.	69.30
MSR-T			16 ohms (4)				11¼ lb.	79.97
MM-2	350-10,000 Hz	25 watts	16 ohms	150°	117 dB	6" dia. x 5" d.	5¼ lb.	39.53
MM-2F						7¼" dia. x 3¾" d.		40.79
MM-2TC	350-10,000 Hz	25 watts	16 ohms	120°	117 dB	10" h. x 6 7/16" w. x 4 7/16" d.	8¾ lb.	62.30
MM-2TC-T			16 ohms (4)				9¾ lbs.	71.97
UW-30	100-10,000 Hz	25 watts	8 ohms	360°		7 3/16" dia. x 3⅝" d.	5¼ lb.	59.07
MLC	150-15,000 Hz	15 watts	8 ohms	120°	117 dB	12¾" x 9⅛" x 10⅝" d.	10 lb.	45.05
CLC	55-14,000 Hz	30 watts	8 ohms	120°	118 dB	22¾" dia. x 12¾" d.	23 lb.	76.89
WLC	50-15,000 Hz	30 watts	8 ohms	90°	120 dB	33½" dia. x 20" d.	68 lb.	217.77
ELC	150-11,500 Hz	15 watts	8 ohms	120°	114 dB	12¾" x 9⅛" x 10⅝"	9 lb.	36.51

1) Capacity in watts IPM (Music Power).

2) Voice coil impedance.

3) SPL reading taken 4 ft. on axis with "Full-Range" power input. Reduce by 6 dB each time distance is doubled. Reduce by 3dB if power input is halved; increase by 3dB when power input is doubled.

4) Matching transformer primary impedances: 45/165/200/250/500/1000/2000 ohms.

EXPLOSION PROOF DRIVERS


7101X


5436B

7101X, 7102X, 7105X are UL approved explosion-proof drivers, for use in 100%-safe systems where flammable liquids, gases, dust, etc., are present. The 7105X is approved for use in hydrogen-air atmospheres. In compliance with Government safety regulations, these units have provisions for mounting a line-matching transformer (optional*). 7101X is approved for Class I, Groups C & D. 7102X is approved for the same, plus Class II, Groups E, F & G. 7105X is approved for Class I, Groups B, C & D and Class II, Groups E, F & G. All units have 16 ohm voice coils. Frequency response is to 12,000 Hz and power capacity is 65 watts. Dimensions are 7⅞" in dia., 7⅜" long. Shipping weight is 14 lb.

These UNIVERSITY explosion-proof drivers may be used with any UNIVERSITY trumpet, but are most often used and recommended for use with the UNIVERSITY SOUND Models PH, SMH and Cobreflex.

* University Model 5436B 65 watt transformer kit is complete with transformer, mounting bracket and hardware for installation inside the explosion-proof driver housing. Prices:

Model 7101X $83.45 Model 7102X $90.89 Model 7105X $137.34 Model 5436B $15.57

Slim profile 3-way high fidelity speaker

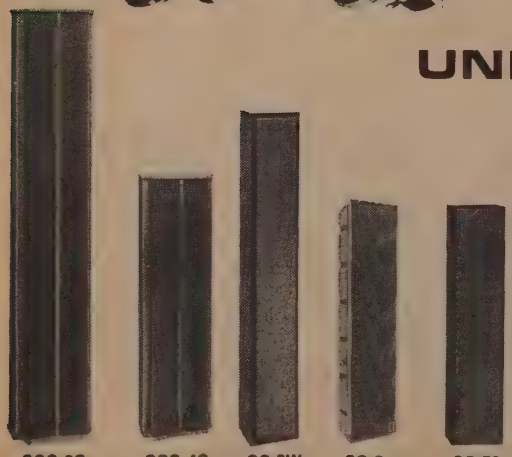

8M2C


8M2CT

MODEL 8M2C 3-WAY SPEAKER A slim profile multi-speaker for public address and commercial sound applications. High quality, high efficiency performance for background music. Response to 50-20,000 Hz. Handles 15 watts of IPM. Model 8M2CT has built-in line matching transformer for 25 and 70 volt lines, tapped for 15/10/5/2.5/-1.25/.65 watts. Only 3" deep. Net $14.46

MODEL 8M2CT Same as 8M2C with transformer Net $17.61

UNILINE(TM) SOUND COLUMNS


CSO-6G · CSO-4G · CS-3W · CS-2 · CS-50

Model		CSO-6G	CSO-4G	CS-3W *	CS-2	CS-50 *
Column Height		60½"	41⅜"	48"	32⅝"	32"
Speakers		four 8" plus two 8" Dual Cone	two 8" plus two 8" Dual Cone	six 4"x6" plus two tweeters	six wide-range 5"	six 5"
Frequency Range		65-14,000 Hz	70-17,000 Hz	150-10,000 Hz	175-12,000 Hz	200-10,000 Hz
Power Capacity		120 watts IPM	75 watts IPM	25 watts IPM	30 watts IPM	30 watts IPM
Impedance		16 ohms	8 ohms	16 ohms	8 ohms	8 ohms
S.P.L.*		124.5dB	121.5dB	112dB	111dB	109dB
Dispersion	Vertical	16°	18°	20°	25°	20°
	Horizontal	120°	120°	120°	165°	120°
Dimensions		60½"x11¾"x7½"D	41⅜"x12"x7 13/16"D	48"x7¼"x6⅜"D	32⅝"x7¾"x6½"D	32"x7"x4¼"
Shipping Weight		63 lb.	40 lb.	28 lbs.	14 lb.	14 lbs.
Net Price		217.35	156.87	99.95	65.67	54.50

UNILINE is a registered trademark of UNIVERSITY SOUND *4 ft. on axis, re .0002 dynes/cm², at rated power
* Oiled Walnut Finish

Net

© United Technical Publications

UNIVERSITY® SOUND
A quality company of LTV Ling Altec, Inc.

High Fidelity Component Speakers

SERIES 200 Wide-Range High Compliance Models

Model	Frequency Response (Hz)	Power Capacity (Watts IPM**)	Imp. (Ohms)*	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Net Price
315-C	25-20,000	50	8-16	15¼"x12"	34½	$204.65
312	28-40,000	35	8-16	13"x6⅝"	10¼	88.74
8201	28-18,500	35	8-16	13"x6⅝"	10¼	69.50
Diff-8	30-15,000	35	8-16	9⅜"x4 5/16"	5	34.13
1212	35-30,000	30	8	13"x8 5/16"	10	62.96
M-15T	30-20,000	35	8	15½"x7"	17	76.94
M-12T	35-40,000	30	8-16	12 15/16"x3⅞"	9	42.68
M-12D	35-15,000	30	8-16	12 15/16"x3⅝"	7½	29.34
M-12	35-12,000	30	8-16	12 15/16"x3⅝"	7½	23.64
M-8D	50-15,000	30	8-16	8¼"x2½"	5½	22.58
M-8	50-12,000	30	8-16	8¼"x2½"	5½	18.36
MS	3000-40,000	30	8-16	3⅛"x3-1/16"	1½	20.96

*May be used with amplifiers with output impedance of 8 or 16 ohms.

**Integrated Program Material.

WOOFERS, MID-RANGE and TWEETERS

Dual Voice Coil Woofers — High Compliance Models

Model	Frequency Response (Hz)	Power Capacity (Watts IPM)*	Impedance (Ohms)**	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Net Price
C-15HC	15-800	60	4-20**	15"x8⅛"	24¾	97.50
C-12HC	20-3,000	50	4-20**	13"x6⅞"	13¾	59.85
High Efficiency Models						
C-15W	25-1,500	50	4-20**	15⅜"x10½"	27	118.26

*Integrated Program Material

**Impedance Range Depending on Strapping of Voice Coils.

Mid-Range Speakers, Horns and Drivers

C-8M Cone Speaker	500-5,000	50	8	8¼" Dia. x 4" Depth	3	$ 19.11
Cobreflex Horn	200 Hz cutoff			10¼" L. x 18½" W. x 9¼" D.	10¼	31.73
H-600 Horn	600 Hz cutoff			7¾ L. x 8¾" W. x 4¾" D.	1¾	23.80
T-30 Driver*	350-18,000	50	8	3½" Dia. x 3¾" Depth	2¼	33.40
T-50 Driver*	350-20,000	50	8	4¼" Dia. x 4⅛" Depth	5¼	53.20

*For use with Cobreflex and H-600 horns.

Tweeters

Model	Frequency Response (Hz)	Power Capacity (Watts IPM)*	Impedance (Ohms)**	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Net Price
T-202 Sphericon	3,000-40,000	30	4-16	4⅝" Dia. x 4" D.	2½	$ 28.62
HF-206	3,500-22,000	50	8	6" L. x 3⅜" W. x 6⅝" D.	3½	39.50
4401	2,000-15,000	50	8	6" L. x 2¾" W. x 6⅜" D.	2¼	22.50
UXT-5	4,500-17,500	50	8	4¼" L. x 2½" W. x 4" D.	2¼	29.50

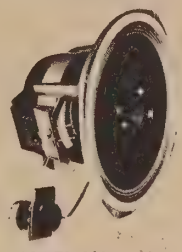
Crossover Network and Attenuaters

Model	Crossover Frequencies (Hz)	Impedance (Ohms)	Dimensions (L.xW.xD.)	Shipping Wt. (Pounds)	Net Price
N-1*	1250, 2500, 5000, 10000	4-8-16	3⅝"x3¼"x3"	2	$ 16.50
N-2A	350, 700	4-8-16	3⅝"x3¼"x3"	2½	24.11
N-2B	1250, 2500, 5000	4-8-16	3⅝"x3¼"x3"	2½	19.76
N-3*	350, 700, 5000	8	7"x5"x3"	5¼	41.75
AP-8	L pad for presence and brilliance controls.				9.00

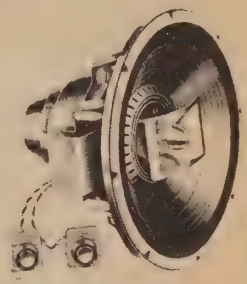
*Model N-1 equipped with built-in brilliance control. N-3 equipped with built-in brilliance and presence controls.

Wide-Range High Compliance Models

University Series 200 component speakers represent the ultimate in quality. Their high power-handling capacity and rugged die-cast baskets and molded seamless cones assures long-life adherance to original performance standards. These speakers are designed for use in any pre-finished or custom built enclosure. Where baffle mounting space is at a premium and high quality music reproduction is desired, Series 200 University component speakers are the logical choice for the discriminating music lover or audiophile.



MODEL 312
12" 3-Way Diffaxial Speaker



MODEL 315-C
Super 15" 3-Way Diffaxial Speaker



C-15W



HF-206

T-202



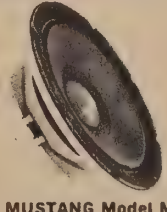
1212

University MUSTANG Series
Thin-Line High Fidelity Component Speakers

These speakers utilize the latest engineering developments. The Mustangs use strong die-cast baskets and molded seamless cones to assure long life and adherence to original performance. Mustangs are ideal for in-wall mounting for background music systems and home high fidelity installations. For quality souad at an economical price where space is at a premium, choose a Mustang.



MUSTANG MS
Sphericon Tweeter



MUSTANG Model M-8
8" Speaker



MUSTANG Model M-8D
8" 2-Way Dual-Cone Speaker



MUSTANG Model M-15T
15" 3-Way Wide-Range Speaker



MUSTANG Model M-12D
12" 2-Way Dual-Cone Speaker



MUSTANG Model M-12T
12" 3-Way Wide-Range Speaker

UNIVERSITY® SOUND
A quality company of LTV Ling Altec, Inc.

Dynamic Microphones

Broadcasting, Recording, Home Entertainment and General Purpose Applications

UNIVERSITY'S series of dynamic microphones embraces every possible need in *the audio field. Widely acclaimed in the industry, each* UNIVERSITY *microphone is designed and engineered to maintain the same exacting quality standards for which* UNIVERSITY *is famous the world over. Each and every* UNIVERSITY *microphone, from the economically priced Model 2000 to the top of the line 5000 Series, is covered by* UNIVERSITY'S *exclusive warranty to assure reliable trouble free operation for many years. To own the finest—choose* UNIVERSITY*!*





Model 5000 Shock-Mounted Super-Cardioid Dynamic spherical shaped 5000 Series has a wide-angle pickup pattern with a precise taper characteristic that rejects all unwanted sound at the rear hemisphere of the unit. Rugged die-cast housing. For all applications — soundcasting, broadcasting, recording. 200 and 20,000 ohms. Response from 25 to 18,000 Hz. Output at 200 ohms -54 dB/1 mw/10 microbar; at 20,000 ohms 13 mv/10 microbar. 2 3/16" max. diameter. 9⅝" max. length. 15' wired-in 2 cond. shielded cable and SA-10 Stand Adapter supplied. Net $59.37

Model 5020 Same as 5000 with detachable 15' cable and Amphenol Connector. Net $65.67

Model 5050 Same as 5000 with swivel stand adapter and 15' detachable cable. Net $67.11

Model 5100 Same as Model 5000 with switch. Net $65.67

Model 6000 Attache' Cardioid Lavalier The 6000 is the world's smallest cardioid microphone. Its wide-range cardioid pickup pattern and inconspicuous appearance make it ideal for churches, night club, studio and remote broadcasting applications. It can be used as a lavalier, hand-held, mounted on a desk or floor stand, a boom or gooseneck fixture. Response is 50-15,000 Hz. Low impedance 50-500 ohms. Output at 150 ohms is -57 dB/1 mw/10 microbar. 1 1/6" diameter, 3 11/16" long. Supplied with lavalier neck cord, cable. Net Price $41.75

Model 8000A Shock Mounted Cardioid Dynamic Highly directional wide angle pick-up pattern. Shock mounted for on-the-move applications. Ideal for church sound systems, industrial and commercial p.a. systems, and home tape recording. Response is 70-15,000 Hz. Impedance 250 and 20,000 ohms. Output at 250 ohms is -60 dB/1 mw/10 microbar; at 20,000 ohms is 8.5 mv/10 microbar. 1¾" diameter, 6⅜" long. Equipped with 15', 3 cond. shielded cable and Cannon XLR-4-11-C connector. Supplied with stand adaptor. Net $ 37.77

Model 8100A Same as Model 8000 with switch. Net $40.92

Model 2000 Omni-directional Dynamic For general soundcasting and recording applications. Omni-directional pick-up pattern is ideal for groups and audience participation programs. Response is 50-14,000 Hz. Impedance 50 and 20,000 ohms. Output at 50 ohms is -50 dB/1 mw/10 microbar; at 20,000 ohms is 28 mv/10 microbar. 15' 3 cond. shielded cable is wired-in. 1 5/32" dia., 6" long. With SA-10 Stand Adaptor. Net $32.96

Model 2040 Same as Model 2000 with switch and detachable 15' cable. Cannon Connector. Net $41.37

MICROPHONE STANDS

Model DS-10 Desk Stand Heavy base sculptured stand may be used with any microphone. Standard ⅞-27 NPSM thread. 4½" high x 7⅞" wide x 4⅝" deep. Black wrinkle finish. Net $8.91

Model SA-10 Slide-on Stand Adaptor. Net $3.00

Model DS-1 Desk Stand Contemporary design, slim profile desk stand with extruded aluminum base in black oxide finish. Perfectly balanced, will hold large microphones. Standard ⅝-27 thread. 6"x4"x3¾". Knurled locking washer. Net $3.47

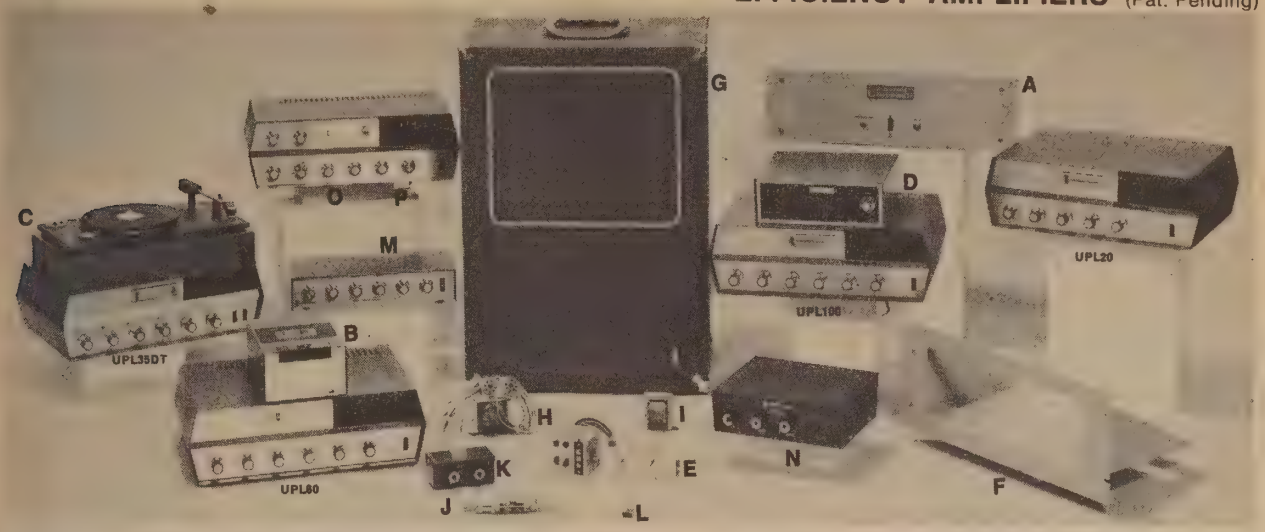
Model FS-7AB Floor Stand A new concept in microphone stands. New fluted tubes are easy to adjust. Doesn't show hand marks, won't slip. Velvet action movement of upper tube, no twisting or turning. Positive lock clutch, jam-free one hand operation. Non-reflecting finish. Adjustable from 34" to 63". Black wrinkle base weighs 7 pounds and is 10" diameter. Natural satin fluted aluminum. Net $15.15

Model FS-7BB Blue Anodized Net $15.81
Model FS-7GB Gold Anodized. Net $15.81
Model FS-10AB Floor Stand Same as Model FS-7 except for 10 pound, 12" diameter base. Natural Fluted aluminum. Net $16.77
Model FS-10BB Blue Anodized. Net $17.45
Model FS-10GB Gold Anodized. Net $17.45

Net
© United Technical Publications

UNIVERSITY® SOUND
A quality company of LTV Ling Altec, Inc.

POWER-LINE
WIDE RANGE HIGH EFFICIENCY AMPLIFIERS (Pat. Pending)



A. MODELS UPB60T and 100T BOOSTER AMPLIFIERS. 60 and 100 watt RMS solid state booster amp designed for dependable operation. Ideal for use wherever undistorted high power is required.

Computer Logic Circuit protection prevents damage to amplifier under any adverse load condition. Response ± 1.5 dB. 50 to 15,000 Hz. Inputs: Hi Z 50,000 ohm. Optional plug-ins provide 10k ohms bridging, 600 ohm line. An additional optional plug-in capability provides low Z ohms for microphone, RIAA meg Phono, NAB Tape Head. Outputs: 25v and 70v isolated, 8 ohms, and 2nd-16 ohms. 5" x 15½" x 10½". 117 VAC shpg. wt. 21 lbs. Prices on request.

B. MODEL CP-1. Top-mounting unit provides superb playback through the AUX input. Plays pre-recorded standard cassett tapes. Useful for background music as well as pre-recorded lectures. Monophonic 3 1/16" x 5½" x 8¼". Prices on request.

C. MODEL PT-210. Provides rugged dependable operation. 3 speed monophonic record player made for top mounting on Power-Line amps. Mounts in seconds. Equipped with dual stylus (stereo microgroove and 78 rpm) flip-over sapphire cartridge. 4¾" x 14⅜" x 8¾". List **$63.20.**

D. MODEL AFT-1. AM-FM tuner top mounts on Power-Line amps. Provides superb reception from both local and distant stations. AM-FM mode switch, AFC switching, plays through AUX input on Power-Line, back lighted tuning dial. Prices on request.

E. MODEL MPA-2B TWO CHANNEL MIKE PRE-AMP. Adds 2 additional mike inputs to UPL amplifier. Has full level controls, hi-lo impedance switch, facilities for remote or precedence controls. List **$76.95.**

F. MODEL RAC-1. Rack mounting adaptor for Power-Line. Simple screwdriver installation. Designed for use with standard 19" rack. List **$29.95.**

G. MODEL CAM-12 PORTABLE CARRY CASE. Doubles as portable P.A. system. Houses two M-12 extended range Mustang high fidelity speakers. Slide in rack for amplifier and storage strap for microphone. Price on request.

H. MODELS AXT-20, 35, 60, and 100. Output Autoformer kits for installation in transformerless Power-Line amplifiers. Easily installed to facilitate constant voltage speaker hook-up. List ATX20 **$19.33,** 35 **$21.28,** 60 **$22.43,** 100 **$27.60.**

I. MODELS ULT 5 and 10. University exclusive line matching transformers. To be used at speakers when transformerless installation is made. List ULT5 **$4.88** 10 **$7.38.**

J. MODEL LOZ. Balanced - to - Ground Microphone Transformer. An "in-line" transformer allowing use of balanced-to-ground mikes with Power-Line amplifiers. List **$19.25.**

K. RCB-2A REMOTE VOLUME CONTROL. For use with LDR-1. Provides remote level control for 2 different input signals. List **$20.73.**

L. MODEL LDR-1 PRECEDENCE CONTROL. Plug in accessory permits user to provide source precedence from remote location. List **$10.50.**

M. MODEL UMX-4. Mixed/Preamp. 4 mic Hi-Lo Z w/built-in transformers and Aux input. Outputs Hi-Lo Z mic, Aux and mix buss. Master Level Control, Cannon connectors.

N. MODEL UPB-10T. 10 watt amplifier with Hi-Lo Z mic, Aux and optional inputs. Outputs 16 ohm, 25 and 70v. Ideal for music or paging.

O. LDS-60T. 60 watt RMS Mixer amplifier, 4 mic inputs w/Cannon connectors Hi or Lo Z, Mag Phono and Aux on common fader. 4-12 ohms, 25 and 70 v. outputs.

P. LDS-100T. As above, but 100 watt RMS.

SPECIFICATIONS COMMON TO ALL UPL MODELS

SENSITIVITY	Mic (lo Z): 0.25 mv, Mic (hi Z): 4.0 mv, Aux: 250 mv, Bridging: 1V
SIGNAL TO NOISE RATIO	Power Amplifier: —80 dB Aux: —70 dB, Mic: —60 dB
OUTPUTS: XFMR Models (All models: Tape and Bridging outputs)	25V & isolated 70.7V line 4, 8 & 16 ohms on terminal strip 2 quick disconnect octal sockets
TONE CONTROLS (feedback)	Bass: ±10 db at 100 Hz Treble: ±10dB at 10kHz
POWER INPUT DIMENSIONS	95-130V AC 60 Hz 5" high x 15½" wide x 10½" deep

SPECIAL FEATURES	Hi or lo Z mic input selection by means of slide switch Switched AC outlet Spkr. protection circuit (Output current limited to rated power to prevent overdriving the speakers.) Fused AC line Power consumption less than 5W when idling, resulting in low operating temperatures & long component life.

MODELS				
	UPL20 (XFMR-LESS) $153.95 **UPL20T** (WITH/XFMR) $172.44 **UPL20DT** (DELUXE W/ XFMR $186.25)	**UPL35** (XFMR-LESS) $175.45 **UPL35T** (WITH/XFMR) $195.95 **UPL35DT** (DELUXE WITH XFMR) $210.40	**UPL60** (XFMR-LESS) $215.45 **UPL60T** (WITH/XFMR) $236.50 **UPL60DT** (DELUXE WITH XFMR) $256.46	**UPL100** (XFMR-LESS) $264.61 **UPL100T** (WITH/XFMR $291.51 **UPL100DT** (DELUXE W/ XFMR) $315.11
FREQUENCY RESPONSE	50-15kHZ, ±1½ dB	50-15kHz, ±1½ dB	50-15kHz, ±1½ dB	50-15kHz, ±1½ dB
POWER OUTPUT	20W at less than 5% THD	35W at less than 5% THD	60W at less than 5% THD	100W at less than 5% THD
PEAK POWER	40w.	70w.	120w.	200w.
INPUTS (IMPEDANCE) (All mike inputs specially suitable for guitar and music inputs.	1 Mic (hi or lo Z unbalanced) hi Z: 47k ohms, lo Z: 150 ohms Aux (2 inputs on fader) 300k ohms Bridging hi Z (5K)	2 Mic (hi or lo Z unbalanced) hi Z: 47k ohms, lo Z: 150 ohms Aux (2 inputs on fader) 300k ohms Bridging hi Z (5K)	2 Mic (hi or lo Z unbalanced) hi Z: 47k ohms, lo Z: 150 ohms Aux (2 inputs on fader) 300k ohms Bridging hi Z (5K)	2 Mic (hi or lo Z unbalanced) hi Z: 47k ohms, lo Z: 150 ohms Aux (2 inputs on fader) 300k ohms Bridging hi Z (5K)
CONTROLS	1 Mic 1 Gain Control (fader) for Aux. 1 & Aux. 2	2 Indiv. Mic. 2 more mics available on optional pre-amp 1 Gain Control (fader) for Aux. 1 & Aux. 2	2 Indiv. Mic. 2 more mics available on optional pre-amp 1 Gain Control (fader) for Aux. 1 & Aux. 2	2 Indiv. Mic. 2 more mics available on optional pre-amp 1 Gain Control (fader) for Aux. 1 & Aux. 2
SEMI-CONDUCTORS	19 All-silicon	35 All silicon	31 All-silicon	32 All silicon

Dut to the unusual capabilities of University Power-Line amplifiers, many features listed here-in have never been possible before. The circuitry is so advanced that patents have been applied for.

- Instantaneous electronic output transistor/short circuit portection
- Optional 2 Mic Pre-Amp (Optional Remote Control and precedence controls may be used also)
- Optional Remote Control
- Optional Precedence Control
- †Short circuit protection (if output is shorter, amplifier shuts off for 3 sec. Computer logic circuit then measures output still shorted, amp remains off. If back to normal, amp turns back on.)
- ††Thermal protection (If temp. rises above 185° F. amplifier shuts off until temp. drops.)

†60 and 100 watt models
††100 watt models

*Deluxe Models: UPL20DT, UPL35DT, UPL60DT and UPL100DT feature built-in monitor speakers, monitor speaker switch, AC cord storage holder and convenient retractable carry handle. Three wire AC power cord available on all models, on request, at slight additional cost. All prices and specifications subject to change without notice. TRADE DISCOUNT APPLIES TO LIST PRICES ONLY.

Wharfedale...ALL NEW FOR 1971

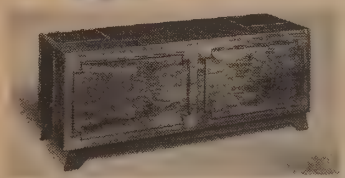
Achromatic and Variflex Speaker Systems . . . all with unitized construction...all built to take power

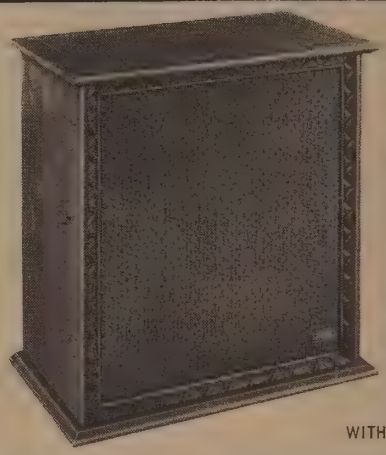


VARIFLEX™ W80A

A NEW CONCEPT . . . ELIMINATES THE USUAL LIMITATIONS INVOLVING SPEAKER PLACEMENT

Two W80A Speaker Systems may be placed end to end as a console, or spaced at any distance from each other or from the wall, at almost any height between ceiling and floor, to project flawless stereophonic sound to all areas of the room. Decorator designed to add elegance to any setting.
• Speakers: All professional grade components. Woofer: Heavy duty 12½" with 9½ lb. magnet assembly; mid-range: 5" acoustically isolated; two different treble speakers: 3" domed for sub-treble; 1" domed for extra highs • Controls: Individual for each treble; variplanular disc on a swivel mount to adjust sound projection • Minimum power required: 20 watts (per channel) IHF • System impedance: 4 to 8 ohms • Dimensions: 28"x17¼"x17" deep (Two W80A's can be used for a single 56" console. Removable bumpers add 1" to height.) • Shipping weight: 81 lbs. • Finish: Oiled walnut. • Price: $317.60. B-69 roll-out base for individual speaker, $18.50. B-68 pedestal for use when two speakers are end to end in console arrangement, $25.75.





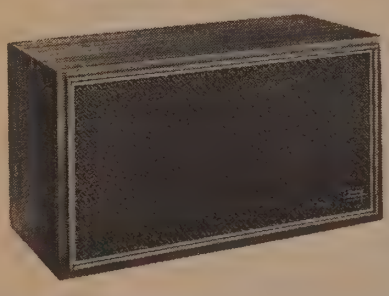


ACHROMATIC W70E

VERSATILE HIGH AND LOW BOY DE LUXE 3-WAY SPEAKER SYSTEM WITH ACOUSTIC SUSPENSION

One of the industry's most popular and versatile floor-standing systems, a W70E combines the finest components to provide the ultimate in home stereo reproduction. Superbly styled, the versatile W70E can be used vertically or horizontally. Either way, it creates a decorative end table to compliment any room setting.
• Speakers: Woofer: 15" long throw, heavy duty; mid-range: 5" acoustically isolated; tweeters: 3" omnidirectional; 3" mylar dome tweeter with phase compensating diffuser • Controls: Separate, continuously variable controls for mid and treble ranges • Minimum power required: 15 watts (per channel) IHF • System impedance: 8 ohms • Dimensions: 24"x22¾"x13⅝" deep • Shipping weight: 72 lbs. • Finish: Oiled walnut • Price: $223.00

ACHROMATIC W45 3-WAY SHELF SPEAKER SYSTEM WITH ACOUSTIC SUSPENSION



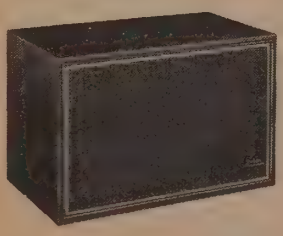
A new speaker system engineered specifically to meet today's challenging musical requirements. Truly an outstanding value. A multiple speaker assembly yielding a carefully tailored ultra-linear response.
• Speakers: Woofer: 8" heavy duty. Oversized voice coil and long-travel cone for extended bass; mid-range: 3¼" acoustically isolated; tweeter: 2½" ultra-curvilinear provides wide angle dispersion and smooth responses at high output levels • Controls: Continuously variable mid-range and treble • Minimum power required: 10 watts (per channel) IHF • System impedance: 8 ohms • Dimensions: 22"x12"x10" deep • Shipping weight: 37 lbs. • Finish: Oiled walnut • Price: $117.00

ACHROMATIC W60E 3-WAY SPEAKER SYSTEM WITH ACOUSTIC SUSPENSION FOR BOOKSHELF OR FLOOR LOCATION



The remarkable W60E is the new version of Wharfedale's most popular speaker system. New 3-way configuration and upgraded components, make the sound more impressive than ever before.
• Speakers: Woofer: 12½" heavy duty. Magnet assembly, distortion-free bass; mid-range: 5" acoustically isolated; super tweeter: 3" omnidirectional mylar dome and phase compensating diffuser for clean high response • Controls: Individual and variable for mid-range and treble • Minimum power required: 10 watts (per channel) IHF • System impedance: 4 to 8 ohms • Dimensions: 24"x15"x12" deep • Shipping weight: 56 lbs. • Finish: Oiled walnut • Price: $153.00

ACHROMATIC W25 2-WAY SPACE-SAVER SPEAKER SYSTEM WITH ACOUSTIC SUSPENSION



The remarkable performance of this small speaker system is even more amazing when you consider its compact size and modest cost. It is designed specifically to handle today's musical demands from percussive hard-rock to full symphonic material.
• Speakers: Woofer: 8" high compliance for base and mid-range; tweeter: 2½" ultra-curvilinear • Control: Variable treble • Minimum power required: 10 watts (per channel) IHF • System impedance: 8 ohms • Dimensions: 15½"x10"x8" deep • Shipping weight: 14 lbs. • Finish: Oiled walnut • Price: $58.75

ACHROMATIC W35 3-WAY SHELF/CORNER SPEAKER SYSTEM WITH ACOUSTIC SUSPENSION



A new, highly versatile shape in speaker systems for today's special decorative needs. May be used free-standing on shelf or at shelf corners, or suspended in room corners with optional corner mounting bracket. Exceptionally robust and highly articulate performance results from the 3-way speaker configuration. Ideal for four-channel stereo application.
• Speakers: Woofer: 8" heavy duty. Low resonance, high compliance cone suspension for deep, faithful bass reproduction; mid-range: 3¼" acoustically isolated; tweeter: 2½" ultra-curvilinear for undistorted wide-angle response • Controls: Individual and variable mid-range and tweeter • Minimum power required: 10 watts (per channel) IHF • System impedance: 8 ohms • Dimensions: 15"x15"x8" deep • Shipping weight: 24 lbs. • Finish: Oiled walnut • Price: $82.00. B-66 Mounting Bracket, $4.00

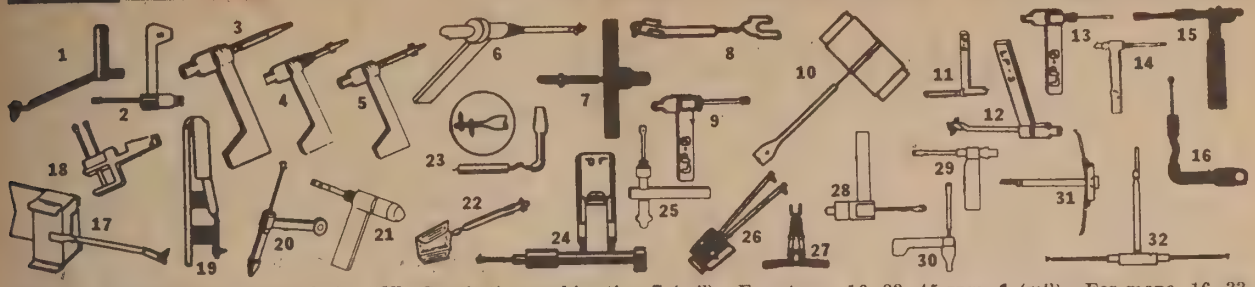
WHARFEDALE, DIV. BRITISH INDUSTRIES CO.

Prices and specifications subject to change without notice.

Net

© United Technical Publications

E-V/GAME "PRECISIONEERED" REPLACEMENT NEEDLES



NOTES: **"D"**—Natural diamond tip. **"S"**—Synthetic sapphire tip. **.7** (mil)—For stereo, 16, 33, 45 rpm. **1** (mil)—For mono, 16, 33, 45 rpm. **2** (mil)—For mono, all speeds. **3** (mil)—For mono, 78 rpm. Replacement needles 3002, 3009 and 3009D for **BSR** TC8H, TC8M, TC8S and TC8SH; 3000, 3000D, 3002, 3002D, 3009, 3009D for **Magnavox** 560180-3, 560209-1, -2, 560236-1 and 560288-1, -2; for **Motorola** 59P60015A03, 59C61619A01, 59B638903 and 59C60918A01; for **Philco** 325-8009-1, -8012, -8014, -8021, -8027, -1, 8043, 8052; for **Zenith** 142-47, -84, -85, -86B, -95, -96, -97, -124 and -125; 3000 thru 3009D for **Vaco** TO-35X, -45, -55, SN-45, ST-100, -200, -40, -20, and ST-2, -4 Series: 3000, 3000D, 3001, 3001D, 3009, 3009D for all **Ronette** Fonofluid cartridges are listed under Astatic.

FOR ASTATIC CARTRIDGES

E-V No.	Fits Manufacturer's Cartridge Number	Fig.	Tip Size, Material	Net Each
2102	AC, ACD Ser. 40–42, 90; 62-1†	1	3S	$1.50
2117DS	17, 17A, 17D, 135DA, 217D	2	.7D, 3S*	3.57
2120	Ser. 133, 137, 233D, 459, 483,	3	.7S, 3S*	2.10
2120DS	497; 139D, 192, 237D, 485D	3	.7D, 3S*	3.57
2122DS	Ser. 153, 157, 341, 343, 345, 461‡	4	.7D, 3S*	3.57
2123	138, -D; 140, -D, -RD; 142, -D,	5	.7S, 3S*	2.10
2123DS	-R, -RD; 146, 148, 217, 233, 253, 496	5	.7D, 3S*	3.57
2126	167, 167D, 169, 169D, 181D,	6	.7S, 3S*	2.10
2126DS	187D, 281D	6	.7D, 3S*	3.57
2127	146-1, 146-7, 346, 348, 602	7	.7S	1.50
2127D		7	.7D	2.97
3000		8	1S	1.50
3000D		8	1D	2.97
3001		8	2S	1.50
3001D	118, 120, 124, 310, 312, 414, 416,	8	2D	2.97
3002	420, 422, 424, 426 Series; 609	8	3S	1.50
3002D		8	3D	2.97
3009		8	.7S	1.50
3009D		8	.7D	2.97

FOR BSR CARTRIDGES

2421	C-1, SX1H, SX1M, X1H,	9	.7S, 3S*	$2.10
2421DS	X1HE, X1M, X3H	9	.7D, 3S*	3.57

FOR ELECTRO-VOICE CARTRIDGES

2604	Ser. 21, 22, 26, 27, 126, 127,	10	.7S	$1.50
2604D	128, 129	10	.7D	2.97
2616	117; 131, -D; 148, -D; 154, -D;	11	.7S, 3S*	2.10
2616D	159, -D; 259, -D; 260, -D	11	.7D, 3S*	3.57
2619	132, 163	12	.7S, 3S*	2.10
2619DS	132D, 163D	12	.7D, 3S*	3.57
2622	141, 149, 150, 157, 158, 169, 186,	13	.7S, 3S*	2.10
2622DS	256, 257, 258, 278, 279, 280 Ser.	13	.7D, 3S*	3.57
2624DS	Ser. 168, 198-9, 275, 277, 282, 284	14	.7D, 3S*	3.57
2625DS	5000D, 5003D, 5005D, 5075D, 5168-70D	15	.7D, 3S*	3.57
3201	Series 37, 38, 47, 72 (new no.)	16	1S, 3S*	2.10
3201DS		16	1D, 3S*	3.57

FOR EUPHONICS CARTRIDGES

2677D	U-1, U-2, U-4, U-5 Series	17	.7D	$2.97
2679	U-8, U-10, U-88 Series	18	.7S, 3S*	2.10
2679DS	U-9, U-11, U-89, U-98 Series	18	.7D, 3S*	3.57

FOR GENERAL ELECTRIC CARTRIDGES

2733D	VR-II Series cartridges	19	1D	$2.97
2739DS	C-100, 100A, 200, 400; EA97X250, 497, 569; RS3824, 4694	20	.7D, 3S*	3.57
2744	C-50, 500, 600, 650; EA80X165,	21	.7S, 3S*	2.10
2744DS	209, 234; RS6527, 6770; EA1013	21	.7D, 3S*	3.57

FOR MAGNAVOX CARTRIDGES

2604	560232, 560233, 260250, 560290,	10	.7S	$1.50
2604D	560296 Series	10	.7D	2.97
2619	560305, -1, -2; 560307, -1, -2, -3	12	.7S, 3S*	2.10
2619DS		12	.7D, 3S*	3.57
2622	560310-1, -2; 560311, -1, -2;	13	.7S, 3S*	2.10
2622DS	560315-1, 560340-1	13	.7D, 3S*	3.57
2624DS	560345, -2; 560350, -2	14	.7D, 3S*	3.57
2625DS	560360, -2	15	.7D, 3S*	3.57
2677D	560296-7, -8	17	.7D	2.97
2679	560234, -2	18	.7S, 3S*	2.10
2679DS		18	.7D, 3S*	3.57
3005	560277-1, 560277-2	22	.7S	1.50
3005D		22	.7D	2.97
3201	560224-1, 560225-1;	16	1S, 3S*	2.10
3201DS	560288-1, -2	16	1D, 3S*	3.57
3213DS	560246-2, 560247-1, 560259-1	23	.7D, 3S*	3.57

FOR MOTOROLA CARTRIDGES

2120	59C61496A01	3	.7S, 3S*	$2.10
2120DS	59C62432A01	3	.7D, 3S*	3.57
2123	59C62945A01	5	.7S, 3S*	2.10
2123DS		5	.7D, 3S*	3.57
2604	59C643220, 59C643221,	10	.7S	1.50
2604D	59K643335	10	.7D	2.97

FOR MOTOROLA CARTRIDGES (CONT'D)

E-V No.	Fits Manufacturer's Cartridge Number	Fig.	Tip Size, Material	Net Each
2616	59C61640A01, 59C62077A01	11	.7S, 3S*	$2.10
2616D	59C61640A03, 59C62077A03	11	.7D, 3S*	3.57
2677D	59C61100A01, A05; 59C61270A01	17	.7D	2.97
2679	59C62266A01	18	.7S, 3S*	2.10
2679DS	59C62266A05	18	.7D, 3S*	3.57
3201	59B634441	16	1S, 3S*	2.10
3201DS		16	1D, 3S*	3.57
3213DS	59C645700, 59C645701	23	.7S, 3S*	3.57
3214DS	59C60337A02, 59D60872A02, 59D62271A02	24	.7D, 3S*	3.57
3311DS	59C62971A02, 59C63816A01	25	.7D, 3S*	3.57

FOR PHILCO CARTRIDGES

2102	325-8004, 8, 9, 10, 33; 425-0013	1	3S	$1.50
2122DS	35-2860, 2863; 325-0129, 0130, 2864, 8077, 8078	4	.7D, 3S*	3.57
2123	325-1446-39, 325-8077,	5	.7S, 3S*	2.10
2123DS	325-8078, 325-8083, 325-8084	5	.7D, 3S*	3.57
2604	35-2808 Ser.; 35-2824-2, 2825-1,	10	.7S	1.50
2604D	2851-1; 325-8036, 8047, 8047-1	10	.7D	2.97
2619	325-8076	12	.7S, 3S*	2.10
2619DS		12	.7D, 3S*	3.57
2622	35-2857-1; 2865-1, -2; 2868-1, -2;	13	.7S, 3S*	2.10
2622DS	325-8079, 8080, 8081, 8082, 8085	13	.7D, 3S*	3.57
3005	325-8048, 325-8049, 325-8070,	22	.7S	1.50
3005D	325-8072	22	.7D	2.97
3201	325-8018	16	1S, 3S*	2.10
3201DS	325-8034	16	1D, 3S*	3.57
3214DS	325-8075	24	.7D, 3S*	3.57

FOR RCA CARTRIDGES

2906DS	RMP-200, -2 to -7; 106770A, 1A;	26	.7D, 3S*	$3.57
2906DD	106960A; 108213A, 108214A	26	.7D, 3D*	5.97
2907	RMP-200-8, -9; 106770B, 71B;	27	.7S, 3S*	2.10
2907DS	110021, 23; 111347, 8; 115062	27	.7D, 3S*	3.57
2912	RMP-204	28	.7S, 3S*	2.10
2912DS	115276, 115277, 115302, 115303	28	.7D, 3S*	3.57

FOR RONETTE AND CBS CARTRIDGES

3005	BF-40 Stereo Series;	22	.7S	$1.50
3005D	Perpetuum-Ebner PF-90	22	.7D	2.97

FOR SONOTONE CARTRIDGES

3201	Series W-9980, 2T, 2TA, 5T, 7T	16	1S, 3S*	$2.10
3201DS	(Vertical compliant version)	16	1D, 3S*	3.57
3213DS	8TA Series	23	.7D, 3S*	3.57
3214DS	9T, 9TA, 16T, 916TA Series	24	.7D, 3S*	3.57
3224DS	21T, 22T, 23T, 24T, 35T 43T Series	29	.7D, 3S*	3.57

FOR TETRAD CARTRIDGES

3311DS	1–21D, 2–21D, 6–21D Series	25	.7D, 3S*	$3.57

FOR VACO CARTRIDGES

3331	CN60, CN62, CN65, CN67,	30	.7S, 3S*	$2.10
3331DS	CN68, CN70, CN72, CN75	30	.7D, 3S*	3.57

FOR ZENITH CARTRIDGES

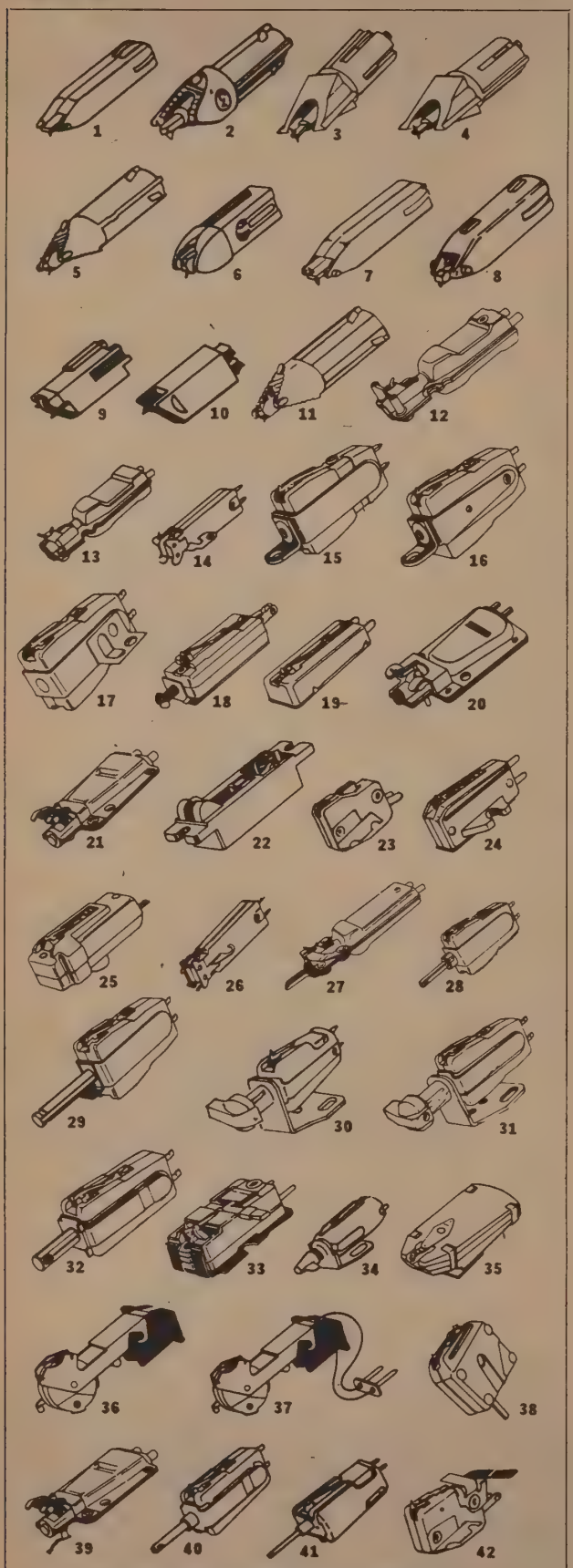
2120	142-144	3	.7S, 3S*	$2.10
2120DS	142-145	3	.7D, 3S*	3.57
2123	142-148	5	.7S, 3S*	2.10
2123DS	142-149	5	.7D, 3S*	3.57
2604	142-92, 142-93, 142-95, 142-117,	10	.7S	1.50
2604D	142-118	10	.7D	2.97
2622	142-155	13	.7S, 3S*	2.10
2622DS	142-160	13	.7D, 3S*	3.57
2677D	142-121, 142-122, 142-123	17	.7D	2.97
2679	142-133	18	.7S, 3S*	2.10
2679DS	142-134	18	.7D, 3S*	3.57
3005	142-98B, 101B, 107B, 113B,	22	.7S	1.50
3005D	146B, 147B, 152B, 153B, 157	22	.7D	2.97
3452DS	142-126 to 128, 136 to 143	31	.7D, 3S*	3.87
3454DS	142-150, 142-151, 142-163	32	.7D, 3S*	3.87

*Twin points. †Also 112-TS. ‡Also Series 481, 499; 465D, 479D.

THIS LISTING COVERS UP TO 70% OF ALL REPLACEMENTS. ASK FOR OTHER NEEDLES ALSO AVAILABLE.

636-70B

E-V/GAME REPLACEMENT PHONO CARTRIDGES



THIS E-V GAME LISTING COVERS UP TO 90% OF ALL REPLACEMENT CARTRIDGES. ASK FOR OTHERS AVAILABLE.

POWER POINT® PLUG-IN CARTRIDGES

Power Point, an Electro-Voice innovation, represents the most convenient cartridge/needle combination ever designed. Slips into old mount without soldering or wiring (mounts are needed when converting to Power Points or other plug-in types); exact physical and electrical replacements for all originals. **"D"**—Natural diamond tip. **"S"**—Synthetic sapphire tip. **.7** (mil)—For stereo, 16, 33, 45 rpm. **1** (mil)—For mono, 16, 33, 45 rpm. **2** (mil)—For mono, all speeds. **3** (mil)—For mono, 78 rpm. Specify if mount is required (e.g., Model 61 cartridge **with mount**) and add **60c** to price.

STEREO CERAMIC CARTRIDGES

E-V Model	Original Mfr's Number	Fig.	Tip Size, Material	Output	Tracking Force	Net Ea.
11	Astatic 11T7	1	.7S, .7S*	.5 V	6 gm	$3.57
11D	Astatic 11T7D	1	.7D, .7S*	.5 V	6 gm	5.37
13	Astatic 13T	1	.7S, 3S*	.5 V	6 gm	3.57
13D	Astatic 13TX	1	.7D, 3S*	.5 V	6 gm	5.37
13B†	Astatic 13TB	1	.7S, 3S*	.5 V	6 gm	4.17
13DB†	Astatic 13TBX	1	.7D, 3S*	.5 V	6 gm	5.97
61	Astatic 103	2	.7S, .7S*	1.0 V	6 gm	4.17
61D	Astatic 103D	2	.7D, .7S*	1.0 V	6 gm	5.97
66	Astatic 105	2	.7S, 3S*	1.0 V	6 gm	4.17
66D	Astatic 105D	2	.7D, 3S*	1.0 V	6 gm	5.97
106	Astatic 111	3	.7S, 3S*	.3 V	6 gm	4.17
106D	Astatic 111D	3	.7D, 3S*	.3 V	6 gm	5.97
107	Astatic 113	4	.7S, .7S*	.5 V	6 gm	4.17
107D	Astatic 113D	4	.7D, .7S*	.5 V	6 gm	5.97
108	Astatic 115	4	.7S, 3S*	.5 V	6 gm	4.17
108D	Astatic 115D	4	.7D, 3S*	.5 V	6 gm	5.97
108V‡	Astatic 115V	4	.7S, 3S*	.5 V	6 gm	4.17
108DV‡	Astatic 115VD	4	.7D, 3S*	.5 V	6 gm	5.97

MONOPHONIC CERAMIC CARTRIDGES

51	Astatic 93T1	5	1S, 1S*	1.0 V	6 gm	$2.37
56	Astatic 93T	5	1S, 3S*	1.0 V	6 gm	2.37
56D	Astatic 93TX	5	1D, 3S*	1.0 V	6 gm	4.17
76	Astatic 91T	6	1S, 3S*	1.0 V	6 gm	2.37
76D	Astatic 91TX	6	1D, 3S*	1.0 V	6 gm	4.17
81	Astatic 81T	7	1S, 3S*	1.1 V	6 gm	2.37
81D	Astatic 81TX	7	1D, 3S*	1.1 V	6 gm	4.17
81B†	Astatic 81TB	7	1S, 3S*	1.1 V	6 gm	2.97
81DB†	Astatic 81TBX	7	1D, 3S*	1.1 V	6 gm	4.77
83	Astatic 83-1	8	1S	1.1 V	6 gm	2.10
83D	Astatic 83-1X	8	1D	1.1 V	6 gm	3.90
89	Astatic 89T	7	1S, 3S*	1.3 V	6 gm	2.97
89D	Astatic 89TX	7	1D, 3S*	1.3 V	6 gm	4.77
111	Zenith 142-77	9	1S, 3S*	.5 V	8 gm	5.10
111D	Zenith 142-76	9	1D, 3S*	.5 V	8 gm	6.90
112	Zenith S-15780	10	2S	§	6 gm	2.70
113	Zenith S-15222	10	1S	§	6 gm	2.70
113D	Zenith S-21458	10	1D	§	6 gm	4.50
116	Zenith 142-87	11	1S, 3S*	.5 V	6 gm	2.97
116D	Zenith 142-88	11	1D, 3S*	.5 V	6 gm	4.77

*Twin points. †With PT-9 mounting bracket. ‡Out of phase. §Moving vane elem. mod. type; requires special input circuit.

"PRECISIONEERED" CARTRIDGES

Most popular replacement cartridges. To choose replacement, find proper heading, i.e., single or dual needles, stereo or mono.

SINGLE NEEDLE MONOPHONIC CARTRIDGES

17	Astatic 16, 22	12	2S	3.5 V	10 gm	$2.37
18	Astatic 18	13	2S	3.0 V	12 gm	1.95
23#	Astatic 40-2	14	2S	1.0 V	6 gm	3.90
58	Astatic 310-1	15	1S	3.2 V	8 gm	2.97
59	Astatic 310-2	16	2S	3.2 V	8 gm	2.97
77	Astatic 414-1	17	1S	3.0 V	8 gm	2.67
5178	GE 119B5265-1	18	1S	4.0 V	7 gm	3.30
5178D	GE 119B5265-2	18	1D	4.0 V	7 gm	5.10
246	Lloyds PH-42	19	1S	1.4 V	4 gm	4.20
41	RCA 103238	20	1S	3.2 V	10 gm	2.97
74	RCA 75575	21	1S	1.0 V	10 gm	2.67
263	RCA 115058	22	.7S	2.5 V	7–9 gm	3.24
263D	RCA 115062	22	.7D	2.5 V	7–9 gm	9.90
30#	Sonotone 1P-1S	23	1S	1.0 V	6 gm	2.91
35#	Sonotone 1P-2S	23	2S	1.0 V	6 gm	2.91
35D#	Sonotone 1P-2D	23	2D	1.0 V	6 gm	4.71
5200	Vaco SN45	24	2S	3.0 V	8 gm	2.55
5246	Vaco SN-H45	25	2S	3.5 V	8 gm	3.00

DUAL-NEEDLE MONOPHONIC CARTRIDGES

28#	Astatic 41-T	26	1S, 3S	.7 V	6 gm	$5.70
43	Astatic 62TY	27	1S, 3S	1.0 V	10 gm	4.77
49	Astatic 310-1	27	1S, 3S	3.2 V	8 gm	4.77
63	Astatic 310TS	28	1S, 3S	3.2 V	8 gm	3.27
68	Astatic 314TS	29	1S, 3S	3.2 V	8 gm	3.27
80	Astatic 420	30	1S, 3S	3.0 V	8 gm	3.27
82	Astatic 422	31	1S, 3S	1.0 V	8 gm	3.57
91	Astatic 118TS	32	1S, 3S	.7 V	10 gm	3.87
259	Astatic 148	33	1S, 3S	1.1 V	6 gm	4.05
259D	Astatic 148	33	1D, 3S	1.1 V	6 gm	5.85
260	Astatic 146	33	1S, 3S	2.8 V	8 gm	3.87
260D	Astatic 146D	33	1D, 3S	2.8 V	8 gm	5.67
119	BSR TC8M	34	1S, 3S	1.0 V	6–9 gm	2.88
120	BSR TC8H	34	1S, 3S	4.0 V	10–12 gm	2.88
136	Elac KST-9	35	1S, 3S	.7 V	8 gm	4.50
188D	Magnavox 560158-2	36	1D, 3S	.35 V	6–15 gm	12.00
190D	Magnavox 560158-3	37	1D, 3S	.35 V	6–15 gm	12.00
5181	Philco 325-8024	38	1S, 3S	3.0 V	8 gm	7.80
75	RCA 75475	39	1S, 3S	1.0 V	8 gm	3.90
86	Ronette DC-04	30	1S, 3S	1.0 V	10 gm	3.57
87	Ronette DC-500	41	1S, 3S	3.0 V	10 gm	3.87
38#	Sonotone 2T-S	42	1S, 3S	1.0 V	6 gm	3.39
38D#	Sonotone 2T-SD	42	1D, 3S	1.0 V	6 gm	5.82
5201#	Vaco TOH-46X	43	1S, 3S	3.6 V	8 gm	3.30
5203#	Vaco TOH-46	44	1S, 3S	3.0 V	8 gm	3.30
5206#	Vaco TO-55	44	1S, 3S	3.0 V	8 gm	3.00
5241#	Vaco CN-68	45	1S, 3S	3.5 V	8 gm	3.30

#Ceramic cartridges; all others are crystal types.

699-70B

Net

© United Technical Publications

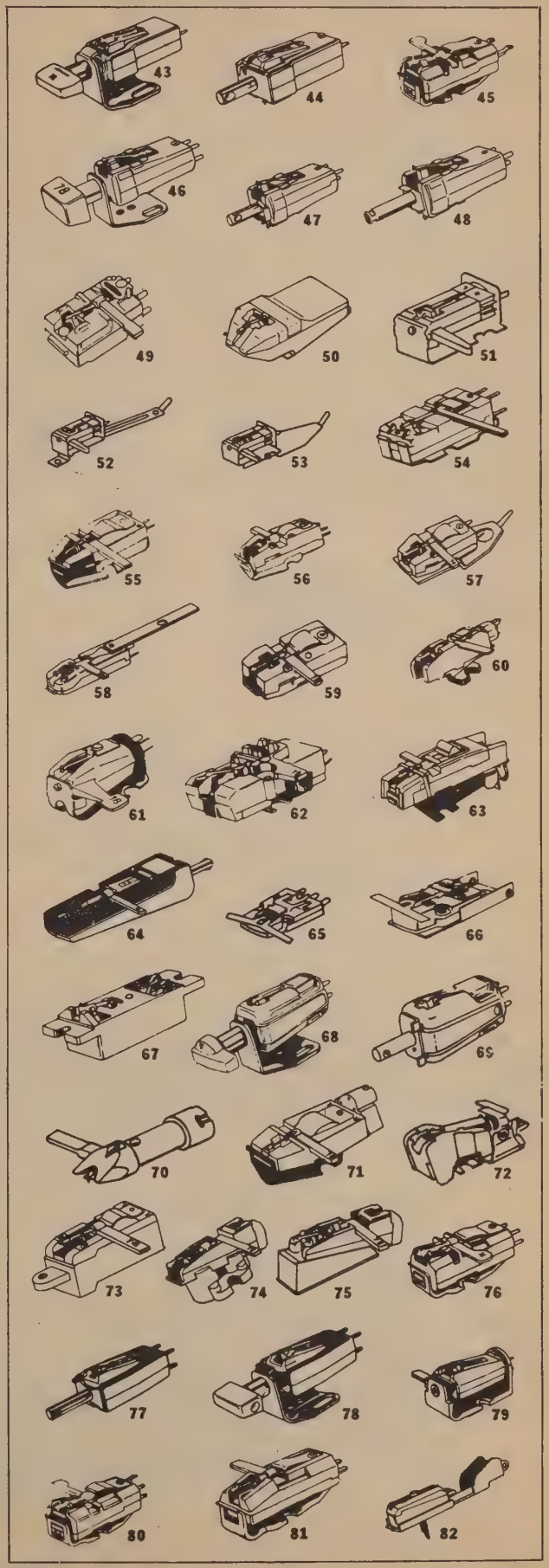
E-V/GAME REPLACEMENT PHONO CARTRIDGES

"PRECISIONEERED" CARTRIDGES (CONT'D)

DUAL-NEEDLE STEREO CARTRIDGES

E-V Model	Original Mfr's Number	Fig.	Tip Size, Material (Type)	Output V	Tracking Grams	Net Each
142	Astatic 76TSB	46	.7S, 3S (Xtl.)	2.0	8	$ 4.77
143	Astatic 70TS	47	.7S, 3S (Xtl.)	2.0	8	4.35
143D	Astatic 70D	47	.7D, 3S (Xtl.)	2.0	8	7.35
144	Astatic 74TS	48	.7S, 3S (Xtl.)	2.0	8	4.35
145	Astatic 80TS	47	.7S, 3S (Xtl.)	.8	6	4.50
145D	Astatic 80D	47	.7D, 3S (Xtl.)	.8	6	7.50
146	Astatic 86TSB	46	.7S, 3S (Xtl.)	.8	6	5.10
146D	Astatic 86D	46	.7D, 3S (Xtl.)	.8	6	7.17
121	BSR TC8S	34	.7S, 3S (Xtl.)	.8	7	4.68
271	BSR SX1M	49	.7S, 3S (Xtl.)	.25	5–7	3.60
272	BSR SX1H	49	.7S, 3S (Xtl.)	.75	6–8	3.60
137	Elac KST-102	50	.7S, 3S (Xtl.)	.8	5–7	4.50
26	E-V 26ST	51	.7S, 3S (Cer.)	.5	5	6.90
26D	E-V 26DST	51	.7D, 3S (Cer.)	.5	5	9.90
126	E-V 126	52	.7S, 3S (Cer.)	.5	5	6.90
126D	E-V 126D	52	.7D, 3S (Cer.)	.5	5	9.90
127	E-V 127	53	.7S, 3S (Cer.)	.5	5	6.90
127D	E-V 127D	53	.7D, 3S (Cer.)	.5	5	9.90
129	E-V 129	52	.7S, 3S (Cer.)	.5	5	6.90
129D	E-V 129D	52	.7D, 3S (Cer.)	.5	5	9.90
131	E-V 131	54	.7S, 3S (Xtl.)	1.5	8–10	5.37
131D	E-V 131D	54	.7D, 3S (Xtl.)	1.5	8–10	7.77
148	E-V 148	54	.7S, 3S (Xtl.)	3.0	6–8	5.37
148D	E-V 148D	54	.7D, 3S (Xtl.)	3.0	6–8	7.77
149	E-V 132, 149C	55	.7S, 3S (Cer.)	.45	2–4	5.40
149D	E-V 132D	55	.7D, 3S (Cer.)	.45	2–4	7.20
149DF	E-V 149DF	55	.7D, 3S (Cer.)	.45	2–4	10.50
150	E-V 150A, B	55	.7S, 3S (Cer.)	.55	4–8	4.80
150D	E-V 150D	55	.7D, 3S (Cer.)	.55	4–8	6.60
154	E-V 154	54	.7S, 3S (Xtl.)	1.3	4–8	6.30
154D	E-V 154D	54	.7D, 3S (Xtl.)	1.3	4–8	8.40
158	E-V 158	55	.7S, 3S (Cer.)	.25	3–6	5.40
158D	E-V 158D	55	.7D, 3S (Cer.)	.25	3–6	7.50
186	E-V 186	56	.7S, 3S (Cer.)	.18	3–6	6.60
186D	E-V 186D	56	.7D, 3S (Cer.)	.18	3–6	8.70
256	E-V 256	57	.7S, 3S (Cer.)	.55	4–8	5.70
256D	E-V 256D	57	.7D, 3S (Cer.)	.55	4–8	7.80
257	E-V 257	57	.7S, 3S (Cer.)	.25	3–6	6.30
257D	E-V 257D	57	.7D, 3S (Cer.)	.25	3–6	7.80
258	E-V 258	57	.7S, 3S (Cer.)	.5	4–8	5.10
258D	E-V 258D	57	.7D, 3S (Cer.)	.5	4–8	7.20
275	E-V 275	58	.7S, 3S (Cer.)	.2	2–4	5.40
275D	E-V 275D	58	.7D, 3S (Cer.)	.2	2–4	7.50
279	E-V 279	56	.7S, 3S (Cer.)	.18	3–6	6.60
279D	E-V 279D	56	.7D, 3S (Cer.)	.18	3–6	8.70
280	E-V 280	59	.7S, 3S (Cer.)	.5	4–8	4.50
280D	E-V 280D	59	.7D, 3S (Cer.)	.5	4–8	6.60
5000	E-V 5000	60	.7S, 3S (Cer.)	.23	2–4	5.10
5000D	E-V 5000D	60	.7D, 3S (Cer.)	.23	2–4	6.90
5015	E-V 5010	60	.7S, 3S (Cer.)	.55	4–6	5.10
5015D	E-V 5010D	60	.7D, 3S (Cer.)	.55	4–6	6.90
5166	E-V 5166	58	.7S, 3S (Cer.)	.25	3	6.00
5166D	E-V 5166D	58	.7D, 3S (Cer.)	.25	3	7.80
220	Euph. E1, U1	61	.7S, 3S (Cer.)	.3	8	6.57
220D	Euph. E2, U2	61	.7D, 3S (Cer.)	.3	8	10.17
224	Euphonics U10	62	.7S, 3S (Cer.)	.4	1.5–4	6.57
224D	Euphonics U11	62	.7D, 3S (Cer.)	.4	1.5–4	9.57
239D	GE C-650	63	.7D, 3S (Cer.)	.4	6	16.00
180D	Philips AG-3310	64	.7D, 3S (Xtl.)	.55	4–10	8.97
54	RCA 110021	65	.7S, 3S (Cer.)	.4	6	6.00
54D	RCA 110023	65	.7D, 3S (Cer.)	.4	6	11.46
133	RCA 106771-A	65	.7S, 3S (Cer.)	.4	6	6.00
133D	RCA 106770-A	65	.7D, 3S (Cer.)	.4	6	11.46
167	RCA 111197	48	.7S, 3S (Xtl.)	2.0	8	4.35
195	RCA 111347	66	.7S, 3S (Cer.)	.4	6	7.38
195D	RCA 111348	66	.7D, 3S (Cer.)	.4	6	11.61
264	RCA 115059	67	.7S* (Xtl.)	1.0	5–7	4.89
264D	RCA 115059	67	.7D* (Xtl.)	1.0	5–7	11.10
95	Ronette 105	68	.7S, 3S (Xtl.)	.8	6	5.10
96	Ron. 106, 208	68	.7S, 3S (Xtl.)	2.0	6	4.77
97	Ronette 105-1	69	.7S, 3S (Xtl.)	.8	6	4.50
98	Ronette 106-1, 208-1	69	.7S, 3S (Xtl.)	2.0	6	$4.35
104	Sonotone N-10T2-S	70	.7S, 3S (Cer.)	.5	6	5.82
104D	Sonotone N-10T2-SD	70	.7D, 3S (Cer.)	.5	6	7.80
169	Sonotone 9T-S	71	.7S, 3S (Cer.)	.4	2–6	5.10
169D	Sonotone 9T-SD	71	.7D, 3S (Cer.)	.4	2–6	7.50
266	Sonotone 8TA4-S	72	.7S, 3S (Cer.)	.3	3–5	6.00
266D	Sonotone 8TA4-SD	72	.7D, 3S (Cer.)	.3	3–5	7.80
141	Telefunken T20/2, T200/2	73	.7S, 3S (Cer.)	.7	6	7.77
141D	Telefunken T20/D, T200/D	73	.7D, 3S (Cer.)	.7	6	11.37
5100	Tetrad 6-32S-75-2	74	.7S, 3S (Cer.)	.125	2.5	7.95
5100D	Tetrad 6-32D-75-1	74	.7D, 3S (Cer.)	.125	2.5	9.75
5124	Tetrad 2-53S-BX	74	.7S, 3S (Cer.)	.2	3	9.30
5273	Tetrad 6-23S-SN2	75	.7S, 3S (Cer.)	.175	3	9.30
5297D	Tetrad 6-22D-B	74	.7D, 3S (Cer.)	.18	†	10.80
5202	Vaco CN-72	76	.7S, 3S (Xtl.)	.9	8	3.30
5213	Vaco ST-2	77	.7S, 3S (Xtl.)	1.0	8	3.45
5215	Vaco ST-2X	43	.7S, 3S (Xtl.)	1.0	8	3.60
5216	Vaco ST-4	77	.7S, 3S (Xtl.)	2.5	6	3.45
5219	Vaco ST-4X	78	.7S, 3S (Xtl.)	2.5	6	3.60
5227	Vaco ST-2V	79	.7S, 3S (Xtl.)	1.0	6	3.60
5228	Vaco ST-4V	79	.7S, 3S (Xtl.)	3.0	6	3.60
5243	Vaco CN-75	80	.7S, 3S (Xtl.)	2.0	8	3.60
5245	Vaco TN-02H	81	.7S, 3S (Xtl.)	.6	8	5.40
247D	Zenith 142-126, 127, 136, 137	82	.7D, 3S (Cer.)	.35	4	9.57

*Single needle. †Tracking Grams 3.5–5.5.



699X-70B

audiotex

HI FI & STEREO ACCESSORIES FOR TAPE RECORDERS & PHONOGRAPHS, HOME & AUTO

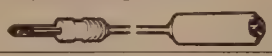
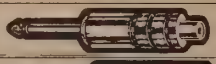
GC ELECTRONICS

CONNECTING CABLES

AMERICAN MADE

STANDARD AUDIO CABLES FOR HI-FI – STEREO

- *The Complete Line of Cables*
- *Durable Molded Assemblies*
- *Heavy-Duty, Low Resistance Wire*
- *Attractively Packaged*

PART NO.	ILLUSTRATION	DESCRIPTION	LENGTH	LIST
30-400-S		Shielded Cable, Phono Pin Plugs on both ends.	18" Cable	.77
30-402-S		Shielded Cable, Phono Pin Plugs on both ends.	36" Cable	.85
30-404-S		Shielded Cable, Phono Pin Plugs on both ends.	72" Cable	1.07
30-406-S		Shielded Cable, Phono Pin Plugs on both ends.	12' Cable	1.58
30-449-S	FOR STEREO HEADSET 	Molded On Three Conductor Phone Plug on one end of two conductor shielded cable, other end Molded On Three Conductor Phone Jack.	12' Cable	4.00
30-450-S		Shielded Cable, Phone Plug on one end, other end stripped and tinned.	72" Cable	1.39
30-451-S		Molded Shielded Cable with right angle Phone Plug on one end, other end stripped and tinned.	12' Cable	1.78
30-534		Combination clamp-type Phone Plug (solder connection) with removable shielded handle. Much easier to attach than the standard phono plug, and provides "finished appearance". Pkg. of 2.	2	.70
30-472		Adapter, Phono Pin Plug to Standard Phone Plug.	1	.98
30-484		Standard Phone Plug, 2 conductor. Black Plastic Handle	1	.60

REQUEST CATALOG #**FR-70-A** FOR COMPLETE LISTING OF HUNDREDS OF ITEMS

NEW

Tape Cartridge Player

HEAD-DEMAG



(Extra Long Tip for Auto and Home 4 and 8 Track Players)

Demagnetizes player heads quickly and easily. Extra long tip will reach into tape cartridge players easily for demagnetizing tape player head, thus preserving full frequency response. Demagnetizer tip is coated with soft plastic to prevent damaging player head. Complete with momentary push-button switch and 6' cord. Nothing to wear out; will last a lifetime.

(Std. Ctn. 12 cards)

NO.30-112-2 ..... List 7.75

HEAD LUBRICANT HEAD CLEANER



(The Perfect Treatment for Maximum Efficiency

Use Audiotex safe, efficient head cleaner to remove dirt and grease. Audiotex Recorder Head lubricant with silicone may be applied liberally to recorder head, leaves a light protective film to reduce friction. Cuts wow, flutter and tape squeals.

(Std. Ctn. 12 cards)

No. 30-124-1 Cleaner ..... List .60
No. 30-124-2 Lubricant ..... List .60
No. 30-124-3 Cleaner and Lubricant.... List 1.17

Audiotex Dual Purpose Bulk Tape Eraser

Catalog Number 30-140

List $18.30



Provides two convenient methods for completely erasing program material from magnetic tapes. Use either as a hand held o rtape model eraser. Rated at 117 V.A.C., 4 amperes, 60 Hz. May also be used with ½" width tapes.

DELUXE TAPE SPLICER

WITH BUILT-IN SPLICING TAPE DISPENSER

(Cuts and Splices Tape Automatically)

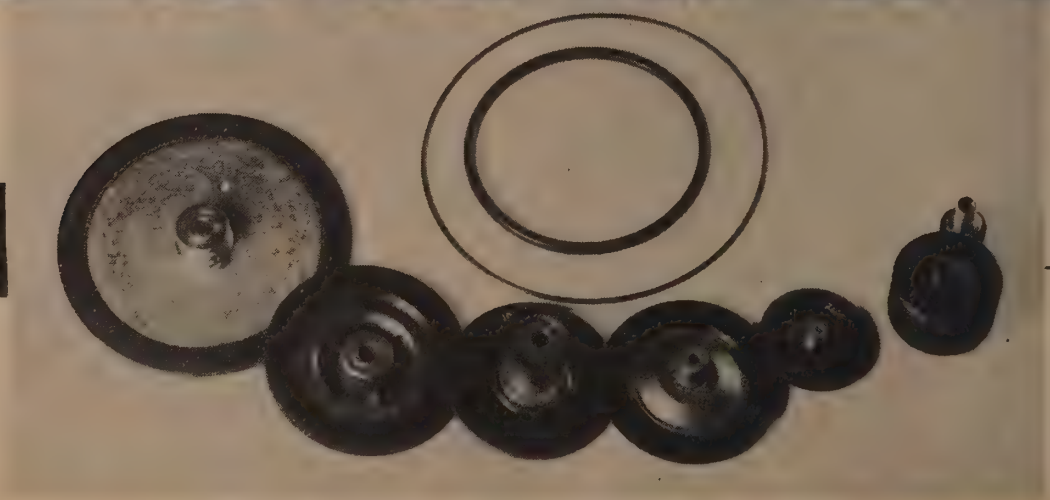


The New Deluxe Audiotex Tape Splicer handles all sizes of splicing tape. Unique splicing tape dispenser simplifies operation. For professionally repairing and editing, splicer cuts recording tape diagonally and trims splicing tape with indented cut to eliminate the danger of adhesive coming in contact with the recorder heads.

No. 30-106 ..... List 6.00

Walsco Tape & Phono Drives & Belts

Walsco ELECTRONICS



WRITE FOR CATALOG #FR-115-W FOR COMPLETE LISTINGS

Trade Discount Applies To List Prices Only

© United Technical Publications

TAPE ACCESSORIES

GC ELECTRONICS

NEW MUSI-KLEEN CASSETTE TAPE HEAD CLEANER

WITH EXCLUSIVE, NON-ABRASIVE KLEEN-TAPE FORMULA

The safe, convenient way to clean cassette tape heads. Audiotex uses a non-abrasive fluid to impregnate the cleaning tape in the cassette — an exclusive formula that will not damage sensitive tape heads. The cassetts is packaged in a plastic storage case and comes complete with cleaning fluid and dropper applicator.

No. 30-618.....List **4.95**



(Std. Ctn. 12)

Safe — Will Not Damage Tape Recorder Head

NEW "BLAST OFF" TAPE HEAD CLEANER

FOR AUTO TAPE PLAYER

New "Blast-Off" aerosol head cleaner removes harmful dust and oxide particles — assuring full fidelity from Auto Tape Cartridge Players. Two 1 second blasts does the job. A convenient way to regularly clean tape heads, the new 3-ounce Blast-Off easily stores in glove compartment of car.

No. 30-630.....List **1.95**

(Std. Ctn. 12)



MUSI-KLEEN TAPE CARTRIDGE PLAYER HEAD CLEANER

For All 8 Track and Combination 4 and 8 Track Tape Players

This head cleaner kit can be used for both home and auto tape players. It is the newest concept in a cleaning kit for tape cartridge player heads. The Audiotex Cleaner Cartridge employs a non-abrasive cleaning fluid which impregnates cloth belts in the cartridge. Kit includes Cleaner Cartridge, Cleaning Fluid and Replacement Belts. Attractively packaged in durable plastic storage container.

No. 30-620 .....List **5.95**



(Std. Ctn. 12)

Protect Your Valuable Tapes!

Avoid Expensive Repairs!

Safe For All Tape Recorder Heads

Garrard®

WORLD'S FINEST

AUTOMATIC TRANSCRIPTION TURNTABLES

SYNCHRO-LAB™ MODELS THAT GUARANTEE ABSOLUTELY CONSTANT SPEED



Garrard's revolutionary SYNCHRO-LAB™ Motor starts instantly at precise speed and maintains that speed regardless of voltage fluctuations. It powers all five Synchro-Lab Series turntables and incorporates the best features of both induction and synchronous motors: instant start... constant speed.



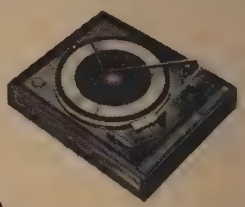
SL 95B

3-speed Automatic Transcription Turntable, $129.50. Synchro-Lab Motor for perfect synchronous speed, unwavering pitch • Ultra-gentle viscous damped tonearm descent in automatic play... first time ever in an automatic turntable • Low-mass, one-piece aluminum tonearm with Afromosia wood inset for low resonance • Gyrosocpically gimballed mounting in which arm floats on needle pivots • Vernier counterweight adjustment for ultra-fine balancing • Patented, permanently accurate anti-skating control... sliding weight design • Calibrated stylus pressure gauge with window scale • Slide-in cartridge clip • Safety platform for two-point record support in automatic play • Full size turntable, kinetically matched to synchronous motor • Simplified operating controls: one for automatic, one for manual, and one for viscous damped cueing/pause control • Matte ebony finish unit plate • Two interchangeable spindles.



SL 75B

3-speed Automatic Transcription Turntable, $109.50. Synchro-Lab Motor • Low-mass, twin braced rigid aluminum tonearm with counterweight locking screw • Slide-in cartridge clip • Needle pivots in tonearm bearings • Precision stylus pressure gauge • Patented anti-skating control • Exclusive viscous damped tonearm descent in automatic play • Full size turntable • Safe, two-point record support.



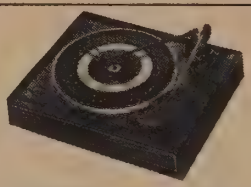
SL 65B

4-speed Automatic Turntable, $79.50. Synchro-Lab Motor • Low-mass, tubular aluminum tonearm with adjustable counterweight • Precision stylus pressure gauge with optical scale • Adjustable anti-skating control • Viscous damped cueing to prevent record and stylus damage • Slide-in cartridge clip • Meticulously balanced cast aluminum turntable • Swing-away overarm for convenient single record handling.



New SL 72B

3-speed Automatic Transcription Turntable, $89.50. Synchro-Lab Motor • Low-mass tubular aluminum tonearm • Gyroscopically gimballed tonearm mounting • Rubber-isolated adjustable counterweight • Patented anti-skating control • Calibrated stylus pressure gauge • Slide-in cartridge clip • Viscous damped tonearm descent in automatic play • Safe, two-point record support • Simplified controls: one for automatic, one for manual, and one for viscous damped cueing/pause control.



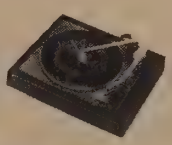
SL 55B

4-speed Automatic Turntable, $59.50. Synchro-Lab Motor • Rigid, lightweight, tubular aluminum tonearm with locking rest • Rubber-isolated counterweight to damp out resonance causing factors • Stylus pressure adjustment and scale • Viscous damped cueing for record/stylus protection • Fully adjustable anti-skating control • Slide-in cartridge clip • Oversized turntable • Swing-away overarm • Super-sensitive trip.



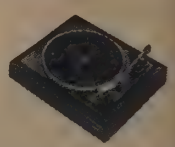
Model 40B

4-speed Automatic Turntable, $44.50. Lightweight tubular aluminum tonearm • Counterweight, resiliently isolated to damp out tonearm resonances • Easy-to-adjust stylus pressure control with visible scale • Viscous damped single-lever cueing/pause control • Oversized turntable • Swing-away overarm • Super-sensitive trip • Garrard 4-pole shaded "Induction Surge Motor."



Model 30

4-speed Automatic Turntable, $39.50. Includes pre-installed stereo ceramic cartridge with flip-over diamond stylus • Automatic record intermix.



SP 20B

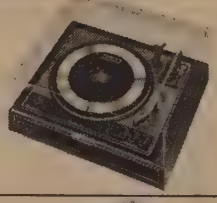
4-speed Manual Record Playing Unit, $37.50. Efficient, low-priced compact manual player, ideal for basic stereo music systems and quality audio/visual applications.

Garrard Module Series

Fine automatic turntables with pre-installed cartridge, coordinated base and dust cover, packaged complete... ready to plug-in-and-play.

New Module SLX-3

Synchronously powered, 3-speed Automatic Turntable, $99.50. Pre-installed fine magnetic cartridge with high compliance elliptical diamond stylus assembly. Garrard's most advanced features: Synchro-Lab Motor • Ultra low-mass dynamically balanced aluminum tonearm • Stylus pressure gauge • Adjustable anti-skating control • Single lever cueing/pause control • Damped tonearm descent • Two-point record support.



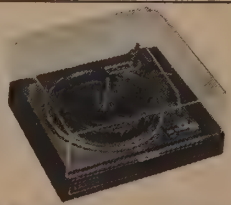
Module SLX-2

Synchronously powered, 3-speed Automatic Turntable, $69.50. Pre-installed magnetic cartridge with high compliance diamond stylus assembly. Synchro-Lab Motor • Sleek low-mass aluminum arm with ball-bearing pivotry; adjustable counter balance • Single lever cueing/pause control • Oversized turntable • Unique swing-away overarm • Simplified speed/size selector.



Module X-10

3-speed Automatic Turntable, $52.50. Pre-installed stereo ceramic cartridge with flip-over diamond stylus. Swing-away overarm • Single lever cueing/pause control • Low-mass aluminum tonearm • Automatic/manual simplified controls • Two interchangeable spindles: long for automatic, short for manual.



New Ultra Compact Module X-11

"Demi" 4-speed Automatic Turntable, $39.95. Pre-installed high quality stereo ceramic cartridge with flip-over diamond stylus. Swing-away overarm • Lightweight aluminum tonearm • Automatic shut off and tonearm lock • Plays stack of 8 records in automatic mode • Two interchangeable spindles.



Accessories: Coordinated bases including the new Power-Matic series, dust covers, mounting boards, automatic 45° spindles.

GARRARD, Div. British Industries Co.

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Net

© United Technical Publications

AUDIO RECORDING TAPE AND ACCESSORIES



RCA Red Seal Audio Tape offers a complete line of quality tape to meet all the needs of today's recordist — professional or amateur. Available in nine different lengths.



RCA Cassettes available in 30, 60, 90 and 120 minute playing lengths plus tape head cleaner, with time-saving color-coded label in unbreakable, pliable plastic mailer.



The newest addition. Quality polyester blank tape in popular 8-track configuration. Blister-packed on pilfier-proof display card in both 32- and 64-minute playing lengths.

RED SEAL TAPE

A professional quality home recording tape from the same magnetic tape formulation used by RCA in recording the world's greatest artists. RCA has developed a special lubricant... an integral part of the tape coating... which aids in smooth tracking over the guides and magnetic head surfaces, resulting in a minimum of friction and wear. Red Seal Tape has exceptional signal-to-noise ratio and frequency response characteristics. Full frequency, high-fidelity tape for monophonic or stereophonic... 2-track or 4-track. Available in nine different lengths and on 3-inch, 5-inch and 7-inch reel sizes on acetate, polyester or tensilized polyester bases. Leader and trailer tape included where type designation includes "LT."

ACETATE BASE

Type No.	Reel/Lgth	Description	Each* 1-11	Each* 12/Up
15A1	3″ - 150′	All Purpose - in Cardboard Mailer - 1.5 mil	.52	.47
15A6	5″ - 600′	All Purpose - Standard Play - 1.5 mil	1.69	1.52
15A6LT	5″ - 600′	Premium - Standard Play - 1.5 mil	1.82	1.64
15A12	7″ - 1200′	All Purpose - Standard Play - 1.5 mil	2.59	2.33
15A12LT	7″ - 1200′	Premium - Standard Play - 1.5 mil	3.02	2.72

POLYESTER BASE

5TM3	3″ - 300′	All Purpose - Double Play - .5 mil Tensilized	1.09	4.98
5TM12	5″ - 1200′	All Purpose - Double Play - .5 mil Tensilized	3.69	3.32
5TM12LT	5″ - 1200′	Premium - Double Play - .5 mil Tensilized	4.25	3.83
5TM18TP	5″ - 1800′	Triple-Play - .5 mil Tensilized	4.87	4.43
5TM24	7″ - 2400′	All Purpose - Double Play - .5 mil Tensilized	6.49	5.84
5TM24LT	7″ - 2400′	Premium - Double Play - .5 mil Tensilized	7.36	6.63
5TM36TP	7″ - 3600′	Triple-Play - .5 mil Tensilized	7.91	7.19
10M2	3″ - 225′	Long Play - in Cardboard Mailer - 1.0 mil extra-strength	.70	.63
10M9	5″ - 900′	All Purpose - Long Play - 1.0 mil extra-strength	2.29	2.06
10M9LT	5″ - 900′	Premium - Long Play - 1.0 mil extra-strength	2.64	2.38
10M18	7″ - 1800′	All Purpose - Long Play - 1.0 mil extra-strength	3.99	3.59
10M18LT	7″ - 1800′	Premium - Long Play - 1.0 mil extra-strength	4.57	4.12
15M6	5″ - 600′	All Purpose - Standard Play - 1.5 mil super-strength	1.77	1.59
15M12	7″ - 1200′	All Purpose - Standard Play - 1.5 mil super-strength	2.83	2.55

LOW NOISE — LOW PRINT & MASTERING TAPE

10MLN18LT	7″ - 1800′	Low Noise and Low Print - Polyester - 1.0 mil extra-strength	5.27	4.75
15ALN12LT	7″ - 1200′	Low Noise and Low Print - Acetate 1.5 mil	3.43	3.09
15MSM9LT	7″ - 900′	High Output Mastering Tape - Polyester - 1.5 mil super-strength	6.12	5.51
15MLN12LT	7″ - 900′	Low Noise and Low Print - Polyester 1.5 mil super-strength	4.30	3.87

TAPES IN PLASTIC MAILERS

5TM3PM	3″ - 300′	.5 mil Polyester - Tensilized	1.32	1.17
10M2PM	3″ - 225′	1.0 mil Polyester - extra-strength	.96	.86
15A1PM	3″ - 150′	1.5 mil Acetate	.67	.60

MAILING LABELS FOR PLASTIC MAILERS (Standard Pack — 20 Packages)

Type No.	Description	Each* 1-19	Each* 20/Up
LL12	Package of 12 Labels	.44	.38

RED SEAL CASSETTES

Type No.	Description	Each* 1-23	Each* 24/Up
V30	30 minutes	1.20	1.02
V60	60 minutes	1.55	1.35
V90	90 minutes	2.13	1.93
V120	120 minutes	2.50	2.30
10R121	Head Cleaner	1.55	1.35

RCA VIBRANT CASSETTES

Type No.	Description	Each* 1-49	Each* 50/Up
CV-30	30 minutes	.94	.85
CV-60	60 minutes	1.17	1.06
CV-90	90 minutes	1.78	1.62

SNAP-LOAD CARTRIDGE

Type No.	Length	Description	Each* 1-11	Each* 12/Up
10M5.6C	560′	1.0 mil Polyester	4.25	3.88

8-TRACK CARTRIDGE

Type No.	Length	Description	Each* 1-23	Each* 24/Up
8TR32	150′	32 minutes	1.75	1.59
8TR64	300′	64 minutes	2.11	1.92

TAPE ACCESSORIES

EMPTY RCA REELS & BOXES (Standard Pack - 10)

Type No.	Description	Each* 1-9	Each* 10/Up
EB3PM	3″ Empty Plastic Mailer	—	.28
EPR3PM	3″ Reel and Plastic Mailer	—	.40

EMPTY RCA REELS & BOXES (Standard Pack - 12)

Type No.	Description	Each* 1-11	Each* 12/Up
EPR3	3″ Reel and Cardboard Mailer	—	.22
EPR5	5″ Reel and Box	.41	.40
EPR7	7″ Reel and Box	.55	.50

LEADER TAPE - POLYESTER (Standard Pack - 12)

BL1	¼″ x 150′ - Blue - 3″ Reel	.85	.75
GL1	¼″ x 150′ - Green - 3″ Reel	.85	.75
RL1	¼″ x 150′ - Red - 3″ Reel	.85	.75
WL1	¼″ x 150′ - White - 3″ Reel	.85	.75
YL1	¼″ x 150′ - Yellow - 3″ Reel	.85	.75
GL12	¼″ x 1200′ - Green - 7″ Reel	3.80	3.30
RL12	¼″ x 1200′ - Red - 7″ Reel	3.80	3.30
WL12	¼″ x 1200′ - White - 7″ Reel	3.80	3.30

SENSING TAPE (Standard Pack - 12)

SL150	7/32″ x 150″ Metallic	1.55	1.30

SPLICING TAPE (Standard Pack - 12)

ST66-1	7/32″ x 66′	.95	.85
ST-66-2	15/32″ x 66′	1.25	1.15
ST66-3	¾″ x 66′	1.80	1.70

TAPE CADDY (Standard Pack - 24)

Type No.	Description	Each* 1-23	Each* 24/Up
IT1140	Tape Cassette Carryette	1.65	1.50

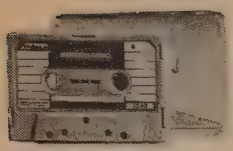
*Optional Distributor Resale Price

© United Technical Publications

Net

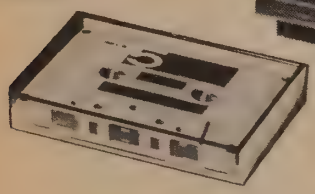
ROBINS INDUSTRIES CORP.

RECORDING CASSETTES, CARTRIDGES AND REEL TO REEL TAPE



Sonoramic brand Cassettes





Brand Five Cassettes

"BRAND FIVE" CASSETTES

High quality. Super coated tape for sharper, brighter recordings. Individually packed in deluxe permanent storage plastic canisters featuring clear hinged cover and built-in stops to protect tape.

Cat. No.	Recording Time	
2D30	30 minutes	"Peg-Hang"
2D60	60 minutes	Dispenser contain
2D90	90 minutes	12 Cassettes.
2D120	120 minutes	

See latest price sheet for prices.

"MAIL-A-CASSETTES"

Quality tape. Individually packed in impact-resistant plastic canisters with built-in stops to protect tape. Self-stick address label included.

Cat. No.	Recording Time	
2C30	30 minutes	Ready for correspon-
2C60	60 minutes	dence and dictation

See latest price sheet for prices.

"SONORAMIC BRAND" CASSETTES

Economical, quality tape for general recording, correspondence and dictation. Packed in two-piece clear plastic canisters with built-in stops to protect tape.

Cat. No.	Recording Time	
2S30	30 minutes	See latest price
2S60	60 minutes	sheet for prices.
2S90	90 minutes	
2S120	120 minutes	

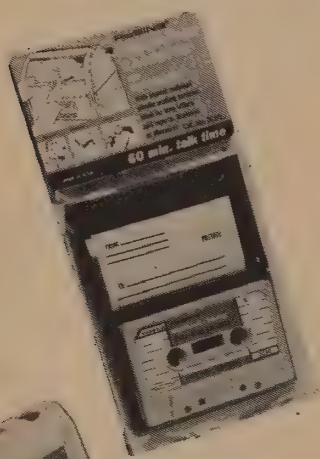
"BRAND FIVE" 8-TRACK BLANK CARTRIDGES

High quality, super coated tape for sharper, brighter recordings. Individually shrink packed.

Cat. No.	Recording Time	
8D30	32 minutes	See latest price
8D60	64 minutes	sheet for prices.
8D80	80 minutes	

ROBINS RECORDING CASSETTES ARE FULLY GUARANTEED

Guarantee Card enclosed with each Cassette indicates Cassette to be of 100% U.S. materials and assembly, and to be free of any defects in materials or workmanship. Should any Cassette prove to be defective in material or workmanship, it will be repaired, or replaced when returned to Robins Quality Control Engineer.



Mail-A-Cassettes

"BRAND FIVE" QUADRUPLE-PLAY ¼ MIL SUPER-LONG RECORDING TAPE

Four times more recording time than standard thicknesses on the same reel. Increases play time of small recorder. Meets needs of commercial users — broadcast, background music systems, lectures, conference, surveillance, and other long uninterrupted uses. Quality tensilized Mylar for strength.

Cat. No.	Reel Size	Length Ft.	Time per track Min. at 3¾ ips	List
3C25MT	2½"	500′	50 min.	$2.65
3C32MT	3¼"	1100′	1 hr. 50 min.	5.20
3D5MT	5"	2400′	4 hrs.	10.30
3D7MT	7"	4800′	8 hrs.	19.70

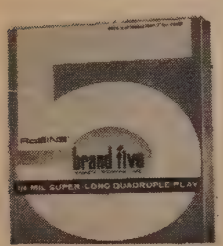


Brand Five 8-track Cartridges

"BRAND FIVE" RECORDING TAPE

The fifth oldest brand of recording tape in the world. Dependable quality. Individually boxed.

Cat. No.	Reel Size	Length Ft.	Time per track Min. at 3¾ ips	List
1.5 mil Acetate				
15D3	3"	150′	7½	.80
15D5	5"	600′	30	1.95
15D7	7"	1200′	60	2.90
1. mil Acetate				
10D3	3"	225′	11	.95
10D5	5"	900′	45	2.45
10D7	7"	1800′	90	3.85
1. mil Polyester				
10D3M	3"	225′	11	1.05
10D5M	5"	900′	45	3.05
10D7M	7"	1800′	90	5.20
.5 mil Polyester Double Play				
5D3M	3"	300′	15	1.20
5D5M	5"	1200′	60	3.50
5D7M	7"	2400′	120	6.30
.5 mil Tensilized Polyester Double Play				
5D3MT	3"	300′	15	1.45
5D5MT	5"	1200′	60	5.04
5D7MT	7"	2400′	120	8.80
.5 mil Polyester Triple Play				
5D3MS	3"	450′	22½	1.60
5D32MS	3¼"	600′	30	2.10
5D5MS	5"	1800′	90	5.04
5D7MS	7"	3600′	180	8.80
.5 mil Tensilized Polyester Triple Play				
5D3MTS	3"	450′	22½	1.75
5D5MTS	5"	1800′	90	6.45
5D7MTS	7"	3600′	180	11.20



Brand Five Tape



Robins brand Correspondence Tape

ROBINS BRAND CORRESPONDENCE TAPE

Top quality recording tape in impact-resistant plastic reusable mailing canister with two-sided address card. Ready for recording and mailing.

Cat. No.	Reel Size	Length Ft.	*Time Min.	Mil and Material	List
15H3	3"	150′	7½	1.5 A	$1.05
10H3	3"	225′	11	1. A	1.30
10H3M	3"	225′	11	1. P	1.50
5H3MT	3"	300′	16	.5 PT	1.85
5H3MTS	3"	450′	22½	.5 PT/TP	2.80
5H32MTS	3¼"	600′	30	.5 PT/TP	3.30



Sonoramic Tape Multi-Paks



Brand Seven Tape

"BRAND SEVEN" TOP QUALITY RECORDING TAPE

Offers increased output, reduced distortion at same recording level, better frequency response for sharper, brighter recordings. Improved uniformity for lower modulation noise. Calendered to achieve smoother oxide surface for professional like recording. Color-Coded Leader Tape and Aluminum Foil Sensing and Cueing Strips pre-spliced to beginning and end of tape on every reel. 4-color library box.

Cat. No.	Reel Size	Length Ft.	*Time Min.	Mil and Material	List
15E5	5"	600′	30	1.5 A	$2.35
15E7	7"	1200′	60	1.5 A	3.80
10E5	5"	900′	45	1. A	3.75
10E7	7"	1800′	90	1. A	5.95
10E5M	5"	900′	45	1. P	3.90
10E7M	7"	1800′	90	1. P	6.70
5E5M	5"	1200′	60	.5 P/DP	4.70
5E7M	7"	2400′	120	.5 P/DP	8.10
5E5MT	5"	1200′	60	.5 PT/DP	5.90
5E7MT	7"	2400′	120	.5 PT/DP	10.30
5E5MS	5"	1200′	60	.5 P/DP	6.25
5E7MS	7"	2400′	120	.5 P/DP	11.00
5E5MTS	5"	1800′	90	.5 PT/TP	7.70
5E7MTS	7"	3600′	180	.5 PT/TP	13.00

"SONORAMIC BRAND" RECORDING TAPE IN MULTI-PAKS

Economical, good quality tape.

Cat. No.	Reels per Pkg.	Reel Size	Lgth. Ft. ea. Tape	Mil and Material	List
15S3-P4	4	3"	150′	1.5 A	$1.75
15S2-P6	6	2"	75′	1.5 A	1.75
10S3-P3	3	3"	225′	1. A	1.75
10S2-P4	4	2"	110′	1. A	1.75
10S3M-P2	2	3"	250′	1. P	1.75
10S2.5M-P3	3	2½"	150′	1. P	1.75
5S2M-P2	2	3"	300′	.5 P/DP	1.75
5S2.5M-P3	3	2½"	200′	.5 P/DP	1.75
5S2.5MS-P2	2	2½"	350′	.5 P/TP	1.75
5S3.2MS-P2	2	3¼"	600′	.5 P/TP	2.80
15S5-P2	2	5"	600′	1.5 A	3.05
10S5-P2	2	5"	900′	1. A	3.70
15S7-P2	2	7"	1200′	1.5 A	5.00
10S7-P2	2	7"	1800′	1. A	6.70

Key to Material: A: Acetate, P: Polyester, T: Tensilized, DP: Double Play, TP: Triple Play.
* Time: Playing time per track in minutes at 3¾ ips.

TAPE ACCESSORIES IN ECONOMICAL MULTI-PAKS. RMC-6 REUSABLE IMPACT-RESISTANT PLASTIC TAPE MAILING CANISTERS FOR UP TO 3¼" DIA. TAPES. Includes two-sided address cards. Pkg. of 6 **List $1.90**

TMC-30 DOUBLE-SIDED ADDRESS CARDS. For use with RMC-6, Robins brand and Mail-A-Tape Correspondence Tape plastic Canisters. Pkg. of 30 cards. **List** **$1.30**

TB-15 TAPE MAILING BOXES. Pkg. of 15, cardboard boxes for up to 3¼" dia. tapes. Ready to address and mail. **List** **$1.60**

Trade Discount Applies To List Prices Only

© United Technical Publications

CASSETTE AND CARTRIDGE ACCESSORIES

ROBINS INDUSTRIES CORP.

TSA-1 CASSETTE STORAGE ALBUM. Recessed compartments for 12 Cassettes. Built-in stops prevent tape slack. **List** $4.00

TSA-3 CASSETTE IN CANISTER ALBUM. Stores 8 Cassettes in their original canisters. **List** $5.00

TCS-6 CASSETTE MODULAR STORAGE UNITS. Holds 12 tapes. Mount on wall, place on shelf. Walnut grain decor. **List** $3.55

TCS-8 for 12 8-track Cartridges. List $5.25

CASSETTE AND CARTRIDGE CARRYING CASES. Low cost, heavy duty. Alligator textured vinyl.
TCC-5 stores 12 Cassettes in canisters $4.50

TCC-8 stores 12 8-track Cartridges 5.55

TCC-21 Deluxe Convertible Case stores 12 Cartridges. Movable partitions convert case for use as a camera case, picnic basket, and utility case. **List** $9.15

TCC-6 "CASSETTE SWINGER" CARRYING CASE. Heavy duty, Holds 12 Cassettes. Free log book included. **List** $6.15

TC-3 DELUXE CASSETTE CANISTER. Impact-resistant plastic. Clear hinged cover. Built-in stops protect tape. Pkg. of 3. **List** $1.65

TC-4 PLASTIC CASSETTE MAILERS. Impact-resistant. Built-in stops protect tape. With self-stick address labels. Pkg. of 3. **List** $1.40

TML-20 REPLACEMENT CASSETTE MAILING LABELS. Pkg. of 20. Self-stick. Use with TC-4 and other canisters. **List** $1.25

TCB-18 ECONOMY CASSETTE MAILERS. Pkg. of 18 Cardboard Mailers. Has "stops" to protect tape for safe mailing. **List** $1.65

TS-115 "CUT-N-SPLICE" CASSETTE TAPE SPLICER. Cuts tape at 45° angle. 25 self-stick Patches included in tray of splicer. **List** $5.00

TS-215 POCKET SIZE PRECISION CASSETTE SPLICER BLOCK. Cuts tape at 45° or 90° angle. In pocket size plastic carry case. Includes cutting blade and 25 self-stick Patches **List** $10.50

TS-315 PROFESSIONAL STUDIO CASSETTE TAPE SPLICER. Precision 45° or 90° cut. Heavy duty splicer block is mounted on sturdy cast base. 100 self-stick Patches and burnishing roller included. **List** $26.25

TT-15 CASSETTE TAPE SPLICING PATCHES. Pkg. of 100. Pre-cut, self-stick. **List** $1.65

TMC-1 CASSETTE BULK TAPE ERASER. Erase recording in seconds. Restore "permanently recorded" cassettes to blank condition. 110 V. A.C. **List $21.00**

TD-10 CASSETTE HEAD DEMAGNETIZER. Removes excessive magnetic build-up from recorder/player heads to improve fidelity. Has built-in pilot light. 110 V. A.C. **List** $10.00

TSC-9 CASSETTE TEST STROBE. Tests recorder/player for correct speed. Built-in strobe tape and light. 110 V. A.C. **List** $6.50

THC-4 CASSETTE NON-ABRASIVE HEAD-KLEEN TAPE. Removes oxide, grime, etc. **List** $3.00

THC-6 3-WAY TEST-N-CLEAN CASSETTE. Cleans recorded heads. Tests head alignment and stereo balance. **List** $2.95

THC-7 CASSETTE MICRO-POLISHING HEAD-KLEEN TAPE. Cleans and polishes recorder heads. **List $2.50**

TCW-2 CASSETTE TAPE TENSION WINDERS. Insert in sprockets of Cassette to wind tape in either direction. Takes up slack. **Pair** $1.60

TK-3 CASSETTE AND CARTRIDGE PLAYER HEAD-KLEEN KIT. 2 oz. bottles of Head Cleaner and Lubricant, plus 25 extra-long Audio Cleaners for hard to reach heads. **List** $2.40

TCL-20 COLOR-CODED CASSETTE TITLE LABELS. Pkg. of 20. 5 colors. Self-stick, die-cut for easy application. **List** $1.60

TCL-30 COLOR-CODED CASSETTE OWNER IDENTIFICATION END LABELS. Pkg. of 30. 5 colors. Self-stick. Printed: "Property-Of—". **List** $1.50

TTK-1 CASSETTE RE-RECORD KIT. Approx. 50 reusable plastic erase tabs for replacing removed tabs of permanently recorded Cassettes. Replacing tabs permits automatic erasure of recordings and re-recording. Handy tool for inserting tabs is included. Tabs are removable to make Cassette permanently recorded again. Includes instructions. **List** $1.65

TSP-140 CASSETTE SENSING AND CUEING TAPE. .140" x 150" length Aluminum foil tape can be cut to any length and placed on any desired section of Cassette tapes to cue automatic stop, reverse, and other electronic sensing devices. **List** $3.10

TSK-2 EXPERIMENTER'S CASSETTE-PARTS KIT. Complete set of parts and housing without tape. **List $1.25**

TC-2 ECONOMY CASSETTE CANISTERS. Pkg. of 3 window clear plastic 2-piece canisters. Has built-in stops to protect tape. **List** $1.00

4- AND 8-TRACK CARTRIDGE BULK TAPE ERASERS. Erase recording in seconds. 110 V. 50-60 Hz A.C.
#TMC-2 Deluxe, **List** $31.50
#TMC-3 Professional, UL listed. **List** $57.75

TSC-8 CARTRIDGE TEST STROBE. Tests speed accuracy of recorder. Built-in strobe tape and light. 110 V. A.C. **List** $7.90

CARTRIDGE HEAD DEMAGNETIZERS. Removes excessive magnetic build-up from recorder heads to improve fidelity. **#TD-12** for Home Cartridge Players. 110 V. A.C. **List** $14.05
#TD-15 for Automobile units. Direct Current model. Plugs into cigarette lighter. **List** $17.50

TBT-8 8-TRACK RECORDER PRE-TEST CARTRIDGE. 60 second blank tape for rapid check of recording level, tone balance, and track switching before recording program. **List** $3.65

THC-9 BEEPER HEAD AND CAPSTAN CLEANING CARTRIDGE. Removes oxide, grime, and dust from heads and capstans of player. Audible beep signals indicate number of times cleaning tape passes and contacts heads. **List** $2.50

THC-10 NON-ABRASIVE HEAD-CLEANER CARTRIDGE. Removes oxide, grime, and dust from heads to improve fidelity. **List** $3.00

THC-11 8-TRACK 5-WAY TEST-N-CLEAN CARTRIDGE. 1. Cleans player heads. 2. Tests track selector. 3. Tests Stereo channel balance. 4. Tests speaker phasing. 5. Tests head alignment to assure full fidelity playback. **List** $5.30

TCA-8- 8-TRACK CARTRIDGE TAPE ALBUM. Stores 8 Cartridges. **List** $6.20

TRL-8 CARTRIDGE COLOR-CODING TITLE LABELS. Replace worn labels. Color-code tapes by category. Pkg. of 20. 5 colors. Self-stick for easy application. **List** $2.00

CASSETTE TAPE EDITING AND CARE KITS SKA-6 KIT. Contains: TS-115 Tape Splicer, 25 Patches, Cassette Tape Tension Winders, 3 Deluxe Cassette Canisters, THC-6 Test-N-Clean Cassette, Cassette Title Labels, and two 60 minute "Sonoramic" Recording Cassettes. All in a heavy duty vinyl, Alligator textured Carrying Case. **List** $17.75

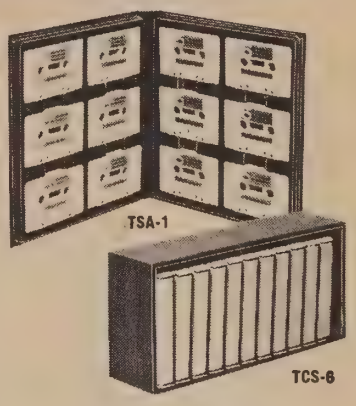
TK-36 KIT. Contains: TS-115 Cassette Tape Splicer, 25 Patches, Cassette Tape Tension Winders, Cassette Color-Coding Title Labels, and Color-Coding numbered Index Spots for Cassettes and matching canisters. **List** $9.50

SKA-8 8-TRACK CARTRIDGE CARE KIT. Contains: TD-12 Cartridge Head Demagnetizer, THC-8 Test-N-Clean Cartridge, Recorder Pre-Test Cartridge, Cartridge Color-Coding Title Labels, Cartridge Protective End Caps. All in a convenient heavy duty vinyl, Alligator textured Carrying Case. **List** $26.00

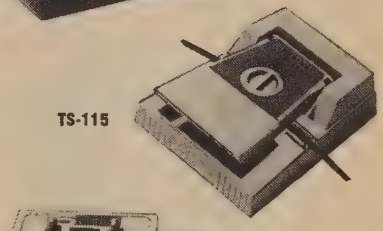
PROTECTIVE COVERS FOR TAPES. Protect recordings from dust and grime. **#TCJ-20,** Pkg. of 20 clear plastic bags for Cartridges. **List** $1.15
#TCJ-18, Pkg. of 20 clear plastic bags for Cassettes. **List** $1.15

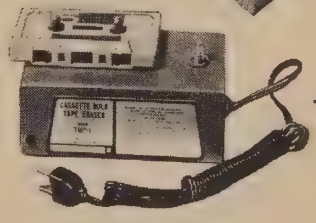
TJ-12 CASSETTE END-CAPS. Plastic. Protects tape at Cassette openings from dust and prime. Pkg. of 10. **List** $1.40

TEP-1 CASSETTE ERASE PREVENTION TAB REMOVER. Convenient special tool for removing erase tabs of Cassettes for making permanent recordings. Simple to use. **List** $1.65

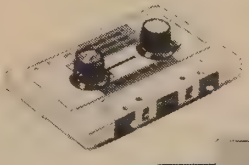




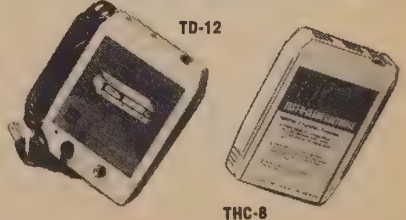












ROBINS®

ROBINS INDUSTRIES CORP.

REEL TO REEL TAPE ACCESSORIES



TS-8D



TS-7S



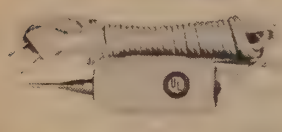
TS-500



TM-99



TM-120



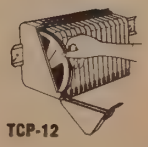
TD-6



TLA-1



TW-1



TCP-12

GIBSON GIRL® "STEREO" TAPE SPLICERS. "See-thru" windows show "Cut" and "Trim" positions. Tape guide and arms secure tape. Blade centering adjustment provided for life-time accuracy. Replaceable cutter cartridge, pads.

TS-8D DELUXE. Easy threading integral tape dispenser has ½" x 100" splicing tape. Made of durable Cycolac®. **List** $14.00

TS-7S STANDARD. Same as TS-8D. Integral tape dispenser has ⅜" x 100" splicing tape. Metal and plastic. **List** $10.50

TS-7J JUNIOR. Same as TS-7S, less dispenser and splicing tape. **List** $8.70

TS-14 PROFESSIONAL STUDIO SPLICER. Cuts tape at 45° or 90° angle. Precision, heavy-duty splicer block mounted on sturdy cast base. Burnishing plate, roller, cutting blade, and 100 self-stick Patches included. **List** $26.25

TS-6 DELUXE "CUT-N-SPLICE". Adjustable cutter cuts tape at 30°, 45°, and 90°. Includes 25 self-stick Patches in tray of splicer. **List** $5.00

PROFESSIONAL GIBSON GIRL® AUDIO/VIDEO TAPE SPLICERS. Heavy duty. Precision cut and trim. Blades and cutter pads are replaceable. **#TS-250** for ¼" tape. **#TS-500** for ½" tape. **#TS-1000** for 1" tape. Splicers with straight cut. **#TS-250S, #TS500S, #TS-1000S. List each** $96.10

AUDIO/VIDEO TAPE SPLICERS. Heavy duty. Includes 25 self-stick Splicing Patches. **#TSV-50** for ½" tape. **#TSV-100** for 1" tape. **List each** $22.70

SPLICING TAPE. Special formula Mylar.

Cat. No.	Width	Length	List
TST-235	¼"	300"	$1.20
TST-376	⅜"	275"	1.20
TST-501	½"	250"	1.20
TST-751	¾"	150"	1.20

SPLICING PATCHES. Pre-cut, self-stick.

Cat. No.	Pkg. Qty.	Splicer to be used with	List
TST-233	75	TS-5, TS-6, and TS-14	$1.30
TT-247	60	TSV-50	1.75
TT-248	48	TSV-100	1.75

REPLACEMENT CUTTER KITS FOR SPLICERS. Kit contains cutter cartridge and 2 cutter pads.

TZ-2 for old TS-4A series splicers. **List** $1.85

TZ-3 for TS-7S, TS-7J, TS-4S, TS-4J. **List** 1.85

TZ-8 for TS-8D splicer **List** 1.85

TZ-4 Cutter Pads for TS-7S, TS-7J, TS-4S, TS-4J, and TS-4A series splicers. **List** 1.85

TZ-250 Cutter Pads for TS-250 splicer. **List** 2.10

TZ-500 Cutter Pads for TS-500 splicer. **List** 2.10

TZ-1000 Cutter Pads for TS-1000 splicer. **List** .. 2.10

TZ-1 Replacement Blades for TS-250, TS-500, TS-1000 splicers. Pkg. of 12. .....$3.50

TM-99 PROFESSIONAL BULK TAPE ERASER. UL LIST. For tapes to ½" wide, reels to 10½". Erasure: 3 to 6 dB below normal erase head level. 110 V. 50-60 Hz A.C. Size: 5¼" x 6¾" x 3¾". **List** ..$52.45

TM-77 DELUXE BULK TAPE ELASER. For ¼" tape, reels to 7". Erasure: 2 to 4 dB below erase head level. 110 V. 50-60 Hz A.C. Size: 2⅜" x 3¾" x 6¼". **List** $29.30

HEAVY DUTY BULK TAPE ERASERS FOR AUDIO-VIDEO AND INDUSTRIAL TAPES UP TO 1" WIDE. Erasure 50-90 dB below saturation level. 115 V. 50-60 Hz A.C. Safety features: overheat indicator, individually fused circuits. **#TM-120** for reels to 17". Duty cycle: 10 min On/10 min. Off. Size: 3¾" x 12" x 14". With blower system. **List** .....$220.50.

#TM-100 for reels to 10½". Duty cycle: 5 min. On/15 min. Off. Size 3¾" x 6" x 8". **List** $110.25

TM-88 HAND HELD BULK TAPE ERASER. For ¼" tape, any size reel. Handle has momentary contact switch. Size: 4" x 2¼" x 4¼". Wt. 2 lbs. 4 oz. Operation: 4 amps, 110 V. A.C. **List** $19.20

TM-2 MAGNETIC TAPE EDITING PEN. Removes single sounds, noise, etc. from recordings. Fade in, fade out sounds. **List** $2.65

HEAD DEMAGNETIZERS. Removes excessive magnetic build-up from recorder heads to improve sound fidelity. Operation: 110 V. 50-60 Hz. A.C.

TD-6 PROFESSIONAL UL LISTED MODEL. Size: 4⅝" x 1¼" dia. **List** $12.75

TD-3 ECONOMY MODEL. 3½" x 1¼" **List** 7.00

TLA-1 TAPE CLEAN-LUBE SYSTEM. Cleans and lubricates both sides of tape during play. Reduces tape drag. Eliminates squeal. Self-stick base mount to recorder deck. Includes Silicone cleaner/lubricant and 2 replacement applicators. **List** $5.25

TLA-2 TAPE LUBE SYSTEM. Lubricates both sides of tape during play. Reduces tape drag. Eliminates squeal. Self-stick for recorder deck mount. With spare graphite lube sticks. **List** $3.50

TX-20 HEAD CLEANER. Removes oxide, dirt, etc. from recorder heads. 2 oz. **List** $1.20

TX-22 HEAD AND GUIDE LUBRICANT. Silicone base liquid reduces head and tape wear. Provides friction free tape path. 2 oz. **List** $1.20

TX-33 TAPE DRIVE OIL. Highly refined lubricant for rotating and moving drive parts. Inhibits rust and oxidation. 2 oz. **List** ..... .90

TX-56 NON-SLIP FOR TAPE DRIVES. Stops slippage of idler, wheels, pulley belts, and cords. Fast drying and penetrating. Dries to tack-free yet non-slip surface. 2 oz. **List** $1.60

TX-60 SPECIAL FORMULATED CASSETTE RECORDER HEAD CLEANER. Meets requirements for safe cleaning of Cassette recorder heads. Removes accumulated oxide, grime, etc. from heads to improve sound fidelity. 2 oz. **List** $1.25

TG-2 TAPE CLEANING AND LUBRICATING CLOTHS. Cleans, lubricates and protects recording tape by depositing film of Silicone. Reduces head and tape wear. Eliminates tape squeal and chatter. Pkg. of 3 reusable cloths. Cloths are washable. **List** $1.15

SENSING STRIPS AND PATCHES. Aluminum foil. Prepares tapes for use with recorders having automatic stops and reverse controls and other electronic sensing devices. **#TSP-25,** ¼" x 4" strips. Pkg. of 25. **List** $2.00

#TSP-50 Patches. ¼" x ¾" lengths. Pkg. of 50. **List** $1.75

LEADER TAPES, CLEAR, WHITE, AND COLORS. 1.5 mil leader tape. 100 ft. x ¼" wide on 2½" reels. Reinforce ends of tape. Use for color-code indexing between recorded sections on reels. Use clear leader to prepare tapes for use with recorders having automatic sensing or shut-off devices.

Cat. No.	Color	List	Cat. No.	Color	List
TT-100C	Clear	$1.35	TT-100G	Green	$1.35
TT-100W	White	1.35	TT-100R	Red	1.35

TT-101 1200 ft. 1.5 mil White Leader Tape on a 7" reel. **List** $5.25

TW-1 PROFESSIONAL TAPE STROBE. Precision all metal, chrome plated. Checks recorder speed accuracy at 7½ and 3¾ ips. Precision machined. Needle bearings. **List** $12.25

TK-5 TAPE STROBE AND LIGHT KIT. Strobe tape and neon light, 110 V. A.C. Tests recorder speed accuracy at 15, 7½, and 3¾ ips. **List** $3.15

TAT-100 HEAD AZIMUTH ALIGNMENT TAPE. 100 ft. on 2½" reel. Has 6 kc steady tone. **List** $2.10

TCP-12 "TAPE SAFES". Set of 12. Protects 7" tapes. Molded hi-impact plastic. Hinge cover. Dovetail groove fits metal wall mount bracket included. **List** $21.00

TAPE "VAULTS". Durable metal, enamel finished canisters. Ribs nest for stacking. **TC5-2** Pkg. of 2 for 5" tapes. **List** .....$1.40.

TC7-2 Pkg. of 2 for 7" tapes. **List** $2.10

EMPTY TAPE REELS. Clear Plastic.

Cat. No.	Size	Qty.	List	Cat. No.	Size	Qty.	List
TR20-6	2"	6	$1.20	TR40-4	4"	4	$1.35
TR25-6	2½"	6	1.20	TR50-2	5"	2	1.20
TR30-6	3"	6	1.20	TR70-2	7"	2	1.35
TR32-4	3¼"	4	1.20	TR53-2†	5"	2	1.85
TR36-6*	3"	6	1.30	TR74-2†	7"	2	2.15
				TR-75(V)	7"	1	2.50

* Assorted Colors. † Low Torque Reels.
(V) VTR Reel for ½" wide video tape.

Trade Discount Applies To List Prices Only

© United Technical Publications

PHONO AND RECORD ACCESSORIES

ROBINS® ROBINS INDUSTRIES CORP.

PK-6 "ROB-O-STAT" RECORD CLEANING KIT. Soft velvet and foam applicator mitt, 1½ oz. Anti-Static Record Cleaner and Lubricant, Polyfoam pad, and Stylus brush. **List** $2.65

PCD-1 PROFESSIONAL RECORD CUEING CONTROL. For manual turntables. Raise and lower tone-arm to desired track with pin-point accuracy without touching it. Prevents scratching records. Self-stick base mounts to turntable deck. **List** $12.20

PNT-1 PHONO STYLUS TIMER. Calibrated 300 hour use gauge indicates elapsed time of phono operation and stylus wear to prevent needless record damage. Indicates time for cleaning and general maintenance of records and equipment. Self-stick base for mount to phono deck. Park brand. Imported. **List** $8.75

PSG-3 STYLUS PRESSURE GAUGE. Has counter balance weight. Measures pressure to ½ gram. **List** $1.75

PM-1 STYLUS MICROSCOPE. Precision ground lenses. 50X magnification. Knurled focusing adjustment, convenient slot holds needle for inspection, and pocket clip. 3¾" x ½" dia. Imported. **List** $3.30

PSD-4 METAL PHONO STROBE DISK. 4-speed. 5" dia. Tests 16⅔, 33¼, 45, and 78 rpm speeds. Use with any phono. **List** $1.90

PK-5M PHONO STROBE AND LIGHT KIT. 4-speed metal Strobe disk and neon lamp. Checks phono speed accuracy. 110 V. A.C. **List** $3.90

PG-20 DISPOSABLE DISC-KLEEN CLOTHS. Silicone impregnated cloths clean and lubricate records to improve sound fidelity. Removes dust and grime. Pkg. of 18. **List** $1.75

PB-3 ADJUSTABLE STYLUS BRUSH. For all U.S. and import phonos. Adjusts ¾" to 2¼" height. Removes dust blob accumulation on stylus. Self-stick base mounts to phono deck. **List** $1.45

PB-10 PROFESSIONAL RECORD SWEEP. Sweeps dirt from delicate sound grooves. Deposits Anti-Static Cleaner and Lubricant. Mounts to phono by suction cup. Anti-static fluid included. **List** $5.25

PB-88 CLEAN SWEEP. Large soft brush on aluminum support, sweeps entire tracking surface of records. Removes dust, etc. Self-stick base for mount to phono deck. **List** $7.90

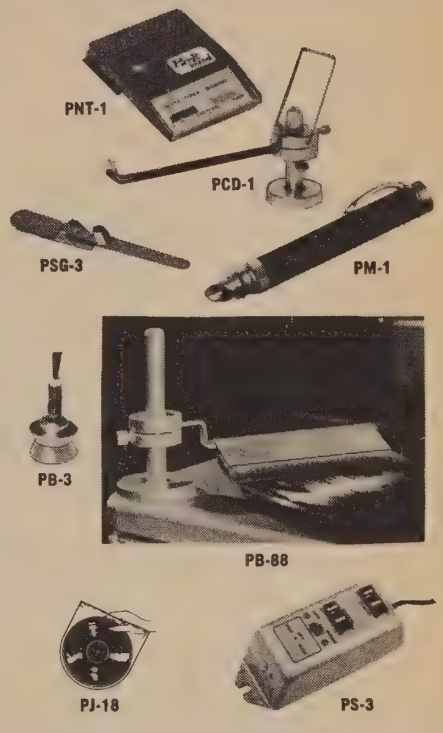
PB-9 "DISK-WHISK" ANTI-STATIC RECORD CLEANER. Cleans and lubricates LP and 45 rpm records on both sides in one operation by rotating record. Deposits anti-static Silicone. Includes record handling disk and 45 rpm adaptor. **List** $2.10

PJ-18 RECORD COVERS. Round bottom, Polyethylene. Protects 12" records. Pkg. of 18. **List** $1.35

PJ-25 ALBUM COVERS. Heavy duty, window clear plastic. Has convenient thumb notch for rapid insertion and removal of album. Pkg. of 12. **List** $1.75

PRS-12 POLY-LINED PROTECTIVE RECORD SLEEVES. Has window clear poly windows to show title labels of records. For 12" records. Pkg. of 12. **List** $2.15

PS-3 AUTOMATIC SOLID-STATE HI-FI/STEREO SHUT-OFF. For U.S. and import equipment. Shuts off amplifier after last record plays. Prevents equipment "burn-up". Amplifier and phono plug in separately. Switch for manual operation. 6 ft. line cord. 110 V. A.C. Metal housing for wall or cabinet mount. 6½" x 2¼" x 1¾" ht. **List** $12.10



ROBINS® XL AND XLP AUDIO CONNECTORS

For use with microphones, public address systems, tape recorders, amplifiers, and other low level sound circuits. Meets requirements for low voltage electrical and eelctronic applications up to 15 amps, 200 volts A.C. FEATURES: Latch-lock for secure, rapid locking of mated connectors. Plugs cannot be accidently disengaged. Neoprene strain relief and secure cable clamp. Zinc alloy shell. Satin nickel finish. Phenolic insulator.

Contacts	Contacts
3-15 amp	4-10 amp
B & S Stranded.	B & S Stranded.
Wire #14	Wire #16
200 V. A.C.	200 V. A.C.

XLP STRAIGHT CORD PLUGS.

Fig. 1 Female		Fig. 2 Male	
XLP-3-11	3-Cond. **$2.85**	**XLP-3-12**	3-Cond. **$2.70**
XLP-4-11	4-Cond. **3.55**	**XLP-4-12**	4-Cond. **3.30**

XLP RIGHT ANGLE 90° CORD PLUG. Fig. 3 Female
XLP-3-15 3-Cond. **$6.90** **XLP-4-15** 4-Cond. **$7.50**

XL STRAIGHT CORD PLUGS.

Fig. 4 Female		Fig. 5 Male	
***XL-3-11**	3-Cond. **$2.60**	***XL-3-12**	3-Cond. **$2.40**
***XL-4-11**	4-Cond. **3.30**	***XL-4-12**	4-Cond. **2.98**

* To be discontinued late 1970.

XL RECEPTACLE, WALL AND PANEL MOUNT. With mounting holes.

Fig. 6 Female		Fig. 7 Male	
XL-3-13	3-Cond. **$3.05**	**XL-3-14**	3-Cond. **$1.90**
XL-4-13	4-Cond. **3.55**	**XL-4-14**	4-Cond. **2.50**

XL RECEPTACLE, PANEL MOUNT. Mounting nut supplied, accommodates panels up to 5/16" thick.

Fig. 8 Female		Fig. 9 Male	
XL-3-13N	3-Cond. **$3.95**	**XL-3-14N**	3-Cond. **$3.00**
		XL-4-14N	4-Cond. **3.90**

XL COMPACT PANEL ADAPTOR RECEPTACLE. Threaded. Supplied with hex mounting nut for mount in panels to ½" thick. Fig. 10 Male
XL-3-52 3-Cond. **$2.65** **XL-4-52** 4-Cond. **$3.25**

XL RECEPTACLE, WALL AND PANEL MOUNT. Compact rectangular flange saves mounting space.

Fig. 11 Female		Fig. 12 Male	
XL-3-31	3-Cond. **$3.20**	**XL-3-32**	3-Cond. **$2.00**
XL-4-31	4-Cond. **3.55**	**XL-4-32**	4-Cond. **2.55**

XL STAINLESS STEEL WALL PLATE MOUNT RECEPTACLE. Single mount. Mounting holes provided. Fits standard outlet boxes.

Fig. 13 Female		Fig. 14 Male	
XL-3-35	3-Cond. **$6.40**	**XL-3-36**	3-Cond. **$6.20**
		XL-4-36	4-Cond. **7.20**

XL TWO-GANG STAINLESS STEEL WALL PLATE MOUNT. Mounting holes provided. Fits standard outlet boxes.

Fig. 15 Female		Fig. 16 Male	
XL-3-35-2G	3-Cond. **$12.35**	**XL-3-36-2G**	3-Cond. **$11.95**
		XL-4-36-2G	4-Cond. **14.20**

XL COMBINATION 3 AND 4-CONDUCTOR WALL PLATE RECEPTACLE. Mounting holes provided. For operation of 3-Cond. and 4-Cond. lines. Prevents confusion and crosscircuiting, as both outlets are not interchangeable. Fits standard wall boxes.
Fig. 17. **XL-34-2G** Male 3 and 4-Cond. **List** $8.60

XL FOUR-GANG COMBINATION 3 AND 4 CONDUCTOR WALL PLATE RECEPTACLE. Mounting holes provided. Operate 3-Cond. and 4-Cond. lines. Can be also used for 2-Cond. lines. Prevents cross-circuiting. Fits standard wall boxes.
Fig. 18. **XL-34-4G** Male 3 and 4-Cond. **List** $16.95

XL MICROPHONE OR 90° MOUNT RECEPTACLE. Two mounting holes provided. Removable insert permits soldering, inspection, etc. Fig. 19 Male.
XL-3-42 3-Cond. **$3.50** **XL-4-42** 4-Cond. **$4.45**

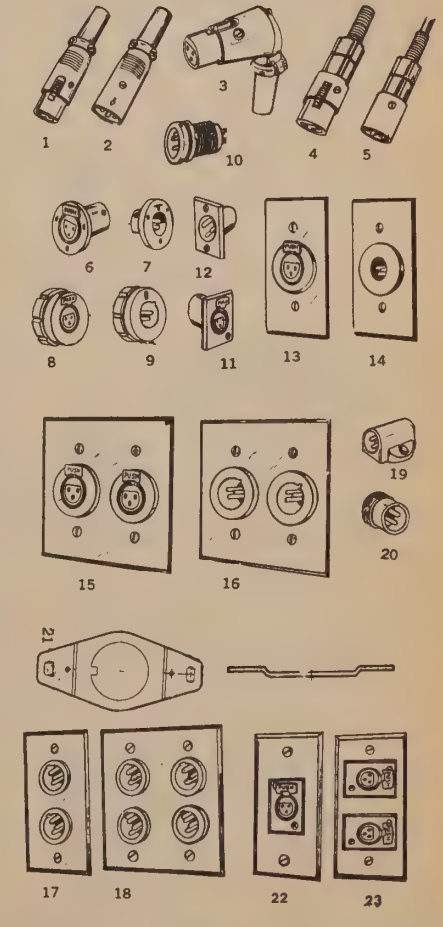
XL ADAPTOR RECEPTACLE. Mounts directly in or on to microphone and other units or surfaces where they can be adequately supported. Threaded to mate into unit of equipment.
Fig. 20. **XL-3-50T** Male 3-Cond. **List** $3.90

XL MOUNTING BRACKET. XL-( )-13N and XL-( )-14N Receptacles can be installed in the floor or at other convenient locations through use of this bracket for mounting receptacles in a Russel and Stoll floor box 2503 and other standard boxes.
Fig. 21. **XL-MB-1 List** $1.15

XL STAINLESS STEEL WALL PLATE AUDIO OUTLETS. Wall plates have mounting holes. Fits standard outlet boxes. Same high quality as XL-3-35, XL-3-36 series, except without mounting strap. Offers advantage of greater compactness in the 2-gang series.

Fig.	Catalog No.	Cond.	Type	List
22	**XL-3-25**	3	Male	**$5.15**
23	**XL-3-25-2G**	3	Male 2-Gang	**7.65**
22	**XL-3-26**	3	Female	**5.40**
23	**XL-3-26-2G**	3	Female 2-Gang	**8.60**
22	**XL-4-25**	4	Male	**5.65**
23	**XL-4-25-2G**	4	Male 2-Gang	**8.60**
22	**XL-4-26**	4	Female	**5.85**
23	**XL-4-26-2G**	4	Female 2-Gang	**8.50**

XLP and XL Connectors are interchangeable with and mate with Cannon XLR Connectors. O.E.M. requirements can be supplied in bulk at competitive quantity prices. Socket and pin inserts available on special order. **ROBINS INDUSTRIES CORP.**

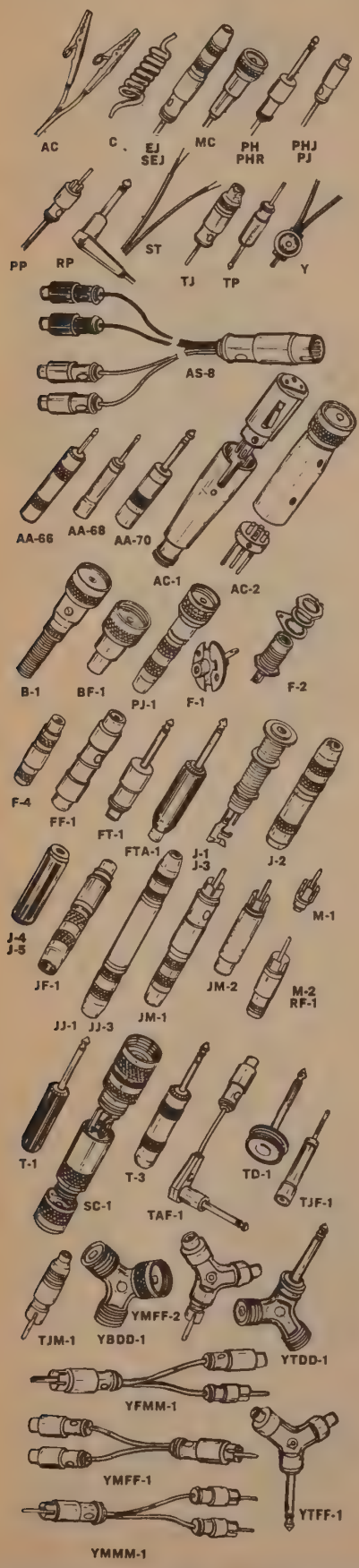


© United Technical Publications

ROBINS®

ROBINS INDUSTRIES CORP.

PATCH MATES AND PLUG MATES



PATCH MATES

Molded Cable Assemblies for use with hi-fi/stereo music systems, tape recorders, musical instruments, public address systems, intercommunications and citizens band equipment.

KEY TO PRODUCT DESCRIPTION

AC: Alligator Clips
C: Shielded Coiled Cord
EJ: 3-Cond. Extension Jack
MC: Microphone Connector
PH: Phone Plug
PHJ: Phone Jack
PHR: Phone Plug with internal resistor
PJ: Phono Jack
PP: Phono Plug
RP: Right Angle Phone Plug
SEJ: Short Extension Jack
SP: Short RCA Phono Plug
ST: Stripped & Tinned Ends
TJ: Tini Extension Jack
TP: Tini-Plug
Y: Y-Junction for Cables

Cat. No.	Adaptor at One End Fig.	Adaptor at Other End Fig.	Cable Length Inches	List
AC-32-6	TP	PP	72″	$3.05
AC-34-6	TP	TJ	72″	3.35
AC-36-6	TP	PH	72″	3.30
BCT-144	PH	MC	72″C	8.35
BS-120	MC	ST	120″	2.70
FF-72	PJ	PJ	72″	2.20
MC-120	PP	AC	120″	2.70
MF-18	PP	PJ	18″	1.45
MF-36	PP	PJ	36″	1.80
MF-72	PP	PJ	72″	2.15
MF-120	PP	PJ	120″	2.60
MJ-72	PP	PHJ	72″	3.25
MM-18	PP	PP	18″	1.30
MM-36	PP	PP	36″	1.45
MM-72	PP	PP	72″	1.85
MM-120	PP	PP	120″	2.40
MS-18	PP	ST	18″	1.00
MS-36	PP	ST	36″	1.20
MS-72	PP	ST	72″	1.55
MS-120	PP	ST	120″	2.19
MT-72	PP	PH	72″	2.45
MT-120	PP	PH	120″	3.00
SJT-300	PH	EJ	300″	10.80
SMF-36	2-PH	2-PHJ	36″	3.30
SMM-36	2-PP	2-PP	36″	3.90
SMM-72	2-PP	2-PP	72″	4.50
SMM-120	2-PP	2-PP	120″	5.35
SMS-36	2-PP	2-ST	36″	3.50
SMS-72	2-PP	2-ST	72″	3.85
SMS-120	2-PP	2-ST	120″	4.50
TC-72	PH	AC	72″	2.30
TC-120	PH	AC	120″	2.90
TCT-144	PH	PH	144″C	8.35
TF-72	PH	PJ	72″	2.65
TJ-120	PH	PHJ	120″	4.30
TS-72	PH	ST	72″	2.60
TS-120	PH	ST	120″	2.90
TT-72	PH	PH	72″	3.20
TT-120	PH	PH	120″	4.00
XCT-240	PH	RP	120″	11.65
XJ-180	SP	SEJ	180″	6.25
XM-120	PHR	PP	120″	4.75
YXTT-144	RP	2-PH	132″	7.40

AS-8 STEREO ADAPTOR CABLE. 5-pin European type Plug to two 1 ft. lengths, Shielded Cable with 4 color-coded Phono Jacks. Converts imported equipment to use American made Accessories. **List** $6.75

PLUG MATES (ADAPTORS)

AA-66 Adapts Standard Phono Plug to "Tini-Jax" Phone Jack. **List** $2.15

AA-68 Phono Jack Input to Micro Plug (.097 dia.) Output. **List** $1.90

AA-70 2-Cond. "Tini-Jax" Input to standard Phone Plug Output. **List** $1.95

AC-1 2-Cond. Input Connector (Switchcraft #2501MP, Amphenol #75C1M) to Output Connector (Robins XL-3-11) with unsoldered internal wire permitting connection to terminal. **List** $4.00

AC-2 Female Microphone Connector (Switchcraft #7501F, Amphenol #750MC1F) to Input Connector (Robins XL-3-12). **List** $4.00

B-1 Microphone Connector, Female. **List** $1.00

BF-1 Phono Jack Input to Female Microphone Connector Output. O.D. ½″. **List** $1.65

BJ-1 2-Cond. Phone Jack Input to Female Microphone Output. Removable Coupler Ring converts connector to male type. Body O.D. ½″. **List** $2.30

F-1 Phono Jack, 2-Cond. Pkg. of 5. **List** ..... .85

F-2 Phono Jack for back of panel mount. 2-Cond. Pkg. of 2. **List** $1.10

F-4 Phono Extension Jack, removable handle, Cable Clamp. Pkg. of 2. **List** $1.65

FF-1 Phono Plug to Phono Plug, Shld. **List** $1.30

FT-1 Phone Plug Output to Phono Jack Input. Shld. **List** 1.55

FTR-1 Phono Adaptor Female Phono Jack end of handle. Internal resistor circuit for connection between crystal phono pick-up, radio or TV set and input of tape recorder. Use as adaptor with magnetic phono by opening plug and twisting leads of resistor together. **List** $2.30

J-1 Phone Jack with long bushing. Mounts in panels to 1¼″ thick. 2-Cond. Jack mates with "Littel Plugs". Ideal for microphone connection. **List** ..$1.80

J-2 ¼″ 2-Cond. Extension Phone Jack with solder terminals. **List** $2.20

J-3 Phone Jack, same as #J-1, except 3-Cond. Mates with "Littel Plugs". **List** $2.10

J-4 Extension Jax, bakelite handle, 2-Cond. Screw terminals. Clamp type terminal provides cable anchor. **List** $1.53

J-5 Extension Jax, bakelite handle, 3-Cond. Screw terminals, Clamp. **List** $1.95

JF-1 2-Cond. Phone Jack Input to Phono Jack Output, Body O.D. ½″. **List** $2.10

JJ-1 Coupler, 2-Cond. Phone Jack each end. **List**..$3.05

JJ-3 Coupler, same as JJ-1, except 3-Cond. **List** $3.55

JM-1 2-Cond. Phone Jack Input to Phono Plug Output. **List** $2.10

JM-2 Compact Adaptor. Phone Jack Input to Phono Plug Output, for connecting Ceramic Phono Cartridge to amplifier which was designed for magnetic cartridge. **List** $3.75

M-1 Phono Plug. Solder terminals. Pkg. of 6. **List** ..... .70

M-2 Phono Plug, 2-Cond. Long handle provides easy grip. With cable clamp. Pkg. of 2. **List** $1.35

RF-1 RF Plug, 2-Cond. long handle, cable clamp, Nylon insulated. **List** ..... .95

SC-1 Microphone Connector with 2 screw terminals. Single contact, Female. 2-piece handle with built-in cable clamp. Cables with stripped ends are connected without soldering. **List** $3.20

T-1 Phone Plug, 2-Cond. Solder ter. Pk/2. **List**..$1.80

T-3 ¼″ Phone Plug, 3-Cond. Solder terminals. Shielded metal handle. **List** $2.20

TAF-1 Phone Plug. Right angle, 2-Cond. with long handle molded to 2″ shielded cable. Adapts Phone Jack to Phono Plugs. **List** $2.15

TD-1 Microphone Input, male to Phone Plug Output. **List** $1.50

TJF-1 Adaptor, 2-Cond. "Tini-Plug" (5/16″) Output to Phono Jack Input. **List** $1.60

TJM-1 2-Cond. "Tini-Jack" Input to Phone Plug Output. O.D. 13/32″. **List** $1.80

XL CONNECT., PIN LAYOUT



"Y" ADAPTORS

Use to convert Stereo players to Monaural, for tap-in meter monitor connection and many other uses. Required on some tape recorders.

YBDD-1 Connects 2 cables (with sta. microphone connections) in parallel to one single connector. **List** $2.35

YFMM-1 Phono Plug connected to One Phono Plug and One Phono Jack. 4″ Shld. Cable. **List** $2.60

YMFF-1 Phono Plug connected in parallel to Two Phono Jacks. 4″ Shld. Cable. **List** $2.60

YMFF-2 Phono Plug connected in parallel to Two Phono Jacks. **List** $2.25

YMMM-1 Phono Plug connected in parallel to Two Phono Plugs. 4″ Shld. Cable. **List** $2.60

YTDD-1 2-Cond. Phone Plug connected in parallel to two male Microphone Connectors. **List** $2.50

YTFF-1 2-Cond. Phone Plug connected in parallel to Two Phono Jacks. **List** $2.50

Trade Discount Applies To List Prices Only

© United Technical Publications

AKRO-MILS

PARTS STORAGE CABINETS

Welded Steel Frame — Molded Styrene Drawers

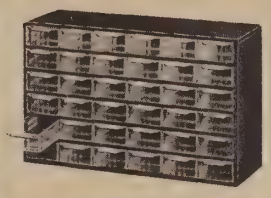
FIND THINGS FAST

MODULAR CABINETS FOR STORING - ORGANIZING - CONTROLLING

Industrial Parts
Electronic Components
Hospital and Drug Items
Supplies
Resale Items

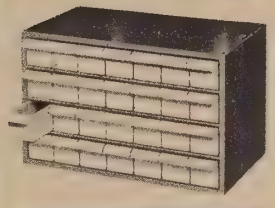
36 COMPACT DRAWERS

DRAWER: 2¾"W x 5⅞"L x 1-7/16"H
FRAME: 18"W x 6"L x 11⅛"H Wt. 13 lb.
Model: 17-136 — Transparent Drawers
List Price $20.00 . . . . . Industrial User $14.99



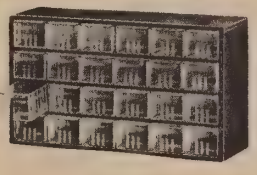
28 LONG-COMPACT DRAWERS

DRAWER: 2⅛"W x 11"L x 2⅛"H
FRAME: 18"W x 11"L x 11"H Wt. 22 lb.
Model: 18-228 — Gray-Unbreakable Drawers
List Price $34.30 . . . . . Industrial User $25.70



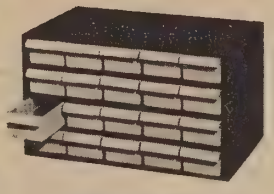
24 DEEP COMPACT DRAWERS

DRAWER: 2¾"W x 5⅞"L x 2"H
FRAME: 18"W x 6"L x 9⅞"H Wt. 11 lb.
Model: 17-024 — Transparent Drawers
List Price $20.00 . . . . . Industrial User $14.99



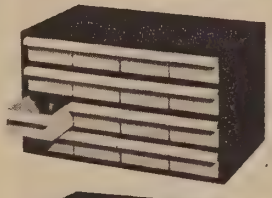
20 LARGE DRAWERS

DRAWER: 3⅛"W x 11"L x 2⅛"H
FRAME: 18"W x 11"L x 11"H Wt. 21 lb.
Model: 17-320 — Transparent Drawers
Model: 18-320 — Gray-Unbreakable Drawers
List Price $30.65 . . . . . Industrial User $22.99



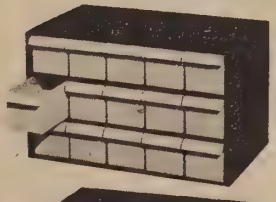
16 LARGE-WIDE DRAWERS

DRAWER: 4"W x 11"L x 2⅛"H
FRAME: 18"W x 11"L x 11"H Wt. 20 lb.
Model: 17-416 — Transparent Drawers
Model: 18-416 — Gray-Unbreakable Drawers
List Price $30.65 . . . . . Industrial User $22.99



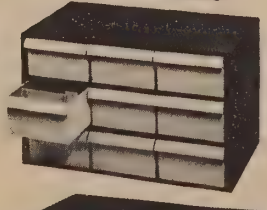
15 LARGE-DEEP DRAWERS

DRAWER: 3⅛"W x 11"L x 3-1/32"H
FRAME: 18"W x 11"L x 11"H Wt. 20 lb.
Model: 17-715 — Transparent Drawers
Model: 18-715 — Gray-Unbreakable Drawers
List Price $30.65 . . . . . Industrial User $22.99



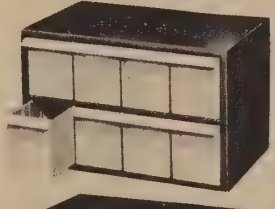
9 JUMBO DRAWERS

DRAWER: 5¼"W x 11"L x 3-1/32"H
FRAME: 18"W x 11"L x 11"H Wt. 18 lb.
Model: 17-909 — Transparent Drawers
Model: 18-909 — Gray-Unbreakable Drawers
List Price $30.65 . . . . . Industrial User $22.99



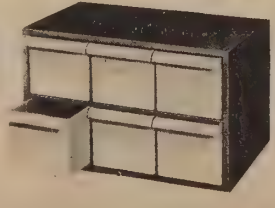
8 JUMBO-DEEP DRAWERS

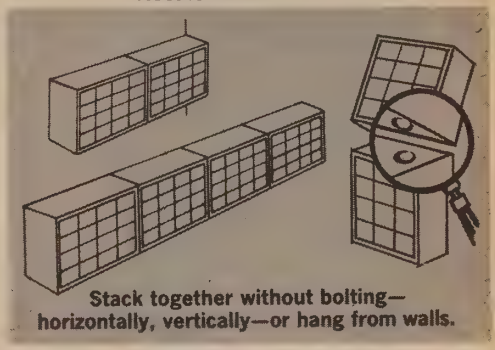
DRAWER: 4"W x 11"L x 4¾"H
FRAME: 18"W x 11"L x 11"H Wt. 22 lb.
Model: 18-608 — Gray-Unbreakable Drawers
List Price $30.65 . . . . . Industrial User $22.99



6 SUPER-JUMBO DRAWERS

DRAWER: 5¼"W x 11"L x 4¾"H
FRAME: 18"W x 11"L x 11"H Wt. 22 lb.
Model: 18-956 — Gray-Unbreakable Drawers
List Price $30.65 . . . . . Industrial User $22.99





Stack together without bolting— horizontally, vertically—or hang from walls.

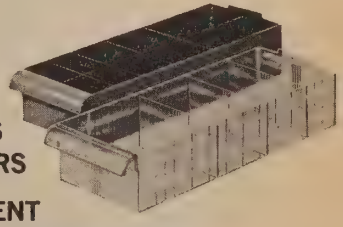
ALL A-M CABINETS STACK TOGETHER



A-M **Modular** Cabinets can be built into a complete system of storage. Start with one cabinet — add 'n stack others as needed. No bolting or shelving required.

HEAVY-DUTY STEEL FRAMES

All A-M Cabinet frames are 18" across the front and fit into standard shelving. May also be stacked together or hung from walls. Heavy-duty steel frame has attractive baked-enamel, chip-proof, hammertone charcoal finish.



TWO TYPES OF DRAWERS

TRANSPARENT OR GRAY — UNBREAKABLE

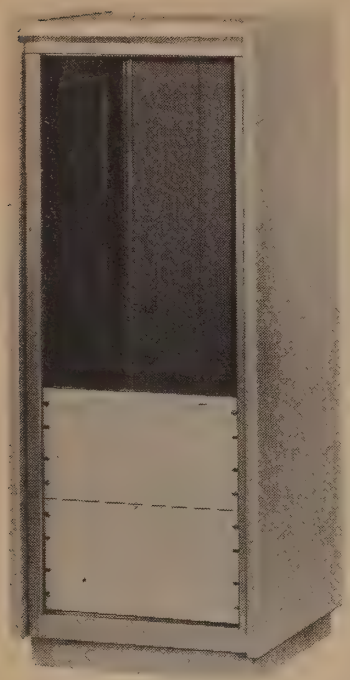
A-M Drawers Have Many Features:

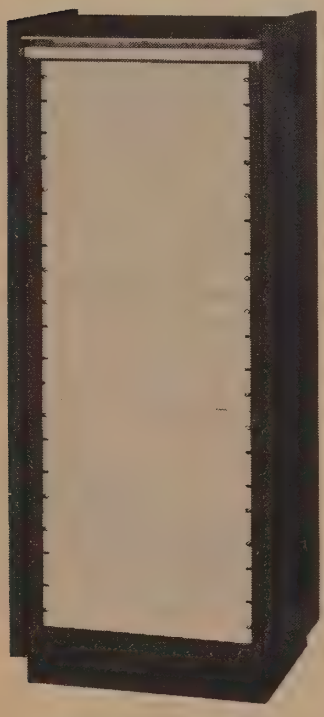
- Rust & corrosion proof.
- Open & close smoothly.
- Safety features — no cuts or scratches from sharp metal.
- Non-toxic, non-conductive.
- 60% lighter than steel, yet will not warp or twist out of shape.
- Patented "lock-tight" dividers prevent drawers from spreading. May be moved to create different sub-compartments. Parts cannot creep from compartment to compartment.

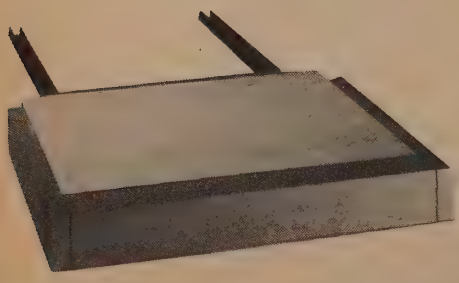
© United Technical Publications

Trade Discount Applies To List Prices Only

BUD Series 2000 Upright Cabinet Racks







Series 2000 has emerged as the creative industrial designer's (Leon Gordon Miller, F.I.D.S.A.) conception of what image the modern electronic enclosure should convey to enhance the prestige of the contents. It combines the dramatic appearance of sheer, square lines with rugged construction. Together with its unique facade, it offers many exclusive features and economies inherent in all Bud products.

One of the time and cost saving benefits of the Series 2000 Cabinet Racks is the fact that they are shipped completely assembled and immediately available for use upon removal from the protective carton.

The basic frame is all-welded construction employing 14 gauge steel members. 18 gauge steel is used in the door, sides and top. "U" braces welded to the sides of the frame augment its strength and rigidity and act as the mounting for the vertical rails, which may be horizontally adjusted. Front panel mounting rails are tapped 10-32. Rear rails are pierced 9-32. Caster bracket in base is drilled for Bud RC-7758 casters.

All series two thousand enclosures may be quickly combined with each other laterally to create units of any desired width as shown in the Add-A-Rack series. In addition a number of Series 60 accessories are easily installed.

Standard finishes are Royal Blue or Gray textured enamel with clear anodized aluminum cowl and Gold textured enamel with gold anodized aluminum cowl. When ordering please add the following suffix to the catalog number: Gold **(GD)**; Royal Blue **(RB)**; Gray Textured **(GT)**.

White panels **(WH)** are recommended for use with Blue or Gray and Sand panels **(S)** with Gold cabinets.

Elements comprising each cabinet are specified above the adjoining tables.

All Cabinets accommodate standard 19" Panels. The Series below include Welded Framework, Plain Sides, Plain Rear Door and Solid Top.

Catalog No.	Height	Width	Outside Depth	Clear Inside Depth	Panel Space	Weight Lbs.	Net Each in Lots of 1-3	4-6	7-9
E-2000	30¼"	24³⁄₁₆"	23⅞"	20½"	21"	115	$135.10	$121.60	$108.10
E-2001	40¾"	24³⁄₁₆"	23⅞"	20½"	31½"	152	167.10	150.40	133.70
E-2002	44¼"	24³⁄₁₆"	23⅞"	20½"	35"	160	176.35	158.70	141.10
E-2003	51¼"	24³⁄₁₆"	23⅞"	20½"	42"	168	185.65	167.10	148.50
E-2004	61¾"	24³⁄₁₆"	23⅞"	20½"	52½"	186	206.40	185.75	165.10
E-2005	70½"	24³⁄₁₆"	23⅞"	20½"	61¼"	210	229.10	206.20	183.30
E-2006	79¼"	24³⁄₁₆"	23⅞"	20½"	70"	225	254.55	229.10	203.65
E-2007	88"	24³⁄₁₆"	23⅞"	20½"	78¾"	255	277.95	250.15	222.35
E-2008	30¼"	24³⁄₁₆"	27⅜"	24"	21"	150	159.55	143.60	127.65
E-2009	40¾"	24³⁄₁₆"	27⅜"	24"	31½"	170	185.30	166.75	148.25
E-2010	44¼"	24³⁄₁₆"	27⅜"	24"	35"	180	195.55	176.00	156.45
E-2011	51¼"	24³⁄₁₆"	27⅜"	24"	42"	185	205.90	185.30	164.70
E-2012	61¾"	24³⁄₁₆"	27⅜"	24"	52½"	200	228.55	205.70	182.85
E-2013	70½"	24³⁄₁₆"	27⅜"	24"	61¼"	230	254.00	228.60	203.20
E-2014	79¼"	24³⁄₁₆"	27⅜"	24"	70"	245	282.15	253.95	225.70
E-2015	88"	24³⁄₁₆"	27⅜"	24"	78¾"	257	308.00	277.20	246.40

The Series below includes Welded Framework, Louvred Sides, Louvred Rear Door, Solid Top.

E-2016	30¼"	24³⁄₁₆"	23⅞"	20½"	21"	115	$140.80	$126.25	$112.25
E-2017	40¾"	24³⁄₁₆"	23⅞"	20½"	31½"	152	174.25	156.85	139.40
E-2018	44¼"	24³⁄₁₆"	23⅞"	20½"	35"	160	184.75	166.30	147.80
E-2019	51¼"	24³⁄₁₆"	23⅞"	20½"	42"	168	195.25	175.75	156.20
E-2020	61¾"	24³⁄₁₆"	23⅞"	20½"	52½"	186	223.15	200.85	178.50
E-2021	70½"	24³⁄₁₆"	23⅞"	20½"	61¼"	210	242.95	218.65	194.35
E-2022	79¼"	24³⁄₁₆"	23⅞"	20½"	70"	225	269.80	242.80	215.85
E-2023	88"	24³⁄₁₆"	23⅞"	20½"	78¾"	255	293.05	263.75	234.45
E-2024	30¼"	24³⁄₁₆"	27⅜"	24"	21"	150	165.35	148.80	132.30
E-2025	40¾"	24³⁄₁₆"	27⅜"	24"	31½"	170	199.80	179.80	159.85
E-2026	44¼"	24³⁄₁₆"	27⅜"	24"	35"	180	211.15	190.05	168.90
E-2027	51¼"	24³⁄₁₆"	27⅜"	24"	42"	185	222.45	200.20	177.95
E-2028	61¾"	24³⁄₁₆"	27⅜"	24"	52½"	200	247.25	222.55	197.80
E-2029	70½"	24³⁄₁₆"	27⅜"	24"	61¼"	230	274.85	247.35	219.90
E-2030	79¼"	24³⁄₁₆"	27⅜"	24"	70"	245	305.20	274.70	244.15
E-2031	88"	24³⁄₁₆"	27⅜"	24"	78¾"	257	332.65	299.40	266.15

SERIES 2000 DOORS FOR UPRIGHT CABINETS

Plain

Catalog No.	Net Each in Lots of 1-3	4-6	7-9	Fits Upright Rack with Following Panel Spaces	Weight Lbs.
E-9000	$20.20	$18.20	$16.15	21"	8
E-9001	24.95	22.45	19.95	31½"	11
E-9002	26.30	23.70	21.05	35"	12
E-9003	27.65	24.90	22.10	42"	16
E-9004	30.85	27.75	24.70	52½"	20
E-9005	34.05	30.65	27.25	61¼"	22
E-9006	39.85	35.90	31.90	70"	24
E-9007	41.25	37.15	33.00	78¾"	26

Louvred

E-9020	$23.15	$20.85	$18.50	21"	8
E-9021	28.70	25.85	22.95	31½"	11
E-9022	30.30	27.25	24.25	35"	12
E-9023	31.90	28.70	25.50	42"	16
E-9024	35.20	31.70	28.15	52½"	20
E-9025	39.35	35.40	31.50	61¼"	22
E-9026	43.65	39.30	34.90	70"	24
E-9027	47.70	42.95	38.15	78¾"	26

SERIES 2000 DESK TOPS

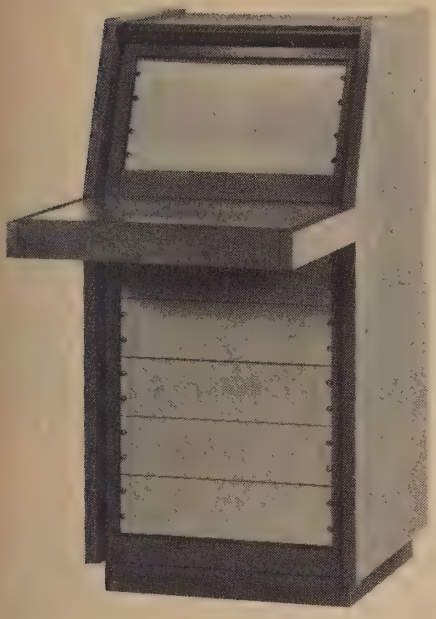
These desk tops may be installed only on any Series 2000 Cabinet Rack. They serve as a smooth writing surface, or a shelf upon which to perform service operations.
Two pre-slotted supporting channels are quickly bolted to panel mounting rails. Surface is Antique White Formica, 24³⁄₁₆" wide, 19½" deep and 3¹⁄₁₆" high. Supports in excess of 200 pounds. Choice of Gray Textured **(GT)**, Royal Blue **(RB)** or Gold **(GD)** textured enamel.

Catalog No.	Fits Series 2000	Supporting Channel	Weight Lbs.	Net Each in Lots of 1-3	4-6	7-9
DT-2960	With 23⅞" depth	21¹⁵⁄₃₂"	22	$43.75	$39.40	$35.00
DT-2962	With 27⅜" depth	24¾"	23	45.10	40.60	36.10

Net

© United Technical Publications

BUD Series 2000 Inclined Panel Cabinet Racks





While all Series 2000 Cabinet Racks have the same styling and construction features, the Inclined Panel Models, in many instances, have different purposes than the Upright Models. Since the inclined panel is positioned 20 degrees off vertical, viewing the instruments by a seated person is more comfortable.

This model lends itself admirably to console arrangement, in a straight line in Add-A-Rack fashion.

Like the Upright Models, these cabinet racks are also shipped completely assembled, saving time and money.

An exclusive feature of the Series 2000 Inclined Panel Rack is that the panel mounting rails in the front vertical and the inclined panel section, as well as in the rear, are adjustable from front to rear. Caster brackets in the base are drilled to accept Bud RC-7758.

The standard finishes for these products are Royal Blue **(RB)** or Gray Textured **(GT)** Textured Enamel, with clear anodized aluminum cowl, and Gold Textured **(GD)**, with gold anodized aluminum cowl. White **(WH)** panels are recommended for use with Blue or Gray racks, and Sand **(S)** colored panels with Gold racks.

SERIES 2000 INCLINED PANEL CABINET RACKS

The following numbers are for enclosures with Welded Framework, Solid Sides and Solid Rear Door.

Catalog No.	Height	Width	Outside Depth	Clear Inside Depth	Inclined Panel Space	Vertical Panel Space	Weight Lbs.	Net Each in Lots of 1-3	4-6	7-9
SE-2064	51¼"	24⅜16"	23⅞"	20½"	10½"	29¾"	160	$184.05	$165.65	$147.25
SE-2065	51¼"	24⅜16"	23⅞"	20½"	15¾"	24½"	160	195.10	175.60	156.10
SE-2066	51¼"	24⅜16"	23⅞"	20½"	17½"	22¾"	160	195.10	175.60	156.10

The following numbers are for Welded Framework, Louvred Sides and Louvred Doors.

SE-2067	51¼"	24⅜16"	23⅞"	20½"	10½"	29¾"	160	$197.70	$177.95	$158.15
SE-2068	51¼"	24⅜16"	23⅞"	20½"	15¾"	24½"	160	209.30	188.35	167.45
SE-2069	51¼"	24⅜16"	23⅞"	20½"	17½"	22¾"	160	209.30	188.35	167.45

The following numbers are the Add-A-Rack enclosures for Series 2000 inclined panel cabinets.

Catalog No.	To Add-A-Rack To	Weight Lbs.	Net Each in Lots of 1-3	4-6	7-9
ASE-2084	SE-2064	115	$155.75	$140.20	$124.60
ASE-2085	SE-2065	115	166.15	149.55	132.90
ASE-2086	SE-2066	120	166.15	149.55	132.90
ASE-2087	SE-2067	115	157.55	141.80	126.05
ASE-2088	SE-2068	115	170.20	153.20	136.15
ASE-2089	SE-2069	120	170.20	153.20	136.15

SERIES 2000 DOORS FOR INCLINED PANEL CABINETS

Plain

Catalog No.	Net Each in Lots of 1-3	4-6	7-9	Fits Vertical Space of the Inclined Unit	Weight Lbs.
E-9008	$25.05	$22.55	$20.05	29¾"	11
E-9009	23.30	21.00	18.65	24½"	10½
E-9010	22.80	20.50	18.25	22¾"	9

Louvred

E-9028	$28.80	$25.90	$23.05	29¾"	11
E-9029	26.95	24.25	21.55	24½"	10½
E-9030	26.10	23.50	20.90	22¾"	9

For complete information consult the Bud catalog.





BUD Trans-aire Blowers



B-23A
B-25A
B-27A
B-52
B-54
B-50

All blowers are designed and manufactured expressly for Bud Radio, Inc. by McLean Engineering Company. Each one is UL approved.

Bud Trans-aire Blowers are designed as an efficient, economical, convenient method of cooling electronic equipment installed in racks, cabinets or consoles. All units are designed with dust filters which are easily removable through the front panel without the use of tools.

Each unit has standard EIA notching for mounting in standard 19" panel space. They have the lowest silhouette height with the highest CFM output in the industry. Their reliability is second to none and are guaranteed for 20,000 hours of continuous duty.

Models with "A" following part number all have vertically mounted fans and two-speed motors. They have the facility of bringing in fresh air or exhausting heated air depending upon the position in which they are mounted.

Audible noise levels are lower than that found in similar models. Motors are rubber mounted to reduce vibration and wear. Attractive chrome plated grilles and 24" 3 wire cord.

"TEM-STAT" TEMPERATURE CONTROLS

Prevents costly damage to elecqronic components in enclosed cabinets, boxes, etc. Bimetal sensing element responds quickly to gradual or sudden temperature changes and actuates whatever warning device you use: Activates a light, bell, blower or other device; or, shuts off current. Activates snap-action, heavy-duty normally open switch contacts. High electrical ratings up to 300°F; fully adjustable temperature ranges. Screw terminals for easy attachment. U/L Listed. Small size, 2 15/16" long x 1" wide x 1 5/32" deep, suitable for limited space applications. **U/L Rating:** 8 amps, full load.

Bud Model TS-15 — For 80°-170°F range. ..... Net Each $6.10

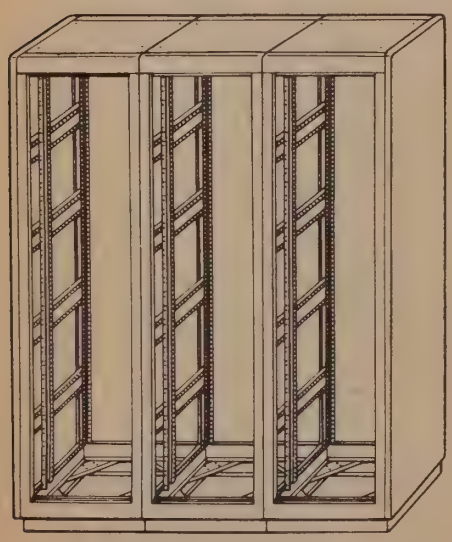
BLOWERS

Bud No.	Panel Space	Depth	Air Delivery	Net Each in Lots of 1-9	10-14	15-19
B-23A	3 1/2"x19"	12"	130 & 180 CFM	$85.35	$76.80	$68.30
B-25A	5 1/4"x19"	14 1/8"	160 & 350 CFM	97.50	87.75	78.00
B-27A	7"x19"	14 1/8"	280 & 515 CFM	109.60	98.65	87.70
B-50	3 1/2"x19"	6 13/32"	150 CFM	83.05	74.75	66.45
B-52	5 1/4"x19"	7 11/16"	150 CFM	85.75	77.20	68.60
B-54	7"x19"	10 3/16"	300 CFM	109.80	98.85	87.85

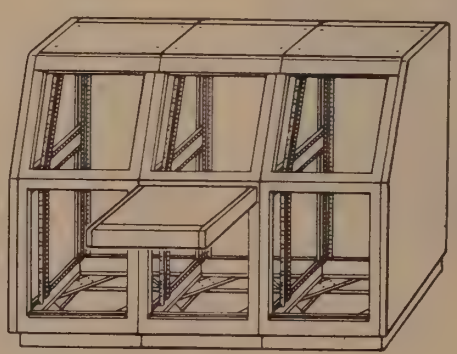
FILTERS

Bud No.	Used With	Net Each in Lots of 1-24	25-49	50-99
BF-24	B-23A	$1.90	$1.70	$1.50
BF-26	B-25A	2.10	1.90	1.70
BF-28	B-27A	2.40	2.15	1.90
BF-24	B-50	1.90	1.70	1.50
BF-53	B-52	2.10	1.90	1.50
BF-55	B-54	2.40	2.15	1.90

SERIES 2000 ADD-A-RACK SERIES



When it is desirable to join any of the Series 2000 enclosures in a bank of two or more, use the Add-A-Rack system. Each Add-A-Rack assembly consists of a frame, top, bottom, rear roor and cowlings. Thus, with one complete unit and several Add-A-Rack assemblies, any desired number of racks may be combined to attain the optimum width.



FOR UPRIGHT MODELS

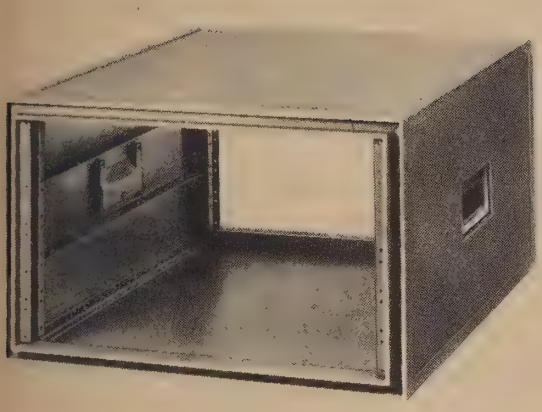
Catalog No.	To Add-A-Rack To	Net Each in Lots of 1-3	4-6	7-9
AE-2032	E-2000	$114.95	$103.45	$ 91.95
AE-2033	E-2001	134.65	121.20	107.75
AE-2034	E-2002	141.10	127.00	112.90
AE-2035	E-2003	147.55	132.80	118.05
AE-2036	E-2004	161.25	145.15	129.00
AE-2037	E-2005	180.00	162.00	144.00
AE-2038	E-2006	200.50	180.45	160.40
AE-2039	E-2007	215.35	193.80	172.30
AE-2040	E-2008	128.55	115.70	102.85
AE-2041	E-2009	150.65	135.60	120.50
AE-2042	E-2010	157.65	141.90	126.10
AE-2043	E-2011	164.55	148.10	131.65
AE-2044	E-2012	179.65	161.70	143.70
AE-2045	E-2013	200.80	180.70	160.65
AE-2046	E-2014	223.65	201.30	178.90
AE-2047	E-2015	247.50	222.75	198.00

Catalog No.	To Add-A-Rack To	Net Each in Lots of 1-3	4-6	7-9
AE-2048	E-2016	$119.55	$107.60	$ 95.65
AE-2049	E-2017	138.50	124.65	110.80
AE-2050	E-2018	145.10	130.60	116.10
AE-2051	E-2019	151.70	136.55	121.35
AE-2052	E-2020	165.75	149.20	132.60
AE-2053	E-2021	185.10	166.60	148.10
AE-2054	E-2022	205.75	185.20	164.60
AE-2055	E-2023	221.40	199.25	177.10
AE-2056	E-2024	130.20	117.20	104.15
AE-2057	E-2025	152.95	137.65	122.35
AE-2058	E-2026	160.85	144.75	128.70
AE-2059	E-2027	168.70	151.85	134.95
AE-2060	E-2028	184.10	165.70	147.30
AE-2061	E-2029	205.75	185.20	164.60
AE-2062	E-2030	229.45	206.50	183.55
AE-2063	E-2031	253.70	228.35	202.95

Net

© United Technical Publications

BUD Classic II Cabinets



CLASSIC II CABINETS

The serene beauty of the Classic II Cabinet reflects the present mode of electronic enclosures. Here the rectilinear outlines combine the innovative construction features to meet the demands of the most critical engineers.

A double rim aluminum extrusion outlines the front of the cabinet. The edges are polished and lacquered to provide an interesting frame for the component mounted panels. Front and rear mounting rails tapped 10-32. Accepts 19" panels.

Two 16 gauge steel flanges, extending the length of each side provide extra support to the handles so that extra safety in carrying is achieved. The annodized aluminum handles are fully recessed in a diecast alloy receptacle. Four rubber feet supplied.

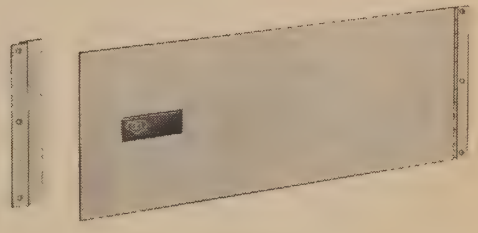
Clear inside depth, panel to panel is 20 11/16". Overall depth is 21 7/16". Choice of Gray Textured **(GT)** or Royal Blue **(RB)** or Gold **(GD)** textured enamel.

Catalog No.	Height	Panel Space	Weight Lbs.	Net Each in Lots of		
				1-4	5-9	10-14
AGC-9267	7 1/16"	5 5/16"	19	$82.80	$74.50	$66.25
AGC-9268	8 13/16"	7 1/16"	20	87.30	78.60	69.85
AGC-9269	10 9/16"	8 13/16"	22	89.40	80.45	71.50
AGC-9270	12 5/16"	10 9/16"	23	92.40	83.15	73.90
AGC-9271	14 1/16"	12 5/16"	25	96.15	86.55	76.95
AGC-9272	15 15/16"	14 1/16"	26	99.10	89.20	79.30
AGC-9273	17 9/16"	15 13/16"	28	102.85	92.55	82.30
AGC-9274	19 5/16"	17 9/16"	29	105.85	95.30	84.70
AGC-9275	21 1/16"	19 5/16"	31	108.15	97.35	86.50
AGC-9276	22 13/16"	21 1/16"	32	111.75	100.60	89.40
AGC-9277	24 9/16"	22 13/16"	34	114.75	103.30	91.80
AGC-9278	26 5/16"	24 9/16"	35	117.90	106.10	94.30
AGC-9279	28 1/16"	26 5/16"	37	120.90	108.80	96.70
AGC-9280	29 13/16"	28 1/16"	38	123.45	111.10	98.75

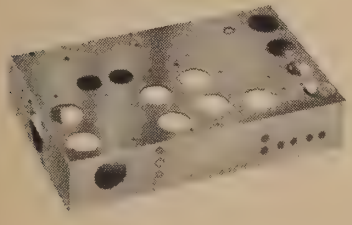
CLASSIC DOORS

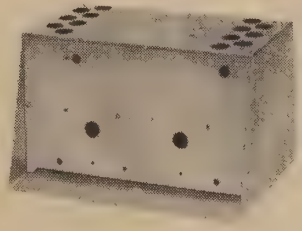
Intended for use on Classic II Cabinets, but will fit any rack or cabinet with 19" panels space by attaching to panel mounting rails. Made of 1/4" 5005-H36 aluminum alloy. Stop fits on one panel mounting rail, hinged door attaches to other mounting rail. Equipped with plated, flush type latch. Finished in choice of textured enamel White **(WH)** or Sand **(S)**.

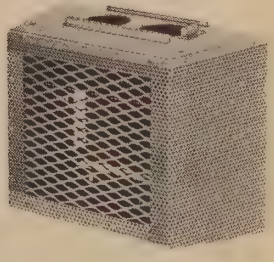
Catalog No.	Height	Width	Weight Lbs.	Net Each in Lots of		
				1-4	5-9	10-14
AGD-367	5 1/4"	19"	3/4	$ 8.90	$ 8.00	$ 7.10
AGD-368	7"	19"	2	10.40	9.35	8.30
AGD-369	8 3/4"	19"	2 3/4	11.40	10.25	9.10
AGD-370	10 1/2"	19"	3	12.50	11.25	10.00
AGD-371	12 1/4"	19"	3 1/4	13.40	12.05	10.70
AGD-372	14"	19"	3 1/2	13.70	12.35	10.95
AGD-373	15 3/4"	19"	4	15.50	13.95	12.40
AGD-374	17 1/2"	19"	4 1/2	16.80	15.10	13.45
AGD-375	19 1/4"	19"	5 1/4	18.00	16.20	14.40
AGD-376	21"	19"	6 1/4	18.10	17.20	15.30
AGD-377	22 3/4"	19"	6 1/4	20.00	18.00	16.00
AGD-378	24 1/2"	19"	7	21.00	18.90	16.80
AGD-379	26 1/4"	19"	7 1/2	22.20	20.00	17.75
AGD-380	28"	19"	8	23.70	21.35	18.95

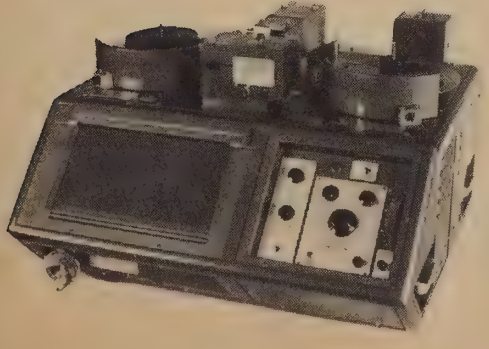


MODIFIED STANDARD PRODUCTS AND SPECIALLY FABRICATED PRODUCTS











BUD Series "60" Cabinet Racks



Scientifically designed to meet all requirements for human needs as well as component physical specifications; the most practical cabinet rack developed for either a single piece of equipment or a large instrumentation system. Very economical to the user, units ar shipped fully assembled and ready for immediate use.

Basic frame welded in a solid unit composed of 14-gauge steel channels. Sides have "U" braces with perforated channels for fastening vertical adjustable mounting rails. Rails also support other types of equipment such as brackets, shelves, slides, etc. Eliminates need of drilling holes in the rack. Sides and rear door made of 18 gauge steel. Door may be mounted to open left or right. Vertical channel 4" wide, welded to door to prevent vibration or whip. Two pairs of panel mounting rails are supplied; fully adjustable. Panels may be mounted in front and rear at the same time. Front rails drilled and tapped 10-32 W.E. spacing. Rear rails are drilled according to universal spacing.

All Series Sixty enclosures may be quickly combined with each other to create units of any desired width as shown in the Add-A-Rack series. In addition, such accessories as desk tops, turrets, drawers, slides, sloping panel supports and front door are easily installed.

Standard finishes are textured over a primer. For two-tone gray, specify by adding suffix **GGY**. For two-tone blue, add suffix **BBY** to order number. Standard Bud relay rack panels are available for the Series Sixty racks in light gray and light blue; when ordering, add suffix **GY** for gray; **BY** for blue.

UPRIGHT CABINET RACKS

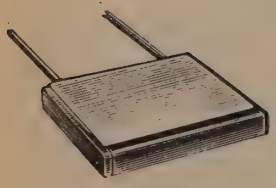
Completely assembled with sides, rear door and top. Standard units have plain sides and door; solid top. For greater ventilation, order units with louvered sides and/or rear door; both with solid top. Width, 24 1/16", all units. Inside depth 20 1/2" clear on units with 22" outside depth; 24", all others. Top opening 18 5/16" w x 17 1/32" d on units with 22" outside depth; 18 5/16" w x 20 17/32" d., all others. **Specify Color When Ordering:** Add suffix **GGY** to number for gray; suffix **BBY** for blue.

Series shown below includes welded framework, plain sides, plain rear door and solid top

For 24" Panel Space					Common Dimensions for Both 24" & 19" Panel Space			For 19" Panel Space					
Bud No. 60	Top Opening	Net Each Lots of 1-3	4-6	7-9	Height	Outside Depth	Panel Space	Bud No. 60	Top Opening	Net Each in Lots of 1-3	4-6	7-9	Wgt. Lbs.
2315	23 5/16"x17 1/32"	$169.80	$152.80	$135.85	29 5/8"	22"	21"	2300	18 5/16"x17 1/32"	$128.95	$116.05	$103.15	118
2316	23 5/16"x17 1/32"	210.10	189.10	168.10	40 1/8"	22"	31 1/2"	2301	18 5/16"x17 1/32"	159.60	143.65	127.70	156
2317	23 5/16"x17 1/32"	233.50	210.15	186.80	50 5/8"	22"	42"	2302	18 5/16"x17 1/32"	177.25	159.55	141.80	173
2318	23 5/16"x17 1/32"	258.60	232.75	206.90	61 1/8"	22"	52 1/2"	2303	18 5/16"x17 1/32"	196.90	177.20	157.50	197
2319	23 5/16"x17 1/32"	287.90	259.10	230.30	69 7/8"	22"	61 1/4"	2304	18 5/16"x17 1/32"	218.70	196.85	174.95	220
2320	23 5/16"x17 1/32"	320.65	288.60	256.50	78 5/8"	22"	70"	2305	18 5/16"x17 1/32"	243.10	218.80	194.50	235
2321	23 5/16"x17 1/32"	349.65	314.70	279.70	87 3/8"	22"	78 3/4"	2306	18 5/16"x17 1/32"	265.35	238.80	212.30	265
2322	23 5/16"x20 17/32"	200.00	180.00	160.00	29 5/8"	25 1/2"	21"	2307	18 5/16"x20 17/32"	152.25	137.05	121.80	156
2323	23 5/16"x20 17/32"	232.35	209.10	185.90	40 1/8"	25 1/2"	31 1/2"	2308	18 5/16"x20 17/32"	176.95	159.25	141.55	176
2324	23 5/16"x20 17/32"	258.95	233.05	207.15	50 5/8"	25 1/2"	42"	2309	18 5/16"x20 17/32"	196.55	176.90	157.25	185
2325	23 5/16"x20 17/32"	286.75	258.10	229.40	61 1/8"	25 1/2"	52 1/2"	2310	18 5/16"x20 17/32"	218.20	196.40	174.55	211
2326	23 5/16"x20 17/32"	319.40	287.45	255.50	69 7/8"	25 1/2"	61 1/4"	2311	18 5/16"x20 17/32"	242.55	218.30	194.05	240
2327	23 5/16"x20 17/32"	354.50	319.05	283.60	78 5/8"	25 1/2"	70"	2312	18 5/16"x20 17/32"	269.45	242.50	215.55	256
2328	23 5/16"x20 17/32"	387.75	349.00	310.20	87 3/8"	25 1/2"	78 3/4"	2313	18 5/16"x20 17/32"	294.10	264.70	235.30	267

Series shown below includes welded framework, louvered sides, louvered rear door and solid top.

2715	23 5/16"x17 1/32"	$179.45	$161.50	$143.55	29 5/8"	22"	21"	2700	18 5/16"x17 1/32"	$134.00	$120.60	$107.20	118
2716	23 5/16"x17 1/32"	221.85	199.65	177.50	40 1/8"	22"	31 1/2"	2701	18 5/16"x17 1/32"	166.45	149.80	133.15	156
2717	23 5/16"x17 1/32"	247.40	222.65	197.90	50 5/8"	22"	42"	2702	18 5/16"x17 1/32"	186.40	167.75	149.10	173
2718	23 5/16"x17 1/32"	282.55	254.30	226.05	61 1/8"	22"	52 1/2"	2703	18 5/16"x17 1/32"	213.05	191.75	170.45	197
2719	23 5/16"x17 1/32"	306.70	276.05	245.35	69 7/8"	22"	61 1/4"	2704	18 5/16"x17 1/32"	231.95	208.75	185.55	220
2720	23 5/16"x17 1/32"	338.75	304.90	271.00	78 5/8"	22"	70"	2705	18 5/16"x17 1/32"	257.55	231.80	206.05	235
2721	23 5/16"x17 1/32"	368.30	331.45	294.65	87 3/8"	22"	78 3/4"	2706	18 5/16"x17 1/32"	279.75	251.80	223.80	265
2722	23 5/16"x20 17/32"	210.10	189.10	168.10	29 5/8"	25 1/2"	21"	2707	18 5/16"x20 17/32"	157.90	142.10	126.30	156
2723	23 5/16"x20 17/32"	252.85	227.55	202.30	40 1/8"	25 1/2"	31 1/2"	2708	18 5/16"x20 17/32"	190.70	171.65	152.55	176
2724	23 5/16"x20 17/32"	280.75	252.70	224.60	50 5/8"	25 1/2"	42"	2709	18 5/16"x20 17/32"	212.20	191.00	169.75	185
2725	23 5/16"x20 17/32"	320.70	288.65	256.55	61 1/8"	25 1/2"	52 1/2"	2710	18 5/16"x20 17/32"	236.15	212.55	188.90	211
2726	23 5/16"x20 17/32"	335.15	301.65	268.10	69 7/8"	25 1/2"	61 1/4"	2711	18 5/16"x20 17/32"	262.40	236.15	209.90	240
2727	23 5/16"x20 17/32"	382.95	344.65	306.35	75 5/8"	25 1/2"	70"	2712	18 5/16"x20 17/32"	291.50	262.35	233.20	256
2728	23 5/16"x20 17/32"	417.40	375.65	333.90	87 3/8"	25 1/2"	78 3/4"	2713	18 5/16"x20 17/32"	317.65	285.90	254.10	267



SERIES SIXTY DESK TOP

May be used in connection with any Series Sixty enclosure. Furnished completely assembled with antique white Formica surface. Fastens to panel mounting rails by two pre-drilled channels. Will support in excess of 200 lbs. Surface 24 1/16" wide, 19 1/2" deep, 3 1/16" high. Available in two colors. **Specify Color:** Add suffix **GG** for gray ; **BB** for blue.

Bud No.	Fits Series Sixty	Support Channel	Wt., Lbs.	Ea., 1-3	Ea., 4-6	Ea., 7-9
60-2360	With 22" depth	21 1/2" long	22	$41.70	$37.55	$33.35
60-2362	With 25 1/2" depth	24 3/4" long	23	43.05	38.75	34.45

© United Technical Publications

BUD Series "60" Cabinet Racks

ACCESSORIES LIST FOR UPRIGHT CABINET RACKS

DOORS

Doors are interchangeable; may be used for front or rear of rack; mount to open either left or right. Doors for racks with 24" panel space are 23 15/16" wide and for 19" panel space 18 15/16" wide.



For 24" Panel Space

Bud No. 60	Plain Type Net 1-3	Plain Type Net 4-6	Plain Type Net 7-9	Bud No. 60	Louvered Type Net 1-3	Louvered Type Net 4-6	Louvered Type Net 7-9	Wgt. Lbs.	Height	Fits Rack with Panel Space
2390	$29.00	$26.10	$23.20	4540	$29.00	$26.10	$23.20	10	21 7/16"	21"
2391	36.35	32.70	29.10	4541	36.35	32.70	29.10	14 1/2	31 15/16"	31 1/2"
2392	40.55	36.50	32.45	4542	40.55	36.50	32.45	19 1/2	42 7/16"	42"
2393	46.00	41.40	36.80	4543	46.00	41.40	36.80	24	52 15/16"	52 1/2"
2394	50.80	45.70	40.65	4544	50.80	45.70	40.65	28	61 11/16"	61 1/4"
2395	55.65	50.10	44.50	4545	55.65	50.10	44.50	32	70 7/16"	70"
2396	60.50	54.45	48.40	4546	60.50	54.45	48.40	36 1/4	79 3/16"	78 3/4"

For 19" Panel Space

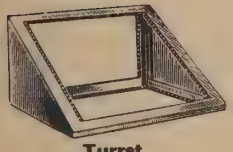
2340	19.30	17.35	15.45	2540	22.05	19.85	17.65	8	21 7/16"	21"
2341	23.85	21.45	19.10	2541	27.40	24.65	21.90	11 1/2	31 15/16"	31 1/2"
2342	26.35	23.70	21.10	2542	30.45	27.40	24.35	15 1/2	42 7/16"	42"
2343	29.40	26.45	23.50	2543	33.70	30.35	26.95	19	52 15/16"	52 1/2"
2344	32.55	29.30	26.05	2544	37.50	33.75	30.00	22 1/4	61 11/16"	61 1/4"
2345	38.00	34.20	30.40	2545	41.70	37.55	33.35	25 1/2	70 7/16"	70"
2346	39.40	35.45	31.50	2546	45.45	40.90	36.35	29	79 3/16"	78 3/4"

ACCESSORY SIDES

Fit Upright Racks with either 24" or 19" Panel Space

Bud No. 60	Plain Net per Pair in Lots of 1-3	Plain Net per Pair in Lots of 4-6	Plain Net per Pair in Lots of 7-9	Bud No. 60	Louvered Net per Pair in Lots of 1-3	Louvered Net per Pair in Lots of 4-6	Louvered Net per Pair in Lots of 7-9	Height	Width	Fits Upright Rack with Panel Space	Wgt. Lbs.
2560	$28.75	$25.90	$23.00	2580	$33.90	$30.50	$27.10	26 55/64"	22"	21"	12 1/2
2561	38.00	34.20	30.40	2581	44.85	40.35	35.90	37 23/64"	22"	31 1/2"	17 1/2
2562	44.20	39.80	35.35	2582	53.35	48.00	42.70	47 55/64"	22"	42"	21
2563	51.05	45.95	40.85	2583	62.70	56.45	50.15	58 23/64"	22"	52 1/2"	26 1/4
2564	56.30	50.65	45.05	2584	69.10	62.20	55.30	67 7/64"	22"	61 1/4"	30
2565	61.95	55.75	49.55	2585	76.75	69.10	61.40	75 55/64"	22"	70"	34
2566	71.00	63.90	56.80	2586	80.85	72.75	64.70	84 39/64"	22"	78 3/4"	38
2567	36.35	32.70	29.10	2587	39.80	35.80	31.85	26 55/64"	25 1/2"	21"	14 1/2
2568	47.45	42.70	37.95	2588	52.00	46.80	41.60	37 23/64"	25 1/2"	31 1/2"	20
2569	54.80	49.30	43.85	2589	60.60	54.55	48.50	47 55/64"	25 1/2"	42"	24
2570	63.65	57.39	50.90	2590	70.45	63.40	56.35	58 23/64"	25 1/2"	52 1/2"	29 1/2
2571	69.75	62.80	55.80	2591	77.00	69.30	61.60	67 7/64"	25 1/2"	61 1/4"	34 1/2
2572	77.60	69.85	62.10	2592	84.85	76.35	67.90	75 55/64"	25 1/2"	70"	39
2573	81.70	73.55	65.35	2593	89.45	80.50	71.55	84 39/64"	25 1/2"	78 3/4"	43 1/2

PERFORATED TOP



Turret

Bud No. 60	For 24" Panel Space Fits Inclined Panel Rack with Top Opening	Net each in lots of 1-3	Net each in lots of 4-6	Net each in lots of 7-9	Bud No. 60	For 19" Panel Space Fits Inclined Paned Rack with Top Opening	Net each in lots of 1-3	Net each in lots of 4-6	Net each in lots of 7-9	Wgt. Lbs.
2382	11 53/64" x 23 5/16"	$8.65	$7.80	$6.90	2372	11 53/64" x 18 5/16"	$6.10	$5.50	$4.90	4
2383	10 1/32" x 23 5/16"	7.70	6.95	6.15	2373	10 1/32" x 18 5/16"	5.90	5.30	4.90	3
2384	9 27/64" x 23 5/16"	7.70	6.95	6.15	2374	9 27/64" x 18 5/16"	5.90	5.30	4.70	3



Drawer



Sliding Desk Top

SERIES SIXTY TURRETS

Made of 16 gauge steel; designed so that any of the three sides may be attached to a 19" Series 60 upright rack or any horizontal surface. Accommodate standard 19" panels. All mounting rails have universal spacing. Sides easily removed when a series of interconnecting turrets are desired. **Specify Color When Ordering:** Add suffix **GG** for dark gray; **BB** for dark blue. For panels, order standard Bud panels with suffix **GY** for light gray; **BY** for light blue.

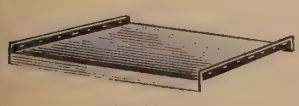
Bud No.	Width	Depth	Height	Panel Space Sloping	Panel Space Bottom	Panel Space Rear	Wt., Lbs.	6 Net Each, Lots of 1-3	6 Net Each, Lots of 4-6	6 Net Each, Lots of 7-9
60-2364	22 1/16"	17 7/8"	12 5/16"	17 1/2"	14"	8 3/4"	17	$41.05	$36.95	$32.85
60-2365	22 1/16"	14 3/8"	10 3/16"	12 1/4"	10 1/2"	7"	14	34.25	30.85	27.40
60-2366	22 1/16"	20 13/16"	14 3/8"	21"	17 1/2"	10 1/2"	20	43.15	38.85	34.50



Desk Top Drawer

SERIES SIXTY DRAWER, DESK TOP AND SHELF ACCESSORIES

No. 60-2368 Drawer: Fits into any 19" Series 60 cabinet rack. Slides easily on nylon rollers. Will support heavy loads. Extends to full depth; stops prevent drawer from falling out. Slides easily attach to panel supporting rails. Silver anodized handles. Shipped completely assembled. **No. 60-2361 Sliding Desk Top:** Fits all 19" Series 60 racks. Has smooth Formica* surface for writing, servicing or inspection. Fits flush with front of unit. Usable area when fully extended, 11" x 16 7/8". Occupies only 1 3/4" of panel height. Will support 75 lbs. Ball-bearing slide mechanism mounts directly in 19" Series 60 racks; brackets included to fit other Bud cabinets and consoles. **No. 60-2363 Desk Top Drawer:** Fits 19" Series 60 racks. Has Formica surface. Fits flush with front of unit. Hinged desk top on drawer holds small tools or parts. Special front-panel latch both locks and releases drawer or top as desired. Mounts to cabinet U-braces; slides travel on nylon rollers. Hardware supplied. **No. 60-2380 and 60-2381 Shelves:** Ideal for support of chassis, power supplies or other equipment; also may be used as base plate for bottom support. Of one-piece 16 gauge steel with flanged front and rear for extra strength and rigidity. Easily bolt to cabinet U-braces. Will support 200 lbs. Hardware supplied.



Shelf

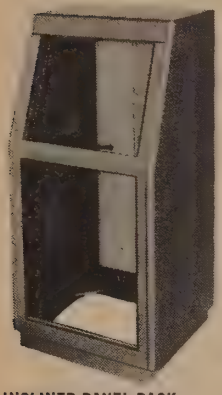
Bud No.	Size, Inches	Wt., Lbs.	For 19" Racks Net Each, Lots of 1-3	For 19" Racks Net Each, Lots of 4-6	For 19" Racks Net Each, Lots of 7-9
60-2368‡	16 5/8 x 6 3/4 x 19 1/4 inside	28	$37.50	$33.75	$30.00
60-2361‡	16 7/8 x 15 1/8 x 1 3/4 with std. 19" panel	8	22.45	20.20	17.95
60-2363‡	16 5/8 x 3 1/4 x 15 inside; 19 x 3 1/2 front panel	19	64.35	57.90	51.50
60-2380†	17 31/32 w. x 19 9/32 d.	7 1/2	8.00	7.20	6.40
60-2381†	17 31/32 w. x 22 3/4 d.	8 3/4	8.30	7.45	6.65

*Synthane Corp. trademark. †Add suffix **BB** for textured blue; **GG** textured gray. ‡Add suffix **BR** for black Rinkletex; **GR**, gray Rinkletex; **HG**, gray hammertone; **BY**, light textured blue; **GY**, light textured gray.

BUD Series "60" Cabinet Racks

INCLINED PANEL CABINET RACKS

Completely assembled with Sides, Rear door and Solid Top. Racks for 24" Panels are 29 1/16" wide and Racks for 19" Panels are 24 1/16" wide. Both types are 50 3/4" high, have an outside Depth of 22" and a clear Inside Depth of 20 1/2".



INCLINED PANEL RACK

Series shown below includes Welded Framework, Plain Sides, Plain Rear Door and Solid Top.

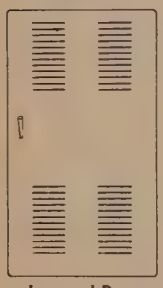
For 24" Panel Space					Common Dims. for Both 24" and 19" Panel Space		For 19" Panel Space				
Bud No. 60	Top Opening	Net each in lots of 1-3	4-6	7-9	Inclined Panel Sp.	Vertical Panel Sp.	Bud No. 60-	Top Opening	Net each in lots of 1-3	4-6	7-9
2337	11 53/64" x 23 5/16"	$266.80	$240.10	$213.45	10 1/2"	29 3/4"	2330	11 53/64" x 18 5/16"	$193.30	$173.95	$154.65
2338	10 1/32" x 23 5/16"	283.10	254.80	226.50	15 3/4"	24 1/2"	2331	10 1/32" x 18 5/16"	204.85	184.35	163.90
2339	9 27/64" x 23 5/16"	283.10	254.80	226.50	17 1/2"	22 3/4"	2332	9 27/64" x 18 5/16"	204.85	184.35	163.90

Series shown below includes Welded Framework, Louvred Sides, Louvred Rear Door and Solid Top.

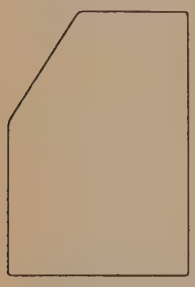
2737	11 53/64" x 23 5/16"	$286.75	$258.10	$229.40	10 1/2"	29 3/4"	2730	11 53/64" x 18 5/16"	$207.70	$186.95	$166.15
2738	10 1/32" x 23 5/16"	303.15	272.85	242.50	15 3/4"	24 1/2"	2731	10 1/32" x 18 5/16"	219.90	197.90	175.90
2739	9 27/64" x 23 5/16"	303.15	272.85	242.50	17 1/2"	22 3/4"	2732	9 27/64" x 18 5/16"	219.90	197.90	175.90



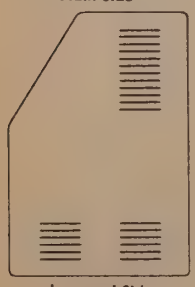
Plain Door



Louvered Door



Plain Side



Louvered Side

ACCESSORIES LIST FOR INCLINED PANEL RELAY RACKS

FRONT DOORS

Front doors for Racks with 24" Panel Space are 23 15/16" wide and for Racks with 19" Panel Space are 18 15/16" wide

For 24" Panel Space									
Plain				Louvred					
Bud No. 60-	Net Each in Lots of 1-3	4-6	7-9	Bud No. 60-	Net Each in Lots of 1-3	4-6	7-9	Wgt. Lbs.	Fits Inclined Panel Rack with Top Opening
2353	$32.65	$29.40	$26.10	2553	$38.75	$34.90	$31.00		11 53/64" x 23 5/16"
2354	30.25	27.25	24.20	2554	34.45	31.00	27.55		10 1/32" x 23 5/16"
2355	30.25	27.25	24.20	2555	33.30	29.95	26.65		9 27/64" x 23 5/16"
For 19" Panel Space									
2350	$23.95	$21.55	$19.15	2550	$27.50	$24.75	$22.00	11	11 53/64" x 18 5/16"
2351	22.25	20.05	17.80	2551	25.75	23.20	20.60	9 1/2	10 1/32" x 18 5/16"
2352	21.75	19.60	17.40	2552	24.90	22.40	19.90	9	9 27/64" x 18 5/16"

REAR DOOR

Rear Doors for Racks with 24" Panel Space are 23 15/16" wide and for Racks with 19" panel space are 18 15/16" wide. One size fits all models regardless of height.

For 24" Panel Space								
Plain				Louvered				
Bud No. 60	Net Each in Lots of 1-3	4-6	7-9	Bud No. 60	Net Each in Lots of 1-3	4-6	7-9	Wgt. Lbs.
2392	$40.55	$36.50	$32.45	4542	$40.55	$36.50	$32.45	19 1/2
For 19" Panel Space								
2342	$26.35	$23.70	$21.10	2542	$30.45	$27.40	$24.35	15 1/2

SIDES

Fits all Inclined Panel Racks regardless of width

Plain Type				Louvered Type				
Bud No. 60	Net Per Pair in Lots of 1-3	4-6	7-9	Bud No. 60	Net Per Pair in Lots of 1-3	4-6	7-9	Wgt. Lbs.
2574	$46.00	$41.40	$36.80	2594	$50.70	$45.65	$40.55	11
2575	47.15	42.45	37.70	2595	52.30	47.05	41.85	9 1/2
2576	47.65	42.90	38.10	2596	52.90	47.60	42.30	9

Specify "L" for left side or "R" for right side, determined when facing front of rack.

PERFORATED TOP

Top with 17" depth fits upright rack with overall depth of 22" and 20 1/2" deep top fits rack with 25 1/2" depth.

For 24" Panel Space						For 19" Panel Space					
Bud No. 60	Net Each in Lots of Width	1-3	4-6	7-9	Depth	Bud No. 60	Net Each in Lots of Width	1-3	4-6	7-9	Wgt. Lbs.
2376	26 15/16"	$10.90	$ 9.80	$8.70	17"	2370	21 15/16"	$7.90	$7.10	$6.30	6
2377	26 15/16"	12.10	10.90	9.70	20 1/2"	2371	21 15/16"	8.30	7.45	6.65	7

Net

© United Technical Publications

BUD Series "60" Cabinet Racks



SERIES SIXTY WEDGES



With Bud Series Sixty Wedges and Standard Series Sixty Cabinet Racks, it is possible to build custom enclosure systems efficiently and economically. A small or large configuration can quickly and easily be assembled to conform to your needs or space requirements.

There is a standard Wedge Unit that is compatible in style and size with every Series Sixty Rack. They are quickly attached to the adjacent framework by means of simple fasteners.

Features include all welded 16 gauge steel frame with removable rear panel for easy access. Choice of 15° or 45° wedges. Components may be attached to side braces, or uprights. Available with dark gray GG frame and light gray GY panel or dark blue BB frame with light blue BY panel.

15° WEDGES FOR SERIES 60 UPRIGHT RACKS

Catalog No.	For Use Where Panel Space Is	For Use Where Depth Is	Width of Wedge Section	Net Each in Lots of 1-3	4-6	7-9
60-8300	21″	22″	7 3/16″	$ 81.20	$ 73.10	$ 64.95
60-8301	31 1/2″	22″	7 3/16″	95.80	86.20	76.65
60-8302	42″	22″	7 3/16″	105.00	94.50	84.00
60-8303	52 1/2″	22″	7 3/16″	115.80	104.20	92.65
60-8304	61 1/4″	22″	7 3/16″	129.80	116.80	103.85
60-8305	70″	22″	7 3/16″	142.90	128.60	114.30
60-8306	78 3/4″	22″	7 3/16″	155.80	140.20	124.65
60-8307	21″	25 1/2″	8 3/32″	92.00	82.80	73.60
60-8308	31 1/2″	25 1/2″	8 3/32″	106.60	95.95	85.30
60-8309	42″	25 1/2″	8 3/32″	119.10	107.20	95.30
60-8310	52 1/2″	25 1/2″	8 3/32″	129.80	116.80	103.85
60-8311	61 1/4″	25 1/2″	8 3/32″	145.00	130.50	116.00
60-8312	70″	25 1/2″	8 3/32″	162.80	146.50	130.25
60-8313	78 3/4″	25 1/2″	8 3/32″	180.70	162.65	144.55

45° WEDGES FOR SERIES 60 UPRIGHT RACKS

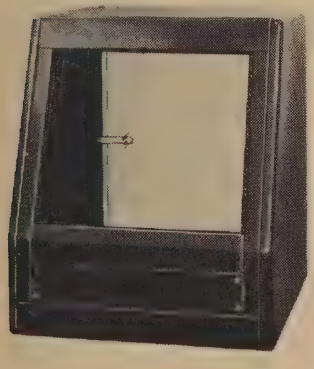
Catalog No.	For Use Where Panel Space Is	For Use Where Depth Is	Width of Wedge Section	Net Each in Lots of 1-3	4-6	7-9
60-8400	21″	22″	18 9/32″	$ 88.80	$ 79.90	$ 71.05
60-8401	31 1/2″	22″	18 9/32″	102.80	92.50	82.25
60-8402	42″	22″	18 9/32″	112.00	100.80	89.60
60-8403	52 1/2″	22″	18 9/32″	121.20	109.10	96.95
60-8404	61 1/4″	22″	18 9/32″	137.40	123.65	109.90
60-8405	70″	22″	18 9/32″	150.40	135.35	120.30
60-8406	78 3/4″	22″	18 9/32″	162.80	146.50	130.25
60-8407	21″	25 1/2″	20 61/64″	97.40	87.65	77.90
60-8408	31 1/2″	25 1/2″	20 61/64″	113.60	102.25	90.90
60-8409	42″	25 1/2″	20 61/64″	126.60	113.95	101.30
60-8410	52 1/2″	25 1/2″	20 61/64″	137.40	123.65	109.90
60-8411	61 1/4″	25 1/2″	20 61/64″	152.10	136.90	121.70
60-8412	70″	25 1/2″	20 61/64″	169.90	152.90	135.90
60-8413	78 3/4″	25 1/2″	20 61/64″	188.30	169.45	150.65

15° WEDGES FOR SERIES 60 INCLINED PANEL RACKS

Catalog No.	For Use Where Vertical Panel Space Is	Width of Wedge Section	Net Each in Lots of 1-3	4-6	7-9
60-8330	29 3/4″	7 3/16″	$124.40	$111.95	$ 99.50
60-8331	24 1/2″	7 3/16″	132.00	118.80	105.60
60-8332	22 3/4″	7 3/16″	132.00	118.80	105.60

45° WEDGES FOR SERIES 60 INCLINED PANEL RACKS

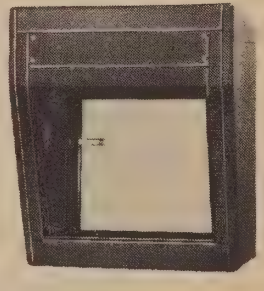
Catalog No.	For Use Where Vertical Panel Space Is	Width of Wedge Section	Net Each in Lots of 1-3	4-6	7-9
60-8430	29 3/4″	18 9/32″	$130.40	$117.35	$104.30
60-8431	24 1/2″	18 9/32″	139.60	125.65	111.70
60-8432	22 3/4″	18 9/32″	139.60	125.65	111.70



SERIES SIXTY CONVERTIBLE

Provides the right angle for viewing comfort. Placed on a table or bench or perched on top of a Series Sixty Inclined Panel Rack, the new convertible affords the viewer optimum viewing angles. Built with the same careful attention to details as other Series Sixty cabinets, the Convertible is an exceptionally rugged enclosure for delicate instruments and systems.

Has all welded, 14 gauge steel frame with removable sides, top, bottom, rear and front panel. Adjustable front and rear mounting rails are drilled and tapped 10-32 with W.E. spacing. "U" shaped channel braces with 9/32″ perforations supply extra rigidity. Accepts 19″ panels. Available with dark gray body GG and light gray GY door or dark blue body BB and light blue BY door.



Series shown below includes welded framework, plain sides, plain rear door and solid top.

Catalog Number	Height (H)	Width	Outside Depth	Clear Inside Depth	Inclined (IP) Panel Space	Vertical Panel Space	Top Opening	Net Each in Lots of 1-3	4-6	7-9
60-4600	22 25/32″	24 1/16″	22″	20 1/2″	10 1/2″	3 1/2″	11 53/64″ x 18 5/16″	$192.50	$173.25	$154.00
60-4601	27 23/32″	24 1/16″	22″	20 1/2″	15 3/4″	3 1/2″	10 1/32″ x 18 5/16″	194.70	175.25	155.75
60-4602	29 23/64″	24 1/16″	22″	20 1/2″	17 1/2″	3 1/2″	9 27/64″ x 18 5/16″	197.10	177.40	157.70

Series shown below includes welded framework, louvered sides, plain rear door and solid top.

60-4700	22 25/32″	24 1/16″	22″	20 1/2″	10 1/2″	3 1/2″	11 53/64″ x 18 5/16″	$200.50	$180.45	$160.40
60-4701	27 23/32″	24 1/16″	22″	20 1/2″	15 3/4″	3 1/2″	10 1/32″ x 18 5/16″	204.00	183.60	163.20
60-4702	29 23/64″	24 1/16″	22″	20 1/2″	17 1/2″	3 1/2″	9 27/64″ x 18 5/16″	206.20	185.60	164.95

Series shown below includes welded framework, plain sides, louvered rear door and solid top.

60-4800	22 25/32″	24 1/16″	22″	20 1/2″	10 1/2″	3 1/2″	11 53/64″ x 18 5/16″	$197.10	$177.40	$157.70
60-4801	27 23/32″	24 1/16″	22″	20 1/2″	15 3/4″	3 1/2″	10 1/32″ x 18 5/16″	199.30	179.35	159.45
60-4802	29 23/64″	24 1/16″	22″	20 1/2″	17 1/2″	3 1/2″	9 27/64″ x 18 5/16″	201.70	181.55	161.35

Series shown below includes welded framework, louvered sides, louvered rear door and solid top.

60-4900	22 25/32″	24 1/16″	22″	20 1/2″	10 1/2″	3 1/2″	11 53/64″ x 18 5/16″	$202.20	$182.00	$161.75
60-4901	27 23/32″	24 1/16″	22″	20 1/2″	15 3/4″	3 1/2″	10 1/32″ x 18 5/16″	204.80	184.30	163.85
60-4902	29 23/64″	24 1/16″	22″	20 1/2″	17 1/2″	3 1/2″	9 27/64″ x 18 5/16″	207.20	186.50	165.75

BUD Add-a-Rack and Cabinets

SERIES SIXTY ADD-A-RACKS

Each assembly consists of frame, top, rear door and cowlings; used as an add-on unit to join any of the Series 60 enclosures into a bank of two or more. One standard rack plus several Add-a-Racks make any desired number of racks combined for optimum width. Colors are same as Racks.

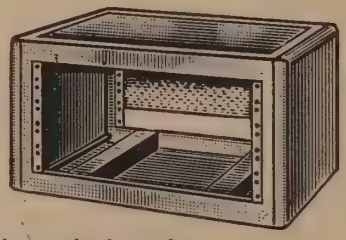
For 24″ Panel Space

Plain Sides					Louvered Sides					
Bud No. 60	For Add-onto Rack No. 60	Net Each in Lots of 1-3	4-6	7-9	Bud No. 60	For Add-onto Rack No. 60	Net Each in Lots of 1-3	4-6	7-9	Wgt. Lbs.
2515	2300, 2600	$143.35	$129.00	$114.70	2915	2715, 2815	$147.00	$132.30	$117.60	
2516	2301, 2601	168.75	151.90	135.00	2916	2716, 2816	172.95	155.65	138.35	
2517	2302, 2602	183.95	165.55	147.15	2917	2717, 2817	189.95	170.95	151.95	
2518	2303, 2603	200.85	180.75	160.70	2918	2718, 2818	206.95	186.25	165.55	
2519	2304, 2604	225.00	202.50	180.00	2919	2719, 2819	231.10	208.00	184.90	
2520	2305, 2605	250.55	225.50	200.45	2920	2720, 2820	257.80	232.00	206.25	
2521	2306, 2606	268.60	241.75	214.90	2921	2721, 2821	277.10	249.40	221.70	
2522	2307, 2607	160.85	144.75	128.70	2922	2722, 2822	162.75	146.50	130.20	
2523	2308, 2608	188.15	169.35	150.50	2923	2723, 2823	191.10	172.00	152.90	
2524	2309, 2609	206.35	185.70	165.10	2924	2724, 2824	211.15	190.05	168.90	
2525	2310, 2610	224.50	202.05	179.60	2925	2725, 2825	230.50	207.45	184.40	
2526	2311, 2611	250.55	225.50	200.45	2926	2726, 2826	257.80	232.00	206.25	
2527	2312, 2612	279.50	251.55	223.60	2927	2727, 2827	286.75	258.10	229.40	
2528	2313, 2613	310.40	279.35	248.30	2928	2728, 2828	317.00	285.30	253.60	
2537	2330, 2630	214.20	192.80	171.35	2937	2737, 2837	216.50	194.85	173.20	
2538	2331, 2631	228.70	205.85	182.95	2938	2738, 2838	234.70	211.25	187.75	
2539	2332, 2632	228.70	205.85	182.95	2939	2739, 2839	234.70	211.25	187.75	

For 19″ Panel

Plain Sides					Louvered Sides					
2500	2300, 2600	$109.75	$ 98.80	$ 87.80	2900	2700, 2800	$112.90	$101.60	$ 90.30	92
2501	2301, 2601	128.50	115.65	102.80	2901	2701, 2801	132.20	119.00	105.75	113
2502	2302, 2602	140.80	126.70	112.65	2902	2702, 2802	144.80	130.30	115.85	115
2503	2303, 2603	153.85	138.45	123.10	2903	2703, 2803	158.25	142.45	126.60	145
2504	2304, 2604	171.90	154.70	137.50	2904	2704, 2804	176.70	159.05	141.35	148
2505	2305, 2605	191.50	172.35	153.20	2905	2705, 2805	196.90	177.20	157.50	152
2506	2306, 2606	205.60	185.05	164.50	2906	2706, 2806	211.35	190.20	169.10	158
2507	2307, 2607	122.75	110.50	98.20	2907	2707, 2807	124.40	111.95	99.50	120
2508	2308, 2608	143.85	129.45	115.10	2908	2708, 2808	145.95	131.35	116.75	132
2509	2309, 2609	157.10	141.40	125.70	2909	2709, 2809	161.30	145.15	129.05	138
2510	2310, 2610	171.45	154.30	137.15	2910	2710, 2810	175.75	158.20	140.60	142
2511	2311, 2611	191.75	172.60	153.40	2911	2711, 2811	196.45	176.80	157.15	164
2512	2312, 2612	213.45	192.10	170.75	2912	2712, 2812	219.15	197.25	175.30	168
2513	2313, 2613	236.25	212.65	189.00	2913	2713, 2813	242.25	218.05	193.80	172
2530	2330, 2630	163.60	147.25	130.90	2930	2730, 2830	165.50	148.95	132.40	119
2531	2331, 2631	174.50	157.05	139.60	2931	2731, 2831	178.80	160.90	143.05	119
2532	2332, 2632	174.50	157.05	139.60	2932	2732, 2832	178.80	160.90	143.05	125

PRESTIGE BALL CORNERED VERSA-CABINETS



A standard Prestige Versa-Cabinet consists of the framework, two ball cornered sides, perforated metal back, solid bottom plate and two supporting channels.

The front, back, top, and bottom may be quickly removed for access to interior for easy servicing.

Standard 19″ panels may be attached to the top, bottom, front or back of cabinet to provide complete closure. Perforated top panel may also be used.

An opening is provided across bottom of back for cable leads, controls or knobs. Size of opening is 1¾″ x 19″. Bud Steel Panel PS 1250 or Aluminum Panel PA-1101 may be used to close opening if desired. Perforated back may be removed and a standard steel or aluminum panel may be used to close back opening entirely.

Sides are attached by means of holding flanges on the bottom of the frame and nut at top. Handles may be fastened to sides.

Cabinets may be fastened side-to-side in batteries of two or more or may be stacked one on another. Four rubber feet are regularly supplied.

Top may be closed by using PS-1256HG or PA-1107HG solid panels or by using PC-1710 perforated steel top panel.

Clear inside width—22¼″. Overall width—23$^{3}/_{16}$″.
Clear inside depth—15″. Overall depth—15$^{25}/_{32}$″.
Weight 28 to 35 lbs.

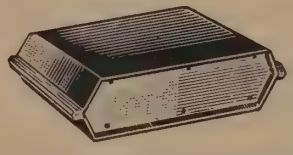
Finished in gray hammertone. GH

Bud No.	Height, Overall	Panel Space	Rear Panel	Net Each, Lots of 1-14	15-24	25-34
PC-1700	8¾″	5¼″	3½″	$38.00	$34.20	$30.40
PC-1701	10½″	7″	5¼″	40.20	36.20	32.15
PC-1702	12¼″	8¾″	7″	41.25	37.15	33.00
PC-1703	14″	10½″	8¾″	46.55	41.90	37.25
PC-1704	15¾″	12¼″	10½″	49.05	44.15	39.25

PERFORATED STEEL TOP PLATE

Bud No.	Size, In.	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
PC-1710	12¼ x 19	2½	$4.20	$3.80	$3.35

GRAND PRIX CABINETS



A concept in styling not elsewhere available in standard electronic cabinetry. Practical for audio equipment, also for medical and other electronic equipment and controls.

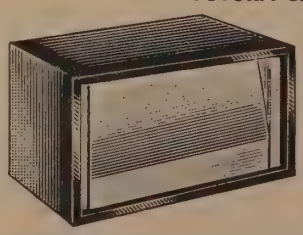
Engineered to make installation and servicing of contents easy. The upper and lower segments are held together by sturdy brushed aluminum extrusions.

Body and front and rear panels made of 20 gauge steel. Four rubber feet are furnished.

Choice of light gray hammertone HG body with matching panels or textured dark gray GG body with textured light gray GY panels. Please specify when ordering.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
MD-1	4$^{3}/_{16}$ x 19⅛ x 10½	7¼	$18.40	$16.55	$14.70
MD-2	7$^{3}/_{16}$ x 19⅛ x 10½	7¾	19.25	17.35	15.40
MD-3	4$^{3}/_{16}$ x 12⅛ x 8¾	7	14.85	13.35	11.90

FUTURA CABINETS



Front panels are held in place by body flanges eliminating the use of panel mounting screws.

Top and sides are formed of one piece of steel to which is fastened the base. Thus, the two parts may be quickly disassembled to expose the entire contents. Body and rear panel are of 20 gauge steel while front panels are 18 gauge. Four rubber feet attached to base. Chassis may be affixed to base, front or rear panels.

Choice of light gray hammertone HG body with textured light gray GY panel or textured dark blue BB body with textured light blue BY panel. Please specify when ordering.

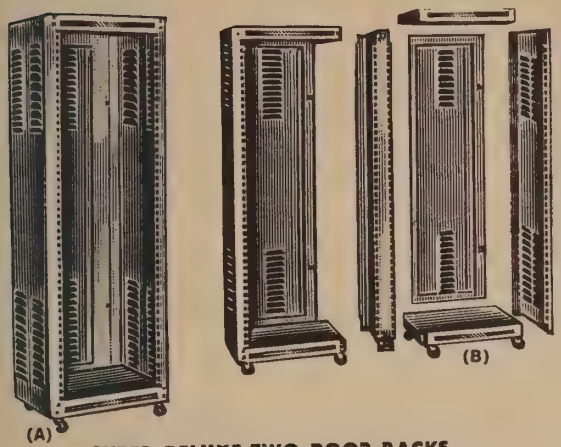
Bud No.	Overall Size, In. W. x H. x D.	Uses Bud Chassis No.	Net Each, Lots of 1-24	25-49	50-99
MD-1960†	13 x 7 x 8	CB-40	$10.35	$ 9.30	$ 8.30
MD-1961†	14 x 8 x 9	CB-997	11.15	10.05	8.90
MD-1962†	16 x 8 x 9	CB-998	11.50	10.35	9.20
MD-1963*	13 x 7 x 8	CB-40	12.10	10.90	9.70
MD-1964*	14 x 8 x 9	CB-997	13.00	11.70	10.40
MD-1965*	16 x 8 x 9	CB-998	13.80	12.40	11.05

Net

© United Technical Publications

BUD Cabinet Racks, Accessories

DELUXE RELAY RACKS WITH ADD-A-RACK



(A) Deluxe Relay Racks — High quality relay racks made of 16-gauge steel with 7/64" panel supports. Panel mounting supports are recessed so that no panel edges will be exposed. Both back and sides are fully louvered for best ventilation. Snap catches are positioned on the door. Rounded corners give streamlined appearance. Base constructed with four special supports so that casters may be applied directly to base for mobility. All standard panels fit these racks: 22" wide for 19" panels; 27" wide for 24" panels.

Super Deluxe Series Relay Racks are equipped with adjustable panel mounting supports permitting forward and backward adjustment of panels for more efficient use of space. Adjustable points are at 1" intervals for 9" to 15" clearance behind panels. Super Deluxe Racks are fitted with both front and rear doors, the rear to cover any equipment behind the panel while making it easily accessible. The front door, not louvered, conceals controls on the front panel.

(B) Add-A-Rack Series — Where relay racks are to be joined in series. Provides additional strength and improved appearance. Includes door, top, bottom and coupling unit, all that is needed to make a double relay rack out of a single Deluxe series.

All Racks Listed are shipped knocked-down with all necessary hardware and assembly instructions. Casters optional. When ordering specify finish. Add suffix "HG" for gray hammertone; suffix "GR" for gray Rinkletex; and suffix "BR" for black Rinkletex.

SUPER DELUXE TWO-DOOR RACKS WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
CR-2174	42 1/16"	36 3/4"	102	$86.55	$77.90	$69.25
CR-2171	47 5/16"	42"	104	93.65	84.30	74.90
CR-2172	66 9/16"	61 1/4"	138	120.85	108.85	96.70
CR-2175	75 5/16"	70"	150	129.90	116.90	103.90
CR-2173	82 5/16"	77"	163	145.00	130.50	116.00

ADD-A-RACK ASSEMBLIES

Includes door, top, bottom and coupling unit for add-on use with racks indicated.

Bud No.	For Use With Rack No.	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
AR-1778	CR-1774	70	$64.75	$58.30	$51.80
AR-1775	CR-1771	74	68.80	61.90	55.05
AR-1776	CR-1772	100	85.50	76.95	68.40
AR-1779	CR-1780	107	90.40	81.35	72.30
AR-1777	CR-1773	113	105.05	94.55	84.05
AR-2278*	CR-2074	102	71.95	64.75	57.55
AR-2275*	CR-2071	86	81.25	73.15	65.00
AR-2276*	CR-2072	110	101.75	91.60	81.40
AR-2279	CR-2075	120	103.85	93.45	83.10
AR-2277*	CR-2073	130	123.80	111.40	99.05

*Gray hammertone standard; for black or gray Rinkletex add 10% to price.

DELUXE RELAY RACKS
17 1/8" Overall Depth
WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
CR-1774	42 1/16"	36 3/4"	82	$65.80	$59.20	$52.65
CR-1771	47 5/16"	42"	92	74.60	67.15	59.70
CR-1772	66 9/16"	61 1/4"	115	93.30	83.95	74.65
CR-1780	75 5/16"	70"	125	95.65	86.10	76.50
CR-1773	82 5/16"	77"	135	107.45	96.70	85.95

EXTRA DEEP DELUXE RACKS

Same as above, except 22 1/8" deep instead of 17 1/8" deep. Gray hammertone GH finish standard; for black or gray Rinkletex add 10% to price.

WITH 19" WIDE PANEL SPACE

CR-2074	42 1/16"	36 3/4"	98	$ 75.30	$ 67.80	$60.30
CR-2071	47 5/16"	42"	102	85.20	76.70	68.10
CR-2072	66 9/16"	61 1/4"	137	112.05	100.85	89.65
CR-2075	75 5/16"	70"	148	114.15	102.75	91.30
CR-2073	82 5/16"	77"	159	133.05	119.75	106.45

WITH 24" WIDE PANEL SPACE

CR-2482	66 9/16"	61 1/4"	160	176.20	158.60	140.95
CR-2485	75 5/16"	70"	173	179.40	161.45	143.50
CR-2483	82 5/16"	77"	186	210.35	189.30	168.30

STANDARD TELEPHONE-TYPE RELAY RACK (B)

3" channels and crossbars of 7/64" steel. Base is chassis type with side angles. Base drilled for RC-7756 casters. Black Rinkletex BR or gray hammertone (suffix "HG").

Bud No.	Height, Overall	Panel Space	Net Each, Lots of 1-9	10-14	15-19	Wt. Lbs.
RR-1263	35 39/64"	31 1/2" x19"	$29.80	$26.80	$23.85	35
RR-1363	40 55/64"	36 3/4" x19"	28.80	25.90	23.05	37
RR-1264	70 39/64"	66 1/2" x19"	34.20	30.80	27.35	46
RR-1364	75 55/64"	71 3/4" x19"	35.85	32.25	28.70	48
RR-1366	81 7/64"	77" x19"	39.25	35.35	31.40	50

HEAVY-DUTY TELEPHONE-TYPE RELAY RACKS (C)

Two 3 1/2"x5"x1/4", 20 3/8" long angles form base. Steel channels are 3"x1 3/16", 72 1/4" long. Cross bars are 1/8"x2 3/32" angles. Panel holes tapped 12-24 with W.E. space. Black Rinkletex finish only. Usually bolted to floor.

RR-1265	72 1/4"	66 1/2" x19"	$79.40	$71.45	$63.50	88



DELUXE TELEPHONE-TYPE RELAY RACKS (A)

Sturdy rack with extra strength and capacity. U-member is welded with ventilation at top. Panel-mounting rails, front and rear, tapped 10-32 with W.E. spacing. Made of 12 ga. steel. Chassis-type base drilled for RC-7756 casters. Brackets hold uprights to base; holes on both sides for bolting racks together. Add suffix HG for gray hammertone; BR for black Rinkletex; or GR for gray Rinkletex. Nos. RR-1367-RR-1369 have 20 7/8" base width and take 19" panels.

Bud No.	Height, Overall	Panel Space	Net Each, Lots of 1-9	10-14	15-19	Wt. Lbs.
RR-1367	64 5/8"	61 1/4" x19"	$56.75	$51.10	$45.40	89
RR-1368	73 5/8"	70" x19"	61.05	54.95	48.85	97
RR-1369	80 5/8"	77" x19"	68.00	61.20	54.40	105

TABLE-MOUNT TELEPHONE RACK (D)

Sturdy rack with chassis type base mounts heavy components on table where enclosures are not required. Panel mount rails recessed for flush mount of 19" panels. Shipped knocked down. Specify black Rinkletex (suffix "BR") or gray hammertone ("HG").

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
RR-1248	24"	21"	15	$12.80	$11.50	$10.25
RR-1249	31"	28"	18	15.10	13.60	12.10

CASTERS

Bud No.	Height	Weight (Set of 4)	Net Each, Lots of 1-49	50-99	100-149
RC-7756	2 3/8"	1 3/4 lbs.	$1.30	$1.15	$1.05
RC-7758	3 1/4"	6 lbs.	3.20	2.90	2.55

© United Technical Publications

BUD Relay Racks and Panels

STANDARD RELAY RACK PANELS



Choice of ⅛" steel or ⅛" and 3/16" aluminum panels in both 19" and 24" widths. Specify color when ordering, use suffix BR for black Rinkletex; GR for Gray Rinkletex; HG for Gray Hammertone; S for Sand; WH for white; GY for light gray textured; BY for light blue textured. Aluminum panels 5005 H-36 or 2024 T-3 alloy.

19" WIDE PANELS

Ht., In.	⅛" STEEL Bud No. PS-	Net Each, Lots of 1-49	50-99	100-149	⅛" ALUMINUM Bud No. PA-	Net Each, Lots of 1-49	50-99	100-149
1¾	1250	$1.45	$1.30	$1.15	1101	$1.60	$1.45	$1.30
3½	1251	1.55	1.40	1.25	1102	2.30	2.05	1.85
5¼	1252	2.10	1.90	1.70	1103	3.00	2.70	2.40
7	1253	2.20	2.00	1.75	1104	3.80	3.40	3.05
8¾	1254	2.95	2.65	2.35	1105	4.35	3.90	3.50
10½	1255	3.40	3.05	2.70	1106	5.50	4.95	4.40
12¼	1256	3.95	3.55	3.15	1107	6.55	5.90	5.25
14	1257	4.40	3.95	3.50	1108	7.35	6.60	5.90
15¾	1258	4.75	4.30	3.80	1109	8.30	7.45	6.65
17½	1259	5.30	4.75	4.25	1110	9.00	8.10	7.20
19¼	1260	5.85	5.25	4.70	1111	9.90	8.90	7.90
21	1261	6.70	6.05	5.35	1112	10.95	9.85	8.75

3/16" 5005 H-36 ALUMINUM PANELS

Ht., In.	Standard 19" Wide Panels Bud No. PA-	Net Each, Lots of 1-49	50-99	100-149	Standard 24" Wide Panels Bud No. PA-	Net Each, Lots of 1-49	50-99	100-149
1¾	3101	$2.65	$2.40	$2.10	2431	$ 4.00	$ 3.60	$ 3.20
3½	3102	3.70	3.35	2.95	2432	5.20	4.70	4.10
5¼	3103	4.85	4.35	3.90	2433	7.20	6.50	5.70
7	3104	6.10	5.50	4.90	2434	8.40	7.50	6.70
8¾	3105	7.15	6.45	5.70	2435	9.80	8.80	7.80
10½	3106	8.85	7.95	7.10	2436	12.40	11.20	10.00
12¼	3107	10.25	9.25	8.20	2437	14.00	12.60	11.20
14	3108	11.40	10.25	9.10	2438	16.50	14.90	13.20
15¾	3109	13.25	11.95	10.60	2439	18.50	16.60	14.80
17½	3110	14.60	13.15	11.70	2440	20.00	18.00	16.00
19¼	3111	15.85	14.25	12.70	2441	22.20	20.00	17.80
21	3112	17.50	15.75	14.00	2442	24.50	22.00	19.60

1/8" 2024 T-3 HARD ALUMINUM PANELS

Ht., In.	Bud PA-	Net Each, Lots of 1-49	50-99	100-149	Ht., In.	Bud PA-	Net Each, Lots of 1-49	50-99	100-149
1¾	1131	$2.00	$1.80	$1.60	12¼	1137	$6.95	$6.25	$5.55
3½	1132	2.55	2.30	2.05	14	1138	8.15	7.35	6.50
5¼	1133	3.30	2.95	2.65	15¾	1139	8.80	7.90	7.05
7	1134	4.30	3.85	3.45	17½	1140	9.55	8.60	7.65
8¾	1135	4.75	4.30	3.80	19¼	1141	10.35	9.30	8.30
10½	1136	6.15	5.55	4.90	21	1142	11.75	10.60	9.40

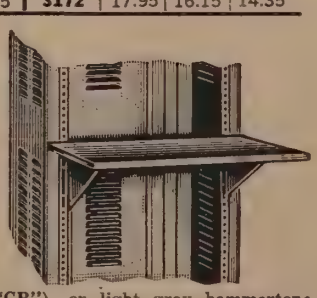
SURFACE SHIELD PANELS

Bright aluminum alloy 5005 H-36 panels have blemish-free mill finish. Covered on both sides with sturdy, pressure-sensitive, white paper; protects against damage and useful for marking for drilling, positioning, etc. Standard notched sizes.

STANDARD 19" WIDE PANELS

Ht., In.	⅛" ALUMINUM Bud SFA-	Net Each, Lots of 1-49	50-99	100-149	3/16" ALUMINUM Bud SFA-	Net Each, Lots of 1-49	50-99	100-149
1¾	1831	$1.50	$1.35	$1.20	3161	$2.65	$2.40	$2.10
3½	1832	2.30	2.05	1.85	3162	3.80	3.40	3.05
5¼	1833	3.00	2.70	2.40	3163	4.95	4.45	3.95
7	1834	3.80	3.40	3.05	3164	6.10	5.50	4.90
8¾	1835	4.35	3.90	3.50	3165	7.25	6.55	5.80
10½	1836	5.50	4.95	4.40	3166	8.40	7.55	6.70
12¼	1837	6.55	5.90	5.25	3167	10.70	9.65	8.55
14	1838	7.35	6.60	5.90	3168	12.20	11.00	9.75
15¾	1839	8.30	7.45	6.65	3169	13.70	12.35	10.95
17½	1840	9.00	8.10	7.20	3170	15.05	13.55	12.05
19¼	1841	9.90	8.90	7.90	3171	16.55	14.90	13.25
21	1842	10.95	9.85	8.75	3172	17.95	16.15	14.35

SHELF ASSEMBLY



Useful as a desk, work space, etc. Can't fall off or tilt; will support any reasonable weight. Shelf portion supported by two brackets, punched to fit standard panel mounting strips. No panel support needed. Sides welded to bottom of shelf; mounting brackets slip into sides and fasten with two screws. 16 gauge steel; ½" flange on all four sides; overall height, 7⅛". Brackets are 7" high. Specify black Rinkletex (suffix "BR"), gray Rinkletex (suffix "GR"), or light gray hammertone (suffix "HG") finish.

Bud No.	Size, Inches D. x W.	Weight, Lbs.	Net Each, Lots of 1-14	15-24	25-34
SA-1719	16 x 22	14	$14.15	$12.75	$11.30
SA-1720	20 x 22	15	14.35	12.90	11.50

PRESTIGE BALL CORNER RACKS



Attractive, practical housing for permanent or mobile instrumentation. Consists of framework, top, bottom, two ball cornered sides, and a ball corner door. Sides attach to frame by means of a tongue-and-slot arrangement and two screws. Sides easily removable. Drilled and tapped adjustable panel mounting rails on all four vertical members of frame. Doors mount from either left or right. Base takes side panels on any of the four sides. Door and side clearance permits covering of equipment without damage to knobs or controls. Provision made for recessed casters. Extra doors available. Knockout holes for attaching two or more units together. Bottom will support 500 lbs. Panel rails 200 lbs. suspended vertically between rails. Units take Bud SD-1717 sliding drawer assembly or CD-2210 console drawer. Shipped knocked-down, with necessary hardware. **Gray hammertone finish only. GH**

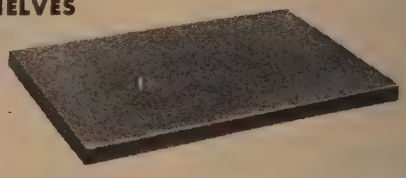
Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
CR-2280	66 9/16"	61¼"	179	$162.80	$146.50	$130.25
CR-2281	71 13/16"	66½"	186	166.85	150.15	133.50
CR-2282	82 5/16"	77"	213	187.45	168.70	149.95
DR-2290	Door for CR-2280		28	19.15	17.25	15.30
DR-2291	Door for CR-2281		33	22.45	20.20	17.95
DR-2292	Door for CR-2282		39	25.10	22.60	20.10

PRESTIGE ADD-A-RACKS

Where relay racks are to be joined in series this assembly is lower in cost yet provides additional strength and improved appearance. Consists of top, bottom, rear door and framework. 16 gauge steel. Extra ball corner doors will fit adjustable panel mounting rails which are recessed. Gray hammertone. GH

BUD NO.	Used to Add-A-Rack to	Wt. Lbs.	Net Each, Lots of 1-9	10-14	15-19
AR-2284	CR-2280	120	$123.10	$110.80	$ 98.50
AR-2286	CR-2281	125	133.00	119.70	106.40
AR-2287	CR-2282	136	149.40	134.45	119.50

RACK SHELVES



Sturdily constructed of heavy-gauge steel. Have 1" flange to add rigidity and strength. Rest on chassis supporting angles. Available in Black Rinkletex finish only. BB

Bud No.	Size, Inches W. x D.	Weight, Lbs.	Net Each, Lots of 1-24	25-49	50-99
CB-1976	19 x 15	6½	$4.95	$4.45	$3.95
CB-1977	19 x 12	5½	3.95	3.55	3.15

POWER OUTLET STRIPS





For more convenient, safer wiring in cabinets and racks or wherever multiple 110-125 volt outlets are required. Each strip is a complete unit ready for use; no field wiring is required. Strip is installed by snapping into mounting clips at convenient locations. When used in cabinets, racks or consoles there is no danger of accidental contact between power cord and contents.

Wire capacity is No. 12AWG Solid TW conductor. Cross section of steel race way is ¾" x 1 9/32" and recpetacles are spaced on 6" centers except POS-4. Double wipe contact receptacle terminals and grounding terminal are 15 amp, 125 volt. Each length of strip includes a 15 amp overload breaker with push-button reset and 6" rubber covered cord and grounding plug. Two sheet metal spring clips furnished with each section. All components are UL approved. Finished in light gray enamel.

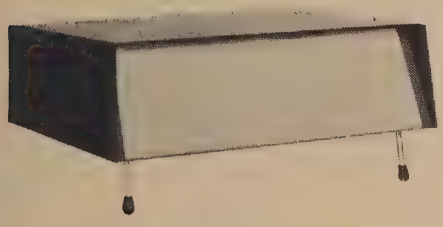
Catalog No.	No. of Outlets	Length	Wgt. Lbs.	1-5	6-11	12-17
POS-4	4	17½"	1¾	$24.95	$22.45	$19.95
POS-7	7	48"	3¾	26.30	23.65	21.05
POS-9	9	60"	4¼	28.95	26.05	23.15
POS-11	11	72"	5	31.55	28.40	25.25

Net

© United Technical Publications

BUD CABINETS

New TILT-A-VIEW CABINETS

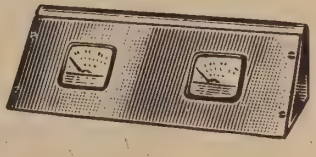


Affords selective vision to viewer who may be observing the action of meters or the position of dials and recorders. Employment of the detachable legs changes the position to any desired angle. Two piece construction permits immediate clear access to interior for installation and servicing.

Fabricated of 18 gauge steel. Lower segment slides into channels and flanges formed in top. Bottom is fastened by screws to the flanges on the lower edge of top. Hooded top shields sloping front panel from overhead glare. No screws appear in front or rear panels. Two 2" high plated legs with rubber feet. Legs screw into base on bottom section. Four rubber feet attached to bottom section. Vinyl texture finish. Gray textured body GT and light sand S panels.

Catalog No.	Sizes, Inches H x W x D	Wgt. Lbs.	1-14	14-24	25-34
TV-2155	4½ x 15 x 10	8½	$ 8.90	$ 8.00	$ 7.10
TV-2156	6½ x 16 x 12	13	10.45	9.40	8.35
TV-2157	8½ x 17 x 14	17	15.20	13.70	12.15

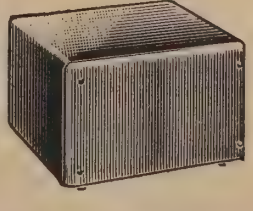
DUAL-VIEW PANEL SUPPORT



Designed for installation on a rack where an oblique view of instrument panel is desired. Engineered so that the entire assembly occupies no more space than size of supported panel. Panel support cover can be removed for easy servicing or installation of instruments. Made of heavy gauge steel with attractive contoured edges. Comes knocked-down with necessary assembly hardware, but without panels. Bud panels to fit these supports are PS-1253 (steel), and PA-1104 (aluminum) for Model IP-1120; PS-1255 (steel), and PA-1106 (aluminum) for IP-1121. When ordering, the finish which is the same as that of the rack to which it will be attached.

Bud No. 1-P-1120 — Requires 19" x 7" panel space. Wt., 3½ lbs.
Net Each, Lots of 1-24 ..... **$6.15**
Lots of 25-49, Each ..... **$5.55** Lots of 50-99, Each **$4.90**
Bud No. 1P-1121 — Requires 19" x 10½" panel space. Wt., 6¾ lbs.
Net Each, Lots of 1-24 ..... **$8.70**
Lots of 25-49, Each ..... **$7.85** Lots of 50-99, Each **$6.95**

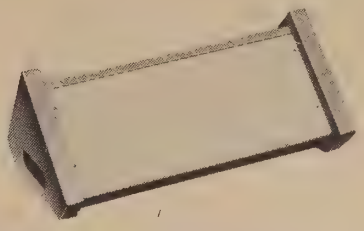
CONTOUR UTILITY CABINETS



Attractively designed utility housing with rounded contour corners. Flanged panels also have rounded corners to preserve the symmetry of design. Constructed of 20 gauge steel. Both front and rear panels are removable; the front panel is solid while the rear panel is louvered for proper ventilation. Four rubber feet, attached to base, prevent scratching surface the unit is placed on. Body is textured, dark grey GG; panel is textured light gray GY.

Bud No.	Overall Size, Inches H.	D.	W.	Net Each, Lots of 1-24	25-49	50 & Over
CU-463	4 7/32	6 7/32	3¾	$ 6.50	$5.25	$5.20
CU-465	4 7/32	6 7/32	5¾	7.45	6.70	5.95
CU-585	5 7/32	8 7/32	5¾	9.55	8.60	7.65
CU-587	5 7/32	8 7/32	7¾	10.50	9.45	8.40
				Lots of 1-49	50-99	100-149
CU-7125	7 7/32	12 7/32	5¾	$ 9.65	$8.70	$7.70
CU-7127	7 7/32	12 7/32	7¾	10.20	9.20	8.15

New MARK T CABINETS

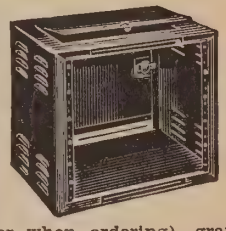


Designed particularly for a housing for controls, dials, meters, switches, lights, etc. Rear door swings open all the way for quick easy access to contents. Comfortable angle for easy viewing.

All welded construction. 16 gauge steel. Removable front panel held by decorative screws. Cam action self adjusting spring latch holds door securely against frame. Piano-type hinge on door. Recessed, safety shielded carrying handles. Four rubber feet included. Gray textured, GT vinyl texture, scratch resistant finish body. Light grey panel and door, GY.

Catalog No.	Width	Panel or Door Area	Wgt. Lbs.	1-14	15-24	25-34
MT-214	16"	5¾" x 14"	9	$31.90	$28.70	$25.50
MT-219	21"	5¾" x 19"	12	34.95	31.45	27.95
MT-224	26"	5¾" x 24"	14½	41.15	37.05	32.90

DELUXE CABINET RACKS



Rounded corners. There is a recessed, hinged door on the top with a snap catch. These racks are made of heavy gauge steel and are of sturdy construction. The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear. Adequate ventilation is assured by means of louvered sides and a 2½ inch opening in the bottom of the back extends the entire width. "NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM in black Rinkletex (add suffix "BR" to number when ordering), gray Rinkletex (suffix "GR", and hammertone gray (suffix "HG"). Size: 14¾" x 22" w. Fits 19" panels. Full size 12 Ga. steel Relay. Rack Panel supplied, at no extra cost.

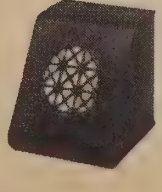
Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
CR-1726	8 25/32"	7"	24	$20.70	$18.65	$16.55
CR-1741	10 9/16"	8¾"	28	22.05	19.85	17.65
CR-1740	12 5/16"	10½"	31	25.85	23.25	20.70
CR-1742	14 1/16"	12¼"	32	26.65	24.00	21.30
CR-1739	15 13/16"	14"	35	36.10	32.50	28.90
CR-1743*	19 5/16"	17½"	40	35.40	31.85	28.30
CR-1727*	22 13/16"	21"	43	38.00	34.20	30.40
CR-1744*	28 1/16"	26¼"	51	40.85	36.75	32.70
CR-1728*	33 5/16"	31½"	58	43.35	39.00	34.70
CR-1745*	36 13/16"	35"	63	45.55	41.00	36.45

*These sizes have both top and rear doors.

HEAVY DUTY CABINET RACKS

Similar to our Deluxe Cabinet Rack except with greater depth and extra strength. These racks are shipped knocked down with all necessary assembly hardware. Panel mounting rails are an integral part of the sides. Removable rear door. Louvered sides and 2½" x 17⅞" opening in bottom or back assure adequate ventilation. Made of 16 gauge steel. Where it is advantageous to have a bank of these cabinet racks, an Add-a-Cab feature is provided. The method of assembly is the same as our Add-a-Rack series. Specify gray hammertone (HG), black Rinkletex (BR), or gray Rinkletex (GR). Size 17⅞"dia. x 22"w.

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
CR-1736	24½"	19¼"	50	$37.20	$33.50	$29.75
CR-1737	31½"	26¼"	57	39.95	35.95	31.95
CR-1738	40¼"	35"	70	47.65	42.90	38.10
ACR-1936	Add-A-Cab for CR-1736		42	37.05	33.35	29.65
ACR-1937	Add-A-Cab for CR-1737		52	45.45	40.90	36.35
ACR-1938	Add-A-Cab for CR-1738		57	47.00	42.30	37.60



MINIATURE SPEAKER CASES

Safe, convenient steel housing for 2" and 3" speakers. Black Rinkletex finish only. (BR)

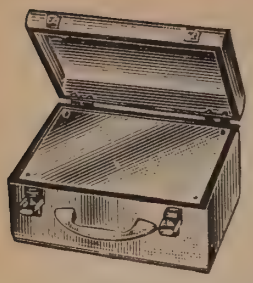
Bud No.	For Size Speaker	Net Each, Lots of 1-24	25-49	50-99
CS-1685	2"	$2.30	$2.00	$1.80
CS-1686	3"	2.30	2.00	1.80

© United Technical Publications

Net

BUD Cases, Racks, Chassis

TRANSICASE PORTABLE INSTRUMENT CASES



Handsome, portable instrument case with unlimited applications. Contour design fabricated of .040" aluminum with flush-fitted aluminum panel. Lid protects instruments in case; mounted on two slide-off, bright nickel-plated hinges with toggle catches. Rubber feet at both base and back; meal plugs supplied to fill holes if rubber feet are not used. Bright nickel-plated handle. **Specify Color:** Add suffix **BB** for textured blue; **GG** for textured gray.

Bud No.	Inside Panel Size, Inches	Clear Internal Space: Below Panel	Clear Internal Space: Above Panel	Internal Aperture	Overall Size, Inches W. x D. x H.	Wt., Lbs.	Net Each, Lots of: 1-9	10-14	15-19
TC-300	8 15/16 x 5 15/16	4 13/32"	1 15/32"	8" x 5 31/32"	10 1/16 x 7 x 6	3 3/4	$29.20	$26.30	$23.35
TC-301	10 3/8 x 7 1/4	4 13/32"	1 15/32"	9 7/16" x 7 9/32"	11 1/2 x 8 1/4 x 6	4 1/2	29.95	26.95	23.95
TC-302	11 7/8 x 7 15/16	5 29/32"	1 15/32"	10 15/16" x 7 31/32"	13 x 9 x 7 1/2	6	32.00	28.80	25.60
TC-303	15 3/8 x 7 15/16	5 29/32"	1 15/32"	14 7/16" x 7 31/32"	16 1/2 x 9 x 7 1/2	8	32.55	29.30	26.05
TC-304	19 x 7	7 11/32"	1 15/32"	18 1/4" x 7 1/32"	20 1/8 x 8 x 9	10	34.30	30.85	27.45

PORTACAB INSTRUMENT CABINETS

PORTACABS



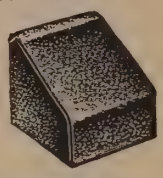
These attractive and versatile cabinets are desirable as housings for instrumentation requiring highly stylized appearance. The body is of one piece .050 aluminum with contoured corners. Panel is .062 aluminum.

Flexible recessed handle permits easy portability as well as vertical stacking. Well louvered for adequate ventilation. Since louveres point inward, side-to-side placement of cabinets is possible without space loss. Welded back has opening.

Front panel mounting flanges ½" wide. Aluminum front panel is recessed ½". The perimeter of the panel follows the contour of the body. Four detachable rubber feet furnished. Gray hammertone finish only. **HG**

Bud No.	Size, Inches W. x D. x H.	Wt., Lbs.	Bud Chassis	Net Each, Lots of: 1-24	25-49	50-99
WA-1540	6 1/8 x 8 x 8	2 1/4	AC-402	$12.45	$11.20	$ 9.95
WA-1541	8 1/8 x 12 x 9	3	AC-407	16.15	14.55	12.90
WA-1542	10 1/8 x 8 x 8	3 1/2	AC-406	14.40	12.95	11.50
WA-1543	11 1/8 x 18 x 11	6 1/2	AC-416	20.00	18.00	16.00
WA-1544	14 1/8 x 18 x 12	7 3/4	AC-420	23.10	20.80	18.50

UNIVERSAL SLOPING PANEL CABINETS



Fully enclosed and shielded housing with one-piece detachable back and sides fastened to body with four self-tapping screws. Components may be mounted on back, bottom, sides or front. Will accommodate Bud Miniature Aluminum Chassis. **Size:** 4" d. x 4¼" h. Gray hammertone finish only **HG**

ALUMINUM MODELS

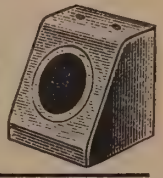
Aluminum alloy 5005 H-14.

Bud No.	Uses Chassis	Width	Wt., Lbs.	Net Each, Lots of: 1-24	25-49	50-99
AC-1610	CB-1617	4"	½	$2.65	$2.40	$2.10
AC-1611	CB-1618	5"	½	2.55	2.30	2.05
AC-1612	CB-1619	6"	¾	2.75	2.50	2.20
AC-1613	CB-1620	7"	¾	3.10	2.80	2.50

STEEL MODELS

C-1606	CB-1617	4"	¾	$2.10	$1.90	$1.70
C-1607	CB-1618	5"	¾	2.20	2.00	1.75
C-1608	CB-1619	6"	1 1/8	2.40	2.15	1.90
C-1609	CB-1620	7"	1 1/8	2.75	2.50	2.20

UNIVERSAL METER CASES



Center hole punched for 2" meters, plus easily removed knock-out ring to provide fit for 3" meters. Single piece detachable back and sides fastened to case with self-tapping screws for easy installation and servicing. Two ⅜" knock-out holes in top provide for installation of feed-through insulators, switches, volume controls, etc. **HG** finish only. **Size:** 4¼" h. x 4" w. x 4" d.

Bud No.	Construction	Weight, Lbs.	Net Each, Lots of: 1-49	50-99	100-149
CM-1935	Steel	1	$1.85	$1.65	$1.50
CMA-1936	Aluminum	¾	2.10	1.90	1.70

WIDE UNIVERSAL METER CASE

Same as above, except extra wide to permit installation of small components along with a meter or accommodate a 4" meter. Made of 5005 H-14 aluminum. **Size:** 4¼" h. x 6" w. x 4" d.

CMA-1930	Aluminum	¾	$3.65	$3.30	$2.90

MINIATURE UTILITY CABINETS

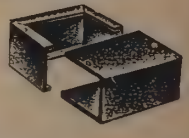


Ideal housing for construction of electronic devices using miniature tubes and transistorized circuitry. Front panel has a built-on chassis. Both front and rear panels are removable; fastened by self-tapping screws. Black Rinkletex. **BR**

Bud No.	Size, In. H. x W. x D.	Chassis W. x D., In.	Net Each, Lots of: 1-49	50-99	100-149
C-1793	4 x 4 x 2	3 1/8 x 1 7/8*	$1.85	$1.65	$1.50
C-1794	4 x 5 x 3	4 1/8 x 2 7/8*	2.10	1.90	1.70
C-1795	5 x 4 x 3	3 1/8 x 2 7/8†	2.30	2.05	1.85
C-1796	6 x 5 x 4	4 1/8 x 3 7/8‡	2.40	2.15	1.90
C-1797	5 x 6 x 4	5 1/8 x 3 7/8†	2.75	2.50	2.20
C-1798	6 x 6 x 6	4 7/8 x 5 7/8‡	3.30	2.95	2.65

*1" high. †1¼" high. ‡1¾" high.

MINI BOXES, HANDY BOXES



Design of this box permits installation of more components than would be possible in the conventionally designed boxes the same size. Two-piece construction. **Either snap-lock or screw type.** The flange type construction assures adequate shielding. Made from heavy .040 ga. aluminum. Available in natural aluminum finish and gray hammertone finish. **BR**

GRAY HAMMERTONE MINIBOXES

Bud No.	Size, Inches L. x H. x W.	Wt. Lbs.	Net Each, Lots of: 1-49	50-99	100-149
CU-2100A	2¾ x 2 1/8 x 1 5/8	¼	$1.00	$ .90	$ .80
CU-2101A	3¼ x 2 1/8 x 1 5/8	¼	1.00	.90	.80
CU-2102A	4 x 2 1/8 x 1 5/8	¼	1.10	1.00	.90
CU-2103A	4 x 2¼ x 2¼	¼	1.20	1.10	.95
CU-2104A	5 x 2¼ x 2¼	¼	1.30	1.15	1.05
CU-2105A	5 x 4 x 3	½	1.65	1.50	1.30
CU-2106A	5¼ x 3 x 2 1/8	¼	1.45	1.30	1.15
CU-2107A	6 x 5 x 4	¾	2.10	1.90	1.70
CU-2108A*	7 x 5 x 3	¾	2.40	2.15	1.90
CU-2109A*	8 x 6 x 3½	1	3.10	2.80	2.50
CU-2110A*	10 x 6 x 3½	1¼	3.40	3.05	2.70
CU-2111A*	12 x 7 x 4	1¾	4.60	4.15	3.70
CU-2112A*	17 x 5 x 4	2¼	4.60	4.15	3.70
CU-2113A*	10 x 2 x 1 5/8	½	1.75	1.60	1.40
CU-2114A*	12 x 2½ x 2¼	¾	2.30	2.05	1.85
CU-2115A	4 x 2 x 2¾	¼	1.20	1.10	.95
CU-2116A	4¼ x 2¼ x 1½	¼	1.20	1.10	.95
CU-2117A	3¼ x 2 1/8 x 1 1/8	¼	1.20	1.10	.95

NATURAL FINISH MINIBOXES

CU-3000A	2¾ x 2 1/8 x 1 5/8	¼	$ .90	$ .80	$ .70
CU-3001A	3¼ x 2 1/8 x 1 5/8	¼	.90	.80	.70
CU-3002A	4 x 2 1/8 x 1 5/8	¼	.90	.80	.70
CU-3003A	4 x 2¼ x 2¼	¼	1.10	1.00	.90
CU-3004A	5 x 2¼ x 2¼	¼	1.20	1.10	.95
CU-3005A	5 x 4 x 3	½	1.20	1.10	.95
CU-3006A	5¼ x 3 x 2 1/8	¼	1.20	1.10	.95
CU-3007A	6 x 5 x 4	¾	1.55	1.40	1.25
CU-3008A	7 x 5 x 3	¾	2.00	1.80	1.60
CU-3009A	8 x 6 x 3½	1	2.55	2.30	2.05
CU-3010A	10 x 6 x 3½	1¼	2.75	2.50	2.20
CU-3011A	12 x 7 x 4	1¾	3.85	3.45	3.10
CU-3012A	17 x 5 x 4	2¼	3.85	3.45	3.10
CU-3013A	10 x 2 x 1 5/8	½	1.45	1.30	1.15
CU-3014A	12 x 2½ x 2¼	¾	2.00	1.80	1.60
CU-3015A	4 x 2 x 2¾	¼	1.10	1.00	.90
CU-3016A	4¼ x 2¼ x 1½	¼	1.10	1.00	.90
CU-3017A	3¼ x 2 1/8 x 1 1/8	¼	.90	.80	.70

HANDY BOXES

Similar to Miniboxes in design and construction, except made of 22 gauge steel. Black Rinkletex **BR** finish only. Screw type only.

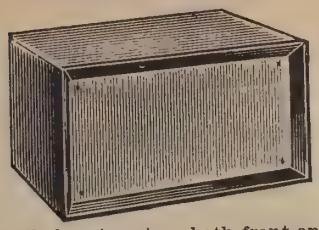
HB-1621	4¼ x 2¼ x 1½	½	$2.05	$1.85	$1.65
HB-1622	4 x 2 x 2¾	½	2.05	1.85	1.65

Net

© United Technical Publications

BUD Cabinets, Foundations

SHADOW CABINETS



An extremely versatile housing since both front and rear panels as well as the bottom may be removed for installation or servicing purposes. Unusually attractive appearance is created by recessing the front panel one inch as well as by beveling the front edges of the body.

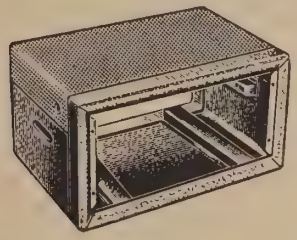
The recessed front panel prevents accidental movement of controls, knobs, and switches attached to it.

The two piece body of the shadow cabinet is made of 18 gauge steel and the panels of 16 gauge steel. Finish is light gray hammertone. **HG**

Four rubber feet attached to the bottom of the cabinet eliminate marring of the surface on which it may be placed.

Bud No.	Overall Size, In. W. x H. x D.	Uses Bud Chassis No.	Net Each, Lots of 1-24	25-49	50-99
SB-2140	14¼ x 8 x 10	AC-424, CB-704	$9.80	$8.80	$7.85
SB-2141	13¼ x 7½ x 9	AC-407, CB-1193	7.80	7.00	6.25
SB-2142	17 x 9½ x 11	AC-411, CB-666	13.10	11.80	10.50
SB-2143	15½ x 6 x 9	AC-409, CB-1194	7.50	6.75	6.00

STANDARD PRESTIGE CABINETS

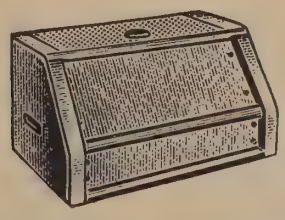


Has two supporting rails, laterally movable to fit any chassis width, and shielded handle slots. Finger holes in cover for easy lifting. Of 16 gauge steel. Takes 19" panels. With embossed feet. Size: 21⅝" w. 14¾" d. overall. Gray hammertone finish. **HG**

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
C-1440	9 9/16"	7"	26	$40.05	$36.05	$32.05
C-1441	11 5/16"	8¾"	27	42.25	38.05	33.80
C-1442	13 1/16"	10½"	29	44.00	39.60	35.20
C-1550*	9 9/16"	7"	26	43.35	39.00	34.70
C-1551*	11 5/16"	8¾"	27	45.10	40.60	36.10
C-1552*	13 1/16"	10½"	29	47.65	42.90	38.10

*With perforated cover; others solid.

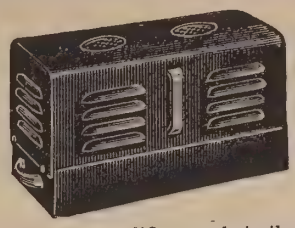
PRESTIGE SLOPING PANEL CABINETS



Ventilated top opens completely. Removable panel trim bar permits installation or removal of panels with chassis attached. Top panel is swept back for easy viewing. Takes standard 19" panels. Shielded lifting handles. Rear opening 2½" x 18" for controls, etc.; panel recess 1¼"; bottom panel 3½" high. **Size:** 22" w. x 9" top depth. Gray hammertone finish only. Weight, 26, 28 and 31 lbs.

Bud No.	Size, In. H. x D.	Slope Height	Net Each, Lots of 1-14	15-24	25-34
C-1555	11⅞ x 14⅛	7"	$48.20	$43.40	$38.55
C-1556	13¼ x 15⅛	8¾"	51.80	46.60	41.45
C-1557	14¾ x 16⅛	10½"	55.55	50.00	44.45

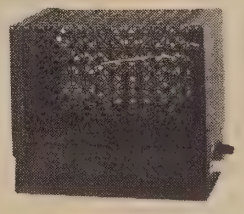
STREAMLINED FOUNDATIONS



Attractive unit houses amplifiers and similar apparatus. Standard chassis with removable top cover. Sides and ends louvered. Handles attached to chassis. Overall height, 9"; chassis 2½" high. Specify black Rinkletex (suffix **BR**), or gray Rinkletex (suffix **GR**).

Bud No.	Size, In. W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CA-1750	10 1/16 x 5	4¾	$10.00	$ 9.00	$ 8.00
CA-1751	12 1/16 x 7	5	11.90	10.70	9.50
CA-1752	17 1/16 x 7	8	12.65	11.40	10.10
CA-1753	17 1/16 x 10	9	13.65	12.30	10.90

STANDARD FOUNDATIONS

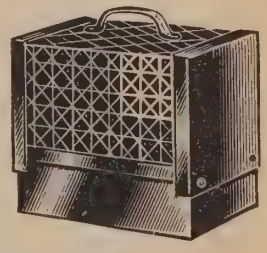


Standard chassis with perforated cover for maximum ventilation. Handles are attached to chassis. Chassis 2½" h., except CA-1128. 3" h. Overall height, 8½", except CA-1128, 8 13/16". Black Rinkletex finish only. BR

Bud No.	Size, Inches W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CA-699	9⅜ x 5⅛	3	$8.35	$7.50	$6.70
CA-1125	13⅜ x 5⅛	4¾	8.70	7.85	6.95
CA-1126	17⅛ x 7⅛	6	9.80	8.80	7.85
CA-1128	12⅛ x 10⅛	7	10.10	9.10	8.10

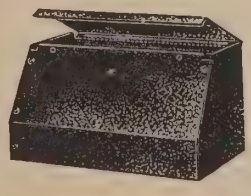
MINIATURE AMPLIFIER FOUNDATION

With the increased use of miniature tubes, smaller cabinets can be used when designing a compact amplifier. This amplifier foundation was designed expressly for this purpose. The chassis is 5" x 7" x 2". Height, 6". The cover is made of perforated metal. A streamlined handle makes this cabinet portable. Black Rinkletex. 1½ lbs.



Bud No.	Net Each, Lots of 1-24	25-49	50-99
CA-1754	$5.95	$5.35	$4.75

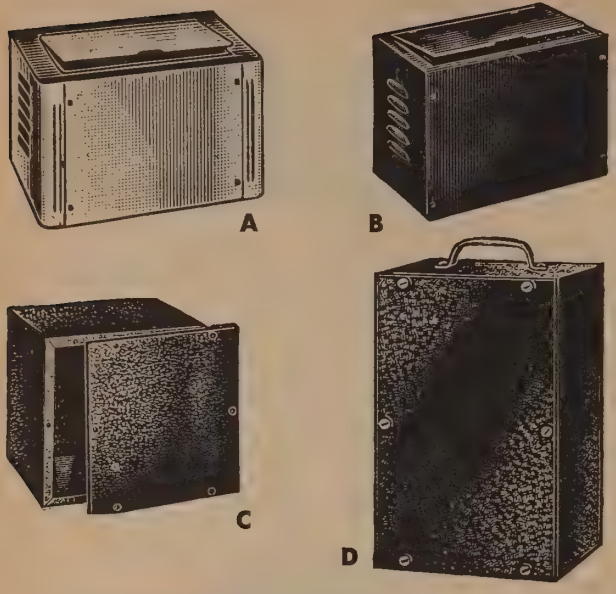
SLOPING PANEL CABINETS



Hinged top for easy access; front panel also removable. Specify black Rinkletex (suffix "BR") or gray hammertone (suffix "HG").

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
C-1584	6½ x 7 1/16 x 7 5/16	2½	$4.65	$4.20	$3.70
C-1587	8 x 8 1/16 x 8	2¾	6.15	5.55	4.90
C-1585	6½ x 9 1/16 x 7 5/16	3	5.10	4.60	4.10
C-1588	8 x 10 1/16 x 8	3¼	6.80	6.10	5.45
C-1586	6½ x 11 1/16 x 7 5/16	3½	5.85	5.25	4.70
C-1894	8 x 14 1/16 x 8	4	7.25	6.55	5.80
C-1892	8 x 13 1/16 x 8½	5¼	8.00	7.20	6.40
C-1896	9 x 18 1/16 x 8½	7	10.15	9.15	8.10
C-1893	10 x 18 1/16 x 10½	8½	10.60	9.55	8.50

BUD Cabinets, Cases, Boxes



STREAMLINED CABINETS (Fig. A)

Ideal for housing devices not requiring excessive depth. Recessed, hinged cover with convenient finger lift for access. Panels fit flush with embossed, rounded corner fronts. Recommended for use with Bud Open End Chassis. Back opening 3½" h. provides for cables or rear controls; louvered sides provide ample ventilation. Size: 8¼" d. x 8" h., overall. Specify black Rinkletex "BR", gray Rinkletex "GR" or gray hammertone (suffix "HG") finish.

Bud No.	Width, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CD-1480	10½"	8" x 8"	5¾	$8.35	$7.50	$6.70
CD-1481	12½"	8" x 10"	6	8.45	7.60	6.75
CD-1482	14½"	8" x 12"	6½	9.00	8.10	7.20
CD-1483	16½"	8" x 14"	7	9.70	8.75	7.75
CD-1484	18½"	8" x 16"	7¾	10.35	9.30	8.30
CD-1485*	20⅝"	12" x 18"	15	20.15	18.15	16.10

*Depth is 12".

INSTRUMENT AND RECEIVER CABINETS (Fig. B

Economy version of the Streamlined Cabinet series. Recessed, hinged cover provides access to contents. Front panel is attached with self-tapping screws. Louvers provide ample ventilation. Bud Open End Chassis are suited for use with these units. Black Rinkletex finish only. BR

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
C-973	7 x 8 x 8	5	$6.25	$5.65	$5.00
C-993	7 x 10 x 8	5½	7.15	6.45	5.70
C-994	7 x 12 x 8	5¾	7.35	6.60	5.90
C-995	7 x 14 x 8	6	2.90	2.70	2.30
C-1190	8 x 16 x 8	7	11.20	10.10	8.95
C-975	9 x 15 x 11	8	13.65	12.30	10.90
C-999	12 x 18 x 12	15	14.75	13.30	11.80

METAL UTILITY CABINETS (Fig. C)

Highly useful housing for all types of electronic equipment such as mixers, monitors, frequency meters, etc. Both front and back panels are removable for easy accessibility.

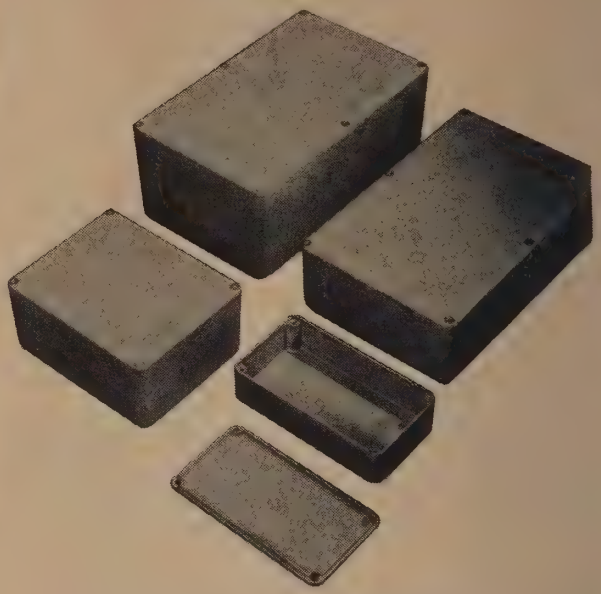
STEEL CABINETS

Specify black Rinkletex (suffix "BR") or gray hammertone (suffix "HG") finish.

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
CU-883	2 x 4 x 4	¾	$1.45	$1.30	$1.15
CU-728	3 x 5 x 4	1⅛	1.75	1.60	1.40
CU-729	4 x 5 x 6	1¼	2.00	1.80	1.60
CU-1098	6 x 6 x 6	2½	3.10	2.80	2.50
CU-1099	5 x 6 x 9	3	3.30	2.95	2.65
CU-879	7 x 8 x 10	5	4.50	4.05	3.60
CU-1124	6 x 7 x 12	4	4.40	3.95	3.50
CU-880	8 x 10 x 10	5½	5.45	4.90	4.35
CU-881	8 x 11 x 12	6	6.00	5.40	4.80
CU-882	7 x 9 x 15	7½	6.10	5.50	4.90
NATURAL FINISH ALUMINUM CABINETS*					
AU-1083	2 x 4 x 4	¼	$2.00	$1.80	$1.60
AU-1028	3 x 5 x 4	¼	2.00	1.80	1.60
AU-1029	4 x 5 x 6	½	2.20	2.00	1.75
AU-1039	6 x 6 x 6	¾	3.10	2.80	2.50
AU-1040	5 x 6 x 9	1	3.65	3.30	2.90
GRAY HAMMERTONE ALUMINUM CABINETS*					
AU-1083HG	2 x 4 x 4	¼	$2.20	$2.00	$1.75
AU-1028HG	3 x 5 x 4	¼	2.55	2.30	2.05
AU-1029HG	4 x 5 x 6	½	2.65	2.40	2.10
AU-1039HG	6 x 6 x 6	¾	3.50	3.15	2.80
AU-1040HG	5 x 6 x 9	1	4.40	3.95	3.50

*Aluminum alloy 5005 H-14.

ECONOBOXES



For applications requiring a sturdier structure than a sheet metal utility cabinet, Bud now offers this line of die-cast aluminum boxes. The close fitting flanged lids are fastened to bosses in the body by means of screws. This feature together with the thickness of the aluminum alloy combine to provide excellent screening properties. The boxes, cast of LM-380 aluminum, are light in weight and easy to machine. These enclosures are suitable for a number of uses including instrument and meter cases, filter networks, junction boxes, switching, audio and radio frequency distributors plus many other purposes where a small box is called for. Especially desired for concealed or other interior use where safety closure is required.

Bud. No.	Ext. Dim. In. L. x W. x D.	Clear Int. Dim. In. L. x W. x D.	Wt. Lbs.	Net each in lots of 1-24	25-49	50-99
CU-124	4⅜x2⅜x1 1/16	4x2x1	½	$1.55	$1.40	$1.25
CU-234	4 1/16x3 1/16x2 1/16	4⅝x3 5/16x1 31/32	¾	2.50	2.25	2.00
CU-247	7⅜x4 1/16x2 1/16	7x4 5/16x1 31/32	1¼	4.10	3.70	3.30
CU-347	7⅜x4 1/16x3 1/16	7x4 5/16x2 31/32	1½	4.40	3.95	3.50

CARRYING CASES (Fig. D)

A versatile cabinet that accepts a variety of equipment. Removable front and back panels; handle may be attached to top. Available in sturdy steel or lightweight aluminum to suit your requirements.

STEEL CASES

Specify black Rinkletex (suffix "BR") or gray hammertone (suffix "HG") finish when ordering.

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CC-1095	5 x 6 x 9	3¼	$4.50	$4.05	$3.60
CC-1091	5 x 9 x 6	3¼	4.50	4.05	3.60
CC-1096	6 x 7 x 12	4	6.25	5.65	5.00
CC-1092	6 x 12 x 7	4	6.25	5.65	5.00
CC-1097	7 x 7¾ x 15	5	6.95	6.25	5.55
CC-1100	8 x 10 x 10	5	7.15	6.45	5.70
CC-1093	7 x 15 x 9	5	8.70	7.85	6.95

NATURAL FINISH ALUMINUM CASES*

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
ACC-2095	5 x 6 x 9	1⅛	$4.60	$4.15	$3.70
ACC-2091	5 x 9 x 6	1⅛	4.60	4.15	3.70
ACC-2096	6 x 7 x 12	1⅓	6.95	6.25	5.55
ACC-2092	6 x 12 x 7	1⅓	6.95	6.25	5.55

GRAY HAMMERTONE ALUMINUM CASES*

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
ACC-2095HG	5 x 6 x 9	1⅛	$5.30	$4.75	$4.25
ACC-2091HG	5 x 9 x 6	1⅛	5.30	4.75	4.25
ACC-2096HG	6 x 7 x 12	1⅓	8.05	7.25	6.45
ACC-2092HG	6 x 12 x 7	1⅓	8.05	7.25	6.45

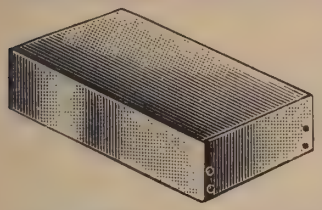
*Aluminum alloy 5005 H-14.

Net

© United Technical Publications

BUD Chassis and Accessories

ALUMINUM CHASSIS BASES



Each chassis is made from a single sheet of aluminum. All bases are welded on the latest type of welders by experienced operators. All corners are reinforced. Natural finish aluminum alloy 5005 H14. All four sides are folded at bottom for extra strength and rigidity. Now 63 sizes.

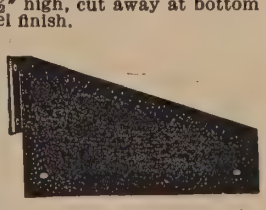
Bud No.	Width, In.	Lgth., In.	Ht., In.	Gauge	Net Each, Lots of 1-24	25-49	50-99
AC-1401*	2½	4½	1	18	$1.45	$1.30	$1.15
AC-1402*	3½	4½	1	18	1.45	1.30	1.15
AC-1403*	3½	5½	1	18	1.45	1.30	1.15
AC-1404*	4	5	2	18	1.75	1.60	1.40
AC-1405*	4	6	1½	18	1.55	1.40	1.25
AC-430	4	6	3	18	2.00	1.80	1.60
AC-431	4	6	2	18	1.75	1.60	1.40
AC-1406*	4	8	2	18	2.00	1.80	1.60
AC-432	4	17	3	16	3.40	3.05	2.70
AC-1407*	4½	8	1½	18	1.75	1.60	1.40
AC-402	5	7	2	18	1.90	1.79	1.50
AC-429	5	7	3	18	2.10	1.90	1.70
AC-1408*	5	9	1½	18	1.75	1.60	1.40
AC-1409*	5	9½	1½	18	1.85	1.65	1.50
AC-403	5	9½	2	18	2.00	1.80	1.60
AC-401	5	9½	2½	18	2.30	2.05	1.85
AC-421	5	9½	3	18	2.40	2.15	1.90
AC-404	5	10	3	18	2.40	2.15	1.90
AC-422	5	13	3	18	2.75	2.50	2.20
AC-1410*	5	13½	2½	18	2.30	2.05	1.85
AC-1411*	5½	5½	1	18	1.65	1.50	1.30
AC-1412*	5½	9½	1½	18	1.85	1.65	1.50
AC-1413*	6	8	2	18	2.00	1.80	1.60
AC-1414*	6	14	3	16	3.65	3.30	2.90
AC-433	6	17	3	16	4.10	3.70	3.30
AC-405	7	7	2	18	2.00	1.80	1.60
AC-406	7	9	2	18	2.10	1.90	1.70
AC-407	7	11	2	18	2.40	2.15	1.90
AC-408	7	12	3	18	2.95	2.65	2.35
AC-409	7	13	2	18	2.55	2.30	2.05
AC-1415*	7	15	2	16	3.20	2.90	2.55
AC-411	7	15	3	16	4.05	3.65	3.25
AC-1416*	7	17	2	16	3.65	3.30	2.90
AC-1417*	7	17	2½	16	3.75	3.40	3.00
AC-423	7	17	3	16	4.10	3.70	3.30
AC-1418*	8	10	2½	18	3.10	2.80	2.50
AC-1419*	8	12	2½	16	3.65	3.30	2.90
AC-424	8	12	3	16	3.50	3.15	2.80
AC-425	8	17	2	16	3.65	3.30	2.90
AC-412	8	17	3	16	4.15	3.75	3.30
AC-1420*	8½	15	3	16	3.85	3.45	3.10
AC-1421*	9	15	3	16	4.40	3.95	3.50
AC-413	10	12	3	16	4.15	3.75	3.30
AC-414	10	14	3	16	4.20	3.80	3.35
AC-415	10	17	2	16	4.10	3.70	3.30
AC-416	10	17	3	16	4.75	4.30	3.80
AC-427	10	17	4	14	6.60	5.95	5.30
AC-1422*	10	17	5	16	9.55	8.60	7.65
AC-1423*	10	23	3	14	6.95	6.25	5.55
AC-426	11	17	2	14	5.05	4.55	4.05
AC-417	11	17	3	14	5.85	5.25	4.70
AC-1424*	12	12	3	16	4.20	3.80	3.35
AC-1425*	12	17	2	16	5.30	4.75	4.25
AC-418	12	17	3	14	5.95	5.35	4.75
AC-419	13	17	2	14	5.30	4.75	4.25
AC-420	13	17	3	14	6.25	5.65	5.00
AC-428	13	17	4	14	7.70	6.95	6.15
AC-1426*	13	17	5	14	10.45	9.40	8.35
AC-1427*	14	17	3	14	7.50	6.75	6.00
AC-1428*	15	17	4	14	10.45	9.40	8.35
AC-1429*	15	17	6	14	14.30	12.85	11.45
AC-1430*	17	17	3	14	8.80	7.90	7.05
AC-1431*	17	17	4	14	12.45	11.20	9.95

*Denotes new size

CHASSIS MOUNTING BRACKETS

Mounts chassis to panels, essential when panel supports entire chassis weight. Heavy gauge steel 6½" high, cut away at bottom to mount flush to panel. Black enamel finish.

Bud No.	Depth, In.	Net Per Pair, Lots of 1-49	50-99	100-149
MB-458	8	$1.75	$1.60	$1.40
MB-448	10	1.75	1.60	1.40
MB-459	11	2.00	1.80	1.60
MB-449	12	2.30	2.05	1.85
MB-460	13	2.20	2.00	1.75
MB-450*	10	2.55	2.30	2.05
MB-451*	13	2.75	2.50	2.20



*8½" high for chassis height of 4".

TRIANGULAR MOUNTING BRACKETS

Ideal for rigid support of shelves to take heavy loads. Heavy gauge steel with ¾" flange. Black enamel finish only.

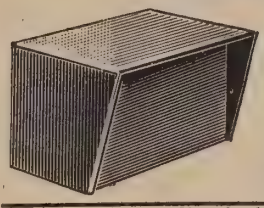
Bud No.	Height, In.	Depth, In.	Wt., Lbs.	Net Per Pair, Lots of 1-49	50-99	100-149
MB-1266	5	5	1	$1.45	$1.30	$1.15
MB-1267	7	7	1	1.55	1.40	1.25
MB-1268	9	9	1½	1.90	1.70	1.50

ALUMINUM BOTTOM PLATES

42 sizes to fit all Bud chassis. Made of 5005 H14 aluminum alloy. Natural finish. Plates have four embossed feet to prevent damage to surface on which they rest. Fit snuggly on bottom of chassis.

Bud No.	Fits Chassis Width In.	Length In.	1-49	50-99	100-149
BPA-1501*	2½	4½	$ .75	$ .70	$ .60
BPA-1502*	3½	4½	.90	.80	.70
BPA-1503*	3½	5½	.90	.80	.70
BPA-1504*	4	5	.90	.80	.70
BPA-1505*	4	6	.90	.80	.70
BPA-1506*	4	8	1.10	1.00	.90
BPA-1532*	4	17	1.10	1.00	.90
BPA-1507*	4½	8	1.20	1.10	.95
BPA-1589	5	7	1.00	.90	.80
BPA-1508*	5	9	1.00	.90	.80
BPA-1590	5	9½	1.00	.90	.80
BPA-1591	5	10	1.00	.90	.80
BPA-1509*	5	13	1.55	1.40	1.25
BPA-1510*	5	13½	1.55	1.40	1.25
BPA-1511*	5½	5½	1.00	.90	.80
BPA-1512*	5½	9½	1.10	1.00	.90
BPA-1513*	6	8	1.20	1.10	.95
BPA-1514*	6	14	1.55	1.40	1.25
BPA-1515*	6	17	2.00	1.80	1.60
BPA-1592	7	7	1.00	.90	.80
BPA-1593	7	9	1.10	1.00	.90
BPA-1594	7	11	1.20	1.10	.95
BPA-1595	7	12	1.45	1.30	1.15
BPA-1596	7	13	1.55	1.40	1.25
BPA-1516*	7	15	1.75	1.60	1.40
BPA-1517*	7	17	1.75	1.60	1.40
BPA-1518*	8	10	1.65	1.50	1.30
BPA-1519*	8	12	2.00	1.80	1.60
BPA-1520*	8	17	2.10	1.90	1.70
BPA-1521*	8½	15	2.40	2.15	1.90
BPA-1522*	9	15	2.55	2.30	2.05
BPA-1523*	10	12	2.00	1.80	1.60
BPA-1524*	10	14	2.00	1.80	1.60
BPA-1597	10	17	2.00	1.80	1.60
BPA-1525*	10	23	2.95	2.65	2.35
BPA-1526*	11	17	2.20	2.00	1.75
BPA-1527*	12	12	2.20	2.00	1.75
BPA-1528*	12	17	2.65	2.40	2.10
BPA-1598	13	17	2.85	2.55	2.30
BPA-1529*	14	17	2.85	2.55	2.30
BPA-1530*	15	17	3.85	3.45	3.10
BPA-1531*	17	17	3.95	3.55	3.15

COWL-TYPE MINIBOXES



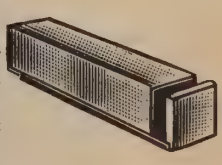
The cowl-type Minibox has a projecting cover to reduce glare on the panel from overhead lighting. It also provides protection for controls and dials. Cover has two box braces to which bottom is attached with sheet metal screws. When assembled, this type of construction results in a sturdy, rigid housing. Constructed of .040" aluminum and available in natural or light hammertone gray finish.

Bud No.	Overall Size, Inches H.	W.	D.	Net Each, Lots of 1-49	50-99	100 & Over
SC-2130*	6	10	7	$8.05	$7.25	$6.45
SC-2131*	7	12	8	8.80	7.90	7.05
SC-2132*	3	8	5	4.75	4.30	3.80
SC-2133*	5	5	5	4.75	4.30	3.80
SC-3030†	6	10	7	5.85	5.25	4.70
SC-3031†	7	12	8	6.40	5.75	5.10
SC-3032†	3	8	5	3.30	2.95	2.65
SC-3033†	5	5	5	3.50	3.15	2.80

*Painted light gray hammertone. †Natural aluminum finish.

MINISLIDES

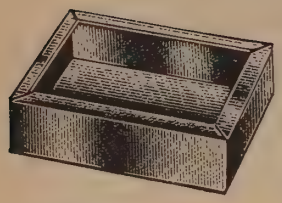
Ideal for housing components or assemblies where easy access to internally mounted parts is important. Can be mounted in a number of positions in a rack or cabinet. Accessibility achieved by removing sliding cover. Design of Mini-slide Box provides adequate shielding and protection from dust. Sturdily made of .050 aluminum. 4 self-tapping fastening screws included. Choice of gray hammertone (HG or natural aluminum (NA).



Bud No.	Finish	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
MS-2150	(GH)	3⅛ x 13 x 2⅝	1	$5.15	$4.65	$4.10
MS-2151	(GH)	5⅛ x 13 x 2⅝	1½	5.85	5.25	4.70
MS-2152	(GH)	3⅛ x 17 x 2⅝	1¼	5.70	5.15	4.55
MS-3050	(NA)	3⅛ x 13 x 2⅝	1	3.85	3.45	3.10
MS-3051	(NA)	5⅛ x 13 x 2⅝	1½	4.75	4.30	3.80
MS-3052	(NA)	3⅛ x 17 x 2⅝	1¼	4.50	4.05	3.60

BUD Chassis and Accessories

STEEL CHASSIS BASES



Chassis are fabricated from a single sheet of steel. 20 gauge is used unless otherwise indicated. All four sides are folded at bottom for additional rigidity and strength. Available in zinc plate or black Rinkletex finish. BR

Size, Inches D. x W. x H.	Zinc Plated Finish				Black Wrinkle Finish			
	Bud CB-	Net Each, Lots of 1-24	25-49	50-99	Bud CB-	Net Each, Lots of 1-24	25-49	50-99
5½ x 5½ x 1	101*	$2.00	$1.80	$1.60	.....	.....	.....	.....
5 x 7 x 2	629*	8.60	7.75	6.90	628*	$1.55	$1.40	$1.25
4½ x 8 x 1½	102*	2.20	2.00	1.75	.....	.....	.....	.....
5 x 9 x 1½	103*	2.00	1.80	1.60	.....	.....	.....	.....
5 x 9½ x 2½	645*	2.55	2.30	2.05	644*	2.00	1.80	1.60
5 x 9½ x 1½	776*	2.55	2.30	2.05	788*	1.75	1.60	1.40
5 x 10 x 3	605*	2.60	2.35	2.10	604*	2.00	1.80	1.60
5 x 13 x 3	105	3.20	2.90	2.55	.....	.....	.....	.....
6 x 8 x 2	104	2.20	2.00	1.75	.....	.....	.....	.....
6 x 14 x 3	756	3.10	2.80	2.50	755	2.55	2.30	2.05
7 x 7 x 2	1191	2.30	2.05	1.85	789	2.00	1.80	1.60
7 x 9 x 2	1192	2.30	2.05	1.85	790	2.00	1.80	1.60
7 x 11 x 2	1193	2.55	2.30	2.05	791	2.10	1.90	1.70
7 x 12 x 3	793	3.10	2.80	2.50	792	2.30	2.05	1.85
7 x 13 x 2	1194	2.75	2.50	2.20	646	2.20	2.00	1.75
5 x 13½ x 2½	1198	3.20	2.90	2.55	647	2.55	2.30	2.05
7 x 15 x 3	1189	3.65	3.30	2.90	649	2.95	2.65	2.35
8½ x 15 x 3	666	4.10	3.70	3.30	665	3.20	2.90	2.55
4 x 17 x 3	1066	3.10	2.80	2.50	1068	2.65	2.40	2.10
7 x 17 x 2½	1199	3.30	2.95	2.65	648	3.00	2.70	2.40
7 x 17 x 3	758	3.75	3.40	3.00	757	3.20	2.90	2.55
8 x 10 x 2½	702	2.95	2.65	2.35	701	2.55	2.30	2.05
8 x 12 x 2½	704	3.20	2.90	2.55	703	2.55	2.30	2.05
8 x 12 x 3	760	3.40	3.05	2.70	759	2.65	2.40	2.10
8 x 17 x 2	774	3.40	3.05	2.70	650	2.55	2.30	2.05
8 x 17 x 3	775	3.75	3.40	3.00	651†	3.10	2.80	2.50
10 x 12 x 3	1195	3.50	3.15	2.80	652	2.75	2.50	2.20
12 x 12 x 3	106	4.60	4.15	3.70	.....	3.10	2.80	2.50
10 x 14 x 3	779	3.50	3.15	2.80	653	.....	.....	.....
10 x 17 x 2	769	3.50	3.15	2.80	654†	2.95	2.65	2.35
10 x 17 x 3	637	4.20	3.80	3.35	636†	2.95	2.65	2.35
10 x 17 x 3	1196‡	4.40	3.95	3.50	655†‡	3.65	3.30	2.90
10 x 23 x 3	1197‡	5.05	4.55	4.05	656‡	4.30	3.85	3.45
11 x 17 x 2	770‡	4.20	3.80	3.35	657†‡	3.40	3.05	2.70
11 x 17 x 3	771‡	5.15	4.65	4.10	658†‡	4.10	3.70	3.30
12 x 17 x 2	661‡	4.50	4.05	3.60	663†‡	3.75	3.40	3.00
12 x 17 x 3	662‡	5.30	4.75	4.25	664†‡	4.15	3.75	3.30
13 x 17 x 2	772‡	5.40	4.85	4.30	659†‡	4.15	3.75	3.30
13 x 17 x 3	773‡	5.95	5.35	4.75	660†‡	4.95	4.45	3.95
10 x 17 x 4	641‡	5.30	4.75	4.25	640†‡	4.75	4.30	3.80
13 x 17 x 4	643‡	6.95	6.25	5.55	642†‡	5.85	5.25	4.70
10 x 17 x 5	624‡	7.80	7.00	6.25	623‡	6.60	5.95	5.30
13 x 17 x 5	626‡	8.60	7.75	6.90	625‡	7.25	6.55	5.80

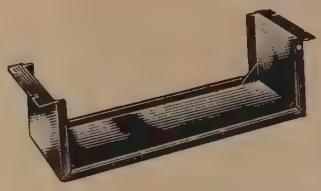
*22 gauge. †Punched to accommodate chassis mounting brackets. ‡18 gauge.

STEEL CHASSIS BOTTOM PLATES

Protect wiring and keep out dust from chassis bottom. Four embossed feet. Two finishes to match chassis finish.

Fits Chassis Size, In. W. x L.	Zinc Plated Finish				Black Rinkletex Finish			
	Bud BP-	Net Each, Lots of 1-49	50-99	100-149	Bud BP-	Net Each, Lots of 1-49	50-99	100-149
5 x 7	706	$ .95	$ .85	$ .75	705	$ .90	$ .80	$ .70
5 x 9½	667	1.00	.90	.80	680	.90	.80	.70
5 x 10	538	1.10	1.00	.90	536	1.00	.90	.80
7 x 7	668	1.40	1.25	1.10	681	1.40	1.25	1.10
7 x 9	669	1.45	1.30	1.15	682	1.45	1.30	1.15
7 x 11	670	1.50	1.35	1.20	683	1.50	1.35	1.20
7 x 12	539	1.75	1.60	1.40	537	1.55	1.40	1.25
7 x 13	671	1.65	1.50	1.30	684	1.55	1.40	1.25
5 x 13½	672	1.45	1.30	1.15	685	1.10	1.00	.90
4 x 17	1067	1.65	1.50	1.30	1069	1.20	1.10	.95
7 x 17	673	1.90	1.70	1.50	686	1.20	1.10	.95
8 x 10	708	1.45	1.30	1.15	707	1.20	1.10	.95
8 x 12	710	1.75	1.60	1.40	709	1.50	1.35	1.20
8 x 17	674	2.00	1.80	1.60	687	1.50	1.35	1.20
10 x 12	675	2.10	1.90	1.70	688	1.55	1.40	1.25
10 x 14	514	.....	.....	.....	517	2.00	1.80	1.60
10 x 17	676	2.15	1.95	1.70	689	1.65	1.50	1.30
11 x 17	677	2.20	2.00	1.75	690	1.75	1.60	1.40
12 x 17	678	2.55	2.30	2.05	691	2.00	1.80	1.60
13 x 17	679	2.95	2.65	2.35	692	2.05	1.85	1.65

PANEL CHASSIS



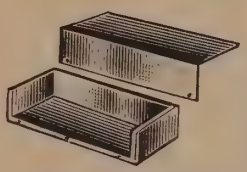
Panel mounting chassis for vertical installation where depth is limited or front service is desired. Made of .062" aluminum alloy 5005 H-14 in natural finish. Front flange has standard notching. Fits standard 19" panel space.

Bud No.	Height, Inches	Weight, Lbs.	Net Each, Lots of 1-24	25-49	50-99
CB-1370	1¾	¾	$3.30	$2.95	$2.65
CB-1371	3½	1¼	3.65	3.30	2.90
CB-1372	5¼	1½	4.20	3.80	3.35
CB-1373	7	2	4.75	4.30	3.80
CB-1374	8¾	2¼	5.60	5.05	4.50
CB-1375	10½	2¾	6.50	5.85	5.20
CB-1376	12¼	3	7.25	6.55	5.80
CB-1377	14	3¼	7.90	7.10	6.30

CHASSIS SUPPORTING ANGLES

Distribute weight to sides of the rack to relieve the panel. Angles are 3" x 1⅜" x 7/64" steel. Black enamel finish. **No. CE-2219** designed for attachment to rails of Console Pedestal or Prestige Relay Racks. Slotted for infinite vertical adjustment; extend to full cabinet depth; 21" x 3" x 2¾".

Bud No.	Length, Inches	Weight, Lbs.	Net Per Pair, Lots of 1-24	25-49	50-99
SA-1349	14½	4	$3.20	$2.90	$2.55
SA-1350	12	3	3.20	2.90	2.55
CE-2219	21	7½	4.45	4.00	3.55



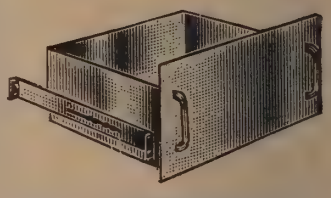
CONVERTA-BOXES

Versatile enclosure combines welded base and two-sided cover. Components or controls are easily mounted to any surface of the unit. All contents easily accessible. Cover and base are fastened by self-tapping screws. Rigid 20 ga. cadmium-plated steel.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CU-341	1½ x 4 x 3	½	$2.65	$2.40	$2.10
CU-452	2 x 5 x 4	1	2.55	2.30	2.05
CU-482	2 x 8 x 4	1¼	2.75	2.50	2.20
CU-592	2½ x 9½ x 5	1¾	2.95	2.65	2.35
CU-622	2½ x 12 x 6	2¾	3.20	2.90	2.55
CU-712	2½ x 15 x 7	3½	4.30	3.85	3.45

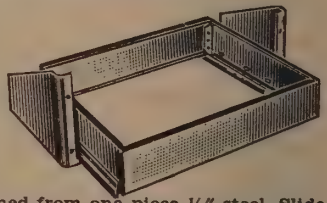
DRAWER WITH ADJUSTABLE SLIDES

Fits any cabinet or cabinet rack with 19" panel space. Slide bracket adjustable 16⅝" to 22⅞" to fit any cabinet with depth 17" to 23". Fastens by bracket to panel mounting rail in front and rear of cabinet. Nylon rollers for smooth movement. Hardware supplied. Specify color when ordering: Add suffix HG for gray hammertone; BR for black Rinkletex; or GR for gray Rinkletex.



Bud No.	Inside Size, Inches	Wt., Lbs.	Net Each, Lots of 1-9	15-24	25-49
D-1721	16⅜ x 6⅜ x 16¼	19½	$55.10	$49.60	$44.10

SLIDING DRAWER ASSEMBLY



Ideal for use as a record player mounting base, typewriter base, apparatus and instrument base, writing desk, etc. Installs quickly and simply in any standard rack. Can't fall out or tilt. Provides a completely safe mounting base for anything put on it. Ball bearing suspension for easy sliding. Chassis formed from one-piece 14 gauge aluminum; electro-welded. Support brackets formed from one-piece ⅛" steel. Slide rail fastens securely to chassis, slides in and out easily on channeled ball bearings. Stop screw on slide rail prevents drawer from falling out of channel. Support brackets and channel finished in grey enamel; chassis, slide and plate finished in light gray hammertone. Will support up to 50 lbs. Chassis Size: 16¾" x 14" x 3", with ½" flange top and bottom. *Fastens to top or bottom.

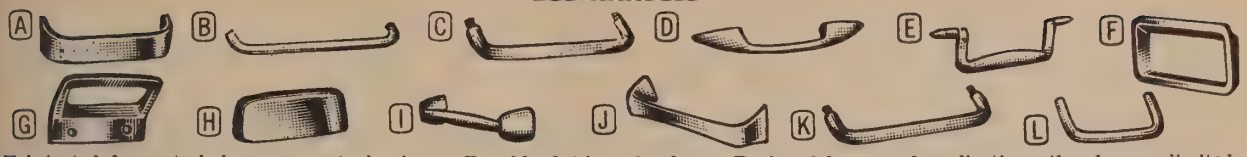
Bud No.	Description	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
SD-1717	Sliding drawer	5	$15.90	$14.30	$12.70
TP-1718	Drawer plate*	1½	3.95	3.55	3.15

Net

© United Technical Publications

BUD Cabinet Hardware

BUD HANDLES



Fabricated from steel, brass or cast aluminum. Durable finish provides long wear and attractive appearance. Skin packed in pairs or bulk packed (priced singly) with all necessary mounting hardware. Designed for rugged applications, they have unlimited use in electronic, electrical and other fields.

Bud No.	Fig.	Description	Net Per Pair, Lots of 1-49	50-99	100-149	Bulk Pack*: Net Each, Lots of 1-99	100-199	200-499
H-9100	A	1" x ¼" chrome-plated solid brass; 4" x ½" mtg. cntrs.; 1" hand clearance; four ½" x 6-32 threaded screws	$7.50	$6.75	$6.00	$2.90	—	—
H-9101	A	Same, but 8" x ½" mtg. centers	11.45	10.30	9.15	4.80	—	—
H-9102	A	⅝" x ¼" chrome-plated solid brass; 4" mtg. centers; 1" hand clearance; two ½" x 6-32 threaded screws	5.85	5.25	4.70	2.60	—	—
H-9103	A	Same, but has 6" mounting centers	6.80	6.10	5.45	2.90	—	—
H-9110	B	⅜" steel rod angular formed, chrome-plated; 6" mtg. ctrs.; 1¼" hand clearance; two ½" x 10-32 screws	5.05	4.55	4.05	1.80	—	—
H-9111	B	⅜" steel rod, chrome plated, 4" mtg. ctrs.; 1" hand clearance; two ½" x 10-32 threaded screws	2.65	2.40	2.10	1.20	—	—
H-9112	B	6" mtg. center version of H-9111	3.10	2.80	2.50	1.30	—	—
H-9113	B	8" mtg. center version of H-9111	3.40	3.05	2.70	1.30	—	—
H-9114	B	½" steel rod, chrome-plated; 8" mtg. centers; 1½" hand clearance; two ½" x ¼-28 thd. screws	5.60	5.05	4.50	2.00	—	—
H-9115	C	⅜" steel rod, chrome-plated; 4" mtg. ctrs.; 15/16" hand clearance; two ¼-28 thd. nuts	4.20	3.80	3.35	1.60	—	—
H-9116	C	Same, but has 6" mtg. centers	4.75	4.30	3.80	1.80	—	—
H-9120	D	Silver-anodized die-cast aluminum; 4⅜" inside, 5⅜" outside mtg. centers; 1" hand clearance; four ½" x 6-32 threaded screws	6.60	5.95	5.30	2.80	—	—
H-9121	D	Same, except chrome plated alloy	8.15	7.35	6.50	3.50	—	—
H-9123	D	Similar to H-9120 but 4½" mtg. centers; 1" hand clearance; two ½" x 10-32 thd. screws	4.30	3.85	3.45	1.80	—	—
H-9122	E	Silver-anodized die-cast aluminum; hinged on ¼" steel pins with 2 hinge blocks; 6½" inside, 7¼" outside mtg. centers; 1½" hand clearance; four ⅜" x 10-32 threaded screws	11.10	10.00	8.90	4.80	—	—
H-9130	F	Silver-anodized die-cast aluminum; 3" mtg. centers; two ⅜" x 10-32 thd. screws; size 4 15/16" x 3"	9.15	8.25	7.30	4.00	—	—
H-9131	G	Silver-anodized die-cast aluminum; size, 4" x 2⅞"; 2¼" mtg. centers; two ¾" x ¼-28 thd. raised, counter-sunk screws and nuts	6.40	5.75	5.10	2.80	—	—
H-9140	H	Silver-anodized die-cast aluminum; 3½" mtg. centers; ¾" hand clearance; two ½" x 10-32 threaded screws	3.85	3.45	3.10	1.60	—	—
H-9150	I	Silver-anodized die-cast aluminum; 4" x ⅝" mtg. centers; 1¼" hand clearance; four ½" x 10-32 threaded screws	5.40	4.85	4.30	2.30	—	—
H-9151	J	Silver-anodized die-cast aluminum; 5 1/16" x ⅝" mtg. centers; 1⅜" hand clearance; four ½" x 10-32 threaded screws	8.80	7.90	7.05	3.70	—	—
H-9152	J	Similar to above except 3⅞" mtg. centers; 1⅛" hand clearance; two ½" x 10-32 threaded screws	7.15	6.45	5.70	3.00	—	—
H-9160	K	Chrome-plated ⅜" steel rod; 3½" mtg. centers; 1 11/16" hand clearance; two ¼"-28 hex nuts	4.75	4.30	3.80	1.80	—	—
H-9161	K	Same, but with 5¼" mounting centers	5.30	4.75	4.25	1.80	—	—
H-9162	K	Same, but with 7" mounting centers	5.40	4.85	4.30	1.90	—	—
H-9163	K	Same, but with 8¾" mounting centers	5.60	5.05	4.50	2.00	—	—
H-9164	K	Same, but with 10½" mounting centers	6.40	5.75	5.10	2.10	—	—
H-9165	K	Same, but with 12¼" mounting centers	6.95	6.25	5.55	2.30	—	—
H-9166	L	Chrome-plated ¼" brass rod; 1 19/64" mtg. centers; 1" hand clearance; two ½" x 6-32 thd. screws	2.20	2.00	1.75	.90	—	—
H-9168	L	Same, but 3" mtg. centers; two ¼" x 6-32 thd. screws	2.30	2.05	1.85	.90	—	—

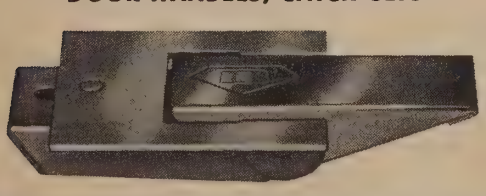
*Number shown is for skin packed pairs. For bulk packed handles (priced singly), add suffix **B** to number (example: H-9100**B**).

SPEAKER ENCLOSURE HANDLES

Attach to any small housing or speaker enclosure to achieve portability. Made of aluminum tubing with etched finish.

Bud No.	Length, Inches	Mtg. Ctrs., Inches	Net Each, Lots of 1-49	50-99	100-149
UH-70A	5⅜	4⅝	$.65	$.60	$.55
UH-71A	3¾	3¼	.55	.50	.45

DOOR HANDLES, CATCH SETS



No. 9347: Fits flush with cabinet door; exposed parts chrome plated **Nos. 3360** and **3361:** Lever-type handles are satin chrome with steel spindle and cam; fit Super Deluxe racks.

Bud No.	Description	Net Each, Lots of 1-49	50-99	100-149
H-3360	Non-locking handle	$4.20	$3.80	$3.35
H-3361	H-3360 with lock and key	7.90	7.10	6.30
H-9347	Flush-mount catch set	1.55	1.40	1.25

RUBBER FEET



No. F-7264A: Has recessed head with mounting stud; rubber portion 15/16" x 11/32" thick. **No. F-8038:** Self adhesive, may be applied to any surface, ¾" dia. x ⅛" thick. **No. F-9653:** Press-fit type for 1/16" hole.

Bud No.	Description	Net per 100, Lots of 1-49	50-99	100-149
F-7264A	High grade black rubber	$11.00	$9.90	$8.80
F-8038**	Sponge rubber pad	2.70	2.40	2.10
F-9653	Top grade gray rubber	5.30	4.70	4.20

** Lots of 1-99, 100-199, 200-299

BUD Slides

All BUD slides and Linear Motion Mechanisms are built from four basic components: the outer member, inner member, ball retainer and a number of ball bearings. These parts which are all steel, have been designed to enable us to fabricate an extensive variety of models. All models excel in their precision smooth, featherlight telescoping movement and are unsurpassed for their reliability and absence of wear after many hundreds of thousands of cycles.
Each main member is press formed to a constant and precise tolerance from high tensile cold rolled steel. Ball bearings of chrome carbon steel are set in special retainers which keep them evenly spaced to give an extremely smooth movement of the slide.

MATERIALS —Main members: high tensile cold rolled carbon steel. Ball retainers: cold rolled steel. Ball bearings: precision carbon steel. Mounting brackets, mounting plates, locks pivot wheels, etc.: mild steel.

FINISHES — Main members: Zinc and chromate. Ball retainers: Zinc. Ball bearings: Chromium plate. Mounting brackets, mounting plates, locks, pivot wheels, etc.: Zinc.

LUBRICANT — Special life-long lubricant specification DTD 825B (MIL. G. 23827) unless otherwise specified.

MOUNTING HOLES — All slide mounting holes are .180"x.210".

ASSEMBLY CARE — During assembly operations special care should be taken to prevent drill chippings and other foreign matter from entering the slide ball races. It is important that the slides are mounted parallel to each other and to chassis/drawer to achieve proper movement and fingertip ease of operation.

ADDITIONAL NOTES — Self-cleaning bridged ball retainer. Use only #8 pan or binding head screws for mounting. Long life, full ball bearing movement.

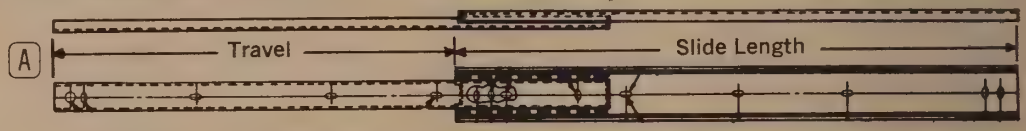
COMMERCIAL SPECIFICATIONS

• Slide Members and Component Parts: Work Hardened Cold Rolled Steel • Ball Bearings: Carburized Steel, Nickel Plated • Finish: Bright Electro-Zinc Plate • Grease: High-Low Temperature.

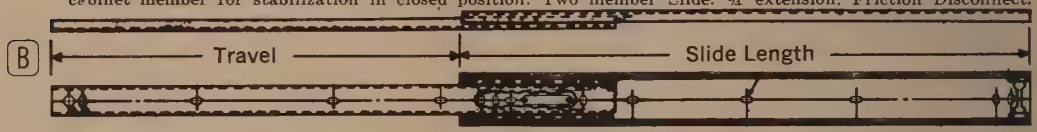
MILITARY & FEDERAL SPECIFICATIONS

Available upon request

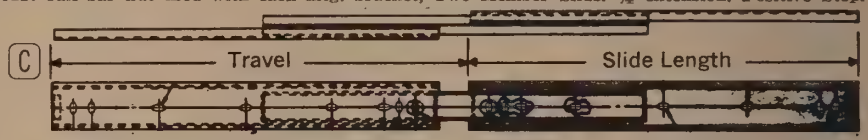
• Slide Members and Component Parts: Work Hardened Cold Rolled Steel Per QQ-S-636 • Ball Bearings: 440C Stainless Steel AMS-7445 or 300 Series Per MIL-S-5059A or MIL-S-7720 • Ball Retainer: Stainless Steel 430 per MIL-S-854 — Class 4, Condition A • Finish: Electro-zinc Plate per QQ-Z-325A, Class 2, Type II (With Chromate Treatment) • Grease: High-Low Temperature per MIL-G-18709.



2 ea. BAS-5100 front mtg. brackets and 2 ea. BAS-5101 rear mtg. brackets required per pair to attach slides to EIA rails.
1 ea. NAS-5110 rail bar nut used with each mtg. bracket. Equipped with stationary delrin balls in front of cabinet member for stabilization in closed position. Two member Slide. ¾ extension. Friction Disconnect.



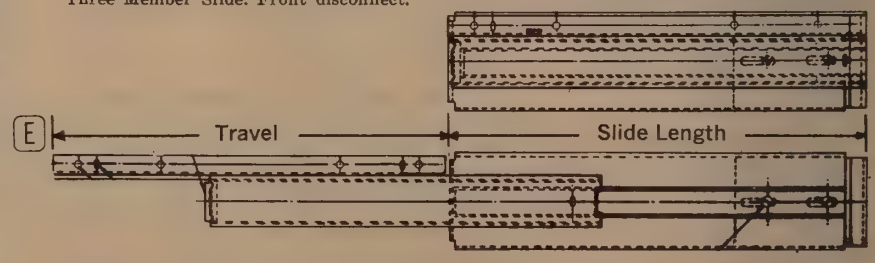
2 ea. BAS-5100 front mtg. brackets and 2 ea. BAS-5101 rear mtg. brackets required per pair to attach slides to EIA rails.
1 ea. NAS-5110 rail bar nut used with each mtg. bracket, Two Member Slide. ¾ extension. Positive Stop.



2 ea. BAS-5100 front mtg. brackets and 2 ea. BAS-5101 rear mtg. brackets required per pair to attach slides to EIA rails.
1 ea. NAS-5110 rail bar nut used with each mtg. bracket. Three Member Slide. Full Extension. Positive Stop.



2 ea. BAS-5102 front mtg. brackets and 2 ea. BAS-5103 rear mtg. brackets required per pair to attach slides to EIA rails.
1 ea. NAS-5110 rail bar nut used with each mtg. bracket. Positive stop at full extension. Three Member Slide. Front disconnect.



Has front (stationary) and rear (adjustable) mounting brackets for EIA rails. Chassis mounts to drawer section. Two Member Slide with drawer section equal to slide length. Lift-off Disconnect.

MOUNTING BRACKETS

Cat. No.	Net each in lots of 1-4	5-9	10-24
BAS-5100 (Front)	$1.30	$1.15	$1.05
BAS-5101 (Rear)	1.30	1.15	1.05
BAS-5102 (Front)	1.30	1.15	1.05
BAS-5103 (Rear)	1.30	1.15	1.05

BAR NUTS

NAS-5110	1.30	1.15	1.05

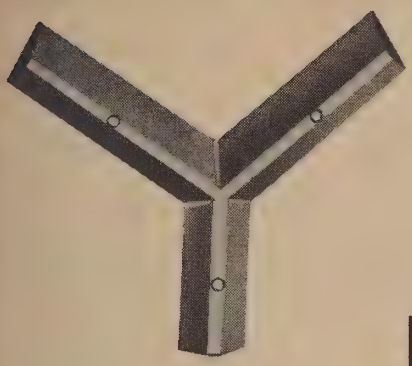
Use prefix "M" for military and "C" for commercial when ordering brackets and nuts.

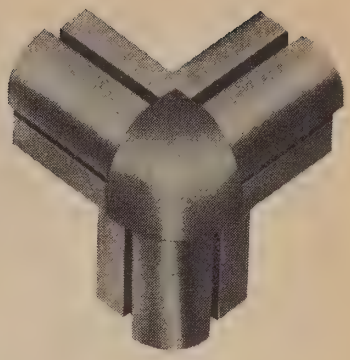
	CAT. NO.	Net Each in Lots of 1-4	5-9	10-24	Slide Lgth.	Travel	Load Rating	Shpg Wgt.
Fig. A	AS-5000	$ 9.50	$ 8.55	$ 7.60	12.00	9.00	108	1.75
	AS-5001	11.00	9.90	8.80	16.00	12.00	95	2.00
	AS-5002	11.80	10.60	9.45	20.00	15.00	82	2.50
Fig. B	AS-5060	8.70	7.85	6.95	12.00	9.00	108	1.75
	AS-5061	9.30	8.35	7.45	16.00	12.00	95	2.00
	AS-5062	9.80	8.80	7.85	20.00	15.00	82	2.50
Fig. C	AS-5020	22.40	20.15	17.90	12.00	12.88	175	3.25
	AS-5021	24.90	22.40	19.90	16.00	16.88	160	4.25
	AS-5022	26.90	24.20	21.50	20.00	20.88	142	5.25
Fig. D	AS-5040	29.80	26.80	23.85	12.00	11.88	120	3.25
	AS-5041	32.30	29.05	25.85	16.00	15.88	108	4.25
	AS-5042	34.40	30.95	27.50	20.00	19.88	92	5.25
Fig. E	AS-5080	27.30	24.55	21.85	12.00	12.00	80	3.50
	AS-5081	27.90	25.10	22.30	16.00	16.00	70	4.50
	AS-5082	30.75	27.70	24.60	20.00	20.00	60	5.40

All Prices Per Pair. Dimension in Inches.

Net
© United Technical Publications

BUD Imlok System

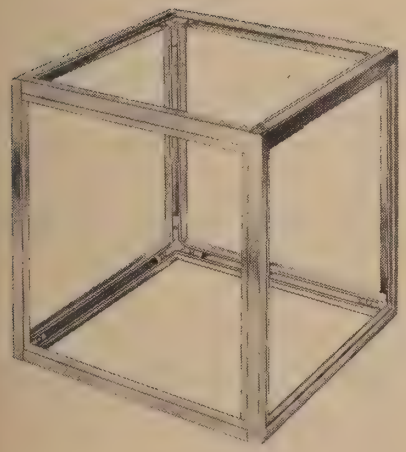


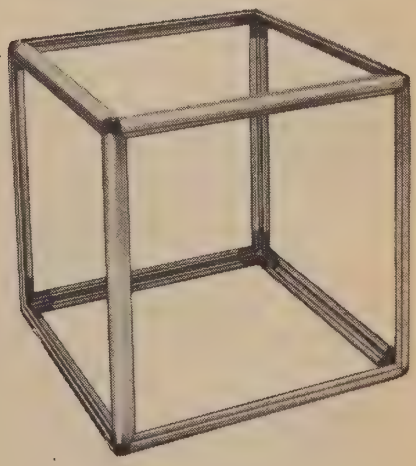


THE BASIC ELEMENTS OF THE BUD *IMLOK* SYSTEM









901 BUD IMLOK SYSTEM

The BUD IMLOK SYSTEM comprises a large variety of aluminum corner connectors which interlock with extrusions to make metal housings easily, quickly and economically. It is ideal for research, prototype and short run work. With the simplest of hand tools, precision cases, boxes, cabinets and consoles may be made. Simple or complex designs are achieved by the proper combination of the elements of the system. Examples are illustrated on the following page. Enclosures are completed by attaching steel or aluminum sheet to the framework by any convenient fastening method.

There are two different types of Imlok components and structures. The 901 Slimline components are more slender in appearance, and the corner connectors are completely covered by the extrusions in every completed structure. The Standard components are more rugged, and the ball surface of the connector is exposed. Ease of fabrication and assembly is common to both types.

Every Bud Imlok part is designed with an eye not only to its efficiency as an engineering component, but also to its appearance as a part of a completed housing. Special accessories such as hinges, catches, rubber feet and casters are available. Also a complete range of precision-made handles. Imlok components are available from authorized Bud Distributors in every major marketing area.

STANDARD BUD IMLOK SYSTEM

You may purchase BUD IMLOK in whichever stage of manufacture you prefer:

1. With connectors pre-drilled, ready for assembly with self-tapping screws and with extrusions.
2. With connectors pre-drilled, ready for assembly and with extrusions custom-cut by Bud to your lengths and mitered.
3. As a complete framework, ready for installation of your own panels.
4. As a complete housing with panels, but unpainted.
5. As a complete housing, fully finished.

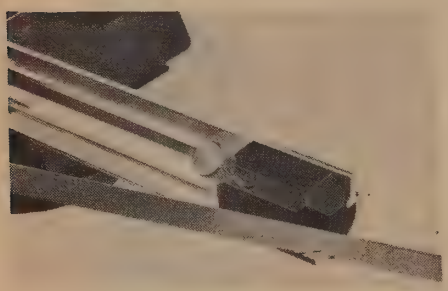
If you have any queries relating to construction or design, please do not hesitate to contact our Imlok Advisory Service. Our extensive knowledge and experience is at your disposal — alternatively, we will always be pleased to arrange for one of our technical representatives to call on you to discuss any problems you may have.

BUD Imlok System

BUD IMLOK IS EASY TO USE



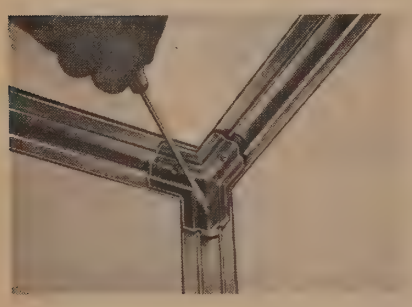
Cut the extrusion to length.



Mitre the ends of the flanges.
Special Imlok jigs make this easy.



Slide extrusion onto the connector.

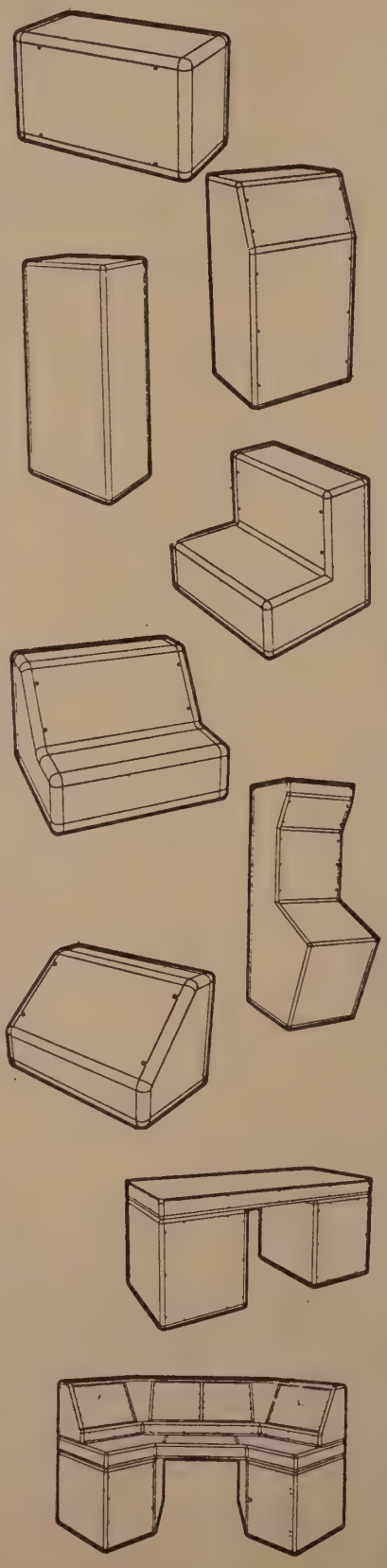


Tighten the self-tapping screws until the point bites into the extrusion.

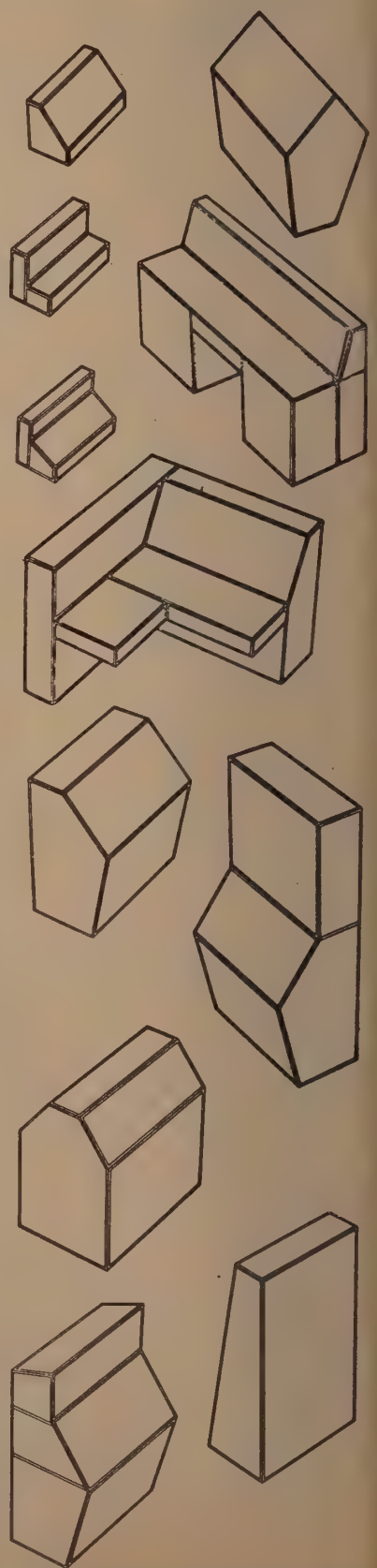
For additional details see your local Bud Distributor or write us for Imlok catalog.

Some typical structures that can be made with Imlok

Standard



901 Slimline



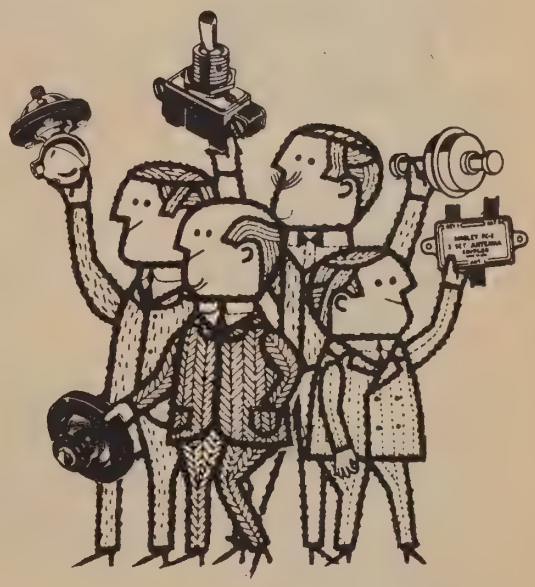
© United Technical Publications

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*



- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

LMB® Box Chassis

The Engineered Precision Line with Interlocking and Flangelocking Construction

Here is the answer to box chassis needs, for the laboratory, manufacturer, experimenter, or builder. The following LMB® Boxes are available from stock in either interlocking (screw fastened) or snap latch. All screw fastenings are drilled and tapped. Self tapping screws are not used. Available colors include natural aluminum, gray or brown hammertone, and black crackle. When ordering specify style and color.

Aluminum used in all LMB® products is aircraft quality specifications type 3003-H 14.

All prices quoted are dealer net. Manufacturers Special Discounts on Application.

WRITE FOR COMPLETE CATALOGUE

Interlocking





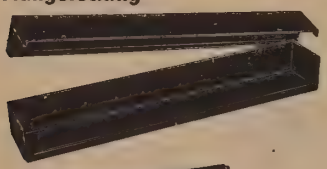
INTERLOCKING (SCREW-FASTENED OR SNAP LATCH)

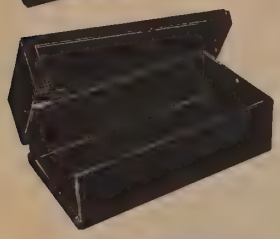
Model	Size	Price	Model	Size	Price
M00	2¼" x 1½" x 1⅜"	$ .63	850	8½" x 2⅛" x 1⅝"	$1.49
00Z	2 5/16" x 2⅛" x 1¾"	.70	138	6¼" x 3½" x 2⅛"	1.45
000	3¼" x 2⅛" x 1⅝"	.75	139	5½" x 3" x 1¼"	1.11
00	4" x 2⅛" x 1⅝"	.78	140PL	3" x 4" x 5"	1.42
100	2¾" x 2⅛" x 2⅝"	.98	140	3" x 4" x 5"	1.77
101	4¼" x 2¼" x 1¼"	.96	141PL	6" x 4" x 3"	1.58
102	4" x 2" x 2¾"	1.12	141	6" x 4" x 3"	1.89
103	2¾" x 2⅛" x 2⅛"	.94	142PL	6" x 4" x 5"	1.85
107	4" x 2¼" x 2¼"	1.06	142	6" x 4" x 5"	2.32
108	5" x 2¼" x 2¼"	1.13	143	4" x 4" x 2"	1.46
135	3¾" x 3" x 2⅛"	1.07	144	10" x 4" x 2½"	2.41
136	5¼" x 3" x 2⅛"	1.19	145	7" x 5" x 3"	2.32
650	6½" x 2⅛" x 1⅝"	1.16	146	8" x 6" x 4½"	3.29
137	8" x 3" x 2¾"	1.77	15	12" x 2" x 1¾"	1.77

SIDELOCK and ENDLOCK CONSTRUCTION

LMB® aluminum Box chassis with sidelock and endlock construction are dust proof, semi-water, and rain proof. Sturdy construction and 100% shielded. The following models are available in plain aluminum, or finished in black, gray, or brown. Endlock or sidelock construction:

Flangelocking





Model	Size	Price	Model	Size	Price
221	2¾" x 3⅛" x 1⅝"	$1.24	654	6" x 5" x 4"	$2.76
321	3¼" x 2⅛" x 1⅝"	1.24	666	6" x 6" x 6"	3.73
421	4" x 2⅛" x 1⅝"	1.24	686	6" x 8" x 6"	4.70
422	4" x 2¼" x 2¼"	1.42	695	6" x 9" x 5"	4.22
424	4" x 2" x 4"	2.18	753	7" x 5" x 3"	2.86
435	4" x 3" x 5"	2.41	754	7" x 5" x 4"	3.04
444	4" x 4" x 4"	2.08	863	8" x 6" x 3½"	3.15
531	5¼" x 3" x 1½"	1.42	865	8" x 6" x 5"	3.93
532	5¼" x 3" x 2⅛"	1.62	1063	10" x 6" x 3½"	3.93
534	5⅝" x 3" x 4"	2.27	1085	10" x 8" x 5"	4.86
543	5" x 4" x 3"	2.06	1221	12" x 2" x 1¾"	2.06
546	5" x 4" x 6"	3.02	1274	12" x 7" x 4"	5.12
645	6" x 4" x 5"	2.86	1754	17" x 5" x 4"	5.80

Endlock



SLIDE COVER

SLIDE COVER (or dust cover) BOXES

Designed by BROADCAST ENGINEERS

No.	L	W	H	Ea.	No.	L	W	H	Ea.
16—Natural Aluminum	13"	3⅛"	2⅝"	$2.97	18—Natural Aluminum	13"	5¼"	2⅝"	$3.85
16—Gray, Black, Brown	13"	3⅛"	2⅝"	3.72	18—Gray, Black, Brown	13"	5¼"	2⅝"	4.73
17—Natural Aluminum	13"	4⅛"	2⅝"	3.50	19—Natural Aluminum	17"	3⅛"	2⅝"	3.69
17—Gray, Black, Brown	13"	4⅛"	2⅝"	4.35	19—Gray, Black, Brown	17"	3⅛"	2⅝"	4.57

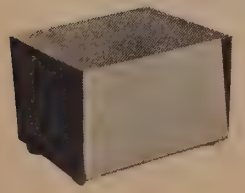


SHIELDED CHASSIS

SHIELDED CHASSIS

	L	W	H	Ea.		L	W	H	Ea.
No. 20 Plain	7½"	7"	2"	$1.84	No. 21 Anodized	13"	10"	3"	$6.39
No. 20 Anodized	7½"	7"	2"	2.27	No. 22 Plain	17"	10"	3"	5.64
No. 21 Plain	13"	10"	3"	4.77	No. 22 Anodized	17"	10"	3"	7.34

THE "NEW" CABINET SERIES IN GLAMOR COLORS



Model		D	W	H	Net Ea.	Model		D	W	H	Net Ea.
275	Ivory	2¾"	x 3"	x 4"	$2.19	453	Blue	4"	x 5"	x 3"	$2.65
2754	Gold	2¾"	x 2¾"	x 4"	2.32	453 BG	Blue & Gold	4"	x 5"	x 3"	3.09
342	Green	3"	x 4¼"	x 2⅜"	2.35	463 GB	Gold & Beige	4"	x 6"	x 3"	3.30
442	Red	4"	x 4½"	x 2⅝"	2.53	463	Beige	4"	x 6"	x 3"	2.87
442 RG	Red & Gold	4"	x 4½"	x 2⅝"	2.97	555	Earth Green	5"	x 5"	x 5"	3.41
442 RB	Red & Black	4"	x 4½"	x 2⅝"	2.97	564	Biscayne Blue	5"	x 6"	x 3"	3.25
444	Black	4"	x 4"	x 2⅝"	2.62	685	Bronze	6"	x 8"	x 5"	4.51
444 BG	Black & Gold	4"	x 4"	x 2⅝"	3.06						

ALL OF COLOR SERIES FITTED WITH ½" RUBBER FEET

WRITE FOR COMPLETE CATALOG

PRICES SUBJECT TO CHANGE

Net

© United Technical Publications

L M B® Box Chassis (Continued)

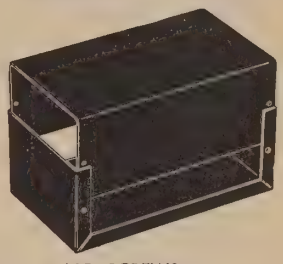
		DEALER NET Plain	Gray, Black, Brown
T-F 770	2¾x2⅛x1⅝	$ .68	$ .89
T-F 771	2¾x2⅛x2¾	.75	1.05
T-F 772	3¼x2⅛x1⅛	.68	.92
T-F 773	3½x2⅛x1⅝	.68	.92
T-F 774	4 x2⅛x1⅝	.68	1.05
T-F 775	4 x2¼x2¼	.83	1.07
T-F 776	4 x2 x2¾	.83	1.10
T-F 777	4¼x2¼x1½	.79	1.10
T-F 778	5 x2¼x2¼	.86	1.13
T-F 779	5 x4 x3	1.03	1.45
T-F 780	5¼x3 x2⅛	$ .90	$1.23
T-F 781	6 x5 x4	1.62	2.01
T-F 782	7 x5 x3	1.54	2.05
T-F 783	8 x6 x3½	1.89	2.48
T-F 784	10 x6 x3½	2.22	2.79
T-F 785	10 x2 x1⅝	1.27	1.73
T-F 786	12 x2½x2¼	1.51	1.84
T-F 787	12 x7 x4	2.98	3.77
T-F 788	17 x5 x4	3.21	3.78

TITE-FIT BOX CHASSIS



		PRICES Plain	Gray, Black, Brown
J-870	2¾x2⅛x1⅝	$ .68	$ .89
J-871	2¾x2⅛x2¾	.75	1.05
J-872	3¼x2⅛x1⅛	.68	.92
J-873	3½x2⅛x1⅝	.68	.92
J-874	4 x2⅛x1⅝	.68	1.05
J-875	4 x2¼x2¼	.83	1.07
J-876	4 x2 x2¾	.83	1.10
J-877	4¼x2¼x1½	.79	1.10
J-878	5 x2¼x2¼	.86	1.13
J-879	5 x4 x3	1.03	1.45
J-880	5¼x3 x2⅛	$ .90	$1.23
J-881	6 x5 x4	1.62	2.01
J-882	7 x5 x3	1.54	2.05
J-883	8 x6 x3½	1.89	2.48
J-884	10 x6 x3½	2.22	2.79
J-885	10 x2 x1⅝	1.27	1.73
J-886	12 x2½x2¼	1.51	1.84
J-887	12 x7 x4	2.98	3.77
J-888	17 x5 x4	3.21	3.78

JIFFY BOX CHASSIS



NO SCREWS

Just push together to close and the Catches snap into place—just a slight pressure of the fingers to open.

		ALUM. GAUGE	PRICES Plain	Gray, Black, or Brown
U-C 970	4x 4x2	.040	$1.73	$2.00
U-C 971	5x 4x3	.040	1.86	2.18
U-C 972	6x 5x4	.040	2.40	2.78
U-C 973	6x 6x6	.040	2.81	3.32
U-C 973A	6x 6x3	.040	2.43	2.97
U-C 974	7x 5x3	.040	3.28	3.83
U-C 975	9x 6x5	.051	$3.72	$4.28
U-C 976	10x 8x7	.051	5.09	5.89
U-C 977	12x 7x6	.051	4.91	5.83
U-C 978	10x10x8	.051	6.49	7.54
U-C 979	12x11x8	.051	7.77	8.82
U-C 980	15x 9x7	.051	7.87	8.92

UTILITY BOXES

Give approximately 25% more usable space for building.



LMB Miniature Boxes are made in the following sizes and are carried in stock in the warehouse for prompt shipment.

ANY QUANTITY

	L	W	D	each	LIDS
M-01	1⅛"	x 1"	x 15/16"	$.46	$.15
M-10	1¾"	x 1¼"	x ⅞"	.46	.15
M-11	2"	x 1¼"	x ¾"	.46	.15
M-12	2"	x 1¼"	x 1"	.46	.15
M-15	2"	x 1¾"	x ½"	$.46	$.15
M-16	2"	x 1¾"	x ¾"	.46	.15
M-17	2"	x 1¾"	x 1"	.46	.15
M-018	2"	x 2"	x 1¼"	.46	.15

Following three numbers on special order only and in quantities of 500 each minimum.

	L	W	D	each	LIDS
M-06	1½"	x 1⅛"	x ¾"	$.53	$.18
M-21	2½"	x 2"	x 1¼"	.57	.20
M-23	3⅞"	x 2⅜"	x ⅞"	$1.21	$.40

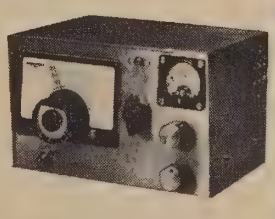
MINIATURE BOX CHASSIS

Precision made in steel only, cadmium plated. Made with or without mounting ears. Covers solder in when used in assembly.



UTILITY ENCLOSURES

No.	L	W	H		Plain	Gray
W-1A	7"	x 5"	x 4½"	with built in chassis	$4.37	$5.32
W-1B	10"	x 4"	x 3½"	with built in chassis	4.37	5.32
W-1C	8½"	x 6⅛"	x 5"	with built in chassis	4.87	5.86
W-1D	18"	x 9"	x 11"	will accommodate an 11" x 17" 2", 3" or 4" chassis	10.73	14.44

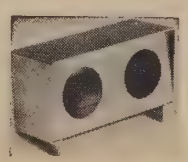


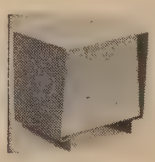


"AL-CAB" CABINETS for meter cases or any application where outstanding appearance is needed

No.	L	W	H		Plain	Gray
W-2AP	3½"	x 4"	x 3"	with holes	$2.07	$2.40
W-2A	3½"	x 4"	x 3½"	without holes	2.18	2.51
W-2B	3"	x 7"	x 3½"	with and without holes	2.48	2.94
W-2C	3⅜"	x 7"	x 3½"	without holes	3.22	3.73
W-2E	4½"	x 4½"	x 3½"	without holes	2.53	2.86

Holes in W-2AP, 2B are 2¼", 2 13/16". For 4" Meter holes and knock-out, add 10% to above prices.



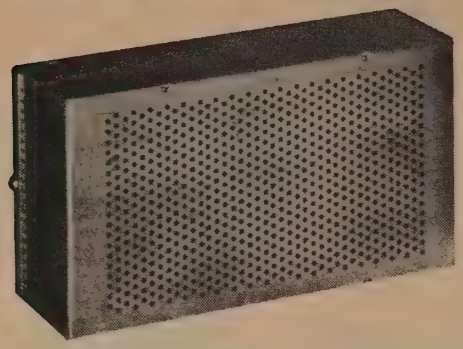


W.M. "AL-CAB" Deluxe Series All with Built-in Chassis

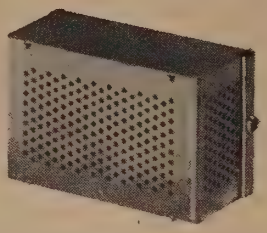
No.	L	W	H	Plain	Gray
W-2F	7½"	x 5"	x 4½"	$4.80	$5.70
W-2G	13"	x 10"	x 5¾"	10.33	12.71
W-2H	7"	x 11"	x 6¼"	8.12	9.49
W-2J	8"	x 11½"	x 7½"	8.91	10.20



WRITE FOR COMPLETE CATALOG PRICES SUBJECT TO CHANGE



LMB® PERFORATED BOX CHASSIS



LMB® Perforated Boxes are adaptable wherever heat dissipation is required as they are spaced in perforations that are set by laboratory research to give utmost heat dissipation and also give utmost shielding. They are die perforated on three sides and top of the box.

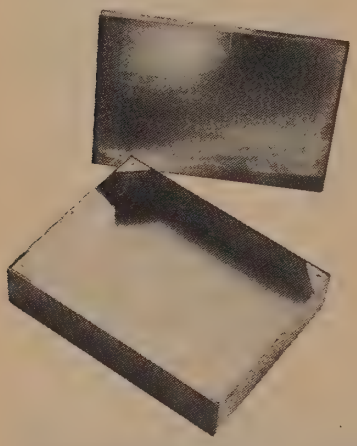
NO.	FINISH	SIZE	NET EA.
00Z	Plain or Gray	2 5/16 x 2 1/8 x 1 3/4	$ .91
000	" "	3 1/4 x 2 1/8 x 1 5/8	1.05
00	" "	4 x 2 1/8 x 1 5/8	1.12
100	" "	2 3/4 x 2 1/8 x 2 5/8	1.32
101	" "	4 1/4 x 2 1/4 x 1 1/4	1.23
102	" "	4 x 2 x 2 3/4	1.55
107	" "	4 x 2 1/4 x 2 1/4	1.20
108	" "	5 x 2 1/4 x 2 1/4	1.65
135	" "	3 3/4 x 3 x 2 1/8	1.50
136	" "	5 1/4 x 3 x 2 1/8	1.75
137	" "	8 x 3 x 2 3/4	2.28
138	Plain or Gray	6 1/4 x 3 1/2 x 2 1/8	$2.00
139	" "	5 1/2 x 3 x 1 1/4	1.50
140	" "	3 x 4 x 5	1.93
141	" "	6 x 4 x 3	2.07
142	" "	6 x 4 x 5	2.40
143	" "	4 x 4 x 2	1.54
144	" "	10 x 4 x 2 1/2	2.41
650	" "	6 1/2 x 2 1/8 x 1 5/8	1.55
850	" "	8 1/2 x 2 1/8 x 1 5/8	1.75
15	" "	12 x 2 x 1 3/4	1.97

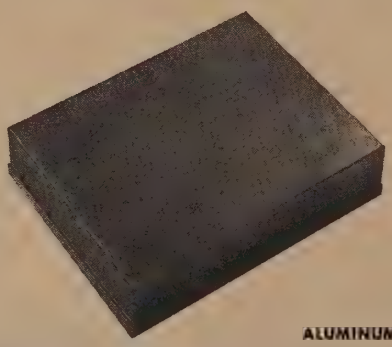
L M B® PRESENTS SOMETHING NEW IN CHASSIS —

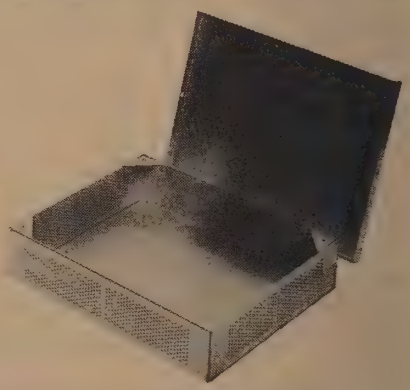
THE CHASSIS WITH THE CAP COVERS AS ORIGINATED BY LMB®

Built with the new original LMB® popular cap cover construction. This construction enables the builder to use either the top or the bottom of the chassis for construction. The Chassis can also be mounted on its side and construction can be on both top and bottom at the same time. Sturdily built from Aircraft quality aluminum, Type 3003, H-14, the same material as is used in the construction of all LMB® precision box chassis. Special technique in welding the corners makes for a stronger chassis than the orthodox type. Cap construction allows for using all the space inside the chassis without being hindered by the mounting flange, which takes from 10% to 20% of the mounting space out of the average chassis.

The P Series are perforated on all four sides and are ideal where heat dissipation is a factor. LMB® chassis — the better chassis, with the year's ahead advanced construction for your better project application. An advanced quality product competitively priced.







ALUMINUM

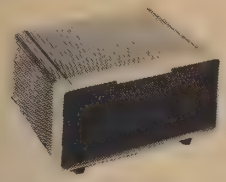
WITHOUT COVER				WITH CAP COVER			PERFORATED		
NO.	SIZE L W H	GAUGE	NET	NO.	L W H	NET	NO.	L W H	NET
553	5x 5x3	18	$1.49	553C	5x 5x3	$2.15	553P	5x 5x3	$2.53
572	5x 7x2	18	1.29	572C	5x 7x2	1.93	572P	5x 7x2	2.26
573	5x 7x3	18	1.56	573C	5x 7x3	2.15	573P	5x 7x3	2.48
5952	5x9½x2	18	1.38	5952C	5x9½x2	2.04	5952P	5x9½x2	2.37
5103	5x10x3	18	1.82	5103C	5x10x3	2.48	5103P	5x10x3	2.81
5133	5x13x3	18	2.04	5133C	5x13x3	2.75	5133P	5x13x3	3.08
642	6x 4x2	18	1.63	642C	6x 4x2	2.04	642P	6x 4x2	2.42
643	6x 4x3	18	1.71	643C	6x 4x3	2.15	643P	6x 4x3	2.70
664	6x 6x4	18	1.27	664C	6x 6x4	1.65	664P	6x 6x4	1.98
6173	6x17x3	18	2.94	6173C	6x17x3	3.74	6173P	6x17x3	4.07
772	7x 7x2	18	1.49	772C	7x 7x2	2.09	772P	7x 7x2	2.42
792	7x 9x2	18	1.61	792C	7x 9x2	2.15	792P	7x 9x2	2.48
7103	7x10x3	18	1.68	7103C	7x10x3	2.75	7103P	7x10x3	3.08
7112	7x11x2	18	1.74	7112C	7x11x2	2.53	7112P	7x11x2	2.86
7123	7x12x3	18	2.23	7123C	7x12x3	3.03	7123P	7x12x3	3.36
7153	7x15x3	18	2.94	7153C	7x15x3	3.96	7153P	7x15x3	4.29
7173	7x17x3	18	3.03	7173C	7x17x3	4.07	7173P	7x17x3	4.40
8103	8x10x3	18	2.92	8103C	8x10x3	3.96	8103P	8x10x3	4.29
8104	8x10x4	18	1.67	8104C	8x10x4	2.39	8104P	8x10x4	2.72
8123	8x12x3	18	2.66	8123C	8x12x3	3.46	8123P	8x12x3	3.88
8172	8x17x2	18	2.77	8172C	8x17x2	3.85	8172P	8x17x2	4.18
8173	8x17x3	16	3.25	8173C	8x17x3	4.95	8173P	8x17x3	5.28
10103	10x10x3	16	2.86	10103C	10x10x3	3.85	10103P	10x10x3	4.40
10123	10x12x3	18	2.97	10123C	10x12x3	3.96	10123P	10x12x3	4.73
10143	10x14x3	18	3.25	10143C	10x14x3	4.73	10143P	10x14x3	5.17
10172	10x17x2	16	3.14	10172C	10x17x2	4.81	10172P	10x17x2	5.25
10173	10x17x3	16	3.74	10173C	10x17x3	5.70	10173P	10x17x3	6.58
10174	10x17x4	16	5.34	10174C	10x17x4	7.01	10174P	10x17x4	7.89
11173	11x17x3	14	4.62	11173C	11x17x3	7.26	11173P	11x17x3	7.81
12172	12x17x2	14	4.95	12172C	11x17x2	7.26	12172P	12x17x2	7.92
12173	12x17x3	14	5.06	12173C	12x17x3	7.59	12173P	12x17x3	8.25
13172	13x17x2	14	4.95	13172C	13x17x2	7.26	13172P	13x17x2	8.03
13173	13x17x3	14	5.28	13173C	13x17x3	7.59	13173P	13x17x3	8.25
13174	13x17x4	14	6.55	13174C	13x17x4	8.75	13174P	13x17x4	9.41

Net

© United Technical Publications

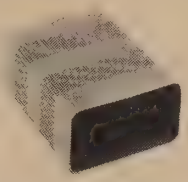
QUALITY CABINETS by LMB®

Original designs in cabinets for the electronic industry, for quality products. Use an original by LMB® to dress up your product.



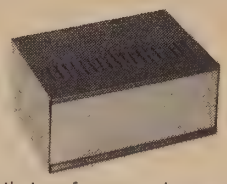
Perforated, removable top, 3 tone, body gray, trim ivory, recessed front panel blue gray.

	Net Ea. Plain	Net Ea. Gray
CO1 — 14½"x13"x6½"	$19.75	$21.95
Chassis for CO-1		
11"x13"x2"		3.03
11"x13"x1½"		2.78
CO2 — 12"x10"x6½"	17.33	19.75
Chassis for CO-2		
11"x8"x2"		2.92
11"x8"x1½"		2.72



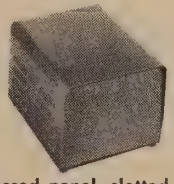
Perforated 3 sides, built in chassis, recessed front panel. Color, body gray, panel dark gray.

	Net Ea. Plain	Net Ea. Gray
CO-3 — 7¼"x5½"x3⅛"	4.93	5.92
CO-4 — 8"x10"x5"	7.65	9.41



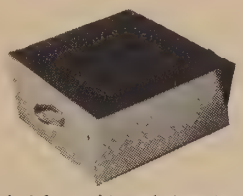
Slotted ventilation, front panel recessed. Color, gray, bronze, hammertone, black crackle, plain — with chassis.

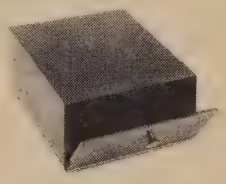
	Net Ea. Plain	Net Ea. Gray
CB-1 — 8"x10"x4½"	$4.92	$5.89
CB-2 — 6"x8"x4½"	4.70	5.47



Aluminum with chassis contoured, hooded front recessed panel, slotted ventilation on bottom, louvers on side. Colors — Gold, Gray, Bronze Hammertone, Black Crackle, Plain — with chassis.

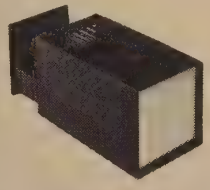
	Net Ea. Plain	Net Ea. Colors
B-1 10"x8"x6"	$12.27	$14.11
B-2 9"x6"x5"	11.02	12.63





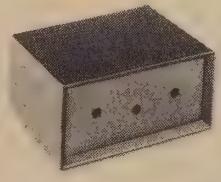
Hooded front, hinged door in rear, front panel removable by removing three screws. Chrome carrying handle. Colors blue, gray, bronze hammertone, black crackle, plain. Steel or aluminum.

	Net Ea. Plain	Net Ea. Colors
HA-1 (ALUM.) 11½"x10½"x5"	$9.74	$10.73



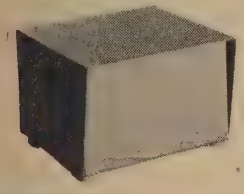
Slot ventilated, ventilation from underneath and sides, built in chassis, recessed panel. Chassis attached to back plate and is removable. Colors — Gray, Bronze Hammertone, Black Crackle, Plain.

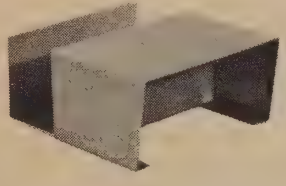
	Net Ea. Plain	Net Ea. Colors
SQ-1 8½"x4½"x4½"	$5.12	$5.89



Double cabinet, inside cabinet fully shielded. Double recessed panel. Colors, Gray, Bronze Hammertone, Black crackle, Plain.

	Net Ea. Plain	Net Ea. Colors
CM-1 6"x8"x3⅞"	$4.95	$6.29





NEW SERIES. Original Construction. Cover slides off at bottom by removing 4 screws. Made of .040 aluminum. Finish: Plain or gray aluminum. Sensibly priced.

No.	D	W	H	Plain	Gray
275	2¾"	x 3"	x 4"	$1.74	$1.82
2754	2¾"	x 2¾"	x 4"	1.80	1.94
342	3"	x 4¼"	x 2⅜"	1.75	1.97
442	4"	x 4½"	x 2⅜"	1.88	2.15
444	4"	x 4"	x 4"	1.97	2.23
453	4"	x 5"	x 3"	2.04	2.27
463	4"	x 6"	x 3"	2.07	2.48
555	5"	x 5"	x 5"	2.64	3.03
564	5"	x 6"	x 4"	2.44	2.86
685	6"	x 8"	x 5"	3.66	4.13



STANDARD RELAY RACK PANELS

⅛" Aluminum material. Aluminum 1100 H 14. Notching is Western Electric. Finish — BLACK WRINKLE, GRAY WRINKLE OR HAMMERTONE. ALL PANELS 19" WIDE

No.	Height	Width	Net Price
#175	1¾"	x 19"	$1.20
#350	3½"	x 19"	1.56
#525	5¼"	x 19"	2.11
#7	7"	x 19"	2.66
#875	8¾"	x 19"	3.12
#1050	10½"	x 19"	3.95
#1225	12¼"	x 19"	4.50

No.	Height	Width	Net Price
#14	14"	x 19"	$5.24
#1575	15¾"	x 19"	5.87
#1750	17½"	x 19"	6.44
#1925	19¼"	x 19"	7.07
#21	21"	x 19"	7.77
#2425	24¼"	x 19"	9.90
#2625	26¼"	x 19"	11.55

© United Technical Publications

Par-Metal® NEW YORK Div. of EON Corp.
ELECTRONIC HOUSINGS

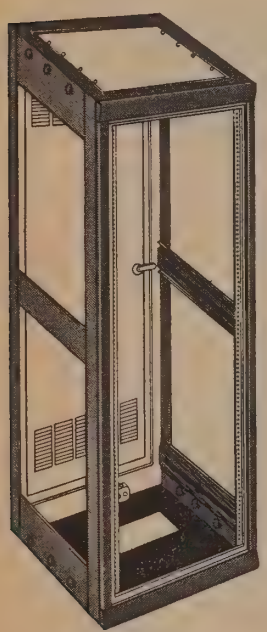
America's **oldest** manufacturer of **Electronic Housings** (established almost 50 years ago) has moved into a 4-story "up-to-the-minute" Brooklyn plant. We have **increased** our floor space over 3 times, and installed improved modern facilities to serve you better. We have **added new items, reduced delivery time** and increased our stock inventory.

These pages list a few of our products. For Catalog Numbers, Sizes, Finishes, Prices or any other details; **see your local distributor.** Ask him for a **free** copy of our Catalog 136.



MODULAR CABINET RACKS

All **PAR-METAL Modular Cabinet Racks** are heavy gauge steel with solidly welded frames and panel angles. They accept a complete line of Par-Metal accessories including: **Basic Slides, Drawers, Shelves** and **Roller Trucks.** Available in 19", 24" & 30" Panel Widths; Panel Heights from 36¾" to 84"; Four Depths are available — 18", 24", 26" & 31". Available with Rear Door Only, or with Front and Rear Doors. All **Par-Metal Racks** have a wide variety of finishes.



SERIES PL RACKS
With Rear Door Only

Highlighting our catalog, is the **"CONTEMPO"** line of Racks, Consoles, Wedges, Roller Trucks, Slides and Tables, etc. Standard finish of all painted parts is a most attractive combination of **Dawn** (Light) **Gray** and **Charcoal** (Dark) **Gray** Textured Vinyl Enamel. **Contempo Racks** have **Pan Shaped Front Doors**, and **"Dutch" Rear Doors;** both with "D" Flush Mounted Handles. Pan Shaped Side Panels are optional. A full line of **Par-Metal** Panels and accessories are available in standard sizes.



CONTEMPO SERIES
With Front and Rear Doors
(Racks for 30" Wide Panels Have Two French Doors to Save Aisle Space)



SERIES FR RACK
equipped with flush side panels and recessed base.

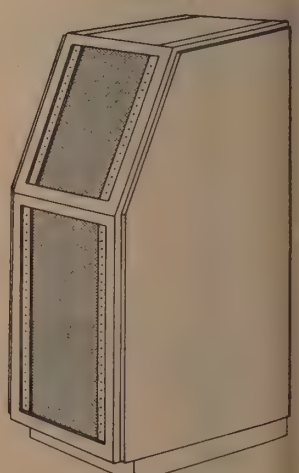
Upper left illustration shows our **Frame Model "PL"** with Rear Door only made for ball-cornered side panels. Illustration directly below it, shows **Model "FR"** with **BOTH Front** and **Rear Doors** as well as Side Panels attached. As the foundation of our line for many years; these racks are rugged in construction, distinctly styled, economically priced and versatile for use throughout the electronic industry.

NEW!

Series #SFS-1712 **Slope Front Floor Standing Rack** is a new item. It is 48" High (including Recessed Base), 26" Deep, with 3 fixed panel angles for 19" wide panels.

For easy modulation, **we make four models;** With both sides attached (single unit), with right or left side attached (opposite side open), and with both sides open.

(Designated by suffixes X-R-L-O respectively.) Ready for immediate delivery in light gray hammertone enamel.



SLOPE FRONT RACK
Cat. No. SFS-1712-X
With Both Sides attached for single units only.

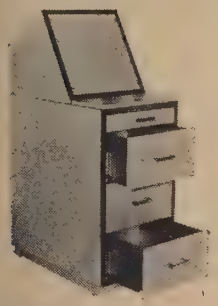
© United Technical Publications

Par-Metal® NEW YORK Div. of EON Corp.

CONSOLES

Par-Metal Consoles are ruggedly welded, heavy gauge steel. They are made in **two designs** and **have many finishes.** Pedestals in top cabinet accommodate 19" Panels and **either** Desk or Stand-Up Heights, and **24"** or **34"** depths. Accessories include Drawers, Hinged Doors, Panels, Slides and Table Tops. Shipped completely assembled; ready for use.

CONTEMPO SINGLE UNIT



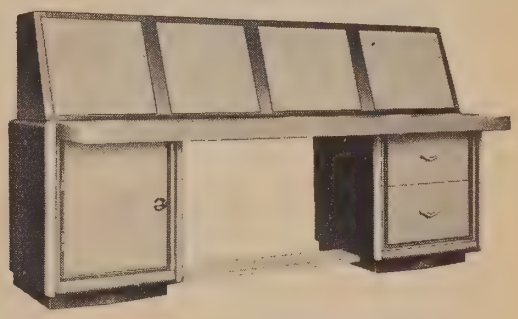
CONTEMPO-PED. Stand-Up Model with Top Cabinet, End Panels and Accessories.

DOUBLE UNIT ASSEMBLY



WITH 2 CONTEMPO-PEDS. Desk Model with 2 Top Cabinets, Exterior Table and Accessories

QUAD UNIT ASSEMBLY



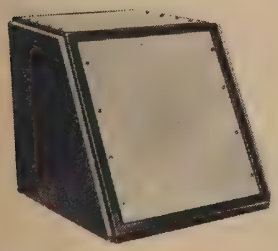
Standard Quad Unit Assembly with Two Pedestal Frames, Extension Desk Table, Quad High Slope Cabinet.

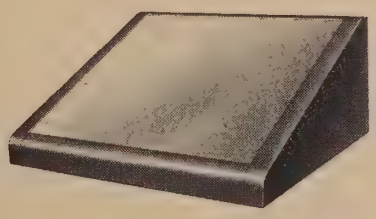
A combination of **Dawn** and **Charcoal** Gray Textured Vinyl finish is **standard** on Contempo Consoles.

Unlimited configurations may be obtained by using the desired, dovetailing components. Ask your distributor for **Par-Metal** Catalog No. 136.

Each pedestal includes 2 pairs of Panel Angles. (E.I.A. spacing tap: 10-32). Standard Pedestals have a dual receptacle in rear. A **wide variety** of finishes is available. Simple charts in **Par-Metal** Catalog No. 136 expedite ordering.

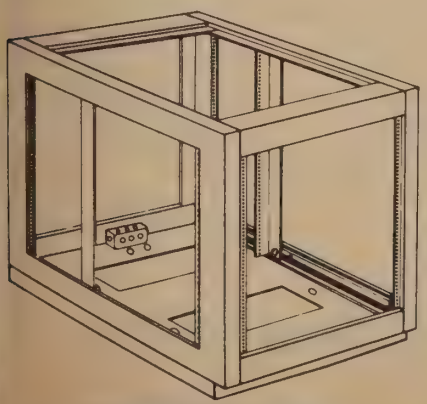
DESK TOP CABINETS





Contempo Top Cabinets are made in **10** styles (24" Deep). Panels removable from the outside. They may be modulated **to any length,** using but one pair of end panels. All other panels are included.

Standard Desk Top Cabinets come in Single Units, Duals, Triples, or Quads in four styles. No end panels needed. Standard finish is light and dark gray hammertone; other finishes are available.



STANDARD PEDESTAL FRAME

PEDESTAL FRAMES

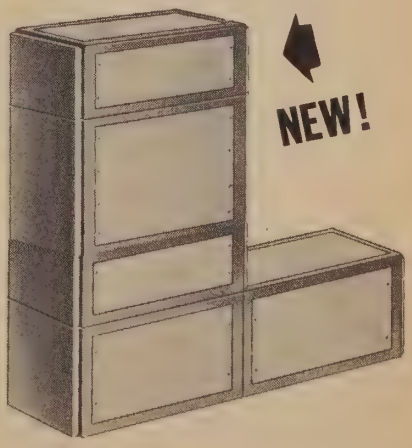
Pedestal Frames are the foundation of the Consoles. Made in Contempo and Standard Designs: 24" and 34" deep, 19" panel width and 30" desk height. **Contempo Models** are **also** made in a **40"** stand-up height.

Angular Wedges (30° and 45°) are made for all sizes of Contempo Pedestals and Top Cabinets. **Par-Metal** Slides, Drawers, Shelves, Hinged Doors, Tables, End Panels, etc., fit these Pedestal Frames.

PAR-METAL's STACKABLES

STACK 'EM HIGH OR WIDE — THEY'RE HANDSOME

- Design your own horizontal configuration or vertical stacking to meet your needs.
- Stack, gang, or use individually.
- End Panels are optional.
- Panel heights from 7" to 35"; 19" panel width; 24" cabinet depth.



FREE!

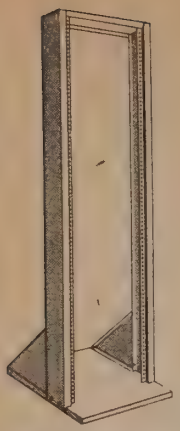
Ask your distributor for Par-Metal's complete catalog!

© United Technical Publications

Par-Metal NEW YORK

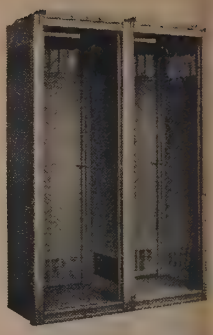
Div. of EON Corp.

RELAY RACKS — SLIDES ROLLER TRUCKS — ACCESSORIES



OPEN CHANNEL RACK
Cat. No. RX-195

OPEN CHANNEL RACKS: Made for both 19″ and 24″ Panel Widths and in Panel Heights from 36¾″ to 77″. Top frame is solidly welded. Rack is shipped with top and base in one carton. Several finishes in stock.



KNOCKDOWN RACKS
Cat. No. ER-225-A

KNOCKDOWN RACKS: Choice of Rear Door **ONLY** or **WITH** Front and Rear Doors. Pair of Panel Angles included. Panel Heights from 36¾″ to 77″; 19″ Panel Width; 18″ Depth. Some models may be modulated. Several finishes available. Sold from stock.



ANGULAR RACK WEDGE
Cat. No. AF-6718-30

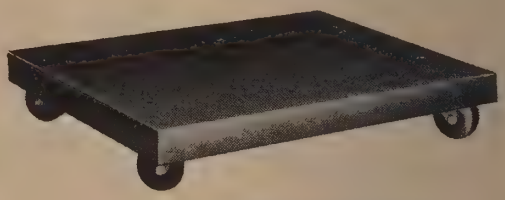
ANGULAR RACK WEDGES: 30° and 45° Wedges available for all racks. Finished to match rack. When needed, joining trims are provided at no extra cost. **ALL Welded** construction.

CONTEMPO CONSOLE WEDGES: 30° and 45° Wedges for all Contempo Pedestals and Top Cabinets. They fit both 24″ and 34″ deep models and are finished to match.

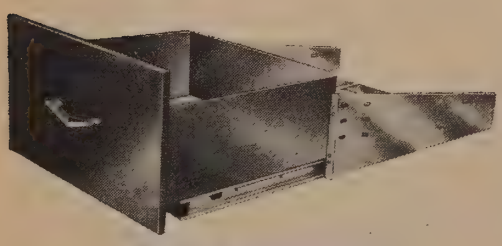


CONTEMPO WEDGE ASSEMBLY
Pedestal Wedge Cat. No. PDW-24-30
and Top Cabinet Wedge
Cat. No. HS-219-30

ROLLER TRUCKS fit all Racks and Cabinets. They are made for Single, Double, Triple or Quad units. Swivel casters are standard; Locking casters, optional. **Also** made with **Extended Base** for sturdiness. All finishes available.

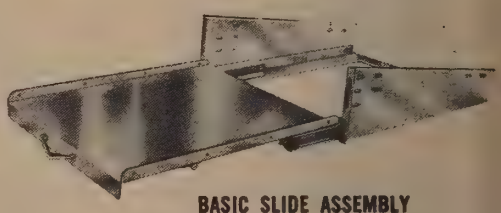


CONTEMPO SINGLE ROLLER TRUCK



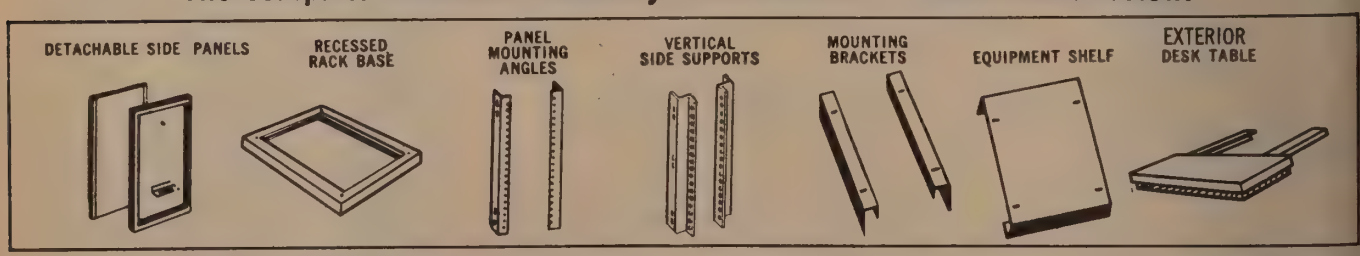
STORAGE DRAWER ASSEMBLY

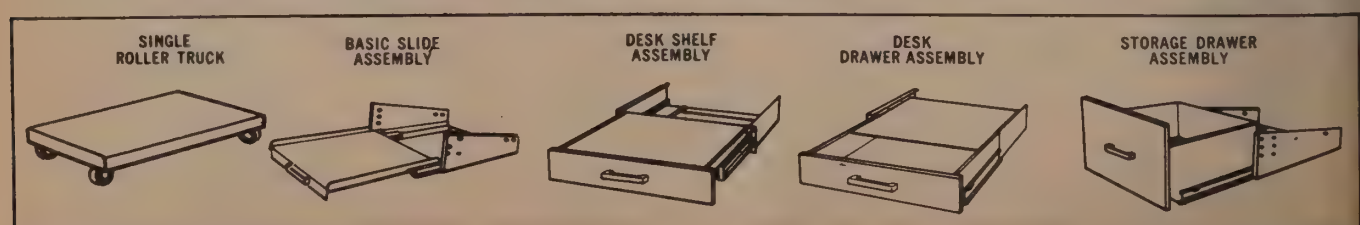
BASIC SLIDES, DRAWERS, RETRACTABLE SHELVES. Par-Metal's ball-bearing, full extending Slides, Drawers and Work Shelves fit both 19″ and 24″ panel widths. Highly popular. Matching finishes.



BASIC SLIDE ASSEMBLY

The complete Par-Metal accessory line includes all those shown below.





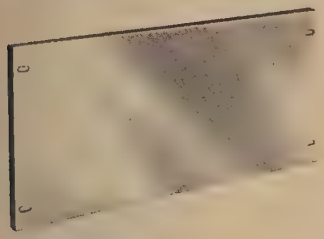
© United Technical Publications

Par-Metal NEW YORK

Div. of EON Corp.

PANELS — SMALL CASES — HARDWARE — MISCELLANEOUS

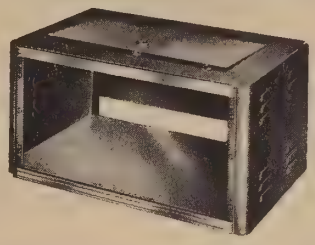
FULL LINE OF STEEL and ALUMINUM PANELS



- BLANK STEEL PANELS
- BLANK ALUMINUM PANELS
- FORMED STEEL PANELS
- GRILLE PANELS
- VENTILATED PANELS
- DESK/TABLE PANELS
- HINGED PANELS

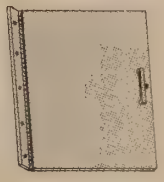
Either 19", 24" or 30" wide.
In multiples of 1¾" high.
Choice of Finishes.
RETMA Hole Spacing

DESK PANEL CABINETS for 19" WIDE PANELS



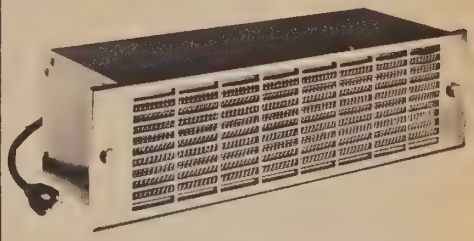
Welded steel cabinets from 8¾" to 35" panel height. Built-in standard panel angles. 15" deep. Full-length piano hinge and chrome lifter on top door.

HINGED DOOR PANELS



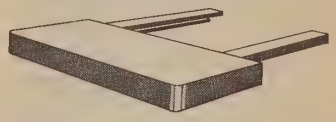
Full-length piano hinged door; mounts to panel angles. Has satin finished chrome handle and push-button latch. Fits 19", 24" & 30" panel widths from 7" to 35" high. All finishes.

FANS & BLOWERS



Intake and exhaust fans and twin, rack mounted blowers in various sizes and strengths. All accessories.

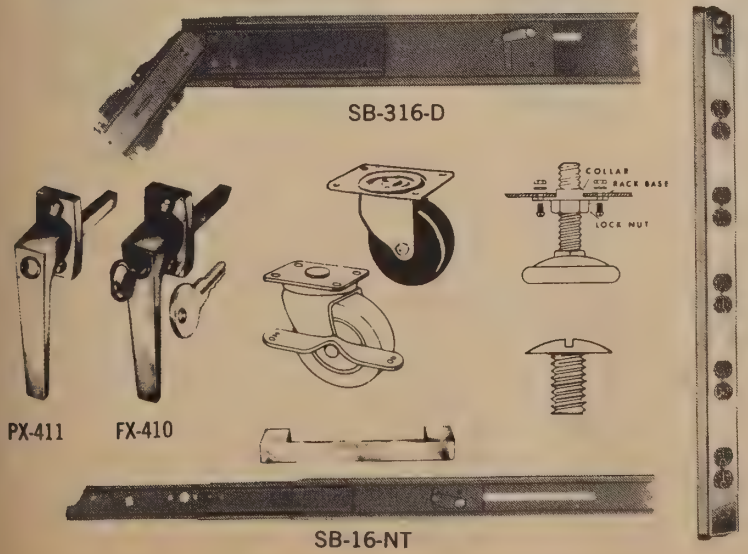
EXTERIOR TABLES



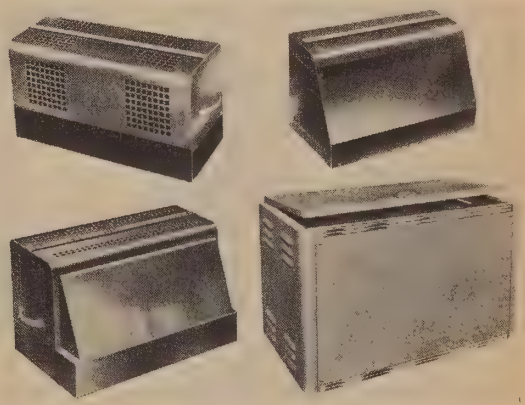
FORMICA covered tables for use with racks and pedestals. To match CONTEMPO or Standard designs. On 5-ply, ¾" plywood. Braced with heavy metal girders.

ASSOCIATED HARDWARE

Running the gamut of hardware used with its equipment, **PAR-METAL** stocks: A **fine** line of **Solid Bearing** Slides, both tilt and non-tilt . . . Door Handles, locking and non-locking . . . Pull and lift handles . . . Dual receptacle power strips . . . Swivel casters, **with/without** touch toe brakes . . . Machine screws and floor levelers.



SMALL CASES and CHASSIS



A large variety of the most popular small cases. Rack mounted and other chassis, amplifier foundations and chassis brackets.

FREE Catalog #136

Ask your distributor for **PAR-METAL's Catalog No. 136** which lists full details of our complete line with sizes, construction details, finishes and prices.



© United Technical Publications

From the World's Largest Manufacturer of Parts Cabinets . . .

QUALITY • SERVICE **raaco** VALUE • GUARANTEED

RAACO CORPORATION

TOP QUALITY STORAGE CABINETS AT LOWEST PRICES



120 01
48 Drawers
22" H x 12" W x 6¼" D
Dividers and Index cards are included

A WELL-ORGANIZED SHOP MEANS GOOD ECONOMY — SAVES TIME, SPACE AND LABOR COST

Time Saving:

- The crystal-clear plastic drawers store your small parts without hiding them.
- No valuable time is lost trying to locate parts.

Space Saving:

- Being only 12" x 6¼" in width and depth, Raaco cabinets occupy a minimum of space.
- The cabinets can be installed and arranged exactly where you need them—in single units or built together into larger sections.
- The cabinets can be placed on tables, wall mounted or stacked very simply.
- No expensive installation costs.



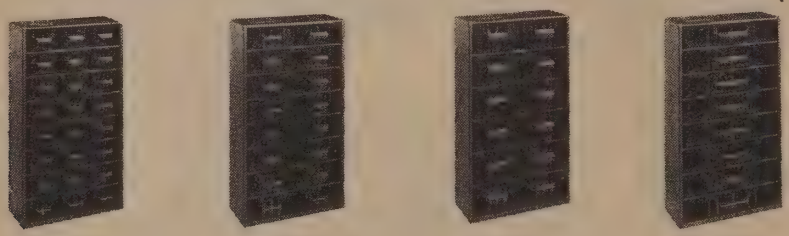


090 01
36 Drawers
16½" H x 12" W x 6¼" D



040 01
16 Drawers
7½" H x 12" W x 6¼" D

Dimensions: 22" H x 12" W x 6¼" D



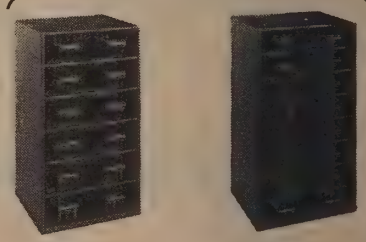
120 03
24 Drawers

120 04
16 Drawers

120 05
12 Drawers

120 07
8 Drawers

Dimensions: 22" H x 12" W x 11½" D



240 10
12 Drawers

240 09
16 Drawers

There are many excellent reasons to use RAACO cabinets . . .

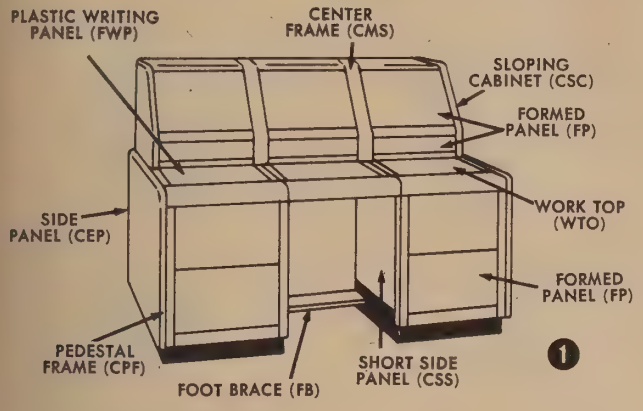
- Heavy fully welded steel frame.
- Full steel shelves with guide rails for each drawer.
- The steel frame is primed and has a baked-on enamel finish.
- Crystal-clear impact styrene drawers, molded handles and label holders.
- Each cabinet is supplied with plastic feet to prevent scratching.
- Depressions in the top of the cabinet fit the plastic feet to insure accurate and secure stacking.
- Drawers have backstops to prevent them from being pulled all the way out.
- Holes in the back of the frame for wall mounting.

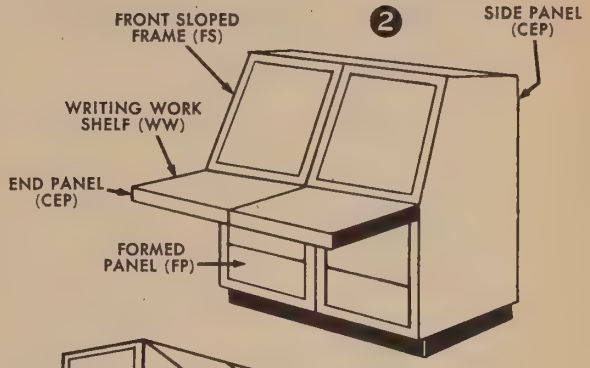
Model	Drawer Dimensions	Pack	Wgt. Lbs.	Industrial User Price
120 01	1⅜" H x 2½" W x 5⅝" D	3	38.6	$11.50
120 03	2¼" H x 3⅛" W x 5⅝" D	3	33.7	11.50
120 04	2¼" H x 5⅛" W x 5⅝" D	3	33.0	11.50
120 05	3⅛" H x 5⅛" W x 5⅝" D	3	32.4	11.50
120 07	2¼" H x 11" W x 5⅝" D	3	31.8	11.50
240 09	2¼" H x 5⅛" W x 11" D	1	16.0	23.00
240 10	3⅛" H x 5⅛" W x 11" D	1	19.8	23.00
040 01	1⅜" H x 2½" W x 5⅝" D	6	27.6	4.75
090 01	1⅜" H x 2½" W x 5⅝" D	3	30.0	8.25

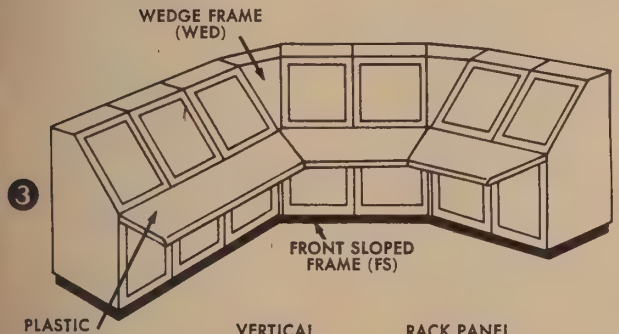
ASK FOR BULLETIN 7/70

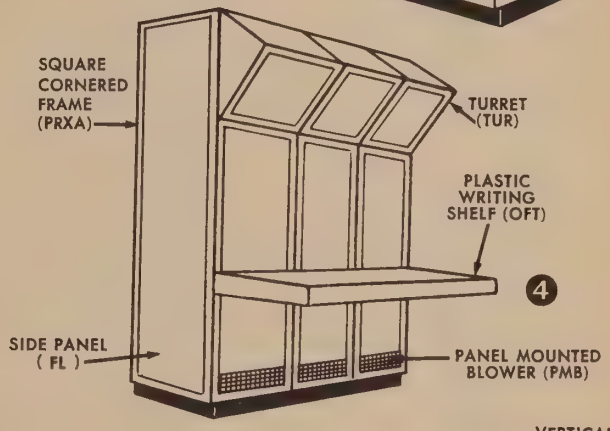
© United Technical Publications

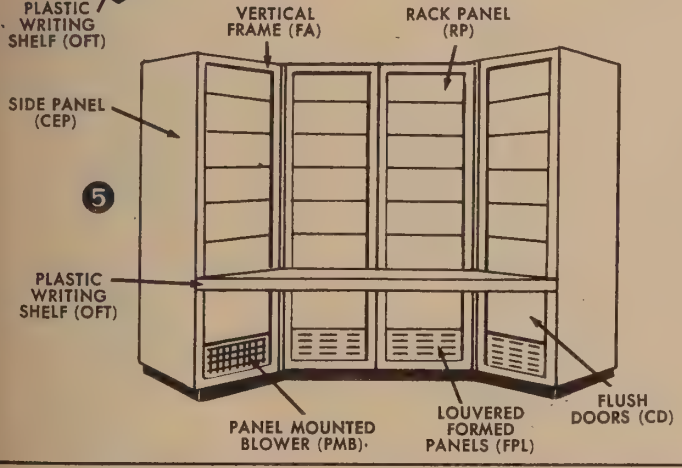
PREMIER MODULAR ENCLOSURE SYSTEMS

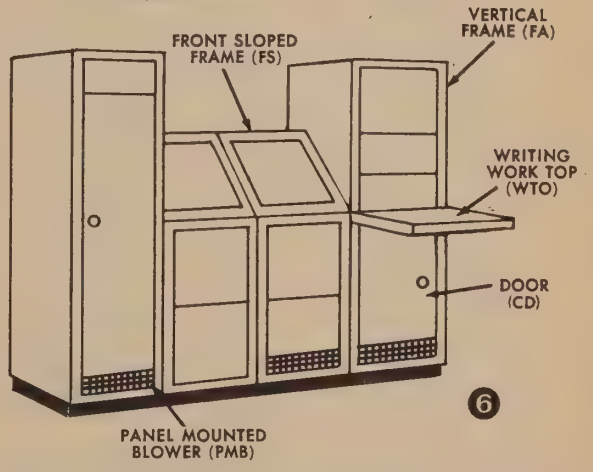












Premier Modular Enclosure Systems offer maximum flexibility, adaptability and esthetic value requirements in the electronic, electrical and electro-mechanical fields. The range of standard units of various widths, depths, heights and shapes available offers a full variety of combinations and configurations necessary to meet the space and human engineering customized requirements for enclosure systems used in modern packaging. There are distinct advantages in using the Premier Modular Systems: "In house" costs for development and design requirements are drastically reduced, standardized production economies are realized, and delivery schedules are considerably faster.

Modifiications available for Premier Modular units offer additional adaptability for "special" requirements. Our Distributors and Sales Representatives can furnish all the information necessary to enable you to meet your metal housing needs with better delivery, design and economy.

The following pages contain the general specifications of Premier's line of standard cabinets, racks, cases, chassis, blowers, slides, fans, panels, hardware and other accessory items. Detail drawings are in last section of catalog. Large scale blueprints and information are available.

INDUSTRIAL DISCOUNT SCHEDULES FOR QUANTITY PURCHASES

SCHEDULE "A" ITEMS

$25 (minimum) to $250	Net
250.01 to 500	5%
500.01 to 1000	10%
1000.01 to 2500	15%

over 2500.01 on quotation

SCHEDULE "B" ITEMS

$25 (minimum) to $200	Net
200.01 to 400	10%
400.01 to 550	15%
550.01 to 700	20%
700.01 to 1000	25%
1000.01 to 2500	30%

over 2500.01 on quotation

© United Technical Publications

PREMIER

MODULAR ASSEMBLIES

ASSEMBLIES INCLUDE FRAME, 2 SIDE PANELS AND 1 DOOR

POPULAR SIZES AND ASSEMBLIES GROUPED FOR EASY ORDERING ALL 19" PANEL SPACE

See Pages 4 through 9 for Specifications and Details



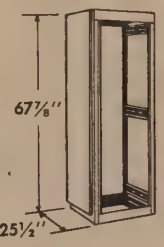
ASSEMBLY NO. FA-A-1
1 FA-52-22
2 CEP-52-22
1 DF-52
$159.13*



ASSEMBLY NO. FA-A-5
1 FA-52-255
2 CEP-52-255
1 DF-52
$168.51*



ASSEMBLY NO. FA-A-2
1 FA-61-22
2 CEP-61-22
1 DF-61
$174.92*



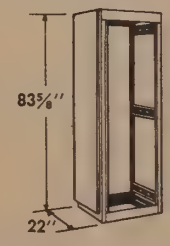
ASSEMBLY NO. FA-A-6
1 FA-61-255
2 CEP-61-255
1 DF-61
$185.79*



ASSEMBLY NO. FA-A-3
1 FA-70-22
2 CEP-70-22
1 DF-70
$188.98*



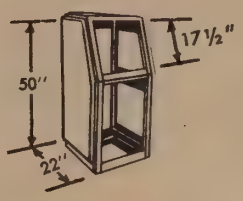
ASSEMBLY NO. FA-A-7
1 FA-70-255
2 CEP-70-255
1 DF-70
$200.92*



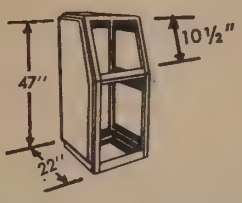
ASSEMBLY NO. FA-A-4
1 FA-77-22
2 CEP-77-22
1 DF-77
$199.32*



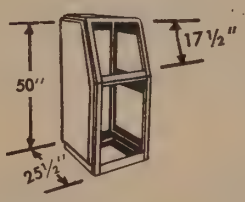
ASSEMBLY NO. FA-A-8
1 FA-77-255
2 CEP-77-255
1 DF-77
$211.96*



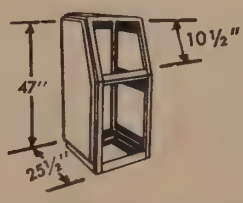
ASSEMBLY NO. FS-A-1
1 FS-1001
1 CEP-1201-LH
1 CEP-1201-RH
1 DF-42
$142.03*



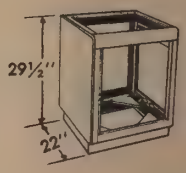
ASSEMBLY NO. FS-A-2
1 FS-1002
1 CEP-1202-LH
1 CEP-1202-RH
1 DF-42-1002
$140.40*



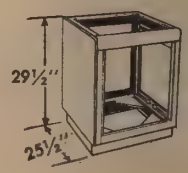
ASSEMBLY NO. FS-A-3
1 FS-1001-255
1 CEP-1201-255-LH
1 CEP-1201-255-RH
1 DF-42
$151.86*



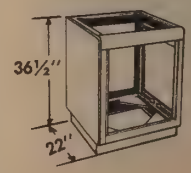
ASSEMBLY NO. FS-A-4
1 FS-1002-255
1 CEP-1202-255-LH
1 CEP-1202-255-RH
1 DF-42-1002
$149.03*



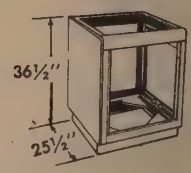
ASSEMBLY NO. CPF-A-1
1 CPF-101
2 CEP-401
1 CD-21
$98.82*



ASSEMBLY NO. CPF-A-2
1 CPF-101-255
2 CEP-401-255
1 CD-21
$111.67*



ASSEMBLY NO. CPF-A-3
1 CPF-102
2 CEP-402
1 CD-28
$115.89*



ASSEMBLY NO. CPF-A-4
1 CPF-102-255
2 CEP-402-255
1 CD-28
$130.43*

*Net Prices (A)
See quantity discount schedule on page 1.

© United Technical Publications

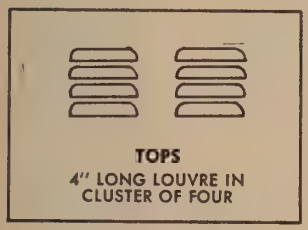
PREMIER

CUSTOMIZED MODIFICATIONS Available for all STANDARD UNITS

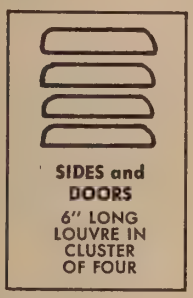
VENTILATION PROVISIONS

LOUVRES

for cabinet tops, sides, doors, etc. in various sizes and patterns.



TOPS
4" LONG LOUVRE IN CLUSTER OF FOUR

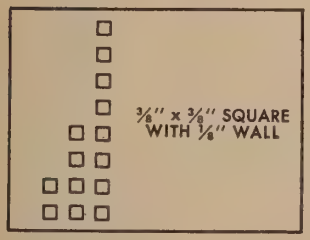


SIDES and DOORS
6" LONG LOUVRE IN CLUSTER OF FOUR

3" Long Louvre also available in cluster of three. 6" and 4" Louvre also available as single.

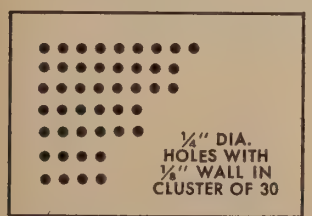
PERFORATIONS

for cabinet tops, sides, bases, doors, etc. in various configurations.



⅜" x ¾" SQUARE WITH ⅛" WALL

VERTICAL ROWS OF 2, 4 AND 8 IN ANY PATTERN

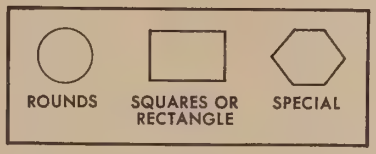


¼" DIA. HOLES WITH ⅛" WALL IN CLUSTER OF 30

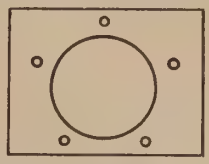
Perforated screening weldments:
1/16" dia. staggered centers
⅛" dia. staggered centers
½" diamond expanded metal

HOLES AND CUT-OUTS

VARIOUS



MOUNTING FOR FANS



OPENING IN TOP — RECESSED FOR LOUVRES (FPL) OR BLANK (FP) FORMED PANELS



PREMIER COLOR FINISHES

Standard Finish on Schedule "B" items are as listed in catalog.

Standard Finish on Schedule "A" items are as listed in catalog or finished in any choice of other Premier Standard colors at no extra charge. Specify when ordering. When color is not specified, standard finish will be furnished. Premier color chips are available.

Premier Color	Federal Standard No. 595
LIGHT GRAY	26440
BEIGE TAN	26521
SMOKE BLUE	25189
WHITE	27875
CHARCOAL BROWN	24091
CHARCOAL GRAY	26152
GREEN	24148
BLACK	27038
BRIGHT BLUE	25102
GRAY HAMMERTONE	—

HANDLES — LOCKS

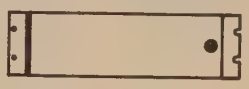
RECESSED

WELDED FLUSH for POR, DCR, CSC, MDK



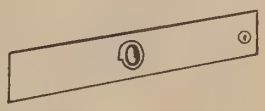
CYLINDER LOCKS

(HW-6) ON SHP PANELS



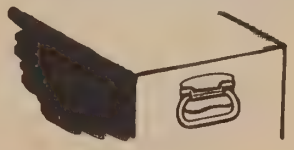
ON DRAWER FRONTS

"D" SERIES



DROP HANDLE (HW-5)

WELDED on sides of DCR, POR, MDK



LOCKING HANDLE (HW-3)

ON REAR DOOR OF R, FXR, DR, RMX, FDX and FD-300 Series DOORS

MISCELLANEOUS

- **SPECIAL SIZES**
  Height, depth and width of standard units altered. Prices quoted on specific requests.
- **SOLID BLANK PANELS**
  Available to fill top and rear openings on POR and MOR.
- **INVERTED BASES or SOLID BASES**
  (no cut-outs) for all large racks and cabinets.

PREMIER STANDARD CHASSIS AND CASES, ETC. MAY BE MODIFIED FOR DIFFERENT DIMENSIONS, VARIOUS HOLE PATTERNS, CUT-OUTS, ETC. PRICES QUOTED UPON APPLICATION.

© United Technical Publications

PREMIER MODULAR CABINET RACKS ROUNDED CORNER

FINISHED IN ALL PREMIER STANDARD COLORS. IF NOT SPECIFIED, LIGHT GRAY IS FURNISHED



VERTICAL FRAMES

Completely welded 14 ga. steel frame. Top and bottom are of one piece construction with rectangular opening in bottom for leads. Supplied with two pairs of 12 ga. steel panel mounting angles, fully adjustable front to rear. Angles have E.I.A. spaced clearance holes. 10-32 screws and captive nuts are furnished. Frames have provisions for ganging, cabling between frames, mounting doors front or rear (left or right handed), mounting casters in base, and mounting writing work frames.

19" and 24" PANELS • 22" and 25½"

Cat. No.	Height	Panel Space	Depth	Width	Shpg. Wt. Lbs.	Net Price (A)†
FA-42-22	48⅝"	42 x 19"	22"	22"	50	$83.90
FA-52-22	59⅛"	52½ x 19"	22"	22"	65	87.01
FA-61-22	67⅞"	61¼ x 19"	22"	22"	80	94.71
FA-70-22	76⅝"	70 x 19"	22"	22"	100	102.55
FA-77-22	83⅝"	77 x 19"	22"	22"	110	108.05
FA-42-255	48⅝"	42 x 19"	25½"	22"	58	88.23
FA-52-255	59⅛"	52½ x 19"	25½"	22"	75	90.25
FA-61-255	67⅞"	61¼ x 19"	25½"	22"	92	100.34
FA-70-255	76⅝"	70 x 19"	25½"	22"	115	108.33
FA-77-255	83⅝"	77 x 19"	25½"	22"	127	113.45
FA-2761-22	67⅞"	61¼ x 24"	22"	27"	90	106.85
FA-2770-22	76⅝"	70 x 24"	22"	27"	110	120.93
FA-2777-22	83⅝"	77 x 24"	22"	27"	120	126.98
FA-2761-255	67⅞"	61¼ x 24"	25½"	27"	98	119.06
FA-2770-255	76⅝"	70 x 24"	25½"	27"	123	128.13
FA-2777-255	83⅝"	77 x 24"	25½"	27"	135	131.16



SLOPED FRONT FRAMES

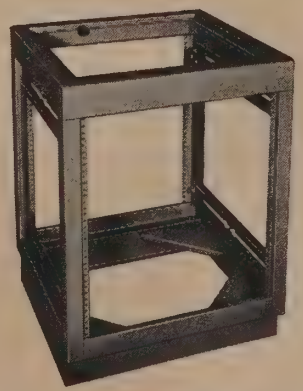
Completely welded 14 ga. steel frame. Front slopes 19° from vertical. Top and bottom are of one piece construction. Frame bottom has rectangular opening for leads and provision for mounting casters. Supplied with two pairs of adjustable panel mounting angles for vertical openings with E.I.A. spaced clearance holes. 10-32 screws and captive nuts are furnished. Sloped front panel space has fixed mounting angles recessed ½" and has tapped 10-32 holes on E.I.A. spacing. Front has removable crosspiece. Frame has provisions for ganging, cabling between frames, mounting left or right handed doors on rear, and mounting writing work frames.

19" & 24" PANEL WIDTHS—10½" & 17½" HEIGHTS
22" and 25½" DEPTHS

Cat. No.	Width	Height	Depth	Sloped Front Panel Space	Front Vertical Space	Rear Vertical Space	Shpg. Wt. Lbs.	Net Price (A)†
FS-1001	22"	50"	22"	17½ x 19"	26¼ x 19"	42 x 19"	66	$81.22
FS-1002	22"	47"	22"	10½ x 19"	29¾ x 19"	42 x 19"	64	78.81
FS-1003	27"	50"	22"	17½ x 24"	26¼ x 24"	42 x 24"	76	93.41
FS-1004	27"	47"	22"	10½ x 24"	29¾ x 24"	42 x 24"	74	91.50
FS-1001-255	22"	50"	25½"	17½ x 19"	26¼ x 19"	42 x 19"	75	85.37
FS-1002-255	22"	47"	25½"	10½ x 19"	29¾ x 19"	42 x 19"	73	83.38
FS-1003-255	27"	50"	25½"	17½ x 24"	26¼ x 24"	42 x 24"	85	99.11
FS-1004-225	27"	47"	25½"	10½ x 24"	29¾ x 24"	42 x 24"	83	97.03

PEDESTAL FRAMES

Frame is completely welded 16 ga. steel. Supplied with two pairs of 12 ga. steel panel mounting angles fully adjustable front to rear with E.I.A. spaced clearance holes. 10-32 screws and captive nuts furnished. Top panel space is recessed ½" and furnished with 10-32 tapped holes on E.I.A. spacing. Frame has provisions for ganging, mounting casters in base and mounting writing work frames. Frame accommodates flush type doors.



19" and 24" PANELS • 22" and 25½" DEPTHS

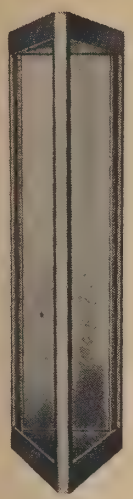
Cat. No.	Width	Depth	Height without Casters	Front & Rear Panel Space	Top Panel Space	Shpg. Wt. Lbs.	Net Price (A)†
CPF-101	22"	22"	29½"	21 x 19"	17½ x 19"	45	$56.36
CPF-102	22"	22"	36½"	28 x 19"	17½ x 19"	48	64.85
CPF-103	27"	22"	29½"	21 x 24"	17½ x 24"	50	62.46
CPF-104	27"	22"	36½"	28 x 24"	17½ x 24"	53	72.75
CPF-101-34	22"	34¼"	29½"	21 x 19"	29¾ x 19"	54	78.80
CPF-101-255	22"	25½"	29½"	21 x 19"	21 x 19"	53	65.69
CPF-102-255	22"	25½"	36½"	28 x 19"	21 x 19"	55	79.31
CPF-103-255	27"	25½"	29½"	21 x 24"	21 x 24"	58	69.21
CPF-104-255	27"	25½"	36½"	28 x 24"	21 x 24"	59	83.85
CPF-101-18	22"	18½"	29½"	21 x 19"	14 x 19"	44	54.55
CPF-102-18	22"	18½"	36½"	28 x 19"	14 x 19"	47	62.62
CPF-103-18	27"	18½"	29½"	21 x 24"	14 x 24"	49	61.65
CPF-104-18	27"	18½"	36½"	28 x 19"	14 x 24"	52	70.72

†See quantity discount schedule on page 1.

TAPPED PANEL MOUNTING ANGLES AVAILABLE FOR ALL ABOVE FRAMES AT ADDITIONAL COST

© United Technical Publications

PREMIER MODULAR CABINET RACKS ROUNDED CORNER



WEDGE FRAMES

30° and 45° wedge shaped frames are designed for curved or wing type modular systems with vertical, sloping and pedestal frame assemblies. Completely welded steel with one piece top and bottom construction. Full sized removable rear panel is included. Note: One piece work and writing tops are available for all console assemblies utilizing wedge frames. Finished in all Premier standard colors. If not specified, Light Gray is furnished.

30° WEDGE FRAMES

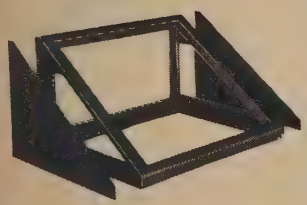
Cat. No.	Height	Depth	For Use With	Net Price (A)†
WED-30-42-22	48⅜"	22"	FA-42-22	$131.70
WED-30-52-22	59⅛"	22"	FA-52-22	142.26
WED-30-61-22	67⅞"	22"	FA-61-22	149.34
WED-30-70-22	76⅝"	22"	FA-70-22	160.05
WED-30-77-22	83⅜"	22"	FA-77-22	167.12
WED-30-42-255	48⅜"	25½"	FA-42-255	157.88
WED-30-52-255	59⅛"	25½"	FA-52-255	167.34
WED-30-61-255	67⅞"	25½"	FA-61-255	170.70
WED-30-70-255	76⅝"	25½"	FA-70-255	184.95
WED-30-77-255	83⅜"	25½"	FA-77-255	192.12
WED-30-101	29½"	22"	CPF-101, 103	110.31
WED-30-102	36½"	22"	CPF-102, 104	117.39
WED-30-101-18	29½"	18½"	CPF-101-18, 103-18	107.81
WED-30-101-255	29½"	25½"	CPF-101-255, 103-255	113.22
WED-30-1001	50"	22"	FS-1001 1003	142.52
WED-30-1002	47"	22"	FS-1002 1004	151.92
WED-30-1001-255	50"	25½"	FS-1001-255, 1003-255	152.12
WED-30-1002-255	47"	25½"	FS-1002-255, 1004-255	171.74

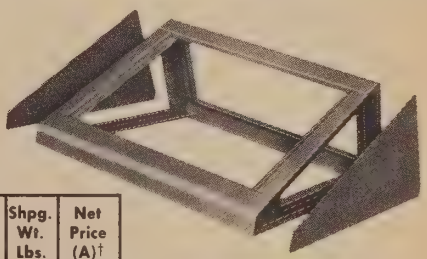
45° WEDGE FRAMES

Cat. No.	Height	Depth	For Use With	Net Price (A)†
WED-45-42-22	48⅜"	22"	FA-42-22	$135.22
WED-45-52-22	59⅛"	22"	FA-52-22	145.88
WED-45-61-22	67⅞"	22"	FA-61-22	153.00
WED-45-70-22	76⅝"	22"	FA-70-22	163.65
WED-45-77-22	83⅜"	22"	FA-77-22	170.64
WED-45-42-255	48⅜"	25½"	FA-42-255	162.17
WED-45-52-255	59⅛"	25½"	FA-52-255	169.58
WED-45-61-255	67⅞"	25½"	FA-61-255	174.29
WED-45-70-255	76⅝"	25½"	FA-70-255	188.60
WED-45-77-255	83⅜"	25½"	FA-77-255	195.60
WED-45-101	29½"	22"	CPF-101, 103	113.31
WED-45-102	36½"	22"	CPF-102, 104	120.97
WED-45-101-18	29½"	18½"	CPF-101-18, 103-18	111.99
WED-45-101-255	29½"	25½"	CPF-101-255, 103-255	116.34
WED-45-1001	50"	22"	FS-1001 1003	159.26
WED-45-1002	47"	22"	FS-1002 1004	173.46
WED-45-1001-255	50"	25½"	FS-1001-255, 1003-255	169.97
WED-45-1002-255	47"	25½"	FS-1002-255, 1004-255	189.80

TURRETS
FOR 19" & 24" PANELS

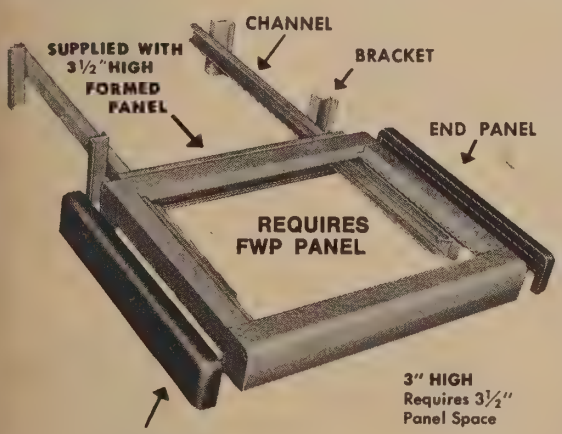
All turrets may be mounted on any of their 3 panel openings to vertical and pedestal frames for optimum viewing angles in sitting or standing positions. Frames are 16 ga. steel, completely welded. All panel openings are drilled and tapped for 10-32 screws on standard E.I.A. spacing in ½" recess. Turrets may be ganged for console assemblies. Furnished with flat steel side panels. Finished in all Premier standard colors.





Cat. No.	Width	Height	Depth	Sloped Front Panel Space	Rear Panel Space	Bottom Panel Space	Shpg. Wt. Lbs.	Net Price (A)†
TUR-1-19	22"	9¾"	21"	14" x 19"	7" x 19"	17½" x 19"	25	$38.90
TUR-1-24	27"	9¾"	21"	14" x 24"	7" x 24"	17½" x 24"	27	44.10
TUR-3-19	22"	12¼"	17½"	17½" x 19"	8¾" x 19"	14" x 19"	20	33.83
TUR-3-24	27"	12¼"	17½"	17½" x 24"	8¾" x 24"	14" x 24"	22	39.03

If not specified, Light Gray Frame with Smoke Blue Side Panels are furnished.



WRITING-WORK SHELF FRAMES

Completely welded 16 ga. steel. Supplied with channels and brackets for mounting into 3½" of panel space on all modular frames. Unit is supported internally and is furnished with 3½" high formed panel filler. May be used in multiple installations. Finished in all Premier standard colors.

If not specified, Light Gray Frame with Smoke Blue End Panels are furnished.

22" WIDE

To Fit 22" DEEP FRAMES					To Fit 25½" DEEP FRAMES		
Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	Top Panel Space	Depth	Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
WW-15-22	11	$37.59	10½" x 19"	15"	WW-15-255	12	$38.31
WW-18-22	12	39.47	14" x 19"	18½"	WW-18-255	13	40.27
WW-22-22	13	41.29	17½" x 19"	22"	WW-22-255	14	42.09

27" WIDE

WW-2715-22	14	$51.94	10½" x 24"	15"	WW-2715-255	15	$43.92
WW-2718-22	15	44.43	14" x 24"	18½"	WW-2718-255	16	45.15
WW-2722-22	16	45.70	17½" x 24"	22"	WW-2722-255	17	46.52

END PANELS FOR WRITING-WORK SHELF

Ball cornered panel made of welded 18 ga. steel; attaches to shelf with 2 captive screws. Finished in all Premier standard colors. If not specified, Smoke Blue is furnished.

Cat. No.	Lbs.	Used With	Net Price (A)
CEP-15	1½	WW-15-22, 15-255; 2715-22, 2715-255	$5.15
CEP-18	2	WW-18-22, 18-255; 2718-22, 2718-255	5.28
CEP-22	2½	WW-22-22, 22-255; 2722-22, 2722-255,	5.45

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER MODULAR CABINET RACKS ROUNDED CORNER

ORDERING GUIDES

Select the basic frame type and size in accordance with equipment space and panel space requirements, operating personnel "human engineering" needs and the general design factor desired. The final frame selections may then be used to order the proper doors, side panels and other required accessories, using the guides below.

General accessory items such as fans, blowers, slides, panels, drawers, shelves, chassis, hardware, etc. may be found on pages 19 through 30.

VERTICAL FRAMES



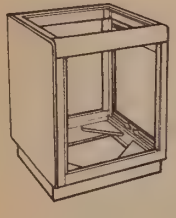
Cat. No.	Side Panels Plain Cat. No.	Side Panels Outside Removable Cat. No.	*Side Panels Hinged Cat. No.	Face Mounted Doors Cat. No.	Chassis Support Angles Cat. No.	Equipment Shelves Cat. No.	Sliding Work Shelves Cat. No.
FA-42-22	CEP-42-22	CEP-OR-42-22	CEP-H-42-22	DF-42	CSA-22	S-22-22	RDS-319-22
FA-52-22	CEP-52-22	CEP-OR-52-22	CEP-H-52-22	DF-52	CSA-22	S-22-22	RDS-319-22
FA-61-22	CEP-61-22	CEP-OR-61-22	CEP-H-61-22	DF-61	CSA-22	S-22-22	RDS-319-22
FA-70-22	CEP-70-22	CEP-OR-70-22	CEP-H-70-22	DF-70	CSA-22	S-22-22	RDS-319-22
FA-77-22	CEP-77-22	CEP-OR-77-22	CEP-H-77-22	DF-77	CSA-22	S-22-22	RDS-319-22
FA-42-255	CEP-42-255	CEP-OR-42-255	CEP-H-42-255	DF-42	CSA-255	S-22-255	RDS-319-22
FA-52-255	CEP-52-255	CEP-OR-52-255	CEP-H-52-255	DF-52	CSA-255	S-22-255	RDS-319-22
FA-61-255	CEP-61-255	CEP-OR-61-255	CEP-H-61-255	DF-61	CSA-255	S-22-255	RDS-319-22
FA-70-255	CEP-70-255	CEP-OR-70-255	CEP-H-70-255	DF-70	CSA-255	S-27-255	RDS-319-22
FA-77-255	CEP-77-255	CEP-OR-77-255	CEP-H-77-255	DF-77	CSA-255	S-22-255	RDS-319-22
FA-2761-22	CEP-61-22	CEP-OR-61-22	CEP-H-61-22	DF-2761	CSA-22	S-27-22	RDS-324-22
FA-2770-22	CEP-70-22	CEP-OR-70-22	CEP-H-70-22	DF-2770	CSA-22	S-27-22	RDS-324-22
FA-2777-22	CEP-77-22	CEP-OR-77-22	CEP-H-77-22	DF-2777	CSA-22	S-27-22	RDS-324-22
FA-2761-255	CEP-61-255	CEP-OR-61-255	CEP-H-61-255	DF-2761	CSA-255	S-27-255	RDS-324-22
FA-2770-255	CEP-70-255	CEP-OR-70-255	CEP-H-70-255	DF-2770	CSA-255	S-27-255	RDS-324-22
FA-2777-255	CEP-77-255	CEP-OR-77-255	CEP-H-77-255	DF-2777	CSA-255	S-22-255	RDS-324-22

SLOPED FRONT FRAMES



Cat. No.	*Side Panels Plain Cat. No.	*Side Panels Outside Removable Cat. No.	*Side Panels Hinged Cat. No.	Face Mounted Rear Door Cat. No.	Equipment Shelf Cat. No.	Chassis Support Angle Cat. No.	Sliding Work Shelf Cat. No.
FS-1001	CEP-1201	CEP-OR-1201	CEP-H-1201	DF-42	S-22-22	CSA-22	RDS-319-22
FS-1002	CEP-1202	CEP-OR-1202	CEP-H-1202	DF-42-1002	S-22-22	CSA-22	RDS-319-22
FS-1003	CEP-1201	CEP-OR-1201	CEP-H-1201	DF-2742	S-27-22	CSA-22	RDS-324-22
FS-1004	CEP-1202	CEP-OR-1202	CEP-H-1202	DF-2742-1002	S-27-22	CSA-22	RDS-324-22
FS-1001-255	CEP-1201-255	CEP-OR-1201-255	CEP-H-1201-255	DF-42	S-22-255	CSA-255	RDS-319-22
FS-1002-255	CEP-1202-255	CEP-OR-1202-255	CEP-H-1202-255	DF-42-1002	S-22-255	CSA-255	RDS-319-22
FS-1003-255	CEP-1201-255	CEP-OR-1201-255	CEP-H-1201-255	DF-2742	S-27-255	CSA-255	RDS-324-22
FS-1004-255	CEP-1202-255	CEP-OR-1202-255	CEP-H-1202-255	DF-2742-1002	S-27-255	CSA-255	RDS-324-22

PEDESTAL FRAMES



Cat. No.	Side Panel Plain Cat. No.	Side Panel Outside Removable Cat. No.	Front or Rear Flush Door Cat. No.	Equipment Shelf Cat. No.	Chassis Support Angles Cat. No.	Top Panel Cat. No.
CPF-101	CEP-401	CEP-OR-401	CD-21	S-22-22	CSA-22	FP-1719
CPF-102	CEP-402	CEP-OR-402	CD-28	S-22-22	CSA-22	FP-1719
CPF-103	CEP-401	CEP-OR-401	CD-2124	S-27-22	CSA-22	FP-1724
CPF-104	CEP-402	CEP-OR-402	CD-2824	S-27-22	CSA-22	FP-1724
CPF-101-34	CEP-401-34	CEP-OR-401-34	CD-21	—	—	FP-2919
CPF-101-255	CEP-401-255	CEP-OR-401-255	CD-21	S-22-255	CSA-255	FP-2119
CPF-102-255	CEP-402-255	CEP-OR-402-255	CD-28	S-22-255	CSA-255	FP-2119
CPF-103-255	CEP-401-255	CEP-OR-401-255	CD-2124	S-27-255	CSA-255	FP-2124
CPF-104-255	CEP-402-255	CEP-OR-402-255	CD-2824	S-27-255	CSA-255	FP-2124
CPF-101-18	CEP-401-18	CEP-OR-401-18	CD-21	S-22-18	CSA-18	FP-1419
CPF-102-18	CEP-402-18	CEP-OR-402-18	CD-28	S-22-18	CSA-18	FP-1419
CPF-103-18	CEP-401-18	CEP-OR-401-18	CD-2124	S-27-18	CSA-18	FP-1424
CPF-104-18	CEP-402-18	CEP-OR-402-18	CD-2824	S-27-18	CSA-18	FP-1424

TURRET FRAMES



Cat. No.	Sloped Front Panel Cat. No.	Rear Panel Cat. No.	Bottom Panel Cat. No.
TUR-1-19	**-1419	**-719	**-1719
TUR-3-19	**-1719	**-819	**-1419
TUR-1-24	**-1424	**-724	**-1724
TUR-3-24	**-1724	**-824	**-1424

**Use (Prefix) MAP for Masked Aluminum Panel
ARP for Painted Aluminum Panel
RP for Painted Steel Panel
FP for Formed Blank Panel
FPL for Formed Louvred Panel
PFP for Perforated Formed Steel Panel

WRITING WORK FRAMES



Cat. No.	Laminated Plastic Top Panel Cat. No.	Rounded End Panels Cat. No.
WW-15-22, WW-15-255	FWP-1019	CEP-15
WW-18-22, WW-18-255	FWP-1419	CEP-18
WW-22-22, WW-22-255	FWP-1719	CEP-22
WW-2715-22, WW-2715-255	FWP-1024	CEP-15
WW-2718-22, WW-2718-255	FWP-1424	CEP-18
WW-2722-22, WW-2722-255	FWP-1724	CEP-22

*SPECIFY LH or RH

For WEDGE ORDERING GUIDE see PAGE 5
For WORK WRITING SURFACES see PAGE 9
For BLOWERS and FANS see PAGES 27-28
For SLIDING DRAWERS see PAGE 21
For CHASSIS SLIDES see PAGE 26
For VARIOUS PANELS to fill panel openings see PAGES 19-20

© United Technical Publications

PREMIER MODULAR CABINET RACK ACCESSORIES

ROUNDED CORNERS

FINISHED IN ALL PREMIER STANDARD COLORS. IF NOT SPECIFIED, ALL DOORS AND SIDE PANELS ARE FURNISHED IN SMOKE BLUE.



SIDE PANELS FOR VERTICAL FRAMES — 1 11/32" DEEP

Ball cornered panels made of 1 piece 16 ga. steel, welded and reinforced for rigidity. Supplied blank, louvred available at additional cost.

		STANDARD PANELS Internally fastened with knurled screws		OUTSIDE REMOVABLE Externally mounted with ¼ turn captive fasteners		HINGED LH or RH Closed externally with ¼ turn captive fasteners	
Height	Width	Cat. No.	Net Price (A)†	Cat. No.	Net Price (A)†	Cat. No.	Net Price (A)†
45¼"	22"	CEP-42-22	$18.44	CEP-OR-42-22	$27.68	CEP-H-42-22	$32.26
55¾"	22"	CEP-52-22	22.06	CEP-OR-52-22	33.09	CEP-H-52-22	38.61
64½"	22"	CEP-61-22	24.39	CEP-OR-61-22	36.59	CEP-H-61-22	42.71
73¼"	22"	CEP-70-22	26.34	CEP-OR-70-22	39.54	CEP-H-70-22	46.11
80¼"	22"	CEP-77-22	27.68	CEP-OR-77-22	41.54	CEP-H-77-22	48.45
45¼"	25½"	CEP-42-255	21.48	CEP-OR-42-255	32.21	CEP-H-42-255	37.58
55¾"	25½"	CEP-52-255	25.13	CEP-OR-52-255	37.70	CEP-H-52-255	43.99
64½"	25½"	CEP-61-255	27.01	CEP-OR-61-255	40.53	CEP-H-61-255	47.28
73¼"	25½"	CEP-70-255	29.42	CEP-OR-70-255	44.16	CEP-H-70-255	51.48
80¼"	25½"	CEP-77-255	31.30	CEP-OR-77-255	46.95	CEP-H-77-255	54.77



SIDE PANELS FOR SLOPED FRONT FRAMES— 1 11/32" DEEP

Ball cornered panels made of 1 piece 16 ga. steel, welded and reinforced for rigidity. Supplied blank, louvred available at additional cost.

		STANDARD PANELS Internally fastened with knurled screws		OUTSIDE REMOVABLE Externally mounted with ¼ turn captive fasteners		HINGED LH or RH Closed externally with ¼ turn captive fasteners	
Height	Width	Cat. No.	Net Price (A)†	Cat. No.	Net Price (A)†	Cat. No.	Net Price (A)†
46⅝"	22"	CEP-1201 LH	$18.06	CEP-OR-1201 LH	$27.09	CEP-H-1201 LH	$31.64
46⅝"	22"	CEP-1201 RH	18.06	CEP-OR-1201 RH	27.09	CEP-H-1201 RH	31.64
43⅝"	22"	CEP-1202 LH	18.44	CEP-OR-1202 LH	27.68	CEP-H-1202 LH	32.26
43⅝"	22"	CEP-1202 RH	18.44	CEP-OR-1202 RH	27.68	CEP-H-1202 RH	32.26
46⅝"	25½"	CEP-1201-255 LH	20.89	CEP-OR-1201-255 LH	31.34	CEP-H-1201-255 LH	36.59
46⅝"	25½"	CEP-1201-255 RH	20.89	CEP-OR-1201-255 RH	31.34	CEP-H-1201-255 RH	36.59
43⅝"	25½"	CEP-1202-255 LH	20.47	CEP-OR-1202-255 LH	30.71	CEP-H-1202-255 LH	35.84
43⅝"	25½"	CEP-1202-255 RH	20.47	CEP-OR-1202-255 RH	30.71	CEP-H-1202-255 RH	35.84

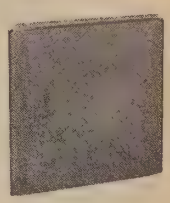
SIDE PANELS FOR PEDESTAL FRAMES — 1 11/32" DEEP

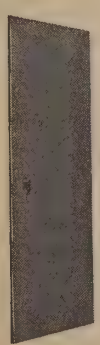
One piece 16 ga. steel, completely welded and reinforced. Supplied blank, louvred at additional cost. 400 Series is ball cornered.



		STANDARD PANELS Internally fastened with knurled screws		OUTSIDE REMOVABLE Externally mounted with ¼ turn captive fasteners	
Height	Width	Cat. No.	Net Price (A)†	Cat. No.	Net Price (A)†
26"	22"	CEP-401	$15.27	CEP-OR-401	$22.93
33"	22"	CEP-402	18.44	CEP-OR-402	27.68
26"	34½"	CEP-401-34	20.22	CEP-OR-401-255	25.56
26"	25½"	CEP-401-255	17.03	CEP-OR-402-255	27.72
33"	25½"	CEP-402-255	18.48		
26"	18½"	CEP-401-18	14.65		
23"	18½"	CEP-402-18	17.48		

Used only when work top is mounted between 2 pedestal frames. Externally fastened.			
H.	W.	Cat. No.	Net Price (A)†
23"	22"	CSS-701	$10.72
23"	34½"	CSS-701-34	14.16
23"	25½"	CSS-701-255	12.80
23"	18½"	CSS-701-18	9.60





SURFACE MOUNTED DOORS 13/16" DEEP for vertical and sloped front frames 16 ga. steel. 1 piece construction mounted with slip jointed hinges supplied with locking handle, 2 keys and latch bracket. May be mounted left or right handed. Supplied blank; louvred at additional charge. Specify hinged side when ordering louvred.

21½" WIDE				26½" WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	Height (A)	Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
DF-36	17	$23.39	40⅝"	DF-2736	23	$27.20
DF-42*	20	24.71	45⅝"	DF-2742	26	30.31
DF-52	25	28.00	56⅛"	DF-2752	31	33.11
DF-61	28	31.43	64 13/16"	DF-2761	34	36.27
DF-70	31	33.75	73⅛"	DF-2770	38	40.68
DF-77	34	35.91	80⅛"	DF-2777	41	42.15

32½" WIDE (DOUBLE DOORS with 3 Point Locking Device)

Cat. No.	Shpg. Wt. Lbs.	Height	Net Price (A)†
DF-3361	40	64 13/16"	$46.72
DF-3370	45	73⅛"	50.60
DF-3377	48	80⅛"	53.88

*Add suffix -1002 when used with FS-1002, 1002-255, 1004, 1004-255

FLUSH MOUNTED DOOR ½" DEEP for use with CPF, FS, FA, POR and CSC frames. 16 ga. steel, 1 piece construction. May be mounted left or right supplied with chrome plated handle and snap catch.

Cat. No.	Net Price (A)†	Height	Width	Shpg. Wt. Lbs.
CD-17	$11.12	17½"	19"	7
CD-21	11.92	21"	19"	8
CD-26	13.44	26¼"	19"	9
CD-28	14.16	28"	19"	10
CD-29	14.72	29¾"	19"	11
CD-42	23.88	42"	19"	16
CD-1724	13.44	17½"	24"	8
CD-2124	14.44	21"	24"	9
CD-2624	16.40	26¼"	24"	11
CD-2824	17.00	28"	24"	12
CD-2924	17.72	29¾"	24"	13
CD-4224	29.48	42"	24"	17

†See quantity discount schedule on page 1.

© United Technical Publications

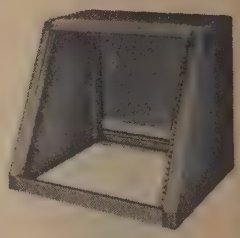
PREMIER DESK CABINET RACKS and ACCESSORIES

ROUNDED CORNERS

SLOPING INSTRUMENT CABINETS



Ball corner modular sloping desk top instrument cabinets constructed of 16 ga. steel. Front and rear panel openings recessed ½" and tapped for 10/32 screws on EIA spacing. Interlocking removable, perforated rear panel fastens with captive screws and furnished with 1¾" opening at bottom for leads. Assembly screws not visible externally. Shipped knocked down. Provisions are made for mounting to tops of Pedestal Frames. Designed to utilize CMS units below for multiple installations. Top, cross-piece and base finished in Light Gray enamel; Rear and side panels finished in Smoke Blue. Also available in all Premier standard colors.



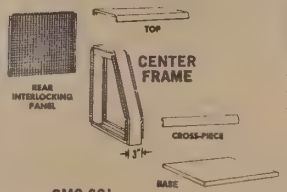
Cat. No.	W.	H.	D.	Slopped Panel Space	Front Vertical Panel Space	Rear Panel Space	Slope from Vertical	Bottom Panel Space	Shpg. Wt. Lbs.	Price Net (A)†
CSC-201	21¾"	18⅛"	18"	12¼x19"	3½x19"	15¾x19"	30°	—	35	$58.77
CSC-202	21¾"	18⅞"	18⅞"	17½x19"	—	15¾x19"	25°	15¾x19"	40	64.07



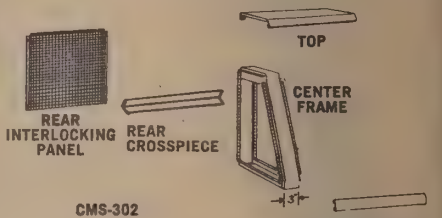
DESIGNED FOR MULTIPLE INSTALLATION

SLOPING INSTRUMENT CABINETS can be joined together to make multiple units by means of a center frame section which is bolted to the top, cross-piece and base. When ordering multiple units specify number of units, such as Double, Triple, etc.

One Triple CSC-201 consists of one CSC-201 and two CMS-301



CMS-301



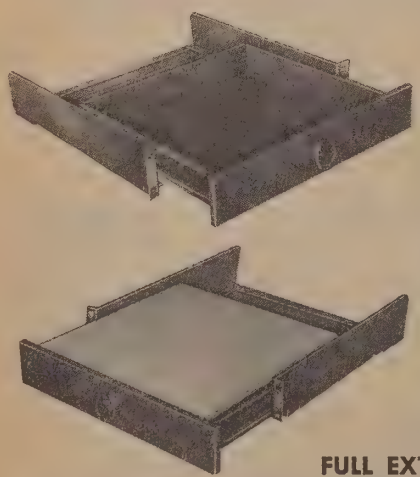
CMS-302
(No Base)

MULTIPLE SECTION for SLOPING CABINET

Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
CMS-301	26	$36.28
CMS-302	28	40.32

EACH MULTIPLE SECTION comprises 5 pieces as shown:

EXAMPLE: One Double CSC-201 consists of one CSC-201 and one CMS-301
One Triple CSC-201 consists of one CSC-201 and two CMS-301



SLIDING DRAWERS and SHELVES

Constructed of welded 16 ga. steel and suspended on roller bearing slides. Units are designed for use with all modular enclosures (CPF, FA, FS, MSF, POR, RMX, FDX Series). Units are furnished with drawer pull and complete hardware for easy installation. Sliding shelf supplied with Gray Linen Weave laminated plastic top surface. Cylinder lock (HW-6) available at additional cost. Finished in light gray enamel. Also available in all Premier standard colors. Please specify.

FULL EXTENSION SLIDES

SLIDING DRAWERS

Cat. No.	Formed Panel Size	Drawer Size W. D. H.	Shpg. Wt. Lbs.	Net Price (A)†
	FOR 19" WIDE PANEL SPACE			
D-1916	10⅜x18⅞x½"	16⅛x16x6"	23	$26.55
D-2016	6⅞x18⅞x½"	16⅛x16x6"	22	25.45
D-2316	3⅜x18⅞x½"	16⅛x16x2 11/16"	16	24.03
	FOR 24" WIDE PANEL SPACE			
D-2116	10⅜x23⅞x½"	21⅛x16x6"	25	$31.84
D-2216	6⅞x23⅞x½"	21⅛x16x6"	24	30.50
D-2416	3⅜x23⅞x½"	21⅛x16x2 11/16"	17	26.55

SLIDING SHELVES

Cat. No.	Formed Panel Size	Shelf Size	Shpg. Wt. Lbs.	Net Price (A)†
	FOR 19" WIDE PANEL SPACE			
RDS-319-22	3⅜x18⅞x½"	16 3/16x15 15/16"	20	$34.03
	FOR 24" WIDE PANEL SPACE			
RDS-324-22	3⅜x23⅞x½"	21 3/16x15 15/16"	22	$43.31

PANEL MOUNTING ANGLES 1¼" x 1¼"

For use where equipment of varied sizes require additional vertical supports in a modular enclosure.

Standard Panel Mounting Angles are constructed of 12 ga. (.104") steel and furnished with 9/32" clearance holes in both legs on E.I.A. spacing. Angles with 10-32 tapped holes in both legs on E.I.A. spacing are also available. Supplied in pairs with hardware for mounting in standard modular frames. Finished in Light Gray enamel.

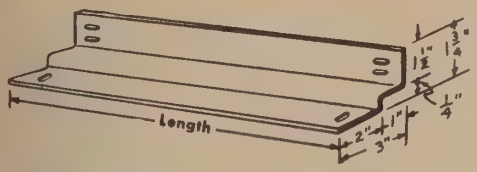
STANDARD			TAPPED	
Catalog No.	Net Price Pair (A)†	Height	Catalog No.	Net Price Pair (A)†
PMA-212	$7.48	21"	PMA-T-212	$8.21
PMA-282	9.79	28"	PMA-T-282	10.76
PMA-362	11.35	36¾"	PMA-T-362	12.48
PMA-422	12.97	42"	PMA-T-422	14.28
PMA-522	14.95	52½"	PMA-T-522	16.45
PMA-612	16.21	61¼"	PMA-T-612	17.84
PMA-702	18.23	70"	PMA-T-702	20.07
PMA-772	19.61	77"	PMA-T-772	21.57
PMA-802	20.63	80½"	PMA-T-802	22.68



†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER ACCESSORIES ROUNDED CORNER

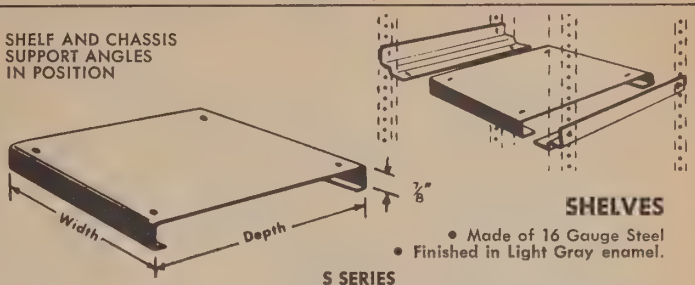


CHASSIS SUPPORT ANGLES

- Made of 12 ga. steel
- Accommodates Shelf (S Series)
- Finished in Light Gray enamel
- Mounts to clearance holes on side legs of Panel Mounting Angles of FA & PRXA series

Cat. No.	Length	To Fit Frames	Net Price (A)†
CSA-16	14⅛"	18" deep FDX, RMX	$4.49 pr.
CSA-18	16⅛"	18" deep PRXA, CPF	4.75 pr.
CSA-22	20⅛"	22" deep FA, CPF, MSF, FS & 24" deep FDX & RMX	5.31 pr.
CSA-24	22⅛"	24" deep PRXA	5.57 pr.
CSA-255	23⅛"	25½" deep FA, CPF, FS & MSF	5.83 pr.

SHELF AND CHASSIS SUPPORT ANGLES IN POSITION

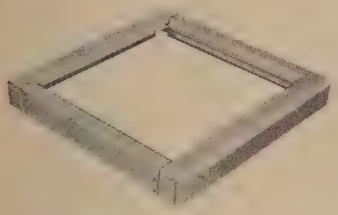


SHELVES

- Made of 16 Gauge Steel
- Finished in Light Gray enamel.

S SERIES

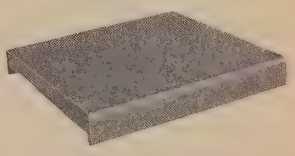
Cat No.	Depth	Width	To Fit Frames		Net Price (A)†
S-18-22	14¼"	17½"	22"Wx18"D	18" FDX, RMX	$3.43
S-22-22	20⅜"	17½"	22"Wx22"D	FA, FS, CPF, MSF	4.33
S-27-22	20⅜"	22½"	27"Wx22"D	FA, FS, CPF, MSF	5.62
S-22-255	23⅞"	17½"	22"Wx25½"D	FA, FS, CPF, MSF	5.10
S-27-255	23⅞"	22½"	27"Wx25½"D	FA, FS, CPF, MSF	6.43
S-22-18	16⅜"	17½"	22"Wx18"D	PRXA	3.72
S-27-18	16⅜"	22½"	27"Wx18"D	PRXA	4.59
S-33-18	16⅜"	28½"	33"Wx18"D	PRXA	6.04
S-22-24	22⅜"	17½"	22"Wx24"D	PRXA	4.79
S-27-24	22⅜"	22½"	27"Wx24"D	PRXA	6.04
S-33-24	22⅜"	28½"	33"Wx24"D	PRXA	7.50
S-33-22	20⅜"	28½"	33"Wx24"D	RMX-7030	6.99



WTO Series
Open Type

WORK TOPS FOR MULTIPLE ASSEMBLY
3" High

- Designed for mounting between two Pedestal Frames or when used with End Pedestal (PE Series).
- WTO accommodates formed or laminated plastic panels.
- USE SHORT END PANELS (CSS Series) FOR THIS INSTALLATION.
- Made of welded 16 gauge steel.
- Finished in Light Gray enamel. Also available in all Premier standard colors. Please specify.



CWT Series
Solid Type

OPEN TYPE

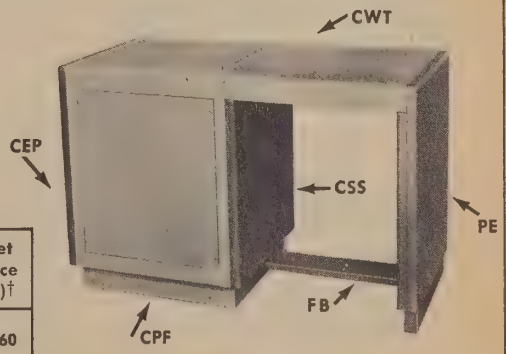
Cat. No.	Width	Depth	Panel Space	Shpg. Wt. Lbs.	Net Price (A)†
WTO-22-22	22"	22"	17½x19"	9½	$28.87
WTO-27-22	27"	22"	17½x24"	11	34.70
WTO-22-34	22"	34¼"	29¾x19"	12	44.94
WTO-22-255	22"	25½"	21 x19"	12	38.74
WTO-27-255	27"	25½"	21 x24"	13	40.78
WTO-22-18	22"	18½"	14 x19"	9	27.54

SOLID TYPE

Cat. No.	Width	Depth	Shpg. Wt. Lbs.	Net Price (A)†
CWT-601	22"	22"	14	$16.24
CWT-603	27"	22"	18	19.08
CWT-601-34	22"	34¼"	20	24.08
CWT-601-18	22"	18½"	12	15.08
CWT-601-255	22"	25½"	16	17.36

END PEDESTAL and FOOT BRACE FOR DOUBLE UNIT ASSEMBLY

- Made of welded, double walled 16 gauge steel.
- Ball cornered.
- End Pedestal mounts to Work Top CWT Series or WTO Series. Foot Brace mounts to Pedestal Frame CPF Series and End Pedestal PE-901.
- Foot Brace can be mounted between two Pedestal Frames (CPF or MSF Series).
- End Pedestal finished in Blue enamel; Also available in all Premier standard colors. Please specify.



END PEDESTAL

Cat. No.	Depth	Height	Shpg. Wt. Lbs.	Net Price (A)†
PE-901	22"	29½"	25	$31.54
PE-901-34	34¼"	29½"	30	47.30
PE-901-255	25½"	29½"	28	38.52
PE-901-18	18½"	29½"	22	30.00

FOOT BRACE

Cat. No.	Shpg. Wt. Lbs.	Used With	Net Price (A)†
FB-801	3	22" Wide Work Tops	$8.60
FB-802	3½	27" Wide Work Tops	9.28

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER MODULAR CABINET RACKS SQUARED CORNERED

Completely welded 14 ga. steel frame. Top and bottom are of one piece construction with rectangular opening in bottom for leads. Supplied with two pairs of 12 ga. steel panel mounting angles, fully adjustable front to rear. Angles have E.I.A. spaced clearance holes. 10-32 screws and captive nuts are furnished. Frames have provisions for ganging, cabling between frames, mounting doors front or rear (left or right handed), mounting casters in base, and mounting writing work frames. Finished in Light Gray enamel. Also available in all Premier standard colors. Please specify.



VERTICAL FRAMES 18" and 24" DEEP for 19", 24" and 30" PANEL WIDTHS

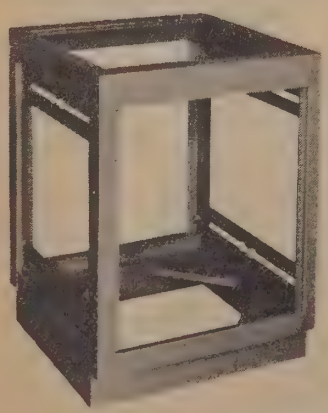
18" DEEP						24" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	Height	Width	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
PRXA-36	40	$69.76	42⅞"	22"	36¾x19"	PRXA-36-24	50	$75.00
PRXA-42	48	73.42	48⅞"	22"	42 x19"	PRXA-42-24	58	78.95
PRXA-52	60	76.14	58⅜"	22"	52½x19"	PRXA-52-24	72	81.91
PRXA-61	70	82.82	67⅜"	22"	61¼x19"	PRXA-61-24	85	89.11
PRXA-70	88	89.75	76⅛"	22"	70 x19"	PRXA-70-24	108	96.53
PRXA-77	100	94.55	83⅛"	22"	77 x19"	PRXA-77-24	120	101.69
PRXA-2761	100	93.50	67⅜"	22"	61¼x24"	PRXA-2761-24	134	100.55
PRXA-2770	104	105.83	76⅛"	27"	70 x24"	PRXA-2770-24	140	113.83
PRXA-2777	116	111.14	83⅛"	27"	77 x24"	PRXA-2777-24	156	119.43
PRXA-3361	122	112.23	67⅜"	33"	61¼x30"	PRXA-3361-24	162	120.67
PRXA-3370	126	127.02	76⅛"	33"	70 x30"	PRXA-3370-24	169	136.60
PRXA-3377	142	133.45	83⅛"	33"	77 x30"	PRXA-3377-24	190	143.40

ORDERING GUIDE

Vertical Frame Cat. No.	Flush Side Panel Cat. No.	Rounded Side Panel Cat. No.	Use Door Cat. No.	Use Chassis Support Angle	Use Shelf	Use Chassis Slides
PRXA-36	FL-36	SP-36	DF-36	CSA-18	S-2218	16"
PRXA-42	FL-42	SP-42	DF-42	CSA-18	S-2218	16"
PRXA-52	FL-52	SP-52	DF-52	CSA-18	S-2218	16"
PRXA-61	FL-61	SP-61	DF-61	CSA-18	S-2218	16"
PRXA-70	FL-70	SP-70	DF-70	CSA-18	S-2218	16"
PRXA-77	FL-77	SP-77	DF-77	CSA-18	S-2218	16"
PRXA-42-24	FL-36-24	SP-36-24	DF-36	CSA-24	S-2224	22"
PRXA-36-24	FL-42-24	SP-42-24	DF-42	CSA-24	S-2224	22"
PRXA-52-24	FL-52-24	SP-52-24	DF-52	CSA-24	S-2224	22"
PRXA-61-24	FL-61-24	SP-61-24	DF-61	CSA-24	S-2224	22"
PRXA-70-24	FL-70-24	SP-70-24	DF-70	CSA-24	S-2224	22"
PRXA-77-24	FL-77-24	SP-77-24	DF-77	CSA-24	S-2224	22"
PRXA-2761	FL-61	SP-61	DF-2761	CSA-18	S-2718	16"
PRXA-2770	FL-70	SP-70	DF-2770	CSA-18	S-2718	16"
PRXA-2777	FL-77	SP-77	DF-2777	CSA-18	S-2718	16"
PRXA-2761-24	FL-61-24	SP-61-24	DF-2761	CSA-24	S-2724	22"
PRXA-2770-24	FL-70-24	SP-70-24	DF-2770	CSA-24	S-2724	22"
PRXA-2777-24	FL-77-24	SP-77-24	DF-2777	CSA-24	S-2724	22"
PRXA-3361	FL-61	SP-61	DF-3361	CSA-18	S-3318	16"
PRXA-3370	FL-70	SP-70	DF-3370	CSA-18	S-3318	16"
PRXA-3377	FL-77	SP-77	DF-3377	CSA-18	S-3318	16"
PRXA-3361-24	FL-61-24	SP-61-24	DF-3361	CSA-24	S-3324	22"
PRXA-3370-24	FL-70-24	SP-70-24	DF-3370	CSA-24	S-3324	22"
PRXA-3377-24	FL-77-24	SP-77-24	DF-3377	CSA-24	S-3324	22"

Use Either Or

PEDESTAL FRAMES



- Frame made of 16 gauge steel completely welded.
- Supplied with two pair of No. 12 gauge steel Panel Mounting Angles on E.I.A. spacings.
- Screws and captive nuts supplied.
- Panel fits into ½" recess.
- Finished in Light Gray enamel. Also available in all Premier standard colors. Please specify.
- Frame accommodates square cornered end panels and flush doors.
- Units designed for multiple installation.
- Brackets welded in base and punched to accommodate casters.

PEDESTAL FRAME			Height with Casters	Height without Casters	Front & Rear Panel Space	Top Panel Space	Shpg. Wt. Lbs.	Net Price (A)†
Cat. No.	Width	Depth						
MSF-21-22	22"	22"	30"	29½"	21x19"	17½x19"	45	$59.70
MSF-28-22	22"	22"	37"	36½"	28x19"	17½x19"	50	68.70
MSF-21-255	22"	25½"	30"	29½"	21x19"	21 x19"	50	62.43
MSF-28-255	22"	25½"	37"	36½"	28x19"	21 x19"	55	71.77

ORDERING GUIDE

Pedestal Frame Cat. No.	Side Panel Cat. No.	Flush Door Cat. No.	Top Panel (Formed) Cat. No.	Top Panel Plastic Laminated Cat. No.	Shelf Cat. No.	Chassis Support Angle Cat. No.	Slide Length
MSF-21-22	MSP-21-22	CD-21	FP-1719	FWP-1719	S-22-22	CSA-22	20"
MSF-28-22	MSP-28-22	CD-28	FP-1719	FWP-1719	S-22-22	CSA-22	20"
MSF-21-255	MSP-21-255	CD-21	FP-2119	FWP-2119	S-22-255	CSA-255	24"
MSF-28-255	MSP-28-255	CD-28	FP-2119	FWP-2119	S-22-255	CSA-255	24"

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER MODULAR CABINET RACK ACCESSORIES

SQUARE CORNERED



½" DEEP SIDE PANELS

- Fits into side recess of frames 18" and 24" deep.
- Made of one piece of 16 gauge steel and reinforced.
- Clips on to horizontal side section of frame.
- Finished in Smoke Blue enamel. Also available in all Premier standard colors.

SIDE PANELS (Rounded)

Cat. No.	Height	Width	Shpg. Wt. Lbs.	Net Price (A)†
SP-36	42¾"	15"	19	$17.11
SP-42	48"	15"	20	18.05
SP-52	58½"	15"	21	20.31
SP-61	67¼"	15"	23	23.51
SP-70	76"	15"	26	25.27
SP-77	83"	15"	28	27.18
SP-36-24	42¾"	21"	21	22.33
SP-42-24	48"	21"	22	23.28
SP-52-24	58½"	21"	25	25.53
SP-61-24	67¼"	21"	28	28.22
SP-70-24	76"	21"	31	30.28
SP-77-24	83"	21"	34	32.75

SIDE PANELS (Flush)

Cat. No.	Height	Width	Shpg. Wt. Lbs.	Net Price (A)†
FL-36	42¾"	15"	18	$14.91
FL-42	48"	15"	19	15.79
FL-52	58½"	15"	21	17.89
FL-61	67¼"	15"	22	20.83
FL-70	76"	15"	25	22.47
FL-77	83"	15"	27	24.24
FL-36-24	42¾"	21"	20	19.69
FL-42-24	48"	21"	21	20.63
FL-52-24	58½"	21"	24	22.72
FL-61-24	67¼"	21"	27	25.12
FL-70-24	76"	21"	30	27.14
FL-77-24	83"	21"	33	29.28



SQUARE SIDE PANELS FOR PEDESTAL FRAMES—13/16" DEEP

- Made of one piece of 16 gauge steel and reinforced.
- End panels attach to frame by a bracket on bottom and two captive screws.
- Finished in Smoke Blue enamel. Also available in all Premier standard colors. Please specify.

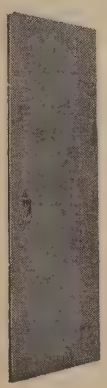
22" Wide for 22" Deep Frames				25½" Wide for 25½" Deep Frames		
Cat. No.	To Fit Frame No.	Net Price (A)†	Height (A)	Cat. No.	To Fit Frame No.	Net Price (A)†
MSP-21-22	MSF-21-22	$13.24	26"	MSP-21-255	MSF-21-255	$15.20
MSP-28-22	MSF-28-22	15.20	33"	MSP-28-255	MSF-28-255	17.16

FLUSH DOORS FOR PEDESTAL FRAMES—½" DEEP

For Frames MSF Series.

- Made of 16 gauge steel
- Finished in Smoke Blue enamel. Also available in all Premier standard colors. Please specify.
- Doors can be mounted either left or right hand by rotating door 180°
- Hinge brackets are punched to accommodate panel mounting angles on cabinets
- Furnished with attractive round chrome plated handle and snap catch.

Cat. No.	Height	Width	Shpg. Wt. Lbs.	Net Price (A)†
CD-21	21"	19"	8	$11.92
CD-28	28"	19"	10	14.16



SURFACE MOUNTED DOORS 13/16" DEEP

For vertical frames 16 ga. steel. 1 piece construction mounted with slip jointed hinges supplied with locking handle and 2 keys and latch bracket. May be mounted left or right handed. Supplied blank; louvred at additional charge. Specify hinged side when ordering louvred. Finished in Smoke Blue enamel. Also available in all Premier standard colors. Please specify.

DOORS FOR VERTICAL FRAMES

21½" WIDE			Height (A)	26½" WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†		Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
DF-36	17	$23.39	40 5/16"	DF-2736	23	$27.20
DF-42*	20	24.71	45 5/16"	DF-2742	26	30.31
DF-52	25	28.00	56 1/16"	DF-2752	31	33.11
DF-61	28	31.43	64 13/16"	DF-2761	34	36.27
DF-70	31	33.75	73 9/16"	DF-2770	38	40.68
DF-77	34	35.91	80 5/16"	DF-2777	41	42.15

32½" WIDE (DOUBLE DOORS with 3 Point Locking Device)	Cat. No	Shpg. Wt. Lbs.	Height	Net Price (A)†
	DF-3361	40	64 13/16"	$46.72
	DF-3370	45	73 9/16"	50.60
	DF-3377	48	80 5/16"	53.88

*Add suffix -1002 when used with FS-1002, 1002-255, 1004, 1004-255

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER HEAVY DUTY RACKS



FDX SERIES



RMX SERIES

FOR 19", 24" AND 30" RACK PANELS— 18" AND 24" DEEP

FINISHED IN ALL PREMIER STANDARD COLORS. IF NOT SPECIFIED, SMOKE BLUE IS FURNISHED.

Rigidly constructed of 16 ga. steel with a 12 ga. steel bottom and welded throughout. Supplied with two pair of 12 ga. steel panel mounting angles fully adjustable front to rear with clearance holes on E.I.A. spacing to accommodate panels, chassis support angles and shelves. 10-32 x 1" screws and captive nuts are furnished.

- Rear doors are hung on sturdy slip-jointed hinges and closed with a chrome handle. Locking handle with 2 keys available at additional cost.
- Round hole and 5 mounting holes on top of frame to accommodate Exhaust (EF Series) and Intake (IF Series) Fans available at additional cost.
- A rectangular cut-out is made in the bottom for leads, etc.
- RMX-7030 Rack supplied with double rear doors and with a 3-point locking device.
- FDX Series are furnished with locking handle and 2 keys on Front Door.
- ALL RACKS ARE SUPPLIED WITHOUT LOUVRES ON SIDES UNLESS SPECIFIED. Louvres available at additional cost.
- Vertical rounded corner "J" type moldings are supplied with RMX series.
- When joining RMX racks for multiple installation, specify amount of center "U" type moldings (supplied at no additional cost). EXAMPLE: Three RMX-3619 requires two "J" and two "U" moldings.
- A heavy duty duplex "U" ground receptacle and outlet box are furnished in the rear under the door.
- Accommodates accessories, fans, blowers, slides, etc.

18" DEEP RACKS					18" DEEP RACKS WITH FRONT AND REAR DOORS		
Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	H & W	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
RMX-3619	100	$94.00	42⅞x22"	36¾x19"	FDX-3619	115	$105.83
RMX-4219	130	99.10	48⅛x22"	42 x19"	FDX-4219	120	111.57
RMX-6119	150	115.41	67⅜x22"	61¼x19"	FDX-6119	175	131.28
RMX-7019	170	124.78	76⅛x22"	70 x19"	FDX-7019	200	141.77
RMX-7719	190	131.70	83⅛x22"	77 x19"	FDX-7719	220	149.81
24" DEEP RACKS					**24" DEEP RACKS WITH FRONT AND REAR DOORS**		
RMX-3619-24	110	$99.35	42⅞x22"	36¾x19"	FDX-3619-24	125	$111.14
RMX-4219-24	130	104.65	48⅛x22"	42 x19"	FDX-4219-24	150	117.11
RMX-6119-24	175	121.74	67⅜x22"	61¼x19"	FDX-6119-24	200	137.56
RMX-7019-24	200	131.53	76⅛x22"	70 x19"	FDX-7019-24	255	148.54
RMX-7719-24	225	138.89	83⅛x22"	77 x19"	FDX-7719-24	270	157.02
RMX-2742	170	125.38	48⅛x27"	42 x24"	FDX-2742	180	140.69
RMX-2761	210	138.14	67⅜x27"	61¼x24"	FDX-2761	230	156.46
RMX-2770	240	155.96	76⅛x27"	70 x24"	FDX-2770	260	176.48
RMX-2777	270	163.21	83⅛x27"	77 x24"	FDX-2777	290	184.49
RMX-7030	240	194.92	76⅛x33"	70 x30"			

ORDERING GUIDE

Frame Cat. No.		Frame Cat. No.	Chassis Support Angle (Page 00) Cat. No.	Shelves (Page 00) Cat. No.	Use Chassis Slides (length) (Page 00)	Use Roller Truck (Page 00) Cat. No.
RMX-3619		FDX-3619	CSA-16	S-18-22	14"	RT-1101 or RT-1101-3*
RMX-4219		FDX-4219	CSA-16	S-18-22	14"	RT-1101 or RT-1101-3*
RMX-6119		FDX-6119	CSA-16	S-18-22	14"	RT-1101 or RT-1101-3*
RMX-7019		FDX-7019	CSA-16	S-18-22	14"	RT-1101 or RT-1101-3*
RMX-7719		FDX-7719	CSA-16	S-18-22	14"	RT-1101 or RT-1101-3*
RMX-3619-24		FDX-3619-24	CSA-22	S-22-22	20"	RT-1103 or RT-1103-3*
RMX-4219-24		FDX-4219-24	CSA-22	S-22-22	20"	RT-1103 or RT-1103-3*
RMX-6119-24	OR	FDX-6119-24	CSA-22	S-22-22	20"	RT-1103 or RT-1103-3*
RMX-7019-24		FDX-7019-24	CSA-22	S-22-22	20"	RT-1103 or RT-1103-3*
RMX-7719-24		FDX-7719-24	CSA-22	S-22-22	20"	RT-1103 or RT-1103-3*
RMX-2742		FDX-2742	CSA-22	S-27-22	20"	RT-1110 or RT-1110-3*
RMX-2761		FDX-2761	CSA-22	S-27-22	20"	RT-1110 or RT-1110-3*
RMX-2770		FDX-2770	CSA-22	S-27-22	20"	RT-1110 or RT-1110-3*
RMX-2777		FDX-2777	CSA-22	S-27-22	20"	RT-1110 or RT-1110-3*
RMX-7030		FDX-7030	CSA-22	S-33-22	20"	FT-1111 or RT-1111-3*

†See quantity discount schedule on page 1.

*3"dia. caster

© United Technical Publications

PREMIER HEAVY DUTY CUBICLES

FOR STANDARD 19, 24 and 30" WIDE PANELS

- Rugged seam welded 12 ga. steel frame with exclusive corner construction.
- Supplied with 10-32 tapped holes on EIA spacings (⅝-⅝-½") on both legs of all vertical uprights.
- Top of frame supplied with knock-out in each corner to accommodate eye bolts for lifting.
- Top and side panels and doors made of No. 14 gauge steel and supplied with a return flange on all sides for easy gasketing.
- Doors and/or side panels can be mounted to any openings of frame.
- Additional adjustable panel mounting angles accommodated by installing horizontal cross pieces (HCP Series).
- If not specified, Light Gray Frames with Smoke Blue Doors and Panels are furnished.

FRAMES 23" WIDE for 19" PANELS

Overall Height	Panel Height	23" Deep Cat. No.	Net Price (A)†	28" Deep Cat. No.	Net Price (A)†	34" Deep Cat. No.	Net Price (A)†
40¾"	36¾"	POC-36-23-23	$ 97.54	POC-36-23-28	$101.07	POC-36-23-34	$107.67
46"	42"	POC-42-23-23	101.07	POC-42-23-28	106.57	POC-42-23-34	113.18
65¼"	61¼"	POC-61-23-23	120.70	POC-61-23-28	126.15	POC-61-23-34	132.69
74"	70"	POC-70-23-23	129.30	POC-70-23-28	134.77	POC-70-23-34	141.14
81"	77"	POC-77-23-23	136.84	POC-77-23-28	142.24	POC-77-23-34	148.77
84½"	80½"	POC-80-23-23	141.14	POC-80-23-28	146.53	POC-80-23-34	152.85

FRAMES 28" WIDE for 24" PANELS

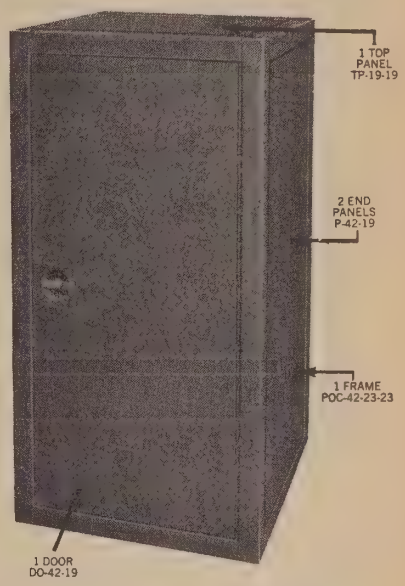
40¾"	36¾"	—	—	POC-36-28-28	$106.57	POC-36-28-34	$113.18
46"	42"	—	—	POC-42-28-28	111.99	POC-42-28-34	118.67
65¼"	61¼"	—	—	POC-61-28-28	131.45	POC-61-28-34	137.92
74"	70"	—	—	POC-70-28-28	140.08	POC-70-28-34	146.54
81"	77"	—	—	POC-77-28-28	147.61	POC-77-28-34	154.09
84½"	80½"	—	—	POC-80-28-28	151.93	POC-80-28-34	158.40

FRAMES 34" WIDE for 30" PANELS

40¾"	36¾"	—	—	—	—	POC-36-34-34	$119.69
46"	42"	—	—	—	—	POC-42-34-34	125.15
65¼"	61¼"	—	—	—	—	POC-61-34-34	144.38
74"	70"	—	—	—	—	POC-70-34-34	152.85
81"	77"	—	—	—	—	POC-77-34-34	160.56
84½"	80½"	—	—	—	—	POC-80-34-34	164.96

†See quantity discount schedule on page 1.

SPECIFICALLY DESIGNED FOR UNUSUALLY HEAVY EQUIPMENT



ACCESSORIES FOR HEAVY DUTY CUBICLES

END PANELS

Blank and Louvred—¾" DEEP. Made of No. 14 gauge steel with return bend for easy gasketing. Fit flush with frame.

19" WIDE

Blank Cat. No.	Net Price (A)†	Height	Louvred Cat. No.	Net Price (A)†
P-36-19	$24.15	36¾"	PL-36-19	$32.74
P-42-19	26.36	42"	PL-42-19	34.90
P-61-19	34.94	61¼"	PL-61-19	43.52
P-70-19	38.42	70"	PL-70-19	46.99
P-77-19	44.19	77"	PL-77-19	49.99
P-80-19	43.12	80½"	PL-80-19	51.71

24" WIDE

Blank Cat. No.	Net Price (A)†	Height	Louvred Cat. No.	Net Price (A)†
P-36-24	$26.75	36¾"	PL-36-24	$34.46
P-42-24	28.07	42"	PL-42-24	36.66
P-61-24	36.75	61¼"	PL-61-24	46.16
P-70-24	40.08	70"	PL-70-24	48.75
P-77-24	43.12	77"	PL-77-24	51.71
P-80-24	44.88	80½"	PL-80-24	53.51

30" WIDE

Blank Cat. No.	Net Price (A)†	Height	Louvred Cat. No.	Net Price (A)†
P-36-30	$28.91	36¾"	PL-36-30	$37.58
P-42-30	31.07	42"	PL-42-30	39.64
P-61-30	39.70	61¼"	PL-61-30	48.31
P-70-30	43.12	70"	PL-70-30	51.71
P-77-30	46.11	77"	PL-77-30	54.74
P-80-30	47.87	80½"	PL-80-30	59.16

DOORS

Blank and Louvred

- Made of No. 14 gauge steel
- Fit flush with frame.
- Supplied with 3 point latching device and round flush handle

19, 24 and 30" WIDE

Blank	Net Price (A)†	Height	Width	Louvred	Net Price (A)†
DO-36-19	$39.87	36¾"	19"	DOL-36-19	$49.68
DO-36-24	44.00	36¾"	24"	DOL-36-24	52.59
DO-36-30	48.11	36¾"	30"	DOL-36-30	57.78
DO-42-19	44.71	42"	19"	DOL-42-19	53.38
DO-42-24	47.62	42"	24"	DOL-42-24	56.28
DO-42-30	51.92	42"	30"	DOL-42-30	60.28
DO-61-19	58.83	61¼"	19"	DOL-61-19	67.94
DO-61-24	62.31	61¼"	24"	DOL-61-24	71.82
DO-61-30	67.46	61¼"	30"	DOL-61-30	76.74
DO-70-19	65.22	70"	19"	DOL-70-19	74.54
DO-70-24	68.16	70"	24"	DOL-70-24	76.83
DO-70-30	73.27	70"	30"	DOL-70-30	81.94
DO-77-19	70.36	77"	19"	DOL-77-19	78.94
DO-77-24	73.27	77"	24"	DOL-77-24	81.94
DO-77-30	78.42	77"	30"	DOL-77-30	87.03
DO-80-19	73.27	80½"	19"	DOL-80-19	81.94
DO-80-24	76.26	80½"	24"	DOL-80-24	84.83
DO-80-30	81.31	80½"	30"	DOL-80-30	89.94

TOP & BOTTOM PANELS

Size	Blank Cat. No.	Net Price (A)†	Louvred Cat. No.	Net Price (A)†
19 x 19"	TP-19-19	$16.41	TPL-19-19	$21.79
19 x 24"	TP-19-24	18.57	TPL-19-24	23.99
19 x 30"	TP-19-30	21.12	TPL-19-30	26.40
24 x 24"	TP-24-24	20.68	TPL-24-24	25.83
24 x 30"	TP-24-30	23.28	TPL-24-30	28.07
30 x 30"	TP-30-30	25.92	TPL-30-30	31.28

PANEL MOUNTING ANGLES

12 gauge steel; tapped 10-32 on E.I.A. spacings

Length	Cat. No.	Net Price (A)†
36¾"	PMAT-362	$12.48 pr.
42"	PMAT-422	14.28 pr.
61¼"	PMAT-612	17.84 pr.
70"	PMAT-702	20.07 pr.
77"	PMAT-772	21.57 pr.
80½"	PMAT-802	22.68 pr.

HORIZONTAL CROSS PIECES

4 required for 36¾" and 42" vertical panel space.
6 required for 61¼"—80½" vertical panel space.

Fits Frame Depth	Cat. No.	Net Price (A)†
23"	HCP-23	$2.87
28"	HCP-28	3.39
34"	HCP-34	3.96

ROLLER TRUCKS

with 4" Diameter Rockite Casters
Fits into recess in bottom of frame

Size	Cat. No.	Net Price (A)†
19 x 19"	CRT 19-19	$60.43
19 x 24"	CRT 19-24	62.88
19 x 30"	CRT 19-30	65.76
24 x 24"	CRT 24-24	65.28
24 x 30"	CRT 24-30	68.16
30 x 30"	CRT 30-30	71.10

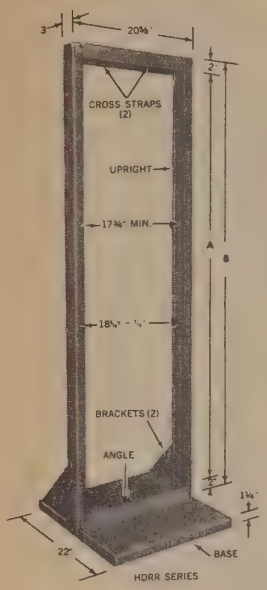
EYE BOLTS

2" Dia. — Cat. No. EB-2 — Net Price (A)† $5.80 set/4

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER CHANNEL RELAY RACKS



HEAVY DUTY RELAY RACK *Meets MIL-STD-189*

- Uprights and top cross strips made of 3/16" sheet steel.
- Base and Brackets made of No. 12 gauge sheet steel.
- Base angle made of 2 x 2 x 3/16" steel.
- Panel mounting holes are tapped 10-32 on E.I.A. spacings (1¼"-½").
- Finished in all Premier Standard Colors. If not specified, Smoke Blue is furnished.
- Shipped knocked down and assembled with ¼-20 x ¾" long hex head cap screws and nuts.

Catalog No.	Panel Space (A)	Frame Height (B)	Net Price (A)†
HDRR-6619	66 21/32"	71 29/32"	$67.53
HDRR-7319	73 21/32"	78 29/32"	73.53
HDRR-7719	77 5/32"	82 13/32"	77.64

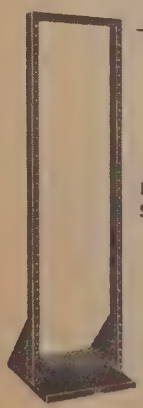


RR-2100 Series

DELUXE UTILITY RACKS

- Made of No. 12 gauge (.104) steel tapped 10-32 on EIA spacings (⅝—⅝—½) both front and rear.
- Uprights 8⅛" deep.
- Panels fit into ½" Recess. Either flat or Formed Panels may be used.
- Top perforated for ventilation when closed front and rear.
- Racks can be bolted side by side.
- There are no screw heads projecting.
- Vertical members and top cross piece are welded together.
- The base and rear supports are shipped knocked down.
- Finished in Smoke Blue.

FOR 19" WIDE PANELS						FOR 24" WIDE PANELS				
Cat. No.	Width	Panel Space	Shpg. Wt. Lbs.	Net Price (A)†	Height	Cat. No.	Width	Panel Space	Shpg. Wt. Lbs.	Net Price (A)†
RR-2164	21 1/16"	61¼x19"	85	$45.42	64½"	RR-2664	26 1/16"	61¼x24"	100	$58.54
RR-2173	21 1/16"	70 x19"	90	48.98	73¼"	RR-2673	26 1/16"	70 x24"	105	62.09
RR-2180	21 1/16"	77 x19"	95	53.69	80¼"	RR-2680	26 1/16"	77 x24"	105	66.85



RR SERIES

CHANNEL RELAY RACKS

- Rigidly constructed of #12 gauge cold rolled sheet steel and finished in Smoke Blue.
- Vertical members and top crossbrace are welded together.
- Panel mounting holes are tapped for 10/32 machine screws on E.I.A. spacings (⅝-⅝-½).
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Base punched to accommodate CA-4 (2") and CA-5 (3") casters.

Cat. No.	H.	W.	D.	Panel Space	Shpg. Wt. Lbs.	Net Price (B)†
RR-800	39¼"	20"	18⅜"	36¾"x19"	40	$28.30
RR-801	74¼"	20"	20⅞"	71¾"x19"	55	33.65
RR-802	79½"	20"	20⅞"	77" x19"	60	38.99
RR-803	69"	20"	20⅞"	66½"x19"	50	32.35



TR SERIES

TABLE TYPE RELAY RACKS

TR SERIES

- Rigidly constructed of #16 gauge cold rolled sheet steel and finished in Smoke Blue.
- Base constructed of one piece, similar to a chassis.
- Panel mounting holes are tapped for 10/32 machine screws on E.I.A. spacings (⅝-⅝-½").
- Racks are shipped knocked down with all necessary bolts for easy assembly.

Cat. No.	H.	W.	D.	Panel Space	Shpg. Wt. Lbs.	Net Price (B)†
TR-2119	25"	21"	12"	21x19"	17	$12.50
TR-2819	32"	21"	12"	28x19"	20	15.00

†See quantity discount schedule on page 1.

PREMIER PAGE 14

© United Technical Publications

PREMIER CABINET RELAY RACKS

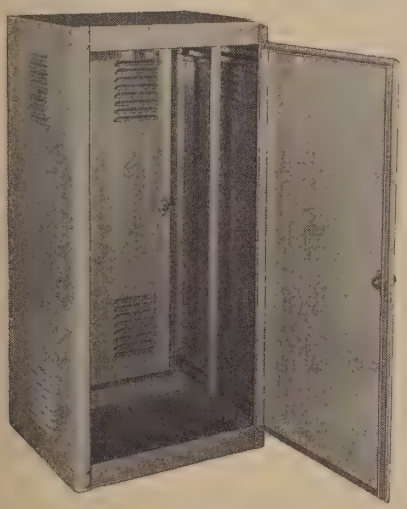


R SERIES

FRONT DOORS AVAILABLE
See Page 28

DR SERIES





FXR SERIES

R SERIES—has front vertical rounded corners.

DR SERIES—has removable rounded front corner mouldings to conceal panel edges and mounting screws. Tops and bottoms are trimmed with chrome mouldings. Top rear has 2 rows of perforations for additional ventilation.

FXR SERIES—front vertical corners are rounded. Front door supplied with locking chrome handle and two keys.

All units supplied with rear doors hung on sturdy slip-jointed hinges, and closed by a chrome handle. Locking handle with 2 keys is available at additional cost.

Panel mounting angles for the R and DR Series are of 12 ga. steel, welded at front of cabinet to form a 5/16" panel recess. Holes are drilled and tapped for 10-32 screws on E.I.A. spacing. FXR Series is supplied with 2 pairs of 12 ga. panel mounting angles fully adjustable front to rear with clearance holes on E.I.A. spacing for additional flexibility to mount accessories. 10-32 screws and captive nuts are furnished.

Rigidly constructed of 16 gauge steel.

Racks are shipped knocked down with all necessary bolts for assembly.

Holes provided in bottom to accommodate casters. Modifications and accessories are available.

Finished in Smoke Blue enamel. Also available in all Premier standard colors. Please specify.

RACKS ARE 22" WIDE x 18" DEEP

	Cat. No.	Overall Height	Panel Space	Use Slide Length*	Shpg. Wt.-Lbs.	Net Price (A)†
R SERIES	R-3619	41 7/8"	36 3/4"	16"	80	$52.60
	R-4219	47 1/8"	42"	16"	90	59.54
	R-6119	66 3/8"	61 1/4"	16"	120	71.80
	R-7719	82 1/8"	77"	16"	140	85.74
DR SERIES	DR-3619	43 1/8"	36 3/4"	16"	85	59.43
	DR-4219	48 3/8"	42"	16"	100	68.11
	DR-6119	67 5/8"	61 1/4"	16"	135	83.80
	DR-7719	83 3/8"	77"	16"	160	98.43
FXR SERIES	FXR-3619	41 7/8"	36 3/4"	16"	93	73.42
	FXR-4219	47 1/8"	42"	16"	105	79.20
	FXR-6119	66 3/8"	61 1/4"	16"	140	105.09
	FXR-7719	82 1/8"	77"	16"	164	124.16

	Cat. No.	Overall Height	Panel Space	Use Slide Length*	Used With	Net Price (A)†
MULTIPLE RACK SERIES	MR-3619	41 7/8"	36 3/4"	16"	R-3619	$46.02
	MR-4219	47 1/8"	42"	16"	R-4219	53.75
	MR-6119	66 3/8"	61 1/4"	16"	R-6119	69 34
	MR-7719	82 1/8"	77"	16"	R-7719	82.57
	DMR-3619	43 1/8"	36 3/4"	16"	DR-3619	60.31
	DMR-4219	48 3/8"	42"	16"	DR-4219	64.63
	DMR-6119	67 5/8"	61 1/4"	16"	DR-6119	71.98
	DMR-7719	83 3/8"	77"	16"	DR-7719	85.89
	MXR-3619	41 7/8"	36 3/4"	16"	FXR-3619	64.55
	MXR-4219	47 1/8"	42"	16"	FXR-4219	74.60
	MXR-6119	66 3/8"	61 1/4"	16"	FXR-6119	93.62
	MXR-7719	82 1/8"	77"	16"	FXR-7719	113.75

*Use Slide Adapter Kit (Cat. No. SAK-35) for rear mounting.

†See quantity discount schedule on page 1.

MULTIPLE RACK UNITS

These racks can be joined together to make multiple units by a solid center partition which is bolted to the top and bottom. Each multiple section comprises a top, bottom, rear door and center partition. On MXR Models, front door is also supplied. When ordering multiple units, specify number of units, such as double, triple, quad, etc.



ONE DOUBLE DR3619 EXAMPLE:

One Double DR-3619 consists of one DR-3619 and one DMR-3619. One Triple FXR-3619 consists of one FXR-3619 and two MXR-3619. One Quad R-3619 consists of one R-3619 and three MR-3619.

© United Technical Publications

PREMIER DESK INSTRUMENT CABINETS



POR Series

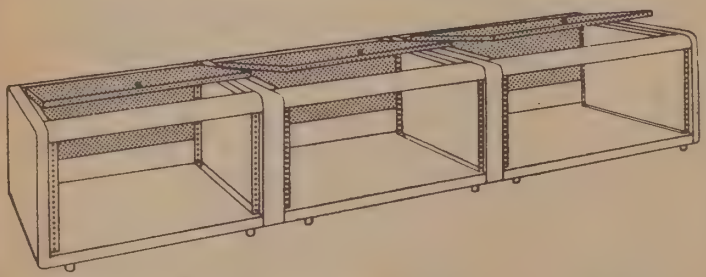
15¼" and 18" DEEP FOR STANDARD 19" WIDE PANELS

- Sides are attractively ball cornered.
- All screws for assembling cabinets are not visible from the outside.
- Both front and rear verticals are tapped for 10/32 machine screws on E.I.A. spacings so that panels may be mounted on both front and rear if desired.
- Interlocking removable top made of perforated metal and held in place by only one captive screw.
- Interlocking removable rear panel made of perforated metal and held in place by two captive screws.
- Rigidly constructed of 16 ga. steel.
- Rear Panel has 3½" opening on bottom for leads, etc., except on POR-3, 318, 5, 518.
- Panels fit into ½" recess.
- Base supplied with four rubber feet.
- Components may be mounted on base before assembly of rack into a complete unit.
- Shipped knocked down with all necessary hardware for easy assembly.

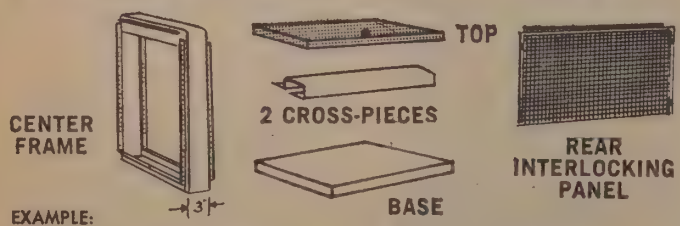
- HANDSOMELY FINISHED IN TWO-TONE SMOKE BLUE AND LIGHT GRAY ENAMEL.
  Top cross braces and base are Light Gray.
  Top and rear panel and side panels are Smoke Blue.
  Also available in other colors at additional cost. Specify color when ordering.

FRONT OR REAR DOORS AVAILABLE (CD Series) See Page 7

15¼" DEEP				ALL CABINETS ARE 21¾" WIDE		18" DEEP			
Catalog No.	Shpg. Wt. Lbs.	Use Slide Length	Net Price (B)†	Overall Height	Panel Space	Catalog No.	Shpg. Wt. Lbs.	Use Slide Length	Net Price (B)†
POR-3	18	14"	$34.40	5⅞"	3½"	POR-318	20	16"	$37.15
POR-5	20	14"	37.10	7⅝"	5¼"	POR-518	22	16"	41.95
POR-7	22	14"	39.37	9⅜"	7"	POR-718	24	16"	42.95
POR-8	24	14"	41.90	11⅛"	8¾"	POR-818	26	16"	43.90
POR-10	26	14"	45.69	12⅞"	10½"	POR-1018	29	16"	50.00
POR-12	28	14"	49.09	14⅝"	12¼"	POR-1218	31	16"	54.44
POR-14	32	14"	54.54	16⅜"	14"	POR-1418	35	16"	60.49
POR-17	40	14"	65.12	19⅞"	17½"	POR-1718	44	16"	71.66
POR-21	44	14"	70.74	23¾"	21"	POR-2118	48	16"	80.19
POR-26	45	14"	76.09	28⅝"	26¼"	POR-2618	49	16"	84.14
POR-31	50	14"	80.19	33⅞"	31½"	POR-3118	55	16"	89.27
POR-35	55	14"	84.84	37⅜"	35"	POR-3518	60	16"	94.46



EACH MULTIPLE SECTION (MOR Series) comprises 6 pieces as shown.



EXAMPLE:
One Double POR-1218 consists of one POR-1218 and one MOR-1218.
One Triple POR-8 consists of one POR-8 and two MOR-8.

MULTIPLE SECTION FOR DESK INSTRUMENT CABINETS

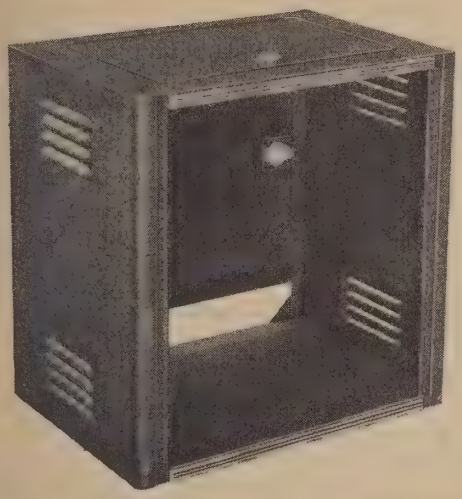
Cabinets can be joined together to make multiple units by means of a center frame section which is bolted to the top cross pieces and base. Rigidly constructed of 16 ga. steel and finished to match POR units. When ordering multiple units specify number of units, such as Double, Triple, etc.

15¼" DEEP					18" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	Overall Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
MOR-3	16	$23.99	5⅞"	3½"	MOR-318	18	$25.17
MOR-5	17	25.12	7⅝"	5¼"	MOR-518	19	27.75
MOR-7	18	26.40	9⅜"	7"	MOR-718	20	29.39
MOR-8	19	27.75	11⅛"	8¾"	MOR-818	21	30.89
MOR-10	20	31.87	12⅞"	10½"	MOR-1018	23	35.20
MOR-12	21	34.40	14⅝"	12¼"	MOR-1218	24	37.80
MOR-14	23	38.34	16⅜"	14"	MOR-1418	26	42.29
MOR-17	31	45.69	19⅞"	17½"	MOR-1718	34	50.39
MOR-21	33	49.57	23¾"	21"	MOR-2118	37	54.92
MOR-26	34	53.62	28⅝"	26¼"	MOR-2618	38	59.40
MOR-31	36	56.10	33⅞"	31½"	MOR-3118	40	62.59
MOR-35	40	59.40	37⅜"	35"	MOR-3518	44	65.56

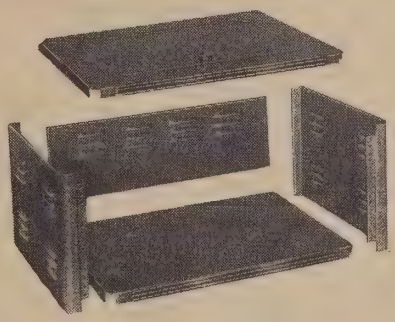
†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER DESK CABINET RACKS



DCR SERIES
(Welded)



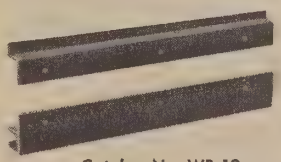
DRK SERIES
(Knocked Down)

FRONT DOORS AVAILABLE — See Page 28

15¼" and 18" DEEP FOR STANDARD 19" WIDE PANEL

- Piano type hinges are used on the top doors, which are provided with snap catches.
- Front vertical corners are rounded and the top and bottom are trimmed with moulding.
- Rigidly constructed of #16 gauge cold rolled sheet steel.
- Panels fit into a ¼" recess so that the edges are not exposed.
- Panel mounting holes are tapped for 10-32 machine screws on E.I.A. spacings (⅝-⅝-½).
- DRK is identical to DCR except shipped knocked down with all necessary hardware for easy assembly. On these models the bolts are not visible from the outside and have the same appearance as the welded models.
- Gussets welded at bottom of rear on Models 170-350 for additional strength.
- Finished in Smoke Blue. Also available in other colors at additional cost. Specify color when ordering.

WALL MOUNTING BRACKETS



Catalog No. WB-19

FOR MOUNTING DESK CABINET RACKS ON WALL—REMOVE REAR DOOR AND USE WALL MOUNTING BRACKETS.

Sold in sets only.
Finished in Smoke Blue

Shipping Weight 2½ lbs.
$6.18 set

NOT APPLICABLE ON DCR-70 THROUGH DCR-140

21¾" WIDE x 15¼" DEEP

	Catalog No.	Net Price (B)†	Catalog No.	Net Price (B)†	Overall Height	Panel Space	Shpg. Wt. Lbs.	Use Slide Length*
WITH DOOR ON TOP ONLY	DCR-70	$19.88	DRK-70	$20.42	8¾"	7"	22	14"
	DCR-80	21.17	DRK-80	21.64	10½"	8¾"	24	14"
	DCR-100	23.19	DRK-100	23.52	12¼"	10½"	26	14"
	DCR-120	25.82	DRK-120	25.99	14"	12¼"	28	14"
	DCR-140	29.65	DRK-140	29.59	15¾"	14"	32	14"
WITH DOOR ON TOP AND REAR	DCR-170	33.72	DRK-170	33.39	19¼"	17½"	40	14"
	DCR-190	35.74	DRK-190	35.29	21"	19¼"	42	14"
	DCR-210	37.02	DRK-210	36.49	22¾"	21"	44	14"
	DCR-260	39.70	DRK-260	39.00	28"	26¼"	45	14"
	DCR-310	42.34	DRK-310	41.49	33¼"	31½"	50	14"
	DCR-350	45.02	DRK-350	44.00	36¾"	35"	55	14"

21¾" WIDE x 18" DEEP

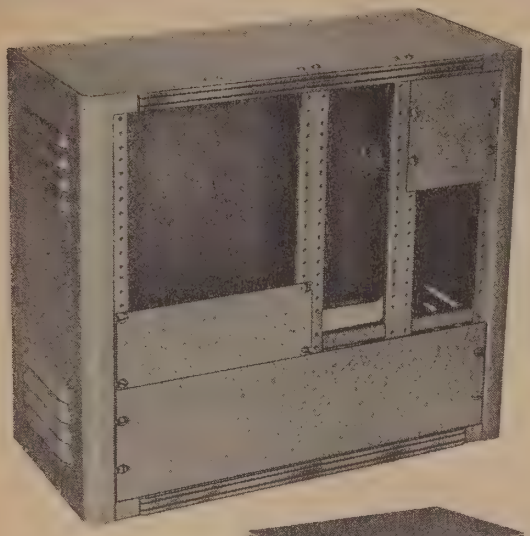
	Catalog No.	Net Price (B)†	Overall Height	Panel Space	Shpg. Wt. Lbs.	Use Slide Length*
WITH DOOR ON TOP ONLY	DCR-1880	$24.37	10½"	8¾"	26	16"
	DCR-18100	26.65	12¼"	10½"	29	16"
	DCR-18120	29.69	14"	12¼"	31	16"
	DCR-18140	31.92	15¾"	14"	35	16"
WITH DOOR ON TOP AND REAR	DCR-18170	38.75	19¼"	17½"	44	16"
	DCR-18190	41.10	21"	19¼"	46	16"
	DCR-18210	42.57	22¾"	21"	48	16"
	DCR-18260	45.64	28"	26¼"	49	16'
	DCR-18310	48.72	33¼"	31½"	55	16"
	DCR-18350	51.80	36¾"	35"	60	16"

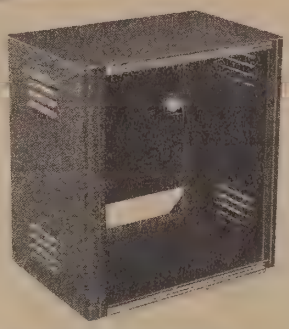
†See quantity discount schedule on page 1.

*Use Slide Adapter Kit (Cat. No. SAK-35) for rear mounting. (See Page 26)

© United Technical Publications

PREMIER 12" DEEP MINIATURE DESK CABINET RACKS





MDK SERIES
Shown with panels, horizontal (DH Series) and vertical (DV Series) dividers assembled.

MODU-RAK®

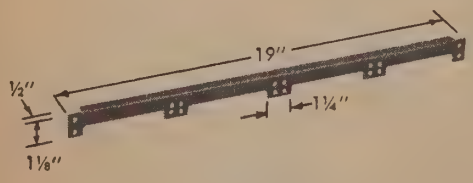
FOR STANDARD 19" RACK PANELS

- Front vertical corners are rounded and the top and bottom are trimmed with moulding.
- Rigidly constructed of #16 gauge cold rolled sheet steel.
- Panels fit into a recess so that the edges are not exposed.
- Panel mounting holes are tapped for 10-32 machine screws on E.I.A. Spacings (⅝-⅝-½")
- Rear doors have snap catches.
- Assembly hardware is not visible from the outside.
- FINISHED IN SMOKE BLUE. Also available in Gray Hammertone.
- SHIPPED KNOCKED DOWN WITH ALL NECESSARY HARDWARE FOR EASY ASSEMBLY.

21¾" WIDE x 12" DEEP

	Catalog No.	Overall Height	Available Panel-Space	Shpg. Wt. Lbs.	Net Price (B)†
WITH REMOVABLE REAR PANEL	MDK-50	7"	5¼ x 19"	16	$16.10
	MDK-70	8¾"	7 x 19"	20	17.33
	MDK-80	10½"	8¾ x 19"	21	18.37
	MDK-100	12¼"	10½ x 19"	23	20.52
	MDK-120	14"	12¼ x 19"	25	23.05
	MDK-140	15¾"	14 x 19"	29	24.95
WITH REAR DOOR	MDK-170	19¼"	17½ x 19"	36	30.67
	MDK-210	22¾"	21 x 19"	39	33.85
	MDK-260	28"	26¼ x 19"	40	36.45
	MDK-280	29¾"	28 x 19"	41	37.80

ACCESSORIES FOR SUBDIVIDING ANY 19" WIDE PANEL SPACE INTO MODULAR UNITS

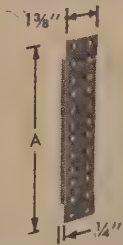


HORIZONTAL DIVIDERS

- Holes punched to accommodate vertical dividers (DV Series) which subdivides the panel space into 9½" and 4¾" widths.
- Made of #16 gauge steel.
- Finished in Smoke Blue

Catalog No.	Dimensions	Net Price (B)†
DH-19	19 x 1¼"	$4.80
DH-95	9½ x 1⅛"	3.90

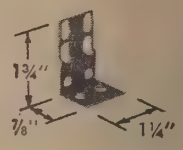
†See quantity discount schedule on page 1.



VERTICAL DIVIDERS

- Two rows of 10-32 tapped holes punched on E.I.A. Spacings.
- Made of No. 16 gauge steel.
- Finished in Smoke Blue

Cat. No.	"A" Available Panel Mtg. Space	Net Price (B)†
DV-5	5¼"	$1.35
DV-7	7"	1.80
DV-8	8¾"	2.25
DV-10	10½"	2.75
DV-12	12¼"	2.90
DV-14	14"	3.20
DV-17	17½"	4.20
DV-21	21"	5.05
DV-26	26¼"	6.35
DV-28	28"	6.55



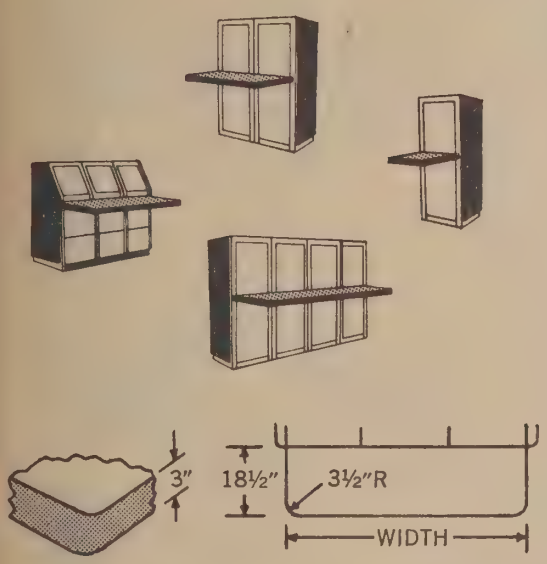
ANGLE BRACKETS

- Punched to accommodate vertical dividers.
- Made of No. 16 gauge steel.
- Finished in Smoke Blue

Cat. No.	Net Price (B)†	sold in pairs only
AB-2	$1.50 pr.	

© United Technical Publications

PREMIER ACCESSORIES



ONE PIECE LAMINATED PLASTIC TOP WORK WRITING SHELVES
For ALL MODULAR FRAMES

- Gray linen weave laminated plastic bonded to ¾" plywood
- Other standard laminated plastic colors or patterns available
- 3" self edged laminated plastic skirt on 3 sides
- Supplied with 3½ x 19" formed panel, channels and brackets

TO FIT 22" DEEP FRAMES				TO FIT 25½" DEEP FRAMES	
Cat. No.	Net Price (A)†	Depth	Width	Cat. No.	Net Price (A)†
For 1 Frame (FA MSF, or PRXA Series) or 1 Sloped Front Frame (FS Series)					
OFT-2218-22	$82.39	18½"	22"	OFT-2218-255	$83.22
For 2 Frames (FA MSF, or PRXA Series) or 2 Sloped Front Frames (FS Series) Side By Side					
OFT-4418-22	102.45	18½"	44"	OFT-4418-255	103.49
For 3 Frames (FA MSF, or PRXA Series) or 3 Sloped Front Frames (FS Series) Side By Side					
OFT-6618-22	120.29	18½"	66"	OFT-6618-255	121.49
For 4 Frames (FA MSF, or PRXA Series) or 4 Sloped Front Frames (FS Series) Side By Side					
OFT-8818-22	151.42	18½"	88"	OFT-8818-255	152.94

SIZES OTHER THAN SHOWN AVAILABLE ON REQUEST

NOTE: ONE PIECE laminated plastic shelves available for use with semi-circular arrangements when used with Wedge Frames.

FORMICA WRITING PANELS

19" and 24" WIDE —½" THICK

Gray Linen Weave Pattern laminated plastic bonded to plywood as top surface; Unfinished laminated plastic bonded to bottom surface.

19" WIDE

Cat. No.	Panel Space	Fits into	Net Price (A)†
FWP-1019	10½ x 19"	WW-15-22 & WW-15-255	$8.41
FWP-1419	14 x 19"	WW-18-22 & WW-18-255	9.40
FWP-1719	17½ x 19"	WW-22-22 & WW-22-255, WTO-22-22 & Top Panel Space of CPF-101, CPF-102, MSF-21-22, MSF-28-22	10.88
FWP-2119	21 x 19"	WTO-22-255, WW-255-22, WW-255-255, MSF-21-255, MSF-28-255	12.87
FWP-2919	29¾ x 19"	CPF-101-34, WTO-22-34	17.81

24" WIDE

Cat. No.	Panel Space	Fits into	Net Price (A)†
FWP-1024	10½ x 24"	WW-2715-22, WW-2715-255	$9.89
FWP-1424	14 x 24"	WW-2718-22, WW-2718-255	11.87
FWP-1724	17½ x 24"	WW-2722-22, WW-2722-255, WTO-27-22 & Top Panel Space of CPF-103 & CPF-104	12.87
FWP-2124	21 x 24"	WTO-27-255, WW-27-255, WW-27-255-255	16.81

FORMED PANELS—½" DEEP 19" and 24" WIDE



BLANK



LOUVRED

- Made of one piece of No. 16 gauge steel, with edges formed for overall depth of ½".
- Each panel has only 2 mounting holes on each side.
- Finished in Light Gray

BLANK

19" WIDE Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	Height	24" WIDE Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
FP-119	1½	$2.05	1¾"	FP-124	2	$2.36
FP-319	2	2.32	3½"	FP-324	3	2.76
FP-519	2½	2.63	5¼"	FP-524	3½	3.13
FP-719	3	2.88	7"	FP-724	4	3.55
FP-819	4	3.13	8¾"	FP-824	5	3.91
FP-1019	5	3.39	10½"	FP-1024	6	4.27
FP-1219	6	3.75	12¼"	FP-1224	7	4.68
FP-1419	6½	4.00	14"	FP-1424	7½	5.03
FP-1519	7	4.27	15¾"	FP-1524	8	5.43
FP-1719	7½	4.63	17½"	FP-1724	8½	5.85
FP-1919	8	4.93	19¼"	FP-1924	9	6.32
FP-2119	9	5.24	21"	FP-2124	10	6.77
FP-2219	10	5.60	22¾"	FP-2224	11	7.24
FP-2619	11	6.27	26¼"	FP-2624	12	8.11
FP-2819	12	6.57	28"	FP-2824	13	8.52
FP-4219	18	8.76	42"	FP-4224	20	11.69

LOUVRED

FPL-719	3	$3.76	7"	FPL-724	4	$4.57
FPL-819	4	4.35	8¾"	FPL-824	5	5.24
FPL-1019	5	4.88	10½"	FPL-1024	6	5.73
FPL-1219	6	5.37	12¼"	FPL-1224	7	6.45
FPL-1419	6½	5.77	14"	FPL-1424	7½	6.95
FPL-1719	7½	6.81	17½"	FPL-1724	8½	8.20
FPL-2119	9	8.43	21"	FPL-2124	10	10.12
FPL-2219	10	9.13	22¾"	FPL-2224	11	10.35
FPL-2619	11	9.45	26¼"	FPL-2624	12	11.37
FPL-2819	12	10.04	28"	FPL-2824	13	12.00
FPL-4219	18	17.07	42"	FP-4224	20	20.62



PERFORATED

- Made of 20 ga. steel with 3/16" diameter holes on 3/16" staggered centers.
- Edges formed on 4 sides.
- Overall depth ½".
- Each panel has mounting holes on each side.
- Finished in Light Gray

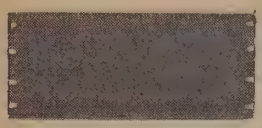
PERFORATED

19" WIDE Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	Height	24" WIDE Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†
PFP-119	1¼	$2.64	1¾"	PFP-124	2½	$3.52
PFP-319	1¾	3.01	3½"	PFP-324	2¾	3.81
PFP-519	2¼	3.23	5¼"	PFP-524	3¼	4.27
PFP-719	2¾	4.05	7"	PFP-724	3¾	5.45
PFP-819	3¾	4.67	8¾"	PFP-824	4¾	6.29
PFP-1019	4¾	5.41	10½"	PFP-1024	5¾	6.83
PFP-1219	5¾	6.12	12¼"	PFP-1224	6¾	8.05
PFP-1419	6¼	6.73	14"	PFP-1424	7¼	8.71
PFP-1519	6¾	7.27	15¾"	PFP-1524	7¾	9.64
PFP-1719	7¼	7.79	17½"			
PFP-1919	7¾	8.63	19¼"			
PFP-2119	8¾	9.24	21"			
PFP-2619	10¾	11.88	26¼"			
PFP-2819	11¾	12.59	28"			

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER STEEL & ALUMINUM RACK PANELS



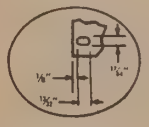
BLANK RACK PANELS
9½" - 19" - 24" - 30" WIDTHS

MATERIAL

Steel
#12 Ga. (.104) Cold Rolled
Aluminum ..... ¼" thick—5005-H36 Alloy
Aluminum ..... ⅜" thick—6061-T6 Alloy

FINISHED IN LIGHT GRAY
Available in other finishes at additional cost.

MASKED ALUMINUM PANELS
Made of bright natural aluminum covered on both sides with special self-adhesive paper. Drilling or milling can be done on paper in place, affording complete damage protection. Paper is removed simply by peeling.



MOUNTING SLOTS
All panels have closed slots for rigidity with spacing according to E.I.A. Standards.

***NOTE: All panels are cut 1/32" less than nominal height.**

MODIFICATIONS AVAILABLE
- ¼" thick Aluminum Panels available in 6061T6 alloy.
- Special finishes, including unfinished.
- Special Heights.

19" WIDE
Also available in 24" and 30" widths

	Masked Aluminum—⅛" Thick			Masked Aluminum—⅜" Thick		
*Nominal Height	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
1¾"	MAP-119	½	$1.38	MAP-119-36	¾	$2.75
3½"	MAP-319	1	2.08	MAP-319-36	1½	3.68
5¼"	MAP-519	1½	2.87	MAP-519-36	2½	4.95
7"	MAP-719	2	3.42	MAP-719-36	3	6.43
8¾"	MAP-819	2½	4.13	MAP-819-36	3¾	7.27
10½"	MAP-1019	3	5.17	MAP-1019-36	4½	8.37
12¼"	MAP-1219	3½	5.88	MAP-1219-36	5	10.45
14"	MAP-1419	4	6.77	MAP-1419-36	6	12.38
15¾"	MAP-1519	4	7.58	MAP-1519-36	6	13.75
17½"	MAP-1719	4¾	8.47	MAP-1719-36	7	15.28
19¼"	MAP-1919	5	9.35	MAP-1919-36	7½	16.67
21"	MAP-2119	6	10.18	MAP-2119-36	9	18.27
26¼"	MAP-2619	7½	13.03	MAP-2619-36	11½	23.54
31½"	MAP-3119	8½	14.97	MAP-3119-36	13½	26.95
35"	MAP-3519	10	17.72	MAP-3519-36	15	33.20

*Nominal	Painted Aluminum—⅛" Thick			Painted Aluminum—⅜" Thick			Painted Steel—No. 12 Gauge		
Height	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
1¾"	ARP-119	½	$1.50	APR-119-36	¾	$2.48	RP-119	1	$1.42
3½"	ARP-319	1	2.25	ARP-319-36	1½	3.55	RP-319	2	1.68
5¼"	ARP-519	1½	3.00	ARP-519-36	2½	4.62	RP-519	3	2.00
7"	ARP-719	2	3.83	ARP-719-36	3	5.72	RP-719	4	2.37
8¾"	ARP-819	2½	4.50	ARP-819-36	3¾	6.88	RP-819	5¼	2.83
10½"	ARP-1019	3	5.42	ARP-1019-36	4½	8.58	RP-1019	6¼	3.30
12¼"	ARP-1219	3½	6.25	ARP-1219-36	5	9.97	RP-1219	7¼	3.88
14"	ARP-1419	4	7.17	ARP-1419-36	6	11.13	RP-1419	8¼	4.35
15¾"	ARP-1519	4	7.83	ARP-1519-36	6	12.83	RP-1519	9	4.93
17½"	ARP-1719	4¾	8.67	ARP-1719-36	7	14.20	RP-1719	10½	5.40
19¼"	ARP-1919	5	9.50	ARP-1919-36	7½	15.48	RP-1919	12	5.98
21"	ARP-2119	6	10.58	ARP-2119-36	9	17.07	RP-2119	12½	6.45
26¼"	ARP-2619	7½	14.05	ARP-2619-36	11½	20.40	RP-2619	15½	8.50
31½"	ARP-3119	8½	17.48	ARP-3119-36	13½	24.07	RP-3119	19	10.40
35"	ARP-3519	10	19.17	ARP-3519-36	15	26.72	RP-3519	22	11.82

24" WIDE

Aluminum—⅛" Thick				Steel—No. 12 Gauge		
Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	*Nominal Height	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
ARP-324	1¼	$3.15	3½"	RP-324	2½	$2.37
ARP-524	2	4.42	5¼"	RP-524	3½	2.83
ARP-724	2½	5.47	7"	RP-724	4½	3.15
ARP-824	3	6.35	8¾"	RP-824	6	3.68
ARP-1024	3½	7.98	10½"	RP-1024	7	4.35
ARP-1224	4	9.23	12¼"	RP-1224	8	5.25
ARP-1424	4½	10.65	14"	RP-1424	9	6.15
ARP-1524	5	12.13	15¾"	RP-1524	10	6.98
ARP-1724	5½	12.97	17½"	RP-1724	11	7.88
ARP-1924	6	14.12	19¼"	RP-1924	12	8.77
ARP-2124	6½	15.60	21"	RP-2124	13	9.60

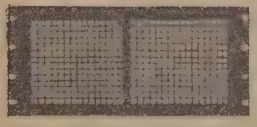
30" WIDE

Aluminum—⅛" Thick				Steel—No. 12 Gauge		
Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	*Nominal Height	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
ARP-330	1½	$4.30	3½"	RP-330	3	$2.93
ARP-530	2¼	6.05	5¼"	RP-530	4½	3.57
ARP-730	3	7.42	7"	RP-730	6	3.93
ARP-830	3¾	8.63	8¾"	RP-830	8	4.62
ARP-1030	4½	10.87	10½"	RP-1030	9¼	5.47
ARP-1230	5	12.62	12¼"	RP-1230	10¼	6.57
ARP-1430	6	14.52	14"	RP-1430	12	7.67
ARP-1530	6½	16.53	15¾"	RP-1530	13½	8.72
ARP-1730	7	17.70	17½"	RP-1730	15	9.87
ARP-1930	7½	19.23	19¼"	RP-1930	18	10.97
ARP-2130	9	21.25	21"	RP-2130	19	12.02

ALUMINUM 9½" Wide
Made of ⅛" Thick Aluminum

Cat. No.	*Nominal Height	Shpg. Wt.	Net Price (B)†
ARP-195	1¾"	¼	$1.50
ARP-395	3½"	½	2.25
ARP-595	5¼"	¾	3.00
ARP-795	7"	1	3.83
ARP-895	8¾"	1¼	4.50
ARP-1095	10½"	1½	5.42
ARP-1295	12¼"	1¾	6.25
ARP-1495	14"	2	7.17

PANELS—19" WIDE
FINISHED IN LIGHT GRAY
Made of 12 Gauge Steel

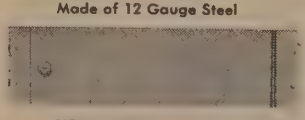


⅜" Sq. Perforations

GRILLE PANELS

Cat. No.	Grille Size	*Nom. Hgt.	Shpg. Wt. Lbs.	Net Price (B)†
GRP-601	3⅛x13¾"	5¼"	2	$4.78
GRP-602	3⅛x13¾"	7"	2	5.00
GPR-603	5⅛x13¾"	8¾"	2½	5.93
GRP-604	*3⅛x13¾"	8¾"	2½	6.05
GRP-605	7⅛x13¾"	10½"	2½	6.55
GRP-606	*5⅛x13¾"	10½"	2½	6.33
GRP-607	*7⅛x13¾"	12¼"	3	7.03

*Allows 3½" space at bottom for chassis mounting.



SIDE HINGED DOOR PANELS

Can be used for left or right hand opening. Supplied with a quick turn fastener. Full height piano hinge welded to panel. Cylinder lock (HW-6) available at additional cost.

Cat. No.	Hgt.	Net Price (B)†
SHP-319	3½"	$5.75
SHP-519	5¼"	6.00
SHP-719	7"	6.63
SHP-819	8¾"	7.13
SHP-1019	10½"	7.63
SHP-1219	12¼"	8.25
SHP-1419	14"	8.93
SHP-2119	21"	14.13



SPEAKER PANELS
Perforated metal is spot-welded behind the opening.

Cat. No.	Hgt.	Spkr. Size	Hole Size	Shpg. Wt. Lbs.	Net Price (B)†
SRP-819	8¾"	6"	4⅝"	6	$5.18
SRP-1019	10½"	8"	6½"	8	6.43
SRP-1219	12¼"	10"	8½"	9	7.68
SRP-1419	14"	12"	11"	10	8.93

†See quantity discount schedule on page 1.

PREMIER PAGE 20

Net

© United Technical Publications

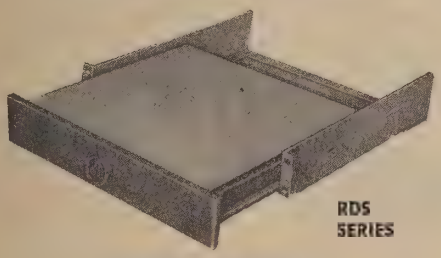
PREMIER ACCESSORIES

SLIDING DRAWERS



D SERIES

FULL EXTENSION SLIDES



RDS SERIES

SLIDING SHELVES

SLIDING DRAWERS and SHELVES

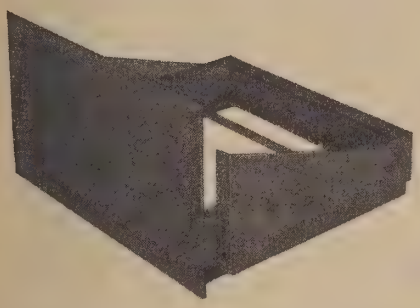
Constructed of welded 16 ga. steel and suspended on roller bearing slides. Units are designed for use with all modular enclosures (CPF, FA, PRXA, FS, MSF, POR, RMX, FDX Series). Units are furnished with drawer pull and complete hardware for easy installation. Sliding shelf supplied with Gray Linen Weave laminated plastic top surface. Cylinder lock (HW-6) available at additional cost. Finished in all Premier standard colors. If not specified, Light Gray is furnished.

SLIDING DRAWERS

Cat. No.	Formed Panel Size	Drawer Size W D H	Shpg. Wt. Lbs.	Net Price (A)†
	FOR 19" WIDE PANEL SPACE			
D-1916	10⅜x18⅞x½"	16⅛x16x6"	23	$26.55
D-2016	6⅞x18⅞x½"	16⅛x16x6"	22	25.45
D-2316	3⅜x18⅞x½"	16⅛x16x2 1⁄16"	16	24.03
	FOR 24" WIDE PANEL SPACE			
D-2116	10⅜x23⅞x½"	21⅛x16x6"	25	31.84
D-2216	6⅞x23⅞x½"	21⅛x16x6"	24	30.50
D-2416	3⅜x23⅞x½"	21⅛x16x2 1⁄16"	17	26.55

SLIDING SHELVES

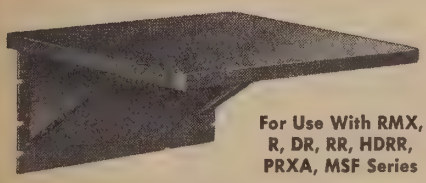
Cat. No.	Formed Panel Size	Shelf Size	Shpg. Wt. Lbs.	Net Price (A)†
	FOR 19" WIDE PANEL SPACE			
RDS-319-22	3⅜x18⅞x½"	16 3⁄16x15 15⁄16"	20	$34.03
	FOR 24" WIDE PANEL SPACE			
RDS-324-22	3⅜x23⅞x½"	21 3⁄16x15 15⁄16"	22	43.31



SLIDING DRAWERS TO FIT STANDARD 19" RACKS 15¼" AND 18" DEEP FOR RECORD TURNTABLES

Panel made of #12 gauge steel; chassis of 16 ga. steel and has a 1" flange on top and bottom to accommodate plywood for the record turntable. The chassis is mounted on ball-bearing suspension slides which can sustain 40 lbs. Drawer extends 11" from front of cabinet. Entire unit mounts on angle brackets which can be bolted on to the cabinet. Supplied knocked down with all necessary bolts for easy assembly. Locks in place by means of 2 latches. Finished in Light Gray enamel.

Cat. No.	Will Fit Rack No.	Panel Size	Chassis Size W D H	Shpg. Wt. Lbs.	Net Price (A)†
RD-10	R, DCR-18, RMX & FDX	10⅜x18⅞"	17x16x3"	15	$18.27
RD-12	R, DCR-18, RMX & FDX	12⅛x18⅞"	17x16x4"	18	20.24
RD-10-14	DCR, DRK, RMX & FDX, R, DCR-18	10⅜x18⅞"	17x14x3"	14½	18.11
RD-12-14	DCR, DRK, RMX & FDX, R, DCR-18	12⅛x18⅞"	17x14x4"	17	20.11



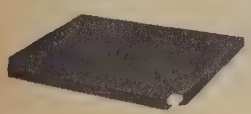
For Use With RMX, R, DR, RR, HDRR, PRXA, MSF Series

DESK PANELS TO FIT STANDARD 19" WIDE PANEL RACKS

- Made of 16 gauge steel and bolted to a standard steel panel 10½"x19"
- Front corners are rounded.
- Finished in Light Gray enamel.
- SHIPPED KNOCKED DOWN WITH ALL NECESSARY HARDWARE FOR EASY ASSEMBLY.

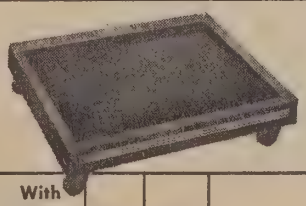
Cat. No.	Width	Depth	Shpg. Wt. Lbs.	Net Price (A)†
DP-1016	22"	16"	20	$18.94
DP-1020	22"	20"	22	19.36

SHELVES TO FIT 19" WIDE PANEL RACKS



Made of one piece of 16 ga. Cold Rolled Steel, 1" high. Holes are punched on sides for mounting to rack. Finished in Light Gray enamel.

Cat. No.	Will Fit Rack No.	Shelf Size	Shpg. Wt. Lbs.	Net Price (A)†
RS-1106	All 15¼" DCR & DRK Racks	12x21 1⁄16	7	$3.37
RS-1107	R & DR Racks	15x21 3⁄16	7	4.20
RS-1108	FXR	13x21 3⁄16	7	3.76
RS-1111	MDK Series—21¾" wide	10x21 1⁄16	6	3.29
RS-1113	18" deep DCR & SDR Racks	16x21 1⁄16	7	4.33



ROLLER TRUCKS FOR RACKS

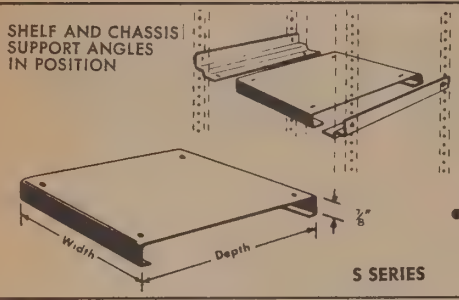
Made from 1 piece of 16 ga. Cold Rolled Steel. Supplied with either 2" or 3" diameter casters and bolts for easy assembly. Finished in Smoke Blue enamel with a red striped chrome molding. One piece roller trucks for multiple racks available upon request.

With 2" Dia. Casters Cat. No.	Shpg. Wt. Lbs.	Net Price (A)†	Will Fit Rack No.	Inside Dimensions	With 3" Dia. Casters Cat No.	Shpg. Wt. Lbs.	Net Price (A)†
RT-1100	22	$12.67	All 15¼" Racks	15¾x22¼"	RT-1100-3	24	$18.47
RT-1101	22	16.06	R, DR, FXR, 18" deep; RMX, FDX, DCR Racks	18¾x22¾"	RT-1101-3	24	21.86
RT-1103	23	19.69	24" deep FDX & RMX Racks	22½x24½"	RT-1103-3	25	25.49
RT-1110	25	29.63	RMX-27 & FDX-27 Series	27½x24½"	RT-1110-3	27	35.43
RT-1111	30	38.16	RMX-7030	33½x24½"	RT-1111-3	32	43.96

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER ACCESSORIES



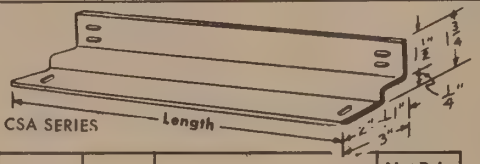
S SERIES

SHELVES

- Made of 16 gauge steel.
- Finished in Light Gray enamel.

Cat. No.	Depth	Width	To Fit Frames		Net Price (A)†
S-18-22	14¼"	17½"	22W x 18"D	18" FDX, RMX	$3.43
S-22-22	20⅜"	17½"	22W x 22"D		4.33
S-27-22	20⅜"	22½"	27W x 22"D	FA, FS	5.62
S-22-255	23⅞"	17½"	22W x 25½"D	CPF, MSF	5.10
S-27-255	23⅞"	22½"	27W x 25½"D		6.43
S-22-18	16⅜"	17½"	22W x 18"D	PRXA	3.72
S-27-18	16⅜"	22½"	27W x 18"D	PRXA	4.59
S-33-18	16⅜"	28½"	33W x 18"D	PRXA	6.04
S-22-24	22⅜"	17½"	22W x 24"D	PRXA	4.79
S-27-24	22⅜"	22½"	27W x 24"D	PRXA	6.04
S-33-24	22⅜"	28½"	33W x 24"D	PRXA	7.50
S-33-22	20⅜"	28½"	33W x 24"D	RMX-7030	6.99

CHASSIS SUPPORT ANGLES



- Made of No. 12 ga. steel
- Accommodates Shelf (S Series)
- Finished in Light Grey enamel
- Mounts to side legs of Panel Mounting Angles

Cat. No.	Length	To Fit Frames	Net Price (A)†
CSA-16	14⅛"	18" deep FDX, RMX	$4.49 pr.
CSA-18	16⅛"	18" deep PRXA	4.75 pr.
CSA-22	20⅛"	22" deep FA, CPF, MSF, FS & 24" deep FDX & RMX	5.31 pr.
CSA-24	22⅛"	24" deep PRXA	5.57 pr.
CSA-255	23⅝"	25½" deep FA, CPF, FS & MSF	5.83 pr.



PANEL MOUNTING ANGLES—1¼" x 1¼"

Made of #12 Ga. (.104) thick steel punched on E.I.A. spacings (⅝-⅝-½) on both legs. 10-32 screws and captive nuts supplied. Angles with tapped holes available. Light Gray enamel.

Panel Mounting Angles			To Fit Racks
Cat. No.	Height	Net Price (A)†	
PMA-212	21"	$7.48 pr.	CPF-101, 103, MSF-21-22 & MSF-21-255
PMA-282	28"	9.79 pr.	CPF-102, 104, MSF-28-22 & MSF-28-255
PMA-362	36¾"	11.35 pr.	PRXA, FDX, RMX
PMA-422	42"	12.97 pr.	FA, PRXA, FS, FDX, RMX
PMA-522	52½"	14.95 pr.	FA, PRXA
PMA-612	61¼"	16.21 pr.	FA, PRXA, FDX, RMX
PMA-702	70"	18.23 pr.	FA, PRXA, FDX, RMX
PMA-772	77"	19.61 pr.	FA, PRXA, FDX, RMX
PMA-802	80¼"	20.63 pr.	POC

CHASSIS MOUNTING BRACKETS

- Constructed of 16 gauge steel
- Finished in Light Gray enamel
- Sold in pairs only



STANDARD TYPE

	Cat. No.	H.	D.	Shpg. Wt. Lbs.	Net Price (B)†
Notched for 3" Chassis	CB-78	6½"	8"	1½	$1.58 pr.
	CB-710	6½"	10"	1¾	1.83 pr.
	CB-711	6½"	11"	2	2.08 pr.
	CB-712	6½"	12"	2⅛	2.33 pr.
	CB-713	6½"	13"	2¼	2.58 pr.
	CB-717	6½"	17"	3	3.17 pr.
Notched for 4"Chassis	CB-810	8½"	10"	2⅜	2.83 pr.
	CB-813	8½"	13"	3	3.17 pr.



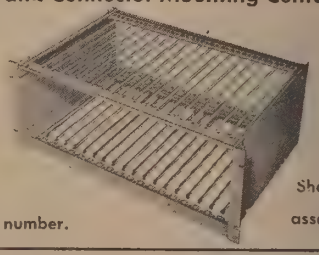
TRIANGULAR TYPE

Cat. No.	H.	D.	Ship. Wt. Lbs.	Net Price (B)†
TCB-55	5"	5"	1	$1.42 pr.
TCB-77	7"	7"	1	1.67 pr.
TCB-99	9"	9"	1⅓	1.92 pr.

PRINTED CIRCUIT CARD HOLDERS

Provides Extensive Adjustability in Accommodating Card Heights and Depths and Connector Mounting Centers

- Units accommodate card widths from 2⅞" to 8"; card depths to 14½"
- Fit standard 19" and 24" wide racks for 5¼", 7", 8¾" panel heights
- 19" wide frames hold up to 27 cards; 24" wide frames hold up to 36 cards
- Supplied with two adjustable rear connector panels made of ⅛" iridited aluminum, having connector mounting holes tapped 4-40 on .200 centers
- Frames made of 16 gauge steel and finished in light gray enamel
- Units shipped K.D. with all necessary hardware
- Guide (G Series) sold in pairs and ordered as a separate item.
- Guides are supplied with push rivets for easy positioning.
- Guides made of 14 gauge caustic etched and iridited aluminum as per MIL-C-5541.
- Vinyl coated guides for insulation available at additional cost. If required, specify letter V after number.



PCH Series Shown with Guides (G Series) assembled in position

FOR 19" WIDE PANEL SPACE								FOR 24" WIDE PANEL SPACE		
	Frame — 19" Wide				Frame — 24" Wide			Guides		
Panel Height	Cat. No.	PC Card Height Range	Net Price (A)†	Overall Depth	Cat. No.	PC Card Height Range	Net Price (A)†	Cat. No.	Length	Net Price (A)†
5¼"	PCH-519-6	2⅞" thru 4½"	$13.52	6¼"	PCH-524-6	2⅞" thru 4½"	$16.33	G-6	4⅛"	.45 pr.
	PCH-519-8		14.65	8¼"	PCH-524-8		17.60	G-8	6⅛"	.51 pr.
	PCH-519-10		15.77	10"	PCH-524-10		18.59	G-10	7⅞"	.61 pr.
	PCH-519-12		16.88	12"	PCH-524-12		19.79	G-12	9⅞"	.73 pr.
	PCH-519-14		18.03	14"	PCH-524-14		20.84	G-14	11⅞"	.79 pr.
	PCH-519-16		19.19	16"	PCH-524-16		21.99	G-16	13⅞"	.84 pr.
7"	PCH-719-6	4⅝" thru 6¼"	14.68	6¼"	PCH-724-6	4⅝" thru 6¼"	17.48	G-6	4⅛"	.45 pr.
	PCH-719-8		15.77	8¼"	PCH-724-8		18.59	G-8	6⅛"	.51 pr.
	PCH-719-10		16.93	10"	PCH-724-10		19.73	G-10	7⅞"	.61 pr.
	PCH-719-12		18.03	12"	PCH-724-12		20.84	G-12	9⅞"	.73 pr.
	PCH-719-14		19.19	14"	PCH-724-14		30.59	G-14	11⅞"	.79 pr.
	PCH-719-16		20.28	16"	PCH-724-16		23.13	G-16	13⅞"	.84 pr.
8¾"	PCH-819-6	6⅜" thru 8"	15.77	6¼"	PCH-824-6	6⅜" thru 8"	18.59	G-6	4⅛"	.45 pr.
	PCH-819-8		16.93	8¼"	PCH-824-8		19.79	G-8	6⅛"	.51 pr.
	PCH-819-10		18.03	10"	PCH-824-10		20.84	G-10	7⅞"	.61 pr.
	PCH-819-12		19.19	12"	PCH-824-12		21.99	G-12	9⅞"	.73 pr.
	PCH-819-14		20.28	14"	PCH-824-14		23.13	G-14	11⅞"	.79 pr.
	PCH-819-16		21.39	16"	PCH-824-16		24.20	G-16	13⅞"	.84 pr.

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER CASES

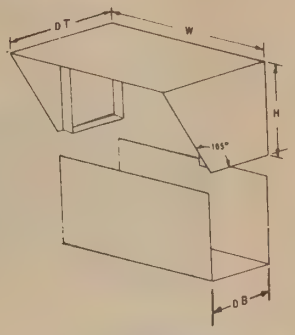
SLOPING COMPACT CASES

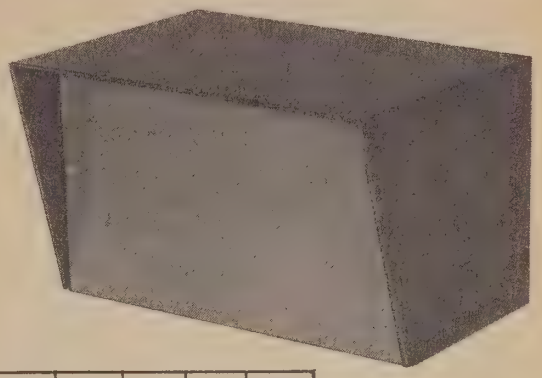
Give your equipment a new look with the new DESIGNER SERIES!

STANDARD SCC SERIES
furnished with Smoke Blue outer shell and Light Gray insert.

DESIGNER DSCC SERIES
furnished with Black outershell and Bright Blue insert.

- Two piece case made of 20 gauge cold rolled steel
- Top of unit extends beyond the front panel
- Supplied with necessary screws for assembly



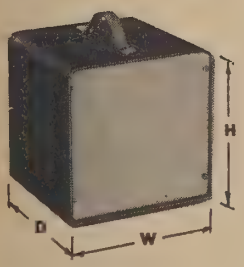


SCC — Standard Series
DSCC — Designer Series

OVERALL DIMENSIONS

Standard Cat. No.	Net Price (B)†	Designer Cat. No.*	Net Price (B)†	Height (H)	Width (W)	Depth Top (DT)	Depth Bottom (DB)
SCC-3000	$7.93	DSCC-3000	$8.63	6″	10″	7″	5¾″
SCC-3001	8.68	DSCC-3001	9.43	7″	12″	8″	5⅞″
SCC-3002	4.48	DSCC-3002	4.95	3″	8″	5″	3⅞″
SCC-3003	4.83	DSCC-3003	5.40	5″	5″	5″	3⅜″

COMPACT CASES
with ROUNDED CORNERS ON BOTH FRONT AND REAR OF TOP



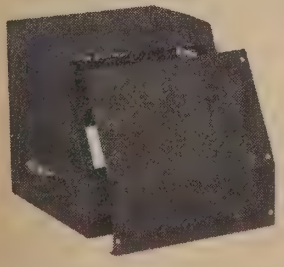
CC — Standard Series
DCC — Designer Series

STANDARD CC SERIES
furnished with Smoke Blue case and Light Gray panel.

DESIGNER DCC SERIES
furnished with Black case and Bright Blue panel.

- Body made of 20 gauge steel
- Front panel made of .064 aluminun
- Recessed handle supplied on top
- Perforated sides for ventilation
- Base supplied with four rubber feet
- Panel fits into ½″ recess
- Two-inch opening in rear for leads
- Supplied with necessary screws for assembly
- Welded construction

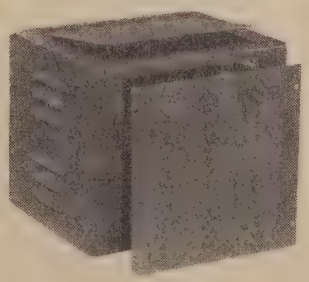
Standard Cat. No.	Net Price (B)†	Designer Cat. No.*	Net Price (B)†	OVERALL DIMENSIONS Depth	Width	Height	Use Chassis	Wt. in Lbs.
CC-2000	$12.32	DCC-2000	$13.43	8″	6⅛″	8″	ACH 426 5x7x2	4
CC-2001	13.50	DCC-2001	14.67	8″	8⅛″	8″	ACH 403 7x7x2	5
CC-2002	14.40	DCC-2002	15.73	8″	10⅛″	8″	ACH 404 7x9x2	6
CC-2003	15.68	DCC-2003	17.08	12″	8⅛″	9″	ACH 405 7x11x2	7
CC-2004	18.98	DCC-2004	20.67	18″	11⅛″	11″	ACH 415 10x17x3	10
CC-2005	21.57	DCC-2005	23.52	18″	14⅛″	12″	ACH 423 13x17x3	11



SLOPING FRONT

Cabinet has rounded top corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Constructed of 20 gauge steel. Finished in Gray Hammertone.

Catalog No.	H. W. D.	Use Chassis No.	Shpg. Wt. Lbs.	Net Price (B)†
SFC-500	8x 8⅛x 8″	CH-403	6	$7.00
SFC-501	8x10⅛x 8″	CH-404	7	7.88
SFC-502	8x14⅛x 8″	CH-406	8	8.40
SFC-503	9x18⅛x 8″	CH-409	10	11.07
SFC-504	12x18⅛x12″	CH-415	14	14.17



HINGED TOP ROUNDED CORNER TYPE

Cabinet has front vertical rounded corners and a removable front panel. Back of cabinet is louvred and has opening for leads. Constructed of 20 gauge steel. Finished in Gray Hammertone.

Catalog No.	H. W. D.	Panel Size	Use Chassis No.	Shpg. Wt. Lbs.	Net Price (B)†
HTC-200	8x10⅜x 8″	8x 8″	CH-403	6	$7.87
HTC-201	8x12⅜x 8″	8x10″	CH-404	6½	8.42
HTC-202	8x16⅜x 8″	8x14″	CH-406	11	9.52
HTC-203	9x17⅜x11″	9x15″	CH-413	6½	17.88
HTC-204	12x20⅜x12″	12x18″	CH-415	13½	20.08
HTC-205	8x14⅜x 8″	8x12″	CH-405	7¼	8.97

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER CASES



A two piece case made of 16 Ga. (.051) aluminum. Supplied with screws. Natural Aluminum Finish or Gray Hammertone.

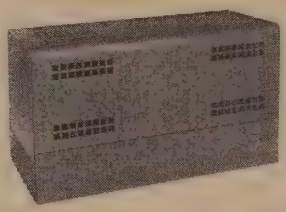
ALUMINUM MINIATURE UTILITY CASES

Natural Aluminum Cat. No.	Net Price (B)†	L.	W.	H.	Shpg. Wt. Lbs.	Gray Hammertone Cat. No.	Net Price (B)†
AMC-1000*	$ .80	2¾"	2⅛"	1⅝"	¼	PMC-1000*	$ .95
AMC-1001*	.83	3¼"	2⅛"	1⅝"	¼	PMC-1001*	1.00
AMC-1002*	.88	4"	2⅛"	1⅝"	¼	PMC-1002*	1.07
AMC-1003	1.00	4"	2¼"	2¼"	⅜	PMC-1003	1.15
AMC-1004	1.08	5"	2¼"	2¼"	½	PMC-1004	1.28
AMC-1005	1.17	5"	4"	3"	½	PMC-1005	1.57
AMC-1006	1.17	5¼"	3"	2⅛"	1	PMC-1006	1.35
AMC-1007	1.50	6"	5"	4"	¾	PMC-1007	2.00
AMC-1008	1.92	7"	5"	3"	1⅛	PMC-1008	2.30
AMC-1009	2.50	8"	6"	3½"	1½	PMC-1009	2.83
AMC-1010	2.67	10"	6"	3½"	1¾	PMC-1010	3.35
AMC-1011	3.67	12"	7"	4"	2	PMC-1011	4.00
AMC-1012	4.00	17"	5"	4"	½	PMC-1012	4.50
AMC-1013	1.42	10"	2"	1⅝"	¼	PMC-1013	2.00
AMC-1014	1.75	12"	2½"	2¼"	¼	PMC-1014	2.33
AMC-1015	1.08	4"	2"	2¾"	⅜	PMC-1015	1.17
AMC-1016	1.08	4¼"	2¼"	1½"	¼	PMC-1016	1.17

*18 Gauge (.040)

AMPLIFIER FOUNDATIONS

STANDARD TYPE



TOP COVER has perforations, rounded corners and is 6" high. Finished in Gray Hammertone.

CHASSIS constructed of one piece with corners spot-welded. Finished in Gray Hammertone.

Cat. No.	Chassis Size	Shpg. Wt. Lbs.	Net Price (B)†
AF-510	5x10x3"	5	$8.85
AF-615	6x14x3"	7	9.83
AF-1017	10x17x3"	11	12.37
AF-1317	13x17x3"	13	13.92

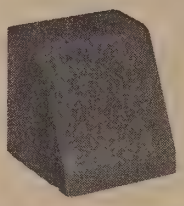
PERFORATED TYPE COVERS



TOP COVER made of perforated steel and has rounded corners with solid ends. 6" high except PC-57* Finished in Gray Hammertone.

Cat. No.	W.	D.	Use Chassis No.	Shpg. Wt. Lbs.	Net Price (B)†
*PC-57	7"	5"	ACH or CH-426	1	$4.52
PC-510	10"	5"	ACH or CH-401	1¾	4.63
PC-615	14"	6"	ACH or CH-402	2⅜	5.35
PC-717	17"	7"	ACH or CH-409	3	5.88
PC-1012	12"	10"	ACH or CH-412	3	6.03
PC-1017	17"	10"	ACH or CH-415	3¼	7.28

*4" high.

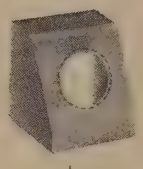


STEEL AND ALUMINUM SLOPING PANEL CASES

ROUND TOP CORNERS WITH SLOPING FRONT

20 gauge Steel Gray Hammertone Finish. 18 gauge (.040) Aluminum—Natural Aluminum finish.

Steel Cat. No.	W. D. H.	Shpg. Wt. Lbs.	Net Price (B)†	Aluminum Cat. No.	Net Price (B)†
SPC-1200	4⅜x4⅛x4⅜	¾	$2.47	ASPC-1200	$2.47
SPC-1201	5⅜x4⅛x4⅜	1	2.63	ASPC-1201	2.63
SPC-1202	6⅜x4⅛x4⅜	1	2.78	ASPC-1202	2.78
SPC-1203	7⅜x4⅛x4⅜	1½	3.00	ASPC-1203	3.00

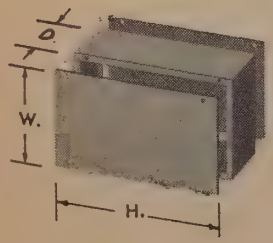


2 in 1 STEEL & ALUMINUM METER CASES

Center Hole for 2" meter (2⅜" dia.) increases to 3" (2¹³⁄₁₆" dia). meter hole by simply removing a knock-out. Size: 4⅜x4⅝x4⅛". Supplied with two ½" dia. knockouts. 20 gauge steel—Gray Hammertone Finish, 18 gauge (.040) Aluminum—Natural Aluminum Finish.

	Cat. No.	Shpg. Wt.	Net Price (B)†
ALUMINUM	ASPC-23	¾	$2.37
STEEL	SPC-23	¾	2.37

UTILITY CASES



ALUMINUM

Constructed of 16 ga. (.051) aluminum with ½" flanged edges, spot welded corners and two removable flat covers. Natural Aluminum finish or Gray Hammertone.

Natural Aluminum Cat. No.	Net Price (B)†	Size H.	W.	D.	Shpg. Wt. Lbs.	Gray Hammertone Cat. No.	Net Price (B)†
AC-442	$1.78	4"	4"	2"	½	PAC-442	$2.12
AC-453	1.88	4"	5"	3"	¾	PAC-453	2.23
AC-564	2.17	5"	6"	4"	1	PAC-564	2.65
AC-596	3.67	5"	9"	6"	1½	PAC-596	4.13
AC-666	2.87	6"	6"	6"	1½	PAC-666	3.33
AC-1276	5.02	12"	7"	6"	2¼	PAC-1276	5.67
AC-1597	6.92	15"	9"	7"	3½	PAC-1597	7.68
AC-695	3.52	6"	9"	5"	1½	PAC-695	3.98

STEEL

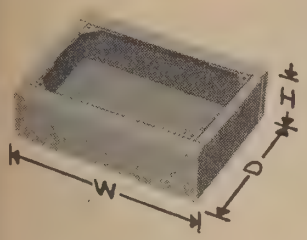
Constructed of 20 ga. sheet with ½" flanged edges, spot welded corners, and two removable flat covers. Finished in Gray Hammertone.

Cat. No.	H.	W.	D.	Shpg. Wt. Lbs.	Net Price (B)†
C-442	4"	4"	2"	⅞	$1.85
C-453	4"	5"	3"	1¼	1.73
C-564	5"	6"	4"	1¾	1.95
C-596	5"	9"	6"	3	3.00
C-666	6"	6"	6"	2¼	2.63
C-695	6"	9"	5"	3	3.05
C-754	7"	5"	4"	2	2.52
C-8101	10"	10"	8"	6	5.40
C-1276	12"	7"	6"	4½	4.20

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER STEEL and ALUMINUM CHASSIS





EXCLUSIVE PREMIER FEATURE!

View of Chassis Showing Gusset Spot-Welded in Corner.

STEEL AND ALUMINUM BLANK

Chassis are of one piece construction with gussets spot-welded to the bottom flanges for additional strength with prefabricated hole for mounting a bottom plate. Corners have rounded effect and single inside thickness for mounting components. Bottom edges are flanged in on four sides. Steel chassis are zinc plated and made of 20 gauge cold rolled steel, except those marked * which are of 16 gauge. Aluminum chassis are made of 18 gauge (.040) aluminum, except those marked * which are of 14 gauge (.064).

Natural Aluminum Finish.

ALUMINUM						STEEL		
Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†	Size D.	W.	H.	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
ACH-400	½	$1.78	5½"	9½"	1½"	CH-400	1	$2.37
ACH-401	¾	2.27	5"	10"	3"	CH-401	1½	2.58
ACH-402	1	3.40	6"	14"	3"	CH-402	2½	2.92
ACH-403	½	2.05	7"	7"	2"	CH-403	1¼	2.37
ACH-404	½	2.17	7"	9"	2"	CH-404	1½	2.48
ACH-405	¾	2.32	7"	11"	2"	CH-405	1⅞	2.63
ACH-406	¾	2.43	7"	13"	2"	CH-406	2	2.87
ACH-407	1	3.88	7"	15"	3"	CH-407	2¾	3.42
ACH-408	1	3.40	4"	17"	3"	CH-408	2¼	3.13
ACH-409	1½	3.95	7"	17"	3"	CH-409	3⅛	3.68
ACH-410	1⅛	3.78	8"	17"	2"	CH-410	2¾	3.42
ACH-411	1½	4.15	8"	17"	3"	CH-411	5¼	3.73
ACH-412	1¼	3.95	10"	12"	3"	CH-412	2¾	3.42
ACH-413	1¼	4.22	10"	14"	3"	CH-413	3¼	3.47
ACH-414	1¼	4.15	10"	17"	2"	CH-414	3¼	3.47
ACH-415*	1⅞	4.70	10"	17"	3"	CH-415*	6	4.13
ACH-416*	2	6.32	10"	17"	4"	CH-416*	7½	5.23
ACH-417*	1¾	4.87	11"	17"	2"	CH-417*	5¼	4.57
ACH-418*	2	5.67	11"	17"	3"	CH-418*	6¼	5.12
ACH-419*	1⅞	5.02	12"	17"	2"	CH-419*	5	4.40
ACH-420*	2⅛	5.93	12"	17"	3"	CH-420*	7	5.23
ACH-421*	2⅞	6.85	12"	17"	4"	CH-421*	8½	5.62
ACH-422*	1⅞	5.13	13"	17"	2"	CH-422*	6	5.23
ACH-423*	2⅛	6.10	13"	17"	3"	CH-423*	7	5.88
ACH-424*	2½	7.45	13"	17"	4"	CH-424*	10	6.88
ACH-425	⅞	2.87	7"	11"	3"	CH-425	2¼	3.30
ACH-426	¼	1.78	5"	7"	2"	CH-426	1	2.03
ACH-427	1¼	4.05	8½"	15"	3"	CH-427	3	3.85
ACH-428	¼	2.05	5"	7"	3"	CH-428	1¼	2.58
ACH-429	¾	2.60	5"	13"	3"	CH-429	2	3.18
ACH-430	1	3.35	8"	12"	3"	CH-430	2½	3.30
ACH-431	¼	1.73	4"	6"	2"	CH-431	1	2.08
ACH-432	¼	2.00	4"	6"	3"	CH-432	1	2.75
ACH-433	⅞	2.87	7"	12"	3"	CH-433	2½	3.13
ACH-434	1	3.78	6"	17"	3"	CH-434	4	3.42
ACH-435*	2½	7.13	10"	23"	3"	CH-435*	10	5.50
ACH-436	¼	1.62	4"	6"	1½"	CH-436	¾	2.08
ACH-437	⅜	1.88	4"	8"	2"	CH-437	1	2.63
ACH-438*	3	12.53	17"	17"	4"	CH-438*	13	9.78
—	—	—	10"	17"	5"	CH-439*	8½	7.70
—	—	—	13"	17"	5"	CH-440*	11	8.53
ACH-441	1	2.87	8"	10"	2½"	CH-441	2½	2.87

*Made of 14 gauge (.064) aluminum.

Chassis Mounting Brackets Available

*Made of 16 gauge steel.

†See quantity discount schedule on page 1.

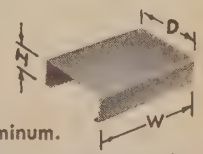
ALUMINUM AND STEEL BOTTOM PLATES



The bottom plates have holes to match the chassis and have 4 pressed dimples. Steel plates are zinc plated and made of 20 gauge steel. Aluminum plates made of 18 gauge (.040). Natural aluminum finish.

ALUMINUM			STEEL		
Cat. No.	Net Price (B)†	Size	Cat. No.	Shpg. Wt. Lbs.	Net Price (B)†
ABP-400	$1.05	5½ x 9½"	BP-400	1	$1.10
ABP-401	1.05	5 x10"	BP-401	1	1.10
ABP-402	1.58	6 x14"	BP-402	1	1.65
ABP-403	1.05	7 x 7"	BP-403	1	1.10
ABP-404	1.05	7 x 9"	BP-404	1	1.10
ABP-405	1.21	7 x11"	BP-405	1	1.27
ABP-406	1.47	7 x13"	BP-406	2	1.53
ABP-407	1.58	7 x15"	BP-407	2	1.65
ABP-408	1.21	4 x17"	BP-408	2	1.27
ABP-409	1.68	7 x17"	BP-409	2	1.77
ABP-410	1.84	8 x17"	BP-410	2	1.93
ABP-412	1.73	10 x12"	BP-412	2	1.82
ABP-413	1.84	10 x14"	BP-413	2	1.93
ABP-414	2.00	10 x17"	BP-414	2	2.08
ABP-418	2.10	11 x17"	BP-418	3	2.20
ABP-419	2.52	12 x17"	BP-419	3	2.63
ABP-422	2.78	13 x17"	BP-422	3	2.92
ABP-423	1.05	5 x 7"	BP-423	1	1.10
ABP-424	1.21	5 x13"	BP-424	1	1.27
ABP-425	1.58	8 x12"	BP-425	2	1.65
ABP-426	1.05	4 x 6"	BP-426	1	1.10
ABP-427	1.42	7 x12"	BP-427	2	1.48
ABP-428	1.58	6 x17"	BP-428	2	1.65
ABP-429	3.05	10 x23"	BP-429	2	3.18
ABP-430	1.16	4 x 8"	BP-430	1	1.22
ABP-431	3.41	17 x17"	BP-431	4	3.58
ABP-432	2.26	8½x15"	BP-432	1½	2.37
ABP-433	1.31	8 x10"	BP-433	1	1.38

ALUMINUM OPEN END CHASSIS

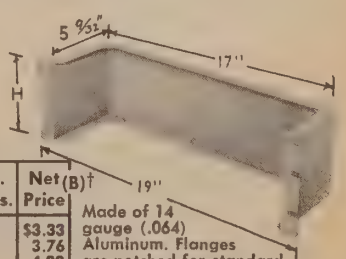


Made of 18 ga. (.040) Aluminum.

Cat. No.	D.	W.	H.	Shpg. Wt. Lbs.	Net Price (B)†
ACH-1350	2⅝"	2¾"	1¼"	¼	$ .63
ACH-1351	1¾"	3⅛"	1"	¼	.63
ACH-1352	3¼"	4½"	2"	¼	.75
ACH-1353	2¾"	4⅛"	1"	¼	.75
ACH-1354	3¾"	4⅛"	1½"	¼	.75
ACH-1355	3"	6⅛"	1¼"	¼	.87
ACH-1356	5¾"	4⅞"	1½"	¼	.92
ACH-1357	4"	3½"	1"	½	.75
ACH-1358	4"	4⅛"	1"	½	.87
ACH-1359	4"	5⅛"	1"	½	.87
ACH-1360	4"	6⅛"	1"	½	.92

ALUMINUM VERTICAL PANEL CHASSIS

To FIT 19" STANDARD RACKS



Cat. No.	H.	Shpg. Wt. Lbs.	Net (B)† Price
ACH-1200	1¾"	¾	$3.33
ACH-1201	3½"	1¼	3.76
ACH-1202	5¼"	1½	4.29
ACH-1203	7"	2	4.73
ACH-1204	8¾"	2¼	5.43
ACH-1205	10½"	2¾	6.21
ACH-1206	12¼"	3	7.35
ACH-1207	14"	3¼	8.40

Made of 14 gauge (.064) Aluminum. Flanges are notched for standard rack mounting. All chassis depths are 5 9/32". Gussets are spot welded in each corner for greater strength. Etched finish.

FOR SIDE HINGED PANELS (SHP SERIES)

© United Technical Publications

PREMIER CHASSIS SLIDES

SOLID BEARING SLIDES

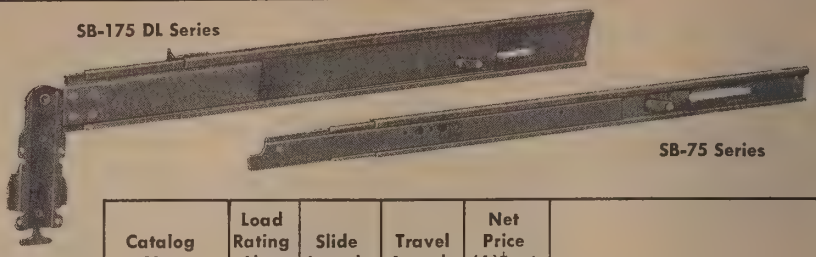
RATED 75 lb. and 175 lb. LOADS

- **TILT and NON-TILT MODELS.**
- EXCLUSIVE "QUICK DISCONNECT" allows for immediate removal of chassis.
- SB-75 Series carry 75 lbs. fully extended. SB-175 Series carry 175 lbs. fully extended.
- Made of high strength cold rolled steel.
- Withstands 100 hours salt spray.
- Slide mounts standard 17" wide chassis.
- 3 telescoping members allow full accessibility for instant servicing.
- SB-75 Series—.386 horizontal side space adjustable $\pm\frac{1}{32}$. SB-175 Series—.398 horizontal side space adjustable $\pm\frac{1}{32}$.
- Finish: Electro zinc plated, chromate treated and completely coated with Molybdenum Disulphide lubricant.
- SB-175-DL Series have detent locks which allow chassis to be tilted either up or down and locked at 90° for easy servicing.

SLIDE TILT CONVERSION KIT

Converts straight slides to tilting type on SB Series.

	Net Price (A)†
STK-75 (For SB-75 Series)	$4.40



Catalog No.	Load Rating Lbs.	Slide Length	Travel Length	Net Price (A)† pair
SB-75-14	75	14"	14½"	$19.64 pr.
SB-75-16	75	16"	14½"	19.95 pr.
SB-75-20	75	20"	18½"	20.31 pr.
SB-75-22	75	22"	22½"	21.33 pr.
SB-75-24	75	24"	22½"	22.43 pr.
SB-175-14	175	14"	14½"	40.08 pr.
SB-175-16	175	16"	18½"	40.71 pr.
SB-175-20	175	20"	22½"	41.11 pr.
SB-175-22	175	22"	24"	42.32 pr.
SB-175-24	175	24"	26½"	43.06 pr.
SB-75-DL-14	75	14"	15"	39.30 pr.
SB-75-DL-16	75	16"	17"	39.99 pr.
SB-75-DL-20	75	20"	21"	41.67 pr.
SB-75-DL-22	75	22"	23"	42.48 pr.
SB-75-DL-24	75	24"	25"	43.35 pr.
SB-175-DL-14	175	14"	14½"	59.71 pr.
SB-175-DL-16	175	16"	18¼"	60.34 pr.
SB-175-DL-20	175	20"	22¼"	62.12 pr.
SB-175-DL-22	175	22"	26¼"	63.22 pr.
SB-175-DL-24	175	24"	26¼"	64.19 pr.

Catalog No. 14" length slides fit 15¼" deep POR (DCR, DRK, FXR)*, RMX, FDX

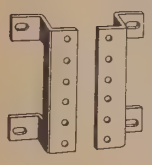
16" length slides fit 18" deep PRXA, POR (R, DCR)*

20" length slides fit FS, 22" deep CPF & FA, MSF, RMX, FDX

22" length slides fit 24" deep PRXA

24" length slides fit 25½" deep FA & FS, MSF, CPF

*Slide Adapter Kit (Cat. No. SAK-35) required for rear mounting on all models in parenthesis.



SLIDE ADAPTER KIT

For BB and SB SERIES

Required for rear mounting on DR, R, DCR, DRK and FXR models.

- Mounts to inside rear flange by drilling 4 holes.
- Made of No. 12 gauge steel and tapped 10-32 on E.I.A. spacings (⅝-⅝-½).
- Finished in Gray Hammertone.

Kit includes 2 brackets, four 10-32 screws and keps.

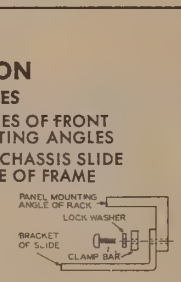
Cat. No. SAK-35
Net Price (A)† $4.00

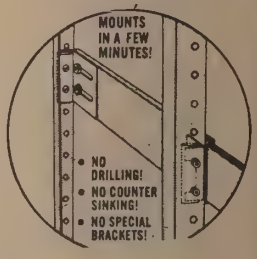
RAPID INSTALLATION

For BB and SB SERIES SLIDES

- MOUNTS TO TAPPED HOLES OF FRONT AND REAR PANEL MOUNTING ANGLES
- SIMPLE ADJUSTMENT OF CHASSIS SLIDE ASSEMBLY FROM OUTSIDE OF FRAME

Head of Screw on Inside of Rack. Screw Flush with Front Edge of Angles when Assembled





ALUMINUM BALL BEARING SLIDES

HIGH STRENGTH ANODIZED ALUMINUM

READY-TO-MOUNT



- EXCLUSIVE "QUICK DISCONNECT" allows for immediate removal of chassis.
- Carries load of 100 lbs. when fully extended.
- Glides smoothly on stainless steel ball bearings.
- 5/16" horizontal side space adjustable $\pm\frac{1}{16}$.
- 1⅝" vertical side space.
- 3 telescoping members.
- Allows full accessibility for instantaneous servicing.
- Slide mounts standard 17" wide chassis.
- Slide locks in open position.
- Supplied with all necessary hardware for immediate installation.

Catalog No.	Load Rating Lbs.	Slide Length	Travel Length	Will Fit Racks	Net Price (A)† pair
BB-100-14	100	14"	13"	15¼" deep POR (DCR, DRK, FXR)*, RMX, FDX	59.34 pr
BB-100-16	100	16"	15"	18" deep PRXA, POR (R, DCR)*	61.27 pr
BB-100-20	100	20"	19"	FS, 22" deep CPF & FA, MSF, RMX, FDX	65.02 pr
BB-100-22	100	22"	21"	24" deep PRXA	66.91 pr
BB-100-24	100	24"	23"	25½" deep FA & FS, MSF, CPF	68.84 pr

*Slide adapter kit (Cat. No. SAK-35) required for rear mounting on all models in parenthesis.



100 lb. FULL EXTENSION THIN SLIDES

- Large, quiet nylon rollers and steel balls glide to full extension
- Positive mechanical stop prevents slide from being over-extended
- Requires only ½ inch mounting space on each side
- Cold rolled steel, zinc plated, clear iridite track, outer and intermediate channels

Catalog No.	Load Rating Lbs.	Slide Length	Travel Length	Net Price (A)† pair
SFE-100-14	100	14"	14"	$9.12 pr.
SFE-100-16	100	16"	16"	9.67 pr.
SFE-100-20	100	20"	20"	10.80 pr.
SFE-100-22	100	22"	22"	11.35 pr.

†See quantity discount schedule on page 1.

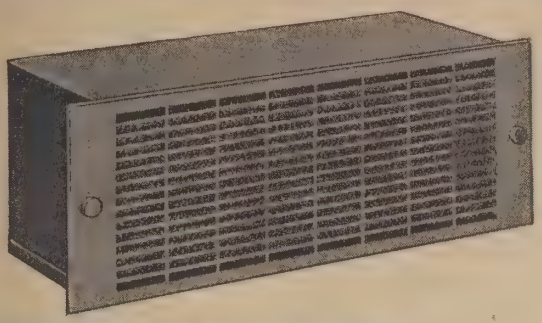
PREMIER PAGE 26

PREMIER METAL PRODUCTS COMPANY / A Division of Sunshine Mining Company

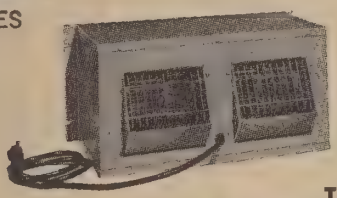
Net

© United Technical Publications

PREMIER PANEL MOUNTED BLOWERS



PMB SERIES



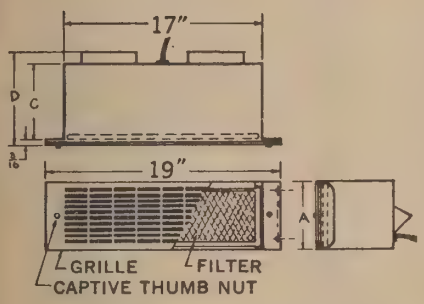
REAR VIEW

PREM-O-KOOL

MAXIMUM COOLING with MINIMUM SPACE

- Permanently lubricated motors with lubricant temperature range from −29°C to +148°C.
- Permanent type washable filter—easily removable from front.
- Low noise level with minimum of vibration.
- Standard E.I.A. notching.
- Grille supplied with 2 captive thumb nuts.
- Units furnished with 3'6" lead with molded male plug.
- Performance data prepared by impartial, independent testing laboratory.
- Motors are 115 Volt 50/60 cycle, single phase AC.
- Housing finished in Gray Hammertone. Grille chrome plated.

BASE RECESSED BLOWERS utilizing "dead space" in base are available. Units use less panel space. Unit performance ratings are the same as PMB Series.



Units available to fit Standard 24" wide panel space. Prices upon request.

Grille finished to match color of Premier cabinets or frames at no additional cost.

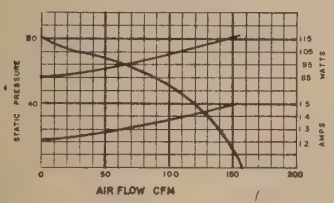
†See quantity discount schedule on page 1.

TO FIT STANDARD 19" WIDE PANEL SPACE

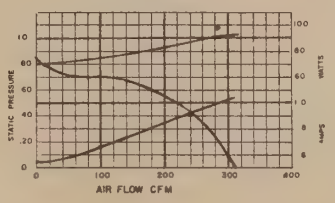
CATALOG NO.	PMB-5-150	PMB-5-300	PMB-7-360	PMB-7-475	PMB-8-525	PMB-10-820
CFM at 0" S.P.	150	300	360	475	525	820
PANEL HEIGHT (A)	5¼"	5¼"	7"	7"	8¾"	10½"
FILTER, Permanent	16⅝x4⅞ x½"	16⅝x4⅞ x½"	16⅝x6¾ x½"	16⅝x6¾ x½"	16⅝x8⅜ x½"	16⅝x10⅛ x½"
DEPTH OF ENCLOSURE ONLY (C)	6¼"	6¼"	8¼"	8¼"	10"	11½"
OVERALL DEPTH including outlets (D)	7"	7"	10"	10"	11⅝"	13"
MOTOR						
RPM	3000	3200	1500	3250	1500	1500
WATTS	120	86	82	180	180	275
VOLTS	115	115	115	115	115	115
CYCLES	50/60	50/60	50/60	50/60	50/60	50/60
AMPS	1.5	.9	1.1	1.7	1.9	2.8
TYPE	Ball bearing shaded pole	Ball bearing permanent split capacitor	Ball bearing shaded pole	Ball bearing permanent split capacitor	Ball bearing permanent split capacitor	Ball bearing permanent split capacitor
SHIPPING WT. LBS.	14	15	24	25	26	35
NET PRICE (A)†	$120.31	$139.02	$159.86	$169.76	$189.53	$212.07

PERFORMANCE

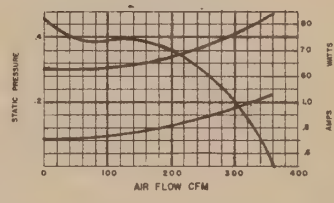
PMB-5-150



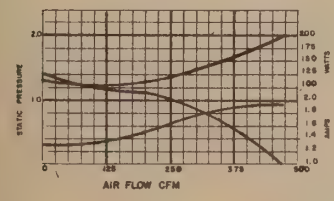
PMB-5-300



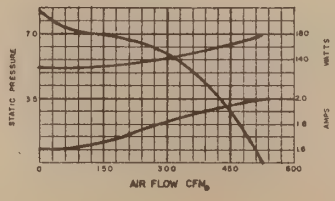
PMB-7-360



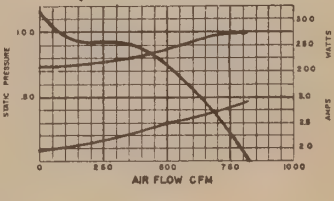
PMB-7-475



PMB-8-525



PMB-10-820

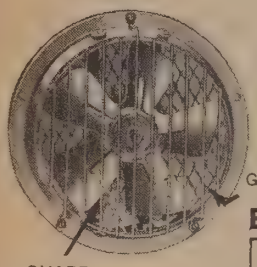


© United Technical Publications

PREMIER FANS AND BLOWERS

PREM-O-KOOL EXHAUST AND INTAKE FANS

Patent No. 3,019,965. Other Patents Pending.

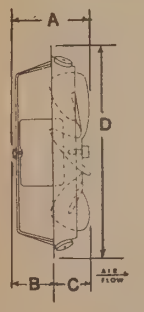


PREM-O-KOOL fans are available for exhausting air from cabinets (EF Series) and for drawing air into cabinets (IF Series).

- Motors are 115 volts 50/60 cycle single phase AC.
- Minimum space required.
- Supplied with 18" lead.
- Fan and motor assembly shock mounted for minimum noise and vibration.
- Permanently lubricated ball bearing, shaded pole motors with low temperature rise.
- Easily interchangeable accessories for flexibility of mounting in cabinets.
- Cut-out and mounting holes for fans can be provided on any Premier rack or cabinet at slight additional cost.

EXHAUST FANS

EF Series



Cat. No.	Net Price (A)†	CFM	Motor Watts	RPM	Fan Blade Dia.	A	B	C	D	Hole Dia. Required
EF-165	$53.31	165	20	1650	6½"	2⅞"	1⅝"	1¼"	8½"	7¾"
EF-220	47.59	220	25	1550	6½"	3¼"	1⅝"	1⅝"	8½"	7¾"
EF-300	50.47	300	65	3000	6½"	4⅛"	2⅝"	1½"	8½"	7¾"
EF-400	57.94	400	46	1460	8"	3⅝"	1⅞"	1¾"	10½"	9¼"
EF-550	62.51	550	90	1600	9"	4¾"	2⅛"	2¼"	11½"	10⅝"
EF-750	67.08	750	105	1560	10"	4⅜"	2⅛"	2¼"	12½"	11⅝"

ACCESSORIES FOR EXHAUST FANS

GUARDS

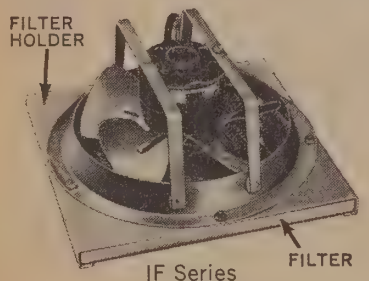
Cat. No.	Used with Fan	Dia.	Depth	Net Price (A)†
GU-6	EF165, 220, 300	6¾"	1⅞"	$3.19
GU-8	EF400	8¼"	2⅜"	3.27
GU-9	EF 550	9¼"	2⅜"	3.91
GU-10	EF 750	10¼"	2⅜"	4.49

GRILLES

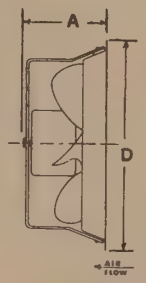
Cat. No.	Used with Fan	Dia.	Net Price (A)†
GR-6	EF165, 220, 300	8½"	$2.59
GR-8	EF400	10½"	2.87
GR-9	EF550	11½"	3.19
GR-10	EF750	12½"	3.91

SLEEVES

Cat. No.	Used with Fan	Dia.	Depth	Net Price (A)†
SL-6	EF165, 220, 300	8½"	1¾"	$3.91
SL-8	EF400	10½"	2"	3.91
SL-9	EF550	11½"	2⅜"	4.49
SL-10	EF 750	12½"	2⅜"	5.09



IF Series



INTAKE FANS

Cat. No.	Net Price (A)†	CFM	Motor Watts	RPM	Fan Blade Dia.	Dimensions A	Dimensions D	Hole Diam. Required
IF-160	$53.56	160	20	1650	6½"	2⅞"	8½"	7¾"
IF-180	47.63	180	25	1550	6½"	3¼"	8½"	7¾"
IF-300	50.46	300	65	3000	6½"	4⅛"	8½"	7¾"
IF-360	57.92	400	46	1460	8"	3¾"	10½"	9¼"
IF-540	62.51	540	90	1600	9"	4⅜"	11½"	10⅝"
IF-740	66.71	740	105	1560	10"	4⅜"	12½"	11⅝"

ACCESSORIES FOR INTAKE FANS

FILTERS Permanent washable type ½" thick

Cat. No.	Used with Fan	Size	Net Price (A)†
FL-6	IF160, 180, 300	8⅜" Sq.	$3.20
FL-8	IF360	10⅜" Sq.	3.20
FL-9	IF540	11⅜" Sq.	3.91
FL-10	IF740	12⅜" Sq.	3.91

FILTER HOLDERS

Cat. No.	Used with Fan	Size	Depth	Net Price (A)†
FH-6	IF160, 180, 300	8⅛" Sq.	⅝"	$5.09
FH-8	IF360	10⅛" Sq.	⅝"	5.09
FH-9	IF540	11⅛" Sq.	⅝"	6.51
FH-10	IF740	12⅛" Sq.	⅝"	7.68

PREMIER CABINETS AND RACKS



FA, PRXA, FS, RMX, FDX, R, DR, DCR, DRK, SDR, POR and FXR models may be supplied with one round and 5 mounting holes to accommodate Exhaust and Intake Fans, at additional cost.

†See quantity discount schedule on page 1.

FRONT DOORS — 1¼" DEEP

TO FIT STANDARD 19" DESK RACK CABINETS AND CABINET RELAY RACKS



Constructed from one piece of #16 gauge steel. Two concealed piano hinges are provided with holes, punched to accommodate E.I.A. spacings and are made to fit on top of the panels. Supplied with cylinder lock and cam bracket to hold door in position on FD-300-306. Locking chrome handle with two keys supplied on FD-310-313 models. All necessary bolts furnished for easy assembly. All doors are 20½" wide x1¼" deep. Finished in Smoke Blue. Also available in Gray Hammertone. SPECIFY COLOR WHEN ORDERING.

Cat. No.	Will Fit Rack No.	Overall Height	Shpg. Wt. Lbs.	Net Price
FD-300	DCR, DRK-260, 18260, MDK-260	26¼"	10	(B)†$20.88
FD-301	DCR, DRK-310, 18310, MDK-310	31½"	11	(B)† 24.12
FD-302	DCR, DRK-350, 18350, MDK-350	35"	12	(B)† 28.09
FD-303	DCR, DRK-120, 18120, MDK-120	12¼"	6	(B)† 15.68
FD-304	DCR, DRK-140, 18140, MDK-140	14"	7	(B)† 16.97
FD-305	DCR, DRK-170, 18170, MDK-170	17½"	8	(B)† 18.55
FD-306	DCR, DRK-210, 18210, MDK-210	21"	9	(B)† 19.94
FD-310	R-3619	36⅞"	13	(A)† 28.71
FD-311	R-4219	42⅛"	15	(A)† 32.90
FD-312	R-6119	61⅜"	20	(A)† 38.24
FD-313	R-7719	77⅛"	24	(A)† 43.80

© United Technical Publications

PREMIER HARDWARE

HW-1
NON-LOCKING HANDLE
Chrome plated
Net Price $2.64
(A)†

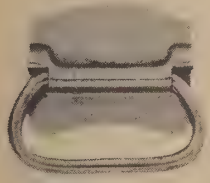




HW-2
ROUND CHROME PLATED HANDLE
Net Price $1.17
(A)†

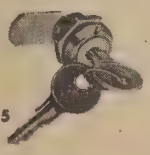
HW-3
LOCKING HANDLE
with 2 keys—
Chrome plated
Net Price $4.97
(A)†





HW-5
DROP HANDLE
Finished in Smoke Blue.
Also available in all Premier Standard colors.
Net Price $1.51
(A)†

HW-6
CYLINDER LOCK
with 2 keys
Nickel plated
Net Price $3.15
(A)†



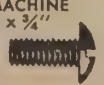


HW-7
BLACK NYLON HANDLE
with 2 screws
Net Price $1.04
(A)†



HW-8
QUICK TURN FASTENER
Nickel plated
Net Price $1.56
(A)†

HW-13
TRUSS HEAD MACHINE SCREWS 10/32 x ¾"
Nickel plated
Net Price (A)†
$.43 bag of 40





HW-14
10/32 x 1" PHILLIPS WASHER HEAD SCREWS and CAPTIVE NUTS.
Packaged 20 ea./bag
Net Price $1.60
bag of 20
(A)†



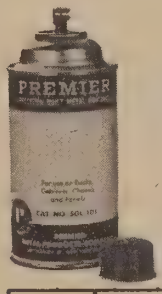


HEAVY DUTY OUTLET BOXES

For Internal Rack Mounting

- Completely wired with circuit breaker. Ready for use
- Supplied with 6' Neoprene cord set with molded plug
- Rated at 15 Amperes. 130 Volts continuous duty
- "U" ground outlets—soldered connections
- Mounting centers 6"
- 1½" wide x 1⅛" deep
- Mounts to crosspiece on PRXA, FA, FDX & RMX frames
- Steel case finished in Gray Hammertone

Model No.	Length	No. of Outlets	Rack Panel Space	Price Net (A)†
OB-161	56¾"	9	61¼"†	$20.04
OB-170	65½"	10	70"†	23.40
OB-177	72½"	11	77"†	25.84

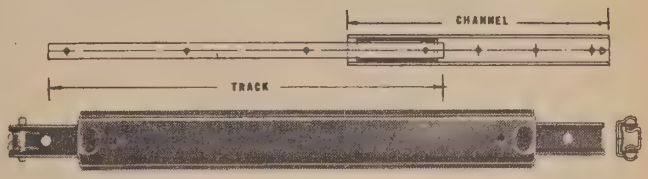


SPRAY CAN LACQUER

Available in 3 colors
12 oz. CAN
Packaged 6 to case

Cat. No.	To Match	Net Price (B)†
GHL-102	Gray Hammertone	$2.78
SBL-105	Smoke Blue	3.00
LGL-106	Light Gray	3.00

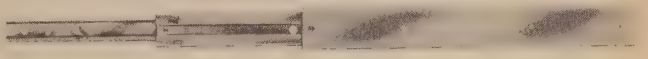
UTILITY SLIDES



"A" SERIES

- May be mounted on side or underneath.
- Ball bearing spacer and patented silencer spring eliminates slide noise and vibration.
- All members made of 16 gauge cold rolled steel.
- Black oxidized finish.

Catalog No.	Slide Travel	Channel Length	Track Length	Load Cap.	Net Price (A)† pair
A-50-13	9"	11"	13"	50	$3.53 pr.
A-40-15	11"	11"	15"	40	3.61 pr.
A-30-165	12½"	11"	16½"	30	3.91 pr.
A-30-185	14½"	11"	18½"	30	4.16 pr.



50 LB. — FULL EXTENSION 3 PC. SLIDE

- 50 lb. load rating • 3 piece full extension
- Ball bearings and nylon rollers
- Positive mechanical stop • Instant disconnect
- Side mounted — only ½" width required
- CR steel, zinc plated and clear iridite

Cat. No.	Slide Length And Extension	Net Price (A)† pair
LFE-50-14	14"	$6.27 pr.
LFE-50-16	16"	6.71 pr.
LFE-50-20	20"	7.33 pr.
LFE-50-22	22"	7.88 pr.



*Foot operated friction brake for positive locking wheel.
**With roller bearing wheel.

2" - 3" - 4" DIA. CASTERS

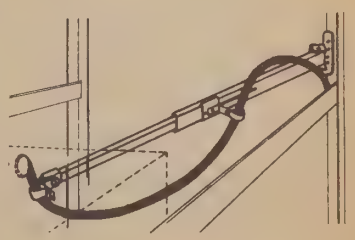
Made of non-marking composition wheel with Ball Bearing Swivel Plate. Packed one set of 4 in box with screws for assembly.

Cat. No.	Kind of Wheel	Wheel Size	Overall Height	Cap. per Caster—Lbs.	Net Price (A)†
CA-4	Plaskite	2" dia. x 1⅜"	2⅞"	80	$3.64
CA-5	Rockite	3" dia. x 1¼"	3⅛"	225	9.56
CA-6	Soft Rubber	Double 2" dia. x 1⅜"	2⅞"	125	10.04
CA-7*	Rockite	3" dia. x 1¼"	3⅛"	225	13.06
CA-8**	Rockite	4" dia. x 1⅝"	5¼"	450	43.87

BALL BEARING ACTION CABLE RETRACTOR

FOR CONTROL OF POWER SUPPLY CABLES

The PREMIER CABLE RETRACTOR is designed for easy and fast installation in both new and existing equipment. It is attached to rear of cabinet and controls power supply cables most efficiently. As the chassis is extended, the retractor pivots and the inner ball bearing actuated member glides out as necessary. Spring tension keeps cable "jam-proof"

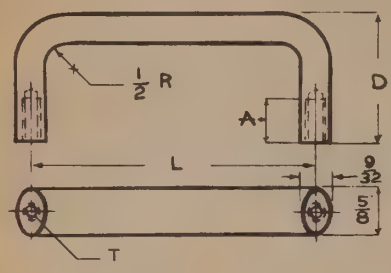


Cat. No. PCR-3-16
Net Price (A)† $18.69

†See quantity discount schedule on page 1.

© United Technical Publications

PREMIER HANDLES for INSTRUMENTS and EQUIPMENT



5/8" OVAL HW-16 SERIES

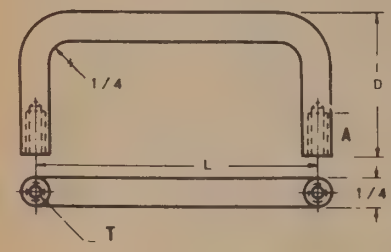
MATERIAL: Aluminum per QQ-A-325-A.
FINISH: Black Anodize per MIL-A-8625 Type II.

Cat. No.	L	D	A	T	Net Price (A)†
HW-16A1	3	1 3/32	3/32	10-24	$2.25
HW-16A4	4 3/16	1 1/2	1/2	10-24	2.38
HW-16A6	6 3/16	1 3/4	1/2	10-24	2.72

5/8" OVAL HW-17 SERIES

MATERIAL: Brass per QQ-B-626 Comp 22½ Hard.
FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI.

Cat. No.	L	D	A	T	Net Price (A)†
HW-17B1	3	1 3/32	3/32	10-32	$2.98
HW-17B4	4 3/16	1 1/2	1/2	10-32	3.15
HW-17B6	6 3/16	1 3/4	1/2	10-32	3.72



1/4" ROUND HW-19 SERIES

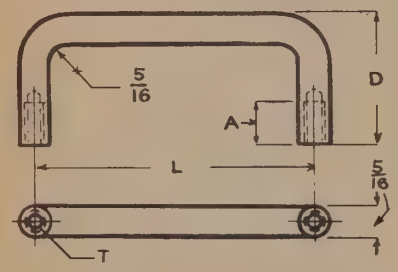
MATERIAL: Brass per QQ-B-626 Comp 22½ Hard.
FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI.

Cat. No.	L	D	A	T	Net Price (A)†
HW-19B1	2	1½	3/16	8-32	$1.51
HW-19B2	3	1½	3/16	8-32	1.51
HW-19B3	4	1½	3/16	8-32	1.64
HW-19B4	6	1½	3/16	8-32	1.68

1/4" ROUND HW-20 SERIES

MATERIAL: Aluminum per QQ-A-325A.
FINISH: Black Anodize per MIL-A-8625 Type II.

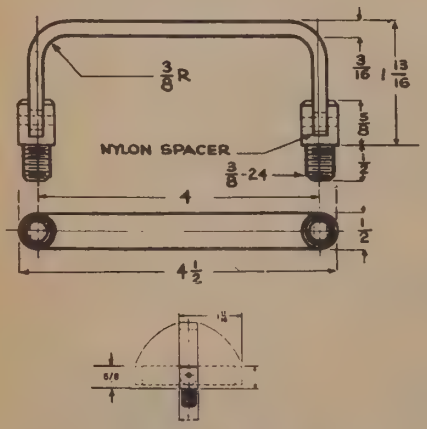
Cat. No.	L	D	A	T	Net Price (A)†
HW-20A1	2	1½	3/16	8-32	$1.47
HW-20A2	3	1½	3/16	8-32	1.47
HW-20A3	4	1½	3/16	8-32	1.60
HW-20A4	6	1½	3/16	8-32	1.68



5/16" ROUND HW-18 SERIES

MATERIAL: Brass per QQ-B-626 Comp 22½ Hard.
FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI.

Cat. No.	L	D	A	T	Net Price (A)†
HW-18B3	3	1 5/16	3/16	8-32	$1.64
HW-18B13	4 3/16	1½	3/16	10-32	1.77
HW-18B14	6	1½	3/16	10-32	1.77
HW-18B16	6 3/16	1¾	3/16	10-32	1.94



DROP HANDLES—HW-21 and HW-22 SERIES

HW-21A

MATERIAL: Bow-Aluminum MIL Spec QQ-A-274. Ferrules MIL Spec QQ-A-325A.

FINISH: Semi-Frost Per MIL-A-8625 Type II.

HW-22B

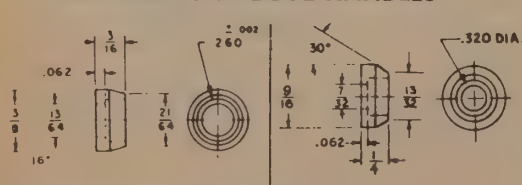
MATERIAL: Bow-Brass MIL Spec QQ-B-626 Comp 22½ Hard. Ferrules MIL Spec QQ-B-626 Comp 22½ Hard.

FINISH: Nickel Plate and Polish MIL-QQ-N-290 Type VI.

NOTE: Handle and Ferrules are furnished with nylon spacer and roll-pin 1/8 dia. to hold bow in any given position. Swings 180° to either plane.

Cat. No.	Material	Net Price (A)†
HW-21A HW-22B	Aluminum Brass	$4.02, 4.32

FERRULES FOR ABOVE HANDLES



FOR 1/4" DIAMETER HANDLES

HW-23AF (ALUMINUM) Made of Aluminum per QQ-A-325A, anodized black per MIL-A-8625 Type II.

Net Price (A)† $.17

HW-24BF (BRASS) Made of Brass per QQ-B-626 comp. 22½ hard, nickel plated and polished per MIL-QQ-N-290 Type VI.

Net Price (A)† $.17

FOR 5/16" DIAMETER HANDLES

HW-25BF (BRASS) Made of Brass per QQ-B-626 comp. 22½ hard, nickel plated and polished per MIL-QQ-N-290 Type VI.

Net Price (A)† $.22

†See quantity discount schedule on page 1.

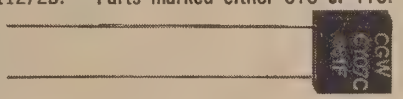
Net

© United Technical Publications

We make capacitors for guys who can't stand failures.

For coupling, decoupling, filtering, timing, switching or computer circuits, CORNING®Capacitors provide ultra-stable electrical performance.This stability is inherent in their fused glass and aluminum foil capacitive elements. These inorganic materials and continuous process and quality monitoring are responsible for the well-known CORNING CYFR capacitor made for the Minuteman. Many of the basic advantages of the CYFR have found their way into standard CORNING Capacitors. The properties of these capacitors are entirely those of the closely controlled dielectric, and can't be changed by assembly methods or subsequent treatment. At 1 Kc and 25°C, dissipation factor is less than 0.001; at any given temperature, TC will not deviate from the curve by more than 5 ppm on CYFR, CYFM and CYO units.

Corning manufactures highly stable fixed glass capacitors to meet your demanding circuit requirements. Their performance and economic advantages will add value to your equipment.

	TYPE AND MIL SPEC	STYLE	CAPACITANCE RANGE (pf)	VOLTAGE	NOMINAL DIMENSIONS Size in inches	WEIGHT IN GRAMS
CYFM (CY)	Fusion-sealed environment-proof performance at cost savings. Electrically and environmentally interchangeable with CYFR. MIL-C-11272B. Parts marked either CYFM or CY. 	CYFM10 (CY10)	0.5 to 200 220 to 300	500 300	11/32 x 11/64 x 5/64	0.25 - 0.50
		CYFM15 (CY15)	220 to 510 560 to 1200	500 300	15/32 x 17/64 x 7/64	0.75 - 1.25
		CYFM20 (CY20)	560 to 3300 3600 to 5100	500 300	47/64 x 27/64 x 9/64	2.50 - 4.00
		CYFM30 (CY30)	3600 to 6200 6800 to 10,000	500 300	49/64 x 3/4 x 9/64	5.00 - 7.00
CYO (TYO)	New printed circuit capacitor provides glass stability in a uniformly symmetric case. Eliminates shorting. Lead spacing: CYO-6—0.2", CYO-7—0.2", CYO-8—0.4". MIL-C-11272B. Parts marked either CYO or TYO. 	CYO-6 (TYO-6)	1 to 560	300	.300 x .200 x .115	.3 - .4
		CYO-7 (TYO-7)	561 to 1000	300	.300 x .300 x .115	.4 - .5
		CYO-8 (TYO-8)	1001 to 2400	300	.500 x .300 x .115	.7 - .8
GLASS-K (CYK) (CK)	New miniature stable capacitor exhibits high capacitance-to-volume ratio. Offers size advantages of ceramic types, and consistent performance associated with glass dielectrics. 10% and 20% tolerances. Solderable and weldable gold plated dumet leads. MIL-C-11015D. Parts marked either CYK or CK.	CYK01 (CK31)	270 to 51,000	50	0.250 x 0.100	0.2
		CYK02 (CK32)	12,000 to 100,000	50	0.250 x 0.140	0.3

STANDARD CAPACITOR VALUES, CYFM (CY), CYO (TYO)*

CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL. EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.
0.5	0R5C	7.5	7R5J	33	330J	130	131J	560	561J	2400	242J
1.0	1R0C	8.2	8R2J	36	360J	150	151J	620	621J	2700†	272J
1.5	1R5C	9.1	9R1J	39	390J	160	161J	680	681J	3000†	302J
2.2	2R2C	10	100J	43	430J	180	181J	750	751J	3300†	332J
2.7	2R7C	11	110J	47	470J	200	201J	820	821J	3600†	362J
3.0	3R0C	12	120J	51	510J	220	221J	910	911J	3900†	392J
3.3	3R3C	13	130J	56	560J	240	241J	1000	102J	4300†	432J
3.6	3R6C	15	150J	62	620J	270	271J	1100	112J	4700†	472J
3.9	3R9C	16	160J	68	680J	300	301J	1200	122J	5100†	512J
4.3	4R3C	18	180J	75	750J	330	331J	1300	132J	5600†	562J
4.7	4R7C	20	200J	82	820J	360	361J	1500	152J	6200†	622J
5.1	5R1C	22	220J	91	910J	390	391J	1600	162J	6800†	682J
5.6	5R6C	24	240J	100	101J	430	431J	1800	182J	7500†	752J
6.2	6R2C	27	270J	110	111J	470	471J	2000	202J	8200†	822J
6.8	6R8C	30	300J	120	121J	510	511J	2200	222J	9100†	912J
										10000†	103J

*Standard Tolerances As Shown: C = ±25 pf J = ±5%.
*Other Tolerances Available On Request: D = ±.50 pf F = ±1% G = ±2% K = ±10%
†Values Do Not Apply To CYO (TYO) Capacitors.

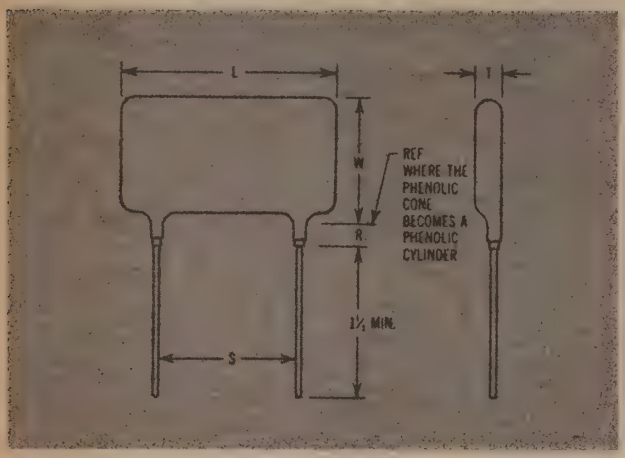
CORNING ELECTRONICS

CORNING GLASS WORKS
ELECTRONIC PRODUCTS DIVISION

© United Technical Publications

ELMENCO CAPACITORS

DIMENSIONAL DATA

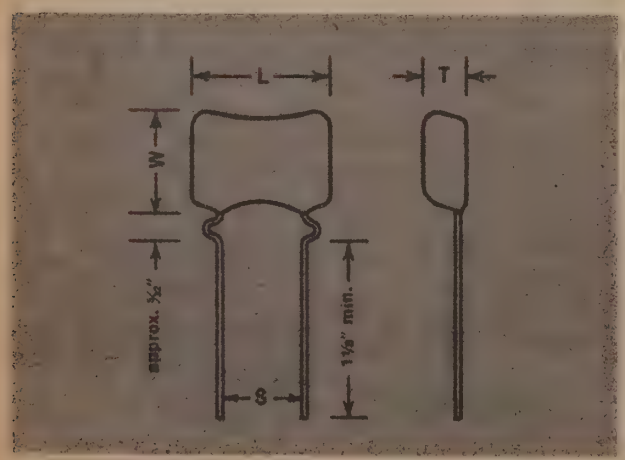


	DM-5	DM-10	DM-15	DM-16	DM-19	DM-20	DM-30	DM-42
R. MAX.	5/64	1/8	1/8	1/8	5/64	5/64	11/64	11/64
S ±1/32	1/8	5/64	11/64	1/2	11/32	3/16	7/16	1 1/16
LEAD WIRE GAGE	#26	#26	#22	#22	#20	#20	#18	#18

Dipped mica leads may be tinned copper-clad steel, 30% minimum conductivity, or tinned brass except for DM-5 and DM-10 case sizes which are copper-clad steel only.

Crimped Leads

In addition to the straight lead design, DM capacitors (except DM-5) are also available with crimped leads for printed circuit application. The crimp provides a positive stop when capacitors are mounted. This prevents interference of resin coat on the leads with dip-solder operation, provides greater mounting uniformity, and elevates the components slightly above the surface of the board. Crimped leads are normally copper-clad steel. Lead wire gage for crimped lead units is the same as for straight lead capacitors for types DM-19 through DM-42. For type DM-10 #24 gage is used, types DM-15 and DM-16 use #20 gage. Crimped lead units are not regularly stocked but are available to special order at nominal extra charge.



Maximum Dimensions

Maximum dimensions of the various DM case sizes have been specified to anticipate variations in coat thickness and minor protrusions on the surface. Average dimensions of a given lot may be appreciably smaller than those listed.

Note that the leads are not centered in the thickness dimension. This can be seen on the end view dimensional drawing. Construction of Elmenco Dur-Mica capacitors provides for leads to project from one surface of the mica stack, causing them in turn to extend from one edge of the capacitor. Regardless of case size and overall thickness, leads will always be within 1/64 to 3/32 from one of the capacitor surfaces except for SCDM types.

Not all dimensions of every capacitance value are listed since size varies almost linearly with capacitance value. Dimensions of values between those specified below should be determined by interpolation.

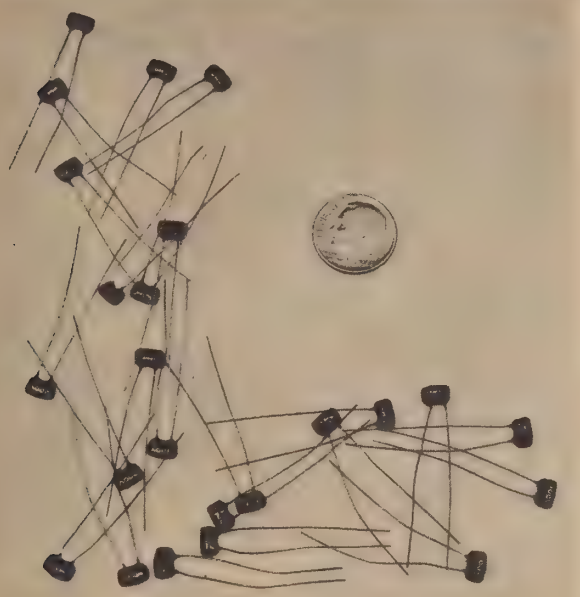
CASE SIZE	Cap. mmf.	Volt. VDCW	L. max.	W. max.	T max.
DM-5	10	300	.270	.190	.110
	39	300	.270	.210	.130
	68	300	.270	.220	.150
	100	300	.270	.250	.190
	150	100	.270	.230	.170
	180	100	.270	.240	.180
	200	100	.270	.250	.190
	68	50	.270	.200	.120
	100	50	.270	.200	.130
	180	50	.270	.210	.140
	240	50	.270	.220	.160
	330	50	.270	.240	.180
	390	50	.270	.250	.190
DM-10 (CM04) (CM09)	10	500	.360	.330	.190
	50	500	.370	.340	.190
	100	500	.370	.350	.200
	150	500	.380	.360	.210
	250	500	.390	.380	.220
	300	300	.390	.380	.220
	390	100	.390	.380	.220
DM-15 (CM05) (CM10)	10	500	.450	.360	.170
	100	500	.460	.360	.180
	200	500	.460	.380	.190
	300	500	.470	.390	.210
	500	500	.490	.420	.240
	560	300	.470	.390	.210
	680	300	.470	.390	.210
	820	300	.470	.400	.230
	1000	100	.490	.420	.240
DM-16	430	500	.730	.380	.200
	600	500	.750	.390	.220
	720	500	.750	.400	.230
	720	300	.730	.380	.200
	900	300	.740	.390	.210
	1300	300	.740	.390	.230
DM-19 (CM06) (CM11)	100	500	.640	.500	.190
	500	500	.650	.510	.200
	1000	500	.650	.520	.220
	2000	500	.670	.530	.240
	3000	500	.680	.550	.280
	5000	500	.710	.590	.360
	6200	300	.690	.570	.320
	8200	100	.700	.580	.350
DM-20	680	500	.750	.510	.200
	1000	500	.750	.510	.200
	2000	500	.760	.520	.220
	3900	500	.780	.560	.300
	5600	500	.790	.570	.340
	6800	300	.790	.560	.320
	7500	100	.780	.560	.300
	10000	100	.790	.570	.340
DM-30 (CM07) (CM12)	4300	500	.780	.860	.270
	6800	500	.780	.870	.300
	10000	500	.800	.890	.340
	15000	500	.810	.900	.390
	20000	500	.830	.920	.450
	20000	300	.810	.890	.370
	25000	300	.820	.910	.420
	30000	300	.830	.920	.460
	36000	100	.830	.920	.450
DM-42 (CM08) (CM13)	20000	500	1.420	.870	.300
	30000	500	1.440	.890	.350
	50000	500	1.480	.920	.460
	62000	300	1.470	.920	.450
	82000	100	1.480	.920	.460
DM-43	50000	500	2.060	.900	.380
	68000	500	2.070	.910	.440
	75000	300	2.060	.900	.380
	100000	300	2.070	.910	.440
	130000	100	2.090	.930	.490

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

ELMENCO CAPACITORS

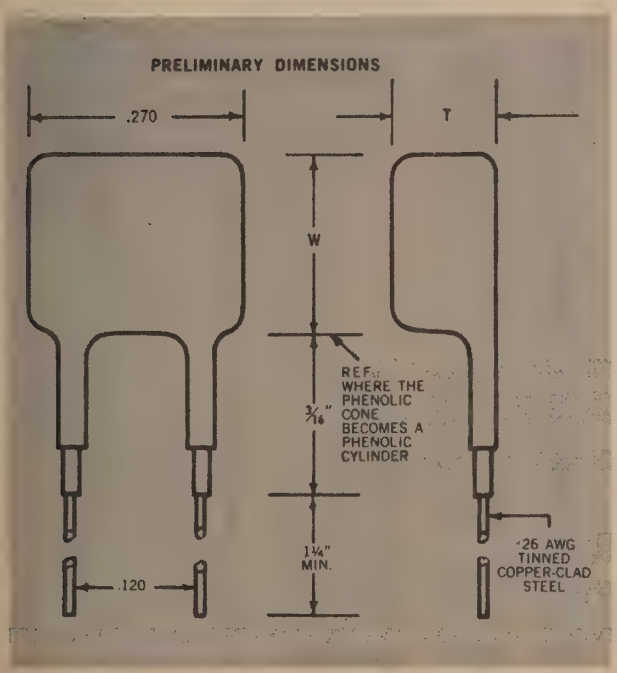
DM5 MINIATURE DIPPED MICA



Capacitance Range 1pF-390pF

The new ELMENCO DM5 dipped silvered mica capacitor has been designed to keep pace with the ever-shrinking world of electronic circuitry.

DM5 capacitors are supplied in standard voltage rating of 300 VDCW, 100V and 50V ratings as indicated in the tabulation below. Electrical and environmental specifications are basically the same as for the other ELMENCO dipped mica capacitor styles. The capacitors are stamped with working voltage and with capacitance value in pf. followed by a letter signifying capacitance tolerance. For example 27K would be 27 pF. ±10%, 150G would be 150 pF. ±2%.



pF	L	W	T
300V			
10	.270	.190	.110
39	.270	.210	.130
68	.270	.220	.150
100	.270	.250	.190
100V			
150	.270	.230	.170
180	.270	.240	.180
200	.270	.250	.190
50V			
68	.270	.200	.120
100	.270	.200	.130
180	.270	.210	.140
240	.270	.220	.160
330	.270	.240	.180
390	.270	.250	.190

Cap. pF.	Part Number	TOLERANCE ±1 pF. "A"	±0.5 pF. "D"	±10% "K"	±5% "J"	±2% "G"	±1% "F"
		Net Price (1-20)					
50 VDCW							
68	DM5-EY680			.28	.31	.54	.92
75	DM5-EY750			.29	.32	.56	.95
82	DM5-EY820			.29	.33	.57	.97
91	DM5-FY910			.31	.34	.60	1.03
100	DM5-FY101			.33	.36	.63	.73
110	DM5-FY111			.34	.38	.67	.76
120	DM5-FY121			.36	.40	.70	.80
130	DM5-FY131			.38	.42	.73	.84
150	DM5-FY151			.41	.46	.80	.91
160	DM5-FY161			.43	.48	.83	.95
180	DM5-FY181			.46	.51	.90	1.03
200	DM5-FY201			.51	.57	1.00	1.14
220	DM5-FY221			.55	.61	1.06	1.22
240	DM5-FY241			.58	.65	1.13	1.29
250	DM5-FY251			.60	.67	1.16	1.33
270	DM5-FY271			.63	.70	1.23	1.40
300	DM5-FY301			.70	.78	1.36	1.55
330	DM5-FY331			.75	.83	1.46	1.67
360	DM5-FY361			.80	.89	1.56	1.78
390	DM5-FY391			.87	.97	1.69	1.93
300 VDCW							
1	DM5-CC010	$0.21	$0.37				
2	DM5-CC020	.21	.37				
3	DM5-CC030	.21	.37				
4	DM5-CC040	.21	.37				
5	DM5-CC050	.21	.37	$0.37			
6	DM5-CC060	.21	.38	.38			
7	DM5-CC070	.21	.38	.38			
8	DM5-CC080	.21	.38	.38			
10	DM5-CC100		.38	.23	$0.38		
12	DM5-CC120		.46	.24	.39		
15	DM5-CC150		.46	.24	.39		
18	DM5-CC180		.48	.25	.41		
20	DM5-CC200		.56	.25	.27		
22	DM5-CC220		.56	.25	.28		
24	DM5-CC240		.56	.25	.28		
27	DM5-EC270			.26	.29	$0.58	
30	DM5-EC300			.26	.29	.58	
33	DM5-EC330			.27	.30	.60	
36	DM5-EC360			.27	.31	.62	
39	DM5-EC390			.27	.31	.62	
43	DM5-EC430			.28	.31	.62	
47	DM5-EC470			.29	.32	.64	
50	DM5-EC500			.29	.32	.64	$0.96
51	DM5-EC510			.31	.34	.62	1.02
56	DM5-EC560			.32	.36	.64	1.08
62	DM5-EC620			.34	.38	.68	1.14
68	DM5-EC680			.36	.39	.72	1.17
75	DM5-EC750			.37	.41	.74	1.23
82	DM5-EC820			.41	.45	.82	1.35
91	DM5-FC910			.44	.49	.88	1.47
100	DM5-FC101			.46	.51	.92	1.02
110	DM5-FC111			.49	.54	.98	1.08
120	DM5-FC121			.42	.47	.84	.94
130	DM5-FA131*			.44	.49	.88	.98
150	DM5-FA151*			.49	.54	.98	1.08
160	DM5-FA161*			.42	.47	.84	.94
180	DM5-FA181*			.46	.51	.92	1.02
200	DM5-FA201*			.62	.69	1.20	1.37

*100 VDCW

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

ELMENCO CAPACITORS

DIPPED MICA

TYPE DM-10 (CM04) (CM09)● 500VDCW

(SCMD10 values and prices the same)

CAP. pF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION	Net Price (1-20) Tolerance ±1 pF. "A"	±0.5 pF. "D"	±10% "K"	±5% "J"	±2% "G"	±1% "F"
1	DM-10-010	CM-04-CD-010D03	$0.18	$0.31				
2	DM-10-020		.18	.31				
3	DM-10-030		.18	.31				
5	DM-10-050	CM-04-CD-050D03	.18	.31				
10	DM-10-100	CM-04-CD-100‡03		.31	$0.18	$0.31		
12	DM-10-120	CM-04-CD-120‡03		.37	.19	.32		
15	DM-10-150	CM-04-CD-150‡03		.37	.19	.32		
18	DM-10-180	CM-04-CD-180‡03		.37	.19	.32		
20	DM-10-200	CM-04-ED-200‡03		.42	.19	.21		
22	DM-10-220	CM-04-ED-220‡03		.42	.19	.21		
24	DM-10-240	CM-04-ED-240‡03		.43	.20	.22		
27	DM-10-270	CM-04-ED-270‡03			.20	.22	$0.43	
30	DM-10-300	CM-04-ED-300‡03			.20	.22	.43	
33	DM-10-330	CM-04-ED-330‡03			.20	.22	.43	
36	DM-10-360	CM-04-ED-360‡03			.20	.22	.45	
39	DM-10-390	CM-04-ED-390‡03			.20	.22	.45	
43	DM-10-430	CM-04-ED-430‡03			.20	.22	.45	
47	DM-10-470	CM-04-ED-470‡03			.20	.23	.46	
50	DM-10-500				.20	.23	.40	$0.69
51	DM-10-510	CM-04-ED-510‡03			.20	.23	.40	.69
56	DM-10-560	CM-04-ED-560‡03			.21	.23	.41	.70
62	DM-10-620	CM-04-ED-620‡03			.21	.23	.41	.70
68	DM-10-680	CM-04-ED-680‡03			.22	.24	.42	.72
75	DM-10-750	CM-04-ED-750‡03			.22	.24	.42	.72
82	DM-10-820	CM-04-ED-820‡03			.22	.25	.43	.74
91	DM-10-910	CM-04-FD-910‡03			.23	.25	.44	.76
100	DM-10-101	CM-04-FD-101‡03			.23	.26	.50	.51
110	DM-10-111	CM-04-FD-111‡03			.23	.26	.50	.51
120	DM-10-121	CM-04-FD-121‡03			.25	.27	.47	.54
130	DM-10-131	CM-04-FD-131‡03			.26	.29	.50	.57
150	DM-10-151	CM-04-FD-151‡03			.29	.31	.55	.63
160	DM-10-161	CM-04-FD-161‡03			.30	.33	.58	.66
180	DM-10-181	CM-04-FD-181‡03			.32	.36	.63	.72
200	DM-10-201	CM-04-FD-201‡03			.35	.39	.68	.78
220	DM-10-221	CM-04-FD-221‡03			.36	.40	.70	.80
240	DM-10-241	CM-04-FD-241‡03			.39	.43	.76	.86
250	DM-10-251				.40	.45	.76	.89
270*	DM-10-271	CM-04-FC-271‡03			.38	.42	.73	.83
300*	DM-10-301	CM-04-FC-301‡03			.42	.46	.80	.92
330**	DM-10-331	CM-04-FA-331‡03			.39	.43	.76	.86
360**	DM-10-361	CM-04-FA-361‡03			.42	.46	.80	.92
390**	DM-10-391	CM-04-FA-391‡03			.44	.49	.86	.98

TYPE DM-15 (CM05) (CM10)● 500VDCW

(SCDM15 values and prices the same)

CAP. pF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION	Net Price (1-20) Tolerance ±0.5 pF. "D"	±10% "K"	±5% "J"	±2% "G"	±1% "F"
1	DM-15-010†	CM-05-CD-010D03	$0.22				
2	DM-15-020†		.22				
3	DM-15-030†		.22				
5	DM-15-050†	CM-05-CD-050D03	.22				
6	DM-15-060	CM-05-CD-060‡03	.22	$0.22			
7	DM-15-070	CM-05-CD-070‡03	.22	.22			
8	DM-15-080	CM-05-CD-080‡03	.22	.22			
10	DM-15-100	CM-05-CD-100‡03	.22	.16	$0.22		
12	DM-15-120	CM-05-CD-120‡03	.22	.16	.22		
15	DM-15-150	CM-05-CD-150‡03	.23	.16	.22		
18	DM-15-180	CM-05-CD-180‡03	.23	.16	.22		
20	DM-15-200	CM-05-ED-200‡03	.25	.16	.18		
22	DM-15-220	CM-05-ED-220‡03	.25	.16	.18		
24	DM-15-240	CM-05-ED-240‡03	.25	.16	.18		
27	DM-15-270	CM-05-ED-270‡03		.16	.18	$0.25	
30	DM-15-300	CM-05-ED-300‡03		.16	.18	.25	
33	DM-15-330	CM-05-ED-330‡03		.16	.18	.25	
36	DM-15-360	CM-05-ED-360‡03		.16	.18	.25	
39	DM-15-390	CM-05-ED-390‡03		.16	.18	.25	
43	DM-15-430	CM-05-ED-430‡03		.16	.18	.25	
47	DM-15-470	CM-05-ED-470‡03		.16	.18	.25	
50	DM-15-500			.16	.18	.21	$0.36
51	DM-15-510	CM-05-ED-510‡03		.16	.18	.21	.36
56	DM-15-560	CM-05-ED-560‡03		.16	.18	.21	.36
62	DM-15-620	CM-05-ED-620‡03		.16	.18	.22	.36
68	DM-15-680	CM-05-ED-680‡03		.16	.18	.22	.36
75	DM-15-750	CM-05-ED-750‡03		.16	.18	.22	.36
82	DM-15-820	CM-05-ED-820‡03		.16	.18	.22	.36
91	DM-15-910	CM-05-FD-910‡03		.16	.18	.22	.36
100	DM-15-101	CM-05-FD-101‡03		.16	.18	.22	.25

● MIL-C-5 crimped lead type. Use this nomenclature when ordering.

DM-15 (CM05) (CM10)● (Continued)

CAP. pF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION	Net Price (1-20) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
110	DM-15-111	CM-05-FD-111‡03	$0.18	$0.19	$0.23	$0.28
120	DM-15-121	CM-05-FD-121‡03	.18	.19	.23	.28
130	DM-15-131	CM-05-FD-131‡03	.19	.21	.25	.30
150	DM-15-151	CM-05-FD-151‡03	.19	.21	.25	.30
160	DM-15-161	CM-05-FD-161‡03	.20	.23	.27	.32
180	DM-15-181	CM-05-FD-181‡03	.22	.24	.29	.35
200	DM-15-201	CM-05-FD-201‡03	.22	.24	.29	.35
220	DM-15-221	CM-05-FD-221‡03	.23	.26	.31	.37
240	DM-15-241	CM-05-FD-241‡03	.25	.27	.33	.39
250	DM-15-251		.25	.27	.33	.39
270	DM-15-271	CM-05-FD-271‡03	.26	.29	.35	.42
300	DM-15-301	CM-05-FD-301‡03	.28	.31	.37	.44
330	DM-15-331	CM-05-FD-331‡03	.31	.34	.41	.49
360	DM-15-361	CM-05-FD-361‡03	.32	.36	.43	.51
390	DM-15-391	CM-05-FD-391‡03	.34	.37	.45	.53
430	DM-15-431		.36	.40	.48	.58
470	DM-15-471		.38	.42	.50	.60
500	DM-15-501		.39	.43	.52	.62
510	DM-15-511		.41	.45	.54	.65
560*	DM-15-561		.41	.45	.54	.65
620*	DM-15-621		.44	.48	.58	.69
680*	DM-15-681		.48	.53	.64	.76
750*	DM-15-751		.51	.56	.66	.81
820*	DM-15-821		.55	.61	.73	.88
910**	DM-15-911		.48	.53	.64	.76
1000**	DM-15-102		.52	.58	.69	.83
1100**	DM-15-112		.63	.69	.81	.96
1200**	DM-15-122		.67	.73	.87	1.03

TYPE DM-16 available on request

TYPE DM-19 (CM06) (CM11)● 500VDCW

(SCDM-19 prices on request)

CAP. pF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION	Net Price (1-20) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
100	DM-19-101		$0.18	$0.20	$0.21	$0.27
110	DM-19-111		.18	.20	.21	.27
120	DM-19-121		.18	.20	.21	.27
130	DM-19-131		.20	.21	.22	.28
150	DM-19-151		.20	.21	.22	.28
160	DM-19-161		.20	.21	.22	.28
180	DM-19-181		.20	.21	.22	.28
200	DM-19-201		.20	.21	.22	.28
220	DM-19-221		.20	.21	.22	.28
240	DM-19-241		.20	.21	.22	.28
250	DM-19-251		.20	.21	.22	.28
270	DM-19-271		.21	.23	.25	.31
300	DM-19-301		.21	.23	.25	.31
330	DM-19-331		.21	.23	.25	.31
360	DM-19-361		.23	.26	.28	.35
390	DM-19-391		.23	.26	.28	.35
430	DM-19-431	CM-06-FD-431‡03	.23	.26	.28	.35
470	DM-19-471	CM-06-FD-471‡03	.26	.29	.31	.39
500	DM-19-501		.26	.29	.31	.39
510	DM-19-511	CM-06-FD-511‡03	.26	.29	.31	.39
560	DM-19-561	CM-06-FD-561‡03	.26	.29	.31	.39
620	DM-19-621	CM-06-FD-621‡03	.29	.32	.34	.43
680	DM-19-681	CM-06-FD-681‡03	.29	.32	.34	.43
750	DM-19-751	CM-06-FD-751‡03	.31	.35	.37	.47
820	DM-19-821	CM-06-FD-821‡03	.34	.38	.40	.51
910	DM-19-911	CM-06-FD-911‡03	.34	.38	.40	.51
1000	DM-19-102	CM-06-FD-102‡03	.37	.41	.44	.56
1100	DM-19-112	CM-06-FD-112‡03	.40	.44	.47	.60
1200	DM-19-122	CM-06-FD-122‡03	.42	.47	.50	.64
1300	DM-19-132	CM-06-FD-132‡03	.45	.50	.53	.68
1500	DM-19-152	CM-06-FD-152‡03	.51	.56	.60	.76
1600	DM-19-162	CM-06-FD-162‡03	.51	.56	.60	.76
1800	DM-19-182	CM-06-FD-182‡03	.56	.62	.66	.84
2000	DM-19-202	CM-06-FD-202‡03	.62	.67	.73	.92
2200	DM-19-222	CM-06-FD-222‡03	.67	.73	.79	1.00
2400	DM-19-242	CM-06-FD-242‡03	.70	.77	.83	1.05
2500	DM-19-252		.73	.81	.87	1.10
2700	DM-19-272	CM-06-FD-272‡03	.80	.87	.94	1.19
3000	DM-19-302	CM-06-FD-302‡03	.87	.98	1.05	1.33
3300	DM-19-332	CM-06-FD-332‡03	.96	1.05	1.13	1.43
3600	DM-19-362	CM-06-FD-362‡03	1.05	1.16	1.24	1.57
3900	DM-19-392	CM-06-FD-392‡03	1.11	1.22	1.31	1.67
4300	DM-19-432	CM-06-FD-432‡03	1.24	1.36	1.47	1.86
4700	DM-19-472	CM-06-FD-472‡03	1.34	1.47	1.58	2.00
5000	DM-19-502		1.43	1.57	1.69	2.14
5100	DM-19-512		1.46	1.61	1.73	2.15
5600*	DM-19-562		1.36	1.50	1.61	2.05
6200*	DM-19-622		1.49	1.64	1.76	2.24
6800**	DM-19-682		1.30	1.43	1.54	1.95
7500**	DM-19-752		1.46	1.61	1.73	2.19
8200**	DM-19-822		1.59	1.75	1.88	2.38

See page 173 for notes on marking and pricing; capacitance and voltage symbols.

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributer)

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

Net

© United Technical Publications

ELMENCO CAPACITORS

DIPPED MICA

TYPE DM-20 500VDCW

CAP. pF.	PART NUMBER	Tolerance Net Price (1-20) ±10% "K"	±5% "J"	CAP. pF.	PART NUMBER	Tolerance Net Price (1-20) ±10% "K"	±5% "J"
680	DM-20-681	$0.26	$0.29	2700	DM-20-272	.70	.73
750	DM-20-751	.29	.32	3000	DM-20-302	.76	.84
820	DM-20-821	.29	.32	3300	DM-20-332	.83	.91
910	DM-20-911	.31	.35	3600	DM-20-362	.89	.98
1000	DM-20-102	.34	.38	3900	DM-20-392	.96	1.05
1100	DM-20-112	.37	.41	4300	DM-20-432	1.05	1.16
1200	DM-20-122	.37	.41	4700	DM-20-472	1.14	1.26
1300	DM-20-132	.40	.44	5000	DM-20-502	1.24	1.36
1500	DM-20-152	.45	.50	5100	DM-20-512	1.24	1.36
1600	DM-20-162	.45	.50	5600	DM-20-562	1.36	1.50
1800	DM-20-182	.51	.56	6200*	DM-20-622	1.27	1.40
2000	DM-20-202	.53	.59	6800*	DM-20-682	1.40	1.59
2200	DM-20-222	.59	.65	7500**	DM-20-752	1.24	1.36
2400	DM-20-242	.62	.67	8200**	DM-20-822	1.33	1.47
2500	DM-20-252	.64	.71	9100**	DM-20-912	1.49	1.64
				10000**	DM-20-103	1.62	1.78

Type DM-30 (CM07) (CM12)● 500VDCW

CAP. pF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION	Tolerance Net Price (1-20) ±5% "J"
4300	DM-30-432		$1.00
4700	DM-30-472		1.10
5000	DM-30-502		1.15
5100	DM-30-512	CM-07-FD-512‡03	1.15
5600	DM-30-562	CM-07-FD-562‡03	1.25
6200	DM-30-622	CM-07-FD-622‡03	1.35
6800	DM-30-682	CM-07-FD-682‡03	1.51
7500	DM-30-752	CM-07-FD-752‡03	1.61
8200	DM-30-822	CM-07-FD-822‡03	1.76
9100	DM-30-912	CM-07-FD-912‡03	1.91
10000	DM-30-103	CM-07-FD-103‡03	2.11
11000	DM-30-113	CM-07-FD-113‡03	2.27
12000	DM-30-123	CM-07-FD-123‡03	2.45
13000	DM-30-133	CM-07-FD-133‡03	2.67
15000	DM-30-153	CM-07-FD-153‡03	3.03
16000	DM-30-163	CM-07-FD-163‡03	3.24
18000	DM-30-183	CM-07-FD-183‡03	3.59
20000	DM-30-203	CM-07-FD-203‡03	4.00
22000*	DM-30-223		3.69
24000*	DM-30-243		4.00
25000*	DM-30-253		4.20
27000*	DM-30-273		4.40
30000*	DM-30-303		4.98
33000**	DM-30-333		4.41
36000**	DM-30-363		4.77

TYPE DM-42 (CM08) (CM13)● 500VDCW

CAP. pF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION
20000	DM-42-203	
22000	DM-42-223	CM-08-FD-223‡03
24000	DM-42-243	CM-08-FD-243‡03
25000	DM-42-253	
27000	DM-42-273	CM-08-FD-273‡03
30000	DM-42-303	CM-08-FD-303‡03
33000	DM-42-333	CM-08-FD-333‡03
36000	DM-42-363	CM-08-FD-363‡03
39000	DM-42-393	CM-08-FD-393‡03
43000	DM-42-433	CM-08-FD-433‡03
47000	DM-42-473	CM-08-FD-473‡03
50000	DM-42-503	
51000	DM-42-513	CM-08-FD-513‡03
56000*	DM-42-563	CM-08-FC-563‡03
62000*	DM-42-623	CM-08-FC-623‡03
68000*	DM-42-683	CM-08-FC-683‡03
75000**	DM-42-753	CM-08-FA-753‡03
82000**	DM-42-823	CM-08-FA-823‡03

±5%, ±2% AND ±1% PRICES ON REQUEST

TYPE DM-43 available on request

TYPE VDM HIGH VOLTAGE DIPPED MICAS

A complete listing of these units which are available in voltage ratings to 2500 VDCW will be found in the Elmenco-Arcolytic Service Dealer catalog which is available from your distributor or Loral Distributor Products.

NOTES ON DIPPED MICA CAPACITORS

All capacitances marked * are 300VDCW.
All capacitances marked ** are 100 VDCW.
‡ Insert tolerance letter designation in part number.
All values available in ±½% tolerance. Prices upon request.
Prices on request for capacitance values within the ranges specified for each case size but not listed.

● MIL-C-5 crimped lead type. Use this nomenclature when ordering.

MARKING NOTES

DM5: Marked with capacitance in pF, tolerance letter, working voltage, and EM§.

DM10: Values with no military equivalent are marked with capacitance in pF, tolerance letter and EM§.

Values with military equivalent (CM04 Style) are marked as above on one side, but with working voltage added. The other side will show abbreviated Mil nomenclature. Example: CM4ED101JO

DM15: Values with no military equivalent are marked with capacitance in pF, tolerance in percent and EM§.

Values with military equivalent (CM05 Style) are marked as above on one side, but with working voltage added. The other side will show complete Mil nomenclature.

DM19:
DM20: Values with no military equivalent are marked with capacitance in pF, tolerance in percent, and EM§. (The DM20 Series has no military equivalent.)

DM30:
DM42: Values with military equivalent (CM06, CM07, CM08) are marked as above (working voltage added) and with full Mil nomenclature; all on one side of unit.

EM§: Symbol for Elmenco



NET PRICE 50¢

ELMENCO FUSED PLUG

The Elmenco Fused Plug can be used with 3AG and 3AB fuses to 20 Amp. Fuses can be replaced instantly without opening plug.

Spring action of blades assures positive socket contact. Impact resistant cover.

Available assembled and unassembled. Net each 1-99 assembled 50¢. Quantity prices on request.

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

ELMENCO CAPACITORS

SPACE SAVER DIPPED MICA

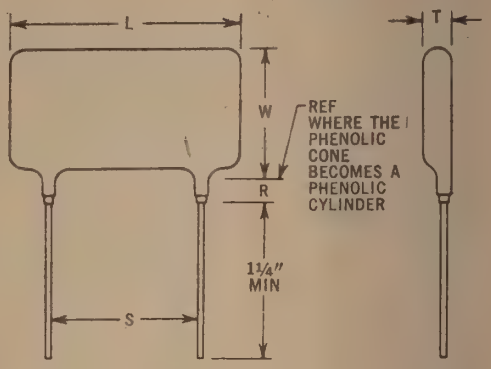
UNIQUE, SINGLE DIP, SPACE SAVING CAPACITORS FOR ULTRA MINIATURE CIRCUITRY

In applications requiring the high performance characteristics of dipped mica capacitors where space is at a premium, the Type SCDM reduced coat ELMENCO capacitors may often be used to advantage. A single protective resin coat is applied instead of the full series of dips incorporated in the standard unit. The amount of coat material is thereby reduced to a minimum consistent with good design, and a significant reduction of all dimensions is achieved.

All electrical and environmental requirements of MIL-C-5 are retained with the exception of case insulation (3.5.3) and moisture resistance (3.14). A maximum voltage stress of 100VDC through the case insulation is recommended for SCDM units. Although some lots of this type capacitor will not meet stringent MIL moisture resistance specifications, all will meet the humidity requirements of Paragraph 2.3.6 of EIA Standard RS-153. Therefore, the SCDM capacitors will operate with satisfaction where they will not be exposed to extensive periods of high humidity. It is recommended that if these capacitors are destined for operation under extreme environmental conditions, they should be given additional moisture protection such as encapsulation or hermetic sealing of the assembly.

Representative dimensions of the SCDM style capacitors are given below. The dimensions of intermediate values may be closely approximated by interpolation.

Pricing for Types SCDM10, SCDM15 and SCDM19 will be found on Page 172.



	SCDM10	SCDM15
R. MAX.	1/8	1/8
S ±1/32	7/64	15/64
LEAD WIRE GAGE	#26	#22

SCDM15

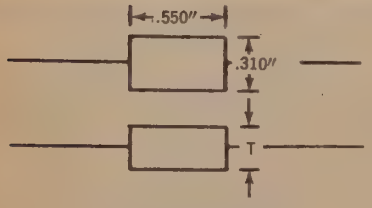
Cap. pF.	Volt. VDCW	L max.	W max.	T max.
10	500	.430	.280	.140
100	500	.430	.280	.150
270	500	.440	.300	.160
510	500	.450	.310	.190
560	300	.450	.310	.160
820	300	.450	.310	.170
1000	100	.450	.320	.170

SCDM10

Cap. pF.	Volt. VDCW	L max.	W max.	T max.
10	500	.310	.230	.120
100	500	.320	.230	.130
180	500	.330	.240	.150
250	500	.340	.250	.160
300	300	.340	.250	.160
390	100	.340	.250	.160

ELMENCO CAPACITORS

MOLDED SILVERED MICA



T—from 1-290 mmf. .190"
T—from 300-510 mmf. .220"

Types CM-20, CM-30, CM-35, CM-42 and High Voltage Molded Mica Types VCM-20, VCM-35 and VCM-42 Prices Available On Request.

TYPE CM-15
500VDCW

Cap. pF.	Type Designation	"J" ±5%	Net Price (1-20) Tolerance "G" ±2%	"F" ±1%
1	CM-15-C-010†	$0.22		
2	CM-15-C-020†	.22		
3	CM-15-C-030†	.22		
5	CM-15-C-050†	.22		

TYPE CM-15
500VDCW

Cap. pF.	Type Designation	"J" ±5%	Net Price (1-20) Tolerance "G" ±2%	"F" ±1%
10	CM-15-C-100	$0.22		
12	CM-15-C-120	.22		
15	CM-15-C-150	.22		
18	CM-15-C-180	.22		
20	CM-15-C-200	.18		
22	CM-15-C-220	.18		
24	CM-15-E-240	.18		
27	CM-15-E-270	.18		
30	CM-15-E-300	.18		
33	CM-15-E-330	.18		
36	CM-15-E-360	.18		
39	CM-15-E-390	.18	$0.25	
43	CM-15-E-430	.18	.25	
47	CM-15-E-470	.18	.25	
50	CM-15-E-500	.18	.21	$0.36
51	CM-15-E-510	.18	.21	.36
56	CM-15-E-560	.18	.21	.36
62	CM-15-E-620	.16	.22	.36
68	CM-15-E-680	.16	.22	.36
75	CM-15-E-750	.16	.22	.36
82	CM-15-E-820	.16	.22	.36
91	CM-15-E-910	.16	.22	.36
100	CM-15-E-101	.16	.22	.25
110	CM-15-E-111	.18	.23	.28
120	CM-15-E-121	.18	.23	.28
130	CM-15-E-131	.19	.25	.30

TYPE CM-15
500VDCW

Cap. pF.	Type Designation	"J" ±5%	Net Price (1-20) Tolerance "G" ±2%	"F" ±1%
150	CM-15-E-151	$0.19	$0.25	$0.30
160	CM-15-E-161	.20	.27	.32
180	CM-15-E-181	.22	.29	.35
200	CM-15-E-201	.22	.29	.35
220	CM-15-E-221	.23	.31	.37
240	CM-15-E-241	.25	.33	.39
250	CM-15-E-251	.25	.33	.39
270	CM-15-E-271	.26	.35	.42
300	CM-15-E-301	.28	.37	.44
330	CM-15-E-331	.31	.41	.49
360	CM-15-E-361	.32	.42	.51
390	CM-15-E-391	.45	.53	.45
430	CM-15-E-431	.48	.58	.73
470	CM-15-E-471	.50	.60	.50
500	CM-15-E-501	.52	.62	.52
510	CM-15-E-511	.54	.65	.53
560**	CM-15-E-561	.37	.45	.53
620**	CM-15-E-621	.40	.48	.58
680**	CM-15-E-681	.43	.52	.62
750**	CM-15-E-751	.47	.56	.67
820**	CM-15-E-821	.50	.60	.72

† Capacities marked with † denote that closest tolerance is ±0.5 mmf.

** Voltage rating 100VDCW.

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

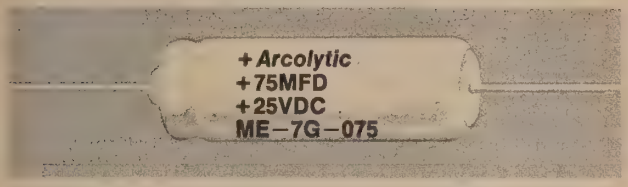
Net

© United Technical Publications

ARCOLYTIC CAPACITORS

MINIATURE ALUMINUM ELECTROLYTICS

TYPE ME



Type ME Miniature Aluminum-cased Electrolytics use the same high purity (99.99%) etched aluminum foil as the standard size Arcolytics. The design of the Type ME is particularly adapted to the latest transistorized circuitry which features low voltages and compactness of structure.

Type ME capacitors have an all-welded construction which provides increased ruggedness and resistance to environmental extremes. Corrosion and electrolyte leakage are eliminated. Electrically, they exhibit extremely low leakage current and maintain extended shelf life without deterioration. All units are insulated with a transparent plastic sleeve permanently bonded to the aluminum body.

SPECIFICATIONS:

CAPACITANCE AND TOLERANCE:

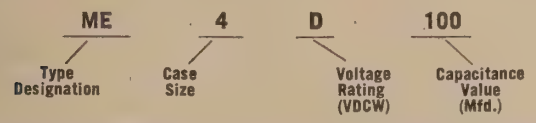
Capacitance measurements are made at 120 cycles per second and 25°C. Capacitance tolerance is —10%, +100%.

OPERATING TEMPERATURE RANGE: —30 to 85°C.

D.C. LEAKAGE CURRENT: Maximum leakage current is 5 microamperes or .03VC, whichever is greater, where V is D.C. voltage applied and C is capacitance in microfarads.

LEADS: Axial 1½" length minimum, #20 tinned copper.

NOMENCLATURE: The part numbers for each Type ME incorporate case size, voltage, and capacitance value:



The example specifies a 100 mfd. 12V capacitor, case size ⅜" x ¾".

VOLTAGE RATINGS: The following table indicates letter designations assigned to the various voltages in which Type ME capacitors are supplied:

Letter Designation	A	B	D	E	G	J	M	N	R	T
VDCW	3	6	12	15	25	50	100	150	250	350

CASE SIZE: Type ME capacitors are made in 8 different case sizes.

CASE SIZE	DIMENSION	CASE SIZE	DIMENSION
1	3/16" D x 3/8" L	5	3/8" D x 7/8" L
2	1/4" D x 5/8" L	6	3/8" D x 1" L
3	3/8" D x 5/8" L	7	3/8" D x 1 1/8" L
4	3/8" D x 3/4" L	8	3/8" D x 1 3/8" L

The insulating plastic sleeve adds 1/32" x 1/16" to case dimensions.

STANDARD PACKAGING is in units of 5 in a custom-designed box which protects straight leads and shows quantity through a clear plastic window.

CAP. MFD.	PART NUMBER	LIST PRICE	NET PRICE (1-20)
3VDCW			
1	ME-1-A-001	$1.25	$0.75
2	ME-1-A-002	1.25	.75
3	ME-1-A-003	1.25	.75
4	ME-1-A-004	1.25	.75
5	ME-1-A-005	1.25	.75
6	ME-1-A-006	1.25	.75
8	ME-1-A-008	1.25	.75
10	ME-1-A-010	1.25	.75
15	ME-2-A-015	1.25	.75
20	ME-2-A-020	1.25	.75
25	ME-2-A-025	1.25	.75
30	ME-2-A-030	1.25	.75
35	ME-2-A-035	1.25	.75
40	ME-2-A-040	1.25	.75
50	ME-2-A-050	1.25	.75
75	ME-3-A-075	1.40	.84
100	ME-3-A-100	1.40	.84
125	ME-4-A-125	1.45	.87
150	ME-4-A-150	1.45	.87
175	ME-4-A-175	1.50	.90
200	ME-4-A-200	1.50	.90
250	ME-4-A-250	1.60	.96
300	ME-7-A-300	1.65	.99
350	ME-7-A-350	1.70	1.02
400	ME-7-A-400	1.70	1.02
450	ME-7-A-450	1.75	1.05
500	ME-7-A-500	1.75	1.05
6VDCW			
1	ME-1-B-001	1.25	.75
2	ME-1-B-002	1.25	.75
3	ME-1-B-003	1.25	.75
4	ME-1-B-004	1.25	.75
5	ME-1-B-005	1.25	.75
6	ME-1-B-006	1.25	.75
8	ME-1-B-008	1.35	.81
10	ME-1-B-010	1.35	.81
15	ME-2-B-015	1.35	.81
20	ME-2-B-020	1.35	.81
25	ME-2-B-025	1.35	.81
30	ME-2-B-030	1.40	.84
35	ME-2-B-035	1.40	.84
40	ME-2-B-040	1.40	.84
50	ME-2-B-050	1.40	.84
60	ME-2-B-060	1.40	.84
75	ME-3-B-075	1.45	.87
100	ME-3-B-100	1.50	.90
125	ME-6-B-125	1.55	.93
150	ME-6-B-150	1.55	.93
175	ME-6-B-175	1.60	.96
200	ME-6-B-200	1.60	.96
250	ME-6-B-250	1.70	1.02
300	ME-8-B-300	1.80	1.08
400	ME-8-B-400	1.85	1.11
500	ME-8-B-500	1.90	1.14
12VDCW			
1	ME-1-D-001	1.25	.75
2	ME-1-D-002	1.25	.75
3	ME-1-D-003	1.25	.75
4	ME-1-D-004	1.25	.75
5	ME-1-D-005	1.35	.81
6	ME-1-D-006	1.35	.81
8	ME-1-D-008	1.35	.81
10	ME-1-D-010	1.35	.81
15	ME-2-D-015	1.40	.84
20	ME-2-D-020	1.40	.84
25	ME-2-D-025	1.40	.84
30	ME-3-D-030	1.45	.87
35	ME-3-D-035	1.45	.87
40	ME-3-D-040	1.50	.90
50	ME-3-D-050	1.55	.93
75	ME-4-D-075	1.65	.99
100	ME-4-D-100	1.65	.99
150	ME-6-D-150	1.75	1.05
200	ME-6-D-200	1.90	1.14
250	ME-8-D-250	2.00	1.20
15VDCW			
1	ME-1-E-001	1.25	.75
2	ME-1-E-002	1.25	.75
3	ME-1-E-003	1.25	.75
4	ME-1-E-004	1.30	.78
5	ME-1-E-005	1.40	.84

CAP. MFD.	PART NUMBER	LIST PRICE	NET PRICE (1-20)
15VDCW			
6	ME-1-E-006	$1.40	$0.84
8	ME-1-E-008	1.40	.84
10	ME-1-E-010	1.40	.84
15	ME-2-E-015	1.45	.87
20	ME-2-E-020	1.45	.87
25	ME-2-E-025	1.45	.87
30	ME-3-E-030	1.50	.90
35	ME-3-E-035	1.55	.93
40	ME-3-E-040	1.60	.96
50	ME-3-E-050	1.60	.96
75	ME-4-E-075	1.60	.96
100	ME-4-E-100	1.65	.99
150	ME-6-E-150	1.75	1.05
200	ME-6-E-200	1.95	1.17
250	ME-8-E-250	2.05	1.23
25VDCW			
1	ME-1-G-001	1.25	.75
2	ME-1-G-002	1.30	.78
3	ME-1-G-003	1.30	.78
4	ME-1-G-004	1.30	.78
5	ME-1-G-005	1.40	.84
6	ME-2-G-006	1.40	.84
8	ME-2-G-008	1.45	.87
10	ME-2-G-010	1.45	.87
15	ME-3-G-015	1.45	.87
20	ME-3-G-020	1.50	.90
25	ME-3-G-025	1.55	.93
30	ME-3-G-030	1.60	.96
35	ME-4-G-035	1.65	.99
40	ME-4-G-040	1.65	.99
50	ME-4-G-050	1.65	.99
75	ME-7-G-075	1.70	1.02
100	ME-7-G-100	1.70	1.05
50VDCW			
1	ME-1-J-001	1.30	.78
2	ME-1-J-002	1.35	.81
3	ME-2-J-003	1.35	.81
4	ME-2-J-004	1.35	.81
5	ME-2-J-005	1.45	.87
6	ME-2-J-006	1.45	.87
8	ME-3-J-008	1.50	.90
10	ME-3-J-010	1.50	.90
15	ME-4-J-015	1.50	.90
20	ME-4-J-020	1.50	.90
25	ME-4-J-025	1.55	.93
30	ME-4-J-030	1.60	.96
35	ME-7-J-035	1.70	1.02
40	ME-7-J-040	1.75	1.05
50	ME-7-J-050	1.75	1.05
100VDCW			
1	ME-2-M-001	1.35	.81
2	ME-2-M-002	1.40	.84
3	ME-2-M-003	1.40	.84
4	ME-3-M-004	1.40	.84
5	ME-3-M-005	1.50	.90
6	ME-4-M-006	1.50	.90
8	ME-4-M-008	1.55	.93
10	ME-4-M-010	1.55	.93
15	ME-7-M-015	1.55	.93
20	ME-7-M-020	1.60	.96
25	ME-7-M-025	1.60	.96
150VDCW			
1	ME-3-N-001	1.40	.84
2	ME-3-N-002	1.45	.87
3	ME-3-N-003	1.45	.87
4	ME-3-N-004	1.45	.87
5	ME-3-N-005	1.55	.93
6	ME-3-N-006	1.55	.93
8	ME-4-N-008	1.60	.96
10	ME-4-N-010	1.60	.96
12	ME-4-N-012	1.60	.96
15	ME-7-N-015	1.60	.96
20	ME-8-N-020	1.60	.96
250VDCW			
1	ME-3-R-001	1.70	1.02
2	ME-3-R-002	1.70	1.02
5	ME-6-R-005	1.80	1.08
350VDCW			
1	ME-3-T-001	1.75	1.05
2	ME-5-T-002	1.75	1.05

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

ELMENCO CAPACITORS

DIPPED TUBULARS

MYLAR* and MYLAR-PAPER

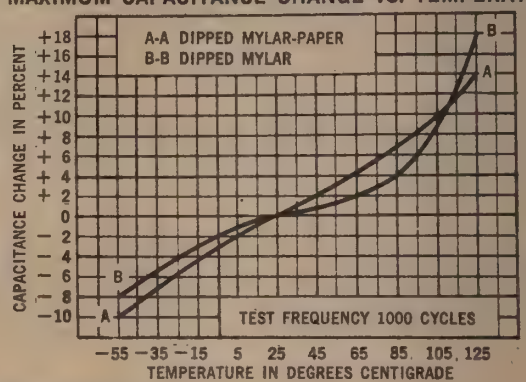
*Reg. DuPont Trademark

ELMENCO dipped mylar* and mylar-paper capacitors represent a double break-through in capacitor design. They combine missile and computer quality with commercial radio-TV cost. A recent development is the addition of precision dipped tubular capacitors in tolerances as low as ±1% in addition to the popular ±10% general purpose unit. The only difference between the general purpose "dp" series and the industrial precision capacitors lies in the extra stabilizing processes applied to close tolerance capacitors to insure retention of accuracy in the field under operating extremes. (See Elmenco-Arcolytic Industrial Catalog).

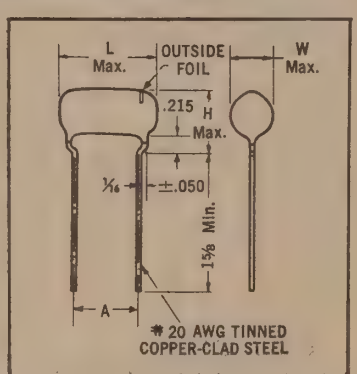
Elmenco Type DP capacitors are non-inductively wound and vacuum dipped to obtain solid impregnation and a rugged, moisture-proof coat. New fabricating techniques realize the full potential of the dielectric materials utilizing most of the low-cost procedures of the exclusive Elmenco dip-coat process. The result is a product of electrical excellence with high reliability in operation at 125°C. without derating. The specifications listed on this and following pages wellillustrate the inherent quality of these capacitors.

Note: The 100VDCW rated dp units are pure mylar* dielectric capacitors.

MAXIMUM CAPACITANCE CHANGE VS. TEMPERATURE







SPECIFICATIONS

TOLERANCE:	±10%,
VOLTAGE RATINGS:	Mylar-Paper — 200, 400, 600, 1600VDCW (no derating) Mylar — 100VDCW (derate 1% per °C. over 85°C.)
TEMPERATURE RANGE:	−55 to 125°C.

INSULATION RESISTANCE:		MYLAR-PAPER		MYLAR	
	Temperature	Megohm-Microfarads Whichever is the Lesser	Or Megohms	Megohm-Microfarads Whichever is the Lesser	Or Megohms
	25°C.	10,000	50,000	20,000	100,000
	85°C.	200	1,000	300	1,500
	105°C.	50	250	80	400
	125°C.	15	75	20	100

POWER FACTOR:	1% maximum at 1 kc.							
CASE SIZE	1	2	3	4	5	6	7	8
DIM. "A" ±	1/4	5/16	23/32	27/32	1 3/32	1 11/32	1 23/32	1 27/32

TYPE DP
GENERAL PURPOSE ±10%
MYLAR* and MYLAR-PAPER

Part Numbers:

6 DP - 2 - 103

Voltage Rating (in 100's of volts DCW) | Type Designation | Case Size | Cap. Value (2 sig. figs. and dec. mult.)

100VDCW

CAP. MFD.	PART NUMBER	L	W	H	LIST PRICE	NET PRICE (1-20)
.005	1DP-1-502	1 1/16	5/16	17/32	$0.30	$0.18
.006	1DP-1-602	1 1/16	5/16	17/32	.30	.18
.0068	1DP-1-682	1 1/16	5/16	17/32	.30	.18
.0075	1DP-1-752	1 1/16	5/16	17/32	.30	.18
.01	1DP-1-103	1 1/16	5/16	17/32	.30	.18
.015	1DP-1-153	23/32	11/32	19/32	.30	.18
.02	1DP-1-203	23/32	11/32	19/32	.30	.18
.022	1DP-1-223	23/32	11/32	19/32	.30	.18
.025	1DP-1-253	23/32	11/32	19/32	.30	.18
.03	1DP-1-303	23/32	3/8	3/8	.30	.18
.033	1DP-1-333	23/32	3/8	3/8	.30	.18
.04	1DP-1-403	23/32	3/8	3/8	.30	.18
.047	1DP-2-473	3/4	11/32	19/32	.35	.21
.05	1DP-2-503	3/4	11/32	19/32	.35	.21
.056	1DP-2-563	3/4	3/8	3/8	.35	.21
.068	1DP-2-683	3/4	13/32	5/8	.35	.21
.075	1DP-2-753	3/4	13/32	5/8	.35	.21
.1	1DP-2-104	29/32	7/16	11/16	.35	.21
.15	1DP-3-154	1 1/4	7/16	11/16	.40	.24
.2	1DP-3-204	1 9/32	1/2	23/32	.45	.27
.22	1DP-3-224	1 9/32	1/2	23/32	.45	.27
.25	1DP-3-254	1 9/32	17/32	3/4	.50	.30
.33	1DP-4-334	1 3/8	9/16	13/16	.60	.36
.47	1DP-4-474	1 3/8	21/32	29/32	.75	.45
.5	1DP-4-504	1 3/8	21/32	29/32	.75	.45
.68	1DP-5-684	1 5/16	11/16	15/16	.95	.57
1.0	1DP-5-105	1 5/16	1/2	1	1.20	.72

200VDCW

CAP. MFD.	PART NUMBER	L	W	H	LIST PRICE	NET PRICE (1-20)
.1	2DP-3-104	1 13/64	1/2	47/64	$0.35	$0.21
.15	2DP-3-154	1 13/64	37/64	29/32	.40	.24
.2	2DP-4-204	1 21/64	37/64	27/32	.45	.27
.22	2DP-4-224	1 21/64	37/64	27/32	.45	.27
.25	2DP-4-254	1 21/64	5/8	7/8	.50	.30
.33	2DP-5-334	1 5/8	5/8	13/16	.60	.36
.47	2DP-5-474	1 5/8	49/64	61/64	.75	.45
.5	2DP-5-504	1 5/8	49/64	61/64	.75	.45

600VDCW

CAP. MFD.	PART NUMBER	L	W	H	LIST PRICE	NET PRICE (1-20)
.001	6DP-1-102	23/32	25/64	5/8	$0.25	$0.15
.0012	6DP-1-122	23/32	25/64	5/8	.25	.15
.0015	6DP-1-152	23/32	25/64	5/8	.25	.15
.002	6DP-1-202	23/32	25/64	5/8	.25	.15
.0022	6DP-1-222	23/32	25/64	5/8	.25	.15
.0025	6DP-1-252	23/32	25/64	5/8	.25	.15
.0027	6DP-1-272	23/32	25/64	5/8	.25	.15
.003	6DP-1-302	23/32	25/64	5/8	.25	.15
.0033	6DP-1-332	23/32	25/64	5/8	.25	.15
.0039	6DP-1-392	23/32	25/64	5/8	.25	.15
.004	6DP-1-402	23/32	27/64	41/64	.25	.15
.0047	6DP-1-472	23/32	27/64	41/64	.25	.15
.005	6DP-1-502	23/32	7/16	41/64	.25	.15
.0056	6DP-1-562	23/32	7/16	41/64	.25	.15
.006	6DP-1-602	23/32	3/8	5/8	.25	.15
.0068	6DP-1-682	23/32	29/64	11/16	.30	.18
.0075	6DP-2-752	57/64	7/16	43/64	.30	.18
.008	6DP-2-802	57/64	7/16	43/64	.30	.18
.0082	6DP-2-822	57/64	7/16	43/64	.30	.18
.01	6DP-2-103	57/64	7/16	43/64	.30	.18
.012	6DP-2-123	57/64	7/16	11/16	.30	.18
.015	6DP-2-153	57/64	29/64	45/64	.30	.18
.018	6DP-2-183	57/64	15/32	23/32	.30	.18
.02	6DP-2-203	57/64	1/2	3/4	.30	.18
.022	6DP-2-223	57/64	1/2	3/4	.30	.18
.025	6DP-2-253	57/64	33/64	47/64	.35	.21
.027	6DP-3-273	17/32	33/64	47/64	.35	.21
.03	6DP-3-303	17/32	33/64	47/64	.35	.21
.033	6DP-3-333	17/32	33/64	47/64	.35	.21
.036	6DP-3-363	17/32	17/32	49/64	.35	.21
.039	6DP-3-393	17/32	17/32	49/64	.35	.21
.04	6DP-3-403	17/32	17/32	49/64	.35	.21
.047	6DP-3-473	17/32	17/32	49/64	.40	.24
.05	6DP-3-503	17/32	35/64	49/64	.40	.24
.056	6DP-3-563	17/32	35/64	49/64	.40	.24
.06	6DP-3-603	17/32	35/64	49/64	.45	.27
.068	6DP-4-683	1 11/32	9/16	51/64	.45	.27
.075	6DP-4-753	1 11/32	37/64	27/32	.45	.27
.082	6DP-4-823	1 11/32	37/64	27/32	.45	.27
.1	6DP-4-104	1 11/32	11/16	29/32	.45	.27
.15	6DP-5-154	1 5/16	47/64	15/16	.60	.36

600VDCW

CAP. MFD.	PART NUMBER	L	W	H	LIST PRICE	NET PRICE (1-20)
.2	6DP-5-204	1 5/16	55/64	1 1/32	.70	.42
.22	6DP-5-224	1 5/16	55/64	1 1/32	.70	.42
.25	6DP-5-254	1 5/16	57/64	1 7/64	.75	.45
.33	6DP-6-334	1 7/8	7/8	1 1/16	1.05	.63
.47	6DP-8-474	2 3/8	29/32	1 7/32	1.50	.90
.5	6DP-8-504	2 3/8	1 5/16	1 3/16	1.50	.90

1600VDCW

CAP. MFD.	PART NUMBER	L	W	H	LIST PRICE	NET PRICE (1-20)
.001	16DP-2-102	7/8	1 1/32	9/16	$0.40	$0.24
.0015	16DP-2-152	7/8	1 1/32	9/16	.40	.24
.0018	16DP-2-182	7/8	3/8	1 9/32	.40	.24
.002	16DP-2-202	7/8	3/8	1 9/32	.40	.24
.0022	16DP-2-222	7/8	3/8	1 9/32	.40	.24
.0025	16DP-2-252	7/8	13/32	5/8	.45	.27
.0027	16DP-2-272	7/8	7/16	5/8	.45	.27
.003	16DP-2-302	7/8	7/16	21/32	.45	.27
.0033	16DP-2-332	7/8	7/16	21/32	.45	.27
.004	16DP-2-402	7/8	15/32	23/32	.45	.27
.0047	16DP-2-472	7/8	1/2	23/32	.45	.27
.005	16DP-2-502	7/8	17/32	3/4	.45	.27
.006	16DP-3-602	1 3/16	7/16	21/32	.50	.30
.0068	16DP-3-682	1 3/16	15/32	11/16	.50	.30
.007	16DP-3-702	1 3/16	15/32	11/16	.50	.30
.0075	16DP-3-752	1 3/16	1/2	23/32	.50	.30
.008	16DP-3-802	1 3/16	17/32	3/4	.50	.30
.0082	16DP-3-822	1 3/16	17/32	3/4	.50	.30
.01	16DP-3-103	1 3/16	17/32	3/4	.50	.30
.015	16DP-4-153	1 11/32	9/16	27/32	.55	.33
.018	16DP-4-183	1 11/32	5/8	7/8	.60	.36
.02	16DP-4-203	1 11/32	21/32	7/8	.60	.36
.022	16DP-5-223	1 5/16	5/8	7/8	.70	.42
.025	16DP-5-253	1 5/16	21/32	7/8	.70	.42
.03	16DP-5-303	1 5/16	11/16	15/16	.70	.42
.033	16DP-5-333	1 5/16	23/32	15/16	.70	.42
.04	16DP-5-403	1 5/16	3/4	1	.75	.45
.047	16DP-5-473	1 5/16	13/16	1 1/16	.80	.48
.05	16DP-5-503	1 5/16	13/16	1 1/16	.80	.48

TYPES MD AND MPD

Precision Dipped Tubulars Capacitors
Available in 100, 200, 400 & 600 VDCW
TOLERANCES OF ±1%, ±2%, ±5%, ±10%

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)

Sold Nationally to Electronic Parts Distributors by: Loral Distributor Products, a Division of Loral Corporation

Trade Discount Applies To List Prices Only

© United Technical Publications

ELMENCO CAPACITORS

VARIABLE COMPRESSION MICA

TRIMMERS

Elmenco trimming capacitors are treated for resistance to humidity and for permanence of capacity setting.

The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

Trimmers shown here are standard sizes and capacities.

Voltage 350 VDCT — 175 VDCW.



TYPE 46 STANDARD TRIMMER ¾" x 5/8"

TYPE 46 — STANDARD TRIMMER

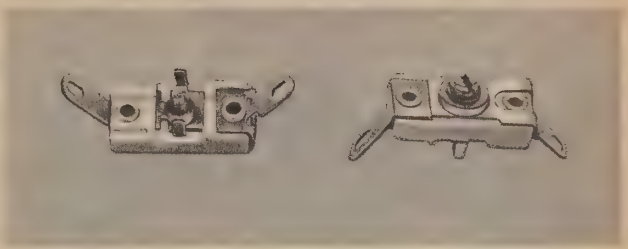
TYPE 46W		GUARANTEED RANGE			
PART NUMBER	NUMBER OF PLATES	At Tight Cap. Will Be More Than pF.	At 3 Turns Open Cap. Will Be Less Than pF.	LIST PRICE	NET PRICE (1-20)
460	1¼ Pl.	15	1.5	$0.60	$0.36
461	1¾ Pl.	40	2.7	.60	.36
462	2 Pl.	80	5	.60	.36
463	3 Pl.	180	10	.70	.42
464	4 Pl.	280	25	.80	.48
465	5 Pl.	380	50	.95	.57
466	6 Pl.	480	75	1.05	.63
467	7 Pl.	580	105	1.15	.69
468	8 Pl.	680	135	1.25	.75
469	9 Pl.	780	170	1.40	.84
4610	10 Pl.	900	210	1.55	.93
4611	11 Pl.	1000	250	1.70	1.02
4612	12 Pl.	1100	290	1.80	1.08
4613	13 Pl.	1200	330	1.95	1.17
4614	14 Pl.	1300	360	2.15	1.29
4615	15 Pl.	1400	390	2.35	1.41



TYPE 40 MINIATURE TRIMMER 3/8" x 5/16"

TYPE 40 — MINIATURE TRIMMER

TYPE 40		GUARANTEED RANGE			
PART NUMBER	NUMBER OF PLATES	At Tight Cap. Will Be More Than pF.	At 3 Turns Open Cap. Will Be Less Than pF.	LIST PRICE	NET PRICE (1-20)
400	1⅛ Pl.	7	0.9	$0.60	$0.36
402	2 Pl.	20	1.5	.60	.36
403	3 Pl.	40	4	.75	.45
404	4 Pl.	60	4	.85	.51
405	5 Pl.	80	10	1.00	.60
406	6 Pl.	115	15	1.10	.66

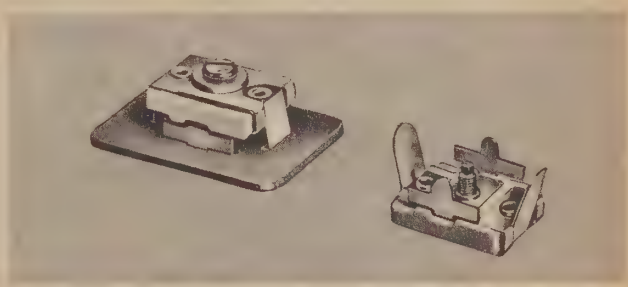


TYPE 42 MIDGET TRIMMER 3/8" x ¾"

TYPE 42 — MIDGET TRIMMER

TYPE 42		GUARANTEED RANGE			
PART NUMBER	NUMBER OF PLATES	At Tight Cap. Will Be More Than pF.	At 3 Turns Open Cap. Will Be Less Than pF.	LIST PRICE	NET PRICE (1-20)
420	1⅛ Pl.	12	1	$0.60	$0.36
421	1¾ Pl.	25	2	.60	.36
422	2 Pl.	40	4	.60	.36
423	3 Pl.	100	7	.70	.42
424	4 Pl.	150	16	.80	.48
425	5 Pl.	200	24	.95	.57
426	6 Pl.	250	37	1.05	.63
427	7 Pl.	300	55	1.15	.69
428	8 Pl.	350	70	1.25	.75
429	9 Pl.	400	90	1.35	.81
4210	10 Pl.	450	110	1.60	.96
4211	11 Pl.	500	130	1.70	1.02
4212	12 Pl.	550	150	1.85	1.11
4213	13 Pl.	600	170	2.00	1.20
4214	14 Pl.	650	190	2.20	1.32
4215	15 Pl.	700	210	2.45	1.53

TYPE PC — PRINTED CIRCUIT TRIMMERS



The Elmenco trimmer capacitors, Types 40, 42, and 46, have been adapted for printed circuit techniques through alteration of terminals and mounting configuration. The holes in the terminal lugs are removed since necessity for hook-up is eliminated. The resulting solid terminals have greatly increased spring action, allowing the trimmer to be "snapped in" the printed circuit board and firmly held until soldered. The mounting lug portion of the trimmer has also been modified to facilitate positioning and support of the unit. Drawings of the trimmers and mounting layout are available upon request at no charge.

This printed circuit style is identified by the prefix letters "PC" preceding the regular part number. All listed values are available in the PC style. Prices available on request.

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

ELMENCO CAPACITORS

VARIABLE COMPRESSION MICA

PADDERS

Elmenco padders use phosphor bronze adjusting plates which assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.



TYPE 30 & TYPE 30M PADDERS, 7/8" x 15/16"

TYPE 30
500 Volts DC Flash-Test — 250 WVDC

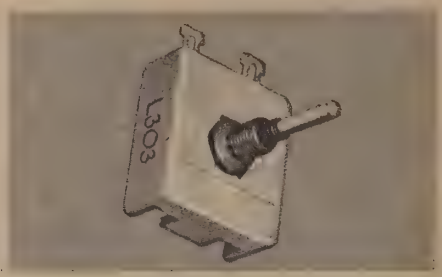
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE: At 1¾ Inch Pounds Cap. Will Be More Than pF.	GUARANTEED RANGE: At 3 Turns Open Cap. Will Be Less Than pF.	LIST PRICE	NET PRICE (1-20)
302	2 Pl.	130	15	$1.15	$0.69
303	3 Pl.	340	65	1.25	.75
304	4 Pl.	550	115	1.35	.81
305	5 Pl.	760	190	1.45	.87
306	6 Pl.	970	275	1.55	.93
307	7 Pl.	1180	350	1.65	.99
308	8 Pl.	1390	450	1.75	1.05
309	9 Pl.	1600	550	1.90	1.14
310	10 Pl.	1890	650	2.00	1.20
311	11 Pl.	2110	780	2.15	1.29
312	12 Pl.	2330	880	2.25	1.35
313	13 Pl.	2605	1150	2.40	1.44
314	14 Pl.	2830	1300	2.55	1.53
315	15 Pl.	3055	1400	2.70	1.62

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 1½ to 1¾ Mil Mica films.

TYPE 30-M
1000 Volts DC Flash-Test — 500 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE: At 1¾ Inch Pounds Cap. Will Be More Than pF.	GUARANTEED RANGE: At 3 Turns Open Cap. Will Be Less Than pF.	LIST PRICE	NET PRICE (1-20)
302-M	2 Pl.	120	15	$1.20	$0.72
303-M	3 Pl.	320	65	1.30	.78
304-M	4 Pl.	500	100	1.40	.84
305-M	5 Pl.	690	180	1.50	.90
306-M	6 Pl.	880	265	1.70	1.02
307-M	7 Pl.	1070	340	1.75	1.05
308-M	8 Pl.	1260	425	1.90	1.14
309-M	9 Pl.	1415	525	2.10	1.26
310-M	10 Pl.	1600	615	2.20	1.32
311-M	11 Pl.	1785	730	2.35	1.41
312-M	12 Pl.	1970	800	2.45	1.47
313-M	13 Pl.	2155	1000	2.60	1.56
314-M	14 Pl.	2340	1100	2.75	1.65
315-M	15 Pl.	2525	1200	3.00	1.80

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2¼ Mil Mica.



TYPE L30

Prices Available on Request

The Type 30 or Type 30M padder can now be obtained with a special adjusting screw which has been lengthened to accommodate a tuning knob. To obtain a padder with the special screw, precede the regular padder part number with the letter "L". For example, a 302 padder with the special screw would be specified as "L-302".



TYPE S46

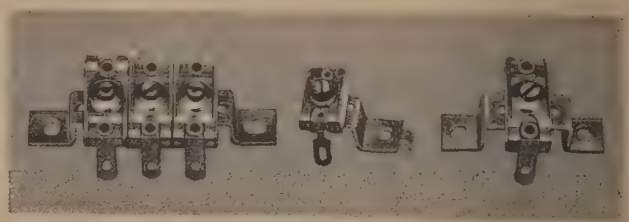
Prices Available on Request

A complete Type 46 trimmer assembly with mounting bracket and adjusting shaft for ease of tuning can be supplied as pictured from stock or with construction variations to order.

To specify precede trimmer part number with the letter "S".

For example:

Type 460 trimmer will be ordered as S-460.



Mounting brackets as illustrated above can be supplied for all types of trimmers in flat "Z" (single mounting hole with or without non-rotational stop), and "U" (dual mounting hole) configurations.

	List Price	Net Price (1-24)
Bracket for mounting 1 Trimmer	$0.15	$0.09
Bracket for mounting 2 Trimmers	.18	.11
Bracket for mounting 3 Trimmers	.21	.13
Bracket for mounting 4 Trimmers	.24	.14
Bracket for mounting 5 Trimmers	.27	.16
Bracket for mounting 6 Trimmers	.30	.18

NET (For quantities of 21 or more, please contact your local Elmenco Arcolytic distributor)
Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

Trade Discount Applies To List Prices Only
© United Technical Publications

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

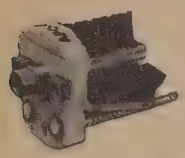
Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

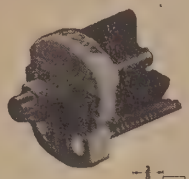
THE HAMMARLUND MANUFACTURING COMPANY INCORPORATED

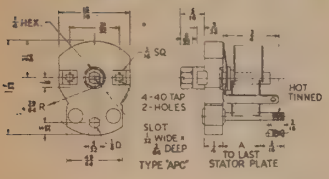
A Subsidiary of Electronic Assistance Corporation

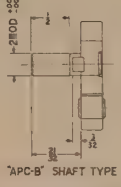
88 STANDARD TYPES OF VARIABLE AIR CAPACITORS

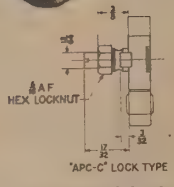












APC capacitors are available in three basic groups. The original APC group is furnished with a hex collar on a slotted shaft as indicated in the drawing. The APC-"B" group is furnished with ¼" diameter shafts to permit adjustment of the capacitance with a front panel knob. The APC-"C" group is supplied with slotted shafts for variation of the capacitance and a 5/16" hex locknut to prevent movement of the rotor in equipment subjected to high levels of vibration or shock.

APC

Capacitor Type	Net Price	Capacitor Type	Net Price
APC-25	$ 1.25	APC-100-B	$ 1.80
APC-50	1.35	APC-140-B	2.00
APC-75	1.45	APC-25-C	1.95
APC-100	1.60	APC-50-C	2.10
APC-140	1.80	APC-75-C	2.20
APC-25-B	1.35	APC-100-C	2.35
APC-50-B	1.45	APC-140-C	2.60
APC-75-B	1.55		

TYPE	CAPACITANCE		PLATES	DIMENSION "A"
	Max.	Min.		
APC-25	25.	3.0	7	21/64
APC-50	50.	3.9	14	1/2
APC-75	75.	4.6	20	11/16
APC-100	100.	5.5	27	59/64
APC-140	140.	6.7	37	1-7/32

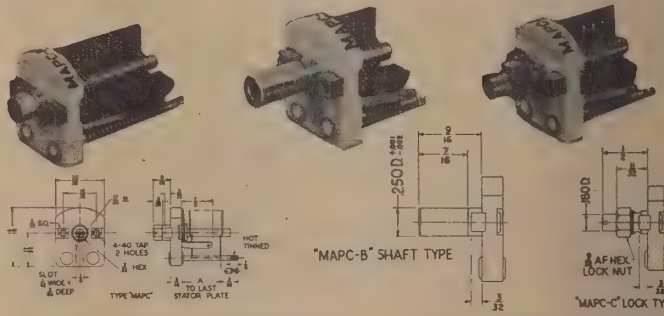
Note: When ordering the APC-"B" or "C" type, add the suffix -B or -C to the above listed type number.

MAPC

FEATURES—The MAPC series is similar to the APC series of capacitors in that identical materials and assembly methods are employed. The silicone treated steatite bases and all brass nickel plated metal parts with exception of the phosphor bronze rotor wiper assure the same type of reliable performance that the APC series provides.

TYPE	CAPACITANCE		PLATES	DIMENSION "A"
	Max.	Min.		
MAPC-15	15	2.3	6	17/64
MAPC-25	25	2.6	10	3/8
MAPC-35	35	2.9	14	15/32
MAPC-50	50	3.2	19	37/64
MAPC-75	75	3.9	29	53/64
MAPC-100	100	4.5	38	1-5/64

Note: When ordering the MAPC-"B" or "C" type, add the suffix -B or -C to the type numbers listed above.



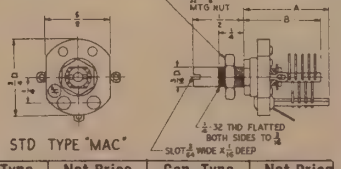
Capacitor Type	Net Price	Capacitor Type	Net Price	Capacitor Type	Net Price
MAPC-15	$ 1.10	MAPC-15-B	$ 1.10	MAPC-15-C	$ 1.45
MAPC-25	1.15	MAPC-25-B	1.15	MAPC-25-C	1.50
MAPC-35	1.20	MAPC-35-B	1.20	MAPC-35-C	1.55
MAPC-50	1.25	MAPC-50-B	1.25	MAPC-50-C	1.65
MAPC-75	1.35	MAPC-75-B	1.35	MAPC-75-C	1.70
MAPC-100	1.45	MAPC-100-B	1.45	MAPC-100-C	1.85

MAC

The MAC capacitors provide the low minimum capacitance and inductance essential for trimming and tuning resonant circuits in the VHF and UHF range. The materials employed and the constructional methods are the same as those used in the manufacture of the APC and MAPC series of capacitors.

TYPE	CAPACITANCE		PLATES	DIMENSIONS	
	Max.	Min.		"A"	"B"
MAC-5	5.4	1.3	5	45/64	39/64
MAC-10	9.6	1.5	9	13/16	23/32
MAC-15	15.8	1.9	15	1	29/32
MAC-20	21.5	2.2	21	1-11/64	1-5/64
MAC-30	32.0	2.5	27	1-17/65	1-11/64





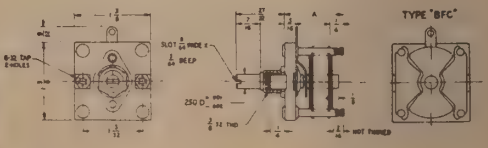
Cap. Type	Net Price	Cap. Type	Net Price
MAC-5	$ .90	MAC-20	$ 1.10
MAC-10	.95	MAC-30	1.20
MAC-15	1.00		

BFC

The BFC capacitors are of the butterfly type permitting operation as a series capacitor without a rotor connection or as a split stator capacitor with provision for grounding the rotor independently from the capacitor mounting studs, which are insulated from the rotor in the silicone treated steatite base.

CODE	CAPACITY/SECTION		SERIES CAPACITY		PLATES		DIMENSION "A"
	Max.	Min.	Max.	Min.	Rotor	Ea. Stator	
BFC-12	14.5	3.4	7.6	2.2	4	3	29/32
BFC-25	27.3	4.8	14.1	2.9	7	6	1-13/64
BFC-38	40.1	6.2	20.6	3.6	10	9	1-1/2





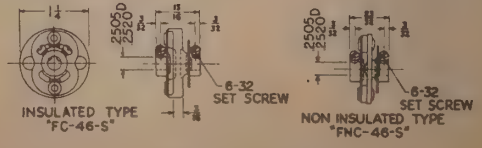
Cap Type	Net Price	Cap Type	Net Price
BFC-12	$ 2.55	BFC-38	$ 3.75
BFC-25	3.00		

FC-FNC

The FC-46-S is an insulated flexible coupling to prov mechanical ganging of angularly misaligned shafts. 1 FNC-46-S is non-insulated.

FC-46-S — $1.65; FNC-46-S — $1.30.





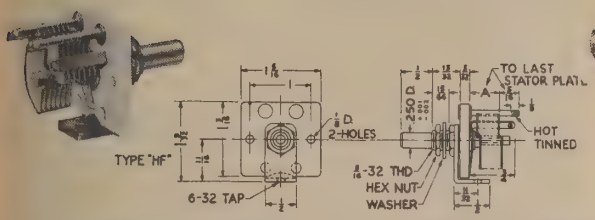
Net

© United Technical Publications

THE HAMMARLUND MANUFACTURING COMPANY INCORPORATED

A Subsidiary of Electronic Assistance Corporation

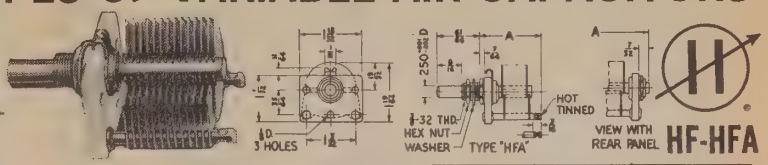
88 STANDARD TYPES OF VARIABLE AIR CAPACITORS



CODE	CAPACITY		PLATES/SECTION	DIMENSION "A"
	Max.	Min.		
HF-15	17.5	2.8	5	17/64
HF-35	36.	3.2	10	25/64
HF-50	52.	3.7	14	1/2
HF-100	102.	5.3	27	59/64
HF-140	142.	6.3	37	1-7/32
HF-15-X	15.	3.6	10	23/32
HF-30-X	30.	5.2	20	1-5/16

The HF is a single section capacitor employing the APC rotor and stator design. An extra long sleeve bearing and positive contact nickel-plated phosphor bronze wiper make this unit ideally suited to high frequency applications.

The HFA capacitors are similar to the HF series except that larger rotor and stator plates are used.

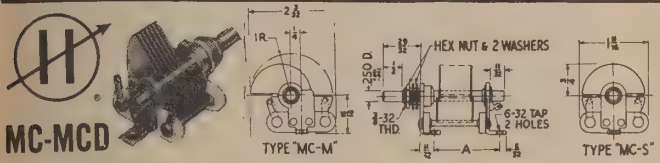


HF-HFA

CODE	CAPACITY		AIR GAP	PLATES/SECTION	DIMENSION "A"
	Max.	Min.			
HFA-100-A	102	4.5	0.020	19	1-13/32
HFA-140-A	145	6.0	0.020	27	1-23/32
HFA-200-A	200	8.0	0.020	38	2-7/32
HFA-15-B	16	2.8	0.030	5	7/8
HFA-25-B	25	3.0	0.030	7	31/32
HFA-50-B	50	4.3	0.030	14	1-3/8
HFA-100-B*	100	7.5	0.030	27	2-21/64
HFA-15-E	16	4.0	0.070	9	1-3/8
60 cycle peak test voltage HFA-A, 1130 V. B, 1690 V. E, 1750 V.					

*Has Front and Rear Supporting Panels.

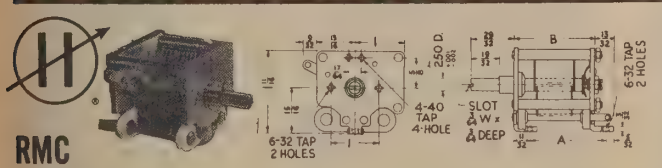
Cap. Type	Net Price	Cap. Type	Net Price
HF-15	$ 1.45	HFA-100-A	$ 2.95
HF-35	1.55	HFA-140-A	3.25
HF-50	1.75	HFA-200-A	4.00
HF-100	2.00	HFA-15-B	2.20
HF-140	2.15	HFA-25-B	2.30
HF-15-X	1.40	HFA-50-B	2.50
HF-30-X	1.85	HFA-100-B	4.35
		HFA-15-E	2.60



MC-MCD

The MC is a versatile single section tuning capacitor designed to give the equipment engineer a choice of mountings, connections and capacity characteristics. The threaded brass front bearing and tapped aluminum end brackets permit panel or base mounting.

Capacitor Type	Net Price	Capacitor Type	Net Price	Capacitor Type	Net Price
MC-20-S	$ 2.75	MC-140-S	$ 3.50	MC-50-SX	$ 3.40
MC-35-S	2.85	MC-200-M	3.90	MC-100-SX	4.35
MC-50-M	2.95	MC-250-M	4.25	MCD-50-M	8.25
MC-50-S	2.95	MC-325-M	4.75	MCD-100-M	8.90
MC-75-M	3.10	MC-20-SX	2.95	MCD-100-S	8.75
MC-75-S	3.10	MC-35-MX	3.15	MCD-140-M	9.50
MC-100-M	3.25	MC-35-SX	3.15	MCD-35-MX	9.10
MC-100-S	3.25	MC-50-MX	3.40	MCD-35-SX	8.75
MC-140-M	3.50				

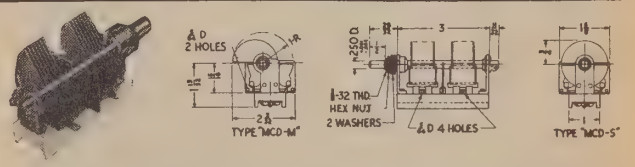


RMC

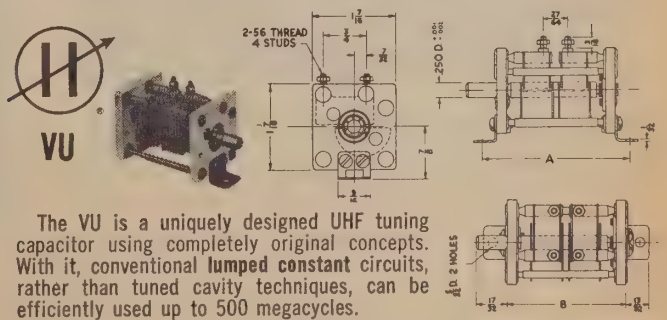
The RMC was designed specifically for applications requiring an MC type tuning capacitor with very rigid construction. Its sturdy frame consists of heavy gauge aluminum end panels held together by three aluminum tie rods.

Cap. Type	Net Price	Cap. Type	Net Price
RMC-50-S	$ 5.50	RMC-140-S	$ 6.65
RMC-100-S	5.85	RMC-325-S	7.85

CODE	CAPACITY		PLATES	DIMENSIONS	
	Max.	Min.		"A"	"B"
RMC-50-S	50.	7.3	7	1-7/32	1-5/16
RMC-100-S	105.	9.5	14	1-13/32	1-1/2
RMC-140-S	143.5	11.0	19	1-19/32	1-11/16
RMC-325-S	327.	17.5	43	2-23/32	2-13/16



TYPE	CAPACITY		PLATES/SECTION	DIMENSION "A"
	Max.	Min.		
MC-20-S	20.	5.5	3	1-7/32
MC-35-S	35.	6.0	5	1-7/32
MC-50-M	50.	6.3	7	1-7/32
MC-50-S	50.	6.5	7	1-7/32
MC-75-M	80.	7.3	11	1-7/32
MC-75-S	80.	8.0	11	1-7/32
MC-100-M	100.	7.7	14	1-13/32
MC-100-S	100.	8.3	14	1-13/32
MC-140-M	140.	9.0	19	1-19/32
MC-140-S	140.	10.0	19	1-19/32
MC-200-M	200.	10.3	27	2
MC-250-M	250.	12.0	34	2-5/16
MC-325-M	320.	13.5	43	2-23/32
MC-20-SX	20.	6.8	7	1-13/32
MC-35-MX	32.	7.8	11	1-19/32
MC-35-SX	32.	8.5	11	1-19/32
MC-50-MX	53.	10.5	19	2-5/16
MC-50-SX	53.	11.5	19	2-5/16
MC-100-SX	100.	16.5	35	3-29/32
MCD-50-M	50.	5.5	7	Single Hole panel mtg. Length back of panel 3-11/32
MCD-100-M	100.	6.3	14	
MCD-100-S	100.	7.0	14	
MCD-140-M	140.	7.8	19	
MCD-35-MX	31.	6.0	11	
MCD-35-SX	31.	6.8	11	



VU

The VU is a uniquely designed UHF tuning capacitor using completely original concepts. With it, conventional **lumped constant** circuits, rather than tuned cavity techniques, can be efficiently used up to 500 megacycles.

Cap. Type	Net Price	Cap. Type	Net Price
VU-20	$ 8.20	VU-45	$ 9.15
VU-30	8.80		

CODE	SERIES CAPACITY		PLATES/SECTION	DIMENSIONS	
	Eff.	Min.		"A"	"B"
VU-20	22.5	3.35	11	2-9/32	1-25/32
VU-30	31.5	3.5	15	2-9/16	2-1/16
VU-45	45.0	3.8	21	2-31/32	2-15/32

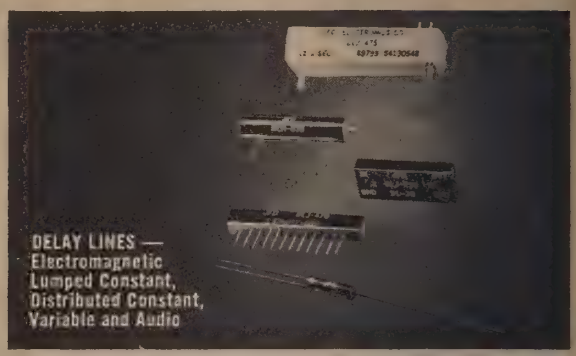
© United Technical Publications

JFD

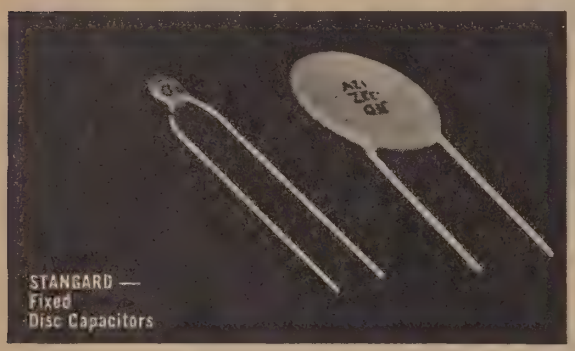
JFD ELECTRONICS CORP. / COMPONENTS DIVISION
SUBSIDIARY OF RIKER-MAXSON CORPORATION



Low-cost for commercial and industrial applications. 9 △ Cs are available from 2.0 to 60.0 pf in 4 versatile configurations. DV11 Series meets or exceeds applicable MIL-C-81A. Write for catalogs STD-DV/67-A and DVJ-300/66.



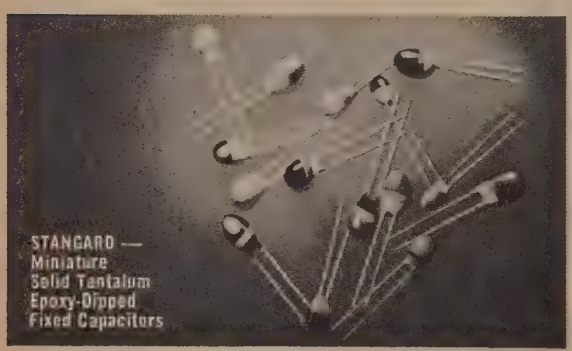
Top quality, rugged, precision components of proven dependability. High delay to rise time ratios. Mounting methods for a wide variety of circuit applications. Write for catalog DL-68.



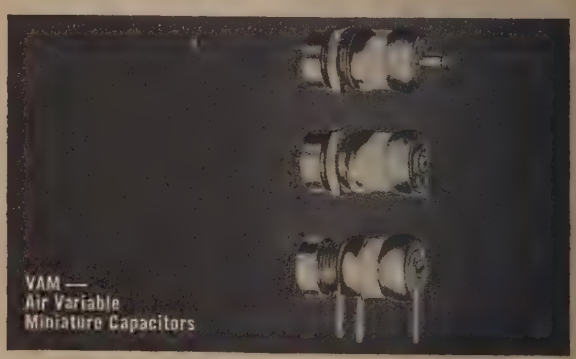
Low-cost for transistor and general commercial circuitry. High K. Available in voltage ratings from 3 volts and higher. Write for catalog STD-FD/67-A.



Ideal for nanosecond delay in high pulse circuitry. Rise time is less than one nanosecond. TC less than 20 PPM/°C. Operating temperature range —55°C to +125°C. Impedance 50 Ω. Write for catalog PL-67.



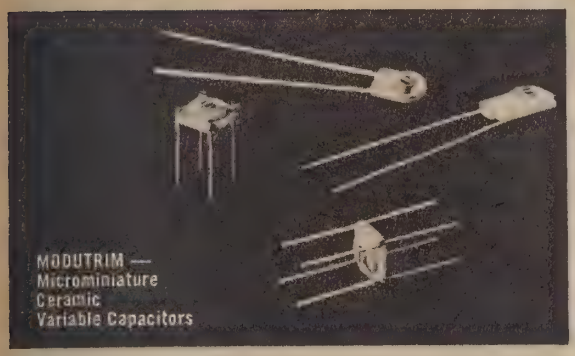
Low-cost for instrument, control, communication systems as well as general commercial circuitry. Capacitance range from 0.1 to 50.0 mfd. Write for catalog STD-TR/67.



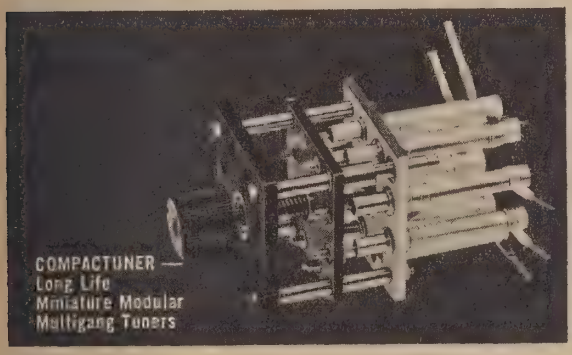
Specially designed for high frequency applications that demand extreme stability, small size and high Q capacitance. Range measured at 1 MHz is 0.8 through 10.0 pf, Q measured at 10 pf and 100 MHz is greater than 2,000. Write for catalog VAM-67-B.

© United Technical Publications

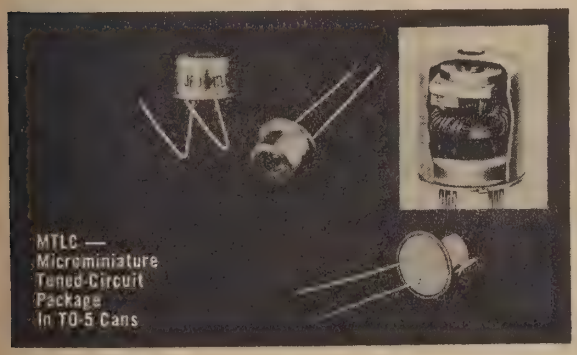
JFD ELECTRONICS CORP. / COMPONENTS DIVISION



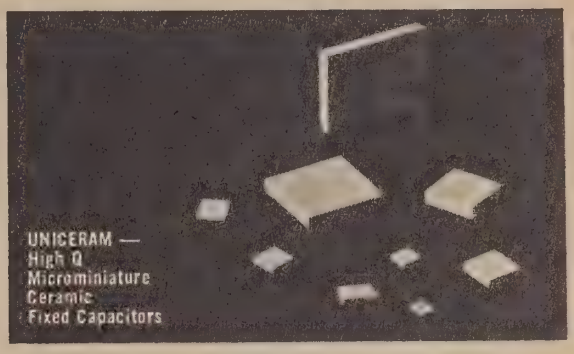
Offer micromodule and hybrid circuit designers a choice of wide △ Cs in extremely small and stable units. Capacitance ranges from 1.1 to 60.0 pf. Meet or exceed applicable MIL-C-81. Write for catalogs MT-67-A and MT-500-68.



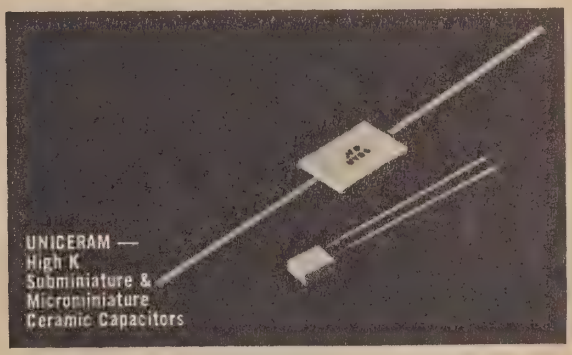
4 and 8 gang models for SLC and SLF tuning. Each provides stability and accuracy of tuning in a smaller sized package, unobtainable before Compactuner! Write for catalog LLCT-68.



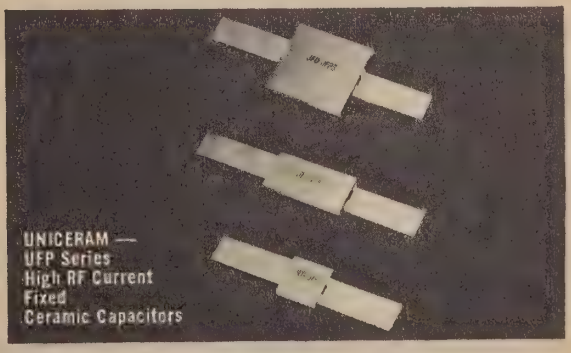
Complete LC tuned circuits within TO-5 cans. Standard frequency ranges from 2 to 300 MHz. Various other complex networks such as discriminators, phase detectors are also available on special order. Write for catalog MTLC-67-A.



Offer a high ratio of capacitance per unit volume. They combine exceptional stability and a guaranteed minimum Q in a smaller size package than competitive units. Over 1,000 glass encapsulated models with capacitance values from 0.5 to 3,000 pf. Write for catalog UNM-H/Q-67-A.



Multi-layer 'chips' and glass encapsulated leaded units are available in 5 square and 12 rectangular configurations. Ideal for hybrid integrated circuits. Capacitance range is 10 pf to 1.5 mfd. Meet or exceed applicable MIL-C-11015C. Write for catalog UNM-H/K-67.



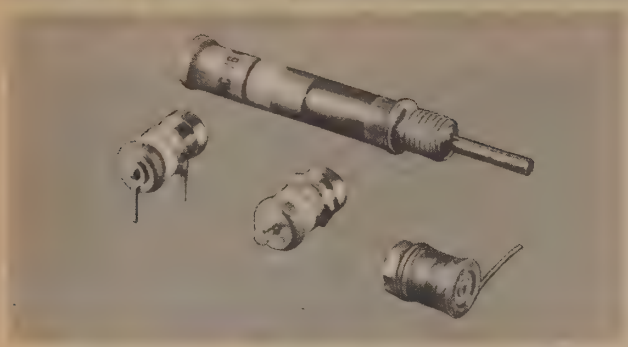
The smallest high RF power capacitors available! Typical UFP1 rating is 12 KVAR at +25°C. Recommended 'space-savers' for use in military communications, mobile, commercial broadcast and amateur radio transmitters. Write for catalog UNM-UFP-68.

JFD ELECTRONICS CORP. / COMPONENTS DIVISION
SUBSIDIARY OF RIKER-MAXSON CORPORATION

© United Technical Publications

JFD

JFD ELECTRONICS CORP. / COMPONENTS DIVISION
SUBSIDIARY OF RIKER-MAXSON CORPORATION



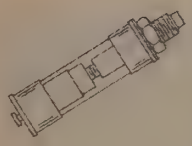
PISTON TRIMMER

JFD has available the largest selection of Precision Piston Trimmers in the industry—more than 2,500 standard and special designs that meet or exceed MIL-C-14409B.

JFD's unique capacitor-design-capability offers an unmatched number of exclusive features—Seven drive mechanisms incorporating advanced construction . . . Matched metalizing / homogeneous bond with dielectric . . . High level shock and vibration resistance . . . Clean room high reliability units available.

Write for complete catalog #C-67-A "Precision Piston Trimmer and Tuning Capacitors."

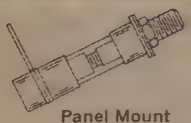
Max-C High Range Miniature Telescopic Sealed Capacitor Series



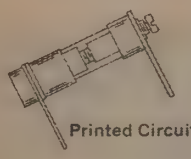
(Dia. 5/16 in.)

PANEL MOUNT					PRINTED CIRCUIT				
JFD No.	Mil. Spec.	Cap. (pf) Min.	Cap. (pf) Max.	Body Length	JFD No.	Mil. Spec.	Cap. (pf) Min.	Cap. (pf) Max.	Body Length
GLASS				±1/32 in.	**GLASS**				±1/32 in.
NMC601	PC39J160	1.0	16.0	15/32	NMC621	PC43J160	1.0	16.0	.750
NMC603	PC39J360	1.0	36.0	45/64	NMC623	PC43J360	1.0	36.0	.990
NMC604	PC39J520	1.0	52.0	59/64	NMC624	PC43J520	1.0	52.0	1.205
NMC606	PC39J750	1.0	75.0	1 11/64	NMC626	PC43J750	1.0	75.0	1.450
NMC609	PC39J121	1.0	120.0	1 49/64	NMC629	PC43J121	1.0	120.0	2.050
MC601Y	PC39J140	1.0	14.0	15/32	MC621Y	PC43J140	1.0	14.0	.750
MC603Y	PC39J280	1.0	28.0	45/64	MC621	PC43J140	1.0	14.0	.700
MC604Y	PC39J420	1.0	42.0	59/64	MC623Y	PC43J280	1.0	28.0	.990
MC606Y	PC39J600	1.0	60.0	1 11/64	MC623	PC43J280	1.0	28.0	.940
MC609Y	PC39J900	1.0	90.0	1 49/64	MC624Y	PC43J420	1.0	42.0	1.205
MC601	PC39J140	1.0	14.0	15/32	MC624	PC43J420	1.0	42.0	1.155
MC603	PC39J280	1.0	28.0	45/64	MC626Y	PC43J600	1.0	60.0	1.450
MC604	PC39J420	1.0	42.0	59/64	MC626	PC43J600	1.0	60.0	1.400
MC606	PC39J600	1.0	60.0	1 11/64	MC629Y	PC43J900	1.0	90.0	2.050
MC609	PC39J900	1.0	90.0	1 49/64	MC629	PC43J900	1.0	90.0	2.000

Miniature Telescopic Capacitor Series*



Panel Mount



Printed Circuit



Wire Series — Lug & Lead Series

(Dia. ¼ in.)

PANEL MOUNT					PRINTED CIRCUIT				
JFD No.	Mil. Spec.	Cap. (pf) Min.	Cap. (pf) Max.	Body Length	JFD No.	Mil. Spec.	Cap. (pf) Min.	Cap. (pf) Max.	Body Length
GLASS				+3/64−1/32	**GLASS**				±1/32 in.
NVC20G	PC50J110	0.8	11.0	35/64	NVC9GW	PC51J110	0.8	11.0	9/16
NVC21G	PC50J5R5	0.8	5.5	19/64	NVC10GW	PC51J5R5	0.8	5.5	5/16
NVC22G	PC50H160	0.8	16.0	3/4	NVC31GW	PC51H160	0.8	16.0	49/64
NVC23G	PC50H230	0.8	23.0	63/64	NVC32GW	PC51H230	0.8	23.0	1
NVC24G	PC50H380	1.0	38.0	1 19/32	NVC43GW	PC51H380	1.0	38.0	1 39/64
VC20GY	PC40J8R5	0.8	8.5	35/64	VC9GWY	PC41J8R5	0.8	8.5	9/16
VC21GY	PC40J4R5	0.8	4.5	19/64	VC10GWY	PC41J4R5	0.8	4.5	5/16
VC22GY	PC40H120	0.8	12.0	3/4	VC31GWY	PC41H120	0.8	12.0	49/64
VC23GY	PC40H180	0.8	18.0	63/64	VC32GWY	PC41H180	0.8	18.0	1
VC24GY	PC40H300	1.0	30.0	1 19/32	VC43GWY	PC41H300	1.0	30.0	1 39/64
VC20G	PC40J8R5	0.8	8.5	35/64	VC9GW	PC41J8R5	0.8	8.5	5/16
VC21G	PC40J4R5	0.8	4.5	19/64	VC10GW	PC41J4R5	0.8	4.5	9/16
VC22G	PC40H120	0.8	12.0	3/4	VC31GW	PC41H120	0.8	12.0	49/64
VC23G	PC40H180	0.8	18.0	63/64	VC32GW	PC41H180	0.8	18.0	1
VC24G	PC40H300	1.0	30.0	1 19/32	VC43GW	PC41H300	1.0	30.0	1 39/64
QUARTZ				+3/64−1/32	**QUARTZ**				±1/32 in.
NMQ101	PC40Q1R8	0.6	1.8	19/64	NMQ121	PC41Q1R8	0.6	1.8	5/16
NMQ103	PC40Q5R5	0.6	5.5	35/64	NMQ123	PC41Q5R5	0.6	5.5	9/16
NMQ106	PC40Q9R5	0.6	9.5	63/64	NMQ126	PC41Q9R5	0.6	9.5	1
NMQ109	PC40Q160	0.8	16.0	1 19/32	NMQ129	PC41Q160	0.8	16.0	1 19/32
MQ101	PC40Q1R8	0.6	1.8	19/64	MQ121	PC41Q1R8	0.6	1.8	5/16
MQ103	PC40Q5R5	0.6	5.5	35/64	MQ123	PC41Q5R5	0.6	5.5	9/16
MQ106	PC40Q9R5	0.6	9.5	63/64	MQ126	PC41Q9R5	0.6	9.5	1
MQ109	PC40Q160	0.8	16.0	1 19/32	MQ129	PC41Q160	0.8	16.0	1 39/64

TYPICAL SPECIFICATIONS	GLASS	QUARTZ
JFD No./Prefix 'N'	Green Glass dielectric & Hi-Life mechanism	Hi-Life mechanism only
JFD No./Suffix 'Y'	Hi-Life mechanism only	
WVDC	750	750
Dielectric Strength VDC	1,500	1,500
"Q" Minimum at 20 MC	500 min.	1,500 min.
Temperature Coefficient PPM/°C	±50 (−55 to +125°C)	+25 ±25 (−55 to +150°C)
Insulation Resistance megohms	10^6	10^6
Turning Torque inch ounces	1-10	1-10

Body length indicated on Panel Mount only is exclusive of mounting bushing. 'N' and 'Y' Series mounting bushing dimension: 9/32 in. All other ¼ in. ¼ in.
*Miniature Telescopic Capacitor Series available sealed.

© United Technical Publications

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors

The
RADIO-ELECTRONIC
MASTER
A United Technical Publication

E. F. JOHNSON COMPANY

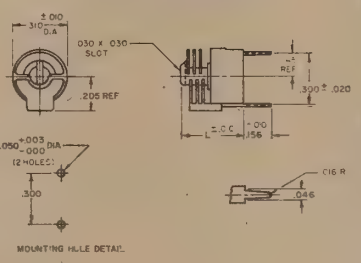
Sub miniature trimmer capacitors

Type "T" air variable capacitors

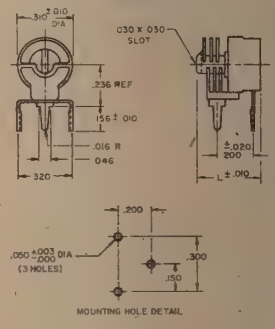
Now – smaller versions of our widely used machined plate "U" capacitors. Printed circuit mounting – vertical or horizontal style. Mounting dimensions of vertical type are identical to those of 3/8" dia. PC type ceramic trimmers. Designed to meet or exceed EIA-RS 204 and MILSTD. 202C Methods 204A and 201A. Metal parts are silver plated and Iridited.

Plates are precision machined from brass extrusions and offer exceptional uniformity, stability, and absolute freedom from moisture entrapment. Stable electrically – temperature coefficient plus 30 ± 15 ppm/°C. Excellent retrace characteristics. High Q – typically 2000 @ 150 MHz. Ceramic is 95% Alumina grade L-624 or better. Can be supplied with tuning slot on both ends of rotor. High temperature versions available as specials.









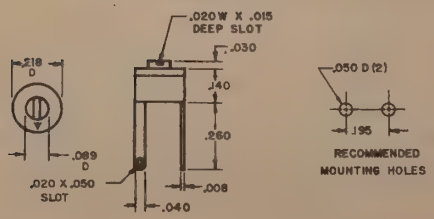
Specifications

Vertical Mounting Cat. No.	Horizontal Mounting Cat. No.	Nominal Capacity pF. Min.	Nominal Capacity pF. Max.	Total Plates	Air Gap (in.)	Minimum DC Voltage Breakdown	Length (inch)	Vertical Net Price	Horizontal Net Price
187-0103-005	187-0103-105	1.3	5.4	6	.008	250	.36"	$0.66	$0.70
187-0106-005	187-0106-105	1.7	11.0	12	.008	250	.47"	.70	.74
187-0109-005	187-0109-105	1.9	15.7	12	.008	250	.58"	.78	.82

Also available as specials with minimum of 4 plates to maximum of 20 plates.

Ceramic disc trimmer capacitors





This new micro-miniature ceramic disc trimmer exhibits extreme stability and long life due to encapsulation of the titinate rotor plate. The stator is of HIGH ALUMINA for lower loss and higher strength under extreme environmental conditions. Smooth, linear tuning is realized by precision lapping of bearing surfaces. Designed to meet or exceed applicable portions of MIL-C-81. Operating range is —55° to 125°C. Working Voltage 100 VDC up to 85°C, 50 VDC up to 125°C.

Catalog Number	Nominal Capacity (pF.) Min.	Nominal Capacity (pF.) Max.	Minimum DC Voltage Breakdown	Net Price
274-0009-005	2.5	9.0	200	$3.95
274-0020-005	3.5	20.0	200	3.95
274-0025-005	5.0	25.0	200	3.95

Net
© United Technical Publications

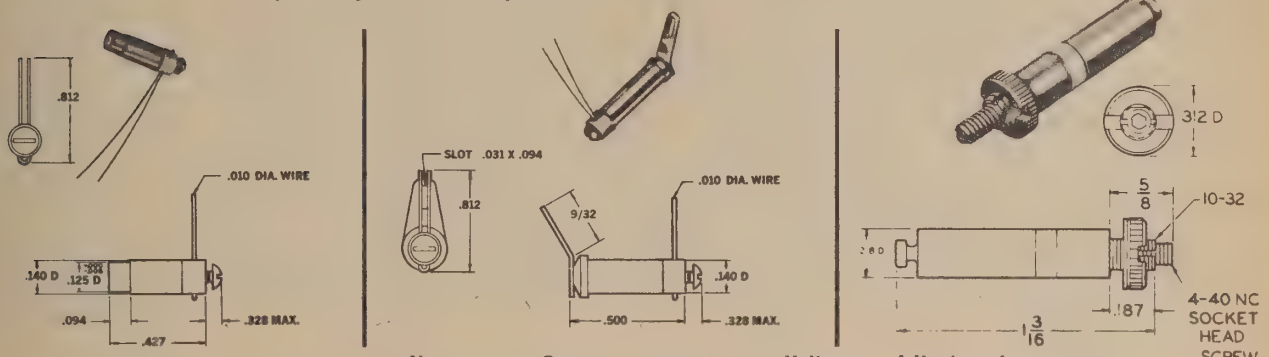
E. F. JOHNSON COMPANY

Miniature Teflon® dielectric trimmer capacitors

These new trimming capacitors are ideally suited for VHF and UHF applications requiring low minimum capacity and delta C. They provide high resolution and electrical stability. Tuning is linear. Q is high (2000 @ 150 MHz typically). Insulation resistance 10^6 megohms. Temperature range −55° to +150°C. High resistance to shock and vibration.

Metal parts are gold plated on PC and solder lug types, silver plated on panel mount version. Insulation is Teflon®.

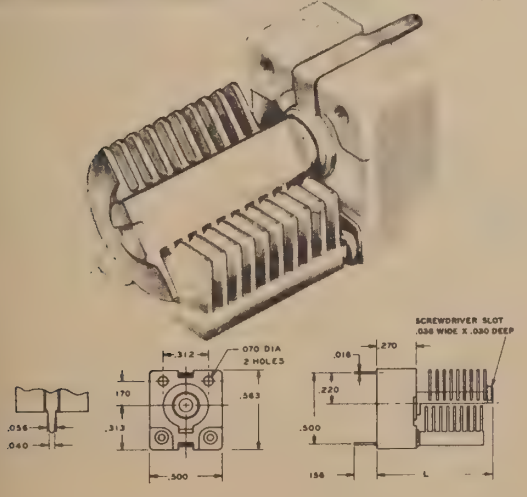
®Teflon is a registered trade name of DuPont Co.



Cat. No.	Mounting	Nom. pf. Max.	Cap. Per Sec. Min.	Torque Oz. In.	Voltage Breakdown	Adjustment Turns Per Inch	Net Price
273-0001-001	PC	1.5	.25	.2-3.0	2,000	80	$0.60
273-0001-002	Solder Lug	1.5	.25	.2-3.0	2,000	80	.70
273-0015-001	Panel	2.9	.30	.2-10.0	2,000	40	1.10

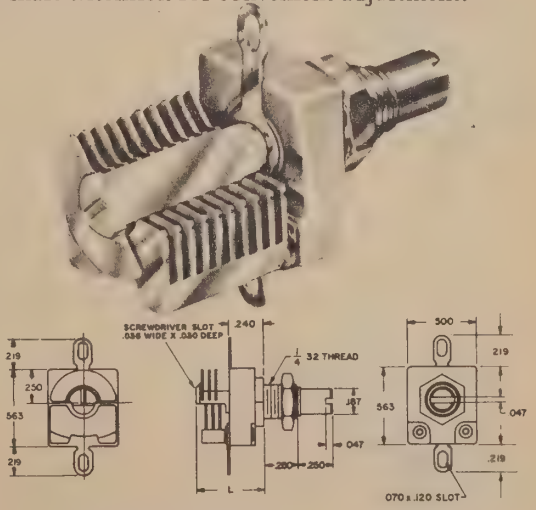
Type "V" capacitors

These air variables provide high capacity in small space. Printed circuit and panel mount types mount in less than 0.3 sq. in. area. Rotors and stators precision machined from one piece of solid brass for high reliability and outstanding mechanical stability. High "Q" (typically 2000 @ 150 MHz). . . high torque (2-1/2 to 10 ounce inches) . . . low temperature coefficient (plus 50 ± 20 PPM/°C) . . . exceptionally uniform delta C and voltage characteristics. Metal parts silver-plated. Ceramic is steatite Grade L-423 or better. Voltage breakdown rating 650 VDC. Freedom from moisture entrapment. Slotted rotor or shaft extension for convenient adjustment.



Cat. No.	Nom. Cap. pf. per Sec. Max.	Min.	Plates Per Section	L ± 1/32"	Volts Peak Bkdwn.	Air Gap	Net Price
SINGLE SECTION—Printed Circuit Types							
193-0004-005	13	1.4	8	37/64"	650	.010"	$0.85
193-0006-005	20	1.7	12	1 1/16"	650	.010"	.90
193-0008-005	27	2.0	16	25/32"	650	.010"	.95
193-0010-005	34	2.2	20	57/64"	650	.010"	1.00

Capacitors with .016" air gap available as specials.



Cat. No.	Nom. Cap. pf. per Sec. Max.	Min.	Plates Per Section	L ± 1/32"	Volts Peak Bkdwn.	Air Gap	Net Price
SINGLE SECTION—Panel Mount Type							
193-0004-001	13	1.4	8	35/64"	650	.010"	1.10
193-0006-001	20	1.7	12	21/32"	650	.010"	1.15
193-0008-001	27	2.0	16	3/4"	650	.010"	1.20
193-0010-001	34	2.2	20	55/64"	650	.010"	1.25

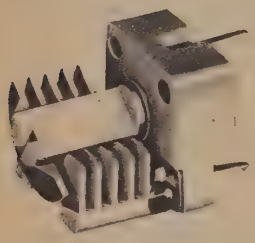
Capacitors with .016" air gap available as specials.

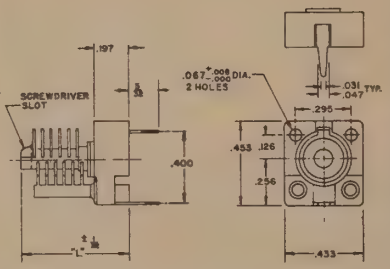
E. F. JOHNSON COMPANY

Miniature air variable capacitors

Type "U" capacitors

Sub-miniature Type "U" air variable capacitors cut costs, improve performance, and save valuable space in compact electronic equipment. Available in single section, differential and butterfly types, they occupy minimum mounting area. Single section type requires less than 0.2 square inch and differential and butterfly types less than 0.23 square-inch area for chassis or printed board mounting. Rotors and stators are precision machined from one piece of solid brass, providing outstanding mechanical stability and uniformity. Units offer high "Q" typically 2000 @ 150 MHz, high torque (2-1/2 to 10 ounce inches), exceptionally low temperature coefficient (plus 45 ± 15 PPM/°C), and absolute freedom from moisture entrapment. All metal parts silver-plated — ceramic is steatite, Grade L-423 or better. Exceptionally uniform delta C and voltage characteristics . . . breakdown ratings available to 1100 volts DC. No special tools required for installation — slotted end accommodates large screwdriver for quick adjustment. Choice of wide, double-pierced or printed circuit style terminals. Single-section models available in 2-Hole; Printed Circuit; and #10-32 Panel Mount types. Differential and Butterfly models available in Printed Circuit mounting. Specials available in production quantities with features including front shaft extensions and special platings.



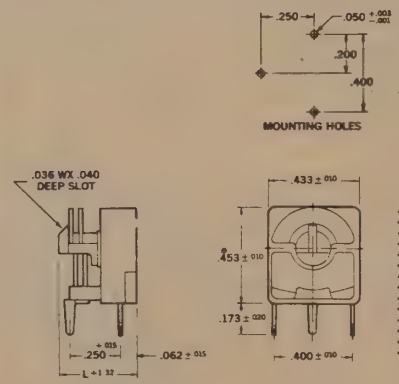


Printed Circuit Mounting —Single Section

Cat. No.	Nom. Cap. pf. per Sec. Max.	Min.	Plates Per Section	L ± 1/32"	Volts Peak Bkdwn.	Air Gap	Net Price
189-0501-005	4.2	1.2	4	27/64"	650	.010	$0.64
189-0502-005	6.7	1.3	6	15/32"	650	.010	.66
189-0503-005	9.2	1.4	8	33/64"	650	.010	.64
189-0504-005	11.6	1.5	10	9/16"	650	.010	.66
189-0505-005	14.1	1.7	12	39/64"	650	.010	.68
189-0506-005	16.7	1.8	14	43/64"	650	.010	.70
189-0507-005	19.3	2.0	16	23/32"	500	.010	.72
189-0508-005	21.9	2.2	18	49/64"	500	.010	.74
189-0509-005	24.5	2.4	20	13/16"	500	.010	.76

Capacitors with .016" air gap available as specials. Two-hole mounting type "U" with press-in acetal fastener for chassis mounting also available.

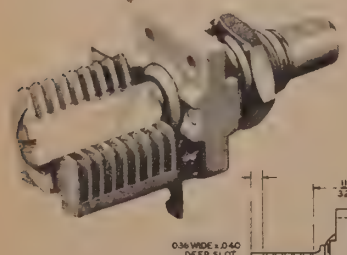


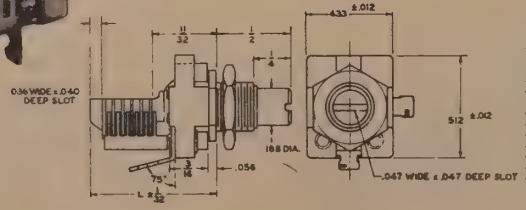


Horizontal Mounting Printed Circuit Type—Single Section

Cat. No.	Nom. Cap. pf. per Sec. Max.	Min.	Plates Per Section	L ± 1/32"	Volts Peak Brkdn.	Air Gap	Net Price
189-0503-105	9.2	1.4	8	31/64	650	.010	$0.78
189-0504-105	11.6	1.5	10	17/32	650	.010	.80
189-0505-105	14.1	1.7	12	37/64	650	.010	.82
189-0506-105	16.7	1.8	14	41/64	650	.010	.84
189-0507-105	19.3	2.0	16	11/16	500	.010	.86
189-0508-105	21.9	2.2	18	47/64	500	.010	.88
189-0509-105	24.5	2.4	20	25/32	500	.010	.90

Capacitors with .016" air gap available as specials.





Panel Mounting Type "U" Capacitors—Single Section

Cat. No.	Nom. Cap. pf. per Sec. Max.	Min.	Plates Per Section	L ± 1/32"	Volts Peak Brkdn.	Air Gap	Net Price
189-0563-001	9.2	1.4	8	5/16	650	.010	$0.96
189-0564-001	11.6	1.5	10	5/8	650	.010	.98
189-0565-001	14.1	1.7	12	43/64	650	.010	1.00
189-0566-001	16.7	1.8	14	23/32	650	.010	1.02
189-0567-001	19.3	2.0	16	49/64	500	.010	1.04
189-0568-001	21.9	2.2	18	13/16	500	.010	1.06
189-0569-001	24.5	2.4	20	7/8	500	.010	1.08

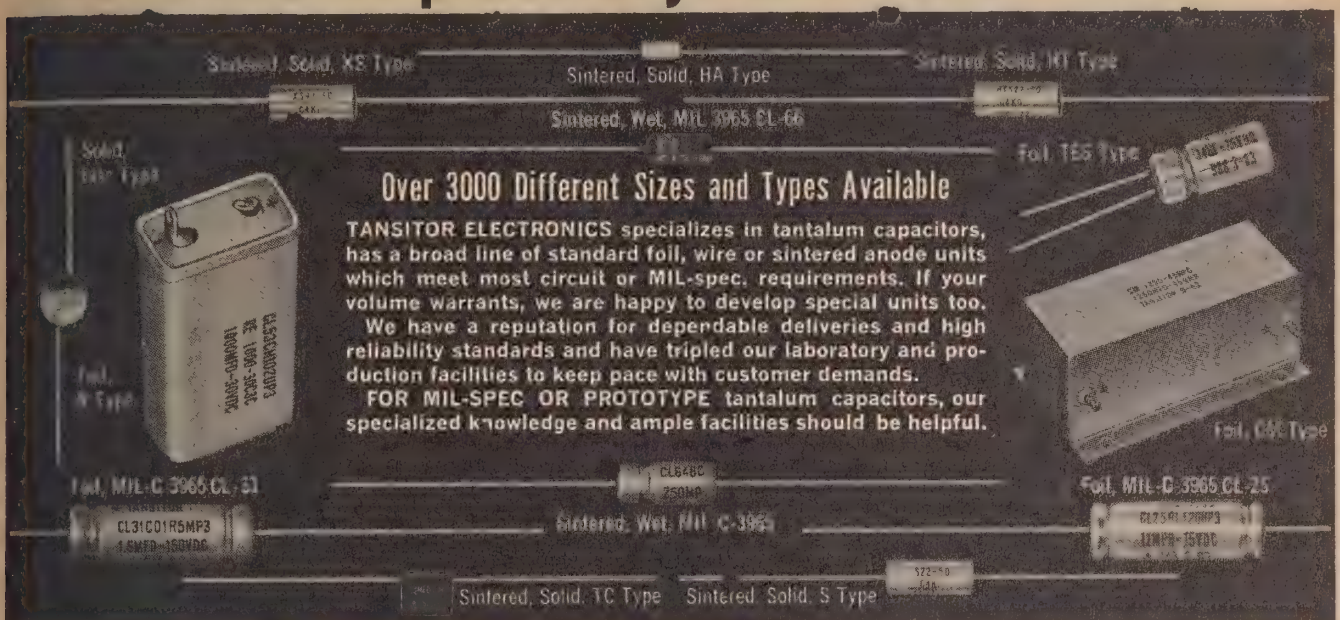
Capacitors with .016" air gap available as specials. Differential type "U" with PC mounting also available.

Net

© United Technical Publications

TANTALUM CAPACITORS?

Your choice is practically unlimited at TANSITOR



Over 3000 Different Sizes and Types Available

TANSITOR ELECTRONICS specializes in tantalum capacitors, has a broad line of standard foil, wire or sintered anode units which meet most circuit or MIL-spec. requirements. If your volume warrants, we are happy to develop special units too.

We have a reputation for dependable deliveries and high reliability standards and have tripled our laboratory and production facilities to keep pace with customer demands.

FOR MIL-SPEC OR PROTOTYPE tantalum capacitors, our specialized knowledge and ample facilities should be helpful.

Type	Tansitor Part No.	Temp. Rating	Voltage Range	Capacitance Range, Mfds.		Size Range Inches
				Plain	Etched	
MIL-C-3965D Foil CL20, 21, 22, 23, 30, 31, 32, 33	TE 20, 21, 22, 23, 30, 31, 32, 33	−55 to +85°C +125°C derated	3 to 300	0.25 to 440	0.5 to 1,750	0.188 x 0.688 to 0.375 x 2.750
Foil	TH	−55 to +125°C	3 to 150	0.15 to 350	0.28 to 1,750	0.188 x 0.688 to 0.531 x 2.781
Foil Radial	TES	−55 to +85°C	3 to 150	1.0 to 90	1.8 to 14,000	0.312 x 0.650 to 0.625 x 2.438
Foil Axial	THH	−55 to +150°C	3 to 150	0.15 to 350	0.28 to 580	0.187 x 1.00 to 0.375 x 3.250
Foil Axial	HV	−55 to +125°C	200 to 300	0.13 to 35	None	0.187 x 0.750 to 0.531 x 2.875
MIL-C-3965D CL70, 71, 72, 73 High Etch	TE 70, 71, 72, 73	−55 to +85°C +125°C derated	15 to 150	.25 to 440	0.75 to 920	0.188 x 0.688 to 0.375 x 2.750
Custom Made	CM	−55 to +125°C	3 to 300	19 to 1,400	120 to 310,000	1.062 x 1.062 x 3.875 to 3.562 x 3.562 x 3.875
Foil, Rectangular	R	−55 to +125°C	10 to 100	13 to 460	6 to 3,500	1.312 x 0.75 x 1.375 to 1.312 x 0.75 x 2.50
MIL-C-3965D Foil CL51, 52, 53, 54	TE 51, 52, 53, 54	−55 to +85°C +125°C derated	10 to 150	13 to 460	6 to 3,500	1.312 x 0.75 x 1.375 to 1.312 x 0.75 x 2.50
Foil Axial	WF	−55 to +125°C	6 to 300	0.1 to 560		0.188 x 0.453 to 0.375 x 0.766
Solid (P)	S	−80 to +125°C	6 to 50	0.0047 to 330		0.125 x 0.250 to 0.341 x 0.75
Solid (NP)	S	−80 to +125°C	6 to 50	0.16 to 160		0.145 x 0.540 to 0.366 x 1.520
Solid (P & NP)	XS	−80 to +125°C	6 to 50	1.2 to 450		0.125 x 0.250 to 0.341 x 0.750
Solid	HA	−55 to +125°C	2 to 50	0.010 to 47		0.067 x 0.110 to 0.150 x 0.250
Solid	TC	−55 to +125°C	2 to 35	0.0047 to 1.5		0.125 x 0.070 x 0.040 to 0.375 x 0.150
Solid	Disc	−80 to +175°C	3 to 35	0.12 to 40		0.100 x 0.06 to 0.50 x 0.10
Wet	W	−55 to +125°C	6 to 125	1.7 to 1,200		0.188 x 0.453 to 0.375 x 1.250
MIL-C-3965D Wet, CL66, 67	TE 66, 67	−55 to +125°C	6 to 125	1.7 to 560		0.188 x 0.453 to 0.375 x 0.766
MIL-C-3965D Wet, CL64, 65	TE 64, 65	−55 to +125°C	6 to 125	1.7 to 560		0.188 x 0.453 to 0.375 x 0.766
Wet, Rectangular	RW	−55 to +125°C	6 to 150	130 to 22,000		0.720 x 1.306 to 1.062 x 3.75
MIL-C-3965D CL55, Rectang.	TE 55	−55 to +125°C	10 to 100	35 to 2,400		0.720 x 1.305 x 1.062 to 0.720 x 1.305 x 2.50
Wet, Rectangular	TE 59	−55 to +125°C	6 to 125	340 to 22,000		1.000 x 1.500 x 1.593 to 1.000 x 3.750 x 1.593

FOR TECHNICAL DATA . . .
and further information or prices
write to TANSITOR ELECTRONICS, INC.

TANSITOR

TANSITOR ELECTRONICS, INC.

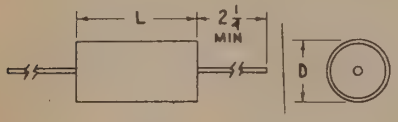
© United Technical Publications

METALLIZED MYLAR* CAPACITORS

TYPE AM
MINIATURE TUBULAR

Type AM CAPACITORS are designed to withstand the most rugged environmental conditions. They are hermetically sealed and will withstand most military environmental and electrical requirements.

Type AM Capacitors are available in a variety of mounting styles. Size is given for grounded case style. For floating case, Circuit B, add 1/16" to length. Write for further information.



200 VOLTS D.C.

BASIC PART NO.	CAP MFD	SIZE CIRCUIT A OR F D	L
AM2-103	0.01	0.174	9 16
AM2-123	.012	.174	9 16
AM2-153	.015	.174	9 16
AM2-183	.018	.174	9 16
AM2-223	.022	.187	9 16
AM2-273	.027	.187	9 16
AM2-333	.033	.235	9 16
AM2-393	.039	.235	9 16
AM2-473	.047	.235	9 16
AM2-563	.056	.235	3 4
AM2-683	.068	.235	3 4
AM2-823	.082	.235	3 4
AM2-104	0.1	.235	3 4
AM2-124	.12	.312	3 4
AM2-154	.15	.312	3 4
AM2-184	.18	.312	3 4
AM2-224	.22	.312	3 4
AM2-274	.27	.400	3 4
AM2-334	.33	.400	3 4
AM2-394	.39	.400	3 4
AM2-474	.47	.400	1 1 16
AM2-564	.56	.400	1 1 16
AM2-684	.68	.400	1 1 16
AM2-824	.82	.562	1 1 16
AM2-105	1.0	.562	1 1 16
AM2-155	1.5	.562	1 1 4
AM2-205	2.0	.670	1 1 4
AM2-305	3.0	.670	1 1 2
AM2-405	4.0	.670	1 3 4
AM2-505	5.0	.750	1 3 4
AM2-805	8.0	1.0	1 3 4
AM2-106	10.0	1.0	2 1 4

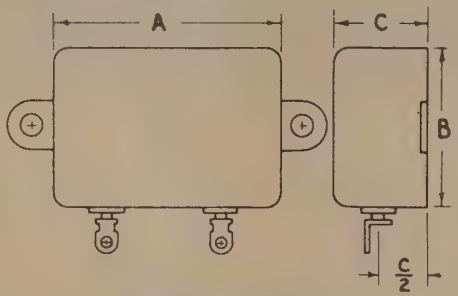
★ DUPONT POLYESTER FILM

METALLIZED MYLAR*
CHARACTERISTICS

Metallized MYLAR* satisfies the requirements of high resistance, low absorption, excellent retrace and capacitance stability over a wide temperature range and high ambient operating conditions. The self-healing characteristics are well known and extend the useful life of the capacitor. The second, and most overlooked feature, is the possibility of making full use of the highest volts-per-mil rating of the film by eliminating all the weak dielectric areas. This results in extreme small size without sacrificing life, reliability and economy. Temperature range is minus 90°C to 125°C without voltage deviation. All units are extended foil construction.

TYPE AB
BATHTUB STYLE

Type AB CAPACITORS are hermetically sealed in bathtub containers and designed to operate under the most severe military environment and electrical conditions.



200 VOLTS D.C.

PART NUMBER	CAP. MFD.	CASE SIZE A	B	C
AB2-504	0.5	1 1/8	1	13/16
AB2-105	1.0	1 1/8	1	13/16
AB2-205	2.0	1 1/8	1	13 16
AB2-405	4.0	1 3/4	1	3 4
AB2-505	5.0	1 3/4	1	3 4
AB2-605	6.0	1 3/4	1 1/4	7 8
AB2-805	8.0	1 3/4	1 1/4	7 8
AB2-106	10.0	2	1 3 4	7 8
AB2-126	12.0	2	1 3 4	7 8
AB2-156	15.0	2	1 3 4	7 8
AB2-206	20.0	2	2	1 1 8
AB2-306	30.0	2	2	1 1 4

TYPE AZ
EPOXY COATED

Type AZ CAPACITORS are an economical version of the Type AM. These capacitors are not designed to withstand an extremely rugged environment, but they are suitable for most commercial applications.

Style W is tubular with axial leads.
Style X is tubular with radial leads.
Style Y is rectangular with axial leads.
Style Z is rectangular with radial leads.

HOW TO ORDER

Select the style required. Find style, voltage and capacitance in the table. Establish the part number by selecting the heading (i.e. AZ2-etc.) and adding the capacitance code and style letter. Make certain that capacitance tolerance is indicated as a separate item.

AZ2 is rated at 200 volts and AZ3 is rated at 300 volts operating.

TYPE AZ
STYLE W AND X 200 WVDC

Cap MFD	Cap Code	AZ2 D Max.	AZ2 L Max.	AZ3 D Max.	AZ3 L Max.
.01	103	.23	.38	.26	.38
.012	123	.24	.38	.23	.51
.015	153	.25	.38	.24	.51
.018	183	.23	.51	.25	.51
.022	223	.24	.51	.26	.51
.027	273	.25	.51	.28	.51
.033	333	.26	.51	.29	.51
.039	393	.27	.51	.26	.70
.047	473	.29	.51	.28	.70
.056	563	.26	.70	.29	.70
.068	683	.27	.70	.31	.70
.082	823	.29	.70	.33	.70
.1	104	.30	.70	.35	.70
.12	124	.32	.70	.37	.70
.15	154	.39	.70	.40	.70
.18	184	.39	.70	.43	.70
.22	224	.39	.70	.39	.95
.27	274	.44	.70	.42	.95
.33	334	.44	.70	.45	.95
.39	394	.47	.70	.48	.95
.47	474	.44	.95	.52	.95
.56	564	.47	.95	.55	.95
.68	684	.50	.95	.60	.95
.82	824	.50	.95	.65	.95
1.0	105	.57	.95	.64	1.13
1.5	155	.66	1.13	.75	1.13
2.0	205	.75	1.13	.85	1.13
3.0	305	.75	1.38	.84	1.63
4.0	405	.87	1.63	1.09	1.26
5.0	505	.87	1.63	1.05	1.63
8.0	805	1.07	1.63		
10.0	106	1.19	1.63		

TYPE EP
PLASTIC FILM HIGH VOLTAGE DC FILTER CAPACITOR

TYPE EP Capacitors are designed for commercial service. Economy and reliability were the determination factors. CP70 Containers oil filled. For 65°C operation.

PART NUMBER	CAP. MFD.	VOLTS DCW	A ±1/16	B ±1/16	C ±1/16	E MAX.
EP20-105	1.0	2000	2 1/2	1 3/16	2 3/4	1 1/8
EP20-205	2	2000	2 1/2	1 3/16	4	1 1/8
EP20-405	4	2000	3 3 4	1 3/4	3 1/2	1 1/8
EP20-805	8	2000	3 3/4	2 1/4	4 3/4	1 1/8
EP20-106	10	2000	3 3/4	3 3/16	4 1/2	1 1/8
EP30-504	0.5	3000	2 1/2	1 3/16	2 1/2	1 1/8
EP30-105	1.0	3000	2 1/2	13/16	3 3/4	1 1/8
EP30-205	2	3000	3 3/4	1 1/4	4 1/2	1 1/8
EP30-405	4	3000	3 3/4	2 1/4	4 3/4	1 1/8
EP30-805	8	3000	4 9/16	3 3/4	4 3/4	1 1/8
EP40-254	.25	4000	2 1/2	13/16	2 1/8	1 1/8
EP40-105	1	4000	3 3/4	1 1/4	3 1/2	1 1/8
EP40-205	2	4000	3 3/4	1 3/4	4 1/2	1 1/8
EP40-405	4	4000	4 9 16	3 3/4	3 3/4	1 1/8

PART NUMBER	CAP. MFD.	VOLTS DCW	A ±1/16	B ±1/16	C ±1/16	E MAX.
EP50-504	.05	5000	2 1/2	1 3/16	4	1 1/8
EP50-105	1.0	5000	3 3/4	1 3/4	3 3/4	1 1/8
EP50-205	2	5000	3 3/4	2 1/4	4 3/4	1 1/8
EP50-405	4	5000	4 9/16	3 3/4	4 3/4	1 1/8
EP80-104	0.1	8000	3 3/4	1 3/4	2 1/2	2 1/4
EP80-504	.5	8000	3 3/4	2 1/4	4 3/4	2 1/4
EP80-105	1.0	8000	3 3/4	3 3/16	5 1/4	2 1/4
EP100-104	0.1	10,000	3 3/4	1 3/4	3	2 1/4
EP100-254	0.25	10,000	3 3/4	1 3/4	4 1/4	2 1/4
EP100-504	0.5	10,000	3 3/4	2 1/4	5 3/4	2 1/4
EP100-105	1.0	10,000	4 9/16	3 3/4	5 1/2	2 1/4
EP100-205	2	10,000	4 9/16	3 3/4	10	2 1/4

Plastic Capacitors, Inc.

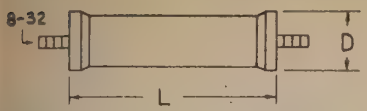
Contact your distributor for prices

© United Technical Publications

HIGH VOLTAGE FILTER CAPACITORS

SMALLEST SIZE AVAILABLE ANYWHERE

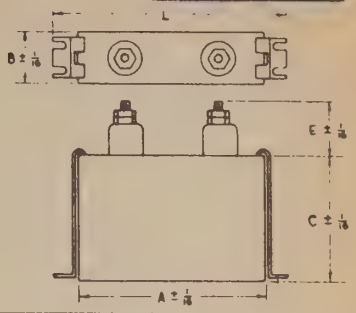




All glass containers with 'D' dimensions of 19/32 have 2-1/2 inch long 18 tinned copper pigtail leads.

CONTAINER is a hard glass pillar with silver fused to each end. A metal ferrule is soldered to each end assuring hermetic sealing. The stud is silver soldered to the ferrule. All parts are tin plated.

TYPE OF and **TYPE LK** capacitors are hermetically sealed, rated for operation at 85°C at full nameplate rating, and will withstand most environmental and electrical specifications in general use. Size is very small due to the nature of the dielectric used, and the particular attention to processing.



TYPE OF GLASS CONTAINER

PART NUMBER	CAP MFD	VOLTS DC	DIMENSIONS L	D
OF20-103	.01	2000	1 3/16	19/32
OF20-203	.02	2000	1 9/16	19/32
OF20-503	.05	2000	1 3/4	3/4
OF20-104	0.1	2000	2 1/4	3/4
OF20-254	0.25	2000	2 3/4	29/32
OF20-504	0.5	2000	2	1 3/8
OF30-103	.01	3000	1 9/16	19/32
OF30-203	.02	3000	1 3/4	3/4
OF30-503	.05	3000	2 1/4	3/4
OF30-104	0.1	3000	1 3/4	1 1/8
OF30-254	0.25	3000	2	1 3/8
OF30-504	0.5	3000	2 3/4	1 5/8
OF40-103	.01	4000	1 3/16	3/4
OF40-203	.02	4000	1 3/4	3/4
OF40-503	.05	4000	2	13/16
OF40-104	0.1	4000	2	1 1/8
OF40-254	0.25	4000	2 1/4	1 5/8
OF40-504	0.5	4000	3 3/4	1 5/8
OF50-201	.0002	5000	1 3/16	19/32
OF50-501	.0005	5000	1 3/16	19/32
OF50-102	.001	5000	1 3/16	19/32
OF50-202	.002	5000	1 3/16	19/32
OF50-502	.005	5000	1 5/8	19/32
OF50-103	.01	5000	1 3/4	3/4
OF50-203	.02	5000	2 1/4	3/4
OF50-503	.05	5000	2 1/4	29/32
OF50-104	0.1	5000	2 1/4	1 3/8
OF50-254	0.25	5000	3	1 5/8
OF50-504	0.5	5000	6	1 5/8
OF60-502	.005	6000	1 5/8	19/32
OF60-103	.01	6000	1 3/4	3/4
OF60-203	.02	6000	2 1/4	3/4
OF60-503	.05	6000	3 1/4	29/32
OF60-254	0.25	6000	4	1 5/8
OF80-501	.0005	8000	1 9/16	19/32
OF80-102	.001	8000	1 9/16	19/32
OF80-202	.002	8000	1 3/4	19/32
OF80-502	.005	8000	1 3/4	3/4
OF80-103	.01	8000	2 1/4	3/4
OF80-203	.02	8000	2 3/4	29/32
OF80-503	.05	8000	2 3/4	1 3/8
OF80-104	0.1	8000	3 5/8	1 5/8
OF80-204	0.2	8000	7	1 5/8
OF100-501	.0005	10KV	1 5/8	19/32
OF100-102	.001	10KV	1 5/8	19/32
OF100-202	.002	10KV	1 5/8	3/4
OF100-502	.005	10KV	1 3/4	13/16
OF100-103	.01	10KV	2 1/4	29/32
OF100-203	.02	10KV	2 3/4	1 1/8
OF100-503	.05	10KV	2 3/4	1 5/8
OF100-603	.06	10KV	3	1 5/8
OF100-104	0.1	10KV	5	1 5/8
OF150-501	.0005	15KV	2 1/4	19/32
OF150-202	.002	15KV	2 1/4	3/4
OF150-502	.005	15KV	2 3/4	1 1/8
OF150-103	.01	15KV	3 3/4	1 1/8
OF150-203	.02	15KV	4 1/4	1 3/8
OF150-503	.05	15KV	7	1 5/8
OF200-102	.001	20KV	3 1/2	3/4
OF200-202	.002	20KV	3 1/2	13/16
OF200-502	.005	20KV	3 1/2	1 1/8
OF200-103	.01	20KV	4 1/2	1 1/8
OF200-203	.02	20KV	4 1/2	1 5/8
OF300-201	.0002	30KV	4 9/16	19/32
OF300-501	.0005	30KV	4 9/16	19/32
OF300-502	.005	30KV	5	1 3/8
OF300-103	.01	30KV	6 1/2	1 5/8
OF300-203	.02	30KV	9	1 5/8
OF400-202	.002	40KV	6 1/2	1 1/8
OF400-502	.005	40KV	6 1/2	1 5/8
OF500-501	.0005	50KV	8 1/4	3/4
OF500-102	.001	50KV	8 1/4	13/16
OF500-202	.002	50KV	8 1/4	1 1/8
OF500-502	.005	50KV	10 3/4	3 3/8

TYPE LK CP70 CONTAINER

PART NUMBER	CAP MFD	VOLTS DC	DIMENSIONS A	B	C	E
LK6-504	.5	600	1 3/4	1	2 1/8	3/4
LK6-105	1	600	1 3/4	1	2 1/8	3/4
LK6-605	6	600	2 1/2	1 3/16	4 1/2	3/4
LK6-106	10	600	3 3/4	1 1/4	4 1/2	3/4
LK6-256	25	600	3 3/4	2 1/4	5 3/4	3/4
LK10-254	.25	1000	1 3/4	1	2 1/8	3/4
LK10-504	.5	1000	1 3/4	1	2 1/8	3/4
LK10-205	2	1000	1 3/4	1	3 1/2	3/4
LK10-405Y	4	1000	2 1/2	1 3/16	3 3/4	3/4
LK10-605	6	1000	2 1/2	1 3/16	5	3/4
LK10-805	8	1000	2 1/2	1 3/16	6 1/4	3/4
LK10-256	25	1000	3 3/4	2 1/4	6 1/4	3/4
LK20-104	.1	2000	1 3/4	1	2 1/8	1 1/8
LK20-254	.25	2000	1 3/4	1	2 1/8	1 1/8
LK20-504	.5	2000	1 3/4	1	2 1/8	1 1/8
LK20-105	1.0	2000	1 3/4	1	3 1/4	1 1/8
LK20-205	2	2000	2 1/2	1 3/16	3 1/2	1 1/8
LK20-405	4	2000	2 1/2	1 3/16	5 1/2	1 1/8
LK20-805Y	8	2000	3 3/4	1 3/4	4 1/2	1 1/8
LK20-106	10	2000	3 3/4	1 3/4	5 1/4	1 1/8
LK20-126	12	2000	3 3/4	1 3/4	6 1/4	1 1/8
LK20-156	15	2000	3 3/4	2 1/4	6	1 1/8
LK20-306	30	2000	4 9/16	3 3/4	5 3/4	1 1/8
LK20-506	50	2000	4 9/16	3 3/4	9 1/4	1 1/8
LK30-104	.1	3000	1 3/4	1	2 1/8	1 1/8
LK30-105	1	3000	1 3/4	1	5 1/4	1 1/8
LK30-205	2	3000	2 1/2	1 3/16	5 1/2	1 1/8
LK30-405	4	3000	3 3/4	1 1/4	6 1/4	1 1/8
LK30-805	8	3000	3 3/4	2 1/4	6 1/2	1 1/8
LK30-106	10	3000	3 3/4	3 3/16	5 3/4	1 1/8
LK30-306Z	30	3000	4 9/16	3 3/4	11 1/2	1 1/8
LK40-104	.1	4000	1 3/4	1	2 1/8	1 1/8
LK40-105	1	4000	2 1/2	1 3/16	4	1 1/8
LK40-205	2	4000	2 1/2	1 3/16	6 3/4	1 1/8
LK40-405	4	4000	3 3/4	1 3/4	6	1 1/8
LK40-106	10	4000	4 9/16	3 3/4	5 1/2	1 1/8
LK40-256Y	25	4000	4 9/16	3 3/4	11	1 1/8
LK50-104	.1	5000	1 3/4	1	2 1/8	1 1/8
LK50-504	.5	5000	1 3/4	1	4 3/4	1 1/8
LK50-105	1	5000	2 1/2	1 3/16	5	1 1/8
LK50-405	4	5000	3 3/4	2 1/4	6 1/4	1 1/8
LK50-805	8	5000	4 9/16	3 3/4	6 1/4	1 1/8
LK50-106Y	10	5000	4 9/16	3 3/4	7 1/2	1 1/8
LK80-254	.25	8000	3 3/4	1 1/4	3 3/4	1 1/2
LK80-504	.5	8000	3 3/4	1 1/4	5 3/4	1 1/2
LK80-105	1	8000	3 3/4	1 3/4	7	1 1/2
LK80-205Y	2	8000	4 9/16	3 3/4	5 1/4	1 1/2
LK80-405Y	4	8000	4 9/16	3 3/4	8 1/2	1 1/2
LK80-106Y	10	8000	7 5/16	5 9/16	9	1 1/2
LK100-104	.1	10KV	3 3/4	1 3/4	3 1/4	2 1/4
LK100-254	.25	10KV	3 3/4	1 3/4	3 3/4	2 1/4
LK100-105	1	10KV	3 3/4	2 1/4	7 1/4	2 1/4
LK100-126Y	12	10KV	13 1/2	4 1/8	11	2 1/4
LK150-503	.05	15KV	3 3/4	1 3/4	3 1/2	2 3/4
LK150-104	.1	15KV	3 3/4	1 3/4	3 3/4	2 3/4
LK150-504	.5	15KV	3 3/4	3 3/16	6 1/2	2 3/4
LK150-105	1	15KV	4 9/16	3 3/4	8 1/2	2 3/4
LK150-205Y	2	15KV	6	4 5/8	9 1/4	2 3/4
LK150-805	8	15KV	13 1/2	6 1/8	11 7/8	2 3/4
LK200-103	.01	20KV	3 3/4	2 1/4	3 1/4	2 3/4
LK200-203	.02	20KV	3 3/4	2 1/4	3 1/4	2 3/4
LK200-503	.05	20KV	3 3/4	2 1/4	3 3/4	2 3/4
LK200-104	.1	20KV	3 3/4	2 1/4	4 3/4	2 3/4
LK200-504	.5	20KV	4 9/16	3 3/4	7 1/2	2 3/4
LK300-103	.01	30KV	3 3/4	3 3/16	4	3 7/8
LK300-503	.05	30KV	3 3/4	3 3/16	5 1/2	3 7/8
LK300-205	2	30KV	13 1/2	6 1/8	12 7/8	3 7/8
LK400-503	.05	40KV	4 9/16	3 3/4	5 1/2	3 7/8
LK400-504	.5	40KV	13 1/2	5 1/8	12 7/8	3 7/8
LK500-203	.02	50KV	4 9/16	3 3/4	7 1/2	6
LK500-104	.1	50KV	8	4	9 1/4	6
LK500-254Z	.25	50KV	7 5/16	5 9/16	11	6

Plastic Capacitors, Inc.

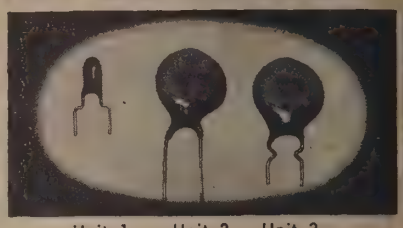
Contact your distributor for prices

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 196D DIPPED TANTALEX® SOLID-TANTALUM CAPACITORS

- Epoxy-Dipped Coating Economically Provides Good Electrical and Mechanical Protection
- High Stability, Very Little Capacitance Change, Even at Outer Limits of Operating Temperature Range (-55C to +85C)
- Low Dissipation Factor Permits Higher Ripples
- Radial Leads For Mounting on Printed Boards
- Capacitors Listed Here Have Long Straight Leads (See Unit 2 in Photo). Numbers Ending with A1 indicate .125" Lead Spacing; Numbers Ending with A3 have .250" Lead Spacing. For Short Crimped Pin Leads (.178" L.) with .250" Lead Spacing, Change A1 to E3 (See Unit 1) and Change A3 to B3 (See Unit 3).



Unit 1 Unit 2 Unit 3

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.	H. x W. x T.
4 WVDC, 5.3 V SURGE			
10	196D106X0004HA1	196D106X9004HA1	.375 x .175 x .175
12	———	196D126X9004HA1	.375 x .175 x .175
47	196D476X0004JA1	196D476X9004JA1	.425 x .225 x .225
56	———	196D566X9004JA1	.425 x .225 x .225
82	———	196D826X9004KA1	.450 x .225 x .225
100★	196D107X0004KA1	196D107X9004KA1	.450 x .225 x .225
180	———	196D187X9004LA3	.500 x .450 x .250
220★	196D227X0004LA3	196D227X9004LA3	.500 x .450 x .250
6 WVDC, 8 V SURGE			
6.8	196D685X0006HA1	196D685X9006HA1	.375 x .175 x .175
8.2	———	196D825X9006HA1	.375 x .175 x .175
33	196D336X0006JA1	196D336X9006JA1	.425 x .225 x .225
39	———	196D396X9006JA1	.425 x .225 x .225
47★	196D476X0006KA1	196D476X9006KA1	.450 x .225 x .225
56	———	196D566X9006KA1	.450 x .225 x .225
68★	196D686X0006KA1	196D686X9006KA1	.450 x .225 x .225
120	———	196D127X9006LA3	.500 x .450 x .250
150	196D157X0006LA3	196D157X9006LA3	.500 x .450 x .250
270	———	196D277X9006MA3	.800 x .600 x .275
330*	196D337X0006MA3	196D337X9006MA3	.800 x .600 x .275
10 WVDC, 13 V SURGE			
4.7	196D475X0010HA1	196D475X9010HA1	.375 x .175 x .175
5.6	———	196D565X9010HA1	.375 x .175 x .175
22	196D226X0010JA1	196D226X9010JA1	.425 x .225 x .225
27	———	196D276X9010JA1	.425 x .225 x .225
33★	196D336X0010KA1	196D336X9010KA1	.450 x .225 x .225
39	———	196D396X9010KA1	.450 x .225 x .225
82	———	196D826X9010LA3	.500 x .450 x .250
100★	196D107X0010LA3	196D107X9010LA3	.500 x .450 x .250
180	———	196D187X9010MA3	.800 x .600 x .275
220	196D227X0010MA3	196D227X9010MA3	.800 x .600 x .275
15 WVDC, 20 V SURGE			
3.3★	196D335X0015HA1	196D335X9015HA1	.375 x .175 x .175
3.9	———	196D395X9015HA1	.375 x .175 x .175
15★	196D156X0015JA1	196D156X9015JA1	.425 x .225 x .225
18	———	196D186X9015JA1	.425 x .225 x .225
22★	196D226X0015KA1	196D226X9015KA1	.450 x .225 x .225
56	———	196D566X9015LA3	.500 x .450 x .250
68	196D686X0015LA3	196D686X9015LA3	.500 x .450 x .250
120	———	196D127X9015MA3	.800 x .600 x .275
150	196D157X0015MA3	196D157X9015MA3	.800 x .600 x .275
20 WVDC, 26 V SURGE			
2.7	———	196D275X9020HA1	.375 x .175 x .175
10★	196D106X0020JA1	196D106X9020JA1	.425 x .225 x .225
12	———	196D126X9020JA1	.425 x .225 x .225
15★	196D156X0020KA1	196D156X9020KA1	.450 x .225 x .225
39	———	196D396X9020LA3	.500 x .450 x .250
47★	196D476X0020LA3	196D476X9020LA3	.500 x .450 x .250
82	———	196D826X9020MA3	.800 x .600 x .275
100★	196D107X0020MA3	196D107X9020MA3	.800 x .600 x .275
25 WVDC, 32 V SURGE			
1.2	———	196D125X9025HA1	.375 x .175 x .175
1.5	196D155X0025HA1	196D155X9025HA1	.375 x .175 x .175
1.8	———	196D185X9025HA1	.375 x .175 x .175
2.2★	196D225X0025HA1	196D225X9025HA1	.375 x .175 x .175
5.6	———	196D565X9025JA1	.425 x .225 x .225
6.8	196D685X0025JA1	196D685X9025JA1	.425 x .225 x .225
8.2	———	196D825X9025JA1	.425 x .225 x .225
10★	196D106X0025KA1	196D106X9025KA1	.450 x .225 x .225
12	———	196D126X9025KA1	.450 x .225 x .225
18	———	196D186X9025LA3	.500 x .450 x .250
22★	196D226X0025LA3	196D226X9025LA3	.500 x .450 x .250
27	———	196D276X9025LA3	.500 x .450 x .250
33	196D336X0025LA3	196D336X9025LA3	.500 x .450 x .250
39	———	196D396X9025MA3	.800 x .600 x .275
47★	196D476X0025MA3	196D476X9025MA3	.800 x .600 x .275
56	———	196D566X9025MA3	.800 x .600 x .275
68	196D686X0025MA3	196D686X9025MA3	.800 x .600 x .275
35 WVDC, 46 V SURGE			
.10	196D104X0035HA1	196D104X9035HA1	.375 x .175 x .175
.12	———	196D124X9035HA1	.375 x .175 x .175
.15	196D154X0035HA1	196D154X9035HA1	.375 x .175 x .175
.18	———	196D184X9035HA1	.375 x .175 x .175
.22	196D224X0035HA1	196D224X9035HA1	.375 x .175 x .175
.27	———	196D274X9035HA1	.375 x .175 x .175
.33	196D334X0035HA1	196D334X9035HA1	.375 x .175 x .175
.39	———	196D394X9035HA1	.375 x .175 x .175
.47	196D474X0035HA1	196D474X9035HA1	.375 x .175 x .175
.56	———	196D564X9035HA1	.375 x .175 x .175
.68	196D684X0035HA1	196D684X9035HA1	.375 x .175 x .175
.82	———	196D824X9035HA1	.375 x .175 x .175
1.0★	196D105X0035HA1	196D105X9035HA1	.375 x .175 x .175
1.2	———	196D125X9035JA1	.425 x .225 x .225
1.5	196D155X0035JA1	196D155X9035JA1	.425 x .225 x .225
1.8	———	196D185X9035JA1	.425 x .225 x .225
2.2	196D225X0035JA1	196D225X9035JA1	.425 x .225 x .225
2.7	———	196D275X9035JA1	.425 x .225 x .225
3.3★	196D335X0035JA1	196D335X9035JA1	.425 x .225 x .225
3.9	———	196D395X9035JA1	.425 x .225 x .225
4.7★	196D475X0035JA1	196D475X9035JA1	.425 x .225 x .225
5.6	———	196D565X9035KA1	.450 x .225 x .225
6.8★	196D685X0035KA1	196D685X9035KA1	.450 x .225 x .225
8.2	———	196D825X9035LA3	.500 x .450 x .250
10	196D106X0035LA3	196D106X9035LA3	.500 x .450 x .250
12	———	196D126X9035LA3	.500 x .450 x .250
15	196D156X0035LA3	196D156X9035LA3	.500 x .450 x .250
18	———	196D186X9035MA3	.800 x .600 x .275
22	196D226X0035MA3	196D226X9035MA3	.800 x .600 x .275
27	———	196D276X9035MA3	.800 x .600 x .275
33★	196D336X0035MA3	196D336X9035MA3	.800 x .600 x .275
50 WVDC, 65 V SURGE			
.10★	196D104X0050HA1	196D104X9050HA1	.375 x .175 x .175
.12	———	196D124X9050HA1	.375 x .175 x .175
.15★	196D154X0050HA1	196D154X9050HA1	.375 x .175 x .175
.18	———	196D184X9050HA1	.375 x .175 x .175
.22★	196D224X0050HA1	196D224X9050HA1	.375 x .175 x .175
.27	———	196D274X9050HA1	.375 x .175 x .175
.33★	196D334X0050HA1	196D334X9050HA1	.375 x .175 x .175
.39	———	196D394X9050HA1	.375 x .175 x .175
.47★	196D474X0050HA1	196D474X9050HA1	.375 x .175 x .175
.56	———	196D564X9050HA1	.375 x .175 x .175
.68★	196D684X0050HA1	196D684X9050HA1	.375 x .175 x .175
.82	———	196D824X9050HA1	.375 x .175 x .175
1.0★	196D105X0050HA1	196D105X9050HA1	.375 x .175 x .175
1.2	———	196D125X9050JA1	.425 x .225 x .225
1.5	196D155X0050JA1	196D155X9050JA1	.425 x .225 x .225
1.8	———	196D185X9050JA1	.425 x .225 x .225
2.2★	196D225X0050JA1	196D225X9050JA1	.425 x .225 x .225
2.7	———	196D275X9050JA1	.425 x .225 x .225
3.3	196D335X0050JA1	196D335X9050JA1	.425 x .225 x .225
3.9	———	196D395X9050KA1	.450 x .225 x .225
4.7★	196D475X0050KA1	196D475X9050KA1	.450 x .225 x .225

★Preferred Value—For Faster Delivery

7005

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 150D TANTALEX® SOLID-TANTALUM CAPACITORS

- Combine True Miniaturization with Characteristics Previously Unobtainable in Electrolytic Capacitors.
- Hermetically Sealed Metal Case.
- Solid Electrolyte Cannot Leak or Corrode, Even if Hermetic Seal is Accidentally Broken.
- Exhibit Stable Capacitance and Low Dissipation Factor over Temperature Range of —80°C to +85°C. With Appropriate Voltage Derating, May Be Operated to +125°C.
- Listed Units have Plastic Sleeves. For Bare Case, end Cat. No. in "0" instead of "2."
- For complete technical data, refer to latest issue of Engineering Bulletin 3520.

Call Your Sprague Industrial Distributor For Current Quantity Prices



µF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
6 WVDC — 8 VDC SURGE			
.22	A	150D224X0006A2	150D224X9006A2
.27	A	———	150D274X9006A2
.33	A	150D334X0006A2	150D334X9006A2
.39	A	———	150D394X9006A2
.47	A	150D474X0006A2	150D474X9006A2
.56	A	———	150D564X9006A2
.68	A	150D684X0006A2	150D684X9006A2
.82	A	———	150D824X9006A2
1.0	A	150D105X0006A2	150D105X9006A2
1.2	A	———	150D125X9006A2
1.5	A	150D155X0006A2	150D155X9006A2
1.8	A	———	150D185X9006A2
2.2	A	150D225X0006A2	150D225X9006A2
2.7	A	———	150D275X9006A2
3.3	A	150D335X0006A2	150D335X9006A2
3.9	A	———	150D395X9006A2
4.7	A	150D475X0006A2	150D475X9006A2
5.6	A	———	150D565X9006A2
6.8	A	150D685X0006A2	150D685X9006A2
8.2	B	———	150D825X9006B2
10	B	150D106X0006B2	150D106X9006B2
12	B	———	150D126X9006B2
15	B	150D156X0006B2	150D156X9006B2
18	B	———	150D186X9006B2
22	B	150D226X0006B2	150D226X9006B2
27	B	———	150D276X9006B2
33	B	150D336X0006B2	150D336X9006B2
39	B	———	150D396X9006B2
47	B	150D476X0006B2	150D476X9006B2
56	B	———	150D566X9006B2
60	B	150D606X0006B2	150D606X9006B2
68	R	150D686X0006R2	150D686X9006R2
82	R	———	150D826X9006R2
100	R	150D107X0006R2	150D107X9006R2
120	R	150D127X0006R2	150D127X9006R2
150	R	150D157X0006R2	150D157X9006R2
180	R	150D187X0006S2	150D187X9006R2
220	S	150D227X0006S2	150D227X9006S2
270	S	150D277X0006S2	150D227X9006S2
330	S	150D337X0006S2	150D337X9006S2
10 WVDC — 13 VDC SURGE			
.22	A	150D224X0010A2	150D224X9010A2
.27	A	———	150D274X9010A2
.33	A	150D334X0010A2	150D334X9010A2
.39	A	———	150D394X9010A2
.47	A	150D474X0010A2	150D474X9010A2
.56	A	———	150D564X9010A2
.68	A	150D684X0010A2	150D684X9010A2
.82	A	———	150D824X9010A2
1.0	A	150D105X0010A2	150D105X9010A2
1.2	A	———	150D125X9010A2
1.5	A	150D155X0010A2	150D155X9010A2
1.8	A	———	150D185X9010A2
2.2	A	150D225X0010A2	150D225X9010A2
2.7	A	———	150D275X9010A2
3.3	A	150D335X0010A2	150D335X9010A2
3.9	A	———	150D395X9010A2
4.7	A	150D475X0010A2	150D475X9010A2
5.6	B	———	150D565X9010B2
6.8	B	150D685X0010B2	150D685X9010B2
8.2	B	———	150D825X9010B2
10	B	150D106X0010B2	150D106X9010B2
12	B	———	150D126X9010B2
15	B	150D156X0010B2	150D156X9010B2
18	B	———	150D186X9010B2
22	B	150D226X0010B2	150D226X9010B2
27	B	———	150D276X9010B2
33	B	150D336X0010B2	150D336X9010B2
39	B	———	150D396X9010B2
40	B	150D406X0010B2	150D406X9010B2
47	R	150D476X0010R2	150D476X9010R2
56	R	———	150D566X9010R2
68	R	150D686X0010R2	150D686X9010R2
82	R	———	150D826X9010R2
100	R	150D107X0010R2	150D107X9010R2
120	R	150D127X0010R2	150D127X9010R2
150	S	150D157X0010S2	150D157X9010S2
180	S	———	150D187X9010S2
220	S	150D227X0010S2	150D227X9010S2
15 WVDC — 18 VDC SURGE			
.22	A	150D224X0015A2	150D224X9015A2
.27	A	———	150D274X9015A2
.33	A	150D334X0015A2	150D334X9015A2
.39	A	———	150D394X9015A2
.47	A	150D474X0015A2	150D474X9015A2
.56	A	———	150D564X9015A2
.68	A	150D684X0015A2	150D684X9015A2
.82	A	———	150D824X9015A2
1.0	A	150D105X0015A2	150D105X9015A2
1.2	A	———	150D125X9015A2
1.5	A	150D155X0015A2	150D155X9015A2
1.8	A	———	150D185X9015A2
2.2	A	150D225X0015A2	150D225X9015A2
2.7	A	———	150D275X9015A2
3.3	A	150D335X0015A2	150D335X9015A2
3.9	B	———	150D395X9015B2
4.7	B	150D475X0015B2	150D475X9015B2
5.6	B	———	150D565X9015B2
6.8	B	150D685X0015B2	150D685X9015B2
8.2	B	———	150D825X9015B2
10	B	150D106X0015B2	150D106X9015B2
12	B	———	150D126X9015B2
15	B	150D156X0015B2	150D156X9015B2
18	B	———	150D186X9015B2
22	B	150D226X0015B2	150D226X9015B2
27	R	———	150D276X9015R2
33	R	150D336X0015R2	150D336X9015R2
39	R	———	150D396X9015R2
47	R	150D476X0015R2	150D476X9015R2
56	R	———	150D566X9015R2
68	R	150D686X0015R2	150D686X9015R2
82	S	———	150D826X9015S2
100	S	150D107X0015S2	150D107X9015S2
120	S	———	150D127X9015S2
150	S	150D157X0015S2	150D157X9015S2
20 WVDC — 23 VDC SURGE			
.0047	A	150D472X0020A2	150D472X9020A2
.0056	A	———	150D562X9020A2
.0068	A	150D682X0020A2	150D682X9020A2
.0082	A	———	150D822X9020A2
.01	A	150D103X0020A2	150D103X9020A2
.012	A	———	150D123X9020A2
.015	A	150D153X0020A2	150D153X9020A2
.018	A	———	150D183X9020A2
.022	A	150D223X0020A2	150D223X9020A2
.027	A	———	150D273X9020A2
.033	A	150D333X0020A2	150D333X9020A2
.039	A	———	150D393X9020A2
.047	A	150D473X0020A2	150D473X9020A2
.056	A	———	150D563X9020A2
.068	A	150D683X0020A2	150D683X9020A2
.082	A	———	150D823X9020A2
.10	A	150D104X0020A2	150D104X9020A2
.12	A	———	150D124X9020A2
.15	A	150D154X0020A2	150D154X9020A2
.18	A	———	150D184X9020A2
.22	A	150D224X0020A2	150D224X9020A2
.27	A	———	150D274X9020A2
.33	A	150D334X0020A2	150D334X9020A2
.39	A	———	150D394X9020A2
.47	A	150D474X0020A2	150D474X9020A2
.56	A	———	150D564X9020A2
.68	A	150D684X0020A2	150D684X9020A2
.82	A	———	150D824X9020A2
1.0	A	150D105X0020A2	150D105X9020A2
1.2	A	———	150D125X9020A2
1.5	A	150D155X0020A2	150D155X9020A2
1.8	A	———	150D185X9020A2
2.2	A	150D225X0020A2	150D225X9020A2
2.7	B	———	150D275X9020B2
3.3	B	150D335X0020B2	150D335X9020B2
3.9	B	———	150D395X9020B2
4.7	B	150D475X0020B2	150D475X9020B2
5.6	B	———	150D565X9020B2
6.8	B	150D685X0020B2	150D685X9020B2
8.2	B	———	150D825X9020B2
10	B	150D106X0020B2	150D106X9020B2
12	B	———	150D126X9020B2
15	B	150D156X0020B2	150D156X9020B2
18	R	———	150D186X9020R2
22	R	150D226X0020R2	150D226X9020R2
27	R	———	150D276X9020R2
33	R	150D336X0020R2	150D336X9020R2
39	R	———	150D396X9020R2
47	R	150D476X0020R2	150D476X9020R2
56	S	———	150D566X9020S2
68	S	150D686X0020S2	150D686X9020S2
82	S	———	150D826X9020S2
100	S	150D107X0020S2	150D107X9020S2
35 WVDC — 40 VDC SURGE			
.0047	A	150D472X0035A2	150D472X9035A2
.0056	A	———	150D562X9035A2
.0068	A	150D682X0035A2	150D682X9035A2
.0082	A	———	150D822X9035A2
.01	A	150D103X0035A2	150D103X9035A2
.012	A	———	150D123X9035A2
.015	A	150D153X0035A2	150D153X9035A2
.018	A	———	150D183X9035A2
.022	A	150D223X0035A2	150D223X9035A2
.027	A	———	150D273X9035A2
.033	A	150D333X0035A2	150D333X9035A2
.039	A	———	150D393X9035A2
.047	A	150D473X0035A2	150D473X9035A2
.056	A	———	150D563X9035A2
.068	A	150D683X0035A2	150D683X9035A2
.082	A	———	150D323X9035A2
.10	A	150D104X0035A2	150D104X9035A2
.12	A	———	150D124X9035A2
.15	A	150D154X0035A2	150D154X9035A2
.18	A	———	150D184X9035A2
.22	A	150D224X0035A2	150D224X9035A2
.27	A	———	150D274X9035A2
.33	A	150D334X0035A2	150D334X9035A2
.39	A	———	150D394X9035A2
.47	A	150D474X0035A2	150D474X9035A2
.56	A	———	150D564X9035A2
.68	A	150D684X0035A2	150D684X9035A2
.82	A	———	150D824X9035A2
1.0	A	150D105X0035A2	150D105X9035A2
1.2	B	———	150D125X9035B2
1.5	B	150D155X0035B2	150D155X9035B2
1.8	B	———	150D185X9035B2
2.2	B	150D225X0035B2	150D225X9035B2
2.7	B	———	150D275X9035B2
3.3	B	150D335X0035B2	150D335X9035B2
3.9	B	———	150D395X9035B2
4.7	B	150D475X0035B2	150D475X9035B2
5.6	B	———	150D565X9035B2
6.8	B	150D685X0035B2	150D685X9035B2
8.2	R	———	150D825X9035R2
10	R	150D106X0035R2	150D106X9035R2
12	R	———	150D126X9035R2
15	R	150D156X0035R2	150D156X9035R2
18	R	———	150D186X9035R2
22	R	150D226X0035R2	150D226X9035R2
27	S	———	150D276X9035S2
33	S	150D336X0035S2	150D336X9035S2
39	S	———	150D396X9035S2
47	S	150D476X0035S2	150D476X9035S2

DIMENSIONS

Code	With Sleeve D. x L.	Bare Case D. x L.
A	.135" x .286"	.125" x .250"
B	.185" x .474"	.175" x .438"
R	.289" x .686"	.279" x .650"
S	.351" x .786"	.341" x .750"

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 150D SOLID-ELECTROLYTE TANTALEX® CAPACITORS (Cont.)

50 WVDC, 65 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0050A2	150D472X9050A2
.0056	A	—	150D562X9050A2
.0068	A	150D682X0050A2	150D682X9050A2
.0082	A	—	150D822X9050A2
.01	A	150D103X0050A2	150D103X9050A2
.012	A	—	150D123X9050A2
.015	A	150D153X0050A2	150D153X9050A2
.018	A	—	150D183X9050A2
.022	A	150D223X0050A2	150D223X9050A2
.027	A	—	150D273X9050A2
.033	A	150D333X0050A2	150D333X9050A2
.039	A	—	150D393X9050A2
.047	A	150D473X0050A2	150D473X9050A2
.056	A	—	150D563X9050A2
.068	A	150D683X0050A2	150D683X9050A2
.082	A	—	150D823X9050A2
.1	A	150D104X0050A2	150D104X9050A2
.12	A	—	150D124X9050A2
.15	A	150D154X0050A2	150D154X9050A2
.18	A	—	150D184X9050A2
.22	A	150D224X0050A2	150D224X9050A2
.27	A	—	150D274X9050A2
.33	A	150D334X0050A2	150D334X9050A2
.39	A	—	150D394X9050A2
.47	A	150D474X0050A2	150D474X9050A2
.56	A	—	150D564X9050A2
.68	A	150D684X0050A2	150D684X9050A2
.82	A	—	150D824X9050A2
1.0	A	150D105X0050A2	150D105X9050A2
1.2	B	—	150D125X9050B2
1.5	B	150D155X0050B2	150D155X9050B2
1.8	B	—	150D185X9050B2
2.2	B	150D225X0050B2	150D225X9050B2
2.7	B	—	150D275X9050B2
3.3	B	150D335X0050B2	150D335X9050B2
3.9	B	—	150D395X9050B2
4.7	B	150D475X0050B2	150D475X9050B2
5.6	R	—	150D565X9050R2
6.8	R	150D685X0050R2	150D685X9050R2
8.2	R	—	150D825X9050R2
10	R	150D106X0050R2	150D106X9050R2
12	R	—	150D126X9050R2
15	R	150D156X0050R2	150D156X9050R2
18	R	—	150D186X9050R2
22	S	150D226X0050S2	150D226X9050S2

60 WVDC, 78 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0060A2	150D472X9060A2
.0056	A	—	150D562X9060A2
.0068	A	150D682X0060A2	150D682X9060A2
.0082	A	—	150D822X9060A2
.01	A	150D103X0060A2	150D103X9060A2
.012	A	—	150D123X9060A2
.015	A	150D153X0060A2	150D153X9060A2
.018	A	—	150D183X9060A2
.022	A	150D223X0060A2	150D223X9060A2
.027	A	—	150D273X9060A2
.033	A	150D333X0060A2	150D333X9060A2
.039	A	—	150D393X9060A2
.047	A	150D473X0060A2	150D473X9060A2
.056	A	—	150D563X9060A2
.068	A	150D683X0060A2	150D683X9060A2
.082	A	—	150D823X9060A2
.1	A	150D104X0060A2	150D104X9060A2
.12	A	—	150D124X9060A2
.15	A	150D154X0060A2	150D154X9060A2
.18	A	—	150D184X9060A2
.22	A	150D224X0060A2	150D224X9060A2
.27	A	—	150D274X9060A2
.33	A	150D334X0060A2	150D334X9060A2
.39	A	—	150D394X9060A2
.47	A	150D474X0060A2	150D474X9060A2
.56	A	—	150D564X9060A2
.68	A	150D684X0060A2	150D684X9060A2
.82	B	—	150D824X9060B2
1.0	B	150D105X0060B2	150D105X9060B2
1.2	B	—	150D125X9060B2
1.5	B	150D155X0060B2	150D155X9060B2
1.8	B	—	150D185X9060B2
2.2	B	150D225X0060B2	150D225X9060B2
2.7	B	—	150D275X9060B2
3.3	B	150D335X0060B2	150D335X9060B2
3.9	B	—	150D395X9060B2
4.7	R	150D475X0060R2	150D475X9060R2
5.6	R	—	150D565X9060R2
6.8	R	150D685X0060R2	150D685X9060R2
8.2	R	—	150D825X9060R2
10	R	150D106X0060R2	150D106X9060R2
12	S	—	150D126X9060S2
15	S	150D156X0060S2	150D156X9060S2
18	S	—	150D186X9060S2
22	S	150D226X0060S2	150D226X9060S2

75 WVDC, 97 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0075A2	150D472X9075A2
.0056	A	—	150D562X9075A2
.0068	A	150D682X0075A2	150D682X9075A2
.0082	A	—	150D822X9075A2
.01	A	150D103X0075A2	150D103X9075A2
.012	A	—	150D123X9075A2
.015	A	150D153X0075A2	150D153X9075A2
.018	A	—	150D183X9075A2
.022	A	150D223X0075A2	150D223X9075A2
.027	A	—	150D273X9075A2
.033	A	150D333X0075A2	150D333X9075A2
.039	A	—	150D393X9075A2
.047	A	150D473X0075A2	150D473X9075A2
.056	A	—	150D563X9075A2
.068	A	150D683X0075A2	150D683X9075A2
.082	A	—	150D823X9075A2
.1	A	150D104X0075A2	150D104X9075A2
.12	A	—	150D124X9075A2
.15	A	150D154X0075A2	150D154X9075A2
.18	A	—	150D184X9075A2
.22	A	150D224X0075A2	150D224X9075A2
.27	A	—	150D274X9075A2
.33	A	150D334X0075A2	150D334X9075A2
.39	A	—	150D394X9075A2
.47	A	150D474X0075A2	150D474X9075A2
.56	A	—	150D564X9075A2
.68	A	150D684X0075A2	150D684X9075A2
.82	B	—	150D824X9075B2
1.0	B	150D105X0075B2	150D105X9075B2
1.2	B	—	150D125X9075B2
1.5	B	150D155X0075B2	150D155X9075B2
1.8	B	—	150D185X9075B2
2.2	B	150D225X0075B2	150D225X9075B2
2.7	B	—	150D275X9075B2
3.3	B	150D335X0075B2	150D335X9075B2
3.9	B	—	150D395X9075B2
4.7	R	150D475X0075R2	150D475X9075R2
5.6	R	—	150D565X9075R2
6.8	R	150D685X0075R2	150D685X9075R2
8.2	R	—	150D825X9075R2
10.0	R	150D106X0075R2	150D106X9075R2
12.0	S	—	150D126X9075S2
15.0	S	150D156X0075S2	150D156X9075S2

100 WVDC, 115 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0100A2	150D472X9100A2
.0056	A	—	150D562X9100A2
.0068	A	150D682X0100A2	150D682X9100A2
.0082	A	—	150D822X9100A2
.01	A	150D103X0100A2	150D103X9100A2
.012	A	—	150D123X9100A2
.015	A	150D153X0100A2	150D153X9100A2
.018	A	—	150D183X9100A2
.022	A	150D223X0100A2	150D223X9100A2
.027	A	—	150D273X9100A2
.033	A	150D333X0100A2	150D333X9100A2
.039	A	—	150D393X9100A2
.047	A	150D473X0100A2	150D473X9100A2
.056	A	—	150D563X9100A2
.068	A	150D683X0100A2	150D683X9100A2
.082	A	—	150D823X9100A2
.1	A	150D104X0100A2	150D104X9100A2
.12	A	—	150D124X9100A2
.15	A	150D154X0100A2	150D154X9100A2
.18	A	—	150D184X9100A2
.22	A	150D224X0100A2	150D224X9100A2
.27	A	—	150D274X9100A2
.33	A	150D334X0100A2	150D334X9100A2
.39	A	—	150D394X9100A2
.47	A	150D474X0100A2	150D474X9100A2
.56	A	—	150D564X9100A2
.68	B	150D684X0100B2	150D684X9100B2
.82	B	—	150D824X9100B2
1.0	B	150D105X0100B2	150D105X9100B2
1.2	B	—	150D125X9100B2
1.5	B	150D155X0100B2	150D155X9100B2
1.8	B	—	150D185X9100B2
2.2	B	150D225X0100B2	150D225X9100B2
2.7	B	—	150D275X9100B2
3.3	R	150D335X0100B2	150D335X9100R2
3.9	R	—	150D395X9100R2
4.7	R	150D475X0100R2	150D475X9100R2
5.6	R	—	150D565X9100R2
6.8	R	150D685X0100R2	150D685X9100R2

125 WVDC, 140 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0125A2	150D472X9125A2
.0056	A	—	150D562X9125A2
.0068	A	150D682X0125A2	150D682X9125A2
.0082	A	—	150D822X9125A2
.01	A	150D103X0125A2	150D103X9125A2
.012	A	—	150D123X9125A2
.015	A	150D153X0125A2	150D153X9125A2
.018	A	—	150D183X9125A2
.022	A	150D223X0125A2	150D223X9125A2
.027	A	—	150D273X9125A2
.033	A	150D333X0125A2	150D333X9125A2
.039	A	—	150D393X9125A2
.047	A	150D473X0125A2	150D473X9125A2
.056	A	—	150D563X9125A2
.068	A	150D683X0125A2	150D683X9125A2
.082	A	—	150D823X9125A2
.1	A	150D104X0125A2	150D104X9125A2
.12	A	—	150D124X9125A2
.15	A	150D154X0125A2	150D154X9125A2
.18	A	—	150D184X9125A2
.22	A	150D224X0125A2	150D224X9125A2
.27	A	—	150D274X9125A2
.33	A	150D334X0125A2	150D334X9125A2
.39	A	—	150D394X9125A2
.47	A	150D474X0125A2	150D474X9125A2
.56	B	—	150D564X9125B2
.68	B	150D684X0125B2	150D684X9125B2
.82	B	—	150D824X9125B2
1.0	B	150D105X0125B2	150D105X9125B2
1.2	B	—	150D125X9125B2
1.5	B	150D155X0125B2	150D155X9125B2
1.8	B	—	150D185X9125B2
2.2	B	150D225X0125B2	150D225X9125B2

DIMENSIONS WITH SLEEVE

Code	D. x L.
A	.135"x.286"
B	.185"x.474"
R	.289"x.686"
S	.351"x.786"

Call Your Sprague Industrial Distributor for Current Quantity Prices

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

151D NON-POLARIZED TANTALEX® SOLID-TANTALUM CAPACITORS



- Truly Miniature Units Offer Excellent Electrical Characteristics and Outstanding Service Life.
- Hermetically Sealed in Metal Case.
- May Be Used At Full Rated Operating Voltages Up to 85°C. With Derating, May Be Used Up To 125°C.
- For Use Where Non-Polarized Solid Electrolyte Tantalums Excel—In Servo Systems, Crossover Networks, Low Frequency Tuned Circuits.
- Listed Units Have Plastic Sleeves.
- For Bare Case End Cat. No. in "0" Instead of "2."
- For Complete Technical Data, Refer To Latest Issue of Engineering Bulletin 3521.

Call Your Sprague Industrial Distributor For Current Quantity Prices

6 VOLTS NP, 8 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.11	W	151D114X0006W2	151D114X9006W2
.13	W	———	151D134X9006W2
.16	W	151D164X0006W2	151D164X9006W2
.19	W	———	151D194X9006W2
.23	W	151D234X0006W2	151D234X9006W2
.28	W	———	151D284X9006W2
.34	W	151D344X0006W2	151D344X9006W2
.41	W	———	151D414X9006W2
.50	W	151D504X0006W2	151D504X9006W2
.60	W	———	151D604X9006W2
.75	W	151D754X0006W2	151D754X9006W2
.90	W	———	151D904X9006W2
1.1	W	151D116X0006W2	151D115X9006W2
1.3	W	———	151D135X9006W2
1.6	W	151D165X0006W2	151D165X9006W2
1.9	W	———	151D195X9006W2
2.3	W	151D235X0006W2	151D235X9006W2
2.8	W	———	151D285X9006W2
3.4	W	151D345X0006W2	151D345X9006W2
4.1	X	———	151D415X9006X2
5.0	X	151D505X0006X2	151D505X9006X2
6.0	X	———	151D605X9006X2
7.5	X	151D755X0006X2	151D755X9006X2
9.0	X	———	151D905X9006X2
11	X	151D116X0006X2	151D116X9006X2
13	X	———	151D136X9006X2
16	X	151D166X0006X2	151D166X9006X2
19	X	———	151D196X9006X2
23	X	151D236X0006X2	151D236X9006X2
28	X	———	151D286X9006X2
30	X	151D306X0006X2	151D306X9006X2
34	Y	151D346X0006Y2	151D346X9006Y2
41	Y	———	151D416X9006Y2
50	Y	151D506X0006Y2	151D506X9006Y2
60	Y	151D606X0006Y2	151D606X9006Y2
75	Y	151D756X0006Y2	151D756X9006Y2
90	Y	151D906X0006Y2	151D906X9006Y2
110	Z	151D117X0006Z2	151D117X9006Z2
130	Z	151D137X0006Z2	151D137X9006Z2
160	Z	151D167X0006Z2	151D167X9006Z2

10 VOLTS NP, 13 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.11	W	151D114X0010W2	151D114X9010W2
.13	W	———	151D134X9010W2
.16	W	151D164X0010W2	151D164X9010W2
.19	W	———	151D194X9010W2
.23	W	151D234X0010W2	151D234X9010W2
.28	W	———	151D284X9010W2
.34	W	151D344X0010W2	151D344X9010W2
.41	W	———	151D414X9010W2
.50	W	151D504X0010W2	151D504X9010W2
.60	W	———	151D604X9010W2
.75	W	151D754X0010W2	151D754X9010W2
.90	W	———	151D904X9010W2
1.1	W	151D115X0010W2	151D115X9010W2
1.3	W	———	151D135X9010W2
1.6	W	151D165X0010W2	151D165X9010W2
1.9	W	———	151D195X9010W2
2.3	W	151D235X0010W2	151D235X9010W2
2.8	X	———	151D285X9010X2
3.4	X	151D345X0010X2	151D345X9010X2
4.1	X	———	151D415X9010X2
5.0	X	151D505X0010X2	151D505X9010X2
6.0	X	———	151D605X9010X2
7.5	X	151D755X0010X2	151D755X9010X2
9.0	X	———	151D905X9010X2
11	X	151D116X0010X2	151D116X9010X2
13	X	———	151D136X9010X2
16	X	151D166X0010X2	151D166X9010X2
19	X	———	151D196X9010X2
20	X	151D206X0010X2	151D206X9010X2
23	Y	151D236X0010Y2	151D236X9010Y2
28	Y	———	151D286X9010Y2
34	Y	151D346X0010Y2	151D346X9010Y2
41	Y	———	151D416X9010Y2
50	Y	151D506X0010Y2	151D506X9010Y2
60	Y	151D606X0010Y2	151D606X9010Y2
75	Z	151D756X0010Z2	151D756X9010Z2
90	Z	———	151D906X9010Z2
110	Z	151D117X0010Z2	151D117X9010Z2

15 VOLTS NP, 20 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.11	W	151D114X0015W2	151D114X9015W2
.13	W	———	151D134X9015W2
.16	W	151D164X0015W2	151D164X9015W2
.19	W	———	151D194X9015W2
.23	W	151D234X0015W2	151D234X9015W2
.28	W	———	151D284X9015W2
.34	W	151D344X0015W2	151D344X9015W2
.41	W	———	151D414X9015W2
.50	W	151D504X0015W2	151D504X9015W2
.60	W	———	151D604X9015W2
.75	W	151D754X0015W2	151D754X9015W2
.90	W	———	151D904X9015W2
1.1	W	151D115X0015W2	151D115X9015W2
1.3	W	———	151D135X9015W2
1.6	W	151D165X0015W2	151D165X9015W2
1.9	X	———	151D195X9015X2
2.3	X	151D235X0015X2	151D235X9015X2
2.8	X	———	151D285X9015X2
3.4	X	151D345X0015X2	151D345X9015X2
4.1	X	———	151D415X9015X2
5.0	X	151D505X0015X2	151D505X9015X2
6.0	X	———	151D605X9015X2
7.5	X	151D755X0015X2	151D755X9015X2
9.0	X	———	151D905X9015X2
11	X	151D116X0015X2	151D116X9015X2
13	Y	———	151D136X9015Y2
16	Y	151D166X0015Y2	151D166X9015Y2
19	Y	———	151D196X9015Y2
23	Y	151D236X0015Y2	151D236X9015Y2
28	Y	———	151D286X9015Y2
34	Y	151D346X0015Y2	151D346X9015Y2
41	Z	———	151D416X9015Z2
50	Z	151D506X0015Z2	151D506X9015Z2
60	Z	———	151D606X9015Z2
75	Z	151D756X0015Z2	151D756X9015Z2

20 VOLTS NP, 26 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0020W2	151D232X9020W2
.0028	W	———	151D282X9020W2
.0034	W	151D342X0020W2	151D342X9020W2
.0041	W	———	151D412X9020W2
.005	W	151D502X0020W2	151D502X9020W2
.006	W	———	151D602X9020W2
.0075	W	151D752X0020W2	151D752X9020W2
.009	W	———	151D902X9020W2
.011	W	151D113X0020W2	151D113X9020W2
.013	W	———	151D133X9020W2
.016	W	151D163X0020W2	151D163X9020W2
.019	W	———	151D193X9020W2
.023	W	151D233X0020W2	151D233X9020W2
.028	W	———	151D283X9020W2
.034	W	151D343X0020W2	151D343X9020W2
.041	W	———	151D413X9020W2
.05	W	151D503X0020W2	151D503X9020W2
.06	W	———	151D603X9020W2
.075	W	151D753X0020W2	151D753X9020W2
.09	W	———	151D903X9020W2
.11	W	151D114X0020W2	151D114X9020W2
.13	W	———	151D134X9020W2
.16	W	151D164X0020W2	151D164X9020W2
.19	W	———	151D194X9020W2
.23	W	151D234X0020W2	151D234X9020W2
.28	W	———	151D284X9020W2
.34	W	151D344X0020W2	151D344X9020W2
.41	W	———	151D414X9020W2
.50	W	151D504X0020W2	151D504X9020W2
.60	W	———	151D604X9020W2
.75	W	151D754X0020W2	151D754X9020W2
.90	W	———	151D904X9020W2
1.1	W	151D115X0020W2	151D115X9020W2
1.3	X	———	151D135X9020X2
1.6	X	151D165X0020X2	151D165X9020X2
1.9	X	———	151D195X9020X2
2.3	X	151D235X0020X2	151D235X9020X2
2.8	X	———	151D285X9020X2
3.4	X	151D345X0020X2	151D345X9020X2
4.1	X	———	151D415X9020X2
5.0	X	151D505X0020X2	151D505X9020X2
6.0	X	———	151D605X9020X2
7.5	X	151D755X0020X2	151D755X9020X2
9.0	Y	———	151D905X9020Y2
11	Y	151D116X0020Y2	151D116X9020Y2
13	Y	———	151D136X9020Y2
16	Y	151D166X0020Y2	151D166X9020Y2
19	Y	———	151D196X9020Y2
23	Y	151D236X0020Y2	151D236X9020Y2
28	Z	———	151D286X9020Z2
34	Z	151D346X0020Z2	151D346X9020Z2
41	Z	———	151D416X9020Z2
50	Z	151D506X0020Z2	151D506X9020Z2

35 VOLTS NP, 46 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0035W2	151D232X9035W2
.0028	W	———	151D282X9035W2
.0034	W	151D342X0035W2	151D342X9035W2
.0041	W	———	151D412X9035W2
.005	W	151D502X0035W2	151D502X9035W2
.006	W	———	151D602X9035W2
.0075	W	151D752X0035W2	151D752X9035W2
.009	W	———	151D902X9035W2
.011	W	151D113X0035W2	151D113X9035W2
.013	W	———	151D133X9035W2
.016	W	151D163X0035W2	151D163X9035W2
.019	W	———	151D193X9035W2
.023	W	151D233X0035W2	151D233X9035W2
.028	W	———	151D283X9035W2
.034	W	151D343X0035W2	151D343X9035W2
.041	W	———	151D413X9035W2
.050	W	151D503X0035W2	151D503X9035W2
.060	W	———	151D603X9035W2
.075	W	151D753X0035W2	151D753X9035W2
.090	W	———	151D903X9035W2
.11	W	151D114X0035W2	151D114X9035W2
.13	W	———	151D134X9035W2
.16	W	151D164X0035W2	151D164X9035W2
.19	W	———	151D194X9035W2
.23	W	151D234X0035W2	151D234X9035W2
.28	W	———	151D284X9035W2
.34	W	151D344X0035W2	151D344X9035W2
.41	W	———	151D414X9035W2
.50	W	151D504X0035W2	151D504X9035W2
.60	X	———	151D604X9035X2
.75	X	151D754X0035X2	151D754X9035X2
.90	X	———	151D904X9035X2
1.1	X	151D115X0035X2	151D115X9035X2
1.3	X	———	151D135X9035X2
1.6	X	151D165X0035X2	151D165X9035X2
1.9	X	———	151D195X9035X2
2.3	X	151D235X0035X2	151D235X9035X2
2.8	X	———	151D285X9035X2
3.4	X	151D345X0035X2	151D345X9035X2
4.1	Y	———	151D415X9035Y2
5.0	Y	151D505X0035Y2	151D505X9035Y2
6.0	Y	———	151D605X9035Y2
7.5	Y	151D755X0035Y2	151D755X9035Y2
9.0	Y	———	151D905X9035Y2
11	Y	151D116X0035Y2	151D116X9035Y2
13	Z	———	151D136X9035Z2
16	Z	151D166X0035Z2	151D166X9035Z2
19	Z	———	151D196X9035Z2
23	Z	151D236X0035Z2	151D236X9035Z2

DIMENSIONS

Code	With Sleeve D. x L.	Bare Case D. x L.
W	.161" x .575"	.146" x .540"
X	.207" x .955"	.192" x .915"
Y	.314" x 1.350"	.299" x 1.320"
Z	.376" x 1.550"	.361" x 1.520"

Copyright 1970, Sprague Products Company

IND-REM-1E-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 151D NON-POLARIZED SOLID-ELECTROLYTE TANTALEX® CAPACITORS (Cont.)

50 VOLTS NP, 65 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0050W2	151D232X9050W2
.0028	W	———	151D282X9050W2
.0034	W	151D342X0050W2	151D342X9050W2
.0041	W	———	151D412X9050W2
.005	W	151D502X0050W2	151D502X9050W2
.006	W	———	151D602X9050W2
.0075	W	151D752X0050W2	151D752X9050W2
.009	W	———	151D902X9050W2
.011	W	151D113X0050W2	151D113X9050W2
.013	W	———	151D133X9050W2
.016	W	151D163X0050W2	151D163X9050W2
.019	W	———	151D193X9050W2
.023	W	151D233X0050W2	151D233X9050W2
.028	W	———	151D283X9050W2
.034	W	151D343X0050W2	151D343X9050W2
.041	W	———	151D413X9050W2
.05	W	151D503X0050W2	151D503X9050W2
.06	W	———	151D603X9050W2
.075	W	151D753X0050W2	151D753X9050W2
.09	W	———	151D903X9050W2
.11	W	151D114X0050W2	151D114X9050W2
.13	W	———	151D134X9050W2
.16	W	151D164X0050W2	151D164X9050W2
.19	W	———	151D194X9050W2
.23	W	151D234X0050W2	151D234X9050W2
.28	W	———	151D284X9050W2
.34	W	151D344X0050W2	151D344X9050W2
.41	W	———	151D414X9050W2
.50	W	151D504X0050W2	151D504X9050W2
.60	X	———	151D604X9050X2
.75	X	151D754X0050X2	151D754X9050X2
.90	X	———	151D904X9050X2
1.1	X	151D115X0050X2	151D115X9050X2
1.3	X	———	151D135X9050X2
1.6	X	151D165X0050X2	151D165X9050X2
1.9	X	———	151D195X9050X2
2.3	X	151D235X0050X2	151D235X9050X2
2.8	Y	———	151D285X9050Y2
3.4	Y	151D345X0050Y2	151D345X9050Y2
4.1	Y	———	151D415X9050Y2
5.0	Y	151D505X0050Y2	151D505X9050Y2
6.0	Y	———	151D605X9050Y2
7.5	Y	151D755X0050Y2	151D755X9050Y2
9.0	Y	———	151D905X9050Y2
11.0	Z	151D116X0050Z2	151D116X9050Z2

60 VOLTS NP, 78 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0060W2	151D232X9060W2
.0028	W	———	151D282X9060W2
.0034	W	151D342X0060W2	151D342X9060W2
.0041	W	———	151D412X9060W2
.005	W	151D502X0060W2	151D502X9060W2
.006	W	———	151D602X9060W2
.0075	W	151D752X0060W2	151D752X9060W2
.009	W	———	151D902X9060W2
.011	W	151D113X0060W2	151D113X9060W2
.013	W	———	151D133X9060W2
.016	W	151D163X0060W2	151D163X9060W2
.019	W	———	151D193X9060W2
.023	W	151D233X0060W2	151D233X9060W2
.028	W	———	151D283X9060W2
.034	W	151D343X0060W2	151D343X9060W2
.041	W	———	151D413X9060W2
.05	W	151D503X0060W2	151D503X9060W2
.06	W	———	151D603X9060W2
.075	W	151D753X0060W2	151D753X9060W2
.09	W	———	151D903X9060W2
.11	W	151D114X0060W2	151D114X9060W2
.13	W	———	151D134X9060W2
.16	W	151D164X0060W2	151D164X9060W2
.19	W	———	151D194X9060W2
.23	W	151D234X0060W2	151D234X9060W2
.28	W	———	151D284X9060W2
.34	W	151D344X0060W2	151D344X9060W2
.41	X	———	151D414X9060X2
.50	X	151D504X0060X2	151D504X9060X2
.60	X	———	151D604X9060X2
.75	X	151D754X0060X2	151D754X9060X2
.90	X	———	151D904X9060X2
1.1	X	151D115X0060X2	151D115X9060X2
1.3	X	———	151D135X9060X2
1.6	X	151D165X0060X2	151D165X9060X2
1.9	X	———	151D195X9060X2
2.3	Y	151D235X0060Y2	151D235X9060Y2
2.8	Y	———	151D285X9060Y2
3.4	Y	151D345X0060Y2	151D345X9060Y2
4.1	Y	———	151D415X9060Y2
5.0	Y	151D505X0060Y2	151D505X9060Y2
6.0	Z	———	151D605X9060Z2
7.5	Z	151D755X0060Z2	151D755X9060Z2
9.0	Z	———	151D905X9060Z2
11.0	Z	151D116X0060Z2	151D116X9060Z2

75 VOLTS NP, 97 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0075W2	151D232X9075W2
.0028	W	———	151D282X9075W2
.0034	W	151D342X0075W2	151D342X9075W2
.0041	W	———	151D412X9075W2
.005	W	151D502X0075W2	151D502X9075W2
.006	W	———	151D602X9075W2
.0075	W	151D752X0075W2	151D752X9075W2
.009	W	———	151D902X9075W2
.011	W	151D113X0075W2	151D113X9075W2
.013	W	———	151D133X9075W2
.016	W	151D163X0075W2	151D163X9075W2
.019	W	———	151D193X9075W2
.023	W	151D233X0075W2	151D233X9075W2
.028	W	———	151D283X9075W2
.034	W	151D343X0075W2	151D343X9075W2
.041	W	———	151D413X9075W2
.05	W	151D503X0075W2	151D503X9075W2
.06	W	———	151D603X9075W2
.075	W	151D753X0075W2	151D753X9075W2
.09	W	———	151D903X9075W2
.11	W	151D114X0075W2	151D114X9075W2
.13	W	———	151D134X9075W2
.16	W	151D164X0075W2	151D164X9075W2
.19	W	———	151D194X9075W2
.23	W	151D234X0075W2	151D234X9075W2
.28	W	———	151D284X9075W2
.34	W	151D344X0075W2	151D344X9075W2
.41	X	———	151D414X9075X2
.50	X	151D504X0075X2	151D504X9075X2
.60	X	———	151D604X9075X2
.75	X	151D754X0075X2	151D754X9075X2
.90	X	———	151D904X9075X2
1.1	X	151D115X0075X2	151D115X9075X2
1.3	X	———	151D135X9075X2
1.6	X	151D165X0075X2	151D165X9075X2
1.9	X	———	151D195X9075X2
2.3	Y	151D235X0075Y2	151D235X9075Y2
2.8	Y	———	151D285X9075Y2
3.4	Y	151D345X0075Y2	151D345X9075Y2
4.1	Y	———	151D415X9075Y2
5.0	Y	151D505X0075Y2	151D505X9075Y2
6.0	Z	———	151D605X9075Z2
7.5	Z	151D755X0075Z2	151D755X9075Z2

100 VOLTS NP, 115 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0100W2	151D232X9100W2
.0028	W	———	151D282X9100W2
.0034	W	151D342X0100W2	151D342X9100W2
.0041	W	———	151D412X9100W2
.005	W	151D502X0100W2	151D502X9100W2
.006	W	———	151D602X9100W2
.0075	W	151D752X0100W2	151D752X9100W2
.009	W	———	151D902X9100W2
.011	W	151D113X0100W2	151D113X9100W2
.013	W	———	151D133X9100W2
.016	W	151D163X0100W2	151D163X9100W2
.019	W	———	151D193X9100W2
.023	W	151D233X0100W2	151D233X9100W2
.028	W	———	151D283X9100W2
.034	W	151D343X0100W2	151D343X9100W2
.041	W	———	151D413X9100W2
.050	W	151D503X0100W2	151D503X9100W2
.060	W	———	151D603X9100W2
.075	W	151D753X0100W2	151D753X9100W2
.090	W	———	151D903X9100W2
.11	W	151D114X0100W2	151D114X9100W2
.13	W	———	151D134X9100W2
.16	W	151D164X0100W2	151D164X9100W2
.19	W	———	151D194X9100W2
.23	W	151D234X0100W2	151D234X9100W2
.28	W	———	151D284X9100W2
.34	X	151D344X0100X2	151D344X9100X2
.41	X	———	151D414X9100X2
.50	X	151D504X0100X2	151D504X9100X2
.60	X	———	151D604X9100X2
.75	X	151D754X0100X2	151D754X9100X2
.90	X	———	151D904X9100X2
1.1	X	151D115X0100X2	151D115X9100X2
1.3	X	———	151D135X9100X2
1.6	Y	151D165X0100Y2	151D165X9100Y2
1.9	Y	151D195X0100Y2	151D195X9100Y2
2.3	Y	151D235X0100Y2	151D235X9100Y2
2.8	Y	151D285X0100Y2	151D285X9100Y2
3.4	Y	151D345X0100Y2	151D345X9100Y2

125 VOLTS NP, 140 NP SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0023	W	151D232X0125W2	151D232X9125W2
.0028	W	———	151D282X9125W2
.0034	W	151D342X0125W2	151D342X9125W2
.0041	W	———	151D412X9125W2
.005	W	151D502X0125W2	151D502X9125W2
.006	W	———	151D602X9125W2
.0075	W	151D752X0125W2	151D752X9125W2
.009	W	———	151D902X9125W2
.011	W	151D113X0125W2	151D113X9125W2
.013	W	———	151D133X9125W2
.016	W	151D163X0125W2	151D163X9125W2
.019	W	———	151D193X9125W2
.023	W	151D233X0125W2	151D233X9125W2
.028	W	———	151D283X9125W2
.034	W	151D343X0125W2	151D343X9125W2
.041	W	———	151D413X9125W2
.05	W	151D503X0125W2	151D503X9125W2
.06	W	———	151D603X9125W2
.07	W	151D703X0125W2	151D703X9125W2
.09	W	———	151D903X9125W2
.11	W	151D114X0125W2	151D114X9125W2
.13	W	———	151D134X9125W2
.16	W	151D164X0125W2	151D164X9125W2
.19	W	———	151D194X9125W2
.23	W	151D234X0125W2	151D234X9125W2
.28	X	———	151D284X9125X2
.34	X	151D344X0125X2	151D344X9125X2
.41	X	———	151D414X9125X2
.50	X	151D504X0125X2	151D504X9125X2
.60	X	———	151D604X9125X2
.75	X	151D754X0125X2	151D754X9125X2
.90	X	———	151D904X9125X2
1.1	X	151D115X0125X2	151D115X9125X2

DIMENSIONS WITH SLEEVE

Code	D. x L.
W	.161" x .575"
X	.207" x .955"
Y	.314" x 1.350"
Z	.376" x 1.550"

Call Your Sprague Industrial Distributor for Current Quantity Prices

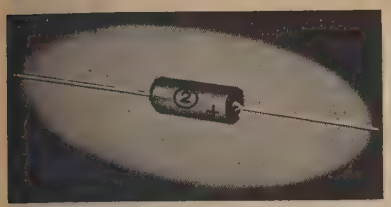
Copyright 1970, Sprague Products Company

IND-REM-IF-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS



MIL-C-26655 Solid TANTALUM CAPACITORS

- Military Version of Type 150D.
- CS12, Bare Tube; CS13, Insulating Sleeve
- Solid Electrolyte Will Not Seep Even if Hermetic Seal is Accidentally Broken
- Temperature Range of −55C to +85C. Also −55C to +125C With Voltage Derating
- For Complete Technical Data, See Latest Issue of Engineering Bulletin 3520.1
- For Insulated Style CS13, Add 0.010" to Diameter and 0.036" to Length

SIZE CODE

A = .125" D. x .250" L. C = .279" D. x .650" L.
B = .175" D. x .438" L. D = .341" D. x .750" L.

µF	Size Code	Tol.	CS12 Type Designation	CS13 Type Designation
6 WVDC				
5.6	A	10%	CS12BB565K	CS13BB565K
6.8	A	10%	CS12BB685K	CS13BB685K
6.8	A	20%	CS12BB685M	CS13BB685M
47	B	10%	CS12BB476K	CS13BB476K
47	B	20%	CS12BB476M	CS13BB476M
56	B	10%	CS12BB566K	CS13BB566K
150	C	10%	CS12BB157K	CS13BB157K
150	C	20%	CS12BB157M	CS13BB157M
180	C	10%	CS12BB187K	CS13BB187K
270	D	10%	CS12BB277K	CS13BB277K
330	D	10%	CS12BB337K	CS13BB337K
330	D	20%	CS12BB337M	CS13BB337M
10 WVDC				
3.9	A	10%	CS12BC395K	CS13BC395K
4.7	A	10%	CS12BC475K	CS13BC475K
4.7	A	20%	CS12BC475M	CS13BC475M
27	B	10%	CS12BC276K	CS13BC276K
33	B	10%	CS12BC336K	CA13BC336K
33	B	20%	CS12BC336M	CA13BC336M
39	B	10%	CS12BC396K	CS13BC396K
82	C	10%	CS12BC826K	CS13BC826K
100	C	10%	CS12BC107K	CS13BC107K
100	C	20%	CS12BC107M	CS13BC107M
120	C	10%	CS12BC127K	CS13BC127K
180	D	10%	CS12BC187K	CS13BC187K
220	D	10%	CS12BC227K	CS13BC227K
220	D	20%	CS12BC227M	CS13BC227M
15 WVDC				
2.7	A	10%	CS12BD275K	CS13BD275K
3.3	A	10%	CS12BD335K	CS13BD335K
3.3	A	20%	CS12BD335M	CS13BD335M
18	B	10%	CS12BD186K	CS13BD186K
22	B	10%	CS12BD226K	CS13BD226K
22	B	20%	CS12BD226M	CS13BD226M
56	C	10%	CS12BD566K	CS13BD566K
68	C	10%	CS12BD686K	CS13BD686K
68	C	20%	CS12BD686M	CS13BD686M
120	D	10%	CS12BD127K	CS13BD127K
150	D	10%	CS12BD157K	CS13BD157K
150	D	20%	CS12BD157M	CS13BD157M
20 WVDC				
1.2	A	10%	CS12BE125K	CS13BE125K
1.5	A	10%	CS12BE155K	CS13BE155K
1.5	A	20%	CS12BE155M	CS13BE155M
1.8	A	10%	CS12BE185K	CS13BE185K
2.2	A	10%	CS12BE225K	CS13BE225K
2.2	A	20%	CS12BE225M	CS13BE225M
8.2	B	10%	CS12BE825K	CS13BE825K
10	B	10%	CS12BE106K	CS13BE106K
10	B	20%	CS12BE106M	CS13BE106M
12	B	10%	CS12BE126K	CS13BE126K
15	B	10%	CS12BE156K	CS13BE156K
15	B	20%	CS12BE156M	CS13BE156M
27	C	10%	CS12BE276K	CS13BE276K
33	C	10%	CS12BE336K	CS13BE336K
33	C	20%	CS12BE336M	CS13BE336M
39	C	10%	CS12BE396K	CS13BE396K
47	C	10%	CS12BE476K	CS13BE476K
47	C	20%	CS12BE476M	CS13BE476M
56	D	10%	CS12BE566K	CS13BE566K
68	D	10%	CS12BE686K	CS13BE686K
68	D	20%	CS12BE686M	CS13BE686M
82	D	10%	CS12BE826K	CS13BE826K
100	D	10%	CS12BE107K	CS13BE107K
100	D	20%	CS12BE107M	CS13BE107M
35 WVDC				
.33	A	10%	CS12BF334K	CS13BF334K
.33	A	20%	CS12BF334M	CS13BF334M
.39	A	10%	CS12BF394K	CS13BF394K
.47	A	10%	CS12BF474K	CS13BF474K
.47	A	20%	CS12BF564K	CS13BF474M
.56	A	10%	CS12BF564K	CS13BF564K
.68	A	10%	CS12BF684K	CS13BF684K
.68	A	20%	CS12BF684M	CS13BF684M
.82	A	10%	CS12BF824K	CS13BF824K
1.0	A	10%	CS12BF105K	CS13BF105K
1.0	A	20%	CS12BF105M	CS13BF105M
1.2	B	10%	CS12BF125K	CS13BF125K
1.5	B	10%	CS12BF155K	CS13BF155K
1.5	B	20%	CS12BF155M	CS13BF155M
1.8	B	10%	CS12BF185K	CS13BF185K
2.2	B	10%	CS12BF225K	CS13BF225K
2.2	B	20%	CS12BF225M	CS13BF225M
2.7	B	10%	CS12BF275K	CS13BF275K
3.3	B	10%	CS12BF335K	CS13BF335K
3.3	B	20%	CS12BF335M	CS13BF335M
3.9	B	10%	CS12BF395K	CS13BF395K
4.7	B	10%	CS12BF475K	CS13BF475K
4.7	B	20%	CS12BF475M	CS13BF475M
5.6	B	10%	CS12BF565K	CS13BF565K
6.8	B	10%	CS12BF685K	CS13BF685K
6.8	B	20%	CS12BF635M	CS13BF685M
8.2	C	10%	CS12BF825K	CS13BF825K
10	C	10%	CS12BF106K	CS13BF106K
10	C	20%	CS12BF106M	CS13BF106M
12	C	10%	CS12BF126K	CS13BF126K
15	C	10%	CS12BF156K	CS13BF156K
15	C	20%	CS12BF156M	CS13BF156M
18	C	10%	CS12BF186K	CS13BF186K
22	C	10%	CS12BF226K	CS13BF226K
22	C	20%	CS12BF226M	CS13BF226M
27	D	10%	CS12BF276K	CS13BF276K
33	D	10%	CS12BF336K	CS13BF336K
33	D	20%	CS12BF336M	CS13BF336M
39	D	10%	CS12BF396K	CS13BF396K
47	D	10%	CS12BF476K	CS13BF476K
47	D	20%	CS12BF476M	CS13BF476M
50 WVDC				
1.0	A	10%	CS12BG105K	CS13BG105K
1.0	A	20%	CS12BG105M	CS13BG105M
1.2	B	10%	CS12BG125K	CS13BG125K
1.5	B	10%	CS12BG155K	CS13BG155K
1.5	B	20%	CS12BG155M	CS13BG155M
1.8	B	10%	CS12BG185K	CS13BG185K
2.2	B	10%	CS12BG225K	CS13BG225K
2.2	B	20%	CS12BG225M	CS13BG225M
2.7	B	10%	CS12BG275K	CS13BG275K
3.3	B	10%	CS12BG335K	CS13BG335K
3.3	B	20%	CS12BG335M	CS13BG335M
3.9	B	10%	CS12BG395K	CS13BG395K
4.7	B	10%	CS12BG475K	CS13BG475K
4.7	B	20%	CS12BG475M	CS13BG475M
5.6	C	10%	CS12BG565K	CS13BG565K
6.8	C	10%	CS12BG685K	CS13BG685K
6.8	C	20%	CS12BG685M	CS13BG685M
8.2	C	10%	CS12BG825K	CS13BG825K
10	C	10%	CS12BG106K	CS13BG106K
10	C	20%	CS12BG106M	CS13BG106M
12	C	10%	CS12BG126K	CS13BG126K
15	C	10%	CS12BG156K	CS13BG156K
15	C	20%	CS12BG156M	CS13BG156M
18	C	10%	CS12BG186K	CS13BG186K
22	D	10%	CS12BG226K	CS13BG226K
22	D	20%	CS12BG226M	CS13BG226M
75 WVDC				
.10	A	10%	CS12BH104K	CS13BH104K
.10	A	20%	CS12BH104M	CS13BH104M
.12	A	10%	CS12BH124K	CS13BH124K
.15	A	10%	CS12BH154K	CS13BH154K
.15	A	20%	CS12BH154M	CS13BH154M
.18	A	10%	CS12BH184K	CS13BH184K
.22	A	10%	CS12BH224K	CS13BH224K
.22	A	20%	CS12BH224M	CS13BH224M
.27	A	10%	CS12BH274K	CS13BH274K
.33	A	10%	CS12BH334K	CS13BH334K
.33	A	20%	CS12BH334M	CS13BH334M
.39	A	10%	CS12BH394K	CS13BH394K
.47	A	10%	CS12BH474K	CS13BH474K
.47	A	20%	CS12BH474M	CS13BH474M
.56	A	10%	CS12BH564K	CS13BH564K
.68	A	10%	CS12BH684K	CS13BH684K
.68	A	20%	CS12BH684M	CS13BH684M
.82	B	10%	CS12BH824K	CS13BH824K
1.0	B	10%	CS12BH105K	CS13BH105K
1.0	B	20%	CS12BH105M	CS13BH105M
1.2	B	10%	CS12BH125K	CS13BH125K
1.5	B	10%	CS12BH155K	CS13BH155K
1.5	B	20%	CS12BH155M	CS13BH155M
1.8	B	10%	CS12BH185K	CS13BH185K
2.2	B	10%	CS12BH225K	CS13BH225K
2.2	B	20%	CS12BH225M	CS13BH225M
2.7	B	10%	CS12BH275K	CS13BH275K
3.3	B	10%	CS12BH335K	CS13BH335K
3.3	B	20%	CS12BH335M	CS13BH335M
3.9	B	10%	CS12BH395K	CS13BH395K
4.7	C	10%	CS12BH475K	CS13BH475K
4.7	C	20%	CS12BH475M	CS13BH475M
5.6	C	10%	CS12BH565K	CS13BH565K
6.8	C	10%	CS12BH685K	CS13BH685K
6.8	C	20%	CS12BH685M	CS13BH685M
8.2	C	10%	CS12BH825K	CS13BH825K
10	C	10%	CS12BH106K	CS13BH106K
10	C	20%	CS12BH106M	CS13BH106M
12	D	10%	CS12BH126K	CS13BH126K
15	D	10%	CS12BH156K	CS13BH156K
15	D	20%	CS12BH156M	CS13BH156M
100 WVDC				
.0047	A	10%	CS12BJ472K	CS13BJ472K
.0047	A	20%	CS12BJ472M	CS13BJ472M
.0056	A	10%	CS12BJ562K	CS13BJ562K
.0068	A	10%	CS12BJ682K	CS13BJ682K
.0068	A	20%	CS12BJ692M	CS13BJ682M
.0082	A	10%	CS12BJ822K	CS13BJ822K
.01	A	10%	CS12BJ103K	CS13BJ103K
.01	A	20%	CS12BJ103M	CS13BJ103M
.012	A	10%	CS12BJ123K	CS13BJ123K
.015	A	10%	CS12BJ153K	CS13BJ153K
.015	A	20%	CS12BJ153M	CS13BJ153M
.018	A	10%	CS12BJ183K	CS13BJ183K
.022	A	10%	CS12BJ223K	CS13BJ223K
.022	A	20%	CS12BJ223M	CS13BJ223M
.027	A	10%	CS12BJ273K	CS13BJ273K
.033	A	10%	CS12BJ333K	CS13BJ333K
.033	A	20%	CS12BJ333M	CS13BJ333M
.039	A	10%	CS12BJ393K	CS13BJ393K
.047	A	10%	CS12BJ473K	CS13BJ473K
.047	A	20%	CS12BJ473M	CS13BJ473M
.056	A	10%	CS12BJ563K	CS13BJ563K
.068	A	10%	CS12BJ683K	CS13BJ683K
.068	A	20%	CS12BJ683M	CS13BJ683M
.082	A	10%	CS12BJ823K	CS13BJ823K
.10	A	10%	CS12BJ104K	CS13BJ104K
.10	A	20%	CS12BJ104M	CS13BJ104M
.12	A	10%	CS12BJ124K	CS13BJ124K
.15	A	10%	CS12BJ154K	CS13BJ154K
.15	A	20%	CS12BJ154M	CS13BJ154M
.18	A	10%	CS12BJ184K	CS13BJ184K
.22	A	10%	CS12BJ224K	CS13BJ224K
.22	A	20%	CS12BJ224M	CS13BJ224M
.27	A	10%	CS12BJ274K	CS13BJ274K
.33	A	10%	CS12BJ334K	CS13BJ334K
.33	A	20%	CS12BJ334M	CS13BJ334M
.39	A	10%	CS12BJ394K	CS13BJ394K
.47	A	10%	CS12BJ474K	CS13BJ474K
.47	A	20%	CS12BJ474M	CS13BJ474M
.56	A	10%	CS12BJ564K	CS13BJ564K
.68	B	10%	CS12BJ684K	CS13BJ684K
.68	B	20%	CS12BJ684M	CS13BJ684M
.82	B	10%	CS12BJ824K	CS13BJ824K
1.0	B	10%	CS12BJ105K	CS13BJ105K
1.0	B	20%	CS12BJ105M	CS13BJ105M
1.2	B	10%	CS12BJ125K	CS13BJ125K
1.5	B	10%	CS12BJ155K	CS13BJ155K
1.5	B	20%	CS12BJ155M	CS13BJ155M
1.8	B	10%	CS12BJ185K	CS13BJ185K
2.2	B	10%	CS12BJ225K	CS13BJ225K
2.2	B	20%	CS12BJ225M	CS13BJ225M
2.7	B	10%	CS12BJ275K	CS13BJ275K

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.
© United Technical Publications

SPRAGUE CAPACITORS

TYPE CSR13 ESTABLISHED RELIABILITY SOLID-TANTALUM CAPACITORS to MIL-C-39003

- Handled by Sprague and Sprague Industrial Distributors in Full Compliance with MIL-STD-790 — Manufactured, Marked, Packed, Shipped, Received, Inspected, Stored in Separate Area, Free From Contamination or Mix-up with Other Components
- Established Reliability Military Version of Type 150D Capacitors
- Solid Electrolyte — No Seepage Even if Glass-to-metal Hermetic Seal is Accidentally Broken
- Operating Temperature Range, −55 C to + 125 C
- Capacitance Tolerance Indicated by 10th Character in MIL Type Designation: K = 10%; M = 20%
- Furnished with Insulating Sleeve
- For Complete Technical Data, Refer to Latest Issue of Sprague Engineering Bulletin 3520.2



SIZE CODE	
A = .135"D. x .286"L.	C = .289"D. x .686"L.
B = .185"D. x .474"L.	D = .351"D. x .786"L.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	Case Code	MIL Type Designation L 2% Failure Rate	M 1% Failure Rate	P .1% Failure Rate
6 WVDC				
5.6	A	CSR13B565KL	CSR13B565KM	CSR13B565KP
6.8	A	CSR13B685KL	CSR13B685KM	CSR13B685KP
6.8	A	CSR13B685ML	CSR13B685MM	CSR13B685MP
47	B	CSR13B476KL	CSR13B476KM	CSR13B476KP
47	B	CSR13B476ML	CSR13B476MM	CSR13B476MP
56	B	CSR13B566KL	CSR13B566KM	CSR13B566KP
150	C	CSR13B157KL	CSR13B157KM	CSR13B157KP
150	C	CSR13B157ML	CSR13B157MM	CSR13B157MP
180	C	CSR13B187KL	CSR13B187KM	CSR13B187KP
270	D	CSR13B277KL	CSR13B277KM	CSR13B277KP
330	D	CSR13B337KL	CSR13B337KM	CSR13B337KP
330	D	CSR13B337ML	CSR13B337MM	CSR13B337MP
10 WVDC				
3.9	A	CSR13C395KL	CSR13C395KM	CSR13C395KP
4.7	A	CSR13C475KL	CSR13C475KM	CSR13C475KP
4.7	A	CSR13C475ML	CSR13C475MM	CSR13C475MP
27	B	CSR13C276KL	CSR13C276KM	CSR13C276KP
33	B	CSR13C336KL	CSR13C336KM	CSR13C336KP
33	B	CSR13C336ML	CSR13C336MM	CSR13C336MP
39	B	CSR13C396KL	CSR13C396KM	CSR13C396KP
82	C	CSR13C826KL	CSR13C826KM	CSR13C826KP
100	C	CSR13C107KL	CSR13C107KM	CSR13C107KP
100	C	CSR13C107ML	CSR13C107MM	CSR13C107MP
120	C	CSR13C127KL	CSR13C127KM	CSR13C127KP
180	D	CSR13C187KL	CSR13C187KM	CSR13C187KP
220	D	CSR13C227KL	CSR13C227KM	CSR13C227KP
220	D	CSR13C227ML	CSR13C227MM	CSR13C227MP
15 WVDC				
2.7	A	CSR13D275KL	CSR13D275KM	CSR13D275KP
3.3	A	CSR13D335KL	CSR13D335KM	CSR13D335KP
3.3	A	CSR13D335ML	CSR13D335MM	CSR13D335MP
18	B	CSR13D186KL	CSR13D186KM	CSR13D186KP
22	B	CSR13D226KL	CSR13D226KM	CSR13D226KP
22	B	CSR13D226ML	CSR13D226MM	CSR13D226MP
56	C	CSR13D566KL	CSR13D566KM	CSR13D566KP

µF	Case Code	MIL Type Designation L 2% Failure Rate	M 1% Failure Rate	P .1% Failure Rate
15 WVDC, (Cont.)				
68	C	CSR13D686KL	CSR13D686KM	CSR13D686KP
68	C	CSR13D686ML	CSR13D686MM	CSR13D686MP
120	D	CSR13D127KL	CSR13D127KM	CSR13D127KP
150	D	CSR13D157KL	CSD13D157KM	CSR13D157KP
150	D	CSR13D157ML	CSR13D157MM	CSR13D157MP
20 WVDC				
1.2	A	CSR13E125KL	CSR13E125KM	CSR13E125KP
1.5	A	CSR13E155KL	CSR13E155KM	CSR13E155KP
1.5	A	CSR13E155ML	CSR13E155MM	CSR13E155MP
1.8	A	CSR13E185KL	CSR13E185KM	CSR13E185KP
2.2	A	CSR13E225KL	CSR13E225KM	CSR13E225KP
2.2	A	CSR13E225ML	CSR13E225MM	CSR13E225MP
8.2	B	CSR13E825KL	CSR13E825KM	CSR13E825KP
10	B	CSR13E106KL	CSR13E106KM	CSR13E106KP
10	B	CSR13E106ML	CSR13E106MM	CSR13E106MP
12	B	CSR13E126KL	CSR13E126KM	CSR13E126KP
15	B	CSR13E156KL	CSR13E156KM	CSR13E156KP
15	B	CSR13E156ML	CSR13E156MM	CSR13E156MP
27	C	CSR13E276KL	CSR13E276KM	CSR13E276KP
33	C	CSR13E336KL	CSR13E336KM	CSR13E336KP
33	C	CSR13E336ML	CSR13E336MM	CSR13E336MP
39	C	CSR13E396KL	CSR13E396KM	CSR13E396KP
47	C	CSR13E476KL	CSR13E476KM	CSR13E476KP
47	C	CSR13E476ML	CSR13E476MM	CSR13E476MP
56	D	CSR13E566KL	CSR13E566KM	CSR13E566KP
68	D	CSR13E686KL	CSR13E686KM	CSR13E686KP
68	D	CSR13E686ML	CSR13E686MM	CSR13E686MP
82	D	CSR13E826KL	CSR13E826KM	CSR13E826KP
100	D	CSR13E107KL	CSR13E107KM	CSR13E107KP
100	D	CSR13E107ML	CSR13E107MM	CSR13E107MP
35 WVDC				
5.6	B	CSR13F565KL	CSR13F565KM	CSR13F565KP
6.8	B	CSR13F685KL	CSR13F685KM	CSR13F685KP
6.8	B	CSR13F685ML	CSR13F685MM	CSR13F685MP

Copyright 1970, Sprague Products Company

IND-REM-7B-7005

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE CSR13 SOLID-ELECTROLYTE TANTALUM CAPACITORS (Cont.)

µF	Case Code	MIL Type Designation L 2% Failure Rate	M 1% Failure Rate	P .1% Failure Rate
		35 WVDC, (Cont.)		
22	C	CSR13F226KL	CSR13F226KM	CSR13F226KP
22	C	CSR13F226ML	CSR13F226MM	CSR13F226MP
27	D	CSR13F276KL	CSR13F276KM	CSR13F276KP
33	D	CSR13F336KL	CSR13F336KM	CSR13F336KP
33	D	CSR13F336ML	CSR13F336MM	CSR13F336MP
39	D	CSR13F396KL	CSR13F396KM	CSR13F396KP
47	D	CSR13F476KL	CSR13F476KM	CSR13F476KP
47	D	CSR13F476ML	CSR13F476MM	CSR13F476MP
		50 WVDC		
.0047	A	CSR13G472KL	CSR13G472KM	CSR13G472KP
.0047	A	CSR13G472ML	CSR13G472MM	CSR13G472MP
.0056	A	CSR13G562KL	CSR13G562KM	CSR13G562KP
.0068	A	CSR13G682KL	CSR13G682KM	CSR13G682KP
.0068	A	CSR13G682ML	CSR13G682MM	CSR13G682MP
.0082	A	CSR13G822KL	CSR13G822KM	CSR13G822KP
.01	A	CSR13G103KL	CSR13G103KM	CSR13G103KP
.01	A	CSR13G103ML	CSR13G103MM	CSR13G103MP
.012	A	CSR13G123KL	CSR13G123KM	CSR13G123KP
.015	A	CSR13G153KL	CSR13G153KM	CSR13G153KP
.015	A	CSR13G153ML	CSR13G153MM	CSR13G153MP
.018	A	CSR13G183KL	CSR13G183KM	CSR13G183KP
.022	A	CSR13G223KL	CSR13G223KM	CSR13G223KP
.022	A	CSR13G223ML	CSR13G223MM	CSR13G223MP
.027	A	CSR13G273KL	CSR13G273KM	CSR13G273KP
.033	A	CSR13G333KL	CSR13G333KM	CSR13G333KP
.033	A	CSR13G333ML	CSR13G333MM	CSR13G333MP
.039	A	CSR13G393KL	CSR13G393KM	CSR13G393KP
.047	A	CSR13G473KL	CSR13G473KM	CSR13G473KP
.047	A	CSR13G473ML	CSR13G473MM	CSR13G473MP
.056	A	CSR13G563KL	CSR13G563KM	CSR13G563KP
.068	A	CSR13G683KL	CSR13G683KM	CSR13G683KP
.068	A	CSR13G683ML	CSR13G683MM	CSR13G683MP
.082	A	CSR13G823KL	CSR13G823KM	CSR13G823KP
.1	A	CSR13G104KL	CSR13G104KM	CSR13G104KP
.1	A	CSR13G104ML	CSR13G104MM	CSR13G104MP
.12	A	CSR13G124KL	CSR13G124KM	CSR13G124KP
.15	A	CSR13G154KL	CSR13G154KM	CSR13G154KP
.15	A	CSR13G154ML	CSR13G154MM	CSR13G154MP
.18	A	CSR13G184KL	CSR13G184KM	CSR13G184KP
.22	A	CSR13G224KL	CSR13G224KM	CSR13G224KP
.22	A	CSR13G224ML	CSR13G224MM	CSR13G224MP
.27	A	CSR13G274KL	CSR13G274KM	CSR13G274KP
.33	A	CSR13G334KL	CSR13G334KM	CSR13G334KP
.33	A	CSR13G334ML	CSR13G334MM	CSR13G334MP
.39	A	CSR13G394KL	CSR13G394KM	CSR13G394KP
.47	A	CSR13G474KL	CSR13G474KM	CSR13G474KP
.47	A	CSR13G474ML	CSR13G474MM	CSR13G474MP
.56	A	CSR13G564KL	CSR13G564KM	CSR13G564KP
.68	A	CSR13G684KL	CSR13G684KM	CSR13G684KP
.68	A	CSR13G684ML	CSR13G684MM	CSR13G684MP
.82	A	CSR13G824KL	CSR13G824KM	CSR13G824KP
1	A	CSR13G105KL	CSR13G105KM	CSR13G105KP
1	A	CSR13G105ML	CSR13G105MM	CSR13G105MP
1.2	B	CSR13G125KL	CSR13G125KM	CSR13G125KP
1.5	B	CSR13G155KL	CSR13G155KM	CSR13G155KP
1.5	B	CSR13G155ML	CSR13G155MM	CSR13G155MP
1.8	B	CSR13G185KL	CSR13G185KM	CSR13G185KP
2.2	B	CSR13G225KL	CSR13G225KM	CSR13G225KP
2.2	B	CSR13G225ML	CSR13G225MM	CSP13G225MP

µF	Case Code	MIL Type Designation L 2% Failure Rate	M 1% Failure Rate	P .1% Failure Rate
		50 WVDC (Cont.)		
2.7	B	CSR13G275KL	CSR13G275KM	CSR13G275KP
3.3	B	CSR13G335KL	CSR13G335KM	CSR13G335KP
3.3	B	CSR13G335ML	CSR13G335MM	CSR13G335MP
3.9	B	CSR13G395KL	CSR13G395KM	CSR13G395KP
4.7	B	CSR13G475KL	CSR13G475KM	CSR13G475KP
4.7	B	CSR13G475ML	CSR13G475MM	CSR13G475MP
5.6	C	CSR13G565KL	CSR13G565KM	CSR13G565KP
6.8	C	CSR13G685KL	CSR13G685KM	CSR13G685KP
6.8	C	CSR13G685ML	CSR13G685MM	CSR13G685MP
8.2	C	CSR13G825KL	CSR13G825KM	CSR13G825KP
10	C	CSR13G106KL	CSR13G106KM	CSR13G106KP
10	C	CSR13G106ML	CSR13G106MM	CSR13G106MP
12	C	CSR13G126KL	CSR13G126KM	CSR13G126KP
15	C	CSR13G156KL	CSR13G156KM	CSR13G156KP
15	C	CSR13G156ML	CSR13G156MM	CSR13G156MP
18	C	CSR13G186KL	CSR13G186KM	CSR13G186KP
22	D	CSR13G226KL	CSR13G226KM	CSR13G226KP
22	D	CSR13G226ML	CSR13G226MM	CSR13G226MP
		75 WVDC		
.1	A	CSR13H104KL	CSR13H104KM	———
.1	A	CSR13H104ML	CSR13H104MM	———
.12	A	CSR13H124KL	CSR13H124KM	———
.15	A	CSR13H154KL	CSR13H154KM	———
.15	A	CSR13H154ML	CSR13H154MM	———
.18	A	CSR13H184KL	CSR13H184KM	———
.22	A	CSR13H224KL	CSR13H224KM	———
.22	A	CSR13H224ML	CSR13H224MM	———
.27	A	CSR13H274KL	CSR13H274KM	———
.33	A	CSR13H334KL	CSR13H334KM	———
.33	A	CSR13H334ML	CSR13H334MM	———
.39	A	CSR13H394KL	CSR13H394KM	———
.47	A	CSR13H474KL	CSR13H474KM	———
.47	A	CSR13H474ML	CSR13H474MM	———
.56	A	CSR13H564KL	CSR113H564KM	———
.68	A	CSR13H684KL	CSR13H684KM	———
.68	A	CSR13H684ML	CSR13H684MM	———
.82	B	CSR13H824KL	CSR13H824KM	———
1	B	CSR13H105KL	CSR13H105KM	———
1	B	CSR13H105ML	CSR13H105MM	———
1.2	B	CSR13H125KL	CSR13H125KM	———
1.5	B	CSR13H155KL	CSR13H155KM	———
1.5	B	CSR13H155ML	CSR13H155MM	———
1.8	B	CSR13H185KL	CSR13H185KM	———
2.2	B	CSR13H225KL	CSR13H225KM	———
2.2	B	CSR13H225ML	CSR13H225MM	———
2.7	B	CSR13H275KL	CSR13H275KM	———
3.3	B	CSR13H335KL	CSR13H335KM	———
3.3	B	CSR13H335ML	CSR13H335MM	———
3.9	B	CSR13H395KL	CSR13H395KM	———
4.7	C	CSR13H475KL	CSR13H475KM	———
4.7	C	CSR13H475ML	CSR13H475MM	———
5.6	C	CSR13H565KL	CSR13H565KM	———
6.8	C	CSR13H685KL	CSR13R685KM	———
6.8	C	CSR13H685ML	CSR13H685MM	———
8.2	C	CSR13H825KL	CSR13H825KM	———
10	C	CSR13H106KL	CSR13H106KM	———
10	C	CSR13H106ML	CSR13H106MM	———
12	D	CSR13H126KL	CSR13H126KM	———
15	D	CSR13H156KL	CSR13H156KM	———
15	D	CSR13H156ML	CSR13H156MM	———

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS



85 C FOIL TANTALEX® CAPACITORS

- Small Size, Electrically Stable, Long Life. For Data, See Latest Issue of Engineering Bulletin 3601
- 110D and 112D Available as MIL-C-3965 Units
- Cap. Tol. — 110D & 111D: ±20%, ±15%. 112D & 113D: +75, −15%; +50, −15%; +30, −15%.
- Plastic Wrap. For Bare Case, End Cat. No. in "0" Instead of "1"

Call Your Sprague Industrial Distributor For Quantity Prices

DIMENSIONS

Case	D x L	Case	D x L
D	0.203 x 0.812	P	0.390 x 2.875
G	0.296 x 1.000	R	0.483 x 2.875
J	0.390 x 1.562	Y	0.546 x 2.875
M	0.390 x 2.250		

TYPE 110D
POLARIZED PLAIN-FOIL

µF	Case	Catalog No.
3 WORKING VOLTS D-C		
10	D	110D106X0003D1
55	G	110D556X0003G1
160	J	110D167X0003J1
350	M	110D357X0003M1
440	P	110D447X0003P1
1100	R	110D118X0003R1
1300	Y	110D138X0003Y1
6 WORKING VOLTS D-C		
8	D	110D805X0006D1
35	G	110D356X0006G1
100	J	110D107X0006J1
200	M	110D207X0006M1
300	P	110D307X0006P1
460	R	110D467X0006R1
560	Y	110D567X0006Y1
10 WORKING VOLTS D-C		
6	D	110D605X0010D1
25	G	110D256X0010G1
80	J	110D806X0010J1
160	M	110D167X0010M1
220	P	110D227X0010P1
350	R	110D357X0010R1
420	Y	110D427X0010Y1
15 WORKING VOLTS D-C		
4.5	D	110D455X0015D1
18	G	110D186X0015G1
55	J	110D556X0015J1
110	M	110D117X0015M1
160	P	110D167X0015P1
260	R	110D267X0015R1
320	Y	110D327X0015Y1
25 WORKING VOLTS D-C		
3	D	110D305X0025D1
12	G	110D126X0025G1
35	J	110D356X0025J1
70	M	110D706X0025M1
100	P	110D107X0025P1
180	R	110D187X0025R1
210	Y	110D217X0025Y1
30 WORKING VOLTS D-C		
2.5	D	110D255X0030D1
10	G	110D106X0030G1
30	J	110D306X0030J1
60	M	110D606X0030M1
85	P	110D856X0030P1
150	R	110D157X0030R1
180	Y	110D187X0030Y1
50 WORKING VOLTS D-C		
1.5	D	110D155X0050D1
6	G	110D605X0050G1
20	J	110D206X0050J1
40	M	110D406X0050M1
55	P	110D556X0050P1
100	R	110D107X0050R1
120	Y	110D127X0050Y1
60 WORKING VOLTS D-C		
1.2	D	110D125X0060D1
5	G	110D505X0060G1
17	J	110D176X0060J1
34	M	110D346X0060M1
48	P	110D486X0060P1
85	R	110D856X0060R1
100	Y	110D107X0060Y1
75 WORKING VOLTS D-C		
1	D	110D105X0075D1
4	G	110D405X0075G1
14	J	110D146X0075J1
28	M	110D286X0075M1
40	P	110D406X0075P1
70	R	110D706X0075R1
88	Y	110D886X0075Y1
100 WORKING VOLTS D-C		
0.8	D	110D804X0100D1
3	G	110D305X0100G1
10	J	110D106X0100J1
20	M	110D206X0100M1
30	P	110D306X0100P1
57	R	110D576X0100R1
70	Y	110D706X0100Y1
150 WORKING VOLTS D-C		
0.5	D	110D504X0150D1
2	G	110D205X0150G1
7	J	110D705X0150J1
14	M	110D146X0150M1
20	P	110D206X0150P1
40	R	110D406X0150R1
47	Y	110D476X0150Y1
200 WORKING VOLTS D-C		
0.35	D	110D354X8200D1
1.5	G	110D155X8200G1
5.0	J	110D505X8200J1
10.0	M	110D106X8200M1
15.0	P	110D156X8200P1
25	R	110D256X8200R1
35	Y	110D356X8200Y1
250 WORKING VOLTS D-C		
0.3	D	110D304X8250D1
1.2	G	110D125X8250G1
4.0	J	110D405X8250J1
8.0	M	110D805X8250M1
12.0	P	110D126X8250P1
20	R	110D206X8250R1
30	Y	110D306X8250Y1
300 WORKING VOLTS D-C		
0.25	D	110D254X8300D1
1	G	110D105X8300G1
3	J	110D305X8300J1
7	M	110D705X8300M1
10	P	110D106X8300P1
18	R	110D186X8300R1
375 WORKING VOLTS D-C		
0.2	D	110D204X8375D1
0.8	G	110D804X8375G1
2.5	J	110D255X8375J1
5	M	110D505X8375M1
7	P	110D705X8375P1
12	R	110D126X8300R1
450 WORKING VOLTS D-C		
0.15	D	110D154X8450D1
0.65	G	110D654X8450G1
2	J	110D205X8450J1
4	M	110D405X8450M1
6	P	110D605X8450P1

TYPE 111D
NON-POLARIZED PLAIN-FOIL

µF	Case	Catalog No.
6 WORKING VOLTS N.P.		
7	D	111D705X0006D1
25	G	111D256X0006G1
85	J	111D856X0006J1
170	M	111D177X0006M1
250	P	111D257X0006P1
360	R	111D367X0006R1
470	Y	111D477X0006Y1
10 WORKING VOLTS N.P.		
4	D	111D405X0010D1
16	G	111D166X0010G1
55	J	111D556X0010J1
110	M	111D117X0010M1
150	P	111D157X0010P1
230	R	111D237X0010R1
280	Y	111D287X0010Y1
15 WORKING VOLTS N.P.		
2.5	D	111D255X0015D1
10	G	111D106X0015G1
35	J	111D356X0015J1
70	M	111D706X0015M1
100	P	111D107X0015P1
160	R	111D167X0015R1
200	Y	111D207X0015Y1
25 WORKING VOLTS N.P.		
1.5	D	111D155X0025D1
6	G	111D605X0025G1
20	J	111D206X0025J1
40	M	111D406X0025M1
60	P	111D606X0025P1
100	R	111D107X0025R1
120	Y	111D127X0025Y1
30 WORKING VOLTS N.P.		
1.4	D	111D145X0030D1
5.5	G	111D555X0030G1
18	J	111D186X0030J1
36	M	111D366X0030M1
45	P	111D456X0030P1
85	R	111D856X0030R1
100	Y	111D107X0030Y1
50 WORKING VOLTS N.P.		
0.8	D	111D804X0050D1
3	G	111D305X0050G1
10	J	111D106X0050J1
20	M	111D206X0050M1
30	P	111D306X0050P1
50	R	111D506X0050R1
65	Y	111D656X0050Y1
60 WORKING VOLTS N.P.		
0.6	D	111D604X0060D1
2.5	G	111D255X0060G1
8.5	J	111D855X0060J1
17	M	111D176X0060M1
24	P	111D246X0060P1
45	R	111D456X0060R1
53	Y	111D536X0060Y1
75 WORKING VOLTS N.P.		
0.5	D	111D504X0075D1
2	G	111D205X0075G1
7	J	111D705X0075J1
14	M	111D146X0075M1
20	P	111D206X0075P1
40	R	111D406X0075R1
47	Y	111D476X0075Y1
100 WORKING VOLTS N.P.		
0.4	D	111D404X0100D1
1.5	G	111D155X0100G1
5	J	111D505X0100J1
10	M	111D106X0100M1
15	P	111D156X0100P1
30	R	111D306X0100R1
37	Y	111D376X0100Y1
150 WORKING VOLTS N.P.		
0.25	D	111D254X0150D1
1.0	G	111D105X0150G1
3.5	J	111D355X0150J1
7	M	111D705X0150M1
10	P	111D106X0150P1
20	R	111D206X0150R1
24	Y	111D246X0150Y1
200 WORKING VOLTS N.P.		
0.15	D	111D154X8200D1
0.75	G	111D754X8200G1
2.5	J	111D255X8200J1
5.0	M	111D505X8200M1
7.5	P	111D755X8200P1
14	R	111D146X8200R1
17	Y	111D176X8200Y1
250 WORKING VOLTS N.P.		
0.15	D	111D154X8250D1
0.6	G	111D604X8250G1
2.0	J	111D205X8250J1
4.0	M	111D405X8250M1
6.0	P	111D605X8250P1
12	R	111D126X8250R1
15	Y	111D156X8250Y1
300 WORKING VOLTS N.P.		
0.1	D	111D104X8300D1
.5	G	111D504X8300G1
1.5	J	111D155X8300J1
3.5	M	111D355X8300M1
5	P	111D505X8300P1
9.5	R	111D955X8300R1

TYPE 112D
POLARIZED ETCHED-FOIL

µF	Case	Catalog No.
15 WORKING VOLTS D-C		
15	D	112D156C7015D1
36	D	112D366C7015D1
60	G	112D606C7015G1
130	G	112D137C7015G1
200	J	112D207C7015J1
370	J	112D377C7015J1
400	M	112D407C7015M1
580	P	112D587C7015P1
780	M	112D787C7015M1
1100	P	112D118C7015P1
2000	R	112D208C7015R1
2500	Y	112D258C7015Y1
25 WORKING VOLTS D-C		
10	D	112D106C7025D1
23	D	112D236C7025D1
40	G	112D406C7025G1
80	G	112D806C7025G1
120	J	112D127C7025J1
240	J	112D247C7025J1
250	M	112D257C7025M1
350	P	112D357C7025P1
510	M	112D517C7025M1
720	P	112D727C7025P1
1300	R	112D138C7025R1
1600	Y	112D168C7025Y1
30 WORKING VOLTS D-C		
8	D	112D805C7030D1
19	D	112D196C7030D1
32	G	112D326C7030G1
67	G	112D676C7030G1
110	J	112D117C7030J1
200	J	112D207C7030J1
220	M	112D227C7030M1
300	P	112D307C7030P1
420	M	112D427C7030M1
590	P	112D597C7030P1
1100	R	112D118C7030R1
1400	Y	112D148C7030Y1
50 WORKING VOLTS D-C		
4.5	D	112D455C5050D1
8	D	112D805C5050D1
18	G	112D186C5050G1
29	G	112D296C5050G1
60	J	112D606C5050J1
85	J	112D856C5050J1
100	M	112D107C5050M1
150	P	112D157C5050P1
180	M	112D187C5050M1
260	P	112D267C5050P1
470	R	112D477C5050R1
580	Y	112D587C5050Y1
60 WORKING VOLTS D-C		
4	D	112D405C5060D1
75 WORKING VOLTS D-C		
3	D	112D305C5075D1
4	D	112D405C5075D1
12	G	112D126C5075G1
15	G	112D156C5075G1
30	J	112D306C5075J1
45	J	112D456C5075J1
70	M	112D706C5075M1
95	M	112D956C5075M1
100	P	112D107C5075P1
130	P	112D137C5075P1
250	R	112D257C5075R1
300	Y	112D307C5075Y1
100 WORKING VOLTS D-C		
2	D	112D205C3100D1
3	D	112D305C3100D1
8	G	112D805C3100G1
10	G	112D106C3100G1
25	J	112D256C3100J1
30	J	112D306C3100J1
50	M	112D506C3100M1
63	M	112D636C3100M1
70	P	112D706C3100P1
90	P	112D906C3100P1
170	R	112D177C3100R1
210	Y	112D217C3100Y1
150 WORKING VOLTS D-C		
1	D	112D105C3150D1
1.6	D	112D165C3150D1
4	G	112D405C3150G1
5.5	G	112D555C3150G1
13	J	112D136C3150J1
17	J	112D176C3150J1
25	M	112D256C3150M1
35	M	112D356C3150M1
36	P	112D366C3150P1
50	P	112D506C3150P1
90	R	112D906C3150R1
120	Y	112D127C3150Y1
200 WORKING VOLTS D-C		
3	G	112D305X0200G1
9	J	112D905X0200J1
19	M	112D196X0200M1
27	P	112D276X0200P1
55	R	112D556X0200R1
66	Y	112D666X0200Y1
250 WORKING VOLTS D-C		
2	G	112D205X0250G1
6	J	112D605X0250J1
13	M	112D136X0250M1
19	P	112D196X0250P1
37	R	112D376X0250R1
45	Y	112D456X0250Y1
300 WORKING VOLTS D-C		
1.8	G	112D185X0300G1
5	J	112D505X0300J1
11	M	112D116X0300M1
15	P	112D156X0300P1
28	R	112D286X0300R1

TYPE 113D
NON-POLARIZED ETCHED-FOIL

µF	Case	Catalog No.
15 WORKING VOLTS N.P.		
10	D	113D106C7015D1
25	D	113D256C7015D1
40	G	113D406C7015G1
90	G	113D906C7015G1
120	J	113D127C7015J1
250	J	113D257C7015J1
250	M	113D257C7015M1
350	P	113D357C7015P1
530	M	113D537C7015M1
760	P	113D767C7015P1
1400	R	113D148C7015R1
2000	Y	113D208C7015Y1
25 WORKING VOLTS N.P.		
5	D	113D505C7025D1
14	D	113D146C7025D1
20	G	113D206C7025G1
50	G	113D506C7025G1
70	J	113D706C7025J1
140	J	113D147C7025J1
140	M	113D147C7025M1
200	P	113D207C7025P1
290	M	113D297C7025M1
420	P	113D427C7025P1
800	R	113D807C7025R1
1100	Y	113D118C7025Y1
30 WORKING VOLTS N.P.		
4.5	D	113D455C7030D1
11	D	113D116C7030D1
18	G	113D186C7030G1
39	G	113D396C7030G1
60	J	113D606C7030J1
110	J	113D117C7030J1
120	M	113D127C7030M1
170	P	113D177C7030P1
220	M	113D227C7030M1
320	P	113D327C7030P1
600	R	113D607C7030R1
850	Y	113D857C7030Y1
50 WORKING VOLTS N.P.		
2.5	D	113D255C5050D1
4	D	113D405C5050D1
10	G	113D106C5050G1
14	G	113D146C5050G1
30	J	113D306C5050J1
40	J	113D406C5050J1
60	M	113D606C5050M1
80	P	113D806C5050P1
84	M	113D846C5050M1
120	P	113D127C5050P1
230	R	113D237C5050R1
310	Y	113D317C5050Y1
75 WORKING VOLTS N.P.		
1.5	D	113D155C5075D1
2	D	113D205C5075D1
6	G	113D605C5075G1
7	G	113D705C5075G1
15	J	113D156C5075J1
20	J	113D206C5075J1
35	M	113D356C5075M1
43	M	113D436C5075M1
50	P	113D506C5075P1
60	P	113D606C5075P1
110	R	113D117C5075R1
160	Y	113D167C5075Y1
100 WORKING VOLTS N.P.		
1	D	113D105C3100D1
1.4	D	113D145C3100D1
4	G	113D405C3100G1
5	G	113D505C3100G1
12	J	113D126C3100J1
14	J	113D146C3100J1
25	M	113D256C3100M1
29	M	113D296C3100M1
35	P	113D356C3100P1
41	P	113D416C3100P1
78	R	113D786C3100R1
110	Y	113D117C3100Y1
150 WORKING VOLTS N.P.		
0.5	D	113D504C3150D1
0.75	D	113D754C3150D1
2	G	113D205C3150G1
2.7	G	113D275C3150G1
6	J	113D605C3150J1
7.5	J	113D755C3150J1
12	M	113D126C3150M1
15	M	113D156C3150M1
18	P	113D186C3150P1
22	P	113D226C3150P1
43	R	113D436C3150R1
60	Y	113D606C3150Y1

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

125 C FOIL TANTALEX® CAPACITORS

- Small size, electrically stable, long life. For data, see latest Engineering Bulletin 3602.
- 120D, 122D available as MIL-C-3965 units.
- Tol., 120D, 121D, ±20%; 122D, 123D, −15, +75%.
- Listed units have plastic wrap. For bare metal case units, end Cat. No. in "0" instead of "1".

Call Your Sprague Industrial Distributor For Quantity Prices

Size Code	D. x L.	Size Code	D. x L.
E	0.203 x 0.843	Q	0.390 x 2.968
H	0.296 x 1.125	S	0.483 x 2.968
K	0.390 x 1.656	Z	0.546 x 2.968
N	0.390 x 2.343		



TYPE 120D
POLARIZED PLAIN-FOIL STANDARD RATINGS

µF	Case Code	Catalog Number
10 WORKING VOLTS D-C		
4.5	E	120D455X0010E1
18	H	120D186X0010H1
55	K	120D556X0010K1
110	N	120D117X0010N1
160	Q	120D167X0010Q1
260	S	120D267X0010S1
320	Z	120D327X0010Z1
15 WORKING VOLTS D-C		
3	E	120D305X0015E1
12	H	120D126X0015H1
35	K	120D356X0015K1
70	N	120D706X0015N1
100	Q	120D107X0015Q1
180	S	120D187X0015S1
210	Z	120D217X0015Z1
30 WORKING VOLTS D-C		
1.5	E	120D155X0030E1
6	H	120D605X0030H1
20	K	120D206X0030K1
40	N	120D406X0030N1
55	Q	120D556X0030Q1
100	S	120D107X0030S1
120	Z	120D127X0030Z1
50 WORKING VOLTS D-C		
1	E	120D105X0050E1
4	H	120D405X0050H1
14	K	120D146X0050K1
28	N	120D286X0050N1
40	Q	120D406X0050Q1
70	S	120D706X0050S1
88	Z	120D886X0050Z1
65 WORKING VOLTS D-C		
0.8	E	120D804X0065E1
3	H	120D305X0065H1
10	K	120D106X0065K1
20	N	120D206X0065N1
30	Q	120D306X0065Q1
57	S	120D576X0065S1
70	Z	120D706X0065Z1
100 WORKING VOLTS D-C		
0.5	E	120D504X0100E1
2	H	120D205X0100H1
7	K	120D705X0100K1
14	N	120D146X0100N1
20	Q	120D206X0100Q1
40	S	120D406X0100S1
47	Z	120D476X0100Z1
150 WORKING VOLTS D-C		
0.35	E	120D354X0150E1
1.5	H	120D155X0150H1
5	K	120D505X0150K1
10	N	120D106X0150N1
15	Q	120D156X0150Q1
25	S	120D256X0150S1
30	Z	120D306X0150Z1
200 WORKING VOLTS D-C		
0.25	E	120D254X8200E1
1	H	120D105X8200H1
3	K	120D305X8200K1
7	N	120D705X8200N1
10	Q	120D106X8200Q1
18	S	120D186X8200S1
250 WORKING VOLTS D-C		
0.2	E	120D204X8250E1
0.8	H	120D804X8250H1
2.5	K	120D255X8250K1
5	N	120D505X8250N1
8	Q	120D805X8250Q1
12	S	120D126X8250S1
300 WORKING VOLTS D-C		
0.15	E	120D154X8300E1
0.65	H	120D654X8300H1
2	K	120D205X8300K1
4	N	120D405X8300N1
6	Q	120D605X8300Q1

TYPE 121D
NON-POLARIZED PLAIN-FOIL STANDARD RATINGS

µF	Case Code	Catalog Number
10 WORKING VOLTS N.P.		
2.5	E	121D255X0010E1
10	H	121D106X0010H1
35	K	121D356X0010K1
70	N	121D706X0010N1
100	Q	121D107X0010Q1
160	S	121D167X0010S1
200	Z	121D207X0010Z1
15 WORKING VOLTS N.P.		
1.5	E	121D155X0015E1
6	H	121D605X0015H1
20	K	121D206X0015K1
40	N	121D406X0015N1
60	Q	121D606X0015Q1
100	S	121D107X0015S1
120	Z	121D127X0015Z1
30 WORKING VOLTS N.P.		
0.8	E	121D804X0030E1
3	H	121D305X0030H1
10	K	121D106X0030K1
20	N	121D206X0030N1
30	Q	121D306X0030Q1
50	S	121D506X0030S1
65	Z	121D656X0030Z1
50 WORKING VOLTS N.P.		
0.5	E	121D504X0050E1
2	H	121D205X0050H1
7	K	121D705X0050K1
14	N	121D146X0050N1
20	Q	121D206X0050Q1
40	S	121D406X0050S1
47	Z	121D476X0050Z1
65 WORKING VOLTS N.P.		
0.4	E	121D404X0065E1
1.5	H	121D155X0065H1
5	K	121D505X0065K1
10	N	121D106X0065N1
15	Q	121D156X0065Q1
30	S	121D306X0065S1
37	Z	121D376X0065Z1
100 WORKING VOLTS N.P.		
0.25	E	121D254X0100E1
1.0	H	121D105X0100H1
3.5	K	121D355X0100K1
7	N	121D705X0100N1
10	Q	121D106X0100Q1
20	S	121D206X0100S1
24	Z	121D246X0100Z1
150 WORKING VOLTS N.P.		
0.15	E	121D154X0150E1
0.75	H	121D754X0150H1
2.5	K	121D255X0150K1
5.0	N	121D505X0150N1
7.5	Q	121D755X0150Q1
13	S	121D136X0150S1
16	Z	121D166X0150Z1
200 WORKING VOLTS N.P.		
0.1	E	121D104X8200E1
0.5	H	121D504X8200H1
1.5	K	121D155X8200K1
3.5	N	121D355X8200N1
5.0	Q	121D505X8200Q1
9.5	S	121D955X8200S1
250 WORKING VOLTS N.P.		
0.1	E	121D104X8250E1
0.4	H	121D404X8250H1
1.2	K	121D125X8250K1
2.5	N	121D255X8250N1
4.0	Q	121D405X8250Q1

TYPE 122D
POLARIZED ETCHED-FOIL STANDARD RATINGS

µF	Case Code	Catalog Number
10 WORKING VOLTS D-C		
15	E	122D156C7010E1
60	H	122D606C7010H1
200	K	122D207C7010K1
400	N	122D407C7010N1
580	Q	122D587C7010Q1
15 WORKING VOLTS D-C		
10	E	122D106C7015E1
40	H	122D406C7015H1
120	K	122D127C7015K1
250	N	122D257C7015N1
350	Q	122D357C7015Q1
30 WORKING VOLTS D-C		
4.5	E	122D455C5030E1
18	H	122D186C5030H1
60	K	122D606C5030K1
100	N	122D107C5030N1
150	Q	122D157C5030Q1
50 WORKING VOLTS D-C		
3	E	122D305C5050E1
12	H	122D126C5050H1
30	K	122D306C5050K1
70	N	122D706C5050N1
100	Q	122D107C5050Q1
65 WORKING VOLTS D-C		
2	E	122D205C3065E1
8	H	122D805C3065H1
25	K	122D256C3065K1
50	N	122D506C3065N1
70	Q	122D706C3065Q1
100 WORKING VOLTS D-C		
1	E	122D105C3100E1
4	H	122D405C3100H1
13	K	122D136C3100K1
25	N	122D256C3100N1
36	Q	122D366C3100Q1

TYPE 122D
POLARIZED ETCHED-FOIL MAXIMUM RATINGS

µF	Case Code	Catalog Number
10 WORKING VOLTS D-C		
36	E	122D366C7010E1
130	H	122D137C7010H1
370	K	122D377C7010K1
780	N	122D787C7010N1
1100	Q	122D118C7010Q1
2000	S	122D208C7010S1
2500	Z	122D258C7010Z1
15 WORKING VOLTS D-C		
23	E	122D236C7015E1
80	H	122D806C7015H1
240	K	122D247C7015K1
510	N	122D517C7015N1
720	Q	122D727C7015Q1
1300	S	122D138C7015S1
1600	Z	122D168C7015Z1
20 WORKING VOLTS D-C		
19	E	122D196C7020E1
67	H	122D676C7020H1
200	K	122D207C7020K1
420	N	122D427C7020N1
590	Q	122D597C7020Q1
1100	S	122D118C7020S1
1400	Z	122D148C7020Z1
30 WORKING VOLTS D-C		
8	E	122D805C5030E1
29	H	122D296C5030H1
85	K	122D856C5030K1
180	N	122D187C5030N1
260	Q	122D267C5030Q1
470	S	122D477C5030S1
580	Z	122D587C5030Z1
50 WORKING VOLTS D-C		
4	E	122D405C5050E1
15	H	122D156C5050H1
45	K	122D456C5050K1
95	N	122D956C5050N1
130	Q	122D137C5050Q1
250	S	122D257C5050S1
300	Z	122D307C5050Z1
65 WORKING VOLTS D-C		
3	E	122D305C3065E1
10	H	122D106C3065H1
30	K	122D306C3065K1
63	N	122D636C3065N1
90	Q	122D906C3065Q1
170	S	122D177C3065S1
210	Z	122D217C3065Z1
100 WORKING VOLTS D-C		
1.6	E	122D165C3100E1
5.5	H	122D555C3100H1
17	K	122D176C3100K1
35	N	122D356C3100N1
50	Q	122D506C3100Q1
90	S	122D906C3100S1
120	Z	122D127C3100Z1
150 WORKING VOLTS D-C		
0.75	E	122D754C3150E1
2.5	H	122D255C3150H1
7.5	K	122D755C3150K1
15	N	122D156C3150N1
22	Q	122D226C3150Q1
41	S	122D416C3150S1
51	Z	122D516C3150Z1
200 WORKING VOLTS D-C		
1.7	H	122D175X0200H1
5	K	122D505X0200K1
11	N	122D116X0200N1
15	Q	122D156X0200Q1
28	S	122D286X0200S1
250 WORKING VOLTS D-C		
1.3	H	122D135X0250H1
4	K	122D405X0250K1
8	N	122D805X0250N1
12	Q	122D126X0250Q1

TYPE 123D
NON-POLARIZED ETCHED-FOIL STANDARD RATINGS

µF	Case Code	Catalog Number
10 WORKING VOLTS N.P.		
10	E	123D106C7010E1
40	H	123D406C7010H1
120	K	123D127C7010K1
250	N	123D257C7010N1
350	Q	123D357C7010Q1
15 WORKING VOLTS N.P.		
5	E	123D505C7015E1
20	H	123D206C7015H1
70	K	123D706C7015K1
140	N	123D147C7015N1
200	Q	123D207C7015Q1
30 WORKING VOLTS N.P.		
2.5	E	123D255C5030E1
10	H	123D106C5030H1
30	K	123D306C5030K1
60	N	123D606C5030N1
80	Q	123D806C5030Q1
50 WORKING VOLTS N.P.		
1.5	E	123D155C5050E1
6	H	123D605C5050H1
15	K	123D156C5050K1
35	N	123D356C5050N1
50	Q	123D506C5050Q1
65 WORKING VOLTS N.P.		
1	E	123D105C3065E1
4	H	123D405C3065H1
12	K	123D126C3065K1
25	N	123D256C3065N1
35	Q	123D356C3065Q1
100 WORKING VOLTS N.P.		
0.5	E	123D504C3100E1
2	H	123D205C3100H1
6	K	123D605C3100K1
12	N	123D126C3100N1
18	Q	123D186C3100Q1

TYPE 123D
NON-POLARIZED ETCHED-FOIL MAXIMUM RATINGS

µF	Case Code	Catalog Number
10 WORKING VOLTS N.P.		
25	E	123D256C7010E1
90	H	123D906C7010H1
250	K	123D257C7010K1
530	N	123D537C7010N1
760	Q	123D767C7010Q1
1400	S	123D148C7010S1
2000	Z	123D208C7010Z1
15 WORKING VOLTS N.P.		
14	E	123D146C7015E1
50	H	123D506C7015H1
140	K	123D147C7015K1
290	N	123D297C7015N1
420	Q	123D427C7015Q1
800	S	123D807C7015S1
1100	Z	123D118C7015Z1
20 WORKING VOLTS N.P.		
11	E	123D116C7020E1
39	H	123D396C7020H1
110	K	123D117C7020K1
230	N	123D237C7020N1
320	Q	123D327C7020Q1
600	S	123D607C7020S1
850	Z	123D857C7020Z1
30 WORKING VOLTS N.P.		
4	E	123D405C5030E1
14	H	123D146C5030H1
40	K	123D406C5030K1
84	N	123D846C5030N1
120	Q	123D127C5030Q1
230	S	123D237C5030S1
310	Z	123D317C5030Z1
50 WORKING VOLTS N.P.		
2	E	123D205C5050E1
7	H	123D705C5050H1
20	K	123D206C5050K1
43	N	123D436C5050N1
60	Q	123D606C5050Q1
110	S	123D117C5050S1
160	Z	123D167C5050Z1
65 WORKING VOLTS N.P.		
1.4	E	123D145C3065E1
5	H	123D505C3065H1
14	K	123D146C3065K1
29	N	123D296C3065N1
41	Q	123D416C3065Q1
78	S	123D786C3065S1
110	Z	123D117C3065Z1
100 WORKING VOLTS N.P.		
0.75	E	123D754C3100E1
2.7	H	123D275C3100H1
7.5	K	123D755C3100K1
15	N	123D156C3100N1
22	Q	123D226C3100Q1
43	S	123D436C3100S1
60	Z	123D606C3100Z1

Copyright 1970, Sprague Products Company

Sizes subject to change without notice

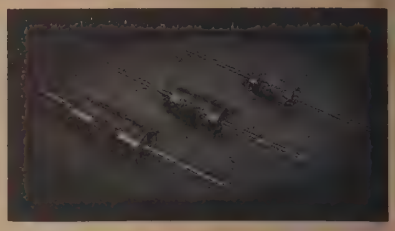
© United Technical Publications

SPRAGUE CAPACITORS

MIL-C-3965 FOIL TANTALUM CAPACITORS TYPES CL24 & CL25

- For −55C to +85C Operation up to 150 Volts in Military and Industrial Electronic Equipment
- Low Leakage Current and Stable Temperature Coefficient Makes Possible Its Use in Many Circuits Where Aluminum Foil Designs Are Undesirable
- The Electrolyte System Used Assures Long Operating and Shelf Life, excellent Low-temperature Performance, Chemical Stability and Inertness
- Dimensions Listed Are For Bare Metal-Case For Insulated Case Add 1/64" to Diameter and 1/8" to Length
- MIL Version of Sprague Type 112D
- Type CL24 Is a Bare Metal-Case Unit. If An Outer Insulating Sleeve Is Desired, Order Type CL25

Call Your Sprague Industrial Distributor For Current Quantity Prices

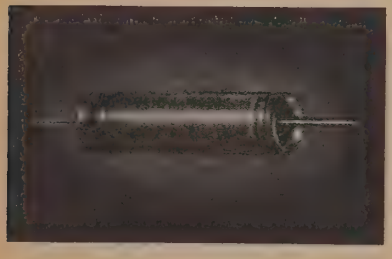


DIMENSIONS

Code	D. x L.	Code	D. x L.
D	13/64 x 3/4	M	2[illegible] x 2 3/4
G	1 9/64 x 1 5/16	P	2 5/64 x 2 13/64
J	2 5/64 x 1 1/2		

µF	WVDC	Size Code	Military Designation*	
15	15	D	CL24BE150UP3	CL25BE150UP3
60	15	G	CL24BE600UP3	CL25BE600UP3
200	15	J	CL24BE201UP3	CL25BE201UP3
400	15	M	CL24BE401UP3	CL25BE401UP3
580	15	P	CL24BE581UP3	CL25BE581UP3
10	25	D	CL24BG100UP3	CL25BG100UP3
40	25	G	CL24BG400UP3	CL25BG400UP3
120	25	J	CL24BG121UP3	CL25BG121UP3
250	25	M	CL24BG251UP3	CL25BG251UP3
350	25	P	CL24BG351UP3	CL25BG351UP3
8	30	D	CL24BH080UP3	CL25BH080UP3
32	30	G	CL24BH320UP3	CL25BH320UP3
110	30	J	CL24BH111UP3	CL25BH111UP3
220	30	M	CL24BH221UP3	CL25BH221UP3
300	30	P	CL24BH301UP3	CL25BH301UP3
4.5	50	D	CL24BJ4R5TP3	CL25BJ4R5TP3
18	50	G	CL24BJ180TP3	CL25BJ180TP3
60	50	J	CL24BJ600TP3	CL25BJ600TP3
100	50	M	CL24BJ101TP3	CL25BJ101TP3
150	50	P	CL24BJ151TP3	CL25BJ151TP3
3	75	D	CL24BL030TP3	CL25BL030TP3
12	75	G	CL24BL120TP3	CL25BL120TP3
30	75	J	CL24BL300TP3	CL25BL300TP3
70	75	M	CL24BL700TP3	CL25BL700TP3
100	75	P	CL24BL101TP3	CL25BL101TP3
2	100	D	CL24BN020SP3	CL25BN020SP3
8	100	G	CL24BN080SP3	CL25BN080SP3
25	100	J	CL24BN250SP3	CL25BN250SP3
50	100	M	CL24BN500SP3	CL25BN500SP3
70	100	P	CL24BN700SP3	CL25BN700SP3
1	150	D	CL24BQ010SP3	CL25BQ010SP3
4	150	G	CL24BQ040SP3	CL25BQ040SP3
13	150	J	CL24BQ130SP3	CL25BQ130SP3
25	150	M	CL24BQ250SP3	CL25BQ250SP3
36	150	P	CL24BQ360SP3	CL25BQ360SP3

*Note: For vibration grade 1 or 2, change last digit of military designation to 1 or 2.



MIL-C-3965 FOIL TANTALUM CAPACITORS TYPES CL34 and CL35

- For use in military and industrial electronic equipment. Designed to operate over the temperature range of −55C to +85C
- Long operation and shelf life, excellent low temperature performance, and optimum electrical characteristics
- For use in circuits where aluminum foil units are unsatisfactory
- Low leakage current and good temperature coefficient
- Type CL34 is a bare metal case unit. If an outer insulating sleeve is desired, order Type CL35
- MIL version of Sprague Type 110D

Call Your Sprague Industrial Distributor For Current Quantity Prices

DIMENSIONS

Code	D. x L.	Code	D. x L.
D	3/16 x 11/16	M	3/8 x 2 1/8
G	9/32 x 7/8	P	3/8 x 2 3/4
J	3/8 x 1 7/16		

µF	WVDC	Size Code	Military Designation*	
10	3	D	CL34BA100MP3	CL35BA100MP3
50	3	G	CL34BA500MP3	CL35BA500MP3
8	6	D	CL34BB080MP3	CL35BB080MP3
30	6	G	CL34BB300MP3	CL35BB300MP3
100	6	J	CL34BB101MP3	CL35BB101MP3
200	6	M	CL34BB201MP3	CL35BB201MP3
300	6	P	CL34BB301MP3	CL35BB301MP3
6	10	D	CL34BD060MP3	CL35BD060MP3
25	10	G	CL34BD250MP3	CL35BD250MP3
80	10	J	CL34BD800MP3	CL35BD800MP3
160	10	M	CL34BD161MP3	CL35BD161MP3
220	10	P	CL34BD221MP3	CL35BD221MP3
4.5	15	D	CL34BE4R5MP3	CL35BE4R5MP3
10	15	G	CL34BE100MP3	CL35BE100MP3
18	15	G	CL34BE180MP3	CL35BE180MP3
55	15	J	CL34BE550MP3	CL35BE550MP3
110	15	M	CL34BE111MP3	CL35BE111MP3
160	15	P	CL34BE161MP3	CL35BE161MP3
2.5	30	D	CL34BH2R5MP3	CL35BH2R2MP3
30	30	J	CL34BH300MP3	CL35BH300MP3
60	30	M	CL34BH600MP3	CL35BH600MP3
85	30	P	CL34BH850MP3	CL35BH850MP3
1.5	50	D	CL34BJ1R5MP3	CL35BJ1R5MP3
6	50	G	CL34BJ060MP3	CL35BJ060MP3
20	50	J	CL34BJ200MP3	CL35BJ200MP3
40	50	M	CL34BJ400MP3	CL35BJ400MP3
55	50	P	CL34BJ550MP3	CL35BJ550MP3
1	75	D	CL34BL010MP3	CL35BL010MP3
4	75	G	CL34BL040MP3	CL35BL040MP3
14	75	J	CL34BL140MP3	CL35BL140MP3
28	75	M	CL34BL280MP3	CL35BL280MP3
40	75	P	CL34BL400MP3	CL35BL400MP3
0.8	100	D	CL34BN0R8MP3	CL35BN0R8MP3
3	100	G	CL34BN030MP3	CL35BN030MP3
10	100	J	CL34BN100MP3	CL35BN100MP3
20	100	M	CL34BN200MP3	CL35BN200MP3
30	100	P	CL34BN300MP3	CL35BN300MP3
0.5	150	D	CL34BQ0R5MP3	CL35BQ0R5MP3
2	150	G	CL34BQ020MP3	CL35BQ020MP3
4	150	J	CL34BQ040MP3	CL35BQ040MP3
7	150	J	CL34BQ070MP3	CL35BQ070MP3
8	150	M	CL34BQ080MP3	CL35BQ080MP3
12	150	M	CL34BQ120MP3	CL35BQ120MP3
14	150	M	CL34BQ140MP3	CL35BQ140MP3
20	150	P	CL34BQ200MP3	CL35BQ200MP3
.35	200	D	CL34BRR35LP3	CL35BRR35LP3
1.5	200	G	CL34BR1R5LP3	CL35BR1R5LP3
5	200	J	CL34BR050LP3	CL35BR050LP3
10	200	M	CL34BR100LP3	CL35BR100LP3
15	200	P	CL34BR150LP3	CL35BR150LP3
.30	250	D	CL34BSR30LP3	CL35BSR30LP3
1.2	250	G	CL34BS1R2LP3	CL35BS1R2LP3
4	250	J	CL34BS040LP3	CL35BS040LP3
8	250	M	CL34BS080LP3	CL35BS080LP3
12	250	P	CL34BS120LP3	CL35BS120LP3
1	300	G	CL34BX010LP3	CL35BX010LP3
3	300	J	CL34BX030LP3	CL35BX030LP3
7	300	M	CL34BX070LP3	CL35BX070LP3
10	300	P	CL34BX100LP3	CL35BX100LP3

*Note: For vibration grade 1 or 2, change last digit of military designation to 1 or 2.

Copyright 1970, Sprague Products Company

IND-REM-8-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

MIL-C-3965 TUBULAR FOIL TANTALUM ELECTROLYTICS

TYPES CL20, CL21, CL22, CL23, CL30, CL31, CL32, and CL33

- Meet Requirements of Military Specification MIL-C-3965
- Small Electrically Stable Foil Tantalums, Long, Reliable Life
- Available in Industrial Equivalents as Types 120D, 121D, 122D, 123D
- Temperature Rating 125C Types Marked (★) Have Insulating Sleeves. All Others are Bare Case
- Capacitance Tolerance
  M = +20, −20% S = +30, −15%
  T = +50, −15% U = +75, −15%
- Call Your Sprague Industrial Distributor for Current Quantity Prices

SIZE CODE (Diam x Length)	
E 13/64 x 3/4	N 25/64 x 2 1/4
H 19/64 x 1 1/32	Q 25/64 x 2 7/8
K 25/64 x 1 9/16	



µF	Size Code	MIL Type Number to MIL-C-3965/17C	MIL Type Number to MIL-C-3965/17B*
TYPE CL20 POLARIZED ETCHED FOIL			
10 WVDC			
15	E	CL20BE150UPE	CL20CD150UP3
60	H	CL20BE600UPE	CL20CD600UP3
200	K	CL20BE201UPE	CL20CD201UP3
400	N	CL20BE401UPE	CL20CD401UP3
580	Q	CL20BE581UPE	CL20CD581UP3
15 WVDC			
10	E	CL20BG100UPE	CL20CE100UP3
40	H	CL20BG400UPE	CL20CE400UP3
120	K	CL20BG121UPE	CL20CE121UP3
250	N	CL20BG251UPE	CL20CE251UP3
350	Q	CL20BG351UPE	CL20CE351UP3
20 WVDC			
8	E	CL20BH080UPE	———
32	H	CL20BH320UPE	———
110	K	CL20BH111UPE	———
220	N	CL20BH221UPE	———
300	Q	CL20BH301UPE	———
30 WVDC			
4.5	E	CL20BJ4R5TPE	CL20CH4R5TP3
18	H	CL20BJ180TPE	CL20CH180TP3
60	K	CL20BJ600TPE	CL20CH600TP3
100	N	CL20BJ101TPE	CL20CH101TP3
150	Q	CL20BJ151TPE	CL20CH151TP3
50 WVDC			
3	E	CL20BL030TPE	CL20CJ030TP3
12	H	CL20BL120TPE	CL20CJ120TP3
30	K	CL20BL300TPE	CL20CJ300TP3
70	N	CL20BL700TPE	CL20CJ700TP3
100	Q	CL20BL101TPE	CL20CJ101TP3
65 WVDC			
2	E	CL20BN020SPE	CL20CK020TP3
8	H	CL20BN080SPE	CL20CK080TP3
25	K	CL20BN250SPE	CL20CK250TP3
50	N	CL20BN500SPE	CL20CK500TP3
70	Q	CL20BN700SPE	CL20CK700TP3
100 WVDC			
1	E	CL20BQ010SPE	CL20CN010SP3
4	H	CL20BQ040SPE	CL20CN040SP3
13	K	CL20BQ130SPE	CL20CN130SP3
25	N	CL20BQ250SPE	CL20CN250SP3
36	Q	CL20BQ360SPE	CL20CN360SP3
TYPE CL21★ POLARIZED ETCHED FOIL			
10 WVDC			
15	E	CL21BE150UPE	CL21CD150UP3
60	H	CL21BE600UPE	CL21CD600UP3
200	K	CL21BE201UPE	CL21CD201UP3
400	N	CL21BE401UPE	CL21CD401UP3
580	Q	CL21BE581UPE	CL21CD581UP3
15 WVDC			
10	E	CL21BG100UPE	CL21CE100UP3
40	H	CL21BG400UPE	CL21CE400UP3
120	K	CL21BG121UPE	CL21CE121UP3
250	N	CL21BG251UPE	CL21CE251UP3
350	Q	CL21BG351UPE	CL21CE351UP3
20 WVDC			
8	E	CL21BH080UPE	———
32	H	CL21BH320UPE	———
110	K	CL21BH111UPE	———
220	N	CL21BH221UPE	———
300	Q	CL21BH301UPE	———
30 WVDC			
4.5	E	CL21BJ4R5TPE	CL21CH4R5TP3
18	H	CL21BJ180TPE	CL21CH180TP3
60	K	CL21BJ600TPE	CL21CH600TP3
100	N	CL21BJ101TPE	CL21CH101TP3
150	Q	CL21BJ151TPE	CL21CH151TP3
50 WVDC			
3	E	CL21BL030TPE	CL21CJ030TP3
12	H	CL21BL120TPE	CL21CJ120TP3
30	K	CL21BL300TPE	CL21CJ300TP3
70	N	CL21BL700TPE	CL21CJ700TP3
100	Q	CL21BL101TPE	CL21CJ101TP3
65 WVDC			
2	E	CL21BN020SPE	CL21CK020TP3
8	H	CL21BN080SPE	CL21CK080TP3
25	K	CL21BN250SPE	CL21CK250TP3
50	N	CL21BN500SPE	CL21CK500TP3
70	Q	CL21BN700SPE	CL21CK700TP3
100 WVDC			
1	E	CL21BQ010SPE	CL21CN010SP3
4	H	CL21BQ040SPE	CL21CN040SP3
13	K	CL21BQ130SPE	CL21CN130SP3
25	N	CL21BQ250SPE	CL21CN250SP3
36	Q	CL21BQ360SPE	CL21CN360SP3
TYPE CL22 NON-POLARIZED ETCHED FOIL			
10 WVDC			
10	E	CL22BE100UNE	CL22CD100UN3
40	H	CL22BE400UNE	CL22CD400UN3
120	K	CL22BE121UNE	CL22CD121UN3
250	N	CL22BE251UNE	CL22CD251UN3
350	Q	CL22BE351UNE	CL22CD351UN3
15 WVDC			
5	E	CL22BG050UNE	CL22CE050UN3
20	H	CL22BG200UNE	CL22CE200UN3
70	K	CL22BG700UNE	CL22CE700UN3
140	N	CL22BG141UNE	CL22CE141UN3
200	Q	CL22BG201UNE	CL22CE201UN3
20 WVDC			
4.5	E	CL22BH4R5UNE	———
18	H	CL22BH180UNE	———
60	K	CL22BH600UNE	———
120	N	CL22BH121UNE	———
170	Q	CL22BH171UNE	———
30 WVDC			
2.5	E	CL22BJ2R5TNE	CL22CH2R5TN3
10	H	CL22BJ100TNE	CL22CH100TN3
30	K	CL22BJ300TNE	CL22CH300TN3
60	N	CL22BJ600TNE	CL22CH600TN3
80	Q	CL22BJ800TNE	CL22CH800TN3
50 WVDC			
1.5	E	CL22BL1R5TNE	CL22CJ1R5TN3
6	H	CL22BL060TNE	CL22CJ060TN3
15	K	CL22BL150TNE	CL22CJ150TN3
35	N	CL22BL350TNE	CL22CJ350TN3
50	Q	CL22BL500TNE	CL22CJ500TN3
65 WVDC			
1	E	CL22BN010TNE	CL22CK010TN3
4	H	CL22BN040TNE	CL22CK040TN3
12	K	CL22BN120TNE	CL22CK120TN3
25	N	CL22BN250TNE	CL22CK250TN3
35	Q	CL22BN350TNE	CL22CK350TN3
100 WVDC			
.5	E	CL22BQ0R5SNE	CL22CN0R5SN3
2	H	CL22BQ020SNE	CL22CN020SN3
6	K	CL22BQ060SNE	CL22CN060SN3
12	N	CL22BQ120SNE	CL22CN120SN3
18	Q	CL22BQ180SNE	CL22CN180SN3
TYPE CL23★ NON-POLARIZED ETCHED FOIL			
10 WVDC			
10	E	CL23BE100UNE	CL23CD100UN3
40	H	CL23BE400UNE	CL23CD400UN3
120	K	CL23BE121UNE	CL23CD121UN3
250	N	CL23BE251UNE	CL23CD251UN3
350	Q	CL23BE351UNE	CL23CD351UN3
15 WVDC			
5	E	CL23BG050UNE	CL23CE050UN3
20	H	CL23BG200UNE	CL23CE200UN3
70	K	CL23BG700UNE	CL23CE700UN3
140	N	CL23BG141UNE	CL23CE141UN3
200	Q	CL23BG201UNE	CL23CE201UN3
20 WVDC			
4.5	E	CL23BH4R5UNE	———
18	H	CL23BH180UNE	———
60	K	CL23BH600UNE	———
120	N	CL23BH121UNE	———
170	Q	CL23BH171UNE	———
30 WVDC			
2.5	E	CL23BJ2R5TNE	CL23CH2R5TN3
10	H	CL23BJ100TNE	CL23CH100TN3
30	K	CL23BJ300TNE	CL23CH300TN3
60	N	CL23BJ600TNE	CL23CH600TN3
80	Q	CL23BJ800TNE	CL23CH800TN3
50 WVDC			
1.5	E	CL23BL1R5TNE	CL23CJ1R5TN3
6	H	CL23BL060TNE	CL23CJ060TN3
15	K	CL23BL150TNE	CL23CJ150TN3
35	N	CL23BL350TNE	CL23CJ350TN3
50	Q	CL23BL500TNE	CL23CJ500TN3
65 WVDC			
1	E	CL23BN010TNE	CL23CK010TN3
4	H	CL23BN040TNE	CL23CK040TN3
12	K	CL23BN120TNE	CL23CK120TN3
25	N	CL23BN250TNE	CL23CK250TN3
35	Q	CL23BN350TNE	CL23CK350TN3
100 WVDC			
.5	E	CL23BQ0R5SNE	CL23CN0R5SN3
2	H	CL23BQ020SNE	CL23CN020SN3
6	K	CL23BQ060SNE	CL23CN060SN3
12	N	CL23BQ120SNE	CL23CN120SN3
18	Q	CL23BQ180SNE	CL23CN180SN3
TYPE CL30 POLARIZED PLAIN FOIL			
2 WVDC			
10	E	CL30BA100MPE	———
50	H	CL30BA500MPE	———
4 WVDC			
8	E	CL30BB080MPE	———
30	H	CL30BB300MPE	———
100	K	CL30BB101MPE	———
200	N	CL30BB201MPE	———
300	Q	CL30BB301MPE	———
7 WVDC			
6	E	CL30BD060MPE	———
25	H	CL30BD250MPE	———
80	K	CL30BD800MPE	———
160	N	CL30BD161MPE	———
220	Q	CL30BD221MPE	———
10 WVDC			
4.5	E	CL30BE4R5MPE	CL30CD4R5MP3
10	H	CL30BE100MPE	———
18	H	CL30BE180MPE	CL30CD180MP3
55	K	CL30BE550MPE	CL30CD550MP3
110	N	CL30BE111MPE	CL30CD111MP3
160	Q	CL30BE161MPE	CL30CD161MP3
15 WVDC			
3	E	CL30BG030MPE	CL30CE030MP3
12	H	CL30BG120MPE	CL30CE120MP3
35	K	CL30BG350MPE	CL30CE350MP3
70	N	CL30BG700MPE	CL30CE700MP3
100	Q	CL30BG101MPE	CL30CE101MP3
20 WVDC			
2.5	E	CL30BH2R5MPE	———
10	H	CL30BH100MPE	———
30	K	CL30BH300MPE	———
60	N	CL30BH600MPE	———
85	Q	CL30BH850MPE	———
30 WVDC			
1.5	E	CL30BJ1R5MPE	CL30CH1R5MP3
6	H	CL30BJ060MPE	CL30CH060MP3
20	K	CL30BJ200MPE	CL30CH200MP3
40	N	CL30BJ400MPE	CL30CH400MP3
55	Q	CL30BJ550MPE	CL30CH550MP3
50 WVDC			
1	E	CL30BL010MPE	CL30CJ010MP3
4	H	CL30BL040MPE	CL30CJ040MP3
14	K	CL30BL140MPE	CL30CJ140MP3
28	N	CL30BL280MPE	CL30CJ280MP3
40	Q	CL30BL400MPE	CL30CJ400MP3
65 WVDC			
.8	E	CL30BN0R8MPE	CL30CK0R8MP3
3	H	CL30BN030MPE	CL30CK030MP3
10	K	CL30BN100MPE	CL30CK100MP3
20	N	CL30BN200MPE	CL30CK200MP3
30	Q	CL30BN300MPE	CL30CK300MP3
100 WVDC			
.5	E	CL30BQ0R5MPE	CL30CN0R5MP3
2	H	CL30BQ020MPE	CL30CN020MP3
4	K	CL30BQ040MPE	———
7	K	CL30BQ070MPE	CL30CN070MP3
8	N	CL30BQ080MPE	———
12	N	CL30BQ120MPE	———
14	N	CL30BQ140MPE	CL30CN140MP3
20	Q	CL30BQ200MPE	CL30CN200MP3
150 WVDC			
.35	E	CL30BZR35LPE	CL30CQR35MP3
1.5	H	CL30BZ1R5LPE	CL30CQ1R5MP3
5	K	CL30BZ050LPE	CL30CQ050MP3
10	N	CL30BZ100LPE	CL30CQ100MP3
15	Q	CL30BZ150LPE	CL30CQ150MP3
165 WVDC			
.3	E	CL30B0R30LPE	———
1.2	H	CL30B01R2LPE	———
4	K	CL30B0040LPE	———
8	N	CL30B0080LPE	———
12	Q	CL30B0120LPE	———
200 WVDC			
.27	E	CL30BXR27LPE	———
1	H	CL30BX010LPE	———
3.3	K	CL30BX3R3LPE	———
6.8	N	CL30BX6R8LPE	———
10	Q	CL30BX100LPE	———
250 WVDC			
.22	E	CL30BYR22LPE	———
.82	H	CL30BYR82LPE	———
2.7	K	CL30BY2R7LPE	———
5.6	N	CL30BY5R6LPE	———
8.2	Q	CL30BY8R2LPE	———
300 WVDC			
.15	E	CL30BUR15LPE	———
.56	H	CL30BUR56LPE	———
1.8	K	CL30BU1R8LPE	———
3.9	N	CL30BU3R9LPE	———
5.6	Q	CL30BU5R6LPE	———

*Available until present stocks are exhausted.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

MIL-C-3965 FOIL TANTALUM ELECTROLYTICS, continued

µF	Size Code	MIL-Type Number to MIL-C-3965/17C	MIL-Type Number to MIL-C-3965/17B*
TYPE CL31★ POLARIZED PLAIN FOIL			
2 WVDC			
10	E	CL31BA100MPE	———
50	H	CL31BA500MPE	———
4 WVDC			
8	E	CL31BB080MPE	———
30	H	CL31BB300MPE	———
100	K	CL31BB101MPE	———
200	N	CL31BB201MPE	———
300	Q	CL31BB301MPE	———
7 WVDC			
6	E	CL31BD060MPE	———
25	H	CL31BD250MPE	———
80	K	CL31BD800MPE	———
160	N	CL31BD161MPE	———
220	Q	CL31BD221MPE	———
10 WVDC			
4.5	E	CL31BE4R5MPE	CL31CD4R5MP3
10	H	CL31BE100MPE	———
18	H	CL31BE180MPE	CL31CD180MP3
55	K	CL31BE550MPE	CL31CD550MP3
110	N	CL31BE111MPE	CL31CD111MP3
160	Q	CL31BE161MPE	CL31CD161MP3
15 WVDC			
3	E	CL31BG030MPE	CL31CE030MP3
12	H	CL31BG120MPE	CL31CE120MP3
35	K	CL31BG350MPE	CL31CE350MP3
70	N	CL31BG700MPE	CL31CE700MP3
100	Q	CL31BG101MPE	CL31CE101MP3
20 WVDC			
2.5	E	CL31BH2R5MPE	———
10	H	CL31BH100MPE	———
30	K	CL31BH300MPE	———
60	N	CL31BH600MPE	———
85	Q	CL31BH850MPE	———
30 WVDC			
1.5	E	CL31BJ1R5MPE	CL31CH1R5MP3
6	H	CL31BJ060MPE	CL31CH060MP3
20	K	CL31BJ200MPE	CL31CH200MP3
40	N	CL31BJ400MPE	CL31CH400MP3
55	Q	CL31BJ550MPE	CL31CH550MP3
50 WVDC			
1	E	CL31BL010MPE	CL31CJ010MP3
4	H	CL31BL040MPE	CL31CJ040MP3
14	K	CL31BL140MPE	CL31CJ140MP3
28	N	CL31BL280MPE	CL31CJ280MP3
40	Q	CL31BL400MPE	CL31CJ400MP3
65 WVDC			
.8	E	CL31BN0R8MPE	CL31CK0R8MP3
3	H	CL31BN030MPE	CL31CK030MP3
10	K	CL31BN100MPE	CL31CK100MP3
20	N	CL31BN200MPE	CL31CK200MP3
30	Q	CL31BN300MPE	CL31CK300MP3
100 WVDC			
.5	E	CL31BQ0R5MPE	CL31CN0R5MP3
2	H	CL31BQ020MPE	CL31CN020MP3
4	K	CL31BQ040MPE	———
7	K	CL31BQ070MPE	CL31CN070MP3
8	N	CL31BQ080MPE	———
12	N	CL31BQ120MPE	———
14	N	CL31BQ140MPE	CL31CN140MP3
20	Q	CL31BQ200MPE	CL31CN200MP3
150 WVDC			
.35	E	CL31BZR35LPE	CL31CQR35MP3
1.5	H	CL31BZ1R5LPE	CL31CQ1R5MP3
5	K	CL31BZ050LPE	CL31CQ050MP3
10	N	CL31BZ100LPE	CL31CQ100MP3
15	Q	CL31BZ150LPE	CL31CQ150MP3
165 WVDC			
.3	E	CL31BOR30LPE	———
1.2	H	CL31BO1R2LPE	———
4	K	CL31BO040LPE	———
8	N	CL31BO080LPE	———
12	Q	CL31BO120LPE	———
200 WVDC			
.27	E	CL31BXR27LPE	———
1	H	CL31BX010LPE	———
3.3	K	CL31BX3R3LPE	———
6.8	N	CL31BX6R8LPE	———
10	Q	CL31BX100LPE	———
250 WVDC			
.22	E	CL31BYR22LPE	———
.82	H	CL31BYR82LPE	———
2.7	K	CL31BY2R7LPE	———
5.6	N	CL31BY5R6LPE	———
8.2	Q	CL31BY8R2LPE	———
300 WVDC			
.15	E	CL31BUR15LPE	———
.56	H	CL31BUR56LPE	———
1.8	K	CL31BU1R8LPE	———
3.9	N	CL31BU3R9LPE	———
5.6	Q	CL31BU5R6LPE	———
TYPE CL32 NON-POLARIZED PLAIN FOIL			
2 WVDC			
10	E	CL32BA100MNE	———
45	H	CL32BA450MNE	———
140	K	CL32BA141MNE	———
280	N	CL32BA281MNE	———
400	Q	CL32BA401MNE	———
4 WVDC			
7	E	CL32BB070MNE	———
25	H	CL32BB250MNE	———
85	K	CL32BB850MNE	———
170	N	CL32BB171MNE	———
250	Q	CL32BB251MNE	———
7 WVDC			
4	E	CL32BD040MNE	———
16	H	CL32BD160MNE	———
55	K	CL32BD550MNE	———
110	N	CL32BD111MNE	———
150	Q	CL32BD151MNE	———
10 WVDC			
2.5	E	CL32BE2R5MNE	CL32CD2R5MN3
10	H	CL32BE100MNE	CL32CD100MN3
35	K	CL32BE350MNE	CL32CD350MN3
70	N	CL32BE700MNE	CL32CD700MN3
100	Q	CL32BE101MNE	CL32CD101MN3
15 WVDC			
1.5	E	CL32BG1R5MNE	CL32CE1R5MN3
6	H	CL32BG060MNE	CL32CE060MN3
20	K	CL32BG200MNE	CL32CE200MN3
40	N	CL32BG400MNE	CL32CE400MN3
60	Q	CL32BG600MNE	CL32CE600MN3
20 WVDC			
1.4	E	CL32BH1R4MNE	———
5.5	H	CL32BH5R5MNE	———
18	K	CL32BH180MNE	———
36	N	CL32BH360MNE	———
45	Q	CL32BH450MNE	———
30 WVDC			
.8	E	CL32BJ0R8MNE	CL32CH0R8MN3
3	H	CL32BJ030MNE	CL32CH030MN3
10	K	CL32BJ100MNE	CL32CH100MN3
20	N	CL32BJ200MNE	CL32CH200MN3
30	Q	CL32BJ300MNE	CL32CH300MN3
50 WVDC			
.5	E	CL32BL0R5MNE	CL32CJ0R5MN3
2	H	CL32BL020MNE	CL32CJ020MN3
7	K	CL32BL070MNE	CL32CJ070MN3
14	N	CL32BL140MNE	CL32CJ140MN3
20	Q	CL32BL200MNE	CL32CJ200MN3
65 WVDC			
.4	E	CL32BN0R4MNE	CL32CK0R4MN3
1.5	H	CL32BN1R5MNE	CL32CK1R5MN3
5	K	CL42BN050MNE	CL32CK050MN3
10	N	CL32BN100MNE	CL32CK100MN3
15	Q	CL32BN150MNE	CL32CK150MN3
100 WVDC			
.25	E	CL32BQR25MNE	CL32CNR25MN3
1	H	CL32BQ010MNE	CL32CN010MN3
3.5	K	CL32BQ3R5MNE	CL32CN3R5MN3
7	N	CL32BQ070MNE	CL32CN070MN3
10	Q	CL32BQ100MNE	CL32CN100MN3
150 WVDC			
.15	E	CL32BZR15LNE	CL32CQR15MN3
.75	H	CL32BZR75LNE	CL32CQR75MN3
2.5	K	CL32BZ2R5LNE	CL32CQ2R5MN3
5	N	CL32BZ050LNE	CL32CQ050MN3
7.5	Q	CL32BZ7R5LNE	CL32CQ7R5MN3
165 WVDC			
.15	E	CL32BO915LNE	———
.6	H	CL32BO0R6LNE	———
2	K	CL32BO020LNE	———
4	N	CL32BO040LNE	———
6	Q	CL32BO060LNE	———
200 WVDC			
.12	E	CL32BXR12LNE	———
.47	H	CL32BXR47LNE	———
1.5	K	CL32BX1R5LNE	———
3.3	N	CL32BX3R3LNE	———
4.7	Q	CL32BX4R7LNE	———
250 WVDC			
.1	E	CL32BY0R1LNE	———
.39	H	CL32BYR39LNE	———
1.2	K	CL32BY1R2LNE	———
2.2	N	CL32BY2R2LNE	———
3.9	Q	CL32BY3R9LNE	———
TYPE CL33★ NON-POLARIZED PLAIN FOIL			
2 WVDC			
10	E	CL33BA100MNE	———
45	H	CL33BA450MNE	———
140	K	CL33BA141MNE	———
280	N	CL33BA281MNE	———
400	Q	CL33BA401MNE	———
4 WVDC			
7	E	CL33BB070MNE	———
25	H	CL33BB250MNE	———
85	K	CL33BB350MNE	———
170	N	CL33BB171MNE	———
250	Q	CL33BB251MNE	———
7 WVDC			
4	E	CL33BD040MNE	———
16	H	CL33BD160MNE	———
55	K	CL33BD550MNE	———
110	N	CL33BD111MNE	———
150	Q	CL33BD151MNE	———
10 WVDC			
2.5	E	CL33BE2R5MNE	CL33CD2R5MN3
10	H	CL33BE100MNE	CL33CD100MN3
35	K	CL33BE350MNE	CL33CD350MN3
70	N	CL33BE700MNE	CL33CD700MN3
100	Q	CL33BE101MNE	CL33CD101MN3
15 WVDC			
1.5	E	CL33BG1R5MNE	CL33CE1R5MN3
6	H	CL33BG060MNE	CL33CE060MN3
20	K	CL33BG200MNE	CL33CE200MN3
40	N	CL33BG400MNE	CL33CE400MN3
60	Q	CL33BG600MNE	CL33CE600MN3
20 WVDC			
1.4	E	CL33BH1R4MNE	———
5.5	H	CL33BH5R5MNE	———
18	K	CL33BH180MNE	———
36	N	CL33BH360MNE	———
45	Q	CL33BH450MNE	———
30 WVDC			
.8	E	CL33BJ0R8MNE	CL33CH0R8MN3
3	H	CL33BJ030MNE	CL33CH030MN3
10	K	CL33BJ100MNE	CL33CH100MN3
20	N	CL33BJ200MNE	CL33CH200MN3
30	Q	CL33BJ300MNE	CL33CH300MN3
50 WVDC			
.5	E	CL33BL0R5MNE	CL33CJ0R5MN3
2	H	CL33BL020MNE	CL33CJ020MN3
7	K	CL33BL070MNE	CL33CJ070MN3
14	N	CL33BL140MNE	CL33CJ140MN3
20	Q	CL33BL200MNE	CL33CJ200MN3
65 WVDC			
.4	E	CL33BN0R4MNE	CL33CK0R4MN3
1.5	H	CL33BN1R5MNE	CL33CK1R5MN3
5	K	CL33BN050MNE	CL33CK050MN3
10	N	CL33BN100MNE	CL33CK100MN3
15	Q	CL33BN150MNE	CL33CK150MN3
100 WVDC			
.25	E	CL33BQR25MNE	CL33CNR25MN3
1	H	CL33BQ010MNE	CL33CN010MN3
3.5	K	CL33BQ3R5MNE	CL33CN3R5MN3
7	N	CL33BQ070MNE	CL33CN070MN3
10	Q	CL33BQ100MNE	CL33CN100MN3
150 WVDC			
.15	E	CL33BZR15LNE	CL33CQR15MN3
.75	H	CL33BZR75LNE	CL33CQR75MN3
2.5	K	CL33BZ2R5LNE	CL33CQ2R5MN3
5	N	CL33BZ050LNE	CL33CQ050MN3
7.5	Q	CL33BZ7R5LNE	CL33CQ7R5MN3
165 WVDC			
.15	E	CL33BOR15LNE	———
.6	H	CL33BO0R6LNE	———
2	K	CL33BO020LNE	———
4	N	CL33BO040LNE	———
6	Q	CL33BO060LNE	———
200 WVDC			
.12	E	CL33BXR12LNE	———
.47	H	CL33BXR47LNE	———
1.5	K	CL33BX1R5LNE	———
3.3	N	CL33BX3R3LNE	———
4.7	Q	CL33BX4R7LNE	———
250 WVDC			
.1	E	CL33BY0R1LNE	———
.39	H	CL33BYR39LNE	———
1.2	K	CL33BY1R2LNE	———
2.2	N	CL33BY2R2LNE	———
3.9	Q	CL33BY3R9LNE	———

*Available until present stocks are exhausted.

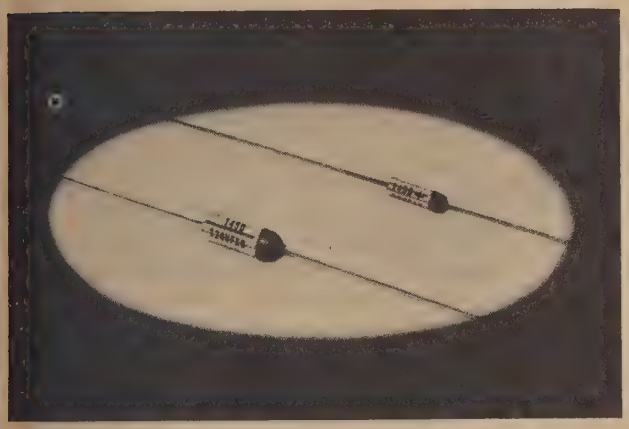
Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 145D NON-SOLID ELECTROLYTE SINTERED-PELLET MINIATURE TANTALEX® CAPACITORS



- High Volumetric Efficiency—Designed for Use in Miniature Commercial and Industrial Printed Wiring Boards, Packaged Circuit Modules, Low-Frequency Filters, and Allied Applications Where Space is at a Premium
- Elastomer End Seals Capped With Plastic Resin for Additional Protection—Prevents Electrolyte Leakage and Lead Breakage
- Will Operate at Temperatures from −55C to +85C Without Voltage Derating
- Capacitors Shown Below Have Outer Plastic-Film Insulation. For Units With Bare Case, Change Last Digit of Catalog Number From 2 to 0
- For Complete Technical Data, Refer to Latest Issue of Engineering Bulletin 3750

μF	Diam.	Length	Catalog Number*
		6 WVDC	
27	0.115	0.312	145D276X0006E2
180	0.145	0.600	145D187X0006H2
560	0.225	0.700	145D567X0006J2
		8 WVDC	
22	0.115	0.312	145D226X0008E2
150	0.145	0.600	145D157X0008H2
470	0.225	0.700	145D477X0008J2
		10 WVDC	
18	0.115	0.312	145D186X0010E2
120	0.145	0.600	145D127X0010H2
390	0.225	0.700	145D397X0010J2
		12 WVDC	
15	0.115	0.312	145D156X0012E2
100	0.145	0.600	145D107X0012H2
330	0.225	0.700	145D337X0012J2
		15 WVDC	
12	0.115	0.312	145D126X0015E2
82	0.145	0.600	145D826X0015H2
270	0.225	0.700	145D277X0015J2
		20 WVDC	
10	0.115	0.312	145D106X0020E2
68	0.145	0.600	145D686X0020H2
220	0.225	0.700	145D227X0020J2
		25 WVDC	
8.2	0.115	0.312	145D825X0025E2
56	0.145	0.600	145D566X0025H2
180	0.225	0.700	145D187X0025J2

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	Diam.	Length	Catalog Number*
		30 WVDC	
6.8	0.115	0.312	145D685X0030E2
47	0.145	0.600	145D476X0030H2
150	0.225	0.700	145D157X0030J2
		35 WVDC	
5.6	0.115	0.312	145D565X0035E2
39	0.145	0.600	145D396X0035H2
120	0.225	0.700	145D127X0035J2
		40 WVDC	
4.7	0.115	0.312	145D475X0040E2
33	0.145	0.600	145D336X0040H2
100	0.225	0.700	145D107X0040J2
		50 WVDC	
3.9	0.115	0.312	145D395X0050E2
27	0.145	0.600	145D276X0050H2
82	0.225	0.700	145D826X0050J2
		60 WVDC	
3.3	0.115	0.312	145D335X0060E2
22	0.145	0.600	145D226X0060H2
68	0.225	0.700	145D686X0060J2
		75 WVDC	
2.2	0.115	0.312	145D225X0075E2
2.7	0.115	0.312	145D275X0075E2
15	0.145	0.600	145D156X0075H2
18	0.145	0.600	145D186X0075H2
47	0.225	0.700	145D476X0075J2
56	0.225	0.700	145D566X0075J2

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

*Catalog Numbers listed are for ±20% tolerance capacitors. For units with a capacitance tolerance of ±10%, change the digit following the letter X from 0 to 9.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 130D 125 C SINTERED-ANODE TANTALEX® CAPACITORS



DIMENSIONS

Code	D x L	Code	D x L	Code	D x L	Code	D x L
C	.203 x .515	F	.296 x .703	T	.390 x .828	W	.390 x 1.312

- Reliable, Superior Quality Capacitors With no Voltage Derating for 125C Operation
- Especially Suited for Military Electronics
- Meets 2000 Cycle MIL Missile Vibration Requirements
- Clean, Shoulder-Less Design Simplifies Mounting on Printed Wiring Boards
- Voltage Ratings From 4 WVDC Through 100 WVDC
- Capacitances from 1.7 μF to 1200 μF
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletins 3701 and 3701.2
- Listed Units Have Plastic-Film Insulation. For Bare Metal Cases, Change Last Digit of Cat. No. to "0"

Call Your Sprague Industrial Distributor For Current Quantity Prices

GROUP 1: ±10%, +20, −15%, and +75, −15% Capacitance Tolerance with outer plastic-film insulation

μF	WVDC	Case Code	Catalog Number ±10%	+20—15%	+75—15%
27	4	C	130D276X9004C2	130D276C2004C2	130D276C7004C2
30	4	C	130D306X9004C2	130D306C2004C2	130D306C7004C2
120	4	F	130D127X9004F2	130D127C2004F2	130D127C7004F2
140	4	F	130D147X9004F2	130D147C2004F2	130D147C7004F2
290	4	T	130D297X9004T2	130D297C2004T2	130D297C7004T2
330	4	T	130D337X9004T2	130D337C2004T2	130D337C7004T2
22	5	C	130D226X9005C2	130D226C2005C2	130D226C7005C2
25	5	C	130D256X9005C2	130D256C2005C2	130D256C7005C2
100	5	F	130D107X9005F2	130D107C2005F2	130D107C7005F2
120	5	F	130D127X9005F2	130D127C2005F2	130D127C7005F2
260	5	T	130D267X9005T2	130D267C2005T2	130D267C7005T2
290	5	T	130D297X9005T2	130D297C2005T2	130D297C7005T2
18	7	C	130D186X9007C2	130D186C2007C2	130D186C7007C2
20	7	C	130D206X9007C2	130D206C2007C2	130D206C7007C2
85	7	F	130D856X9007F2	130D856C2007F2	130D856C7007F2
100	7	F	130D107X9007F2	130D107C2007F2	130D107C7007F2
220	7	T	130D227X9007T2	130D227C2007T2	130D227C7007T2
250	7	T	130D257X9007T2	130D257C2007T2	130D257C7007T2
13	10	C	130D136X9010C2	130D136C2010C2	130D136C7010C2
15	10	C	130D156X9010C2	130D156C2010C2	130D156C7010C2
55	10	F	130D556X9010F2	130D556C2010F2	130D556C7010F2
70	10	F	130D706X9010F2	130D706C2010F2	130D706C7010F2
150	10	T	130D157X9010T2	130D157C2010T2	130D157C7010T2
170	10	T	130D177X9010T2	130D177C2010T2	130D177C7010T2
9	15	C	130D905X9015C2	130D905C2015C2	130D905C7015C2
10	15	C	130D106X9015C2	130D106C2015C2	130D106C7015C2
45	15	F	130D456X9015F2	130D456C2015F2	130D456C7015F2
50	15	F	130D506X9015F2	130D506C2015F2	130D506C7015F2
100	15	T	130D107X9015T2	130D107C2015T2	130D107C7015T2
110	15	T	130D117X9015T2	130D117C2015T2	130D117C7015T2
7	20	C	130D705X9020C2	130D705C2020C2	130D705C7020C2
8	20	C	130D805X9020C2	130D805C2020C2	130D805C7020C2
35	20	F	130D356X9020F2	130D356C2020F2	130D356C7020F2
40	20	F	130D406X9020F2	130D406C2020F2	130D406C7020F2
80	20	T	130D806X9020T2	130D806C2020T2	130D806C7020T2
100	20	T	130D107X9020T2	130D107C2020T2	130D107C7020T2
4.5	30	C	130D455X9030C2	130D455C2030C2	130D455C7030C2
5	30	C	130D505X9030C2	130D505C2030C2	130D505C7030C2
22	30	F	130D226X9030F2	130D226C2030F2	130D226C7030F2
25	30	F	130D256X9030F2	130D256C2030F2	130D256C7030F2
55	30	T	130D556X9030T2	130D556C2030T2	130D556C7030T2
60	30	T	130D606X9030T2	130D606C2030T2	130D606C7030T2
3.6	40	C	130D365X9040C2	130D365C2040C2	130D365C7040C2
4	40	C	130D405X9040C2	130D405C2040C2	130D405C7040C2
18	40	F	130D186X9040F2	130D186C2040F2	130D186C7040F2
20	40	F	130D206X9040F2	130D206C2040F2	130D206C7040F2
45	40	T	130D456X9040T2	130D456C2040T2	130D456C7040T2
50	40	T	130D506X9040T2	130D506C2040T2	130D506C7040T2
3	50	C	130D305X9050C2	130D305C2050C2	130D305C7050C2
3.5	50	C	130D355X9050C2	130D355C2050C2	130D355C7050C2
13	50	F	130D136X9050F2	130D136C2050F2	130D136C7050F2
15	50	F	130D156X9050F2	130D156C2050F2	130D156C7050F2
35	50	T	130D356X9050T2	130D356C2050T2	130D356C7050T2
40	50	T	130D406X9050T2	130D406C2050T2	130D406C7050T2
2.5	70	C	130D255X9070C2	130D255C2070C2	130D255C7070C2
10	70	F	130D106X9070F2	130D106C2070F2	130D106C7070F2
11	70	F	130D116X9070F2	130D116C2070F2	130D116C7070F2
27	70	T	130D276X9070T2	130D276C2070T2	130D276C7070T2
30	70	T	130D306X9070T2	130D306C2070T2	130D306C7070T2
1.7	85	C	130D175X9085C2	130D175C2085C2	130D175C7085C2
9	85	F	130D905X9085F2	130D905C2085F2	130D905C7085F2
18	85	T	130D186X9085T2	130D186C2085T2	130D186C7085T2
1.7	100	C	130D175X9100C2	130D175C2100C2	130D175C7100C2
6.8	100	F	130D685X9100F2	130D685C2100F2	130D685C7100F2
14	100	T	130D146X9100T2	130D146C2100T2	130D146C7100T2

GROUP 2: ±20% and ±10% Capacitance Tolerance with outer plastic-film insulation

These capacitors have approximately twice the capacitance of Group 1 Capacitors of the same physical size at a given voltage rating.

μF	WVDC	Case Code	±20% Tol.	±10% Tol.
68	4	C	130D686X0004C2	130D686X9004C2
270	4	F	130D277X0004F2	130D277X9004F2
560	4	T	130D567X0004T2	130D567X9004T2
1200	4	W	130D128X0004W2	130D128X9004W2
56	5	C	130D566X0005C2	130D566X9005C2
220	5	F	130D227X0005F2	130D227X9005F2
430	5	T	130D437X0005T2	130D437X9005T2
850	5	W	130D857X0005W2	130D857X9005W2
47	7	C	130D476X0007C2	130D476X9007C2
180	7	F	130D187X0007F2	130D187X9007F2
390	7	T	130D397X0007T2	130D397X9007T2
750	7	W	130D757X0007W2	130D757X9007W2
33	10	C	130D336X0010C2	130D336X9010C2
120	10	F	130D127X0010F2	130D127X9010F2
270	10	T	130D277X0010T2	130D277X9010T2
540	10	W	130D547X0010W2	130D547X9010W2
22	15	C	130D226X0015C2	130D226X9015C2
100	15	F	130D107X0015F2	130D107X9015F2
180	15	T	130D187X0015T2	130D187X9015T2
350	15	W	130D357X0015W2	130D357X9015W2
15	20	C	130D156X0020C2	130D156X9020C2
68	20	F	130D686X0020F2	130D686X9020F2
150	20	T	130D157X0020T2	130D157X9020T2
300	20	W	130D307X0020W2	130D307X9020W2
10	30	C	130D106X0030C2	130D106X9030C2
47	30	F	130D476X0030F2	130D476X9030F2
82	30	T	130D826X0030T2	130D826X9030T2
160	30	W	130D167X0030W2	130D167X9030W2
8.2	40	C	130D825X0040C2	130D825X9040C2
39	40	F	130D396X0040F2	130D396X9040F2
68	40	T	130D686X0040T2	130D686X9040T2
140	40	W	130D147X0040W2	130D147X9040W2
6.8	50	C	130D685X0050C2	130D685X9050C2
33	50	F	130D336X0050F2	130D336X9050F2
56	50	T	130D566X0050T2	130D566X9050T2
110	50	W	130D117X0050W2	130D117X9050W2
4.7	70	C	130D475X0070C2	130D475X9070C2
22	70	F	130D226X0070F2	130D226X9070F2
43	70	T	130D436X0070T2	130D436X9070T2
86	70	W	130D866X0070W2	130D866X9070W2
3.6	85	C	130D365X0085C2	130D365X9085C2
14	85	F	130D146X0085F2	130D146X9085F2
25	85	T	130D256X0085T2	130D256X9085T2
56	85	W	130D566X0085W2	130D566X9085W2
3	100	C	130D305X0100C2	130D305X9100C2
11	100	F	130D116X0100F2	130D116X9100F2
22	100	T	130D226X0100T2	130D226X9100T2

Copyright 1970, Sprague Products Company

IND-REM-4A-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 130D TANTALEX® CAPACITORS, continued

GROUP 3: ±20% and ±10% Capacitance Tolerance with outer plastic-film insulation

These are extended-range capacitors, with substantially higher capacitance than units of the same physical size in Groups 1 or 2.

µF	WVDC	Case Code	Catalog Number*	µF	WVDC	Case Code	Catalog Number*	µF	WVDC	Case Code	Catalog Number*	µF	WVDC	Case Code	Catalog Number*
200	4	C	130D207X0004C2	82	10	C	130D826X0010C2	150	20	F	130D157X0020F2	100	40	F	130D107X0040F2
820	4	F	130D827X0004F2	100	10	C	130D107X0010C2	180	20	F	130D187X0020F2	140	40	T	130D147X0040T2
1500	4	T	130D158X0004T2	330	10	F	130D337X0010F2	220	20	F	130D227X0020F2	220	40	T	130D227X0040T2
				390	10	F	130D397X0010F2	330	20	T	130D337X0020T2				
180	5	C	130D187X0005C2	680	10	T	130D687X0010T2	390	20	T	130D397X0020T2				
680	5	F	130D687X0005F2	820	10	T	130D827X0010T2	470	20	T	130D477X0020T2	12	50	C	130D126X0050C2
1400	5	T	130D148X0005T2									15	50	C	130D156X0050C2
				68	15	C	130D686X0015C2	33	30	C	130D336X0030C2	22	50	C	130D226X0050C2
120	7	C	130D127X0007C2	270	15	F	130D277X0015F2	120	30	F	130D127X0030F2	47	50	F	130D476X0050F2
150	7	C	130D157X0007C2	560	15	T	130D567X0015T2	270	30	T	130D277X0030T2	56	50	F	130D566X0050F2
470	7	F	130D477X0007F2									82	50	F	130D826X0050F2
560	7	F	130D567X0007F2	39	20	C	130D396X0020C2	18	40	C	130D186X0040C2	82	50	T	130D826X0050T2
1000	7	T	130D108X0007T2	47	20	C	130D476X0020C2	27	40	C	130D276X0040C2	110	50	T	130D117X0050T2
1200	7	T	130D128X0007T2	56	20	C	130D566X0020C2	68	40	F	130D686X0040F2	180	50	T	130D187X0050T2

* Numbers shown are ±20% capacitors. For units with ±10% capacitance tolerance, change digit after X from 0 to 9.

TYPE 109D SINTERED-ANODE TANTALEX® CAPACITORS



DIMENSIONS

Code	D x L	Code	D x L	Code	D x L	Code	D x L
C	.203 x .515	F	.296 x .703	T	.390 x .828	W	.390 x 1.312

- Intended for Applications Where Reliable Design in Military Equipment is Required
- Double Spun TFE-fluorocarbon Elastomer High Temp. End Seals
- Large Values of Capacitance in Small Physical Size
- Listed Units Have Plastic Sleeves
- For Bare Case, End Catalog Number in "0" instead of "2"
- May Be Operated at 85C at Rated Voltage and to 105C With 15% Voltage Derating
- Will Meet 2000 Cycle Missile Vibration Requirements
- For Complete Technical Data, See Latest Issue of Engineering Bulletin 3700 and 3700.2

Call Your Sprague Industrial Distributor For Current Quantity Prices

GROUP 1: Available in Capacitance Tolerances of ±10%, +20, −15%; +75, −15%

µF	WVDC	Size Code	Catalog Number ±10%	Catalog Number +20, −15%	Catalog Number +75, −15%	µF	WVDC	Size Code	Catalog Number ±10%	Catalog Number +20, −15%	Catalog Number +75, −15%
27	6	C	109D276X9006C2	109D276C2006C2	109D276C7006C2	40	30	F	109D406X9030F2	109D406C2030F2	109D406C7030F2
30	6	C	109D306X9006C2	109D306C2006C2	109D306C7006C2	80	30	T	109D806X9030T2	109D806C2030T2	109D806C7030T2
120	6	F	109D127X9006F2	109D127C2006F2	109D127C7006F2	100	30	T	109D107X9030T2	109D107C2030T2	109D107C7030T2
140	6	F	109D147X9006F2	109D147C2006F2	109D147C7006F2						
290	6	T	109D297X9006T2	109D297C2006T2	109D297C7006T2	4.5	50	C	109D455X9050C2	109D455C2050C2	109D455C7050C2
330	6	T	109D337X9006T2	109D337C2006T2	109D337C7006T2	5	50	C	109D505X9050C2	109D505C2050C2	109D505C7050C2
						22	50	F	109D226X9050F2	109D226C2050F2	109D226C7050F2
22	8	C	109D226X9008C2	109D226C2008C2	109D226C7008C2	25	50	F	109D256X9050F2	109D256C2050F2	109D256C7050F2
25	8	C	109D256X9008C2	109D256C2008C2	109D256C7008C2	55	50	T	109D556X9050T2	109D556C2050T2	109D556C7050T2
100	8	F	109D107X9008F2	109D107C2008F2	109D107C7008F2	60	50	T	109D606X9050T2	109D606C2050T2	109D606C7050T2
120	8	F	109D127X9008F2	109D127C2008F2	109D127C7008F2						
260	8	T	109D276X9008T2	109D267C2008T2	109D276C7008T2	3.6	60	C	109D365X9060C2	109D365C2060C2	109D365C7060C2
290	8	T	109D297X9008T2	109D297C2008T2	109D297C7008T2	4	60	C	109D405X9060C2	109D405C2060C2	109D405C7060C2
						18	60	F	109D186X9060F2	109D186C2060F2	109D186C7060F2
18	10	C	109D186X9010C2	109D186C2010C2	109D186C7010C2	20	60	F	109D206X9060F2	109D206C2060F2	109D206C7060F2
20	10	C	109D206X9010C2	109D206C2010C2	109D206C7010C2	45	60	T	109D456X9060T2	109D456C2060T2	109D456C7060T2
85	10	F	109D856X9010F2	109D856C2010F2	109D856C7010F2	50	60	T	109D506X9060T2	109D506C2060T2	109D506C7060T2
100	10	F	109D107X9010F2	109D107C2010F2	109D107C7010F2						
220	10	T	109D227X9010T2	109D227C2010T2	109D227C7010T2	3	75	C	109D305X9075C2	109D305C2075C2	109D305C7075C2
250	10	T	109D257X9010T2	109D257C2010T2	109D257C7010T2	3.5	75	C	109D355X9075C2	109D355C2075C2	109D355C7075C2
						13	75	F	109D136X9075F2	109D136C2075F2	109D136C7075F2
13	15	C	109D136X9015C2	109D136C2015C2	109D136C7015C2	15	75	F	109D156X9075F2	109D156C2075F2	109D156C7075F2
15	15	C	109D156X9015C2	109D156C2015C2	109D156C7015C2	35	75	T	109D356X9075T2	109D356C2075T2	109D356C7075T2
55	15	F	109D556X9015F2	109D556C2015F2	109D556C7015F2	40	75	T	109D406X9075T2	109D406C2075T2	109D406C7075T2
70	15	F	109D706X9015F2	109D706C2015F2	109D706C7015F2						
150	15	T	109D157X9015T2	109D157C2015T2	109D157C7015T2	2.5	100	C	109D255X9100C2	109D255C2100C2	109D255C7100C2
170	15	T	109D177X9015T2	109D177C2015T2	109D177C7015T2	10	100	F	109D106X9100F2	109D106C2100F2	109D106C7100F2
						11	100	F	109D116X9100F2	109D116C2100F2	109D116C7100F2
9	25	C	109D905X9025C2	109D905C2025C2	109D905C7025C2	27	100	T	109D276X9100T2	109D276C2100T2	109D276C7100T2
[illegible]	25	C	109D106X9025C2	109D106C2025C2	109D106C7025C2	30	100	T	109D306X9100T2	109D306C2100T2	109D306C7100T2
45	25	F	109D456X9025F2	109D456C2025F2	109D456C7025F2						
50	25	F	109D506X9025F2	109D506C2025F2	109D506C7025F2	1.7	125	C	109D175X9125C2	109D175C2125C2	109D175C7125C2
100	25	T	109D107X9025T2	109D107C2025T2	109D107C7025T2	9	125	F	109D905X9125F2	109D905C2125F2	109D905C7125F2
110	25	T	109D117X9025T2	109D117C2025T2	109D117C7025T2	18	125	T	109D186X9125T2	109D186C2125T2	109D186C7125T2
7	30	C	109D705X9030C2	109D705C2030C2	109D705C7030C2	1.7	150	C	109D175X9150C2	109D175C2150C2	109D175C7150C2
8	30	C	109D805X9030C2	109D805C2030C2	109D805C7030C2	6.8	150	F	109D685X9150F2	109D685C2150F2	109D685C7150F2
35	30	F	109D356X9030F2	109D356C2030F2	109D356C7030F2	14	150	T	109D146X9150T2	109D146C2150T2	109D146C7150T2

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 109D TANTALEX® CAPACITORS, continued

GROUP 2: Available in Capacitance Tolerances of ±20% and ±10%

These capacitors have approximately twice the capacitance of Group I Capacitors of the same physical size at a given voltage rating.

µF	WVDC	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
68	6	C	109D686X0006C2	109D686X9006C2
270	6	F	109D277X0006F2	109D277X9006F2
560	6	T	109D567X0006T2	109D567X9006T2
1200	6	W	109D128X0006W2	109D128X9006W2
56	8	C	109D566X0008C2	109D566X9008C2
220	8	F	109D227X0008F2	109D227X9008F2
430	8	T	109D437X0008T2	109D437X9008T2
850	8	W	109D857X0008W2	109D857X9008W2
47	10	C	109D476X0010C2	109D476X9010C2
180	10	F	109D187X0010F2	109D187X9010F2
390	10	T	109D397X0010T2	109D397X9010T2
750	10	W	109D757X0010W2	109D757X9010W2
33	15	C	109D336X0015C2	109D336X9015C2
120	15	F	109D127X0015F2	109D127X9015F2
270	15	T	109D277X0015T2	109D277X9015T2
540	15	W	109D547X0015W2	109D547X9015W2
22	25	C	109D226X0025C2	109D226X9025C2
100	25	F	109D107X0025F2	109D107X9025F2
180	25	T	109D187X0025T2	109D187X9025T2
350	25	W	109D357X0025W2	109D357X9025W2
15	30	C	109D156X0030C2	109D156X9030C2
68	30	F	109D686X0030F2	109D686X9030F2
150	30	T	109D157X0030T2	109D157X9030T2
300	30	W	109D307X0030W2	109D307X9030W2
10	50	C	109D106X0050C2	109D106X9050C2
47	50	F	109D476X0050F2	109D476X9050F2
82	50	T	109D826X0050T2	109D826X9050T2
160	50	W	109D167X0050W2	109D167X9050W2
8.2	60	C	109D825X0060C2	109D825X9060C2
39	60	F	109D396X0060F2	109D396X9060F2
68	60	T	109D686X0060T2	109D686X9060T2
140	60	W	109D147X0060W2	109D147X9060W2
6.8	75	C	109D685X0075C2	109D685X9075C2
33	75	F	109D336X0075F2	109D336X9075F2
56	75	T	109D566X0075T2	109D566X9075T2
110	75	W	109D117X0075W2	109D117X9075W2
4.7	100	C	109D475X0100C2	109D475X9100C2
22	100	F	109D226X0100F2	109D226X9100F2
43	100	T	109D436X0100T2	109D436X9100T2
86	100	W	109D866X0100W2	109D866X9100W2
3.6	125	C	109D365X0125C2	109D365X9125C2
14	125	F	109D146X0125F2	109D146X9125F2
25	125	T	109D256X0125T2	109D256X9125T2
56	125	W	109D566X0125W2	109D566X9125W2
3	150	C	109D305X0150C2	109D305X9150C2
11	150	F	109D116X0150F2	109D116X9150F2
22	150	T	109D226X0150T2	109D226X9150T2

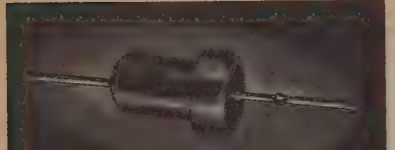
GROUP 3: Available in Capacitance Tolerances of ±20% and ±10%

These are extended-range capacitors, with substantially higher capacitance than units of the same physical size in Groups 1 or 2.

µF	WVDC	Case Code	Catalog Number*
200	6	C	109D207X0006C2
820	6	F	109D827X0006F2
1500	6	T	109D158X0006T2
180	8	C	109D187X0008C2
680	8	F	109D687X0008F2
1400	8	T	109D148X0008T2
120	10	C	109D127X0010C2
150	10	C	109D157X0010C2
470	10	F	109D477X0010F2
560	10	F	109D567X0010F2
1000	10	T	109D108X0010T2
1200	10	T	109D128X0010T2
82	15	C	109D826X0015C2
100	15	C	109D107X0015C2
330	15	F	109D337X0015F2
390	15	F	109D397X0015F2
680	15	T	109D687X0015T2
820	15	T	109D827X0015T2
68	25	C	109D686X0025C2
270	25	F	109D277X0025F2
560	25	T	109D567X0025T2
39	30	C	109D396X0030C2
47	30	C	109D476X0030C2
56	30	C	109D566X0030C2
150	30	F	109D157X0030F2
180	30	F	109D187X0030F2
220	30	F	109D227X0030F2
330	30	T	109D337X0030T2
390	30	T	109D397X0030T2
470	30	T	109D477X0030T2
33	50	C	109D336X0050C2
120	50	F	109D127X0050F2
270	50	T	109D277X0050T2
18	60	C	109D186X0060C2
27	60	C	109D276X0060C2
68	60	F	109D686X0060F2
100	60	F	109D107X0060F2
140	60	T	109D147X0060T2
220	60	T	109D227X0060T2
12	75	C	109D126X0075C2
15	75	C	109D156X0075C2
22	75	C	109D226X0075C2
47	75	F	109D476X0075F2
56	75	F	109D566X0075F2
82	75	F	109D826X0075F2
82	75	T	109D826X0075T2
110	75	T	109D117X0075T2
180	75	T	109D187X0075T2

* Numbers shown are ±20% capacitors. For units with ±10% capacitance tolerance, change digit after X from 0 to 9.

TYPE 133D "CUP STYLE" TANTALEX® CAPACITORS



Size Code	Dimensions Dia. x Length
U	7/32 x 15/32
V	9/32 x 11/16
T	3/8 x 49/64

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

- −55C to +125C Operation At Full Rating. May be Up-Rated 50% for Operation at 85C
- Meet Stringent Vibration Requirements in Military and Missile Applications
- Sintered Anode for Unusual Capacitance Stability, Large Values of Capacitance in Small Physical Size
- For Units with Outer Plastic Insulating Tube, Substitute 4 for 0 at End of Catalog Number
- Also Available as Type 132D for 85C Operation
- For Complete Technical Data See Latest Issue of Engineering Bulletins 3710 and 3711

µF	Size Code	Catalog Number −15, +20% Tol.	Catalog Number ±10% Tol.
4 WORKING VOLTS D-C			
30	U	133D306C2004U0	133D306X9004U0
140	V	133D147C2004V0	133D147X9004V0
320	T	133D327C2004T0	133D327X9004T0
5 WORKING VOLTS D-C			
25	U	133D256C2005U0	133D256X9005U0
7 WORKING VOLTS D-C			
20	U	133D206C2007U0	133D206X9007U0
100	V	133D107C2007V0	133D107X9007V0
250	T	133D257C2007T0	133D257X9007T0
10 WORKING VOLTS D-C			
15	U	133D156C2010U0	133D156X9010U0
70	V	133D706C2010V0	133D706X9010V0
170	T	133D177C2010T0	133D177X9010T0
15 WORKING VOLTS D-C			
10	U	133D106C2015U0	133D106X9015U0
20 WORKING VOLTS D-C			
8	U	133D805C2020U0	133D805X9020U0
40	V	133D406C2020V0	133D406X9020V0
100	T	133D107C2020T0	133D107X9020T0
30 WORKING VOLTS D-C			
5	U	133D505C2030U0	133D505X9030U0
25	V	133D256C2030V0	133D256X9030V0
60	T	133D606C2030T0	133D606X9030T0
40 WORKING VOLTS D-C			
4	U	133D405C2040U0	133D405X9040U0
20	V	133D206C2040V0	133D206X9040V0
50	T	133D506C2040T0	133D506X9040T0
50 WORKING VOLTS D-C			
3.5	U	133D355C2050U0	133D355X9050U0
15	V	133D156C2050V0	133D156X9050V0
40	T	133D406C2050T0	133D406X9050T0
70 WORKING VOLTS D-C			
2	U	133D205C2070U0	133D205X9070U0
11	V	133D116C2070V0	133D116X9070V0
30	T	133D306C2070T0	133D306X9070T0
85 WORKING VOLTS D-C			
1.7	U	133D175C2085U0	133D175X9085U0
9	V	133D905C2085V0	133D905X9085V0
25	T	133D256C2085T0	133D256X9085T0

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 137D HERMETICALLY-SEALED GELLED-ELECTROLYTE SINTERED-ANODE TANTALEX® CAPACITORS

- Glass-to-metal Hermetic Seal Makes Type 137D Capacitors Especially Well Suited For Use in Satellites and Other Space Equipment.
- Gelled-electrolyte For Optimum Performance Characteristics
- High Volumetric Efficiency Results in Space Savings
- Operating Temperature Range of —55C to +175C
- Available in Voltage Ratings From 6 WVDC Through 150 WVDC At 85C With Appropriate Derating For Higher Temperature Operation
- Capacitors Listed Below Have Outer Plastic Insulating Sleeve. For Units with Bare Case, End Catalog Number in 0 Instead of 2
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin Number 3703

Call Your Sprague Industrial Distributor For Current Quantity Prices



µF	Case Size	Catalog Number*
6 WVDC		
68	C	137D686X0006C2
140	C	137D147X0006C2
270	F	137D277X0006F2
560	F	137D567X0006F2
560	A	137D567X0006A2
560	T	137D567X0006T2
1000	T	137D108X0006T2
1200	W	137D128X0006W2
8 WVDC		
56	C	137D566X0008C2
120	C	137D127X0008C2
220	F	137D227X0008F2
470	F	137D477X0008F2
470	A	137D477X0008A2
470	T	137D477X0008T2
850	T	137D857X0008T2
1000	W	137D108X0008W2
10 WVDC		
39	C	137D396X0010C2
47	C	137D476X0010C2
82	C	137D826X0010C2
100	C	137D107X0010C2
150	F	137D157X0010F2
180	F	137D187X0010F2
330	F	137D337X0010F2
330	A	137D337X0010A2
330	T	137D337X0010T2
390	F	137D397X0010F2
390	A	137D397X0010A2
390	T	137D397X0010T2
600	T	137D607X0010T2
680	W	137D687X0010W2
750	T	137D757X0010T2
820	W	137D827X0010W2
15 WVDC		
33	C	137D336X0015C2
68	C	137D686X0015C2
120	F	137D127X0015F2
270	F	137D277X0015F2
270	A	137D277X0015A2
270	T	137D277X0015T2
540	T	137D547X0015T2
560	W	137D567X0015W2
20 WVDC		
27	C	137D276X0020C2
56	C	137D566X0020C2
100	F	137D107X0020F2
220	F	137D227X0020F2
220	A	137D227X0020A2
220	T	137D227X0020T2
390	T	137D397X0020T2
470	W	137D477X0020W2

µF	Case Size	Catalog Number*
25 WVDC		
22	C	137D226X0025C2
47	C	137D476X0025C2
100	F	137D107X0025F2
180	F	137D187X0025F2
180	A	137D187X0025A2
180	T	137D187X0025T2
350	T	137D357X0025T2
390	W	137D397X0025W2
30 WVDC		
18	C	137D186X0030C2
39	C	137D396X0030C2
82	F	137D826X0030F2
150	F	137D157X0030F2
150	A	137D157X0030A2
150	T	137D157X0030T2
300	T	137D307X0030T2
330	W	137D337X0030W2
35 WVDC		
12	C	137D126X0035C2
15	C	137D156X0035C2
27	C	137D276X0035C2
33	C	137D336X0035C2
56	F	137D566X0035F2
68	F	137D686X0035F2
100	F	137D107X0035F2
100	A	137D107X0035A2
100	T	137D107X0035T2
120	F	137D127X0035F2
120	A	137D127X0035A2
120	T	137D127X0035T2
180	T	137D187X0035T2
220	T	137D227X0035T2
220	W	137D227X0035W2
270	W	137D277X0035W2
50 WVDC		
10	C	137D106X0050C2
22	C	137D226X0050C2
47	F	137D476X0050F2
82	F	137D826X0050F2
82	A	137D826X0050A2
82	T	137D826X0050T2
160	T	137D167X0050T2
180	W	137D187X0050W2
60 WVDC		
8.2	C	137D825X0060C2
18	C	137D186X0060C2
39	F	137D396X0060F2
68	F	137D686X0060F2
68	A	137D686X0060A2
68	T	137D686X0060T2
140	T	137D147X0060T2
150	W	137D157X0060W2

µF	Case Size	Catalog Number*
75 WVDC		
5.6	C	137D565X0075C2
6.8	C	137D685X0075C2
12	C	137D126X0075C2
15	C	137D156X0075C2
27	F	137D276X0075F2
33	F	137D336X0075F2
47	F	137D476X0075F2
47	A	137D476X0075A2
47	T	137D476X0075T2
56	F	137D566X0075F2
56	A	137D566X0075A2
56	T	137D566X0075T2
82	T	137D826X0075T2
100	W	137D107X0075W2
110	T	137D117X0075T2
120	W	137D127X0075W2
100 WVDC		
3.9	C	137D395X0100C2
4.7	C	137D475X0100C2
15	F	137D156X0100F2
18	F	137D186X0100F2
22	F	137D226X0100F2
33	A	137D336X0100A2
33	T	137D336X0100T2
43	A	137D436X0100A2
43	T	137D436X0100T2
68	W	137D686X0100W2
86	W	137D866X0100W2
125 WVDC		
3.6	C	137D365X0125C2
9.0	F	137D905X0125F2
14	F	137D146X0125F2
18	T	137D186X0125T2
25	T	137D256X0125T2
28	A	137D286X0125A2
56	W	137D566X0125W2
150 WVDC		
1.7	C	137D175X0150C2
3.0	C	137D305X0150C2
6.8	F	137D685X0150F2
11	F	137D116X0150F2
14	T	137D146X0150T2
22	T	137D226X0150T2
22	A	137D226X0150A2
47	W	137D476X0150W2

DIMENSIONS

Case Code	Diam. x Length
C	0.219 x 0.515
F	0.312 x 0.704
A	0.312 x 1.095
T	0.406 x 0.828
W	0.406 x 1.312

* Catalog numbers listed above are for ±20% tolerance capacitors. For units with capacitance tolerance of +20%, —15% change X0 in middle of catalog number to C2; for +75, —15% change digits to C7; for ±10% change digits to X9.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

MIL-C-3965 TUBULAR SINTERED-ANODE TANTALEX® CAPACITORS—TYPES CL64 and CL65

- MIL Version of Proven Sprague Type 130D Capacitors
- Capacitors Listed on This Page Have Characteristic B (85C). Also Available in Characteristic C (125C).
- Voltage Ratings From 6 WVDC Through 125 WVDC
- Type CL64 Is a Bare Metal-Case Unit. If An Outer Insulating Sleeve is Desired, Order Type CL65.
- Capacitance Tolerance: K = ±10%; M = ±20%

Call Your Sprague Industrial Distributor For Quantity Prices



DIMENSIONS

Code	D x L.	Code	D x L.	Code	D x L.
T1	.188" x .453"	T2	.281" x .641"	T3	.375" x .766"

µF	Size Code	CL64 Type Number*	CL65 Type Number*
6 WVDC			
30	T1	CL64BB300KP3	CL65BB300KP3
30	T1	CL64BB300MP3	CL65BB300MP3
68	T1	CL64BB680MP3	CL65BB680MP3
140	T2	CL64BB141KP3	CL65BB141KP3
140	T2	CL64BB141MP3	CL65BB141MP3
270	T2	CL64BB271MP3	CL65BB271MP3
330	T3	CL64BB331KP3	CL65BB331KP3
330	T3	CL64BB331MP3	CL65BB331MP3
560	T3	CL64BB561MP3	CL65BB561MP3
8 WVDC			
25	T1	CL64BC250KP3	CL65BC250KP3
25	T1	CL64BC250MP3	CL65BC250MP3
56	T1	CL64BC560MP3	CL65BC560MP3
220	T2	CL64BC221MP3	CL65BC221MP3
430	T3	CL64BC431MP3	CL65BC431MP3
10 WVDC			
20	T1	CL64BD200KP3	CL65BD200KP3
20	T1	CL64BD200MP3	CL65BD200MP3
47	T1	CL64BD470MP3	CL65BD470MP3
100	T2	CL64BD101KP3	CL65BD101KP3
100	T2	CL64BD101MP3	CL65BD101MP3
180	T2	CL64BD181MP3	CL65BD181MP3
250	T3	CL64BD251KP3	CL65BD251KP3
250	T3	CL64BD251MP3	CL65BD251MP3
390	T3	CL64BD391MP3	CL65BD391MP3
15 WVDC			
15	T1	CL64BE150KP3	CL65BE150KP3
15	T1	CL64BE150MP3	CL65BE150MP3
33	T1	CL64BE330MP3	CL65BE330MP3
70	T2	CL64BE700KP3	CL65BE700KP3
70	T2	CL64BE700MP3	CL65BE700MP3
120	T2	CL64BE121MP3	CL65BE121MP3
170	T3	CL64BE171KP3	CL65BE171KP3
170	T3	CL64BE171MP3	CL65BE171MP3
270	T3	CL64BE271MP3	CL65BE271MP3
25 WVDC			
10	T1	CL64BG100KP3	CL65BG100KP3
10	T1	CL64BG100MP3	CL65BG100MP3
22	T1	CL64BG220MP3	CL65BG220MP3
100	T2	CL64BG101MP3	CL65BG101MP3
180	T3	CL64BG181MP3	CL65BG181MP3
30 WVDC			
8	T1	CL64BH080KP3	CL65BH080KP3
8	T1	CL64BH080MP3	CL65BH080MP3
15	T1	CL64BH150MP3	CL65BH150MP3
40	T2	CL64BH400KP3	CL65BH400KP3
40	T2	CL64BH400MP3	CL65BH400MP3
68	T2	CL64BH680MP3	CL65BH680MP3
100	T3	CL64BH101KP3	CL65BH101KP3
100	T3	CL64BH101MP3	CL65BH101MP3
150	T3	CL64BH151MP3	CL65BH151MP3
50 WVDC			
5	T1	CL64BJ050KP3	CL65BJ050KP3
5	T1	CL64BJ050MP3	CL65BJ050MP3
10	T1	CL64BJ100MP3	CL65BJ100MP3
25	T2	CL64BJ250KP3	CL65BJ250KP3
25	T2	CL64BJ250MP3	CL65BJ250MP3
47	T2	CL64BJ470MP3	CL65BJ470MP3
60	T3	CL64BJ600KP3	CL65BJ600KP3
60	T3	CL64BJ600MP3	CL65BJ600MP3
82	T3	CL64BJ820MP3	CL65BJ820MP3
60 WVDC			
4	T1	CL64BK040KP3	CL65BK040KP3
4	T1	CL64BK040MP3	CL65BK040MP3
8.2	T1	CL64BK8R2MP3	CL65BK8R2MP3
20	T2	CL64BK200KP3	CL65BK200KP3
20	T2	CL64BK200MP3	CL65BK200MP3
39	T2	CL64BK390MP3	CL65BK390MP3
50	T3	CL64BK500KP3	CL65BK500KP3
50	T3	CL64BK500MP3	CL65BK500MP3
68	T3	CL64BK680MP3	CL65BK680MP3
75 WVDC			
3.5	T1	CL64BL3R5KP3	CL65BL3R5KP3
3.5	T1	CL64BL3R5MP3	CL65BL3R5MP3
6.8	T1	CL64BL6R8MP3	CL65BL6R8MP3
15	T2	CL64BL150KP3	CL65BL150KP3
15	T2	CL64BL150MP3	CL65BL150MP3
33	T2	CL64BL330MP3	CL65BL330MP3
40	T3	CL64BL400KP3	CL65BL400KP3
40	T3	CL64BL400MP3	CL65BL400MP3
56	T3	CL64BL560MP3	CL65BL560MP3
100 WVDC			
2.5	T1	CL64BN2R5KP3	CL65BN2R5KP3
2.5	T1	CL64BN2R5MP3	CL65BN2R5MP3
4.7	T1	CL64BN4R7MP3	CL65BN4R7MP3
11	T2	CL64BN110KP3	CL65BN110KP3
11	T2	CL64BN110MP3	CL65BN110MP3
22	T2	CL64BN220MP3	CL65BN220MP3
30	T3	CL64BN300KP3	CL65BN300KP3
30	T3	CL64BN300MP3	CL65BN300MP3
43	T3	CL64BN430MP3	CL65BN430MP3
125 WVDC			
1.7	T1	CL64BP1R7MP3	CL65BP1R7MP3
1.7	T1	CL64BP1R7KP3	CL65BP1R7KP3
3.6	T1	CL64BP3R6MP3	CL65BP3R6MP3
3.6	T1	CL64BP3R6KP3	CL65BP3R6KP3
9	T2	CL64BP090MP3	CL65BP090MP3
9	T2	CL64BP090KP3	CL65BP090KP3
14	T2	CL64BP140MP3	CL65BP140MP3
14	T2	CL64BP140KP3	CL65BP140KP3
18	T3	CL64BP180MP3	CL65BP180MP3
18	T3	CL64BP180KP3	CL65BP180KP3
25	T3	CL64BP250MP3	CL65BP250MP3
25	T3	CL64BP250KP3	CL65BP250KP3

*For Vibration Guide 1 or 2, change last digit in Type Number to 1 or 2.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

Net

© United Technical Publications

SPRAGUE CAPACITORS

MIL-C-3965 HERMETICALLY-SEALED GELLED-ELECTROLYTE SINTERED-ANODE TANTALEX® CAPACITORS—TYPE CL66 & CL67



- Glass-to-Metal Hermetic Seal Makes These Capacitors Especially Well-Suited For Use In Satellites and Other Applications Requiring The Benefits of true Hermetic Sealing
- May Be Operated At Temperatures Up To 175C
- Extremely low leakage Current
- Military Version Of Well-Known Sprague Type 137D
- Capacitors Listed Here Have Capacitance Tolerance Of ±10%. For ±5% Capacitors, Change 10th Character In MIL Type No. From K To J. For ±20% Capacitance Tolerance, Change K To M

Call Your Sprague Industrial Distributor For Current Quantity Prices

µF	Diam. x Length*	MIL Type Number — Bare Case	MIL Type Number — w/Insulating Sleeve
6 WVDC			
30	.187 x .453	CL66BB300KPG	CL67BB300KPG
68	.187 x .453	CL66BB680KPG	CL67BB680KPG
140	.187 x .453	CL66BB141KPG	CL67BB141KPG
270	.281 x .641	CL66BB271KPG	CL67BB271KPG
330	.281 x .641	CL66BB331KPG	CL67BB331KPG
560	.281 x .641	CL66BB561KPG	CL67BB561KPG
8 WVDC			
25	.187 x .453	CL66BC250KPG	CL67BC250KPG
56	.187 x .453	CL66BC560KPG	CL67BC560KPG
220	.281 x .641	CL66BC221KPG	CL67BC221KPG
430	.281 x .641	CL66BC431KPG	CL67BC431KPG
10 WVDC			
20	.187 x .453	CL66BD200KPG	CL67BD200KPG
47	.187 x .453	CL66BD470KPG	CL67BD470KPG
100	.187 x .453	CL66BD101KPG	CL67BD101KPG
180	.281 x .641	CL66BD181KPG	CL67BD181KPG
250	.281 x .641	CL66BD251KPG	CL67BD251KPG
390	.281 x .641	CL66BD391KPG	CL67BD391KPG
15 WVDC			
15	.187 x .453	CL66BE150KPG	CL67BE150KPG
33	.187 x .453	CL66BE330KPG	CL67BE330KPG
70	.187 x .453	CL66BE700KPG	CL67BE700KPG
120	.281 x .641	CL66BE121KPG	CL67BE121KPG
170	.281 x .641	CL66BE171KPG	CL67BE171KPG
270	.281 x .641	CL66BE271KPG	CL67BE271KPG
25 WVDC			
10	.187 x .453	CL66BG100KPG	CL67BG100KPG
22	.187 x .453	CL66BG220KPG	CL67BG220KPG
100	.281 x .641	CL66BG101KPG	CL67BG101KPG
180	.281 x .641	CL66BG181KPG	CL67BG181KPG
30 WVDC			
8	.187 x .453	CL66BH080KPG	CL67BH080KPG
15	.187 x .453	CL66BH150KPG	CL67BH150KPG
40	.187 x .453	CL66BH400KPG	CL67BH400KPG
68	.281 x .641	CL66BH680KPG	CL67BH680KPG
100	.281 x .641	CL66BH101KPG	CL67BH101KPG
150	.281 x .641	CL66BH151KPG	CL67BH151KPG

µF	Diam. x Length*	MIL Type Number — Bare Case	MIL Type Number — w/Insulating Sleeve
50 WVDC			
5	.187 x .453	CL66BJ050KPG	CL67BJ050KPG
10	.187 x .453	CL66BJ100KPG	CL67BJ100KPG
25	.281 x .641	CL66BJ250KPG	CL67BJ250KPG
47	.281 x .641	CL66BJ470KPG	CL67BJ470KPG
60	.281 x .641	CL66BJ600KPG	CL67BJ600KPG
82	.281 x .641	CL66BJ820KPG	CL67BJ820KPG
60 WVDC			
4	.187 x .453	CL66BK040KPG	CL67BK040KPG
8.2	.187 x .453	CL66BK8R2KPG	CL67BK8R2KPG
20	.281 x .641	CL66BK200KPG	CL67BK200KPG
39	.281 x .641	CL66BK390KPG	CL67BK390KPG
50	.281 x .641	CL66BK500KPG	CL67BK500KPG
68	.281 x .641	CL66BK680KPG	CL67BK680KPG
75 WVDC			
3.5	.187 x .453	CL66BL3R5KPG	CL67BL3R5KPG
6.8	.187 x .453	CL66BL6R8KPG	CL67BL6R8KPG
15	.187 x .453	CL66BL150KPG	CL67BL150KPG
33	.281 x .641	CL66BL330KPG	CL67BL330KPG
40	.281 x .641	CL66BL400KPG	CL67BL400KPG
56	.281 x .641	CL66BL560KPG	CL67BL560KPG
100 WVDC			
2.5	.187 x .453	CL66BN2R5KPG	CL67BN2R5KPG
4.7	.187 x .453	CL66BN4R7KPG	CL67BN4R7KPG
11	.281 x .641	CL66BN110KPG	CL67BN110KPG
22	.281 x .641	CL66BN220KPG	CL67BN220KPG
30	.281 x 1.032	CL66BN300KPG	CL67BN300KPG
43	.281 x 1.032	CL66BN430KPG	CL67BN430KPG
125 WVDC			
1.7	.187 x .453	CL66BP1R7KPG	CL67BP1R7KPG
3.6	.187 x .453	CL66BP3R6KPG	CL67BP3R6KPG
9	.281 x .641	CL66BP090KPG	CL67BP090KPG
14	.281 x .641	CL66BP140KPG	CL67BP140KPG
25	.375 x .765	CL66BP250KPG	CL67BP250KPG

*Dimensions shown are for CL66 capacitors. For CL67 units, add .031" to diameter and .063" to length.

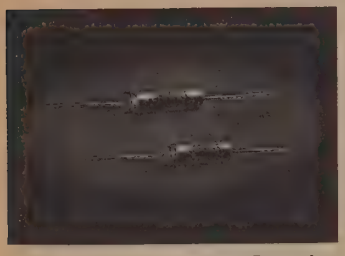
Copyright 1970, Sprague Products Company

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE TE LITTL-LYTIC® ELECTROLYTICS



- Ultra-Small — Excellent, Dependable Replacement Units for Transistorized Equipment Presently on the Market
- Reliability at Reasonable Prices
- All-Welded Construction — No Pressure Joints to Cause "Open" or Intermittent Circuits
- No Corrosion as with Competitive Units
- Extremely Low Leakage Current, Long Shelf Life
- Withstand Temperatures Up to 85C (185F)
- Furnished with Clear Plastic Outer Insulating Sleeves
- Packed 5 to a Handy Rigid Kleer-Pak® Plastic Box

For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3150

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
3 WVDC			
1	.260 x .536	TE-1050	30D105G003BA2
2	.260 x .536	TE-1051	30D205G003BA2
3	.260 x .536	TE-1052	30D305G003BA2
4	.260 x .536	TE-1052.1	30D405G003BA2
5	.260 x .536	TE-1052.2	30D505G003BA2
6	.260 x .536	TE-1052.3	30D605G003BA2
8	.260 x .536	TE-1052.5	30D805G003BA2
10	.260 x .536	TE-1053	30D106G003BA2
15	.260 x .536	TE-1053.5	30D156G003BA2
20	.260 x .536	TE-1054	30D206G003BA2
25	.260 x .536	TE-1055	30D256G003BA2
30	.260 x .536	TE-1055.5	30D306G003BA2
35	.260 x .723	TE-1056*	30D356G003BB2
40	.260 x .723	TE-1057*	30D406G003BB2
50	.260 x .723	TE-1058	30D506G003BB2
65	.260 x .723	TE-1058.5	30D656G003BB2
75	.322 x .723	TE-1059	30D756G003CB2
100	.322 x .723	TE-1059.5	30D107G003CB2
130	.322 x .723	TE-1060.1	30D137G003CB2
150	.322 x .848	TE-1061	30D157G003CC2
200	.322 x .848	TE-1064	30D207G003CC2
250	.385 x .848	TE-1065	30D257G003DC2
300	.385 x .848	TE-1066	30D307G003DC2
400	.385 x .973	TE-1067	30D407G003DD2
500	.385 x 1.286	TE-1068	30D507G003DF2
600	.385 x 1.286	TE-1069.1	30D607G003DF2
800	.385 x 1.536	TE-1070.1	30D807G003DH2
6 WVDC			
1	.260 x .536	TE-1080	30D105G006BA2
2	.260 x .536	TE-1081	30D205G006BA2
3	.260 x .536	TE-1082	30D305G006BA2
4	.260 x .536	TE-1083	30D405G006BA2
5	.260 x .536	TE-1084	30D505G006BA2
6	.260 x .536	TE-1085	30D605G006BA2
8	.260 x .536	TE-1086	30D805G006BA2
10	.260 x .536	TE-1087	30D106G006BA2
15	.260 x .536	TE-1089	30D156G006BA2
20	.260 x .536	TE-1090	30D206G006BA2
25	.260 x .723	TE-1091	30D256G006BB2
30	.260 x .723	TE-1092*	30D306G006BB2
35	.260 x .723	TE-1093	30D356G006BB2
50	.322 x .723	TE-1100	30D506G006CB2
75	.322 x .723	TE-1101.5	30D756G006CB2
90	.322 x .723	TE-1101.7	30D906G006CB2
100	.322 x .848	TE-1102	30D107G006CC2
140	.322 x .848	TE-1102.5	30D147G006CC2
150	.385 x .848	TE-1103	30D157G006DC2
200	.385 x .848	TE-1104	30D207G006DC2
250	.385 x .973	TE-1105	30D257G006DD2
300	.385 x 1.286	TE-1106	30D307G006DF2
400	.385 x 1.286	TE-1107	30D407G006DF2
500	.385 x 1.536	TE-1107.5	30D507G006DH2
600	.385 x 1.536	TE-1108.5	30D607G006DH2

*Available until present stock is exhausted

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
12 WVDC			
1	.260 x .536	TE-1120	30D105G012BA2
2	.260 x .536	TE-1121	30D205G012BA2
3	.260 x .536	TE-1122	30D305G012BA2
4	.260 x .536	TE-1123	30D405G012BA2
5	.260 x .536	TE-1127	30D505G012BA2
6	.260 x .536	TE-1127.1	30D605G012BA2
8	.260 x .536	TE-1127.3	30D805G012BA2
10	.260 x .536	TE-1128	30D106G012BA2
15	.260 x .536	TE-1129	30D156G012BA2
20	.260 x .723	TE-1130	30D206G012BB2
25	.260 x .723	TE-1131	30D256G012BB2
30	.260 x .723	TE-1132.1	30D306G012BB2
35	.322 x .723	TE-1132*	30D356G012CB2
50	.322 x .723	TE-1133	30D506G012CB2
60	.322 x .723	TE-1133.5	30D606G012CB2
75	.322 x .848	TE-1134	30D756G012CC2
90	.385 x .723	TE-1134.5	30D906G012DB2
100	.322 x .848	TE-1135	30D107G012CC2
140	.385 x .848	TE-1135.5	30D147G012DC2
150	.385 x .973	TE-1136	30D157G012DD2
190	.385 x .973	TE-1136.5	30D197G012DD2
200	.385 x 1.286	TE-1137	30D207G012DF2
250	.385 x 1.286	TE-1138	30D257G012DF2
290	.385 x 1.286	TE-1139	30D297G012DF2
390	.385 x 1.536	TE-1140	30D397G012DH2
16 WVDC			
1	.260 x .536	TE-1148	30D105G016BA2
2	.260 x .536	TE-1149	30D205G016BA2
3	.260 x .536	TE-1150	30D305G016BA2
4	.260 x .536	TE-1151	30D405G016BA2
5	.260 x .536	TE-1152	30D505G016BA2
6	.260 x .536	TE-1153	30D605G016BA2
8	.260 x .536	TE-1154	30D805G016BA2
10	.260 x .536	TE-1155	30D106G016BA2
15	.260 x .723	TE-1156	30D156G016BB2
20	.260 x .723	TE-1157	30D206G016BB2
25	.260 x .723	TE-1157.1	30D256G016BB2
30	.322 x .723	TE-1158	30D306G016CB2
35	.322 x .723	TE-1159	30D356G016CB2
50	.322 x .723	TE-1160	30D506G016CB2
75	.322 x .848	TE-1161	30D756G016CC2
85	.385 x .723	TE-1161.5	30D856G016DB2
90	.322 x .848	TE-1161.7	30D906G016CC2
100	.385 x .848	TE-1162	30D107G016DC2
130	.385 x .848	TE-1162.5	30D137G016DC2
150	.385 x .973	TE-1163	30D157G016DD2
180	.385 x .973	TE-1163.7	30D187G016DD2
200	.385 x 1.286	TE-1164	30D207G016DF2
250	.385 x 1.286	TE-1164.5	30D257G016DF2
300	.385 x 1.536	TE-1165.5	30D307G016DH2
350	.385 x 1.536	TE-1166	30D357G016DH2

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
25 WVDC			
1	.260 x .536	TE-1200	30D105G025BA2
2	.260 x .536	TE-1201	30D205G025BA2
3	.260 x .536	TE-1201.1	30D305G025BA2
4	.260 x .536	TE-1201.2	30D405G025BA2
5	.260 x .536	TE-1202	30D505G025BA2
6	.260 x .536	TE-1203	30D605G025BA2
8	.260 x .536	TE-1203.5	30D805G025BA2
10	.260 x .723	TE-1204	30D106G025BB2
15	.260 x .723	TE-1205	30D156G025BB2
20	.322 x .723	TE-1206	30D206G025CB2
25	.322 x .723	TE-1207	30D256G025CB2
30	.322 x .723	TE-1207.5	30D306G025CB2
35	.322 x .723	TE-1208	30D356G025CB2
50	.322 x .848	TE-1209	30D506G025CC2
75	.385 x .848	TE-1210	30D756G025DC2
100	.385 x .973	TE-1211	30D107G025DD2
150	.385 x 1.286	TE-1212	30D157G025DF2
200	.385 x 1.536	TE-1213	30D207G025DH2
50 WVDC			
1	.260 x .536	TE-1300	30D105G050BA2
2	.260 x .536	TE-1301	30D205G050BA2
3	.260 x .536	TE-1302	30D305G050BA2
4	.260 x .536	TE-1302.1	30D405G050BA2
5	.260 x .723	TE-1303	30D505G050BB2
6	.260 x .723	TE-1303.1	30D605G050BB2
8	.260 x .723	TE-1303.3	30D805G050BB2
10	.322 x .723	TE-1304	30D106G050CB2
15	.322 x .723	TE-1304.2	30D156G050CB2
20	.322 x .848	TE-1305	30D206G050CC2
25	.322 x .848	TE-1305.5	30D256G050CC2
35	.385 x .848	TE-1306	30D356G050DC2
50	.385 x .973	TE-1307	30D506G050DD2
75	.385 x 1.286	TE-1308	30D756G050DF2
100	.385 x 1.536	TE-1309	30D107G050DH2
100 WVDC			
1	.260 x .536	TE-1400	30D105G100BA2
2	.260 x .723	TE-1401	30D205G100BB2
3	.322 x .723	TE-1402	30D305G100CB2
4	.322 x .723	TE-1403	30D405G100CB2
5	.322 x .848	TE-1404	30D505G100CC2
6	.322 x .848	TE-1405	30D605G100CC2
8	.385 x .848	TE-1406	30D805G100DC2
10	.385 x .848	TE-1407	30D106G100DC2
15	.385 x .973	TE-1408	30D156G100DD2
20	.385 x 1.286	TE-1409	30D206G100DF2
25	.385 x 1.536	TE-1410	30D256F100DH2
30	.385 x 1.536	TE-1411	30D306F100DH2
150 WVDC			
1	.260 x .536	TE-1500	30D105G150BA2
2	.260 x .723	TE-1501	30D205G150BB2
3	.322 x .723	TE-1502	30D305G150CB2
4	.322 x .848	TE-1503	30D405G150CC2
5	.322 x .848	TE-1504	30D505G150CC2
6	.385 x .848	TE-1505	30D605G150DC2
7	.385 x .848	TE-1505.5	30D705F150DC2
8	.385 x .848	TE-1506	30D805G150DC2
10	.385 x .973	TE-1507	30D106G150DD2
15	.385 x 1.286	TE-1508.1	30D156F150DF2
20	.385 x 1.536	TE-1509	30D206F150DH2

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970, Sprague Products Company

IND-REM-15-7002

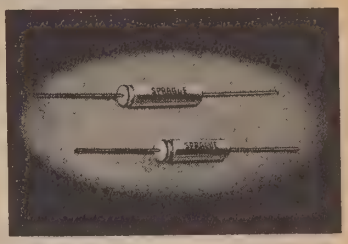
Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 500D MINIATURE METAL-CASE ALUMINUM 'LYTICS

- Economy Line "Made-in-America" Quality at Import Prices
- Excellent Low Temperature Operation
- Reliability at Low Cost
- Withstand High Surge Voltages
- Long Shelf Life, Extremely Low Leakage Current
- High Capacitance in Ultra-Small Physical Size
- Furnished with Plastic Outer Insulating Sleeves
- Packaged 5 to A Handy Rigid Kleer-Pak Plastic Box
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3149



µF	WVDC	D. x L.	Cat. No.
1	3	.260 x .536	500D105G003BA7
2	3	.260 x .536	500D205G003BA7
3	3	.260 x .536	500D305G003BA7
4	3	.260 x .536	500D405G003BA7
5	3	.260 x .536	500D505G003BA7
6	3	.260 x .536	500D605G003BA7
8	3	.260 x .536	500D805G003BA7
10	3	.260 x .536	500D106G003BA7
15	3	.260 x .536	500D156G003BA7
20	3	.260 x .536	500D206G003BA7
25	3	.260 x .536	500D256G003BA7
30	3	.260 x .536	500D306G003BA7
50	3	.260 x .723	500D506G003BB7
65	3	.260 x .723	500D656G003BB7
75	3	.322 x .723	500D756G003CB7
100	3	.322 x .723	500D107G003CB7
130	3	.322 x .723	500D137G003CB7
150	3	.322 x .848	500D157G003CC7
200	3	.322 x .848	500D207G003CC7
250	3	.385 x .848	500D257G003DC7
300	3	.385 x .848	500D307G003DC7
400	3	.385 x .973	500D407G003DD7
500	3	.385 x 1.286	500D507G003DF7
600	3	.385 x 1.286	500D607G003DF7
800	3	.385 x 1.536	500D807G003DH7
1	6	.260 x .536	500D105G006BA7
2	6	.260 x .536	500D205G006BA7
3	6	.260 x .536	500D305G006BA7
4	6	.260 x .536	500D405G006BA7
5	6	.260 x .536	500D505G006BA7
6	6	.260 x .536	500D605G006BA7
8	6	.260 x .536	500D805G006BA7
10	6	.260 x .536	500D106G006BA7
15	6	.260 x .536	500D156G006BA7
20	6	.260 x .536	500D206G006BA7
25	6	.260 x .723	500D256G006BB7
35	6	.260 x .723	500D356G006BB7
50	6	.260 x .723	500D506G006BB7
75	6	.322 x .723	500D756G006CB7
90	6	.322 x .723	500D906G006CB7
100	6	.322 x .848	500D107G006CC7
140	6	.322 x .848	500D147G006CC7
150	6	.385 x .848	500D157G006DC7
200	6	.385 x .848	500D207G006DC7
250	6	.385 x .973	500D257G006DD7
300	6	.385 x .973	500D307G006DD7
400	6	.385 x 1.286	500D407G006DF7
500	6	.385 x 1.536	500D507G006DH7
600	6	.385 x 1.536	500D607G006DH7
1	12	.260 x .536	500D105G012BA7
2	12	.260 x .536	500D205G012BA7
3	12	.260 x .536	500D305G012BA7
4	12	.260 x .536	500D405G012BA7
5	12	.260 x .536	500D505G012BA7
6	12	.260 x .536	500D605G012BA7
8	12	.260 x .536	500D805G012BA7
10	12	.260 x .536	500D106G012BA7
15	12	.260 x .536	500D156G012BA7
20	12	.260 x .723	500D206G012BB7
25	12	.260 x .723	500D256G012BB7
30	12	.260 x .723	500D306G012BB7
50	12	.322 x .723	500D506G012CB7
60	12	.322 x .723	500D606G012CB7
75	12	.322 x .848	500D756G012CC7
90	12	.385 x .723	500D906G012DB7
100	12	.322 x .848	500D107G012CC7
140	12	.385 x .848	500D147G012DC7
150	12	.385 x .973	500D157G012DD7
190	12	.385 x .973	500D197G012DD7
200	12	.385 x 1.286	500D207G012DF7
250	12	.385 x 1.286	500D257G012DF7
290	12	.385 x 1.286	500D297G012DF7
390	12	.385 x 1.536	500D397G012DH7
1	16	.260 x .536	500D105G016BA7
2	16	.260 x .536	500D205G016BA7
3	16	.260 x .536	500D305G016BA7
4	16	.260 x .536	500D405G016BA7
5	16	.260 x .536	500D505G016BA7
6	16	.260 x .536	500D605G016BA7
8	16	.260 x .536	500D805G016BA7
10	16	.260 x .536	500D106G016BA7
15	16	.260 x .723	500D156G016BB7
20	16	.260 x .723	500D206G016BB7
25	16	.260 x .723	500D256G016BB7
30	16	.322 x .723	500D306G016CB7
35	16	.322 x .723	500D356G016CB7
50	16	.322 x .723	500D506G016CB7
75	16	.322 x .848	500D756G016CC7
85	16	.385 x .723	500D856G016DB7
90	16	.322 x .848	500D906G016CC7
100	16	.385 x .848	500D107G016DC7
130	16	.385 x .848	500D137G016DC7
150	16	.385 x .973	500D157G016DD7
180	16	.385 x .973	500D187G016DD7
200	16	.385 x 1.286	500D207G016DF7
250	16	.385 x 1.286	500D257G016DF7
300	16	.385 x 1.536	500D307G016DH7
350	16	.385 x 1.536	500D357G016DH7
1	25	.260 x .536	500D105G025BA7
2	25	.260 x .536	500D205G025BA7
3	25	.260 x .536	500D305G025BA7
4	25	.260 x .536	500D405G025BA7
5	25	.260 x .536	500D505G025BA7
6	25	.260 x .536	500D605G025BA7
8	25	.260 x .536	500D805G025BA7
10	25	.260 x .723	500D106G025BB7
15	25	.260 x .723	500D156G025BB7
25	25	.322 x .723	500D256G025CB7
30	25	.322 x .723	500D306G025CB7
35	25	.322 x .723	500D356G025CB7
50	25	.322 x .848	500D506G025CC7
75	25	.385 x .848	500D756G025DC7
100	25	.385 x .973	500D107G025DD7
150	25	.385 x 1.286	500D157G025DF7
200	25	.385 x 1.536	500D207G025DH7
1	50	.260 x .536	500D105G050BA7
2	50	.260 x .536	500D205G050BA7
3	50	.260 x .536	500D305G050BA7
4	50	.260 x .536	500D405G050BA7
5	50	.260 x .723	500D505G050BB7
6	50	.260 x .723	500D605G050BB7
8	50	.260 x .723	500D805G050BB7
10	50	.322 x .723	500D106G050CB7
15	50	.322 x .723	500D156G050CB7
20	50	.322 x .848	500D206G050CC7
25	50	.322 x .848	500D256G050CC7
35	50	.385 x .848	500D356G050DC7
50	50	.385 x .973	500D506G050DD7
75	50	.385 x 1.286	500D756G050DF7
100	50	.385 x 1.536	500D107G050DH7

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970, Sprague Products Company

All sizes subject to change without notice.

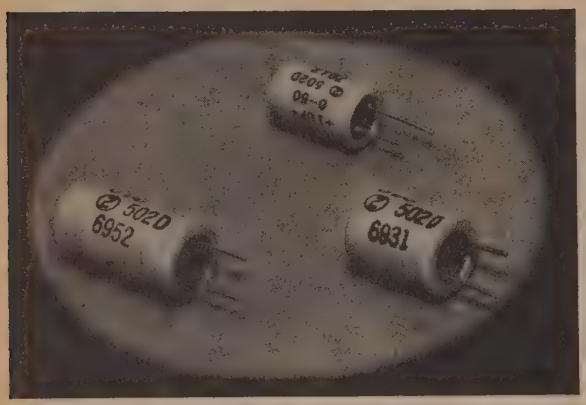
© United Technical Publications

SPRAGUE CAPACITORS

TYPE 500D ALUMINUM ELECTROLYTICS, continued

μF	WVDC	D. x L.	Cat. No.
1	100	.260 x .536	500D105F100BA7
2	100	.260 x .723	500D205F100BB7
3	100	.322 x .723	500D305F100CB7
4	100	.322 x .723	500D405F100CB7
5	100	.322 x .848	500D505F100CC7
6	100	.322 x .848	500D605F100CC7
8	100	.385 x .848	500D805F100DC7
10	100	.385 x .848	500D106F100DC7
15	100	.385 x .848	500D156F100DD7
20	100	.385 x 1.286	500D206F100DF7
25	100	.385 x 1.536	500D256F100DH7
30	100	.385 x 1.536	500D306F100DH7
1	150	.260 x .536	500D105F150BA7
2	150	.260 x .723	500D205F150BB7
3	150	.322 x .723	500D305F150CB7
4	150	.322 x .848	500D405F150CC7
5	150	.322 x .848	500D505F150CC7
6	150	.385 x .848	500D605F150DC7
7	150	.385 x .848	500D705F150DC7
8	150	.385 x .848	500D805F150DC7
10	150	.385 x .973	500D106F150DD7
15	150	.385 x 1.286	500D156F150DF7
20	150	.385 x 1.536	500D206F150DH7

TYPE 502D VERTI-LYTIC® MINIATURE ELECTROLYTICS



- Designed For Space-Saving Vertical Installation On High-Density Printed Wiring Boards.

- Moderately Priced For Use In "Personal" Radios, Auto Radios, Portable Tape Recorders, Etc., Yet Their Mechanical And Electrical Characteristics Make Them Well-Suited For High Quality Industrial Instrumentation.
- Operating Temperature Range, −20C to +85C.
- Excellent Capacitance Stability And Equivalent Series Resistance, Low Leakage Current.
- Welds At All Critical Anode And Cathode Terminations Assure Freedom From Open Circuits, Even When Operated In The Millivolt Or Microvolt Range.
- Metal-Encased, With Thermoplastic Insulating Sleeve.
- For Complete Technical Data, Refer To Latest Issue Of Engineering Bulletin 3152.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	Diameter	Length	Lead Spacing	Catalog Number
3 WVDC (4 VDC Surge)				
68	.410	.577	.200	502D686G003CC1C
150	.410	.577	.200	502D157G003CC1C
330	.410	.827	.200	502D337G003CE1C
6 WVDC (8 VDC Surge)				
47	.410	.577	.200	502D476G006CC1C
100	.410	.577	.200	502D107G006CC1C
220	.410	.827	.200	502D227G006CE1C
16 WVDC (20 VDC Surge)				
33	.410	.577	.200	502D336G016CC1C
47	.410	.577	.200	502D476G016CC1C
68	.410	.577	.200	502D686G016CC1C
150	.410	.827	.200	502D157G016CE1C
25 WVDC (35 VDC Surge)				
15	.410	.577	.200	502D156G025CC1C
22	.410	.577	.200	502D226G025CC1C
33	.410	.577	.200	502D336G025CC1C
68	.410	.827	.200	502D686G025CE1C
100	.410	.827	.200	502D107G025CE1C
50 WVDC (65 VDC Surge)				
1.0	.410	.577	.200	502D105G050CC1C
1.5	.410	.577	.200	502D155G050CC1C
2.2	.410	.577	.200	502D225G050CC1C
3.3	.410	.577	.200	502D335G050CC1C
4.7	.410	.577	.200	502D475G050CC1C
6.8	.410	.577	.200	502D685G050CC1C
10	.410	.577	.200	502D106G050CC1C
15	.410	.577	.200	502D156G050CC1C
22	.410	.827	.200	502D226G050CE1C
33	.410	.827	.200	502D336G050CE1C
47	.410	.827	.200	502D476G050CE1C

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE TL TRANSI-LYTIC® ELECTROLYTICS

- Miniature Low-Cost Capacitors For Use in Transistorized Pocket and "Personal Portable" Radios
- Special Low-Leakage Current Construction to Meet The Requirements of Transistor Circuitry
- Sturdy Plastic Case With Thermo-setting Resin End Seals
- Excellent Resistance to High Humidity Conditions
- Polarity Stamped on Each Unit
- For Complete Data, See Latest Issue of Engineering Bulletin 3010



CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
3 WVDC			
1	.180 x .570	TL-1050	31D1
2	.180 x .570	TL-1051	31D2
3	.180 x .570	TL-1052	31D3
4	.180 x .570	TL-1052.1	31D4
5	.180 x .570	TL-1052.2	31D5
6	.180 x .570	TL-1052.3	31D6
8	.180 x .570	TL-1052.5	31D7
10	.180 x .570	TL-1053	31D8
15	.180 x .570	TL-1053.5	31D9
20	.210 x .700	TL-1054	31D10
25	.210 x .700	TL-1055	31D11
35	.250 x .820	TL-1056	31D12
50	.250 x .820	TL-1058	31D13
75	.250 x .820	TL-1059	31D14
100	.312 x .820	TL-1059.5	31D15
150	.375 x 1.070	TL-1061	31D16
200	.375 x 1.070	TL-1064	31D17
250	.375 x 1.070	TL-1065	31D18
300	.375 x 1.070	TL-1066	31D93
400	.437 x 1.070	TL-1067	31D94
500	.437 x 1.070	TL-1068	31D95
1000	.625 x 1.700	TL-1069	31D96
1500	.625 x 1.700	TL-1070	31D97
2000	.625 x 1.700	TL-1071	31D98
2500	.750 x 2.100	TL-1072	31D99
3000	.750 x 2.100	TL-1073	31D100
4000	.750 x 2.100	TL-1074	31D101
6 WVDC			
1	.180 x .570	TL-1080	31D19
2	.180 x .570	TL-1081	31D20
3	.180 x .570	TL-1082	31D21
4	.180 x .570	TL-1083	31D22
5	.180 x .570	TL-1084	31D23
6	.180 x .570	TL-1085	31D24
8	.180 x .570	TL-1086	31D25
10	.180 x .570	TL-1087	31D26
15	.210 x .700	TL-1089	31D27
20	.210 x .700	TL-1090	31D28
25	.250 x .820	TL-1091	31D29
35	.250 x .820	TL-1093	31D30
50	.250 x .820	TL-1100	31D31
75	.312 x .820	TL-1101.5	31D32
100	.375 x 1.070	TL-1102	31D33
150	.375 x 1.070	TL-1103	31D34
175	.375 x 1.070	TL-1103.5	31D35
200	.375 x 1.070	TL-1104	31D102
250	.437 x 1.070	TL-1105	31D103
300	.437 x 1.070	TL-1106	31D104
400	.500 x 1.440	TL-1107	31D105
500	.500 x 1.440	TL-1108	31D106
1000	.625 x 1.700	TL-1111	31D107
1500	.625 x 1.700	TL-1112	31D108
2000	.750 x 2.100	TL-1113	31D109
2500	.750 x 2.100	TL-1114	31D110
3000	.875 x 2.320	TL-1115	31D111
4000	.875 x 2.320	TL-1116	31D112
12 WVDC			
1	.180 x .570	TL-1120	31D36
2	.180 x .570	TL-1121	31D37
3	.180 x .570	TL-1122	31D38
4	.180 x .570	TL-1123	31D39

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
5	.180 x .570	TL-1127	31D40
6	.180 x .570	TL-1127.1	31D41
8	.210 x .700	TL-1127.3	31D42
10	.210 x .700	TL-1128	31D43
15	.210 x .700	TL-1129	31D44
20	.250 x .820	TL-1130	31D45
25	.250 x .820	TL-1131	31D46
35	.250 x .820	TL-1132	31D47
50	.312 x .820	TL-1133	31D48
75	.375 x 1.070	TL-1134	31D49
100	.375 x 1.070	TL-1135	31D50
150	.375 x 1.070	TL-1136	31D113
200	.437 x 1.070	TL-1137	31D114
250	.500 x 1.440	TL-1138	31D115
300	.500 x 1.440	TL-1139	31D116
400	.500 x 1.440	TL-1140	31D181
500	.625 x 1.700	TL-1141	31D117
1000	.625 x 1.700	TL-1142	31D118
1500	.750 x 1.440	TL-1143	31D119
2000	.750 x 2.100	TL-1144	31D120
2500	.875 x 2.320	TL-1145	31D121
3000	.875 x 2.320	TL-1146	31D122
4000	1.000 x 2.320	TL-1147	31D123
16 WVDC			
1	.180 x .570	TL-1148	31D51
2	.180 x .570	TL-1149	31D52
3	.180 x .570	TL-1150	31D53
4	.180 x .570	TL-1151	31D54
5	.180 x .570	TL-1152	31D55
6	.180 x .570	TL-1153	31D56
8	.210 x .700	TL-1154	31D57
10	.210 x .700	TL-1155	31D58
15	.250 x .820	TL-1156	31D59
20	.250 x .820	TL-1157	31D60
25	.250 x .820	TL-1157.1	31D61
35	.312 x .820	TL-1159	31D62
50	.312 x .820	TL-1160	31D63
75	.375 x 1.070	TL-1161	31D64
100	.375 x 1.070	TL-1162	31D65
150	.375 x 1.070	TL-1163	31D124
200	.437 x 1.070	TL-1164	31D125
250	.500 x 1.440	TL-1164.5	31D126
300	.500 x 1.440	TL-1165	31D127
400	.625 x 1.700	TL-1165.5	31D128
500	.625 x 1.700	TL-1166	31D129
1000	.750 x 1.700	TL-1166.5	31D130
1500	.750 x 1.700	TL-1167	31D131
2000	.875 x 2.320	TL-1167.5	31D132
2500	.875 x 2.320	TL-1168	31D133
3000	1.000 x 2.320	TL-1168.5	31D134
20 WVDC			
1	.180 x .570	TL-1170	31D66
2	.180 x .570	TL-1171	31D67
3	.180 x .570	TL-1172	31D68
4	.180 x .570	TL-1173	31D69
5	.180 x .570	TL-1174	31D70
6	.210 x .700	TL-1175	31D71
8	.210 x .700	TL-1176	31D72
10	.210 x .700	TL-1177	31D73
15	.250 x .820	TL-1178	31D74
20	.250 x .820	TL-1179	31D75
25	.250 x .820	TL-1180	31D76
35	.312 x .820	TL-1181	31D77

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
50	.312 x .820	TL-1182	31D78
75	.375 x 1.070	TL-1183	31D79
100	.375 x 1.070	TL-1184	31D135
150	.437 x 1.070	TL-1185	31D136
200	.500 x 1.440	TL-1186	31D137
250	.500 x 1.440	TL-1187	31D138
300	.500 x 1.440	TL-1188	31D139
400	.625 x 1.700	TL-1189	31D140
500	.625 x 1.700	TL-1190	31D141
1000	.750 x 1.700	TL-1191	31D142
1500	.750 x 2.100	TL-1192	31D143
2000	.875 x 2.320	TL-1193	31D144
2500	1.000 x 2.320	TL-1194	31D145
3000	1.000 x 2.320	TL-1195	31D146
25 WVDC			
1	.180 x .570	TL-1200	31D80
2	.180 x .570	TL-1201	31D81
3	.180 x .570	TL-1201.1	31D82
4	.180 x .570	TL-1201.2	31D83
5	.210 x .700	TL-1202	31D84
6	.210 x .700	TL-1203	31D85
8	.210 x .700	TL-1203.5	31D86
10	.250 x .820	TL-1204	31D87
15	.250 x .820	TL-1205	31D88
20	.250 x .820	TL-1206	31D89
25	.312 x .820	TL-1207	31D90
35	.375 x 1.070	TL-1208	31D91
50	.375 x 1.070	TL-1209	31D92
75	.375 x 1.070	TL-1210	31D147
100	.437 x 1.070	TL-1211	31D148
150	.500 x 1.440	TL-1212	31D149
200	.500 x 1.440	TL-1213	31D150
250	.625 x 1.700	TL-1214	31D151
300	.625 x 1.700	TL-1215	31D152
400	.625 x 1.700	TL-1216	31D153
500	.625 x 1.700	TL-1217	31D154
1000	.750 x 2.100	TL-1218	31D155
1500	.875 x 2.320	TL-1219	31D156
2000	1.000 x 2.320	TL-1220	31D157
50 WVDC			
1	.180 x .570	TL-1300	31D158
2	.180 x .570	TL-1301	31D159
3	.210 x .700	TL-1302	31D160
4	.210 x .700	TL-1302.1	31D161
5	.250 x .820	TL-1303	31D162
6	.250 x .820	TL-1303.1	31D163
8	.250 x .820	TL-1303.3	31D164
10	.250 x .820	TL-1304	31D165
15	.312 x .820	TL-1304.2	31D166
20	.375 x 1.070	TL-1305	31D167
25	.375 x 1.070	TL-1305.1	31D168
35	.375 x 1.070	TL-1306	31D169
50	.437 x 1.070	TL-1307	31D170
75	.500 x 1.440	TL-1308	31D171
100	.500 x 1.440	TL-1309	31D172
150	.625 x 1.700	TL-1310	31D173
175	.625 x 1.700	TL-1311	31D174
200	.625 x 1.700	TL-1312	31D175
250	.625 x 1.700	TL-1313	31D176
300	.750 x 1.195	TL-1314	31D177
400	.750 x 2.100	TL-1315	31D178
500	.750 x 2.100	TL-1316	31D179
1000	1.000 x 2.320	TL-1317	31D180

Copyright 1970, Sprague Products Company

IND-REM-15a-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE TVA ATOM® ELECTROLYTICS

- The Smallest Dependable Standard Tubular—Designed for 85C (185F) Operation in Voltages to 475 WVDC
- Whether For AC-DC Sets, Auto Radios, Home Radio-phono Combinations, Or TV Sets, The SPRAGUE Line Will Handle All Your Replacement Requirements—No Dual Inventory Problems
- Have Low Leakage And Long Shelf Life
- Will Withstand High Temperatures, High Ripple Currents, High Surge Voltages
- Metal Case Construction with Outer Kraftboard Insulating Tube Except as Noted by * Sign



CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	WVDC	D. x L.	Cat. No.
		SINGLE UNITS	
750	3	1 3/32 x 1 11/32	TVA-1097*
50	6	1 1/32 x 3/4	TVA-1100*
100	6	1 1/32 x 7/8	TVA-1101*
250	6	1 3/32 x 1	TVA-1102*
500	6	1 3/32 x 1 11/32	TVA-1103*
1000	6	3/4 x 1 13/16	TVA-1104
1500	6	1 3/16 x 2 1/16	TVA-1105
2000	6	1 3/16 x 2 1/16	TVA-1106
8	10NP	5/16 x 1 5/16	TVAN-1112
50	10NP	5/16 x 1 5/16	TVAN-1117
160	10NP	1 1/16 x 1 13/16	TVAN-1120
100	12	1 1/32 x 7/8	TVA-1130*
250	12	1 3/32 x 1 5/16	TVA-1131*
500	12	1 5/32 x 1 11/32	TVA-1132*
1000	12	1 3/16 x 1 13/16	TVA-1133
100	15	1 3/32 x 7/8	TVA-1160*
250	15	1 3/32 x 1 5/16	TVA-1161*
500	15	1 5/32 x 1 11/32	TVA-1162*
1000	15	1 3/16 x 1 13/16	TVA-1163
2000	15	1 5/16 x 2 13/16	★TVA-1170
3000	15	1 1/16 x 4 1/16	TVA-1175
2	25	5/32 x 1 9/32	TVA-1201*
2	25NP	5/16 x 1 5/16	TVAN-1202
4	25NP	1 5/16 x 1 5/16	★TVAN-1202.2
5	25	5/32 x 1 9/32	TVA-1203*
5	25NP	5/16 x 1 5/16	TVAN-1203.1
8	25NP	1 1/16 x 1 13/16	★TVAN-1203.8
10	25	5/32 x 3/4	TVA-1204*
10	25NP	5/16 x 1 5/16	TVAN-1204.1
20	25	1 1/32 x 3/4	TVA-1204.5*
25	25	1 1/32 x 3/4	TVA-1205*
50	25	1 1/32 x 7/8	TVA-1206*
50	25NP	1 1/16 x 1 13/16	TVAN-1206.1
100	25	1 3/32 x 1	TVA-1207*
100	25NP	1 1/16 x 1 5/16	TVAN-1207.1
150	25	1 3/16 x 1 5/16	TVA-1207.5*
250	25	1 5/32 x 1 5/16	TVA-1208*
500	25	3/4 x 1 13/16	TVA-1209
1000	25	1 3/16 x 2 5/16	TVA-1211
3	30NP	1 1/16 x 1 5/16	TVAN-1215
20	30NP	1 1/16 x 1 1/16	TVAN-1220
10	40NP	5/16 x 1 13/16	TVAN-1230
1	50	5/32 x 1 9/32	TVA-1300*
2	50	5/32 x 1 9/32	TVA-1301*
2	50NP	1 1/16 x 1 13/16	TVAN-1301.1
3	50	5/16 x 1 9/32	TVA-1302*
3	50NP	5/16 x 1 9/16	TVAN-1302.1
4	50NP	1 1/16 x 1 7/16	★TVAN-1302.5
5	50	5/32 x 3/4	TVA-1303*
5	50NP	1 1/16 x 2 5/16	TVAN-1303.1
10	50	1 1/32 x 3/4	TVA-1304*
10	50NP	1 1/16 x 2 1/16	TVAN-1304.1
15	50	1 1/32 x 3/4	TVA-1305*
20	50	1 1/32 x 7/8	TVA-1305.5*
25	50	1 1/32 x 7/8	TVA-1306*
50	50	1 3/32 x 1	TVA-1308*
50	50NP	1 3/16 x 2 1/16	TVAN-1308.1
100	50	1 3/32 x 1 9/32	TVA-1310*
150	50	1 5/32 x 1 11/32	TVA-1311*
250	50	1 3/16 x 1 9/16	TVA-1312
500	50	1 x 1 1/16	TVA-1313
10	90	1 3/32 x 7/8	TVA-1320
10	100NP	1 1/16 x 1 13/16	TVAN-1333
1	150	5/32 x 1 9/32	TVA-1400*
4	150	1 1/32 x 7/8	TVA-1402*
4	150NP	5/16 x 1 13/16	TVAN-1402.1
5	150	1 1/32 x 7/8	TVA-1403*
8	150	1 3/32 x 7/8	TVA-1405*
10	150	1 3/32 x 1	TVA-1406*
10	150NP	1 3/16 x 1 9/16	TVAN-1406.1
12	150	1 3/32 x 1 5/16	TVA-1407*
16	150	3/8 x 1 1/2	TVA-1409*
20	150	1 3/32 x 1 11/32	TVA-1410*
25	150	1 5/32 x 1 5/16	TVA-1411*
30	150	1 5/32 x 1 11/32	TVA-1412*
40	150	1 3/16 x 1 9/16	TVA-1413
50	150	1 3/16 x 1 13/16	TVA-1414
60	150	1 5/16 x 1 9/16	TVA-1415
80	150	1 5/16 x 1 9/16	TVA-1418
100	150	1 5/16 x 2 1/16	TVA-1420
150	150	1 1/16 x 2 1/16	TVA-1422
200	150	1 1/16 x 2 9/16	TVA-1423
300	150	1 1/16 x 3 5/16	TVA-1425
80	175	1 1/16 x 2 1/16	TVA-1430
2	200NP	5/16 x 1 5/16	TVAN-1435.1
60	200NP	1 1/16 x 2 13/16	TVAN-1440
100	200	1 1/16 x 2 5/16	TVA-1445
1	250	1 1/32 x 3/4	TVA-1500*
4	250	1 3/32 x 1	TVA-1501
8	250	1 3/32 x 1 11/32	TVA-1503*
10	250	1 5/32 x 1 5/16	TVA-1504*
12	250	1 3/32 x 2 1/16	TVA-1505*

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

★ Mounting straps attached *Heat shrinkable plastic sleeve.

Copyright 1970, Sprague Products Company

IND-REM-13-7002

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

ATOM® ELECTROLYTICS, continued

µF	WVDC	D. x L.	Cat. No.
		SINGLE UNITS (Cont.)	
16	250	13/16 x 1 5/16	TVA-1507
20	250	13/16 x 1 5/16	TVA-1508
30	250	13/16 x 1 13/16	TVA-1510
40	250	13/16 x 2 1/16	TVA-1511
50	250	1 5/16 x 1 13/16	TVA-1512
60	250	1 x 1 13/16	TVA-1513
70	250	1 1/16 x 2 1/16	TVA-1515
100	250	1 1/16 x 2 5/16	TVA-1522
100	300	1 1/16 x 3 1/16	TVA-1573
4	350	13/32 x 1 5/16	TVA-1601*
5	350NP	13/16 x 1 13/16	TVAN-1602
8	350	15/32 x 1 9/16	TVA-1603*
10	350	3/4 x 1 9/16	TVA-1604
10	350NP	1 1/16 x 2 1/16	TVAN-1604.1
12	350	13/16 x 1 9/16	TVA-1605
16	350	13/16 x 1 9/16	TVA-1607
20	350	13/16 x 1 13/16	TVA-1608
30	350	13/16 x 2 1/16	TVA-1610
40	350	15/16 x 2 1/16	TVA-1611
60	350	1 1/16 x 2 1/16	TVA-1613
100	350	1 1/16 x 2 13/16	TVA-1620
10	400NP	1 1/16 x 2 1/16	★TVAN-1650
20	400NP	1 1/16 x 2 5/16	TVAN-1652
1	450	13/32 x 7/8	TVA-1700*
2	450	13/32 x 1 5/16	TVA-1701*
4	450	15/32 x 1 9/16	TVA-1702*
5	450	1 1/16 x 1 9/16	TVA-1703
8	450	3/4 x 1 9/16	TVA-1704
10	450	13/16 x 1 9/16	TVA-1705
12	450	13/16 x 1 9/16	TVA-1706
16	450	13/16 x 1 13/16	TVA-1708
20	450	15/16 x 1 13/16	TVA-1709
30	450	15/16 x2 1/16	TVA-1711
40	450	1 1/16 x 2 1/16	TVA-1712
50	450	1 1/16 x 2 5/16	TVA-1713
60	450	1 1/16 x 2 13/16	TVA-1714
80	450	1 1/16 x 3 13/16	TVA-1716
100	450	1 1/16 x 4 1/16	TVA-1718
10	475	13/16 x 2 1/16	TVA-1802
20	475	15/16 x 2 5/16	TVA-1804
8	500	15/16 x 1 13/16	TVA-1902
10	500	15/16 x 1 13/16	TVA-1903
12	500	15/16 x 2 1/16	TVA-1904
16	500	1 x 2 5/16	TVA-1905
20	500	1 1/16 x 2 5/16	TVA-1906
40	500	1 1/16 x3 1/16	TVA-1908
8	600	1 1/16 x 3 3/16	TVA-1962
10	600	1 1/16 x 3 3/16	TVA-1963
16	600	1 1/16 x 4 3/16	TVA-1965
20	600	1 1/16 x 4 3/16	TVA-1966
		DUAL UNITS (COMMON NEGATIVE)—3 LEADS	
10-10	25-25	15/16 x 1 9/16	★TVA-2210
10-10	50-50	13/16 x 1 5/16	★TVA-2315
8.8	150-150	13/16 x 1 5/16	TVA-2415
16-16	150-150	13/16 x 1 9/16	★TVA-2420
30-20	150-150	15/16 x 1 9/16	★TVA-2421
20-12	150-150	13/16 x 1 9/16	★TVA-2425
20-20	150-150	13/16 x1 9/16	★TVA-2428
30-30	150-150	15/16 x 1 9/16	★TVA-2434
40-20	150-150	15/16 x 1 9/16	★TVA-2438
40-30	150-150	15/16 x 1 13/16	★TVA-2442
40-40	150-150	15/16 x 2 1/16	★TVA-2445
50-30	150-150	15/16 x 2 1/16	★TVA-2450
50-50	150-150	15/16 x 2 1/16	★TVA-2453
60-20	150-150	15/16 x 2 1/16	★TVA-2455
60-40	150-150	15/16 x 2 13/16	★TVA-2456
60-60	150-150	15/16 x 2 13/16	★TVA-2457
80-20	150-150	15/16 x 2 5/16	★TVA-2459
80-30	150-150	15/16 x 2 5/16	★TVA-2460
80-40	150-150	15/16 x 2 5/16	★TVA-2461
80-50	150-150	15/16 x 2 5/16	★TVA-2462
100-50	150-150	1 1/16 x 2 13/16	★TVA-2463
200-5	150-150	1 1/16 x 3 5/16	★TVA-2467
60-1	200-200	15/16 x 2 5/16	★TVA-2493
200-5	200-200	1 1/16 x 3 13/16	★TVA-2498
20-20	250-250	15/16 x 1 13/16	★TVA-2515
40-10	250-250	15/16 x 2 1/16	★TVA-2520
80-10	250-250	1 1/16 x 2 5/16	★TVA-2525
60-32	300-300	1 1/16 x 3 1/16	★TVA-2585
8-8	450-450	15/16 x 1 13/16	★TVA-2720
10-10	450-450	15/16 x 2 1/16	★TVA-2722
16-8	450-450	15/16 x 2 5/16	★TVA-2725
20-20	450-450	15/16 x 2 13/16	TVA-2730
30-30	450-450	1 1/16 x 3 5/16	★TVA-2735
40-40	450-450	1 1/16 x 4 1/16	★TVA-2740
50-30	450-450	1 1/16 x 4 1/16	★TVA-2743
80-30	450-450	1 1/16 x 4 5/16	★TVA-2750
20-100	475-50	1 1/16 x 2 5/16	★TVA-2765
		DUAL UNIT (SEPARATE SECTIONS)—4 LEADS	
120-120	150-150	1 1/16 x 4	TU-2120
		TRIPLE UNITS	
40-40-250	150-150-10	1 x 2 1/16	★TVA-3406
20-20-20	150-150-25	15/16 x 1 9/16	★TVA-3415
30-30-100	150-150-12	15/16 x 2 1/16	★TVA-3419
60-40-250	150-150-15	1 1/16 x 2 1/16	★TVA-3421.5
40-20-20	150-150-25	15/16 x 1 13/16	★TVA-3422.9
40-30-20	150-150-25	15/16 x 2 1/16	★TVA-3423
40-40-20	150-150-25	15/16 x 2 5/16	★TVA-3425
40-40-100	150-150-25	15/16 x 2 5/16	★TVA-3427
50-30-20	150-150-25	15/16 x 2 5/16	★TVA-3430
50-30-100	150-150-25	15/16 x 2 5/16	★TVA-3432
50-30-200	150-150-25	1 1/16 x 2 5/16	★TVA-3433
50-50-20	150-150-25	1 x 2 5/16	★TVA-3436
80-40-20	150-150-25	1 1/16 x 2 1/16	★TVA-3437.1
20-20-20	150-150-150	15/16 x 1 13/16	★TVA-3440
30-25-20	150-150-150	15/16 x 2 5/16	★TVA-3442
30-30-20	150-150-150	15/16 x 2 5/16	★TVA-3443
30-30-30	150-150-150	15/16 x 2 5/16	★TVA-3444
40-20-10	150-150-150	15/16 x 2 5/16	★TVA-3445
40-20-20	150-150-150	15/16 x 2 1/16	★TVA-3446
40-30-20	150-150-150	15/16 x 2 5/16	★TVA-3448
40-30-30	150-150-150	1 1/16 x 2 5/16	★TVA-3449
40-40-20	150-150-150	15/16 x 2 5/16	★TVA-3450
40-40-40	150-150-150	1 1/16 x 2 5/16	★TVA-3451
50-30-20	150-150-150	1 1/16 x 2 5/16	★TVA-3453
50-50-50	150-150-150	1 1/16 x 3 1/16	★TVA-3453.5
60-40-40	150-150-150	1 1/16 x 2 5/16	★TVA-3454.3
80-40-20	150-150-150	1 1/16 x 3 1/16	★TVA-3455
80-40-40	150-150-150	1 1/16 x 3 1/16	★TVA-3456
80-50-50	150-150-150	1 1/16 x 3 5/16	★TVA-3456.5
80-60-20	150-150-150	1 1/16 x 3 1/16	★TVA-3457
80-80-80	150-150-150	1 1/16 x 3 13/16	TVA-3457.5
100-30-10	150-150-150	1 1/16 x 2 13/16	★TVA-3458
12-12-20	450-450-25	1 1/16 x 2 1/16	★TVA-3716
20-20-20	450-450-25	1 1/16 x 2 5/16	★TVA-3718
40-40-20	450-450-25	1 1/16 x 4 1/16	★TVA-3720
40-20-20	450-450-450	1 1/16 x 4 1/16	★TVA-3740

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

★ Mounting straps attached.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE TVL TWIST-LOK® ELECTROLYTICS



- Hermetically Sealed in Aluminum Cans for Long Life and Dependable Performance in TV, Radio and Hi-Fi
- Designed for 85C (185F) Operation
- Stand Up Under Extremely High Temperatures Often Encountered in TV, Hi-Fi, and Auto Radio Cabinets
- Withstand High Surge Voltages
- Ideal for High Ripple Selenium Rectifier Circuits
- Can Be Safely Mounted "Above Ground" Using Phenolic Mounting Plate and Insulating Tube
- Easy to Mount—Unit Locks Firmly in Place with a Twist of the Tabs

The Twist-lok Capacitors listed here include only popular ratings for industrial applications. For the complete line of more than 2400 Twist-lok Capacitors, please refer to Distributor's Guide to Replacement Electrolytic Capacitors, C-1005.

µF	WVDC	Dia. x Length	Cat. No.
		SINGLE UNITS	
2000	6	1⅜ x 2	TVL-1115
3000	10	1⅜ x 2½	TVL-1140
225	15	¾ x 2	TVL-1160
1000	15	1 x 1½	TVL-1165
1500	15	1 x 2	TVL-1167
2000	15	1⅜ x 2	TVL-1168
3000	15	1⅜ x 2	TVL-1170
4000	15	1⅜ x 3½	TVL-1173
100	25	¾ x 2	TVL-1215
500	25	1 x 1½	TVL-1220
1000	25	1⅜ x 2	TVL-1230
25	50	¾ x 2	TVL-1308
100	50	¾ x 2	TVL-1317
150	50	¾ x 2½	TVL-1320
250	50	1 x 2	TVL-1324
500	50	1⅜ x 2	TVL-1330
1000	50	1⅜ x 2½	TVL-1338
1500	50	1⅜ x 3	TVL-1341
30	150	1 x 2	TVL-1408
50	150	1 x 1½	TVL-1415
80	150	1 x 2½	TVL-1420
100	150	1 x 1½	TVL-1423
120	150	1 x 2	TVL-1425
120	150	1⅜ x 2½	TVL-1426
140	150	1 x 2½	TVL-1428
150	150	1 x 2	TVL-1429
150	150	1⅜ x 2	TVL-1430
200	150	1⅜ x 2	TVL-1431
200	150	1 x 3	TVL-1431.1
300	150	1⅜ x 2	TVL-1434
500	150	1⅜ x 4	TVL-1439.5
125	200	1 x 2½	TVL-1470
150	200	1 x 2⅞	TVL-1471
160	200	1⅜ x 2	TVL-1473
200	200	1⅜ x 2	TVL-1475
500	200	1⅜ x 4	TVL-1490
20	250	1 x 2	TVL-1509
40	250	1 x 2	TVL-1519
100	250	1 x 3	TVL-1535
150	250	1 x 3	TVL-1539
150	250	1⅜ x 2½	TVL-1540
160	250	1⅜ x 2½	†TVL-1541

† Furnished with a plastic outer insulating sleeve.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	WVDC	Dia. x Length	Cat. No.
160	250	1 x 4	TVL-1541.1
200	250	1⅜ x 2½	TVL-1547
60	300	1 x 3	TVL-1570
80	300	1 x 2½	TVL-1573
100	300	1 x 2½	TVL-1578
125	300	1⅜ x 2½	TVL-1580
150	300	1⅜ x 3½	TVL-1584
250	300	1⅜ x 4	TVL-1590
30	350	1 x 2	TVL-1617
40	350	1 x 2	TVL-1621
50	350	1 x 2	TVL-1622
60	350	1 x 2½	TVL-1624
80	350	1⅜ x 2	TVL-1630
125	350	1⅜ x 2½	TVL-1638
150	350	1⅜ x 2½	TVL-1642
250	350	1⅜ x 4½	TVL-1644.2
320	350	1⅜ x 4	TVL-1645
4	450	1 x 2	TVL-1702
10	450	1 x 1½	TVL-1705
15	450	1 x 1½	TVL-1709
20	450	1 x 2	TVL-1714
25	450	1 x 2	TVL-1716
30	450	1 x 2½	TVL-1720
40	450	1 x 2½	TVL-1725
50	450	1 x 2½	TVL-1728
60	450	1⅜ x 2½	TVL-1730
80	450	1⅜ x 2½	TVL-1735
100	450	1⅜ x 2½	TVL-1750
125	450	1⅜ x 3½	TVL-1760
150	450	1⅜ x 4	TVL-1770
40	475	1⅜ x 2	TVL-1820
10	500	1 x 1½	TVL-1940
20	500	1 x 2½	TVL-1943
30	500	1 x 2½	TVL-1947
40	500	1 x 2½	TVL-1950
80	500	1⅜ x 2½	TVL-1958
90	500	1⅜ x 3	TVL-1960
15	525	1⅜ x 3	TVL-1980
		DUAL UNITS	
500-500	15-15	1 x 2	TVL-2157
1000-1000	15-15	1 x 2½	TVL-2160
1000-1000	15-15	1⅜ x 2½	TVL-2161
500-100	16-16	1 x 2	TVL-2175

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970, Sprague Products Company

IND-REM-10-7002

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TVL TWIST-LOK® ELECTROLYTICS, continued

μF	WVDC	Dia. x Length	Cat. No.
800-200	16-16	1 x 2	TVL-2179.5
1000-500	16-16	1 x 2½	TVL-2185
500-200	16-16	1 x 2	TVL-2190
500-500	25-25	1⅜ x 2	TVL-2233
1000-500	25-25	1⅜ x 2	TVL-2239
100-25	50-50	1 x 2	TVL-2324
100-100	50-50	1 x 1½	TVL-2326
150-100	150-50	1 x 3	TVL-2413
20-20	150-150	1 x 1½	TVL-2415
30-30	150-150	1 x 1½	TVL-2422
40-20	150-150	1 x 1½	TVL-2425
40-30	150-150	1 x 2	TVL-2427
40-40	150-150	1 x 1½	TVL-2428
50-30	150-150	1 x 1½	TVL-2432
50-50	150-150	1 x 1½	TVL-2435
60-20	150-150	1 x 2	TVL-2436
60-60	150-150	1 x 3½	TVL-2438
70-30	150-150	1 x 2	TVL-2439
75-75	150-150	1 x 2	TVL-2440
80-40	150-150	1⅜ x 2	TVL-2442
80-50	150-150	1 x 2½	TVL-2442.1
80-60	150-150	1 x 3	TVL-2442.2
80-80	150-150	1⅜ x 2	TVL-2442.4
125-100	150-150	1⅜ x 2½	TVL-2443.3
150-80	150-150	1⅜ x 2½	TVL-2443.5
200-5	150-150	1⅜ x 3	TVL-2444
200-125	150-150	1⅜ x 3½	TVL-2445
200-150	150-150	1⅜ x 4	TVL-2446
200-200	150-150	1⅜ x 2½	TVL-2447
60-60	200-200	1 x 1¾	TVL-2461
60-60	200-200	1⅜ x 2	TVL-2462
100-100	200-200	1⅜ x 3	TVL-2464
200-5	200-200	1⅜ x 2	TVL-2470
20-20	250-250	1 x 1½	TVL-2515
40-40	250-250	1 x 3	TVL-2520
150-150	250-250	1⅜ x 2½	TVL-2535
200-200	250-250	1⅜ x 4	TVL-2538
100-100	300-200	1 x 3½	TVL-2562
40-30	300-300	1 x 3	TVL-2574
40-40	300-300	1⅜ x 2	TVL-2575
80-80	300-300	1⅜ x 2½	TVL-2585
120-20	300-300	1⅜ x 3½	TVL-2588
120-40	300-300	1⅜ x 3½	TVL-2589
150-100	300-300	1⅜ x 3	TVL-2591
200-80	300-300	1⅜ x 4½	TVL-2593
15-15	350-350	1 x 2	TVL-2625
20-20	350-350	1 x 2	TVL-2626
30-30	350-350	1 x 2½	TVL-2628
50-30	350-350	1⅜ x 2	TVL-2630
80-20	350-350	1⅜ x 2½	TVL-2633
80-40	350-350	1⅜ x 2½	TVL-2634
80-80	350-350	1⅜ x 2½	TVL-2635
90-40	350-350	1⅜ x 3	TVL-2637
100-60	350-350	1⅜ x 3½	TVL-2639
100-100	350-350	1⅜ x 3	TVL-2641
160-10	350-350	1⅜ x 3	TVL-2643
200-200	350-350	1⅜ x 5	TVL-2645.5
100-30	400-50	1⅜ x 2½	TVL-2655
80-80	400-200	1⅜ x 3½	TVL-2656
80-60	400-400	1⅜ x 3	TVL-2677
80-80	400-400	1⅜ x 4	TVL-2678
120-40	400-400	1⅜ x 4	TVL-2679
40-100	450-50	1 x 3½	TVL-2709
80-100	450-50	1⅜ x 3	TVL-2711
20-50	450-250	1 x 3	TVL-2722
20-160	450-250	1⅜ x 4	TVL-2722.7
80-200	450-250	1⅜ x 4½	TVL-2722.8
40-10	450-300	1 x 3	TVL-2724
80-2	450-350	1⅜ x 2½	TVL-2738.5
10-10	450-450	1 x 2	TVL-2750
15-15	450-450	1 x 2½	TVL-2753
20-10	450-450	1 x 2½	TVL-2754
20-20	450-450	1 x 2½	TVL-2755
30-10	450-450	1 x 2½	TVL-2757
30-30	450-450	1⅜ x 2	TVL-2759
40-20	450-450	1⅜ x 2	TVL-2762
40-40	450-450	1⅜ x 2½	TVL-2764
50-50	450-450	1⅜ x 3	TVL-2767
60-20	450-450	1⅜ x 3	TVL-2768
60-40	450-450	1⅜ x 3½	TVL-2770
60-60	450-450	1⅜ x 3	TVL-2772
80-10	450-450	1⅜ x 3	TVL-2776
80-20	450-450	1⅜ x 2½	TVL-2776.5
80-30	450-450	1⅜ x 4	TVL-2777
80-40	450-450	1⅜ x 3½	TVL-2778
80-50	450-450	1⅜ x 4	TVL-2778.5
80-80	450-450	1⅜ x 3½	TVL-2779
100-40	450-450	1⅜ x 3½	TVL-2780
30-100	475-50	1 x 3½	TVL-2803
80-160	475-250	1⅜ x 4½	TVL-2808
20-100	475-400	1⅜ x 3	TVL-2813
15-15	475-475	1 x 2½	TVL-2820
30-10	475-475	1 x 3	TVL-2824
80-50	475-475	1⅜ x 3½	TVL-2851
10-10	500-500	1 x 2½	TVL-2933
20-20	500-500	1⅜ x 2	TVL-2935
30-30	500-500	1⅜ x 2½	TVL-2937
40-40	500-500	1⅜ x 2½	TVL-2940
60-40	500-500	1⅜ x 3½	TVL-2944

TRIPLE UNITS

850-400-4	16-16-11.5	1 x 2½	TVL-3021
1000-500-4	16-16-11.5	1⅜ x 2	TVL-3021.5
400-100-100	16-16-16	1 x 2	TVL-3025
500-500-100	16-16-16	1 x 2	TVL-3026.8
1000-500-20	16-16-16	1⅜ x 2	TVL-3027
20-20-20	25-25-25	1 x 1½	TVL-3210
40-20-20	150-150-25	1 x 2	TVL-3422
40-40-20	150-150-25	1 x 1½	TVL-3426
40-40-200	150-150-25	1 x 2	TVL-3426.3
40-40-250	150-150-25	1 x 2½	TVL-3426.4
50-30-20	150-150-25	1 x 2½	TVL-3426.7
50-50-20	150-150-25	1 x 3	TVL-3430
60-40-200	150-150-25	1 x 3	TVL-3431.3
80-40-20	150-150-25	1 x 2½	TVL-3432
20-20-20	150-150-150	1 x 1½	TVL-3433
30-30-10	150-150-150	1 x 2	TVL-3435
40-20-10	150-150-150	1 x 2	TVL-3436
40-20-20	150-150-150	1 x 1½	TVL-3437
40-30-20	150-150-150	1 x 2	TVL-3438
40-40-40	150-150-150	1 x 1¾	TVL-3440
50-40-10	150-150-150	1 x 2½	TVL-3441
50-50-50	150-150-150	1 x 3	TVL-3442
60-40-20	150-150-150	1 x 1¾	TVL-3443
70-40-40	150-150-150	1 x 3	TVL-3443.4
80-40-20	150-150-150	1 x 2	TVL-3444
80-80-80	150-150-150	1⅜ x 3	TVL-3446
100-30-10	150-150-150	1 x 2½	TVL-3447
120-80-40	150-150-150	1⅜ x 3½	TVL-3448
120-120-40	150-150-150	1⅜ x 2	TVL-3448.2
200-100-60	150-150-150	1⅜ x 2½	TVL-3450
200-150-150	150-150-150	1⅜ x 4	TVL-3452
250-200-10	150-150-150	1⅜ x 4	TVL-3453
60-200-140	200-150-150	1⅜ x 3	TVL-3461.4
60-5-20	200-200-50	1 x 2½	TVL-3467
80-10-20	200-200-50	1 x 3	TVL-3471
250-200-10	200-200-200	1⅜ x 4	TVL-3490

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TVL TWIST-LOK® ELECTROLYTICS, continued

μF	WVDC	Dia. x Length	Cat. No.
15-15-20	250-250-25	1 x 2	TVL-3510
20-20-20	250-250-250	1 x 2	TVL-3532
40-20-20	250-250-250	1 x 2	TVL-3540
80-80-60	250-250-250	1⅜ x 3	TVL-3545
100-60-20	300-150-50	1⅜ x 3	TVL-3560.1
100-200-60	300-150-150	1⅜ x 4	TVL-3560.5
100-200-30	300-150-150	1⅜ x 4	TVL-3560.6
20-100-100	300-200-50	1 x 3½	TVL-3560.10
100-60-20	300-250-250	1⅜ x 3	TVL-3562
200-60-20	300-250-250	1⅜ x 4	TVL-3563
100-10-60	300-300-50	1⅜ x 2½	TVL-3574
125-20-20	300-300-50	1⅜ x 3½	TVL-3574.3
125-60-40	300-300-50	1⅜ x 4	TVL-3574.6
140-100-60	300-300-50	1⅜ x 3½	TVL-3574.7
140-100-100	300-300-50	1⅜ x 3½	TVL-3574.8
10-10-10	300-300-300	1 x 2	TVL-3580
80-40-40	300-300-300	1⅜ x 2½	TVL-3583
120-50-40	300-300-300	1⅜ x 3	TVL-3585
140-100-20	300-300-300	1⅜ x 4½	TVL-3585.5
160-60-20	300-300-300	1⅜ x 4	TVL-3587
40-200-100	350-150-150	1⅜ x 3½	TVL-3608.3
60-200-30	350-150-150	1⅜ x 3	TVL-3608.6
125-5-100	350-200-75	1⅜ x 3	TVL-3610
30-30-20	350-300-25	1 x 3	TVL-3620
15-10-20	350-350-25	1 x 2	TVL-3630
20-10-20	350-350-25	1 x 2	TVL-3634
20-20-20	350-350-25	1 x 2	TVL-3635
30-20-20	350-350-25	1 x 2	TVL-3636
200-10-50	350-350-25	1⅜ x 4	TVL-3636.8
20-5-150	350-350-50	1 x 3	TVL-3638.1
80-40-100	350-350-200	1⅜ x 3	TVL-3639
100-60-20	350-350-200	1⅜ x 3	TVL-3639.2
20-10-10	350-350-350	1 x 2	TVL-3639.6
30-20-10	350-350-350	1 x 2½	TVL-3639.8
60-40-20	350-350-350	1⅜ x 3½	TVL-3640
60-50-50	350-350-350	1⅜ x 2½	TVL-3641
80-60-60	350-350-350	1⅜ x 3½	TVL-3642
90-40-20	350-350-350	1⅜ x 2½	TVL-3645
140-140-20	350-350-350	1⅜ x 4	TVL-3648
80-80-100	400-200-50	1⅜ x 3	TVL-3652
40-200-60	400-200-200	1⅜ x 4	TVL-3653
10-4-20	400-350-25	1 x 2	TVL-3668
100-10-20	400-350-50	1⅜ x 3½	TVL-3672
20-20-20	400-400-25	1 x 2½	TVL-3678
80-40-60	400-400-50	1⅜ x 3½	TVL-3682.8
80-40-100	400-400-50	1⅜ x 3	TVL-3683
80-40-150	400-400-50	1⅜ x 4	TVL-3684
100-10-20	400-400-50	1⅜ x 2	TVL-3685
20-20-10	400-400-350	1 x 3	TVL-3687.4
60-30-20	400-400-350	1⅜ x 3	TVL-3688
80-20-10	400-400-350	1⅜ x 3	TVL-3689
100-10-80	400-400-350	1⅜ x 3½	TVL-3689.3
100-30-20	400-400-400	1⅜ x 4	TVL-3697
100-40-10	400-400-400	1⅜ x 4	TVL-3698
10-100-200	450-200-25	1 x 3½	TVL-3708.2
10-100-100	450-200-50	1 x 3½	TVL-3708.4
50-160-50	450-250-50	1⅜ x 4	TVL-3711.2
20-160-40	450-250-150	1⅜ x 3	TVL-3711.3
10-40-10	450-300-150	1⅜ x 2	TVL-3713.7
50-10-160	450-350-250	1⅜ x 4½	TVL-3719.4
60-80-20	450-400-250	1⅜ x 4	TVL-3720
80-50-100	450-350-200	1⅜ x 4	TVL-3723.7
40-80-40	450-350-350	1⅜ x 3½	TVL-3724.7
10-10-20	450-450-25	1 x 2	TVL-3731
15-15-40	450-450-25	1 x 2½	TVL-3734
20-10-20	450-450-25	1 x 3	TVL-3735
20-20-20	450-450-25	1 x 3	TVL-3739
40-40-20	450-450-25	1⅜ x 2½	TVL-3744
40-40-40	450-450-25	1⅜ x 2½	TVL-3744.2
80-40-100	450-450-25	1⅜ x 4	TVL-3746
20-10-50	450-450-50	1 x 3	TVL-3751
30-10-150	450-450-50	1⅜ x 2	TVL-3752
80-65-50	450-450-50	1⅜ x 3½	TVL-3754.9
40-40-100	450-450-50	1⅜ x 3	TVL-3755
60-40-75	450-450-50	1⅜ x 4	TVL-3756
80-20-100	450-450-50	1⅜ x 3½	TVL-3757
40-40-40	450-450-150	1⅜ x 3	TVL-3758
40-10-100	450-450-200	1⅜ x 3½	TVL-3762
40-40-100	450-450-200	1⅜ x 3	TVL-3764
40-40-80	450-450-350	1⅜ x 4	TVL-3774
50-20-4	450-450-350	1 x 3½	TVL-3774.6
80-80-10	450-450-400	1⅜ x 4	TVL-3775.7
10-10-10	450-450-450	1 x 2	TVL-3776
15-15-10	450-450-450	1 x 3	TVL-3778
15-15-15	450-450-450	1 x 2½	TVL-3778.2
20-10-10	450-450-450	1 x 3	TVL-3779
20-20-20	450-450-450	1⅜ x 2	TVL-3780
30-10-10	450-450-450	1⅜ x 2	TVL-3780.5
30-20-20	450-450-450	1⅜ x 3	TVL-3781
30-30-30	450-450-450	1⅜ x 3	TVL-3782
40-10-10	450-450-450	1⅜ x 2½	TVL-3783
40-30-20	450-450-450	1⅜ x 2½	TVL-3784
40-40-10	450-450-450	1⅜ x 2½	TVL-3785
40-40-20	450-450-450	1⅜ x 2½	TVL-3786
40-40-40	450-450-450	1⅜ x 3	TVL-3787
50-20-4	450-450-450	1 x 3½	TVL-3787.5
50-40-30	450-450-450	1⅜ x 3	TVL-3788
60-20-20	450-450-450	1⅜ x 3	TVL-3789
60-30-10	450-450-450	1⅜ x 3	TVL-3790
60-40-20	450-450-450	1⅜ x 3	TVL-3791
80-40-20	450-450-450	1⅜ x 3	TVL-3793
80-50-30	450-450-450	1⅜ x 4	TVL-3793.3
40-80-10	475-300-300	1⅜ x 3½	TVL-3806
10-100-25	475-350-25	1⅜ x 3	TVL-3806.4
10-4-100	475-350-50	1 x 2	TVL-3806.6
20-10-5	475-350-150	1 x 2½	TVL-3806.8
40-80-10	475-450-450	1⅜ x 4	TVL-3816
50-40-40	475-475-25	1⅜ x 3½	TVL-3816.11
20-10-100	475-475-50	1⅜ x 2	TVL-3817
20-10-100	475-475-400	1⅜ x 3½	TVL-3819
30-30-20	475-475-475	1⅜ x 3	TVL-3840
40-20-20	475-475-475	1⅜ x 3	TVL-3842
40-30-10	475-475-475	1⅜ x 3	TVL-3842.6
40-30-30	475-475-475	1⅜ x 4	TVL-3843
20-10-100	500-500-50	1 x 4	TVL-3928
40-40-100	500-500-200	1⅜ x 4	TVL-3935
10-10-10	500-500-500	1 x 2½	TVL-3952
30-20-20	500-500-500	1⅜ x 3	TVL-3956
40-40-10	500-500-500	1⅜ x 3½	TVL-3965

QUADRUPLE UNITS

50-40-160-40	150-150-25-25	1⅜ x 2	TVL-4410.7
60-40-20-200	150-150-150-10	1⅜ x 2	TVL-4414
40-40-30-20	150-150-150-25	1⅜ x 2	TVL-4420
40-40-40-20	150-150-150-25	1⅜ x 2	TVL-4421
80-40-40-20	150-150-150-25	1⅜ x 2	TVL-4431
80-40-40-40	150-150-150-25	1⅜ x 2½	TVL-4432
80-40-40-100	150-150-150-25	1⅜ x 2	TVL-4434
250-200-10-25	150-150-150-50	1⅜ x 3	TVL-4440
200-200-100-10	150-150-150-75	1⅜ x 2½	TVL-4440.3
40-40-40-30	150-150-150-150	1⅜ x 2	TVL-4441
100-80-60-40	150-150-150-150	1⅜ x 3	TVL-4445
200-200-60-30	150-150-150-150	1⅜ x 4	TVL-4448
200-200-60-30	175-175-175-175	1⅜ x 3½	TVL-4450
100-40-10-100	250-250-250-50	1⅜ x 3½	TVL-4516
10-200-140-30	300-150-150-150	1⅜ x 3½	TVL-4559
10-200-200-30	300-150-150-150	1⅜ x 4	TVL-4559.2
100-60-10-20	300-200-150-50	1⅜ x 3	TVL-4559.5
100-10-200-30	300-300-150-150	1⅜ x 3½	TVL-4561
140-10-200-30	300-300-150-150	1⅜ x 4	TVL-4561.3
60-40-20-50	300-300-300-25	1⅜ x 3½	TVL-4570

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970, Sprague Products Company

IND-EEM-11a-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TVL TWIST-LOK® ELECTROLYTICS, continued

μF	WVDC	Dia. x Length	Cat. No.
150-30-30-150	300-300-300-50	1⅜ x 4	TVL-4574
80-20-20-200	300-300-300-150	1⅜ x 3½	TVL-4576
40-20-10-10	300-300-300-300	1⅜ x 2	TVL-4578
40-40-20-10	300-300-300-300	1⅜ x 2	TVL-4579
40-40-30-20	300-300-300-300	1⅜ x 3	TVL-4580
60-40-10-10	300-300-300-300	1⅜ x 2½	TVL-4583
150-100-10-5	300-300-300-300	1⅜ x 4	TVL-4587
140-100-20-20	300-300-300-300	1⅜ x 4½	TVL-4588
150-150-30-30	300-300-300-300	1⅜ x 4½	TVL-4589
200-20-20-20	300-300-300-300	1⅜ x 3½	TVL-4590
10-20-10-50	350-200-200-50	1⅜ x 2	TVL-4603.13
5-100-20-100	350-200-200-25	1⅜ x 2	TVL-4603.15
160-30-30-20	350-300-300-50	1⅜ x 4	TVL-4605.2
140-100-20-20	350-300-300-300	1⅜ x 4	TVL-4605.3
160-60-10-4	350-300-300-300	1⅜ x 3½	TVL-4605.5
40-80-10-10	350-300-300-300	1⅜ x 2½	TVL-4605.6
60-4-100-40	350-350-25-25	1⅜ x 2½	TVL-4607
60-20-80-100	350-350-150-50	1⅜ x 3	TVL-4608
5-20-100-100	350-350-200-50	1⅜ x 2	TVL-4608.12
60-40-60-20	350-350-200-150	1⅜ x 3	TVL-4609
100-60-10-100	350-350-200-150	1⅜ x 4½	TVL-4609.4
100-80-10-20	350-350-300-50	1⅜ x 4	TVL-4610.8
30-10-5-200	350-350-350-25	1⅜ x 2	TVL-4620.3
40-20-20-25	350-350-350-25	1⅜ x 2½	TVL-4621.3
40-40-20-20	350-350-350-25	1⅜ x 2½	TVL-4621.6
40-40-30-10	350-350-350-25	1⅜ x 3	TVL-4622
40-40-40-40	350-350-350-25	1⅜ x 2½	TVL-4622.3
250-20-20-50	350-350-350-25	1⅜ x 4½	TVL-4622.11
90-30-5-100	350-350-350-75	1⅜ x 3½	TVL-4625
60-30-30-150	350-350-350-50	1⅜ x 3	TVL-4630.4
70-40-10-50	350-350-350-50	1⅜ x 3	TVL-4631
100-10-10-20	350-350-350-50	1⅜ x 3	TVL-4632
100-20-10-20	350-350-350-50	1⅜ x 3½	TVL-4633
100-40-30-50	350-350-350-50	1⅜ x 4	TVL-4634
30-20-5-100	350-350-350-200	1⅜ x 3	TVL-4634.6
30-10-5-100	350-350-350-200	1⅜ x 2½	TVL-4634.7
40-20-20-10	350-350-350-350	1⅜ x 2	TVL-4635
40-40-40-40	350-350-350-350	1⅜ x 4	TVL-4635.3
80-60-40-20	350-350-350-350	1⅜ x 3½	TVL-4635.7
90-40-30-30	350-350-350-350	1⅜ x 4	TVL-4635.8
20-10-10-20	400-350-200-25	1⅜ x 2	TVL-4652
40-80-100-100	400-350-200-50	1⅜ x 3½	TVL-4653
40-80-100-25	400-350-200-50	1⅜ x 3½	TVL-4654
40-80-10-100	400-350-350-200	1⅜ x 4	TVL-4661.4
40-100-20-10	400-350-350-350	1⅜ x 4	TVL-4661.6
50-40-100-100	400-400-50-25	1⅜ x 4	TVL-4663.2
80-40-100-20	400-400-50-25	1⅜ x 3	TVL-4663.4
100-10-30-20	400-400-50-50	1⅜ x 2½	TVL-4663.5
50-20-20-25	400-400-350-25	1⅜ x 3	TVL-4665.5
100-10-20-20	400-400-350-50	1⅜ x 3	TVL-4666.2
80-40-10-20	400-400-400-25	1⅜ x 3½	TVL-4669
80-40-30-40	400-400-400-25	1⅜ x 3½	TVL-4670
90-20-10-50	400-400-400-50	1⅜ x 4	TVL-4670.7
80-10-4-100	400-400-400-50	1⅜ x 4	TVL-4670.9
80-40-10-100	400-400-400-200	1⅜ x 4	TVL-4671.2
80-40-30-4	400-400-400-350	1⅜ x 4	TVL-4672
50-40-30-20	400-400-400-400	1⅜ x 4	TVL-4674
80-25-10-10	400-400-400-400	1⅜ x 4	TVL-4680
100-40-10-10	400-400-400-400	1⅜ x 4	TVL-4681
100-80-10-10	400-400-400-400	1⅜ x 4	TVL-4683
100-80-30-10	400-400-400-400	1⅜ x 4½	TVL-4683.8
20-80-20-50	450-200-200-50	1⅜ x 3	TVL-4701
20-160-50-50	450-250-75-50	1⅜ x 4	TVL-4701.3
25-100-10-60	450-300-300-50	1⅜ x 3	TVL-4703.5
10-100-20-20	450-300-300-200	1⅜ x 3	TVL-4704
80-2-100-25	450-350-25-25	1⅜ x 3	TVL-4705.3
40-30-15-50	450-350-300-50	1⅜ x 3	TVL-4705.8
10-140-100-20	450-350-300-300	1⅜ x 4	TVL-4705.9
80-10-40-30	450-400-300-300	1⅜ x 4	TVL-4710.2
20-80-50-100	450-350-350-50	1⅜ x 4	TVL-4711
60-40-20-20	450-400-400-400	1⅜ x 4	TVL-4711.3

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	WVDC	Dia. x Length	Cat. No.
20-15-20-20	450-450-25-25	1⅜ x 2	TVL-4712
50-20-4-40	450-450-150-25	1⅜ x 2½	TVL-4712.9
50-40-4-40	450-450-150-25	1⅜ x 2½	TVL-4712.10
35-25-20-100	450-450-200-50	1⅜ x 2½	TVL-4714
80-30-20-50	450-450-250-50	1⅜ x 3½	TVL-4714.2
40-40-100-60	450-450-200-200	1⅜ x 4	TVL-4714.3
30-20-160-40	450-450-250-150	1⅜ x 4½	TVL-4714.4
80-50-100-250	450-450-250-50	1⅜ x 4	TVL-4714.5
80-50-20-50	450-450-250-50	1⅜ x 4	TVL-4714.6
30-20-160-10	450-450-250-250	1⅜ x 4	TVL-4714.10
30-20-4-200	450-450-350-250	1⅜ x 4½	TVL-4716.4
40-40-30-30	450-450-350-350	1⅜ x 4	TVL-4720
10-10-10-20	450-450-450-25	1⅜ x 2	TVL-4723
20-20-20-20	450-450-450-25	1⅜ x 2	TVL-4724.2
40-20-20-20	450-450-450-25	1⅜ x 3	TVL-4731
40-20-20-40	450-450-450-25	1⅜ x 2½	TVL-4732
40-30-10-20	450-450-450-25	1⅜ x 3	TVL-4734
40-40-10-20	450-450-450-25	1⅜ x 3½	TVL-4736
40-40-20-20	450-450-450-25	1⅜ x 3½	TVL-4737
40-40-40-40	450-450-450-25	1⅜ x 3	TVL-4739
60-50-5-20	450-450-450-25	1⅜ x 4	TVL-4739.5
80-40-40-40	450-450-450-25	1⅜ x 4	TVL-4739.6
80-50-10-20	450-450-450-25	1⅜ x 4	TVL-4739.9
40-20-10-100	450-450-450-50	1⅜ x 3½	TVL-4743
40-40-10-25	450-450-450-50	1⅜ x 3	TVL-4745
40-40-10-50	450-450-450-50	1⅜ x 4	TVL-4746
40-40-10-100	450-450-450-100	1⅜ x 3½	TVL-4747
20-30-80-40	450-450-450-150	1⅜ x 4	TVL-4754
40-20-10-100	450-450-450-250	1⅜ x 4	TVL-4757
30-20-10-20	450-450-450-350	1⅜ x 2½	TVL-4757.12
40-10-10-40	450-450-450-350	1⅜ x 3	TVL-4758
5-5-5-5	450-450-450-450	1⅜ x 2	TVL-4759.7
10-10-10-10	450-450-450-450	1⅜ x 2	TVL-4760
20-10-10-10	450-450-450-450	1⅜ x 2	TVL-4761
20-20-20-20	450-450-450-450	1⅜ x 2½	TVL-4763
30-30-20-20	450-450-450-450	1⅜ x 3	TVL-4769.4
35-35-10-5	450-450-450-450	1⅜ x 3	TVL-4771
40-10-10-10	450-450-450-450	1⅜ x 3	TVL-4771.3
40-35-10-10	450-450-450-450	1⅜ x 3	TVL-4771.8
40-40-20-20	450-450-450-450	1⅜ x 2½	TVL-4773
40-40-30-30	450-450-450-450	1⅜ x 4	TVL-4774
40-40-40-40	450-450-450-450	1⅜ x 3½	TVL-4775
60-20-20-20	450-450-450-450	1⅜ x 3	TVL-4778
80-10-10-10	450-450-450-450	1⅜ x 3½	TVL-4783
20-80-20-10	475-300-300-300	1⅜ x 3½	TVL-4801
20-140-20-10	475-300-300-300	1⅜ x 4	TVL-4801.2
10-100-10-100	475-300-300-25	1⅜ x 3½	TVL-4802
10-140-4-100	475-350-350-50	1⅜ x 4	TVL-4803.3
10-130-20-10	475-350-350-350	1⅜ x 3	TVL-4803.4
30-130-10-10	475-350-350-350	1⅜ x 4	TVL-4803.8
10-40-100-10	475-400-50-25	1⅜ x 2½	TVL-4804
10-40-4-100	475-400-350-50	1⅜ x 2½	TVL-4805
10-80-40-100	475-400-400-50	1⅜ x 4	TVL-4805.2
10-60-30-125	475-450-400-50	1⅜ x 4	TVL-4811
10-50-30-30	475-450-450-25	1⅜ x 3	TVL-4813
80-4-4-200	475-450-450-25	1⅜ x 3½	TVL-4813.2
10-40-10-100	475-450-450-50	1⅜ x 2½	TVL-4814
50-18-4-40	475-475-150-25	1⅜ x 2½	TVL-4814.7
20-10-20-100	475-475-450-25	1⅜ x 2½	TVL-4818
100-4-4-200	475-475-475-25	1⅜ x 4	TVL-4818.5
80-4-4-4	475-450-450-450	1⅜ x 3	TVL-4820.3
50-40-4-40	475-475-150-25	1⅜ x 3½	TVL-4820.4
80-80-4-4	475-475-450-450	1⅜ x 4	TVL-4820.5
80-4-4-200	475-475-475-25	1⅜ x 3½	TVL-4823
20-20-10-10	475-475-475-475	1⅜ x 2½	TVL-4832
20-20-20-20	475-475-475-475	1⅜ x 2½	TVL-4834
40-20-10-10	475-475-475-475	1⅜ x 2½	TVL-4840
10-10-4-20	500-300-300-25	1⅜ x 2	TVL-4909
30-10-150-30	500-450-50-50	1⅜ x 3	TVL-4917
10-10-10-10	500-500-500-500	1⅜ x 2	TVL-4940
40-40-8-8	500-500-500-500	1⅜ x 4	TVL-4944

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

Net

SPRAGUE CAPACITORS



TYPE 600D EXTRALYTIC® ALUMINUM ELECTROLYTIC CAPACITORS

- Extended Operating Temperature Range From —55C to +125C
- Dual Rating Makes Possible Operation At Either 85C or 125C
- Voltage Ratings Up to 250 Volts D-C
- Improved Oxide Systems, Etching Techniques, and End Seals; a New Electrolyte Makes The Type 600D Equivalent to Or Better Than Comparable Foil Tantalum Capacitors.
- Lower Cost and One Third The Weight of Comparable Foil Tantalums

For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3455.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	Case Code	Catalog Number†
7 WVDC @ 85C, 5 WVDC @ 125C		
120	KD	600D127G007KD4
220	DD	600D227G007DD4
270	DE	600D277G007DE4
390	DG	600D397G007DG4
560	DJ	600D567G007DJ4
820	DL	600D827G007DL4
1000	DX	600D108G007DX4
10 WVDC @ 85C, 7 WVDC @ 125C		
100	KD	600D107G010KD4
180	DE	600D187G010DE4
220	DE	600D227G010DE4
330	DG	600D337G010DG4
470	DJ	600D447G010DJ4
680	DL	600D687G010DL4
820	DX	600D827G010DX4
15 WVDC @ 85C, 10 WVDC @ 125C		
68	KD	600D686G015KD4
82	KD	600D826G015KD4
150	DD	600D157G015DD4
180	DE	600D187G015DE4
270	DG	600D277G015DG4
390	DJ	600D397G015DJ4
560	DL	600D567G015DL4
680	DX	600D687G015DX4
20 WVDC @ 85C, 15 WVDC @ 125C		
68	KD	600D686G020KD4
100	DD	600D107G020DD4
140	DE	600D147G020DE4
220	DG	600D227G020DG4
290	DJ	600D297G020DJ4
440	DL	600D447G020DL4
600	DX	600D607G020DX4
30 WVDC @ 85C, 20 WVDC @ 125C		
33	KD	600D336G030KD4
47	KD	600D476G030KD4
82	DD	600D826G030DD4
100	DE	600D107G030DE4
120	DG	600D127G030DG4
150	DG	600D157G030DG4
220	DJ	600D227G030DJ4
330	DL	600D337G030DL4
390	DX	600D397G030DX4
40 WVDC @ 85C, 30 WVDC @ 125C		
30	KD	600D306G040KD4
50	DD	600D506G040DD4
70	DE	600D706G040DE4
100	DG	600D107G040DG4
140	DJ	600D147G040DJ4
210	DL	600D217G040DL4
280	DX	600D287G040DX4
50 WVDC @ 85C, 40 WVDC @ 125C		
22	KD	600D226G050KD4
33	DD	600D336G050DD4
47	DE	600D476G050DE4
56	DG	600D566G050DG4
68	DG	600D686G050DG4
100	DJ	600D107G050DJ4
150	DL	600D157G050DL4
180	DX	600D187G050DX4
60 WVDC @ 85C, 50 WVDC @ 125C		
17	KD	600D176G060KD4
25	DD	600D256G060DD4
40	DE	600D406G060DE4
60	DG	600D606G060DG4
80	DJ	600D806G060DJ4
120	DL	600D127G060DL4
160	DX	600D167G060DX4
75 WVDC @ 85C, 60 WVDC @ 125C		
12	KD	600D126F075KD4
22	DD	600D226F075DD4
33	DE	600D336F075DE4
47	DG	600D476F075DG4
68	DJ	600D686F075DJ4
100	DL	600D107F075DL4
120	DX	600D127F075DX4
100 WVDC @ 85C, 75 WVDC @ 125C		
8.2	KD	600D825F100KD4
12	DD	600D126F100DD4
15	DE	600D156F100DE4
22	DG	600D226F100DG4
33	DJ	600D336F100DJ4
47	DL	600D476F100DL4
68	DX	600D686F100DX4
150 WVDC @ 85C, 100 WVDC @ 125C		
4.7	KD	600D475F150KD4
5.6	KD	600D565F150KD4
8.2	DD	600D825F150DD4
12	DE	600D126F150DE4
18	DG	600D186F150DG4
22	DJ	600D226F150DJ4
33	DL	600D336F150DL4
56	DX	600D566F150DX4
200 WVDC @ 85C, 150 WVDC @ 125C		
4	KD	600D405F200KD4
6	DD	600D605F200DD4
8	DE	600D805F200DE4
13	DG	600D136F200DG4
17	DJ	600D176F200DJ4
26	DL	600D266F200DL4
39	DX	600D396F200DX4
250 WVDC @ 85C, 200 WVDC @ 125C		
3.3	KD	600D335F250KD4
5.6	DD	600D565F250DD4
6.8	DE	600D685F250DE4
10	DG	600D106F250DG4
12	DJ	600D126F250DJ4
22	DL	600D226F250DL4
27	DX	600D276F250DX4

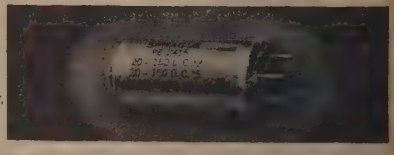
TABLE OF DIMENSIONS

Case Code	With Outer Insulation D	L
KD	.296	1.000
DD	.390	1.000
DE	.390	1.187
DG	.390	1.437
DJ	.390	1.687
DL	.390	2.249
DX	.390	2.749

†Catalog numbers listed are for capacitors with Outer Insulation. For units with bare can substitute "0" for "4" at the end of the catalog number, and subtract 1/64" from diameter and 1/16" from length.

TYPE PE OCTAL-BASE ELECTROLYTICS

- For Applications where Rapid Changing of Capacitors is Desired
- Will Fit Standard Octal-Base Tube Sockets
- Hermetically Sealed in Metal Cans for Long Life
- Will Stand Up Under High Temperatures, High Ripple Currents, High Surge Voltages



µF	WVDC	Diam. x Lgth.	Cat. No.
100	350	1⅜ x 3	PE-1636
10	450	1⅝ x 2½	PE-1705
20	450	1⅝ x 2½	PE-1714
40	450	1⅜ x 2½	PE-1725
80	450	1⅜ x 3½	PE-1730
20-20	150-150	1⅝ x 2½	PE-2415
40-40	150-150	1⅝ x 2½	PE-2428

Call Your Sprague Distributor for Prices

µF	WVDC	Diam. x Lgth.	Cat. No.
10-10	450-450	1⅝ x 2½	PE-2750
20-20	450-450	1⅞ x 2½	PE-2755
40-40	450-450	1⅜ x 3½	PE-2764
10-10-10	450-450-450	1⅝ x 2½	PE-3776
20-20-20	450-450-450	1⅜ x 3	PE-3780
30-30-10-20	450-450-450-50	1⅜ x 3½	PE-4741

Call Your Sprague Distributor for Prices



SPECIAL PURPOSE ELECTROLYTIC CAPACITORS

- Designed to Filter Low Voltage Power Supplies For Aircraft
- Solder Lug Terminals

µF	D. x L.	VDC	Catalog Number	
1250	1 x 2¾	3NP	D16255	(S17377)*
3750	1⅜ x 3⅝	3NP	D3759	(S17378)*

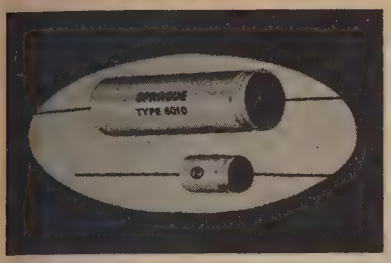
*Please use "S" number when ordering.

Copyright 1970, Sprague Products Company

All sizes subject to changes without notice.

© United Technical Publications

SPRAGUE CAPACITORS



TYPE 601D EXTRALYTIC® ALUMINUM ELECTROLYTIC CAPACITORS

- Supplement Type 600D With Larger Case Sizes and Higher Capacitance Values
- Pressure-sensitive Safety Vent
- Designed to Operate at a Temperature Range of —55C to +85C
- Unique New Electrolyte, High-gain Etched Foil, Improved Oxide System Provide Long Life With Superior Electrical Characteristics
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3456

Call Your Sprague Industrial Distributor For Current Quantity Prices

μF	D. x L.	Catalog Number*
5 WVDC, 7 WDV SURGE		
750	.687 x 1.250	601D757G005FE4
1200	.812 x 1.250	601D128G005GE4
1500	.687 x 1.750	601D158G005FJ4
1700	.937 x 1.250	601D178G005HE4
2300	.687 x 2.250	601D238G005FL4
2400	.812 x 1.750	601D248G005GJ4
2700	.687 x 2.750	601D278G005FP4
3500	.687 x 3.250	601D358G005FS4
3600	.812 x 2.250	601D368G005GL4
4200	.687 x 3.750	601D428G005FT4
4300	.812 x 2.750	601D438G005GP4
4700	1.062 x 1.750	601D478G005JJ4
5200	.937 x 2.250	601D528G005HL4
5500	.812 x 3.250	601D558G005GS4
6100	.937 x 2.750	601D618G005HP4
6700	.812 x 3.750	601D678G005GT4
7100	1.062 x 2.250	601D718G005JL4
7900	.937 x 3.250	601D798G005HS4
8300	1.062 x 2.750	601D838G005JP4
9600	.937 x 3.750	601D968G005HT4
10000	1.062 x 3.250	601D109G005JS4
13000	1.062 x 3.750	601D139G005JT4
7.5 WVDC, 10 VDC SURGE		
650	.687 x 1.250	601D657G7R5FE4
1000	.812 x 1.250	601D108G7R5GE4
1300	.687 x 1.750	601D138G7R5FJ4
1400	.937 x 1.250	601D148G7R5HE4
1900	.687 x 2.250	601D198G7R5FL4
2000	.812 x 1.750	601D208G7R5GJ4
2200	.687 x 2.750	601D228G7R5FP4
2900	.687 x 3.250	601D298G7R5FS4
3000	.812 x 2.250	601D308G7R5GL4
3500	.687 x 3.750	601D358G7R5FT4
3600	.812 x 2.750	601D368G7R5GP4
4000	1.062 x 1.750	601D408G7R5JJ4
4400	.937 x 2.250	601D448G7R5HL4
4600	.812 x 3.250	601D468G7R5GS4
5100	.937 x 2.750	601D518G7R5HP4
5600	.812 x 3.750	601D568G7R5GT4
6000	1.062 x 2.250	601D608G7R5JL4
6600	.937 x 3.250	601D668G7R5HS4
7000	1.062 x 2.750	601D708G7R5JP4
8100	.937 x 3.750	601D818G7R5HT4
9000	1.062 x 3.250	601D908G7R5JS4
11000	1.062 x 3.750	601D119G7R5JT4
10 WVDC, 15 VDC SURGE		
540	.687 x 1.250	601D547G010FE4
850	.812 x 1.250	601D857G010GE4
1000	.687 x 1.750	601D108G010FJ4
1200	.937 x 1.250	601D128G010HE4
1600	.687 x 2.250	601D168G010FL4
1700	.812 x 1.750	601D178G010GJ4
1800	.687 x 2.750	601D188G010FP4
2400	.687 x 3.250	601D248G010FS4
2500	.812 x 2.250	601D258G010GL4
2900	.687 x 3.750	601D298G010FT4
3000	.812 x 2.750	601D308G010GP4
3300	1.062 x 1.750	601D338G010JJ4
3600	.937 x 2.250	601D368G010HL4
3800	.812 x 3.250	601D388G010GS4
4200	.937 x 2.750	601D428G010HP4
4700	.812 x 3.750	601D478G010GT4
5000	1.062 x 2.250	601D508G010JL4
5500	.937 x 3.250	601D558G010HS4
5800	1.062 x 2.750	601D588G010JP4
6700	.937 x 3.750	601D678G010HT4
7500	1.062 x 3.250	601D758G010JS4
9100	1.062 x 3.750	601D918G010JT4
15 WVDC, 20 VDC SURGE		
400	.687 x 1.250	601D407G015FE4
650	.812 x 1.250	601D657G015GE4
800	.687 x 1.750	601D807G015FJ4
930	.937 x 1.250	601D937G015HE4
1200	.687 x 2.250	601D128G015FL4
1300	.812 x 1.750	601D138G015GJ4
1400	.687 x 2.750	601D148G015FP4
1800	.687 x 3.250	601D188G015FS4
15 WVDC, 20 VDC SURGE (Cont.)		
1900	.812 x 2.250	601D198G015GL4
2200	.687 x 3.750	601D228G015FT4
2500	1.062 x 1.750	601D258G015JJ4
2700	.937 x 2.250	601D278G015HL4
2900	.812 x 3.250	601D298G015GS4
3200	.937 x 2.750	601D328G015HP4
3500	.812 x 3.750	601D358G015GT4
3800	1.062 x 2.250	601D388G015JL4
4200	.937 x 3.250	601D428G015HS4
4400	1.062 x 2.750	601D448G015JP4
5100	.937 x 3.750	601D518G015HT4
5700	1.062 x 3.250	601D578G015JS4
6900	1.062 x 3.750	601D698G015JT4
20 WVDC, 30 VDC SURGE		
290	.687 x 1.250	601D297G020FE4
460	.812 x 1.250	601D467G020GE4
580	.687 x 1.750	601D587G020FJ4
660	.937 x 1.250	601D667G020HE4
900	.812 x 1.750	601D907G020GJ4
1000	.687 x 2.750	601D108G020FP4
1300	.687 x 3.250	601D138G020FS4
1600	.687 x 3.750	601D168G020FT4
1800	1.062 x 1.750	601D188G020JJ4
1900	.937 x 2.250	601D198G020HL4
2000	.812 x 3.250	601D208G020GS4
2300	.937 x 2.750	601D238G020HP4
2500	.812 x 3.750	601D258G020GT4
2700	1.062 x 2.250	601D278G020JL4
2900	.937 x 3.250	601D298G020HS4
3100	1.062 x 2.750	601D318G020JP4
3600	.937 x 3.750	601D368G020HT4
4000	1.062 x 3.250	601D408G020JS4
4900	1.062 x 3.750	601D498G020JT4
25 WVDC, 40 VDC SURGE		
220	.687 x 1.250	601D227G025FE4
350	.812 x 1.250	601D357G025GE4
440	.687 x 1.750	601D447G025FJ4
500	.937 x 1.250	601D507G025HE4
660	.687 x 2.250	601D667G025FL4
680	.812 x 1.250	601D687G025JE4
700	.812 x 1.750	601D707G025GJ4
770	.687 x 2.750	601D777G025FP4
990	.687 x 3.250	601D997G025FS4
1000	.812 x 2.250	601D108G025GL4
1200	.687 x 3.750	601D128G025FT4
1300	1.062 x 1.750	601D138G025JJ4
1500	.812 x 3.250	601D158G025GS4
1700	.937 x 2.750	601D178G025HP4
1900	.812 x 3.750	601D198G025GT4
2000	1.062 x 2.250	601D208G025JL4
2200	.937 x 3.250	601D228G025HS4
2300	1.062 x 2.750	601D238G025JP4
2700	.937 x 3.750	601D278G025HT4
3000	1.062 x 3.250	601D308G025JS4
3700	1.062 x 3.750	601D378G025JT4
30 WVDC, 45 VDC SURGE		
190	.687 x 1.250	601D197G030FE4
310	.812 x 1.250	601D317G030GE4
390	.687 x 1.750	601D397G030FJ4
440	.937 x 1.250	601D447G030HE4
580	.687 x 2.250	601D587G030FL4
600	1.062 x 1.250	601D607G030JE4
620	.812 x 1.750	601D627G030GJ4
680	.687 x 2.750	601D687G030FP4
870	.687 x 3.250	601D877G030FS4
880	.937 x 1.750	601D887G030HJ4
930	.812 x 2.250	601D937G030GL4
1000	.687 x 3.750	601D108G030FT4
1200	1.062 x 1.750	601D128G030JJ4
1400	.812 x 3.250	601D148G030GS4
1500	.937 x 2.750	601D158G030HP4
1700	.812 x 3.750	601D178G030GT4
1800	1.062 x 2.250	601D188G030JL4
2000	.937 x 3.250	601D208G030HS4
2100	1.062 x 2.750	601D218G030JP4
2400	.937 x 3.750	601D248G030HT4
2700	1.062 x 3.250	601D278G030JS4
3300	1.062 x 3.750	601D338G030JT4
40 WVDC, 60 VDC SURGE		
140	.687 x 1.250	601D147G040FE4
220	.812 x 1.250	601D227G040GE4
270	.687 x 1.750	601D277G040FJ4
300	.937 x 1.250	601D307G040HE4
400	.687 x 2.250	601D407G040FL4
430	1.062 x 1.250	601D437G040JE4
440	.812 x 1.750	601D447G040GJ4
480	.687 x 2.750	601D487G040FP4
620	.687 x 3.250	601D627G040FS4
630	.937 x 1.750	601D637G040HJ4
660	.812 x 2.250	601D667G040GL4
760	.687 x 3.750	601D767G040FT4
770	.812 x 2.750	601D777G040GP4
860	1.062 x 1.750	601D867G040JJ4
950	.937 x 2.250	601D957G040HL4
1000	.812 x 3.250	601D108G040GS4
1100	.937 x 2.750	601D118G040HP4
1200	.812 x 3.750	601D128G040GT4
1400	.937 x 3.250	601D148G040HS4
1500	1.062 x 2.750	601D158G040JP4
1700	.937 x 3.750	601D178G040HT4
1900	1.062 x 3.250	601D198G040JS4
2300	1.062 x 3.750	601D238G040JT4
50 WVDC, 75 VDC SURGE		
110	.687 x 1.250	601D117G050FE4
170	.812 x 1.250	601D177G050GE4
220	.687 x 1.750	601D227G050FJ4
250	.937 x 1.250	601D257G050HE4
330	.687 x 2.250	601D337G050FL4
340	1.062 x 1.250	601D347G050JE4
350	.812 x 1.750	601D357G050GJ4
380	.687 x 2.750	601D387G050FP4
500	.687 x 3.250	601D507G050FS4
600	.687 x 3.750	601D607G050FT4
680	1.062 x 1.750	601D687G050JJ4
750	.937 x 2.250	601D757G050HL4
790	.812 x 3.250	601D797G050GS4
870	.937 x 2.750	601D877G050HP4
950	.812 x 3.750	601D957G050GT4
1000	1.062 x 2.250	601D108G050JL4
1100	.937 x 3.250	601D118G050HS4
1500	1.062 x 3.250	601D158G050JS4
1800	1.062 x 3.750	601D188G050JT4
75 WVDC, 100 VDC SURGE		
45	.687 x 1.250	601D456F075FE4
75	.812 x 1.250	601D756F075GE4
95	.687 x 1.750	601D956F075FJ4
100	.937 x 1.250	601D107F075HE4
140	.687 x 2.250	601D147F075FL4
150	.812 x 1.750	601D157F075GJ4
160	.687 x 2.750	601D167F075FP4
210	.687 x 3.250	601D217F075FS4
220	.812 x 2.250	601D227F075GL4
260	.687 x 3.750	601D267F075FT4
290	1.062 x 1.750	601D297F075JJ4
320	.937 x 2.250	601D327F075HL4
340	.812 x 3.250	601D347F075GS4
380	.937 x 2.750	601D387F075HP4
400	.812 x 3.750	601D407F075GT4
440	1.062 x 2.250	601D447F075JL4
490	.937 x 3.250	601D497F075HS4
500	1.062 x 2.750	601D507F075JP4
600	.937 x 3.750	601D607F075HT4
660	1.062 x 3.250	601D667F075JS4
800	1.062 x 3.750	601D807F075JT4
100 WVDC, 150 VDC SURGE		
25	.687 x 1.250	601D256F100FE4
45	.812 x 1.250	601D456F100GE4
55	.687 x 1.750	601D556F100FJ4
65	.937 x 1.250	601D656F100HE4
80	.687 x 2.250	601D806F100FL4
90	.812 x 1.750	601D906F100GJ4
95	.687 x 2.750	601D956F100FP4
120	.687 x 3.250	601D127F100FS4
130	.812 x 2.250	601D137F100GL4
150	.687 x 3.750	601D157F100FT4
180	1.062 x 1.750	601D187F100JJ4

*Catalog numbers listed are for capacitors with outer insulation. For bare case change "4" to "0" at end of catalog number and subtract .062" from diameter and .125" from length.

Copyright 1970, Sprague Products Company

All sizes subject to change without notice.

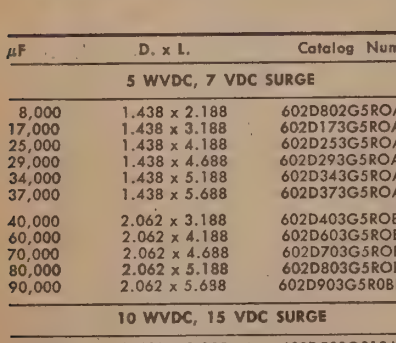
© United Technical Publications

SPRAGUE CAPACITORS

TYPE 601D EXTRALYTIC® ALUMINUM ELECTROLYTIC CAPACITORS, Continued

µF	D. x L.	Catalog Number*
100 WVDC, 150 VDC SURGE (Cont.)		
200	.812 x 3.250	601D207F100GS4
230	.937 x 2.750	601D237F100HP4
250	.812 x 3.750	601D257F100GT4
280	1.062 x 2.250	601D287F100JL4
300	.937 x 3.250	601D307F100HS4
320	1.062 x 2.750	601D327F100JP4
370	.937 x 3.750	601D377F100HT4
420	1.062 x 3.250	601D427F100JS4
500	1.062 x 3.750	601D507F100JT4
150 WVDC, 200 VDC SURGE		
18	.687 x 1.250	601D186F150FE4
30	.812 x 1.250	601D306F150GE4
35	.687 x 1.750	601D356F150FJ4
45	.937 x 1.250	601D456F150HE4
55	.687 x 2.250	601D556F150FL4
60	.812 x 1.750	601D606F150GJ4
65	.687 x 2.750	601D656F150FP4
85	.687 x 3.250	601D856F150FS4
90	.937 x 1.750	601D906F150HJ4
95	.812 x 2.250	601D956F150GL4
100	.687 x 3.750	601D107F150FT4
130	1.062 x 1.750	601D137F150JJ4
140	.812 x 3.250	601D147F150GS4
160	.937 x 2.750	601D167F150HP4
170	.812 x 3.750	601D177F150GT4
190	1.062 x 2.250	601D197F150JL4
210	.937 x 3.250	601D217F150HS4
230	1.062 x 2.750	601D237F150JP4
260	.937 x 3.750	601D267F150HT4
290	1.062 x 3.250	601D297F150JS4
360	1.062 x 3.750	601D367F150JT4
200 WVDC, 250 VDC SURGE		
16	.637 x 1.250	601D166F200FE4
25	.812 x 1.250	601D256F200GE4
30	.687 x 1.750	601D306F200FJ4
35	.937 x 1.250	601D356F200HE4
45	.687 x 2.750	601D456F200FL4
50	.812 x 1.750	601D506F200GJ4
55	.687 x 2.750	601D556F200FP4
70	.687 x 3.250	601D706F200FS4
75	.812 x 2.250	601D756F200GL4
85	.687 x 3.750	601D856F200FT4
90	.812 x 2.750	601D906F200GP4
100	.812 x 3.250	601D107F200GS4
110	.937 x 2.250	601D117F200HL4
130	.937 x 2.750	601D137F200HP4
140	.812 x 3.750	601D147F200GT4
160	1.062 x 2.250	601D167F200JL4
170	.937 x 3.250	601D177F200HS4
180	1.062 x 2.750	601D187F200JP4
210	.937 x 3.750	601D217F200HT4
240	1.062 x 3.250	601D247F200JS4
290	1.062 x 3.750	601D297F200JT4

*Capacitors listed have outer plastic—film insulation.



TYPE 602D EXTRALYTIC® ALUMINUM ELECTROLYTIC CAPACITORS

- Large Cylindrical Power Supply Filter Capacitors With Exceptional Performance Over Long and Trouble-free life
- High Ripple Current Capability
- Designed For Continuous Operation Over Temperature Range of —55 C to +85 C
- Extremely Useful on Input of Power Supply Filters, as They Will Safely Carry as Much as 10 amps of Ripple Current at 120 Hz
- Superior Humidity Seal
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3457

µF	D. x L.	Catalog Number*
5 WVDC, 7 VDC SURGE		
8,000	1.438 x 2.188	602D802G5ROAA2A
17,000	1.438 x 3.188	602D173G5ROAB2A
25,000	1.438 x 4.188	602D253G5ROAC2A
29,000	1.438 x 4.688	602D293G5ROAD2A
34,000	1.438 x 5.188	602D343G5ROAE2A
37,000	1.438 x 5.688	602D373G5ROAF2A
40,000	2.062 x 3.188	602D403G5ROBB2A
60,000	2.062 x 4.188	602D603G5ROBC2A
70,000	2.062 x 4.688	602D703G5ROBD2A
80,000	2.062 x 5.188	602D803G5ROBE2A
90,000	2.062 x 5.688	602D903G5R0BF2A
10 WVDC, 15 VDC SURGE		
5,000	1.438 x 2.188	602D502G010AA2A
10,000	1.438 x 3.188	602D103G010AB2A
15,000	1.438 x 4.188	602D153G010AC2A
17,000	1.438 x 4.688	602D173G010AD2A
20,000	1.438 x 5.188	602D203G0T0AE2A
22,000	1.438 x 5.688	602D223G010AF2A
24,000	2.062 x 3.188	602D243G010BB2A
37,000	2.062 x 4.188	602D373G010BC2A
43,000	2.062 x 4.688	602D433G010BD2A
48,000	2.062 x 5.188	602D483G010BE2A
55,000	2.062 x 5.688	602D553G010BF2A
15 WVDC, 20 VDC SURGE		
4,000	1.438 x 2.188	602D402G015AA2A
8,000	1.438 x 3.188	602D802G015AB2A
12,000	1.438 x 4.188	602D123G015AC2A
14,000	1.438 x 4.688	602D143G015AD2A
16,000	1.438 x 5.188	602D163G015AE2A
18,000	1.438 x 5.688	602D183G015AF2A
20,000	2.062 x 3.188	602D203G015BB2A
30,000	2.062 x 4.188	602D303G015BC2A
35,000	2.062 x 4.688	602D353G015BD2A
40,000	2.062 x 5.188	602D403G015BE2A
45,000	2.062 x 5.688	602D453G015BF2A
20 WVDC, 30 VDC SURGE		
2,800	1.438 x 2.188	602D282G020AA2A
5,100	1.438 x 3.188	602D512G020AB2A
8,600	1.438 x 4.188	602D862G020AC2A
10,000	1.438 x 4.688	602D103G020AD2A
11,000	1.438 x 5.188	602D113G020AE2A
13,000	1.438 x 5.688	602D133G020AF2A
20,000	2.062 x 4.188	602D203G020BC2A
23,000	2.062 x 4.688	602D233G020BD2A
26,000	2.062 x 5.188	602D263G020BE2A
30,000	2.062 x 5.688	602D303G020BF2A
25 WVDC, 40 VDC SURGE		
2,500	1.438 x 2.188	602D252G025AA2A
5,000	1.438 x 3.188	602D502G025AB2A
7,500	1.438 x 4.188	602D752G025AC2A
8,700	1.438 x 4.688	602D872G025AD2A
10,000	1.438 x 5.188	602D103G025AE2A
11,000	1.438 x 5.688	602D113G025AF2A
17,000	2.062 x 4.188	602D173G025BC2A
20,000	2.062 x 4.688	602D203G025BD2A
23,000	2.062 x 5.188	602D233G025BE2A
25,000	2.062 x 5.688	602D253G025BF2A
30 WVDC, 45 VDC SURGE		
2,200	1.438 x 2.188	602D222G030AA2A
4,400	1.438 x 3.188	602D442G030AB2A
6,600	1.438 x 4.188	602D662G030AC2A
7,700	1.438 x 4.688	602D772G030AD2A
8,800	1.438 x 5.188	602D882G030AE2A
9,900	1.438 x 5.688	602D992G030AF2A
10,000	2.062 x 3.188	602D103G030BB2A
15,000	2.062 x 4.188	602D153G030BC2A
17,000	2.062 x 4.688	602D173G0308D2A
20,000	2.062 x 5.188	602D203G030BE2A
22,000	2.062 x 5.688	602D223G030BF2A
40 WVDC, 55 VDC SURGE		
1,800	1.438 x 2.188	602D182G040AA2A
3,700	1.438 x 3.188	602D372G040AB2A
5,500	1.438 x 4.188	602D552G040AC2A
6,400	1.438 x 4.688	602D642G040AD2A
7,400	1.438 x 5.188	602D742G040AE2A
8,200	1.438 x 5.688	602D822G040AF2A
9,000	2.062 x 3.188	602D902G040BB2A
13,000	2.062 x 4.188	602D133G040BC2A
15,000	2.062 x 4.688	602D153G040BD2A
18,000	2.062 x 5.188	602D183G040BE2A
19,000	2.062 x 5.688	602D193G040BF2A
50 WVDC, 75 VDC SURGE		
1,400	1.438 x 2.188	602D142G050AA2A
2,900	1.438 x 3.188	602D292G050AB2A
4,400	1.438 x 4.188	602D442G050AC2A
5,100	1.438 x 4.688	602D512G050AD2A
5,800	1.438 x 5.188	602D582G050AE2A
6,600	1.438 x 5.688	602D662G050AF2A
10,000	2.062 x 4.188	602D103G0508C2A
11,000	2.062 x 4.688	602D113G050BD2A
13,000	2.062 x 5.188	602D133G050BE2A
15,000	2.062 x 5.688	602D153G050BF2A
75 WVDC, 100 VDC SURGE		
530	1.438 x 2.188	602D531F075AA2A
1,000	1.438 x 3.188	602D102F075AB2A
1,600	1.438 x 4.188	602D162F075AC2A
1,800	1.438 x 4.688	602D182F075AD2A
2,000	1.438 x 5.188	602D202F075AE2A
2,400	1.438 x 5.688	602D242F075AF2A
2,600	2.062 x 3.188	602D262F075BB2A
3,900	2.062 x 4.188	602D392F075BC2A
4,500	2.062 x 4.688	602D452F075BD2A
5,000	2.062 x 5.188	602D502F075BE2A
5,800	2.062 x 5.688	602D582F075BF2A
100 WVDC, 150 VDC SURGE		
250	1.438 x 2.188	602D251F100AA2A
500	1.438 x 3.188	602D501F100AB2A
800	1.438 x 4.188	602D801F100AC2A
900	1.438 x 4.688	602D901F100AD2A
1,000	1.438 x 5.188	602D102F100AE2A
1,100	1.438 x 5.688	602D112F100AF2A
1,200	2.062 x 3.188	602D122F100BB2A
1,800	2.062 x 4.188	602D182F100BC2A
2,100	2.062 x 4.688	602D212F100BD2A
2,400	2.062 x 5.188	602D242F100BE2A
2,600	2.062 x 5.688	602D262F100BF2A

*Catalog numbers listed are for capacitors with outer plastic-film insulation. For bare case, change 14th character of cat. no. from "2" to "0" and subtract .063" from both diameter and length. Capacitors listed have low-screw insert terminals. For high-screw insert terminals, change last character of cat. no. from "A" to "B".

Copyright 1970, Sprague Products Company

All sizes subject to change without notice

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 39D POWERLYTIC® ELECTROLYTIC CAPACITORS



Designed for applications which require the greatest possible capacitance in small physical case sizes.

- Type 39D capacitors supplement the original Type 36D Can-type Powerlytic line by offering high-capacitance units in axial-lead tubular configuration.
- Welds at all critical anode and cathode terminals eliminate riveted or pressure connections to assure freedom from open circuit even during operation in the microvolt or millivolt signal range.
- Improved molded phenolic end seals.
- Furnished with outer plastic insulating sleeve.
- Operating temperature range, −55 C to +85 C.
- These capacitors are provided with a pressure-sensitive safety vent.
- Low ESR, low leakage currents.
- For complete technical data, see latest issue of Sprague Engineering Bulletin 3415.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUALITY PRICES

µF	Diam.xLength	Catalog Number*
3 WVDC, 4 VDC SURGE		
400	.562x1.250	39D407G003EE4
900	.562x1.750	39D907G003EJ4
1300	.562x2.250	39D138G003EL4
1400	.812x1.250	39D148G003GE4
1800	.687x1.750	39D188G003FJ4
2100	.937x1.250	39D218G003HE4
2700	.687x2.250	39D278G003FL4
2900	.812x1.750	39D298G003GJ4
3000	1.062x1.250	39D308G003JE4
3600	.687x2.750	39D368G003FP4
4200	.937x1.750	39D428G003HJ4
4300	.812x2.250	39D438G003GL4
5700	.812x2.750	39D578G003GP4
6000	1.062x1.750	39D608G003JJ4
8500	.937x2.750	39D858G003HP4
9000	1.062x2.250	39D908G003JL4
10000	.937x3.250	39D109G003HS4
12000	1.062x2.750	39D129G003JP4
15000	1.062x3.250	39D159G003JS4
18000	1.062x3.750	39D189G003JT4
6 WVDC, 8 VDC SURGE		
300	.562x1.250	39D307G006EE4
600	.562x1.750	39D607G006EJ4
900	.562x2.250	39D907G006EL4
1000	.812x1.250	39D108G006GE4
1200	.687x1.750	39D128G006FJ4
1500	.937x1.250	39D158G006HE4
1900	.687x2.250	39D198G006FL4
2000	.687x2.250	39D208G006GJ4
2100	1.062x1.250	39D218G006JE4
2500	.687x2.750	39D258G006FP4
3000	.812x2.250	39D308G006GL4
4000	.812x2.750	39D408G006GP4
4200	1.062x1.750	39D428G006JJ4
6000	.937x2.750	39D608G006HP4
6300	1.062x2.250	39D638G006JL4
7500	.937x3.250	39D758G006HS4
8500	1.062x2.750	39D858G006JP4
10000	1.062x3.250	39D109G006JS4
12000	1.062x3.750	39D129G006JT4

µF	Diam.xLength	Catalog Number*
10 WVDC, 12 VDC SURGE		
250	.562x1.250	39D257G010EE4
500	.562x1.750	39D507G010EJ4
800	.562x2.250	39D807G010EL4
850	.812x1.250	39D857G010GE4
1000	.687x1.750	39D108G010FJ4
1200	.937x1.250	39D128G010HE4
1600	.687x2.250	39D168G010FL4
1700	.812x1.750	39D178G010GJ4
2100	.687x2.750	39D218G010FP4
2500	.812x2.250	39D258G010GL4
3400	.812x2.750	39D348G010GP4
3500	1.062x1.250	39D358G010JJ4
5000	.937x2.750	39D508G010HP4
5200	1.062x2.250	39D528G010JL4
6300	.937x3.250	39D638G010HS4
7100	1.062x2.750	39D718G010JP4
8800	1.062x3.250	39D888G010JS4
10000	1.062x3.750	39D109G010JT4
15 WVDC, 18 VDC SURGE		
200	.562x1.250	39D207G015EE4
400	.562x1.750	39D407G015EJ4
600	.562x2.250	39D607G015EL4
800	.687x1.750	39D807G015FJ4
950	.937x1.250	39D957G015HE4
1200	.687x2.250	39D128G015FL4
1300	.812x1.750	39D138G015GJ4
1600	.687x2.750	39D168G015FP4
1900	.812x2.250	39D198G015GL4
2500	.812x2.750	39D258G015GP4
2600	1.062x1.750	39D268G015JJ4
3800	.937x2.750	39D388G015HP4
4000	1.062x2.250	39D408G015JL4
4700	.937x3.250	39D478G015HS4
5300	1.062x2.750	39D538G015JP4
6600	1.062x3.250	39D668G015JS4
8000	1.062x3.750	39D808G015JT4

µF	Diam.xLength	Catalog Number*
25 WVDC, 30 VDC SURGE		
100	.562x1.250	39D107G025EE4
200	.562x1.750	39D207G025EJ4
350	.562x2.250	39D357G025EL4
450	.687x1.750	39D457G025FJ4
500	.937x1.250	39D507G025HE4
700	.687x2.250	39D707G025FL4
750	.812x1.750	39D757G025GJ4
800	1.062x1.250	39D807G025JE4
950	.687x2.750	39D957G025FP4
1000	.812x2.250	39D108G025GL4
1100	.937x1.750	39D118G025HJ4
1500	.812x2.750	39D158G025GP4
1600	1.062x1.750	39D168G025JJ4
1700	.937x2.250	39D178G025HL4
2200	.937x2.750	39D228G025HP4
2400	1.062x2.250	39D248G025JL4
2800	.937x3.250	39D288G025HS4
3200	1.062x2.750	39D328G025JP4
4000	1.062x3.250	39D408G025JS4
4700	1.062x3.750	39D478G025JT4
30 WVDC, 40 VDC SURGE		
75	.562x1.250	39D756G030EE4
150	.562x1.750	39D157G030EJ4
250	.562x2.250	39D257G030EL4
350	.687x1.750	39D357G030FJ4
400	.937x1.250	39D407G030HE4
500	.687x2.250	39D507G030FL4
600	1.062x1.250	39D607G030JE4
700	.687x2.750	39D707G030FP4
850	.812x2.250	39D857G030GL4
1100	.812x2.750	39D118G030GP4
1200	.937x2.250	39D128G030HL4
1700	.937x2.750	39D178G030HP4
1800	1.062x2.250	39D188G030JL4
2100	.937x3.250	39D218G030HS4
2400	1.062x2.750	39D248G030JP4
3000	1.062x3.250	39D308G030JS4
3600	1.062x3.750	39D368G030JT4

*These capacitors have outer insulation. For units with bare case, change last character in catalog number from 4 to 0, and subtract .062" from diameter and .125" from length.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 39D POWERLYTIC® ELECTROLYTICS, continued

µF	Diam. x Length	Catalog Number*
40 WVDC, 50 VDC SURGE		
75	.562x1.250	39D756G040EE4
150	.562x1.750	39D157G040EJ4
200	.562x2.250	39D207G040EL4
250	.812x1.250	39D257G040GE4
300	.687x1.750	39D307G040FJ4
350	.937x1.250	39D357G040HE4
450	.687x2.250	39D457G040FL4
500	.812x1.750	39D507G004GJ4
600	.687x2.750	39D607G040FP4
750	.812x2.250	39D757G040GL4
1000	.812x2.750	39D108G040GP4
1100	.937x2.250	39D118G040HL4
1500	.937x2.750	39D158G040HP4
1600	1.062x2.250	39D168G040JL4
1900	.937x3.250	39D198G040HS4
2100	1.062x2.750	39D218G040JP4
2600	1.062x3.250	39D268G040JS4
3200	1.062x3.750	39D328G040JT4
50 WVDC, 65 VDC SURGE		
50	.562x1.250	39D506G050EE4
100	.562x1.750	39D107G050EJ4
150	.562x2.250	39D157G050EL4
200	.687x1.750	39D207G050FJ4
250	.937x1.250	39D257G050HE4
350	.687x2.250	39D357G050FL4
450	.687x2.750	39D457G050FP4
500	.812x2.250	39D507G050GL4
700	.812x2.750	39D707G050GP4
750	1.062x1.750	39D757G050JJ4
800	.937x2.250	39D807G050HL4
1100	.937x2.750	39D118G050HP4
1300	.937x3.250	39D138G050HS4
1500	1.062x2.750	39D158G050JP4
1900	1.062x3.250	39D198G050JS4
2300	1.062x3.750	39D238G050JT4
75 WVDC, 95 VDC SURGE		
30	.562x1.250	39D306G075EE4
75	.562x1.750	39D756G075EJ4
100	.562x2.250	39D107G075EL4
150	.687x1.750	39D157G075FJ4
200	.687x2.250	39D207G075FL4
250	1.062x1.250	39D257G075JE4
300	.687x2.750	39D307G075FP4
350	.812x2.250	39D357G075GL4
450	.812x2.750	39D457G075GP4
500	.937x2.250	39D507G075HL4
700	.937x2.750	39D707G075HP4
750	1.062x2.250	39D757G075JL4
850	.937x3.250	39D857G075HS4
1000	1.062x2.750	39D108G075JP4
1200	1.062x3.250	39D128G075JS4
1500	1.062x3.750	39D158G075JT4
100 WVDC, 125 VDC SURGE		
15	.562x1.250	39D156F100EE4
35	.562x1.750	39D356F100EJ4
55	.562x2.250	39D556F100EL4
60	.812x1.250	39D606F100GE4
75	.687x1.750	39D756F100FJ4
90	.937x1.250	39D906F100HE4
110	.687x2.250	39D117F100EL4
120	.812x1.750	39D127F100GJ4
130	1.062x1.250	39D137F100JE4
100 WVDC, 125 VDC (cont.)		
150	.687x2.750	39D157F100FP4
180	.937x1.750	39D187F100HJ4
190	.812x2.250	39D197F100GL4
250	.812x2.750	39D257F100GP4
260	1.062x1.750	39D267F100JJ4
280	.937x2.250	39D287F100HL4
370	.937x2.750	39D377F100HP4
390	1.062x2.250	39D397F100JL4
460	.937x3.250	39D467F100HS4
520	1.062x2.750	39D527F100JP4
650	1.062x3.250	39D657F100JS4
780	1.062x3.750	39D787F100JT4
150 WVDC, 175 VDC SURGE		
10	.562x1.250	39D106F150EE4
25	.562x1.750	39D256F150EJ4
40	.562x2.250	39D406F150EL4
50	.687x1.750	39D506F150FJ4
60	.937x1.250	39D606F150HE4
80	.687x2.250	39D806F150FL4
85	.812x1.750	39D856F150GJ4
88	1.062x1.250	39D886F150JE4
100	.687x2.750	39D107F150FP4
120	.812x2.250	39D127F150GL4
170	.812x2.750	39D177F150GP4
190	.937x2.250	39D197F150HL4
250	.937x2.750	39D257F150HP4
260	1.062x2.250	39D267F150JL4
310	.937x3.250	39D317F150HS4
350	1.062x2.750	39D357F150JP4
440	1.062x3.250	39D447F150JS4
530	1.062x3.750	39D537F150JT4
200 WVDC, 250 VDC SURGE		
9	.562x1.250	39D905F200EE4
15	.562x1.750	39D156F200EJ4
25	.562x2.250	39D256F200EL4
30	.812x1.250	39D306F200GE4
35	.687x1.750	39D356F200FJ4
40	.937x1.250	39D406F200HE4
55	.812x1.750	39D556F200FL4
60	.687x2.750	39D606F200GJ4
75	.937x1.750	39D756F200FP4
80	.812x2.250	39D806F200HJ4
90	.812x2.750	39D906F200GL4
120	.937x2.750	39D127F200GP4
130	.937x2.750	39D137F200HL4
170	1.062x2.250	39D177F200HP4
180	.937x3.250	39D187F200JL4
220	1.062x2.750	39D227F200HS4
250	1.062x2.750	39D257F200JP4
310	1.062x3.250	39D317F200JS4
370	1.062x3.750	39D377F200JT4
250 WVDC, 300 VDC SURGE		
7	.562x1.250	39D705F250EE4
15	.562x1.750	39D156F250EJ4
20	.562x2.250	39D206F250EL4
30	.687x1.750	39D306F250FJ4
35	.937x1.250	39D356F250HE4
45	.687x2.250	39D456F250FL4
50	1.062x1.250	39D506F250JE4
60	.687x2.750	39D606F250FP4
70	.812x2.250	39D706F250GL4
95	.812x2.750	39D956F250GP4
100	.937x2.250	39D107F250HL4
250 WVDC, 300 VDC SURGE (cont.)		
140	.937x2.750	39D147F250HP4
150	1.062x2.250	39D157F250JL4
180	.937x3.250	39D187F250HS4
200	1.062x2.750	39D207F250JP4
250	1.062x3.250	39D257F250JS4
300	1.062x3.750	39D307F250JT4
300 WVDC, 350 VDC SURGE		
5	.562x1.250	39D505F300EE4
10	.562x1.750	39D106F300EJ4
15	.562x2.250	39D156F300EL4
20	.687x1.750	39D206F300FJ4
25	.937x1.250	39D256F300HE4
30	.687x2.250	39D306F300FL4
40	.687x2.750	39D406F300FP4
50	.812x2.250	39D506F300GL3
65	.812x2.750	39D656F300GP4
75	.937x2.250	39D756F300HL4
100	.937x2.750	39D107F300HP4
120	.937x3.250	39D127F300HS4
130	1.062x2.750	39D137F300JP4
170	1.062x3.250	39D177F300JS4
200	1.062x3.750	39D207F300JT4
350 WVDC, 400 VDC SURGE		
4	.562x1.250	39D405F350EE4
8	.562x1.750	39D805F350EJ4
12	.562x2.250	39D126F350EL4
15	.687x1.750	39D156F350FJ4
20	.687x2.250	39D206F350FL4
25	.812x1.750	39D256F350GJ4
30	.687x2.750	39D306F350FP4
40	.812x2.250	39D406F350GL4
50	.812x2.750	39D506F350GP4
60	.937x2.250	39D606F350HL4
80	.937x2.750	39D806F350HP4
100	.937x3.250	39D107F350HS4
110	1.062x2.750	39D117F350JP4
130	1.062x3.250	39D137F350JS4
160	1.062x3.750	39D167F350JT4
400 WVDC, 475 VDC SURGE		
2	.562x1.250	39D205F400EE4
5	.562x1.750	39D505F400EJ4
10	.687x1.750	39D106F400FJ4
15	.687x2.250	39D156F400FL4
20	.687x2.750	39D206F400FP4
25	.812x2.250	39D256F400GL4
35	.812x2.750	39D356F400GP4
40	.937x2.250	39D406F400HL4
55	.937x2.750	39D556F400HP4
65	.937x3.250	39D656F400HS4
75	1.062x2.750	39D756F400JP4
90	1.062x3.250	39D906F400JS4
110	1.062x3.750	39D117F400JT4
450 WVDC, 525 VDC SURGE		
1	.562x1.250	39D105F450EE4
3	.562x1.750	39D305F450EJ4
5	.562x2.250	39D505F450EL4
10	.687x2.250	39D106F450FL4
15	.687x2.750	39D156F450FP4
20	.812x2.250	39D206F450GL4
25	.812x2.750	39D256F450GP4
35	.937x2.750	39D356F450HP4
45	.937x3.250	39D456F450HS4
50	1.062x2.750	39D506F450JP4
65	1.062x3.250	39D656F450JS4
75	1.062x3.750	39D756F450JT4

*These capacitors have outer insulation. For units with bare case, change last character in catalog number from 4 to 0, and subtract .062" from diameter and .125" from length.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 36D POWERLYTIC® ALUMINUM ELECTROLYTICS

- Especially Suitable for Applications such as Transistorized Circuitry where High Capacitance is Required.
- Maximum Space Economy at Operating Temperatures Up To 65 C.
- Low ESR and Leakage Currents.
- Extremely-Long Shelf Life.
- Uses Most Reliable Seal Developed by Sprague for Aluminum Electrolytic Capacitors. Pressure-type Safety Vents Employing Silicone Rubber Are Used On All Cases.
- Superior Electrical and Life Characteristics Are Insured By Careful Raw Material Inspection, High Quality Control Standards and Close Manufacturing Supervision.
- For Technical Data, Consult Sprague Engineering Bulletin 3431.



CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

3 WVDC, 4 VDC SURGE

µF	Size Code	Catalog Number*
10000	AA	36D103G003AA2A
20000	AB	36D203G003AB2A
30000	AC	36D303G003AC2A
36000	AD	36D363G003AD2A
41000	AE	36D413G003AE2A
46000	AF	36D463G003AF2A
47000	BB	36D473G003BB2A
70000	BC	36D703G003BC2A
80000	CB	36D803G003CB2A
82000	BD	36D823G003BD2A
94000	BE	36D943G003BE2A
100000	BF	36D104G003BF2A
120000	CC	36D124G003CC2A
140000	CD	36D144G003CD2A
160000	CE	36D164G003CE2A
170000	DC	36D174G003DC2A
180000	CF	36D184G003CF2A
200000	DD	36D204G003DD2A
230000	DE	36D234G003DE2A
270000	DF	36D274G003DF2A

6 WVDC, 8 VDC SURGE

µF	Size Code	Catalog Number*
7000	AA	36D702G006AA2A
14000	AB	36D143G006AB2A
21000	AC	36D213G006AC2A
25000	AD	36D253G006AD2A
29000	AE	36D293G006AE2A
32000	AF	36D323G006AF2A
33000	BB	36D333G006BB2A
50000	BC	36D503G006BC2A
57000	CB	36D573G006CB2A
58000	BD	36D583G006BD2A
66000	BE	36D663G006BE2A
75000	BF	36D753G006BF2A
86000	CC	36D863G006CC2A
100000	CD	36D104G006CD2A
110000	CE	36D114G006CE2A
120000	DC	36D124G006DC2A
140000	DD	36D144G006DD2A
160000	DE	36D164G006DE2A
190000	DF	36D194G006DF2A

10 WVDC, 12 VDC SURGE

µF	Size Code	Catalog Number*
6000★	AA	36D602G010AA2A
12000★	AB	36D123G010AB2A
18000	AC	36D183G010AC2A
21000	AD	36D213G010AD2A
24000	AE	36D243G010AE2A
27000	AF	36D273G010AF2A
28000★	BB	36D283G010BB2A
42000	BC	36D423G010BC2A
48000	CB	36D483G010CB2A
49000	BD	36D493G010BD2A
56000	BE	36D563G010BE2A
63000	BF	36D633G010BF2A
72000★	CC	36D723G010CC2A
84000	CD	36D843G010CD2A
96000	CE	36D963G010CE2A
100000	CF	36D104G010CF2A
100000	DC	36D104G010DC2A
120000	DD	36D124G010DD2A
140000	DE	36D144G010DE2A
160000	DF	36D164G010DF2A

15 WVDC, 18 VDC SURGE

µF	Size Code	Catalog Number*
4600★	AA	36D462G015AA2A
9200★	AB	36D922G015AB2A
13000★	AC	36D133G015AC2A
16000	AD	36D163G015AD2A
18000	AE	36D183G015AE2A
20000	AF	36D203G015AF2A
21000★	BB	36D213G015BB2A
31000★	BC	36D313G015BC2A
36000	CB	36D363G015CB2A
37000	BD	36D373G015BD2A
42000	BE	36D423G015BE2A
47000	BF	36D473G015BF2A
54000★	CC	36D543G015CC2A
63000	CD	36D633G015CD2A
72000	CE	36D723G015CE2A
80000★	DC	36D803G015DC2A
81000	CF	36D813G015CF2A
93000	DD	36D933G015DD2A
100000	DE	36D104G015DE2A
120000	DF	36D124G015DF2A

25 WVDC, 30 VDC SURGE

µF	Size Code	Catalog Number*
2700★	AA	36D272G025AA2A
5500★	AB	36D552G025AB2A
8200★	AC	36D822G025AC2A
9600	AD	36D962G025AD2A
11000	AE	36D113G025AE2A
12000	AF	36D123G025AF2A
18000★	BC	36D183G025BC2A
21000	CB	36D213G025CB2A
22000★	BD	36D223G025BD2A
25000	BE	36D253G025BE2A
28000	BF	36D283G025BF2A
32000★	CC	36D323G025CC2A
38000	CD	36D383G025CD2A
43000	CE	36D433G025CE2A
47000★	DC	36D473G025DC2A
48000	CF	36D483G025CF2A
55000★	DD	36D553G025DD2A
63000	DE	36D633G025DE2A
71000★	DF	36D713G025DF2A

30 WVDC, 40 VDC SURGE

µF	Size Code	Catalog Number*
2000	AA	36D202G030AA2A
4000	AB	36D402G030AB2A
6000★	AC	36D602G030AC2A
7200	AD	36D722G030AD2A
8300	AE	36D832G030AE2A
9300	AF	36D932G030AF2A
9500	BB	36D952G030BB2A
14000★	BC	36D143G030BC2A
16000	BD	36D163G030BD2A
19000	BE	36D193G030BE2A
21000	BF	36D213G030BF2A
24000	CC	36D243G030CC2A
28000	CD	36D283G030CD2A
32000	CE	36D323G030CE2A
36000	DC	36D363G030DC2A
37000	CF	36D373G030CF2A
42000	DD	36D423G030DD2A
48000	DE	36D483G030DE2A
54000	DF	36D543G030DF2A

40 WVDC, 50 VDC SURGE

µF	Size Code	Catalog Number*
1800	AA	36D182G040AA2A
3600★	AB	36D362G040AB2A
5500★	AC	36D552G040AC2A
6400	AD	36D642G040AD2A
7300★	AE	36D732G040AE2A
8300	AF	36D832G040AF2A
8400★	BB	36D842G040BB2A
12000★	BC	36D123G040BC2A
14000	BD	36D143G040BD2A
16000	BE	36D163G040BE2A
19000	BF	36D193G040BF2A
21000★	CC	36D213G040CC2A
25000★	CD	36D253G040CD2A
28000	CE	36D283G040CE2A
31000	DC	36D313G040DC2A
32000	CF	36D323G040CF2A
37000	DD	36D373G040DD2A
42000★	DE	36D423G040DE2A
48000	DF	36D483G040DF2A

50 WVDC, 65 VDC SURGE

µF	Size Code	Catalog Number*
1300★	AA	36D132G050AA2A
2600★	AB	36D262G050AB2A
3900★	AC	36D392G050AC2A
4600	AD	36D462G050AD2A
5200	AE	36D522G050AE2A
5900	AF	36D592G050AF2A
6000★	BB	36D602G050BB2A
9000★	BC	36D902G050BC2A
10000	BD	36D103G050BD2A
12000	BE	36D123G050BE2A
13000	BF	36D133G050BF2A
15000★	CC	36D153G050CC2A
18000	CD	36D183G050CD2A
20000	CE	36D203G050CE2A
22000★	DC	36D223G050DC2A
23000	CF	36D233G050CF2A
26000	DD	36D263G050DD2A
30000	DE	36D303G050DE2A
34000	DF	36D343G050DF2A

75 WVDC, 95 VDC SURGE

µF	Size Code	Catalog Number*
850★	AA	36D851G075AA2A
1700★	AB	36D172G075AB2A
2500★	AC	36D252G075AC2A
3000	AD	36D302G075AD2A
3400	AE	36D342G075AE2A
3800	AF	36D382G075AF2A
3900★	BB	36D392G075BB2A
5900★	BC	36D592G075BC2A
6700	CB	36D672G075CB2A
6900	BD	36D692G075BD2A
7800	BE	36D782G075BE2A
8800	BF	36D882G075BF2A
10000★	CC	36D103G075CC2A
11000	CD	36D113G075CD2A
13000	CE	36D133G075CE2A
14000	DC	36D143G075DC2A
15000	CF	36D153G075CF2A
17000	DD	36D173G075DD2A
20000	DE	36D203G075DE2A
22000★	DF	36D223G075DF2A

100 WVDC, 125 VDC SURGE

µF	Size Code	Catalog Number*
450★	AA	36D451G100AA2A
900	AB	36D901G100AB2A
1300★	AC	36D132G100AC2A
1500	AD	36D152G100AD2A
1800	AE	36D182G100AE2A
2000	AF	36D202G100AF2A
3000	BC	36D302G100BC2A
3500	CB	36D352G100CB2A
3600	BD	36D362G100BD2A
4000	BE	36D402G100BE2A
4500	BF	36D452G100BF2A
5300★	CC	36D532G100CC2A
6100	CD	36D612G100CD2A
7000	CE	36D702G100CE2A
7800★	CF	36D782G100CF2A
7800	DC	36D782G100DC2A
9100	DD	36D912G100DD2A
10000	DE	36D103G100DE2A
11000	DF	36D113G100DF2A

150 WVDC, 175 VDC SURGE

µF	Size Code	Catalog Number*
300	AA	36D301F150AA2A
600★	AB	36D601F150AB2A
900★	AC	36D901F150AC2A
1100	AD	36D112F150AD2A
1200	AE	36D122F150AE2A
1300	AF	36D132F150AF2A
1400	BB	36D142F150BB2A
2100★	BC	36D212F150BC2A
2400	BD	36D242F150BD2A
2700	BE	36D272F150BE2A
3100	BF	36D312F150BF2A
3600★	CC	36D362F150CC2A
4200	CD	36D422F150CD2A
4700	CE	36D472F150CE2A
5300	CF	36D532F150CF2A
5300	DC	36D532F150DC2A
6200	DD	36D622F150DD2A
7000	DE	36D702F150DE2A
7800★	DF	36D782F150DF2A

200 WVDC, 250 VDC SURGE

µF	Size Code	Catalog Number*
250	AA	36D251F200AA2A
430	AB	36D431F200AB2A
640	AC	36D641F200AC2A
770	AD	36D771F200AD2A
850	AE	36D851F200AE2A
950	AF	36D951F200AF2A
1400	BC	36D142F200BC2A
1600	CB	36D162F200CB2A
1700	BD	36D172F200BD2A
1900	BE	36D192F200BE2A
2100	BF	36D212F200BF2A
2500	CC	36D252F200CC2A
2900	CD	36D292F200CD2A
3300	CE	36D332F200CE2A
3700	CF	36D372F200CF2A
3700	DC	36D372F200DC2A
4300	DD	36D432F200DD2A
4800	DE	36D482F200DE2A
5500	DF	36D552F200DF2A

DIMENSIONS

Code	D.xL.	Code	D.xL.	Code	D.xL.	Code	D.xL.
AA	1.453x2.250	AF	1.453x5.750	BF	2.078x5.750	CF	2.578x5.750
AB	1.453x3.250	BB	2.078x3.250	CB	2.578x3.250	DC	3.078x4.250
AC	1.453x4.250	BC	2.078x4.250	CC	2.578x4.250	DD	3.078x4.750
AD	1.453x4.750	BD	2.078x4.750	CD	2.578x4.750	DE	3.078x5.250
AE	1.453x5.250	BE	2.078x5.250	CE	2.578x5.250	DF	3.078x5.750
						DJ	3.078x8.750

*Catalog numbers listed are for capacitors with outer plastic-film insulation. For bare case, change 13th character of cat. no. from "2" to "0" and subtract .078" from diameter and .125" from length. Capacitors listed have low-insert terminals. For high-insert or solder-lug terminals, change last character of cat. no. from "A" to "B" or "C", respectively.

★Preferred Value—For Faster Delivery

7007

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 36D POWERLYTIC® ELECTROLYTICS, continued

250 WVDC, 300 VDC SURGE

µF	Size Code	Catalog Number*
170	AA	36D171F250AA2A
350	AB	36D351F250AB2A
530	AC	36D531F250AC2A
630	AD	36D631F250AD2A
700	AE	36D701F250AE2A
780	AF	36D781F250AF2A
800	BB	36D801F250BB2A
1200	BC	36D122F250BC2A
1300	CB	36D132F250CB2A
1400	BD	36D142F250BD2A
1500	BE	36D152F250BE2A
1700	BF	36D172F250BF2A
2000	CC	36D202F250CC2A
2400	CD	36D242F250CD2A
2700	CE	36D272F250CE2A
3000	CF	36D302F250CF2A
3000	DC	36D302F250DC2A
3500	DD	36D352F250DD2A
4000	DE	36D402F250DE2A
4500	DF	36D452F250DF2A

300 WVDC, 350 VDC SURGE

µF	Size Code	Catalog Number*
120	AA	36D121F300AA2A
240	AB	36D241F300AB2A
370	AC	36D371F300AC2A
450	AD	36D451F300AD2A
500	AE	36D501F300AE2A
550	AF	36D551F300AF2A
820	BC	36D821F300BC2A
950	BD	36D951F300BD2A
1100	BE	36D112F300BE2A
1200	BF	36D122F300BF2A
1400	CC	36D142F300CC2A
1600	CD	36D162F300CD2A
1800	CE	36D182F300CE2A
2100	CF	36D212F300CF2A
2100	DC	36D212F300DC2A
2400	DD	36D242F300DD2A
2700	DE	36D272F300DE2A
3100	DF	36D312F300DF2A

350 WVDC, 400 VDC SURGE

µF	Size Code	Catalog Number*
95	AA	36D950F350AA2A
190	AB	36D191F350AB2A
290	AC	36D291F350AC2A
360	AD	36D361F350AD2A
390	AE	36D391F350AE2A
420	BB	36D421F350BB2A
440	AF	36D441F350AF2A
650	BC	36D651F350BC2A
750	CB	36D751F350CB2A
780	BD	36D781F350BD2A
880	BE	36D881F350BE2A
1000	BF	36D102F350BF2A
1100	CC	36D112F350CC2A
1300	CD	36D132F350CD2A
1500	CE	36D152F350CE2A
1600	DC	36D162F350DC2A
1700	CF	36D172F350CF2A
1900	DD	36D192F350DD2A
2200	DE	36D222F350DE2A
2500	DF	36D252F350DF2A

400 WVDC, 475 VDC SURGE

µF	Size Code	Catalog Number*
65	AA	36D650F400AA2A
120	AB	36D121F400AB2A
190	AC	36D191F400AC2A
230	AD	36D231F400AD2A
270	AE	36D271F400AE2A
290	BB	36D291F400BB2A
300	AF	36D301F400AF2A
420	BC	36D421F400BC2A
490	CB	36D491F400CB2A
530	BD	36D531F400BD2A
610	BE	36D611F400BE2A
680	BF	36D681F400BF2A
790	CC	36D791F400CC2A
910	CD	36D911F400CD2A
1000	CE	36D102F400CE2A
1000	DC	36D102F400DC2A
1100	CF	36D112F400CF2A
1200	DD	36D122F400DD2A
1400	DE	36D142F400DE2A
1600	DF	36D162F400DF2A

450 WVDC, 525 VDC SURGE

µF	Size Code	Catalog Number*
50	AA	36D500F450AA2A
100	AB	36D101F450AB2A
140	AC	36D141F450AC2A
170	AD	36D171F450AD2A
190	AE	36D191F450AE2A
210	AF	36D211F450AF2A
220	BB	36D221F450BB2A
330	BC	36D331F450BC2A
380	CB	36D381F450CB2A
390	BD	36D391F450BD2A
440	BE	36D441F450BE2A
490	BF	36D491F450BF2A
570	CC	36D571F450CC2A
660	CD	36D661F450CD2A
760	CE	36D761F450CE2A
850	CF	36D851F450CF2A
860	DC	36D861F450DC2A
1000	DD	36D102F450DD2A
1100	DE	36D112F450DE2A
1200	DF	36D122F450DF2A

TYPE 36D EXTENDED-CAPACITANCE-RANGE POWERLYTIC® CAPACITORS

- Improved materials and processes has resulted in the design of a series of capacitors with extended capacitance ratings.
- Provide the same long life, stable characteristics, and reliability long associated with standard type 36D capacitors.

3 WVDC, 4 VDC SURGE

µF	Size Code	Catalog Number*
13000	AA	36D133G003AA2A
26000	AB	36D263G003AB2A
39000	AC	36D393G003AC2A
45000	AD	36D453G003AD2A
52000	AE	36D523G003AE2A
59000	AF	36D593G003AF2A
96000	BC	36D963G003BC2A
110000	BD	36D114G003BD2A
120000	BE	36D124G003BE2A
140000	BF	36D144G003BF2A
160000	CC	36D164G003CC2A
180000	CD	36D184G003CD2A
210000	CE	36D214G003CE2A
240000	CF	36D244G003CF2A
240000	DC	36D244G003DC2A
280000	DD	36D284G003DD2A
320000	DE	36D324G003DE2A
360000	DF	36D364G003DF2A
650000	DJ	36D654G003DJ2A

6 WVDC, 8 VDC SURGE

µF	Size Code	Catalog Number*
10000	AA	36D103G006AA2A
20000	AB	36D203G006AB2A
30000	AC	36D303G006AC2A
36000	AD	36D363G006AD2A
40000	AE	36D403G006AE2A
45000	AF	36D453G006AF2A
75000	BC	36D753G006BC2A
87000	BD	36D873G006BD2A
100000	BE	36D104G006BE2A
110000	BF	36D114G006BF2A
120000	CC	36D124G006CC2A
140000	CD	36D144G006CD2A
160000	CE	36D164G006CE2A
180000	CF	36D184G006CF2A
190000	DC	36D194G006DC2A
220000	DD	36D224G006DD2A
250000	DE	36D254G006DE2A
280000	DF	36D284G006DF2A
480000	DJ	36D484G006DJ2A

10 WVDC, 12 VDC SURGE

µF	Size Code	Catalog Number*
9000	AA	36D902G010AA2A
18000	AB	36D183G010AB2A
27000	AC	36D273G010AC2A
31000	AD	36D313G010AD2A
36000	AE	36D363G010AE2A
41000	AF	36D413G010AF2A
58000	BC	36D583G010BC2A
68000	BD	36D683G010BD2A
78000	BE	36D783G010BE2A
88000	BF	36D883G010BF2A
100000	CC	36D104G010CC2A
120000	CD	36D124G010CD2A
130000	CE	36D134G010CE2A
150000	CF	36D154G010CF2A
150000	DC	36D154G010DC2A
180000	DD	36D184G010DD2A
200000	DE	36D204G010DE2A
230000	DF	36D234G010DF2A
390000	DJ	36D394G010DJ2A

15 WVDC, 18 VDC SURGE

µF	Size Code	Catalog Number*
7500★	AA	36D752G015AA2A
15000★	AB	36D153G015AB2A
22000★	AC	36D263G015AD2A
26000	AD	36D223G015AC2A
30000	AE	36D303G015AE2A
34000	AF	36D343G015AF2A
50000★	BC	36D503G015BC2A
58000	BD	36D583G015BD2A
66000	BE	36D663G015BE2A
75000	BF	36D753G015BF2A
83000★	CC	36D833G015CC2A
97000	CD	36D973G015CD2A
110000	CE	36D114G015CE2A
120000★	CF	36D124G015CF2A
120000	DC	36D124G015DC2A
140000	DD	36D144G015DD2A
160000	DE	36D164G015DE2A
180000	DF	36D184G015DF2A
300000	DJ	36D304G015DJ2A

25 WVDC, 30 VDC SURGE

µF	Size Code	Catalog Number*
4500★	AA	36D452G025AA2A
9000★	AB	36D902G025AB2A
13000★	AC	36D133G025AC2A
16000	AD	36D163G025AD2A
18000	AE	36D183G025AE2A
20000	AF	36D203G025AF2A
30000★	BC	36D303G025BC2A
35000	BD	36D353G025BD2A
40000	BE	36D403G025BE2A
45000	BF	36D453G025BF2A
50000★	CC	36D503G025CC2A
58000	CD	36D583G025CD2A
66000	CE	36D663G025CE2A
75000★	CF	36D753G025CF2A
75000	DC	36D753G025DC2A
88000	DD	36D883G025DD2A
100000	DE	36D104G025DE2A
110000	DF	36D114G025DF2A
190000	DJ	36D194G025DJ2A

30 WVDC, 40 VDC SURGE

µF	Size Code	Catalog Number*
4000	AA	36D402G030AA2
8000	AB	36D802G030AB2A
12000	AC	36D123G030AC2A
14000	AD	36D143G030AD2A
16000	AE	36D163G030AE2A
18000	AF	36D183G030AF2A
26000	BC	36D263G030BC2A
30000	BD	36D303G030BD2A
35000	BE	36D353G030BE2A
39000	BF	36D393G030BF2A
44000	CC	36D443G030CC2A
51000	CD	36D513G030CD2A
59000	CE	36D593G030CE2A
66000	CF	36D663G030CF2A
66000	DC	36D663G030DC2A
76000	DD	36D763G030DD2A
86000	DE	36D863G030DE2A
97000	DF	36D973G030DF2A
160000	DJ	36D164G030DJ2A

40 WVDC, 50 VDC SURGE

µF	Size Code	Catalog Number*
2900★	AA	36D292G040AA2A
5800★	AB	36D582G040AB2A
8700★	AC	36D872G040AC2A
10000	AD	36D103G040AD2A
12000	AE	36D123G040AE2A
13000	AF	36D133G040AF2A
20000★	BC	36D203G040BC2A
23000	BD	36D233G040BD2A
26000	BE	36D263G040BE2A
30000	BF	36D303G040BF2A
34000★	CC	36D343G040CC2A
40000	CD	36D403G040CD2A
45000	CE	36D453G040CE2A
51000	CF	36D513G040CF2A
51000★	DC	36D513G040DC2A
60000	DD	36D603G040DD2A
68000	DE	36D683G040DE2A
76000	DF	36D763G040DF2A
120000	DJ	36D124G040DJ2A

50 WVDC, 65 VDC SURGE

µF	Size Code	Catalog Number*
2400★	AA	36D242G050AA2A
4800★	AB	36D482G050AB2A
7200★	AC	36D722G050AC2A
8400	AD	36D842G050AD2A
9600	AE	36D962G050AE2A
11000	AF	36D113G050AF2A
16000★	BC	36D163G050BC2A
19000	BD	36D193G050BD2A
21000	BE	36D213G050BE2A
24000	BF	36D243G050BF2A
27000★	CC	36D273G050CC2A
31000	CD	35D313G050CD2A
36000	CE	36D363G050CE2A
40000	CF	36D403G050CF2A
41000★	DC	36D413G050DC2A
48000	DD	36D483G050DD2A
54000	DE	36D543G050DE2A
61000	DJ	36D613G050DF2A
100000	DJ	36D104G050DJ2A

75 WVDC, 95 VDC SURGE

µF	Size Code	Catalog Number*
1400	AA	36D142G075AA2A
2800	AB	36D282G075AB2A
4200	AC	36D422G075AC2A
4900	AD	36D492G075AD2A
5600	AE	36D562G075AE2A
6300	AF	36D632G075AF2A
10000	BC	36D103G075BC2A
12000	BD	36D123G075BD2A
13000	BE	36D133G075BE2A
15000	BF	36D153G075BF2A
17000	CC	36D173G075CC2A
20000	CD	36D203G075CD2A
23000	CE	36D233G075CE2A
25000	CF	36D253G075CF2A
25000	DC	36D253G075DC2A
29000	DD	36D293G075DD2A
33000	DE	36D333G075DE2A
37000	DF	36D373G075DF2A
60000	DJ	36D603G075DJ2A

100 WVDC, 125 VDC SURGE

µF	Size Code	Catalog Number*
850	AA	36D851G100AA2A
1700	AB	36D172G100AB2A
2600	AC	36D262G100AC2A
3000	AD	36D302G100AD2A
3400	AE	36D342G100AE2A
3800	AF	36D382G100AF2A
5800	BC	36D582G100BC2A
6800	BD	36D682G100BD2A
7700	BE	36D772G100BE2A
8700	BF	35D872G100BF2A
9800	CC	36D982G100CC2A
11000	CD	36D113G100CD2A
13000	CE	36D133G100CE2A
15000	CF	36D153G100CF2A
15000	DC	36D153G100DC2A
16000	DD	36D163G100DD2A
19000	DE	36D193G100DE2A
21000	DF	36D213G100DF2A
36000	DJ	36D363G100DJ2A

*Catalog numbers listed are for capacitors with outer plastic-film insulation. For bare case, change 13th character of cat. no. from "2" to "0" and subtract .078" from diameter and .125" from length. Capacitors listed have low-insert terminals. For high-insert or solder-lug terminals, change last character of cat. no. from "A" to "B" or "C", respectively.

★Preferred Value—For Faster Delivery.

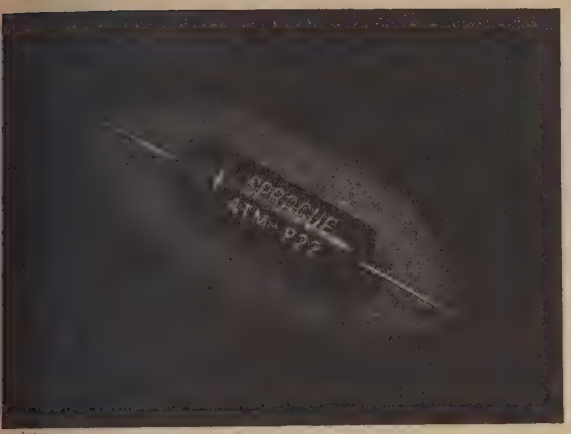
7007

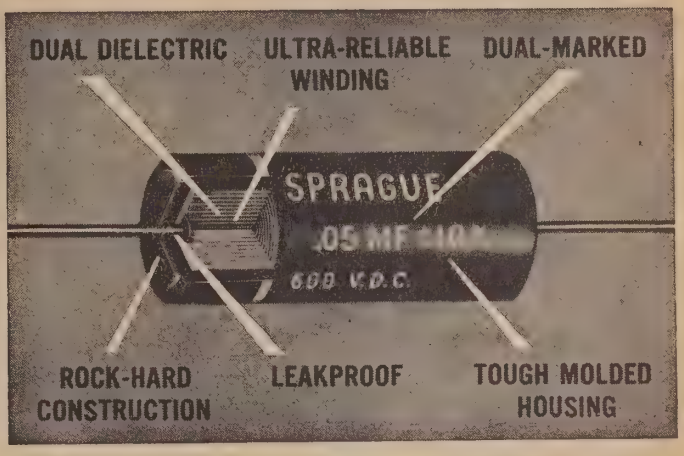
Sizes subject to change without notice

© United Technical Publications

SPRAGUE CAPACITORS

DIFILM® BLACK BEAUTY® MOLDED TUBULARS





- Developed Especially for Long Life Under High Humidity and Temperature Operating Conditions
- Dual Dielectric (film and paper) Combines Best Features of Both Polyester Film and Paper Capacitors
- Exclusive HCX® Solid Impregnated Construction Results in Rock-hard Section
- Won't Leak or Drip

LOOK FOR THE RED MARKINGS ON THE BLACK CASE

- Mica-filled, Non-flammable Molded Case. Won't Crack when Dropped; Soldering won't Harm it
- Every Capacitor Marked Twice. No Twisting the Case to Read Ratings
- Also Available in Handy Sprague Kleer-Pak®
- **Capacitance Tolerance:** ±10% from .001 μF up Except 2TM-M1 ±20%

For Complete Technical Data, See Latest Sprague Engineering Bulletin 2025

The World's Best Molded Tubular at No Extra Cost!

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part. No.
200 WVDC			
.01	5/16 x 1	2TM-S10	160P10392
.02	3/8 x 1 1/4	2TM-S20	.....
.022	3/8 x 1 1/4	2TM-S22	160P22392
.047	3/8 x 1 1/4	2TM-S47	160P47392
.05	3/8 x 1 1/4	2TM-S50	.....
.1	7/16 x 1 1/4	2TM-P10	160P10492
.15	1/2 x 1 1/2	2TM-P15	160P15492
.22	5/8 x 1 7/8	2TM-P22	160P22492
.25	5/8 x 1 7/8	2TM-P25	.....
.47	5/8 x 1 7/8	2TM-P47	160P47492
.5	5/8 x 1 7/8	2TM-P50	.....
1.0	3/4 x 2 1/4	2TM-M1	161P10502
400 WVDC			
.001	5/16 x 1	4TM-D10	160P10294
.005	5/16 x 1	4TM-D50	.....
.01	5/16 x 1	4TM-S10	160P10394
.015	3/8 x 1 1/4	4TM-S15	160P15394
.02	3/8 x 1 1/4	4TM-S20	.....
.022	3/8 x 1 1/4	4TM-S22	160P22394
.025	3/8 x 1 1/4	4TM-S25	.....
.03	3/8 x 1 1/4	4TM-S30	.....
.04	7/16 x 1 1/4	4TM-S40	.....
.047	7/16 x 1 1/4	4TM-S47	160P47394

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part. No.
400 WVDC (Cont.)			
.05	7/16 x 1 1/4	4TM-S50	.....
.068	1/2 x 1 1/2	4TM-S68	160P68394
.1	1/2 x 1 1/2	4TM-P10	160P10494
.15	5/8 x 1 7/8	4TM-P15	160P15494
.2	5/8 x 1 7/8	4TM-P20	.....
.22	5/8 x 1 7/8	4TM-P22	160P22494
.25	5/8 x 1 7/8	4TM-P25	.....
.47	3/4 x 2 1/4	4TM-P47	160P47494
.5	3/4 x 2 1/4	4TM-P50	.....
1.0	1 x 2 1/2	4TM-M1	161P10594
600 WVDC			
.0001	5/16 x 1	6TM-T10*	.....
.00025	5/16 x 1	6TM-T25*	.....
.0004	5/16 x 1	6TM-T40*	.....
.0005	5/16 x 1	6TM-T50	.....
.001	5/16 x 1	6TM-D10	160P10296
.0015	5/16 x 1	6TM-D15	160P15296
.002	5/16 x 1	6TM-D20	.....
.0022	5/16 x 1	6TM-D22	160P22296
.0025	5/16 x 1	6TM-D25	.....
.003	5/16 x 1	6TM-D30	.....
.0033	5/16 x 1	6TM-D33	160P33296
.004	3/8 x 1 1/4	6TM-D40	.....

*Available until present stocks are exhausted.

IND-REM-41-7002

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

DIFILM® BLACK BEAUTY® MOLDED TUBULARS, continued

µF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part. No.
	600 WVDC (Cont.)		
.0047	3/8 x 1 1/4	6TM-D47	160P47296
.005	3/8 x 1 1/4	6TM-D50	.....
.006	3/8 x 1 1/4	6TM-D60	.....
.0068	3/8 x 1 1/4	6TM-D68	160P68296
.008	3/8 x 1 1/4	6TM-D80	.....
.01	3/8 x 1 1/4	6TM-S10	160P10396
.015	3/8 x 1 1/4	6TM-S15	160P15396
.02	7/16 x 1 1/4	6TM-S20	.....
.022	7/16 x 1 1/4	6TM-S22	160P22396
.025	7/16 x 1 1/4	6TM-S25	.....
.03	7/16 x 1 1/4	6TM-S30	.....
.033	7/16 x 1 1/4	6TM-S33	160P33396
.035	7/16 x 1 1/4	6TM-S35	.....
.04	1/2 x 1 1/2	6TM-S40	.....
.047	1/2 x 1 1/2	6TM-S47	160P47396
.05	1/2 x 1 1/2	6TM-S50	.....
.06	1/2 x 1 1/2	6TM-S60	.....
.068	1/2 x 1 1/2	6TM-S68	160P68396
.1	5/8 x 1 7/8	6TM-P10	160P10496
.15	5/8 x 1 7/8	6TM-P15	160P15496
.2	3/4 x 2 1/4	6TM-P20	.....
.22	3/4 x 2 1/4	6TM-P22	160P22496
.25	3/4 x 2 1/4	6TM-P25	.....
.47	1 x 2 1/2	6TM-P47	161P47496
.5	1 x 2 1/2	6TM-P50	.....
1.0	1 x 2 1/2	6TM-M1	.....
	1000 WVDC		
.0005	5/16 x 1	10TM-T50	.....
.001	5/16 x 1	10TM-D10	160P102910
.0015	5/16 x 1	10TM-D15	160P152910
.002	3/8 x 1 1/4	10TM-D20	.....
.0022	3/8 x 1 1/4	10TM-D22	160P222910
.003	3/8 x 1 1/4	10TM-D30	.....
.004	3/8 x 1 1/4	10TM-D40	.....
.0047	3/8 x 1 1/4	10TM-D47	160P472910
.005	3/8 x 1 1/4	10TM-D50	.....
.0068	3/8 x 1 1/4	10TM-D68	160P682910
.01	7/16 x 1 1/4	10TM-S10	160P103910
.015	1/2 x 1 1/2	10TM-S15	160P153910
.02	1/2 x 1 1/2	10TM-S20	.....
.022	1/2 x 1 1/2	10TM-S22	160P223910
.03	5/8 x 1 7/8	10TM-S30	.....
.035	5/8 x 1 7/8	10TM-S35	.....
.047	5/8 x 1 7/8	10TM-S47	160P473910
.05	5/8 x 1 7/8	10TM-S50	.....
.068	5/8 x 1 7/8	10TM-S68	160P683910
.1	3/4 x 2 1/4	10TM-P10	160P104910
.15	3/4 x 2 1/4	10TM-P15	160P154910
	1600 WVDC BUFFER CAPACITORS		
.0005	3/8 x 1 1/4	MB-T5	.....
.001	3/8 x 1 1/4	MB-D1	160P102916
.0015	3/8 x 1 1/4	MB-D15	160P152916
.002	3/8 x 1 1/4	MB-D2	.....
.0022	3/8 x 1 1/4	MB-D22	160P222916
.003	7/16 x 1 1/4	MB-D3	.....
.0033	7/16 x 1 1/4	MB-D33	160P332916
.004	1/2 x 1 1/2	MB-D4	.....
.0047	1/2 x 1 1/2	MB-D47	160P472916
.005	1/2 x 1 1/2	MB-D5	.....
.006	1/2 x 1 1/2	MB-D6	.....
.0068	1/2 x 1 1/2	MB-D68	160P682916
.007	1/2 x 1 1/2	MB-D7	.....
.0075	1/2 x 1 1/2	MB-D75	.....
.008	5/8 x 1 7/8	MB-D8	.....
.01	5/8 x 1 7/8	MB-S1	160P103916
.015	5/8 x 1 7/8	MB-S15	160P153916
.02	5/8 x 1 7/8	MB-S2	.....
.022	5/8 x 1 7/8	MB-S22	160P223916
.03	3/4 x 2 1/4	MB-S3	.....
.04	3/4 x 2 1/4	MB-S4	.....
.05	3/4 x 2 1/4	MB-S5	.....

TYPE 185P HIGH-VOLTAGE TELECAP® DIFILM® CAPACITORS

- Designed to Minimize Corona Effects in High-Voltage
- Suited for Use in Instruments and Other Applications Circuits Which Utilize High Voltage Power Supplies
- Pre-molded Cases are Mechanically Rugged, Non-flammable, and Resistant to Heat and Humidity
- Higher Ripple Voltage Capability, Depending on Frequency, Than Conventional Extended-foil "Non-inductive" Section Capacitors of the Same d-c Voltage
- Standard Capacitance Tolerance, ±10%
- See Latest Issue of Sprague Engineering Bulletin 2011

µF	WVDC	D. x L.	Cat. No.
.047	6,000	1 3/8 x 2 3/4	185P473960
.033	7,000	1 3/8 x 2 3/4	185P333970
.022	8,000	1 3/8 x 2 3/4	185P223980
.00047	10,000	3/4 x 2 1/4	185P4719100
.0010	10,000	1 x 2 1/2	185P1029100
.0015	10,000	1 x 2 1/2	185P1529100
.0022	10,000	1 x 2 1/2	185P2229100
.0033	10,000	1 x 2 1/2	185P3329100
.0047	10,000	1 3/8 x 2 3/4	185P4729100
.0068	10,000	1 3/8 x 2 3/4	185P6829100
.010	10,000	1 3/8 x 2 3/4	185P1039100
.015	10,000	1 3/8 x 2 3/4	185P1539100

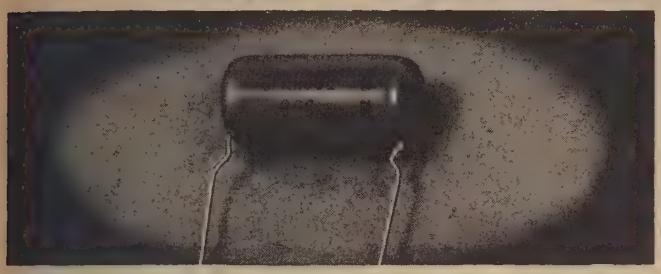
Copyright 1970 Sprague Products Company

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

DIFILM® ORANGE DROP® DIPPED TUBULARS



- Dual Dielectric (Film-paper) Solidly Impregnated With Exclusive HCX®—Produces Rock-Hard Capacitor Section
- Crimped Wire Leads for Correct Spacing When Mounted On Printed Wiring Boards.
- Outside Foil on All Units Identified by Black Striping
- Double Dipped in Bright Orange Epoxy Resin—Beats Heat and Humidity
- Won't Leak or Drip
- For Complete Data, See Latest Issue of Bulletin 2004

µF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
	200 VOLTS D-C		
.02	3/8 x 7/8	2PS-S20	.....
.022	25/64 x 7/8	2PS-S22	220P22392
.047	29/64 x 7/8	2PS-S47	220P47392
.05	15/32 x 7/8	2PS-S50	.....
.1	31/64 x 1 3/16	2PS-P10	220P10492
.15	9/16 x 1 5/16	2PS-P15	220P15492
.2	19/32 x 1 5/16	2PS-P20	.....
.22	39/64 x 1 5/16	2PS-P22	220P22492
.25	5/8 x 1 5/16	2PS-P25	.....
.33	5/8 x 1 5/8	2PS-P33	220P33492
.47	45/64 x 1 5/8	2PS-P47	220P47492
.5	23/32 x 1 5/8	2PS-P50	.....
	400 VOLTS D-C		
.01	13/32 x 1 1/16	4PS-S10	220P10394
.015	29/64 x 1 1/16	4PS-S15	220P15394
.02	13/32 x 7/8	4PS-S20	.....
.022	27/64 x 7/8	4PS-S22	220P22394
.025	7/16 x 7/8	4PS-S25	.....
.03	29/64 x 7/8	4PS-S30	.....
.033	15/32 x 7/8	4PS-S33	220P33394
.04	27/64 x 1 3/16	4PS-S40	.....
.047	29/64 x 1 3/16	4PS-S47	220P47394
.05	29/64 x 1 3/16	4PS-S50	.....
.056	31/64 x 1 3/16	4PS-S56	220P56394
.068	33/64 x 1 3/16	4PS-S68	220P68394
.075	33/64 x 1 3/16	4PS-S75	.....
.1	37/64 x 1 3/16	4PS-P10	220P10494
.15	39/64 x 1 5/16	4PS-P15	220P15494
.2	19/32 x 1 5/8	4PS-P20	.....
.22	39/64 x 1 5/8	4PS-P22	220P22494
.25	41/64 x 1 5/8	4PS-P25	.....
	600 VOLTS D-C		
.001	21/64 x 1 1/16	6PS-D10	220P10296
.0012	21/64 x 1 1/16	6PS-D12	220P12296
.0015	21/64 x 1 1/16	6PS-D15	220P15296
.0018	21/64 x 1 1/16	6PS-D18	220P18296
.002	21/64 x 1 1/16	6PS-D20	.....
.0022	21/64 x 1 1/16	6PS-D22	220P22296
.0025	21/64 x 1 1/16	6PS-D25	.....
.0027	11/32 x 1 1/16	6PS-D27	220P27296
.003	11/32 x 1 1/16	6PS-D30	.....
.0033	23/64 x 1 1/16	6PS-D33	220P33296
.0039	3/8 x 1 1/16	6PS-D39	220P39296
.004	3/8 x 1 1/16	6PS-D40	.....
.0047	25/64 x 1 1/16	6PS-D47	220P47296
.005	25/64 x 1 1/16	6PS-D50	.....
.0056	25/64 x 1 1/16	6PS-D56	220P56296
.006	13/32 x 1 1/16	6PS-D60	.....
.0068	13/32 x 1 1/16	6PS-D68	220P68296
.0075	23/64 x 7/8	6PS-D75	.....
.008	23/64 x 7/8	6PS-D80	.....
.0082	3/8 x 7/8	6PS-D82	220P82296
.01	25/64 x 7/8	6PS-S10	220P10396
.012	25/64 x 7/8	6PS-S12	220P12396
.015	27/64 x 7/8	6PS-S15	220P15396
.02	31/64 x 7/8	6PS-S20	.....
.022	31/64 x 7/8	6PS-S22	220P22396
.025	17/32 x 7/8	6PS-S25	.....
.027	7/16 x 1 3/16	6PS-S27	220P27396

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.
	600 VOLTS D-C (cont.)		
.03	7/16 x 1 3/16	6PS-S30	.....
.033	15/32 x 1 3/16	6PS-S33	220P33396
.035	15/32 x 1 3/16	6PS-S35	.....
.039	31/64 x 1 3/16	6PS-S39	220P39396
.04	1/2 x 1 3/16	6PS-S40	.....
.047	17/32 x 1 3/16	6PS-S47	220P47396
.05	17/32 x 1 3/16	6PS-S50	.....
.056	35/64 x 1 3/16	6PS-S56	220P56396
.06	9/16 x 1 3/16	6PS-S60	.....
.068	37/64 x 1 3/16	6PS-S68	220P68396
.075	9/16 x 1 5/16	6PS-S75	.....
.082	37/64 x 1 5/16	6PS-S82	220P82396
.1	5/8 x 1 5/16	6PS-P10	220P10496
.15	43/64 x 1 5/8	6PS-P15	220P15496
.2	3/4 x 1 5/8	6PS-P20	.....
.22	25/32 x 1 5/8	6PS-P22	220P22496
.25	13/16 x 1 5/8	6PS-P25	.....
.33	55/64 x 1 5/8	6PS-P33	.....
.47	61/64 x 1 5/8	6PS-P47	.....
	1000 VOLTS D-C		
.001	21/64 x 1 1/16	10PS-D10	220P102910
.0015	11/32 x 1 1/16	10PS-D15	220P152910
.002	3/8 x 1 1/16	10PS-D20	.....
.0022	3/8 x 1 1/16	10PS-D22	220P222910
.003	11/32 x 7/8	10PS-D30	.....
.004	3/8 x 7/8	10PS-D40	.....
.0047	13/32 x 7/8	10PS-D47	220P472910
.005	13/32 x 7/8	10PS-D50	.....
	1600 VOLTS D-C		
.0005	3/8 x 1 1/4	16PS-T50	.....
.001	3/8 x 1 1/4	16PS-D10	220P102916
.0015	3/8 x 1 1/4	16PS-D15	220P152916
.002	3/8 x 1 1/4	16PS-D20	.....
.0022	3/8 x 1 1/4	16PS-D22	220P222916
.003	7/16 x 1 1/4	16PS-D30	.....
.0033	7/16 x 1 1/4	16PS-D33	220P332916
.004	1/2 x 1 1/2	16PS-D40	.....
.0047	1/2 x 1 1/2	16PS-D47	220P472916
.005	1/2 x 1 1/2	16PS-D50	.....
.006	1/2 x 1 1/2	16PS-D60	.....
.0068	1/2 x 1 1/2	16PS-D68	220P682916
.007	1/2 x 1 1/2	16PS-D70	.....
.0075	1/2 x 1 1/2	16PS-D75	.....
.008	5/8 x 1 7/8	16PS-D80	.....
.01	5/8 x 1 7/8	16PS-S10	220P103916
.015	5/8 x 1 7/8	16PS-S15	220P153916
.02	5/8 x 1 7/8	16PS-S20	.....
.022	5/8 x 1 7/8	16PS-S22	220P223916
.03	3/4 x 2 1/4	16PS-S30	.....
.04	3/4 x 2 1/4	16PS-S40	.....
.05	3/4 x 2 1/4	16PS-S50	.....
	2000 VOLTS D-C		
.001	3/8 x 1 1/4	20PS-D10	.....
.0015	3/8 x 1 1/4	20PS-D15	.....
.0022	3/8 x 1 1/4	20PS-D22	.....
.0033	7/16 x 1 1/4	20PS-D33	.....
.0047	1/2 x 1 1/2	20PS-D47	.....
.0056	1/2 x 1 1/2	20PS-D56	.....
.0068	1/2 x 1 1/2	20PS-D68	.....

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

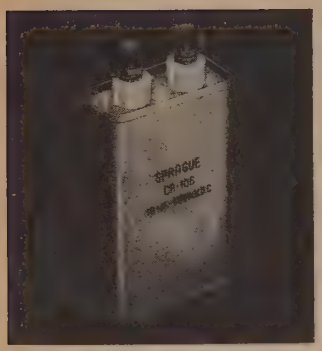
Copyright 1970 Sprague Products Company

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE CR RECTANGULAR OIL CAPACITORS



- Hermetically sealed in Rugged Rectangular Metal Cans
- Oil-Impregnated and Oil-Filled
- Extremely High Insulation Resistance
- Will Withstand High Surge Voltages and High Ambient Temperatures
- Widely Used in Transmitter Power Supplies and Other High-Voltage Applications



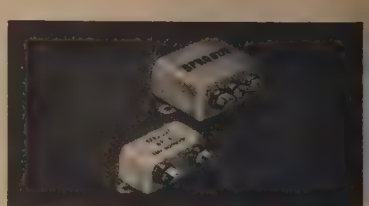
- Furnished With Adapters (as shown above) to Fit Standard Transmitting Tube Plate Caps

Call your Sprague Industrial Distributor for Current Quantity Prices

μF	Size T. x W. x L.	Catalog Number
	600 WVDC	
1.0	1 1/16 x 1 13/16 x 2 1/4	CR-16
2.0	1 1/16 x 1 13/16 x 2 7/8	CR-26
4.0	1 3/16 x 2 1/2 x 3 1/2	CR-46
6.0	1 3/16 x 2 1/2 x 4 3/4	CR-66
8.0	1 1/4 x 3 3/4 x 3 7/8	CR-86
10.0	1 1/4 x 3 3/4 x 4 3/4	CR-106
	1000 WVDC	
.1	1 1/16 x 1 13/16 x 1 5/8	CR-011
.5	1 1/16 x 1 13/16 x 2 1/4	CR-051
1.0	1 1/16 x 1 13/16 x 2 1/4	CR-11
2.0	1 1/16 x 1 13/16 x 3 7/8	CR-21
4.0	1 3/16 x 2 1/2 x 3 5/8	CR-41
8.0	1 1/4 x 3 3/4 x 4 3/4	CR-81
10.0	1 3/4 x 3 3/4 x 4 3/4	CR-101
	1500 WVDC	
.5	1 1/16 x 1 13/16 x 2 7/8	CR-0515
4.0	1 1/4 x 3 3/4 x 4 3/4	CR-415
	2000 WVDC	
.25	1 3/16 x 2 1/2 x 2 1/2	CR-0252
.5	1 3/16 x 2 1/2 x 2 7/8	CR-052
1.0	1 3/16 x 2 1/2 x 3 1/2	CR-12
2.0	1 1/4 x 3 3/4 x 4 1/4	CR-22
3.0	1 1/4 x 3 3/4 x 4 3/4	CR-32
4.0	2 1/4 x 3 3/4 x 3 7/8	CR-42

TYPE BP BATHTUB CAPACITORS

- For Applications Where Severe Operating Conditions Are Found
- Hermetically Sealed for Extra Protection
- Seamless Drawn Metal Can
- Oil-Filled and Oil-Impregnated for Long, Dependable Service Life
- Convenient Mounting Ears are Integral Part of Metal Container



CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	Size L. x W. x H.	Catalog Number
	600 WVDC	
.25	1 13/16 x 1 x 3/4	BP-256
.5	1 13/16 x 1 x 1	BP-506
1.0	2 x 1 3/4 x 1	BP-106
2.0	2 x 2 x 1 1/8	BP-206
.05+.05	1 13/16 x 1 x 3/4	BP-2056
.1 + .1	1 13/16 x 1 x 3/4	BP-216
.25+.25	1 13/16 x 1 x 1	BP-2256
.5 + .5	2 x 1 3/4 x 1	BP-2506
.1 + .1 + .1	1 13/16 x 1 x 7/8	BP-316
.5 + .5 + .5	2 x 2 x 1 1/8	BP-356
.05	1 13/16 x 1 x 3/4	BP-51
.1	1 13/16 x 1 x 3/4	BP-11
.25	1 13/16 x 1 x 7/8	BP-251
.5	2 x 1 3/4 x 7/8	BP-501
1.0	2 x 2 x 1 1/8	BP-101
.05+.05	1 13/16 x 1 x 3/4	BP-2051
.1 + .1	1 13/16 x 1 x 7/8	BP-211
.25+.25	2 x 1 3/4 x 3/4	BP-2251
.5 + .5	2 x 2 x 1 1/8	BP-2501

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

VITAMIN Q® SUBMINIATURE PAPER CAPACITORS



These capacitors are the most widely used of all paper capacitors in commercial and military electronic equipment. Hermetically sealed in metal cases, they are electrically and mechanically designed to meet stringent operating requirements.

Impregnated with Vitamin Q, a substantially linear, controlled molecular weight, hydrocarbon polymer, which is exclusive with Sprague, these dependable capacitors are available for operation in two temperature ranges: −55°C to +85°C and −55°C to +125°C. Because of their Vitamin Q impregnation, these subminiature capacitors have a higher insulation resistance and longer life than comparable units with ordinary oils.

Sprague Subminiature paper capacitors exceed the performance requirements of military specification MIL-C-25A. A limited number of the ratings shown here are listed in the military specification and should be ordered by their MIL type designation where equipment specifications so require. (See page after next.)

Listed below are the most popular insulated section (ungrounded case) capacitors. For technical data on these and other types, ratings, and tolerances, as well as on wax-impregnated units for absolute minimum size, refer to the latest issue of Engineering Bulletin 2110.

Call your Sprague Industrial Distributor for Current Quantity Prices.

CHOICE OF INSERTED TAB OR EXTENDED FOIL CONSTRUCTION

In the past, inserted tab capacitors have not been recommended for low-voltage applications (e.g., below 10 volts) but recent improvements in design now make it possible to recommend them for operation at all voltages from 1 to rated, in nearly all applications.

From the application standpoint, the principal difference between the two construction types is that, at resonance, losses are likely to be lower in the extended foil type. This is because the resistive component of impedance is likely to be higher at resonance in the inserted tab type of construction. Unless unusual circuit requirements make the losses at resonance a critical factor, the inserted tab construction is recommended, primarily because of the smaller size of the capacitor roll.

TYPE 91P, INSERTED TAB CONSTRUCTION, 85°C OPERATION

			Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)	
μF	WVDC	D. x L. Size	Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	100	.175 x ¾	91P10201S2	Call Your Sprague Industrial Distributor for Current Quantity Prices	91P10201S4	Call Your Sprague Industrial Distributor for Current Quantity Prices	91P10291S2	Call Your Sprague Industrial Distributor for Current Quantity Prices	91P10291S4	Call Your Sprague Industrial Distributor for Current Quantity Prices
	600	.235 x ¾	91P10206S2		91P10206S4		91P10296S2		91P10296S4	
.0015	100	.175 x ¾	91P15201S2		91P15201S4		91P15291S2		91P15296S4	
	600	.235 x ¾	91P15206S2		91P15206S4		91P15296S2		91P15291S4	
.0022	600	.235 x ¾	91P22206S2		91P22206S4		91P22296S2		91P22296S4	
.0033	100	.175 x ¾	91P33201S2		91P33201S4		91P33291S2		91P33291S4	
	600	.235 x ¾	91P33206S2		91P33206S4		91P33296S2		91P33296S4	
.0047	100	.175 x ¾	91P47201S2		91P47201S4		91P47291S2		91P47291S4	
	600	.235 x ¾	91P47206S2		91P47206S4		91P47296S2		91P47296S4	
.0068	600	.235 x ¾	91P68206S2		91P68206S4		91P68296S2		91P68296S4	
.01	100	.175 x ¾	91P10301S2		91P10301S4		91P10391S2		91P10391S4	
	400	.235 x ¾	91P10304S2		91P10304S4		91P10394S2		91P10394S4	
	600	.312 x ⅞	91P10306S2		91P10306S4		91P10396S2		91P10396S4	
.015	300	.235 x ¾	91P15303S2		91P15303S4		91P15393S2		91P15393S4	
.022	100	.195 x ¾	91P22301S2		91P22301S4		91P22391S2		91P22391S4	
	200	.235 x ¾	91P22302S2		91P22302S4		91P22392S2		91P22392S4	
	600	.312 x ⅞	91P22306S2		91P22306S4		91P22396S2		91P22396S4	
.033	100	.235 x ¾	91P33301S2		91P33301S4		91P33391S2		91P33391S4	
	400	.312 x ⅞	91P33304S2		91P3304S4		91P3394S2		91P33394S4	
.047	300	.312 x ⅞	91P47303S2		91P47303S4		91P47393S2		91P47393S4	
	400	.400 x ⅞	91P47304S2		91P47304S4		91P47394S2		91P47394S4	
	600	.400 x 1⅛	91P47306S2		91P47306S4		91P47396S2		91P47396S4	
.068	200	.312 x ⅞	91P68302S2		91P68302S4		91P68392S2		91P68392S4	
	300	.400 x ⅞	91P68303S2		91P68303S4		91P68393S2		91P68393S4	

*For Style 4 units add .0625" to diameter and 1/16" to length.

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.
© United Technical Publications

SPRAGUE CAPACITORS

TYPE 91P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices
.1	100	.312 x ⅞	91P10401S2		91P10401S4		91P10491S2		91P10491S4	
	200	.400 x ⅞	91P10402S2		91P10402S4		91P10492S2		91P10492S4	
	300	.400 x 1⅛	91P10403S2		91P10403S4		91P10493S2		91P10493S4	
	400	.400 x 1⅜	91P10404S2		91P10404S4		91P10494S2		91P10494S4	
	600	.562 x 1⅛	91P10406S2		91P10406S4		91P10496S2		91P10496S4	
.22	100	.400 x 1⅛	91P22401S2		91P22401S4		91P22491S2		91P22491S4	
	200	.400 x 1⅜	91P22402S2		91P22402S4		91P22492S2		91P22492S4	
	300	.562 x 1⅛	91P22403S2		91P22403S4		91P22493S2		91P22493S4	
	400	.562 x 1⅜	91P22404S2		91P22404S4		91P22494S2		91P22494S4	
	600	.562 x 1⅞	91P22406S2		91P22406S4		91P22496S2		91P22496S4	
.47	100	.400 x 1⅜	91P47401S2		91P47401S4		91P47491S2		91P47491S4	
	200	.562 x 1⅜	91P47402S2		91P47402S4		91P47492S2		91P47492S4	
	400	.670 x 1⅞	91P47404S2		91P47404S4		91P47494S2		91P47494S4	
	600	.750 x 2⅛	91P47406S2		91P47406S4		91P47496S2		91P47496S4	
1.0	100	.562 x 1⅞	91P10501S2		91P10501S4		91P10591S2		91P10591S4	
	200	.670 x 1⅞	91P10502S2		91P10502S4		91P10592S2		91P10592S4	
	400	1.000 x 1⅞	91P10504S2		91P10504S4		91P10594S2		91P10594S4	

TYPE 96P, INSERTED TAB CONSTRUCTION, 125°C OPERATION

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices
.001	100	.175 x ¾	96P10201S2		96P10201S4		96P10291S2		96P10291S4	
	600	.235 x ¾	96P10206S2		96P10206S4		96P10296S2		96P10296S4	
.0015	100	.175 x ¾	96P15201S2		96P15201S4		96P15291S2		96P15291S4	
	600	.235 x ¾	96P15206S2		96P15206S4		96P15296S2		96P15296S4	
.0022	600	.235 x ¾	96P22206S2		96P22206S4		96P22296S2		96P22296S4	
.0033	100	.175 x ¾	96P33201S2		96P33201S4		96P33291S2		96P33291S4	
	600	.235 x ¾	96P33206S2		96P33206S4		96P33296S2		96P33296S4	
.0047	100	.175 x ¾	96P47201S2		96P47201S4		96P47291S2		96P47291S4	
	600	.235 x ¾	96P47206S2		96P47206S4		96P47296S2		96P47296S4	
.0068	600	.235 x ¾	96P68206S2		96P68206S4		96P68296S2		96P68296S4	
.01	100	.175 x ¾	96P10301S2		96P10301S4		96P10391S2		96P10391S4	
	400	.235 x ¾	96P10304S2		96P10304S4		96P10394S2		96P10394S4	
	600	.312 x ⅞	96P10306S2		96P10306S4		96P10396S2		96P10396S4	
.015	300	.235 x ¾	96P15303S2		96P15303S4		96P15393S2		96P15393S4	
.022	100	.195 x ¾	96P22301S2		96P22301S4		96P22391S2		96P22391S4	
	200	.235 x ¾	96P22302S2		96P22302S4		96P22392S2		96P22392S4	
	600	.312 x ⅞	96P22306S2		96P22306S4		96P22396S2		96P22396S4	
.033	100	.235 x ¾	96P33301S2		96P33301S4		96P33391S2		96P33391S4	
	400	.312 x ⅞	96P33304S2		96P33304S4		96P33394S2		96P33394S4	
.047	300	.312 x ⅞	96P47303S2		96P47303S4		96P47393S2		96P47393S4	
	400	.400 x ⅞	96P47304S2		96P47304S4		96P47394S2		96P47394S4	
	600	.400 x 1⅛	96P47306S2		96P47306S4		96P47396S2		96P47396S4	
.068	200	.312 x ⅞	96P68302S2		96P68302S4		96P68392S2		96P68392S4	
	300	.400 x ⅞	96P68303S2		96P68303S4		96P68393S2		96P68393S4	
.1	100	.312 x ⅞	96P10401S2		96P10401S4		96P10491S2		96P10491S4	
	200	.400 x ⅞	96P10402S2		96P10402S4		96P10492S2		96P10492S4	
	300	.400 x 1⅛	96P10403S2		96P10403S4		96P10493S2		96P10493S4	
	400	.400 x 1⅜	96P10404S2		96P10404S4		96P10494S2		96P10494S4	
	600	.562 x 1⅛	96P10406S2		96P10406S4		96P10496S2		96P10496S4	
	1000	.562 x 1⅝	.....		.....		96P10491OS2		96P10491OS4	
.22	100	.400 x 1⅛	96P22401S2		96P22401S4		96P22491S2		96P22491S4	
	200	.400 x 1⅜	96P22402S2		96P22402S4		96P22492S2		96P22492S4	
	300	.562 x 1⅛	96P22403S2		96P22403S4		96P22493S2		96P22493S4	
	400	.562 x 1⅜	96P22404S2		96P22404S4		96P22494S2		96P22494S4	
	600	.562 x 1⅞	96P22406S2		96P22406S4		96P22496S2		96P22496S4	
.47	100	.562 x 1⅛	96P47401S2		96P47401S4		96P47491S2		96P47491S4	
	200	.562 x 1⅜	96P47402S2		96P47402S4		96P47492S2		96P47492S4	
	400	.670 x 1⅞	96P47404S2		96P47404S4		96P47494S2		96P47494S4	
	600	.750 x 2⅛	96P47406S2		96P47406S4		96P47496S2		96P47496S4	
1.0	100	.562 x 1⅞	96P10501S2		96P10501S4		96P10591S2		96P10591S4	
	200	.670 x 1⅞	96P10502S2		96P10502S4		96P10592S2		96P10592S4	
	400	1.000 x 1⅞	96P10504S2		96P10504S4		96P10594S2		96P10594S4	

*For Style 4 units add .0625 to diameter and 1/16" to length.

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 191P, EXTENDED FOIL CONSTRUCTION, 125°C OPERATION

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	600	.235 x ¾	191P10206S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10206S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10296S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10296S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
.0022	600	.235 x ¾	191P22206S2		191P22206S4		191P22296S2		191P22296S4	
.0047	100	.175 x ¾	191P47201S2		191P47201S4		191P47291S2		191P47291S4	
	300	.235 x ¾	191P47203S2		191P47203S4		191P47293S2		191P47293S4	
.01	100	.235 x ¾	191P10301S2		191P10301S4		191P10391S2		191P10391S4	
	600	.312 x ⅞	191P10306S2		191P10306S4		191P10396S2		191P10396S4	
.015	100	.235 x ¾	191P15301S2		191P15301S4		191P15391S2		191P15391S4	
	400	.312 x ⅞	191P15304S2		191P15304S4		191P15394S2		191P15394S4	
.022	300	.312 x ⅞	191P22303S2		191P22303S4		191P22393S2		191P22393S4	
	600	.400 x ⅞	191P22306S2		191P22306S4		191P22396S2		191P22396S4	
.033	200	.312 x ⅞	191P33302S2		191P33302S4		191P33392S2		191P33392S4	
	600	.400 x 1⅛	191P33306S2		191P33306S4		191P33396S2		191P33396S4	
.047	100	.312 x ⅞	191P47301S2		191P47301S4		191P47391S2		191P47391S4	
	300	.400 x ⅞	191P47303S2		191P47303S4		191P47393S2		191P47393S4	
	400	.400 x 1⅛	191P47304S2		191P47304S4		191P47394S2		191P47394S4	
	600	.400 x 1⅜	191P47306S2		191P47306S4		191P47396S2		191P47396S4	
.068	200	.400 x ⅞	191P68302S2		191P68302S4		191P68392S2		191P68392S4	
.1	100	.400 x ⅞	191P10401S2		191P10401S4		191P10491S2		191P10491S4	
	200	.400 x 1⅛	191P10402S2		191P10402S4		191P10492S2		191P10492S4	
	300	.400 x 1⅜	191P10403S2		191P10403S4		191P10493S2		191P10493S4	
	400	.562 x 1⅛	191P10404S2		191P10404S4		191P10494S2		191P10494S4	
	600	.562 x 1⅜	191P10406S2		191P10406S4		191P10496S2		191P10496S4	
.15	200	.400 x 1⅜	191P15402S2		191P15402S4		191P15492S2		191P15492S4	
	400	.562 x 1⅜	191P15404S2		191P15404S4		191P15494S2		191P15494S4	
.22	100	.400 x 1⅜	191P22401S2		191P22401S4		191P22491S2		191P22491S4	
	200	.562 x 1⅛	191P22402S2		191P22402S4		191P22492S2		191P22492S4	
	400	.562 x 1⅝	191P22404S2		191P22404S4		191P22494S2		191P22494S4	
	600	.670 x 1⅝	191P22406S2		191P22406S4		191P22496S2		191P22496S4	
.33	100	.562 x1⅛	191P33401S2		191P33401S4		191P33491S2		191P33491S4	
.47	100	.562 x 1⅜	191P47401S2		191P47401S4		191P47491S2		191P47491S4	
	200	.562 x 1⅝	191P47402S2		191P47402S4		191P47492S2		191P47492S4	
	400	.750 x 2⅛	191P47404S2		191P47404S4		191P47494S2		191P47494S4	
	600	.750 x 2⅜	191P47406S2		191P47406S4		191P47496S2		191P47496S4	
.68	100	.562 x 1⅝	191P68401S2		191P68401S4		191P68491S2		191P68491S4	
1.0	100	.670 x 1⅝	191P10501S2		191P10501S4		191P10591S2		191P10591S4	
	200	.750 x 2⅛	191P10502S2		191P10502S4		191P10592S2		191P10592S4	

*For Style 4 units add .0625" to diameter and 1/16" to length.

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 196P, EXTENDED FOIL CONSTRUCTION, 125°C OPERATION

			Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
μF	WVDC	Size D. x L.	Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	600	.235 x ¾	196P10206S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	196P10206S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	196P10296S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	196P10296S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
.0022	600	.235 x ¾	196P22206S2		196P22206S4		196P22296S2		196P22296S4	
.0047	100	.175 x ¾	196P47201S2		196P47201S4		196P47291S2		196P47291S4	
	300	.235 x ¾	196P47203S2		196P47203S4		196P47293S2		196P47293S4	
.01	100	.235 x ¾	196P10301S2		196P10301S4		196P10391S2		196P10391S4	
	600	.312 x ⅞	196P10306S2		196P10306S4		196P10396S2		196P10396S4	
	1000	.400 x ⅞	—		—		196P10910S2		196P10910S4	
.015	100	.235 x ¾	196P15301S2		196P15301S4		196P15391S2		196P15391S4	
	400	.312 x ⅞	196P15304S2		196P15304S4		196P15394S2		196P15394S4	
.022	300	.312 x ⅞	196P22303S2		196P22303S4		196P22393S2		196P22393S4	
	600	.400 x ⅞	196P22306S2		196P22306S4		196P22396S2		196P22396S4	
.027	200	.312 x ⅞	—		—		196P27392S2		196P27392S4	
.033	200	.312 x ⅞	196P33302S2		196P33302S4		196P33392S2		196P33392S4	
	600	.400 x 1⅛	196P33306S2		196P33306S4		196P33396S2		196P33396S4	
.039	100	.312 x ⅞	—		—		196P39391S2		196P39391S4	
.047	100	.312 x ⅞	196P47301S2		196P47301S4		196P47391S2		196P47391S4	
	300	.400 x ⅞	196P47303S2		196P47303S4		196P47393S2		196P47393S4	
	400	.400 x 1⅛	196P47304S2		196P47304S4		196P47394S2		196P47394S4	
	600	.400 x 1⅜	196P47306S2		196P47306S4		196P47396S2		196P47396S4	
.056	200	.400 x ⅞	—		—		196P56392S2		196P56392S4	
.068	200	.400 x ⅞	196P68302S2		196P68302S4		196P68392S2		196P68392S4	
.1	100	.400 x ⅞	196P10401S2		196P10401S4		196P10491S2		196P10491S4	
	200	.400 x 1⅛	196P10402S2		196P10402S4		196P10492S2		196P10492S4	
	300	.400 x 1⅜	196P10403S2		196P10403S4		196P10493S2		196P10493S4	
	400	.562 x 1⅛	196P10404S2		196P10404S4		196P10494S2		196P10494S4	
	600	.562 x 1⅜	196P10406S2		196P10406S4		196P10496S2		196P10496S4	
	1000	.670 x 1⅝	—		—		196P10910S2		196P10910S4	
.15	200	.400 x 1⅜	196P15402S2		196P15402S4		196P15492S2		196P15492S4	
	400	.562 x 1⅜	196P15404S2		196P15404S4		196P15494S2		196P15494S4	
.22	100	.400 x 1⅜	196P22401S2		196P22401S4		196P22491S2		196P22491S4	
	200	.562 x 1⅛	196P22402S2		196P22402S4		196P22492S2		196P22492S4	
	400	.562 x 1⅝	196P22404S2		196P22404S4		196P22494S2		196P22494S4	
	600	.670 x 1⅝	196P22406S2		196P22406S4		196P22496S2		196P22496S4	
	1000	.750 x 2⅛	—		—		196P224910S2		196P224910S4	
.33	100	.562 x 1⅛	196P33401S2		196P33401S4		196P33491S2		196P33491S4	
.47	100	.562 x 1⅜	196P47401S2		196P47401S4		196P47491S2		196P47491S4	
	200	.562 x 1⅝	196P47402S2		196P47402S4		196P47492S2		196P47492S4	
	400	.750 x 2⅛	196P47404S2		196P47404S4		196P47494S2		196P47494S4	
	600	.750 x 2⅜	196P47406S2		196P47406S4		196P47496S2		196P47496S4	
	1000	1.000 x 2⅜	—		—		196P474910S2		196P474910S4	
.68	100	.562 x 1⅝	196P68401S2		196P68401S4		196P68491S2		196P68491S4	
1.0	100	.670 x 1⅝	196P10501S2		196P10501S4		196P10591S2		196P10591S4	
	200	.750 x 2⅛	196P10502S2		196P10502S4		196P10592S2		196P10592S4	

*For Style 4 units add .0625" to diameter and 1/16" to length.

Copyright 1970 Sprague Products Company

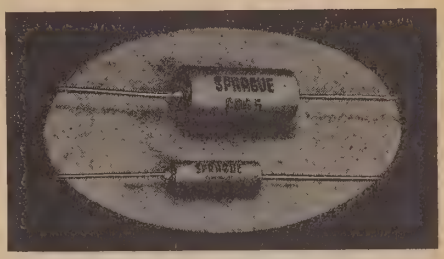
Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE CP04 CAPACITORS TO MIL-C-25C

- Impregnation wth Vitamin Q assures capacitors exceed MIL-C-25C performance requirements.
- Inserted tab construction for applications where minimum size is needed.
- Positive hermetic closure of the metal cases assured by glass-to-metal solder-seal terminals.
- Type CP04 has plain metal case.
- Available in Characteristic K (−55C to +125C). ±10% Capacitance Tolerance.
- Only popular insulated section (ungrounded case) capacitors are listed. For grounded case units, consult your Sprague Distributor.
- Call your Sprague Industrial Distributor for Quantity Prices.



µF	WVDC	D. x L.	Cat. No.*
.001	600	.235 x 3/4	CP04A1KF102K3
.0015	600	.235 x 3/4	CP04A1KF152K3
.0022	600	.235 x 3/4	CP04A1KF222K3
.0033	600	.235 x 3/4	CP04A1KF332K3
.0047	600	.235 x 3/4	CP04A1KF472K3
.0068	600	.235 x 3/4	CP04A1KF682K3
.01	400	.235 x 3/4	CP04A1KE103K3
	600	.312 x 7/8	CP04A1KF103K3
.022	200	.235 x 3/4	CP04A1KC223K3
	600	.312 x 7/8	CP04A1KF223K3
.033	100	.235 x 3/4	CP04A1KB333K3
	400	.312 x 7/8	CP04A1KE333K3
.047	400	.400 x 7/8	CP04A1KE473K3
	600	.400 x 1 1/8	CP04A1KF473K3

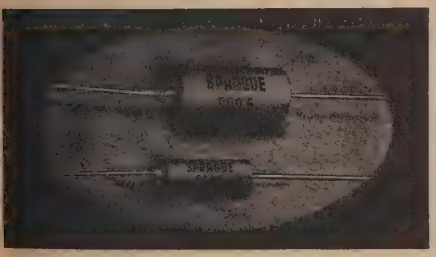
CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	WVDC	D. x L.	Cat. No.*
.068	200	.312 x 7/8	CP04A1KC683K3
.1	100	.312 x 7/8	CP04A1KB104K3
	200	.400 x 7/8	CP04A1KC104K3
	400	.400 x 1 3/8	CP04A1KE104K3
	600	.562 x 1 1/8	CP04A1KF104K3
	1000	.562 x 1 5/8	CP04A1KG104K3
.22	100	.400 x 1 1/8	CP04A1KB224K3
	200	.400 x 1 3/8	CP04A1KC224K3
	400	.562 x 1 3/8	CP04A1KE224K3
	600	.562 x 1 7/8	CP04A1KF224K3
.47	100	.562 x 1 1/8	CP04A1KB474K3
	200	.562 x 1 3/8	CP04A1KC474K3
	400	.670 x 1 7/8	CP04A1KE474K3
	600	.750 x 2 1/8	CP04A1KF474K3
1.0	100	.562 x 1 7/8	CP05A1KB105K3
	200	.670 x 1 7/8	CP05A1KC105K3
	400	1.000 x 1 7/8	CP04A1KE105K3

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

*For Vibration Grade 1, change last digit of Cat. No. to 1

TYPE CP05 CAPACITORS TO MIL-C-25C



- Vitamin Q impregnation assures performance above and beyond MIL-C-25C requirements.
- Inserted tab construction for applications where minimum size is needed.
- Positive hermetic closure of the metal cases assured by glass-to-metal solder-seal terminals.
- Type CP05 has insulating sleeve.
- Capacitance Tolerance ±10%. Characteristic K Temperature Range (−55°C to +125°C).
- Only popular insulated section (ungrounded case) capacitors are listed. For grounded case units, consult your Sprague Distributor.

Call your Sprague Industrial Distributor for Quantity Prices.

µF	WVDC	D. x L.	Cat. No.*
.001	600	.298 x 13/16	CP05A1KF102K3
.0015	600	.298 x 13/16	CP05A1KF152K3
.0022	600	.298 x 13/16	CP05A1KF222K3
.0033	600	.298 x 13/16	CP05A1KF332K3
.0047	600	.298 x 13/16	CP05A1KF472K3
.0068	600	.298 x 13/16	CP05A1KF682K3
.01	400	.298 x 13/16	CP05A1KE103K3
	600	.375 x 15/16	CP05A1KF103K3
.022	200	.298 x 13/16	CP05A1KC223K3
	600	.375 x 15/16	CP05A1KF223K3
.033	100	.298 x 13/16	CP05A1KB333K3
	400	.375 x 15/16	CP05A1KE333K3
.047	400	.463 x 15/16	CP05A1KE473K3
	600	.463 x 1 3/16	CP05A1KF473K3

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	WVDC	D. x L.	Cat. No.*
.068	200	.375 x 15/16	CP05A1KC683K3
.1	100	.463 x 15/16	CP05A1KB104K3
	200	.463 x 15/16	CP05A1KC104K3
	400	.463 x 17/16	CP05A1KE104K3
	600	.625 x 1 3/16	CP05A1KF104K3
	1000	.625 x 1 11/16	CP05A1KG104K3
.22	100	.463 x 1 3/16	CP05A1KB224K3
	200	.463 x 17/16	CP05A1KC224K3
	400	.625 x 17/16	CP05A1KE224K3
	600	.625 x 1 15/16	CP05A1KF224K3
.47	100	.625 x 1 3/16	CP05A1KB474K3
	200	.625 x 17/16	CP05A1KC474K3
	400	.733 x 1 15/16	CP05A1KE474K3
	600	.813 x 2 3/16	CP05A1KF474K3
1.0	100	.625 x 1 15/16	CP05A1KB105K3
	200	.733 x 1 15/16	CP05A1KC105K3
	400	1.063 x 1 15/16	CP05A1KE105K3

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

*For Vibration Grade 1, change last digit of Cat. No. to 1

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.
© United Technical Publications

SPRAGUE CAPACITORS

TYPE CP08 CAPACITORS TO MIL-C-25C

- Vitamin Q impregnation assures performance above and beyond MIL-C-25C requirements.
- Positive hermetic closure of the metal cases with glass-to-metal solder-seal terminals.
- Capacitance Tolerance ±10%. Characteristic K Temperature Range (−55°C to +125°C).
- Type CP08 has plain metal case.
- Extended foil (so-called non-inductive section) construction.
- Listed below are popular insulated section (ungrounded case) capacitors. Consult your Sprague Industrial Distributor for information on grounded case units.

Call your Sprague Industrial Distributor for Quantity Prices.



μF	WVDC	D. x L.	Cat. No.*
.001	600	.235 x 3/4	CP08A1KF102K3
.0022	600	.235 x 3/4	CP08A1KF222K3
.01	100	.235 x 3/4	CP08A1KB103K3
	600	.312 x 7/8	CP08A1KF103K3
	1000	.400 x 7/8	CP08A1KG103K3
.015	100	.235 x 3/4	CP08A1KB153K3
	400	.312 x 7/8	CP08A1KE153K3
.022	600	.400 x 7/8	CP08A1KF223K3
.027	200	.312 x 7/8	CP08A1KC273K3
.033	200	.312 x 7/8	CP08A1KC333K3
	600	.400 x 1 1/8	CP08A1KF333K3
.039	100	.312 x 7/8	CP08A1KB393K3
.047	100	.312 x 7/8	CP08A1KB473K3
	400	.400 x 1 1/8	CP08A1KE473K3
	600	.400x 1 3/8	CP08A1KF473K3

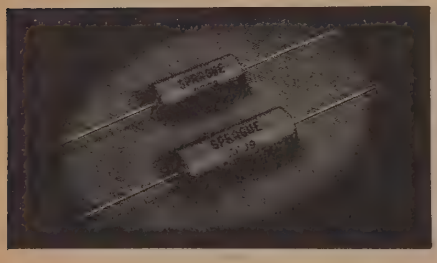
Call Your Sprague Industrial Distributor for Current Quantity Prices

μF	WVDC	D. x L.	Cat. No.*
.056	200	.400 x 7/8	CP08A1KC563K3
.068	200	.400 x 7/8	CP08A1KC683K3
.1	100	.400 x 7/8	CP08A1KB104K3
	200	.400 x 1 1/8	CP08A1KC104K3
	400	.562 x 1 1/8	CP08A1KE104K3
	600	.562 x 1 3/8	CP08A1KF104K3
	1000	.670 x 1 5/8	CP08A1KG104K3
.15	200	.400 x 1 3/8	CP08A1KC154K3
	400	.562 x 1 3/8	CP08A1KE154K3
.22	100	.400 x 1 3/8	CP08A1KB224K3
	200	.562 x 1 1/8	CP08A1KC224K3
	400	.562 x 1 5/8	CP08A1KE224K3
	600	.670 x 1 5/8	CP08A1KF224K3
	1000	.750 x 2 1/8	CP08A1KG224K3

Call Your Sprague Industrial Distributor for Current Quantity Prices

*For Vibration Grade 1, change last digit of Catalog Number to "1."

TYPE CP09 CAPACITORS TO MIL-C-25C



- Vitamin Q impregnation assures performance above and beyond MIL-C-25C requirements.
- Positive hermetic closure of the metal cases with glass-to-metal solder-seal terminals.
- Available in Characteristic K (−55C to +125C). Capacitance Tolerance ±10%.
- Type CP09 has insulating sleeve.
- Extended foil, non-inductive section construction.
- Listed below are popular insulated section (ungrounded case) capacitors. Consult your Sprague Industrial Distributor for information on grounded case units.

Call your Sprague Industrial Distributor for Quantity Prices.

μF	WVDC	D. x L.	Cat. No.*
.001	600	.298 x 13/16	CP09A1KF102K3
.0022	600	.298 x 13/16	CP09A1KF222K3
.01	100	.298 x 13/16	CP09A1KB103K3
	600	.375 x 15/16	CP09A1KF103K3
	1000	.463 x 15/16	CP09A1KG103K3
.015	100	.298 x 13/16	CP09A1KB153K3
	400	.375 x 15/16	CP09A1KE153K3
.022	600	.463 x 15/16	CP09A1KF223K3
.027	200	.375 x 15/16	CP09A1KC273K3
.033	200	.375 x 15/16	CP09A1KC333K3
	600	.463 x 1 3/16	CP09A1KF333K3
.039	100	.375 x 15/16	CP09A1KB393K3
.047	100	.375 x 15/16	CP09A1KB473K3
	400	.463 x 1 3/16	CP09A1KE473K3
	600	.463 x 1 7/16	CP09A1KF473K3

Call Your Sprague Industrial Distributor for Current Quantity Prices

μF	WVDC	D. x L.	Cat. No.*
.056	200	.463 x 15/16	CP09A1KC563K3
.068	200	.463 x 15/16	CP09A1KC683K3
.1	100	.463 x 15/16	CP09A1KB104K3
	200	.463 x 1 3/16	CP09A1KC104K3
	400	.625 x 1 3/16	CP09A1KE104K3
	600	.625 x 1 7/16	CP09A1KF104K3
	1000	.733 x 1 11/16	CP09A1KG104K3
.15	200	.463 x 1 7/16	CP09A1KC154K3
	400	.625 x 1 7/16	CP09A1KE154K3
.22	100	.463 x 1 7/16	CP09A1KB224K3
	200	.625 x 1 3/16	CP09A1KC224K3
	400	.625 x 1 11/16	CP09A1KE224K3
	600	.733 x 1 11/16	CP09A1KF224K3
	1000	.813 x 2 3/16	CP09A1KG224K3

Call Your Sprague Industrial Distributor for Current Quantity Prices

*For Vibration Grade 1, change last digit of Catalog Number to "1."

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE CP53 CAPACITORS TO MIL-C-25

- Impregnated with specially processed mineral oil to exceed performance requirements of MIL-C-25A
- Hermetically sealed, with silicone rubber compression terminals
- Rated for—55°C to +85°C operation
- Drawn metal cases have mounting flanges as integral part of containers
- Single and dual capacitance units have insulated sections—triple capacitance units have grounded cases

Call Your Sprague Industrial Distributor for Current Quantity Prices



NOTE: Capacitors listed below have capacitance tolerances of +20%, —10% (V) or ±10% (K). For ±20% units, change last letter in catalog number from K to M or V to M.

µF	Volts	L. x W. x H.	Cat. No.
Single Capacitance			
.05	600	1 13/16 x 1 x 3/4	*CP53B1EF503KI
.05	1000	1 13/16 x 1 x 3/4	CP53B1EG503KI
.1	600	1 13/16 x 1 x 3/4	*CP53B1EF104KI
.1	1000	1 13/16 x 1 x 3/4	CP53B1EG104KI
.25	600	1 13/16 x 1 x 3/4	CP53B1EF254KI
.25	1000	1 13/16 x 1 x 7/8	CP53B1EG254KI
.5	400	1 13/16 x 1 x 7/8	*CP53B1EE504KI
.5	600	1 13/16 x 1 x 1	CP53B1EF504KI
.5	1000	2 x 1 3/4 x 7/8	CP53B1EG504KI
1.0	600	2 x 1 3/4 x 1	CP53B1EF105KI
1.0	1000	2 x 2 x 1 1/8	CP53B1EG105KI
2.0	100	2 x 1 3/4 x 7/8	CP53B1EB205KI
2.0	200	2 x 2 x 1	CP53B1EC205KI
2.0	600	2 x 2 x 1 1/8	CP53B1EF205KI
4.0	100	2 x 2 x 1 1/8	CP53B1EB405KI

*Available until present stocks are exhausted

Call Your Sprague Distributor for Prices

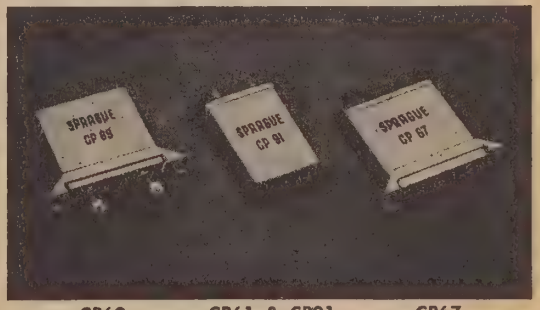
µF	Volts	L. x W. x H.	Cat. No.
Dual Capacitance			
.05 + .05	600	1 13/16 x 1 x 3/4	CP53B4EF503VI
.05 + .05	1000	1 13/16 x 1 x 3/4	CP53B4EG503VI
.1 + .1	600	1 13/16 x 1 x 3/4	CP53B4EF104VI
.1 + .1	1000	1 13/16 x 1 x 7/8	CP53B4EG104VI
.25 + .25	600	1 13/16 x 1 x 1	CP53B4EF254VI
.25 + .25	1000	2 x 1 3/4 x 7/8	CP53B4EF504VI
.5 + .5	600	2 x 1 3/4 x 1	CP53B4EG254VI
.5 + .5	1000	2 x 2 x 1 1/8	CP53B4EG504VI
1.0 + 1.0	600	2 x 2 x 1 1/8	CP53B4EF105VI
Triple Capacitance			
.05 + .05 + .05	600	1 13/16 x 1 x 3/4	*CP53B5EF503VI
.1 + .1 + .1	600	1 13/16 x 1 x 7/8	CP53B5EF104VI
.5 + .5 + .5	600	2 x 2 x 1 1/8	CP53B5EF504VI

Call Your Sprague Distributor for Prices

TYPE CP61, CP67, CP69, CP91, CAPACITORS to MIL-C-25 C

µF	WVDC	CAT. NO.	SIZE	Mounting Brackets CAT. NO.
TYPE 61*				
.05	600	CP61B1EF503K1	1 5/16 x 1 1/16 x 1 1/16	CP091SB1
.1	600	CP61B1EF104K1	1 5/16 x 1 1/16 x 1 3/8	CP091SB2
.1	600	CP61B6EF104V1	1 5/16 x 1 1/16 x 1 3/8	CP091SB2
.25	600	CP61B1EF254K1	1 5/16 x 1 1/16 x 1 5/8	CP091SB3
.25	600	CP61B6EF254V1	1 5/16 x 1 1/16 x 1 5/8	CP091SB3
.5	600	CP61B1EF504K1	1 5/16 x 1 1/16 x 2	CP091SB4
.5	600	CP61B6EF504V1	1 5/16 x 1 1/16 x 2	CP091SB4
1.0	600	CP61B1EF105K1	1 5/16 x 1 1/16 x 2 3/4	CP091SB6
TYPE CP67 Terminals opposite channel bracket				
1	600	CP67B1EF104K1	1 3/4 x 4 1/64 x 1 1/16	Integral Channel Brackets
.25	600	CP67B1EF254K1	1 3/4 x 4 1/64 x 1 1/2	
.5	600	CP67B1EF504K1	1 3/4 x 4 1/64 x 2	
1.0	600	CP67B1EF105K1	1 3/4 x 4 1/64 x 2 3/4	
TYPE CP69 Terminals on same end as channel bracket				
.05	600	CP69B1EF503K1	1 3/4 x 4 1/64 x 1 1/16	Integral Channel Brackets
.1	600	CP69B1EF104K1	1 3/4 x 4 1/64 x 1 1/16	
.25	600	CP69B1EF254K1	1 3/4 x 4 1/64 x 1 1/2	
.5	600	CP69B1EF504K1	1 3/4 x 4 1/64 x 2	
1.0	600	CP69B1EF105K1	1 3/4 x 4 1/64 x 2 3/4	
TYPE CP91				
.05	600	CP91B1EF503K1	1 5/16 x 5/8 x 1 1/16	CP091SB1
.25	600	CP91B1EF254K1	1 5/16 x 5/8 x 1 5/8	CP091SB3
.5	600	CP91B1EF504K1	1 5/16 x 5/8 x 2	CP091SB4
1.0	600	CP91B1EF105K1	1 5/16 x 5/8 x 2 3/4	CP091SB6
.05-.05	600	CP91B6EF503V1	1 5/16 x 5/8 x 1 3/8	CP091SB2
.1-.1	600	CP91B6EF104V1	1 5/16 x 5/8 x 1 5/8	CP091SB3
.25-.25	600	CP91B6EF254V1	1 5/16 x 5/8 x 2	CP091SB4
.5-.5	600	CP91B6EF504V1	1 5/16 x 5/8 x 2 3/4	CP091SB6

Call Your Sprague Industrial Distributor for Current Quantity Prices



CP69 CP61 & CP91 CP67

- Mineral Oil Impregnated for Minimum Capacitance Change with Temperature
- Hermetically Sealed in Drawn Metal Cases
- Silicone Rubber Compression Terminals for Prevention Against Entrance of Moisture or Leakage of Impregnant
- Designed and Manufactured for Service Life Beyond Specification Requirements
- Units Listed are Most Popular Ratings. Complete Military Line Available from Sprague
- These Units Have Capacitance Tolerance of ±10% (K) or +20, —10% (V).

Call Your Sprague Industrial Distributor For Current Quantity Prices

*Available until present stocks are exhausted.

IND-REM-35-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS



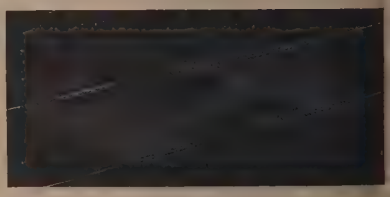
TYPE CP70, CP72 CAPACITORS to MIL-C-25

- Ruggedly Designed for Heavy-Duty Applications
- Long Life and Reliable Service under High Ambient Temperatures
- Terminals have Ceramic Pillar Insulators (E) or Rubber Compression Seals (B)
- Impregnated with a Specially Processed Mineral Oil to Withstand Severe Operating Conditions
- Char. F Units Designed for Ground Equipment Where Low Temperatures are not Encountered

Call Your Sprague Industrial Distributor For Current Quantity Prices

		Char. E (E Term.)			Char. F (B Term.)			Char. E (B Term.)			DIMENSIONS	
μF	WVDC	*MIL-C-25A Cat No	MIL-C-25C Cat. No.	Case Code	*MIL-C-25A Cat. No.	MIL-C-25C Cat. No.	Case Code	*MIL-C-25A Cat. No.	MIL-C-25C Cat. No.	Case Code	Code	W. x T. x H.
.1	1000	CP70E1EG104K	CP72E1EG104K1	A1	———	———	—	———	———	—	A1	1 13/16 x 1 1/16 x 1 3/8
.25	1000	CP70E1EG254K	———	A2	———	———	—	———	———	—	A2	1 13/16 x 1 1/16 x 2 1/4
.25	2000	CP70E1EJ254K	CP72E1EJ254K1	B1	———	———	—	———	———	—	A3	1 13/16 x 1 1/16 x 2 7/8
.5	1000	CP70E1EG504K	CP72E1EG504K1	A2	———	———	—	CP70B1EG504K	CP72B1EG504K1	A2	A4	1 13/16 x 1 1/16 x 3 1/4
.5	1500	CP70E1EH504K	CP72E1EH504K1	A3	———	———	—	———	———	—	A5	1 13/16 x 1 1/16 x 3 7/8
.5	2000	CP70E1EJ504K	CP72E1EJ504K1	B2	———	———	—	———	———	—	A6	1 13/16 x 1 1/16 x 4 3/4
.5	2500	CP70E1EK504K	———	B3	———	———	—	———	CP72B1EF105K1	A2	B1	2 1/2 x 1 3/16 x 2 1/2
1.0	600	———	CP72E1EF105K1	A2	———	———	—	CP70B1EG105K	CP72B1EG105K1	A3	B2	2 1/2 x 1 3/16 x 2 7/8
1.0	1000	CP70E1EG105K	CP72E1EG105K1	A3	———	———	—	———	———	—	B3	2 1/2 x 1 3/16 x 3 1/2
1.0	1500	CP70E1EH105K	———	A6	———	———	—	———	———	—	B4	2 1/2 x 1 3/16 x 3 7/8
1.0	2000	CP70E1EJ105K	CP72E1EJ105K1	B6	———	———	—	———	CP72B1EF205K1	A4	B6	2 1/2 x 1 3/16 x 4 3/4
1.0	2500	CP70E1EK105K	———	D2	———	———	—	———	CP72B1EG205K1	A6	C2	3 3/4 x 1 1/4 x 3 7/8
2.0	600	———	CP72E1EF205K1	A4	CP70B1FF205K	———	A4	———	———	B6	C3	3 3/4 x 1 1/4 x 4 1/4
2.0	1000	CP70E1EG205K	CP72E1EG205K1	A6	CP70B1FG205K	CP72B1FG205K1	A5	CP70B1EG205K	CP72B1EF405K1	B4	C4	3 3/4 x 1 1/4 x 4 3/4
2.0	1500	———	———	—	———	———	—	CP70B1EH205K	CP72B1EG405K1	C2	D2	3 3/4 x 1 3/4 x 3 7/8
2.0	2000	CP70E1EJ205K	CP72E1BJ205K1	C4	———	———	—	———	———	D4	D3	3 3/4 x 1 3/4 x 4
2.0	2500	CP70E1EK205K	———	E5	———	———	—	———	———	—	D4	3 3/4 x 1 3/4 x 4 1/4
4.0	600	———	CP72E1EF405K1	B4	CP70B1FF405K	CP72B1EF405K1	B3	———	CP72B1EF405K1	B4	D5	3 3/4 x 1 3/4 x 4 3/4
4.0	1000	CP70E1EG405K	CP72E1EG405K1	C2	CP70B1FG405K	———	B6	CP70B1EG405K	———	C2	E5	3 3/4 x 2 1/4 x 4 3/4
4.0	1500	CP70E1EH405K	CP72E1EH405K1	D4	———	———	—	CP70B1EH405K	———	D4	E6	3 3/4 x 2 1/4 x 5 1/8
4.0	2000	CP70E1EJ405K	CP72E1EJ405K1	E6	———	———	—	———	———	—	F2	3 3/4 x 2 1/2 x 5 3/4
4.0	2500	CP70E1EK405K	———	J2	———	———	—	———	———	—	G2	3 3/4 x 3 3/16 x 4 3/4
6.0	600	———	CP72E1EF605K1	C2	———	———	—	———	CP72B1EF605K1	C2	G4	3 3/4 x 3 3/16 x 5 1/2
6.0	1000	CP70E1EG605K	CP72E1EG605K1	D3	CP70B1FG605K	———	C4	CP70B1EG605K	CP72B1EG605K1	D3	J2	4 9/16 x 3 3/4 x 4 3/8
6.0	1500	CP70E1EH605K	———	E5	CP70B1FH605K	———	E5	CP70B1EH605K	———	E5		
8.0	600	CP70E1EF805K	CP72E1EF805K1	C3	CP70B1FF805K	———	C3	———	CP72B1EF805K1	C3		
8.0	1000	CP70E1EG805K	CP72E1EG805K1	D5	CP70B1FG805K	———	D2	CP70B1EG805K	———	C4		
8.0	1500	CP70E1EH805K	———	F2	———	———	—	CP70B1EH805K	———	F2		
10.0	600	———	CP72E1EF106K1	D3	CP70B1FF106K	CP72B1FF106K1	C4	———	CP72B1EF106K1	D3		
10.0	1000	CP70E1EG106K	CP72E1EG106K1	E5	CP70B1FG106K	———	E5	CP70B1EG106K	———	E5		
10.0	1500	CP70E1EH106K	———	G4	———	———	—	CP70B1EH106K	———	G4		
12.0	1000	CP70E1EG126K	———	E6	———	———	—	CP70B1EG126K	———	E6		
15.0	1000	———	———	—	———	———	—	CP70B1EG156K	———	F2		

TYPE 155P*, 156P* MOLDED METALLIZED PAPER CAPACITORS



- Superior To Most Competitive Units—Withstand Twice Rated Voltage Tests Giving Extra Design Safety Factor. Stand up Under High Humidity Condition.
- Self-generated Noise Practicallly Non-Existent. • Sealed With Epoxy.
- Type 155P in Molded Case. Type 156P in Premolded Case. • Available in Kleek-Pak® Boxes.

• Call Your Sprague Industrial Distributor For Current Quantity Prices.

μF	D.	L.	Catalog No.
200 VOLTS D-C			
.01	5/16	1	155P10302
.015	5/16	1	155P15302
.02	5/16	1	155P20302
.022	5/16	1	155P22320
.03	5/16	1	155P30302
.033	5/16	1	155P33302
.047	5/16	1	155P47302
.068	5/16	1	155P68302
.1	5/16	1	155P10402
.15	3/8	1 1/4	155P15402
.22	3/8	1 1/4	155P22402
.25	7/16	1 1/4	155P25402
.33	7/16	1 1/4	155P33402
.47	7/16	1 1/4	155P47402
.68	1/2	1 1/2	155P68402
1.0	1/2	1 1/2	155P10502
1.5	5/8	1 7/8	155P15502
3.0	3/4	2 1/4	156P30502
4.5	7/8	2 1/2	156P45502
5.0	7/8	2 1/2	156P50502
5.5	7/8	2 1/2	156P55502
6.0	7/8	2 1/2	156P60502
6.5	7/8	2 1/2	156P65502
7.0	7/8	2 1/2	156P70502
7.5	7/8	2 1/2	156P75502
8.0	1	2 1/2	156P80502
400 VOLTS D-C			
.01	5/16	1	155P10304
.015	5/16	1	155P15304
.02	5/16	1	155P20304
.022	5/16	1	155P22304
.025	3/8	1 1/4	155P25304
.03	3/8	1 1/4	155P30304
.033	3/8	1 1/4	155P33304
.04	3/8	1 1/4	155P40304
.047	3/8	1 1/4	155P47304
.05	3/8	1 1/4	155P50304
.068	3/8	1 1/4	155P68304
.15	1/2	1 1/2	155P15404
.2	1/2	1 1/2	155P20404
.22	1/2	1 1/2	155P22404
.25	5/8	1 7/8	155P25404
.33	5/8	1 7/8	155P33404
.47	5/8	1 7/8	155P47404
.5	5/8	1 7/8	155P50404
.68	3/4	2 1/4	156P68404
1.0	3/4	2 1/4	156P10504
1.5	7/8	2 1/2	156P15504
2.0	7/8	2 1/2	156P20504
2.5	1	2 1/2	156P25504
600 VOLTS D-C			
.015	3/8	1 1/4	155P15306
.02	3/8	1 1/4	155P20306
.022	3/8	1 1/4	155P22306
.03	3/8	1 1/4	155P30306
.033	3/8	1 1/4	155P33306
.04	3/8	1 1/4	155P40306
.047	3/8	1 1/4	155P47306
.05	7/16	1 1/4	155P50306
.06	7/16	1 1/4	155P60306
.068	7/16	1 1/4	155P68306
.15	1/2	1 1/2	155P15406
.2	5/8	1 7/8	155P20406
.68	3/4	2 1/4	156P68406
1.0	7/8	2 1/2	156P10506
1.5	1	2 1/2	156P15506

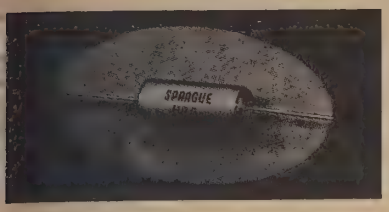
*Available until present stocks are exhausted.

IND-REM-35A-7004

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS



118P DIFILM® METALLIZED CAPACITORS

- Best of Their Type Possible to Produce at the Present State of the Art
- Rated for Operation at 125°C WITHOUT VOLTAGE DERATING
- Unique Dual Dielectric—a Combination of Metallized Paper and of Polyester Film, Impregnated With Special High-Temperature Mineral Wax
- Subjected to Stringent Quality Control During Manufacture
- Higher Insulation Resistance Than Any Other Metallized Paper Capacitors—at 125°C, Minimum Product of Insulation Resistance and Capacitance is 10 Megohm-microfarads for 200 V Units or 40 Megohm-microfarads for 400 and 600 V Units
- Capacitor Sections are Effectively of Non-inductive Construction, Resulting in Capacitors Unmatched by any Other Metallized Capacitors
- Hermetically Sealed, with Glass-to-metal Solder-seal Terminals
- Have Unusual Self-healing Characteristics, in the Rare Event of Capacitor Dielectric Breakdown
- May be Used at Extremely Low Voltages Where Metallized Paper Construction has Previously Been Unsatisfactory
- For Complete Data, see Latest Issue of Engineering Bulletin 2211
- For Units With Outer Plastic Insulating Sleeves, Change Last Digit of Cat. No. From "2" to "4"
- Capacitors Listed Below Are Ungrounded Case (Insulating Section) Units Without Outer Insulating Sleeves. For Information on Other Styles Consult Your Sprague Industrial Distributor

Call Your Sprague Industrial Distributor For Quantity Prices

μF	D. x L.	±20% Tol. Cat. No.	±10% Tol. Cat. No.
200 WVDC			
.01	.175 x .749	118P10302S2	118P10392S2
.015	.195 x .749	118P15302S2	118P15392S2
.022	.235 x .749	118P22302S2	118P2239ZS2
.033	.235 x .749	118P33302S2	118P3339ZS2
.047	.312 x .874	118P47302S2	118P4739ZS2
.068	.312 x .874	118P68302S2	118P6839ZS2
.082	.312 x .874		118P8239ZS2
.1	.312 x .874	118P10402S2	118P1049ZS2
.15	.312 x 1.124	118P15402S2	118P1549ZS2
.22	.400 x .874	118P22402S2	118P2249ZS2
.27	.400 x 1.124		118P2749ZS2
.33	.400 x 1.124	118P33402S2	118P3349ZS2
.47	.500 x 1.124	118P47402S2	118P4749ZS2
.56	.500 x 1.124		118P5649ZS2
.68	.500 x 1.124	118P68402S2	118P6849ZS2
.82	.562 x 1.124		118P8249ZS2
1.0	.562 x 1.124	118P10502S2	118P1059ZS2
1.5	.562 x 1.624	118P15502S2	118P1559ZS2
2.0	.670 x 1.624	118P20502S2	118P2059ZS2
3.0	.670 x 1.874	118P30502S2	118P3059ZS2
4.0	.750 x 1.874	118P40502S2	118P4059ZS2
5.0	1.000 x 1.874	118P50502S2	118P5059ZS2
6.0	1.000 x 1.874	118P60502S2	118P6059ZS2
8.0	1.000 x 1.874	118P80502S2	118P8059ZS2
10.0	1.000 x 2.374	118P10602S2	118P1069ZS2
12.0	1.000 x 2.624	118P12602S2	118P1269ZS2
400 WVDC			
.15	.500 x 1.124	118P15404S2	118P1549ZS2
1.0	.750 x 1.874	118P10504S2	118P1059ZS2
2.0	1.000 x 1.874	118P20504S2	118P2059ZS2
3.0	1.000 x 2.624	118P30504S2	118P3059ZS2
600 WVDC			
.01	.312 x .874	118P10306S2	118P1039ZS2
.047	.400 x 1.124	118P47306S2	118P4739ZS2
.1	.500 x 1.124	118P10406S2	118P1049ZS2
.15	.562 x 1.124	118P15406S2	118P1549ZS2
.22	.562 x 1.374	118P22406S2	118P2249ZS2
.33	.562 x 1.624	118P33406S2	118P3349ZS2
.47	.670 x 1.624	118P47406S2	118P4749ZS2
1.0	1.000 x 1.874	118P10506S2	118P1059ZS2
2.0	1.000 x 2.124	118P20506S2	118P2059ZS2
2.5	1.000 x 2.624	118P25506S2	118P2559ZS2

121P METALLIZED PAPER CAPACITORS



- Designed to Operate at 125C WITHOUT VOLTAGE DERATING—Extremely Important in Military and Industrial Equipment Where Higher Temperatures Are Encountered.
- Quality of These Capacitors Is Surpassed only by Type 118P Units Described Above.
- High Insulation Resistance—at 85C, Minimum Product of Insulation Resistance and Capacitance Is 20 Megohm-Microfarads. At 125C, Minimum Product is 1.0 Megohm-Microfarads.
- Hermetically Sealed With Glass-to-Metal Solder-Seal Terminals—Capacitor Cases Are of Corrosion Resistant Materials—Similar in Appearance to Type 118P.
- May Be Operated at Low Voltages, Unlike Many Other Metallized Capacitors.
- For Complete Technical Data, See Latest Issue of Engineering Bulletin 2210.
- Capacitors Listed Below Are Ungrounded Case (Insulated Section) Units Without Outer Insulating Sleeves. For Information on Other Styles Consult Your Sprague Industrial Distributor.
- For Units With Outer Plastic Insulating Sleeve, Change Last Digit in Cat. No. From 2 to 4.

Call Your Sprague Industrial Distributor For Quantity Prices

μF	WVDC	D. x L.	±20% Tol. Cat. No.	±10%Tol. Cat. No.
150 WVDC				
1.5	150	.562 x 1⅛	121P15501R5S2	121P15591R5S2
2.0	150	.562 x 1⅜	121P20501R5S2	121P20591R5S2
3.0	150	.670 x 1⅜	121P30501R5S2	121P30591R5S2
4.0	150	.670 x 1⅝	121P40501R5S2	121P40591R5S2
5.0	150	.670 x 1⅞	121P50501R5S2	121P50591R5S2
6.0	150	.750 x 1⅞	121P60501R5S2	121P60591R5S2
8.0	150	.750 x 2⅜	121P80501R5S2	121P80591R5S2
10	150	.750 x 2⅝	121P10601R5S2	121P10691R5S2
12	150	1.000 x 1⅞	121P12601R5S2	121P12691R5S2
16	150	1.000 x 2⅜	121P16601R5S2	121P16691R5S2
18	150	1.000 x 2⅝	121P18601R5S2	121P18691R5S2

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 192P PACER® FILMITE® 'E' CAPACITORS



- New Minimum Construction Size. Extended Foil Film Sections Terminate in End Caps, Best Possible Non-Inductive Section. Rated for −55C to +85C
- Controlled Dimensions—May Be Used With Automatic Insertion Equipment
- Wound With Polyester Film Dielectric and Thin Gage Foil Under Controlled Conditions. Protected by Heat Shrinkable Plastic Sleeve or Epoxy Coating.
- Capacitance Tolerance: ±10%
- Available in Kleer-Pak® Boxes
- For Complete Data, See Latest Issue of Sprague Engineering Bulletin 2066

Call Your Sprague Industrial Distributor For Current Quantity Prices

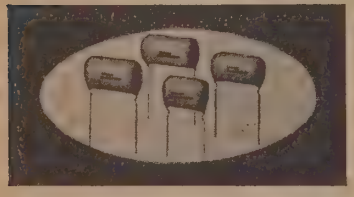
μF	D	L	Cat. No.
80 VOLTS D-C			
0.0022	0.138	5/16	192P2229R8
0.0027	0.138	5/16	192P2729R8
0.0033	0.138	5/16	192P3329R8
0.0039	0.138	5/16	192P3929R8
0.0047	0.138	5/16	192P4729R8
0.0056	0.170	3/8	192P5629R8
0.0068	0.170	3/8	192P6829R8
0.0082	0.170	3/8	192P8229R8
0.01	0.170	3/8	192P1039R8
0.012	0.170	7/16	192P1239R8
0.015	0.170	7/16	192P1539R8
0.018	0.170	1/2	192P1839R8
0.022	0.170	1/2	192P2239R8
0.027	0.204	7/16	192P2739R8
0.033	0.204	7/16	192P3339R8
0.039	0.204	7/16	192P3939R8
0.047	0.204	9/16	192P4739R8
0.056	0.225	9/16	192P5639R8
0.068	0.225	9/16	192P6839R8
0.082	0.290	1/2	192P8239R8
0.1	0.290	1/2	192P1049R8
0.12	0.290	5/8	192P1249R8
0.15	0.290	5/8	192P1549R8
0.18	0.318	5/8	192P1849R8
0.22	0.318	5/8	192P2249R8
0.27	0.318	7/8	192P2749R8
0.33	0.318	7/8	192P3349R8
0.39	0.318	1 3/16	192P3949R8
0.47	0.318	1 3/16	192P4749R8
200 VOLTS D-C			
0.0001	0.138	5/16	192P10192
0.00012	0.138	5/16	192P12192
0.00015	0.138	5/16	192P15192
0.00018	0.138	5/16	192P18192
0.00022	0.138	5/16	192P22192
0.00027	0.138	5/16	192P27192
0.00033	0.138	5/16	192P33192
0.00039	0.138	5/16	192P39192
0.00047	0.138	5/16	192P47192
0.00056	0.138	5/16	192P56192
0.00068	0.138	5/16	192P68192
0.00082	0.138	5/16	192P82192
0.001	0.138	5/16	192P10292
0.0012	0.138	5/16	192P12292
0.0015	0.138	5/16	192P15292
0.0018	0.170	5/16	192P18292
0.0022	0.170	5/16	192P22292
0.0027	0.170	5/16	192P27292
0.0033	0.170	5/16	192P33292
0.0039	0.170	7/16	192P39292
0.0047	0.170	7/16	192P47292
0.0056	0.170	7/16	192P56292
0.0068	0.170	7/16	192P68292
0.0082	0.170	1/2	192P82292
0.01	0.170	1/2	192P10392
0.012	0.204	7/16	192P12392
0.015	0.204	7/16	192P15392
0.018	0.204	9/16	192P18392
0.022	0.204	9/16	192P22392
0.027	0.225	9/16	192P27392
0.033	0.225	9/16	192P33392
0.039	0.290	1/2	192P39392
0.047	0.290	1/2	192P47392
0.056	0.290	5/8	192P56392
0.068	0.290	5/8	192P68392
0.082	0.318	5/8	192P82392
0.1	0.318	5/8	192P10492
0.12	0.318	7/8	192P12492
0.15	0.318	7/8	192P15492
0.18	0.318	1 3/16	192P18492
0.22	0.318	1 3/16	192P22492
400 VOLTS D-C			
0.00047	0.170	3/8	192P47194
0.00056	0.170	3/8	192P56194
0.00068	0.170	3/8	192P68194
0.00082	0.170	3/8	192P82194
0.001	0.170	3/8	192P10294
0.0012	0.170	3/8	192P12294
0.0015	0.170	3/8	192P15294
0.0018	0.170	7/16	192P18294
0.0022	0.170	7/16	192P22294
0.0027	0.204	7/16	192P27294
0.0033	0.204	7/16	192P33294
0.0039	0.204	7/16	192P39294
0.0047	0.204	7/16	192P47294
0.0056	0.225	9/16	192P56294
0.0068	0.225	9/16	192P68294
0.0082	0.225	9/16	192P82294
0.01	0.225	9/16	192P10394
0.012	0.290	1/2	192P12394
0.015	0.290	1/2	192P15394
0.018	0.290	5/8	192P18394
0.022	0.290	5/8	192P22394
0.027	0.318	5/8	192P27394
0.033	0.318	5/8	192P33394
0.039	0.318	7/8	192P39394
0.047	0.318	7/8	192P47394
0.056	0.318	1 3/16	192P56394
0.068	0.318	1 3/16	192P68394

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES

TYPE DF METALLIZED FILM ORANGE DROP® CAPACITORS



- Fit Easily into Tight Spots Because They're Smaller Than Other Types of Comparably-Rated Capacitors
- Extremely High Insulation Resistance Insures Peak Performance At Temperatures Up to +85C (185F)
- Radial Leads Are Extra Long For Point-to-Point Wiring and Crimped For Printed Board Insertion
- Double Dipped in Orange Epoxy Resin For Protection Against Heat And Humidity
- Capacitance Tolerance: ±10%
- Ideal For Color TV Capacitor Replacement
- For Complete Data, See Latest Issue of Sprague Engineering Bulletin 2040.

Call Your Sprague Industrial Distributor For Current Quantity Prices

μF	H. x T. x L.	Cat. No.
100 WVDC		
.15	15/32 x 1/4 x 13/16	1DF-P15
.22	1/2 x 1/4 x 13/16	1DF-P22
.33	17/32 x 5/16 x 13/16	1DF-P33
.47	5/8 x 13/32 x 13/16	1DF-P47
.68	9/16 x 11/32 x 1 1/4	1DF-P68
1.0	5/8 x 13/32 x 1 1/4	1DF-M1
1.5	1 1/16 x 15/32 x 1 1/4	1DF-M1.5
2.0	25/32 x 9/16 x 1 1/4	1DF-M2
2.5	13/16 x 1 9/32 x 1 1/4	1DF-M2.5
3.0	25/32 x 9/16 x 1 5/8	1DF-M3
3.5	1 3/16 x 1 9/32 x 1 5/8	1DF-M3.5
4.0	27/32 x 5/8 x 1 5/8	1DF-M4
4.5	7/8 x 2 1/32 x 1 5/8	1DF-M4.5
5.0	2 9/32 x 1 1/16 x 1 5/8	1DF-M5
5.5	1 5/16 x 2 3/32 x 1 5/8	1DF-M5.5
200 WVDC		
.15	9/16 x 3/8 x 3/16	2DF-P15
.22	5/8 x 7/16 x 13/16	2DF-P22
.33	1 1/16 x 1/2 x 13/16	2DF-P33
.47	1 3/16 x 9/16 x 13/16	2DF-P47
.68	3/4 x 1/2 x 1 1/4	2DF-P68
1.0	1 3/16 x 9/16 x 1 1/4	2DF-M1
1.5	7/8 x 5/8 x 1 1/4	2DF-M1.5
2.0	1 5/16 x 1 1/16 x 1 1/4	2DF-M2
2.5	1 1/16 x 1 3/16 x 1 1/4	2DF-M2.5
3.0	1 5/16 x 1 1/16 x 1 5/8	2DF-M3
3.5	1 x 3/4 x 1 5/8	2DF-M3.5
4.0	1 1/16 x 1 3/16 x 1 5/8	2DF-M4
4.5	1 1/16 x 7/8 x 1 5/8	2DF-M4.5
5.0	1 1/8 x 7/8 x 1 5/8	2DF-M5
5.5	1 3/16 x 1 5/16 x 1 5/8	2DF-M5.5

Copyright 1970, Sprague Products Company

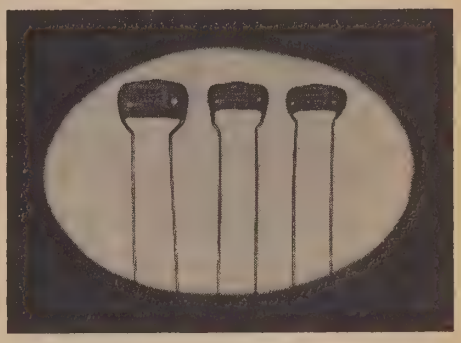
All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 225P FILMITE® 'E' ORANGE DROP® CAPACITORS

- Designed Specifically for Printed Wiring Board Applications and are Furnished with Radial Leads to Facilitate Insertion on Boards
- Find Wide Application in Television Receivers, Radio Sets, and Commercial Electronic Equipment
- Available in Voltage Ratings of 75 Volts and 100 Volts D-C for Operation up to 85C
- Capacitor Sections are Wound From Polyester Film and Thin-gage Foil Under Carefully Controlled Atmospheric Conditions
- Protected Against Moisture by a Wax-free Conformal Coating of Epoxy
- Capacitance Tolerance, ±10%
- For Complete Technical Data, Refer to Latest Issue of Sprague Engineering Bulletin 2062



CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	Size H. x T. x L.	Catalog Number
	75 WVDC	
.12	5/8 x 25/64 x 3/4	225P1249R75ZD3
.15	5/8 x 25/64 x 3/4	225P1549R75ZD3
.18	43/64 x 27/64 x 3/4	225P1849R75ZD3
.22	43/64 x 27/64 x 3/4	225P2249R75ZD3
.27	27/32 x 31/64 x 3/4	225P2749R75ZD3
.33	27/32 x 31/64 x 3/4	225P3349R75ZD3
.39	27/32 x 19/32 x 3/4	225P3949R75ZD3
.47	27/32 x 19/32 x 3/4	225P4749R75ZD3
.68	29/32 x 19/32 x 1 3/16	*225P6849R75
1.0	63/64 x 47/64 x 1 3/16	*225P1059R75
	100 WVDC	
.001	5/16 x 13/64 x 45/64	225P10291WD3
.0012	5/16 x 13/64 x 45/64	225P12291WD3
.0015	5/16 x 13/64 x 45/64	225P15291WD3
.0018	5/16 x 13/64 x 45/64	225P18291WD3
.0022	5/16 x 13/64 x 45/64	225P22291WD3
.0027	5/16 x 13/64 x 45/64	225P27291WD3
.0033	5/16 x 13/64 x 45/64	225P33291WD3
.0039	5/16 x 13/64 x 45/64	225P39291WD3
.0047	5/16 x 13/64 x 45/64	225P47291WD3
.0056	5/16 x 13/64 x 45/64	225P56291WD3
.0068	5/16 x 13/64 x 45/64	225P68291WD3
.0082	5/16 x 13/64 x 45/64	225P82291WD3
.01	5/16 x 13/64 x 45/64	225P10391WD3
.012	5/16 x 13/64 x 45/64	225P12391WD3
.015	5/16 x 13/64 x 45/64	225P15391WD3
.018	5/16 x 13/64 x 45/64	225P18391WD3
.022	5/16 x 13/64 x 45/64	225P22391WD3
.027	21/64 x 15/64 x 45/64	225P27391WD3
.033	21/64 x 15/64 x 45/64	225P33391WD3
.039	11/32 x 1/4 x 45/64	225P39391WD3
.047	11/32 x 1/4 x 45/64	225P47391WD3
.056	3/8 x 9/32 x 45/64	225P56391WD3
.068	3/8 x 9/32 x 45/64	225P68391WD3
.082	17/32 x 21/64 x 45/64	225P82391WD3
.1	17/32 x 21/64 x 45/64	225P10491WD3
.56	57/64 x 9/16 x 1 3/16	225P56491YD3
.68	29/32 x 19/32 x 1 3/16	225P68491YD3
.82	61/64 x 21/32 x 1 3/16	225P82491YD3
1.0	63/64 x 47/64 x 1 3/16	225P10591YD3

µF	Size H. x T. x L.	Catalog Number
	200 WVDC	
.001	9/16 x 15/64 x 13/16	225P10292XD3
.0015	9/16 x 15/64 x 13/16	225P15292XD3
.0022	9/16 x 15/64 x 13/16	225P22292XD3
.0033	9/16 x 15/64 x 13/16	225P33292XD3
.0047	9/16 x 15/64 x 13/16	225P47292XD3
.0068	19/32 x 1/4 x 13/16	225P68292XD3
.01	19/32 x 1/4 x 13/16	225P10392XD3
.015	19/32 x 1/4 x 13/16	225P15392XD3
.022	19/32 x 1/4 x 13/16	225P22392XD3
.033	5/8 x 9/32 x 13/16	225P33392XD3
.047	5/8 x 9/32 x 13/16	225P47392XD3
.068	41/64 x 5/16 x 13/16	225P68392XD3
.1	23/32 x 3/8 x 13/16	225P10492XD3
.15	3/4 x 27/64 x 13/16	225P15492XD3
.22	25/32 x 15/32 x 13/16	225P22492XD3
.33	23/32 x 27/64 x 13/16	225P33492YD3
.47	27/32 x 1/2 x 13/16	225P47492YD3
.68	1 9/64 x 27/32 x 1 3/16	225P68492YD3
	400 WVDC	
.001	9/16 x 15/64 x 13/16	225P10294XD3
.0015	9/16 x 15/64 x 13/16	225P15294XD3
.0022	9/16 x 15/64 x 13/16	225P22294XD3
.0033	9/16 x 15/64 x 13/16	225P33294XD3
.0047	9/16 x 15/64 x 13/16	225P47294XD3
.0068	19/32 x 1/4 x 13/16	225P68294XD3
.01	19/32 x 1/4 x 13/16	225P10394XD3
.015	19/32 x 9/32 x 13/16	225P15394XD3
.022	19/32 x 5/16 x 13/16	225P22394XD3
.033	21/32 x 11/32 x 13/16	225P33394XD3
.047	21/32 x 27/64 x 13/16	225P47394XD3
.068	13/16 x 31/64 x 13/16	225P68394XD3
.1	27/32 x 17/32 x 13/16	225P10494XD3
.15	13/16 x 31/64 x 1 3/16	225P15494YD3
.22	57/64 x 9/16 x 1 3/16	225P22494YD3
.33	1 x 47/64 x 1 3/16	225P33494YD3
.47	1 9/64 x 27/32 x 1 3/16	225P47494YD3

*Available until present stocks are exhausted.

Copyright 1970 Sprague Products Company

IND-REM-40-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 431P METFILM® 'E' CAPACITORS

- Unique Construction Gives Definite Space Advantages Over Metal-Encased, Molded, or Wax-Coated Cardboard-Case Tubulars of Comparable Ratings.
- Axial-Lead Polyester-Film Capacitor Section Protected Against Moisture By An Outer Wrap of Polyester-Film Tape.
- An Improved End Seal of a Plastic Resin Which Bonds With the Film Wrap and the Tinned Leads Provides Superior Humidity Resistance.
- Because of Their Small Size, These Capacitors Are Particularly Well-Suited For Potting or Encapsulating in Electronic Sub-Assemblies.
- For Complete Technical Data, Refer to The Latest Issue of Sprague Engineering Bulletin 2445.
- Call Your Sprague Industrial Distributor For Current Quantity Prices.



μF	T. x W. x L.	WVDC	Catalog Number
.047	3/32 x 3/16 x 5/8	50	431P4739R5
.068	1/8 x 7/32 x 5/8	50	431P6839R5
.10	5/32 x 7/32 x 5/8	50	431P1049R5
.15	3/16 x 1/4 x 5/8	50	431P1549R5
.22	5/32 x 9/32 x 3/4	50	431P2249R5
.33	3/16 x 5/16 x 3/4	50	431P3349R5
.47	3/16 x 5/16 x 1	50	431P4749R5
.68	3/16 x 3/8 x 1	50	431P6849R5
1.0	1/4 x 13/32 x 1	50	431P1059R5
1.5	9/32 x 1/2 x 1	50	431P1559R5
2.0	3/8 x 9/16 x 1	50	431P2059R5
2.5	11/32 x 17/32 x 1 1/4	50	431P2559R5
3.0	3/8 x 19/32 x 1 1/4	50	431P3059R5
4.0	3/8 x 19/32 x 1 1/2	50	431P4059R5
5.0	13/32 x 19/32 x 1 3/4	50	431P5059R5
6.0	15/32 x 11/16 x 1 1/2	50	431P6059R5
7.0	15/32 x 11/16 x 1 3/4	50	431P7059R5
10.0	9/16 x 25/32 x 1 3/4	50	431P1069R5
12.0	1/2 x 13/16 x 2 1/4	50	431P1269R5
.015	3/32 x 3/16 x 5/8	200	431P15392
.022	1/8 x 3/16 x 5/8	200	431P22392
.033	1/8 x 7/32 x 5/8	200	431P33392
.047	5/32 x 1/4 x 5/8	200	431P47392
.068	5/32 x 9/32 x 3/4	200	431P68392
.1	3/16 x 5/16 x 3/4	200	431P10492
.15	7/32 x 11/32 x 3/4	200	431P15492
.22	1/4 x 13/32 x 3/4	200	431P22492
.33	7/32 x 13/32 x 1	200	431P33492
.47	7/32 x 13/32 x 1 1/4	200	431P47492
.68	5/16 x 17/32 x 1	200	431P68492
1.0	5/16 x 17/32 x 1 1/4	200	431P10592
1.5	11/32 x 9/16 x 1 1/2	200	431P15592
2.0	3/8 x 9/16 x 1 3/4	200	431P20592
2.5	15/32 x 21/32 x 1 1/2	200	431P25592
3.0	15/32 x 21/32 x 1 3/4	200	431P30592
4.0	17/32 x 3/4 x 1 3/4	200	431P40592
5.0	15/32 x 3/4 x 2 1/4	200	431P50592
6.0	15/32 x 25/32 x 2 1/2	200	431P60592
7.0	3/4 x 15/16 x 1 3/4	200	431P70592
10.0	23/32 x 1 x 2 1/4	200	431P10692
12.0	23/32 x 1 x 2 1/2	200	431P12692

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	T. x W. x L.	WVDC	Catalog Number
.0033	3/32 x 3/16 x 5/8	400	431P33294
.0047	1/8 x 3/16 x 5/8	400	431P47294
.0068	5/32 x 7/32 x 5/8	400	431P68294
.01	3/16 x 1/4 x 5/8	400	431P10394
.015	5/32 x 9/32 x 3/4	400	431P15394
.022	3/16 x 5/16 x 3/4	400	431P22394
.033	7/32 x 11/32 x 3/4	400	431P33394
.047	1/4 x 13/32 x 3/4	400	431P47394
.068	7/32 x 3/8 x 1	400	431P68394
.1	9/32 x 7/16 x 1	400	431P10494
.15	5/16 x 17/32 x 1	400	431P15494
.22	13/32 x 19/32 x 1	400	431P22494
.33	11/32 x 9/16 x 1 1/2	400	431P33494
.47	3/8 x 9/16 x 1 3/4	400	431P47494
.68	15/32 x 21/32 x 1 3/4	400	431P68494
1.0	1/2 x 23/32 x 2	400	431P10594
1.5	1/2 x 25/32 x 2 1/2	400	431P15594
.0015	3/32 x 3/16 x 5/8	600	431P15296
.0022	1/8 x 3/16 x 5/8	600	431P22296
.0033	5/32 x 7/32 x 5/8	600	431P33296
.0047	1/8 x 1/4 x 3/4	600	431P47296
.0068	5/32 x 9/32 x 3/4	600	431P68296
.01	3/16 x 5/16 x 3/4	600	431P10396
.015	3/16 x 3/8 x 3/4	600	431P15396
.022	1/4 x 13/32 x 3/4	600	431P22396
.033	7/32 x 3/8 x 1	600	431P33396
.047	7/32 x 3/8 x 1 1/4	600	431P47396
.068	5/16 x 1/2 x 1	600	431P68396
.1	3/8 x 19/32 x 1	600	431P10496
.15	3/8 x 19/32 x 1 1/4	600	431P15496
.22	11/32 x 9/16 x 1 3/4	600	431P22496
.33	7/16 x 21/32 x 1 3/4	600	431P33496
.47	9/16 x 3/4 x 1 3/4	600	431P47496
.68	15/32 x 25/32 x 2 1/2	600	431P68496
1.0	3/4 x 31/32 x 2	600	431P10596
1.5	3/4 x 1 1/16 x 2 1/2	600	431P15596

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

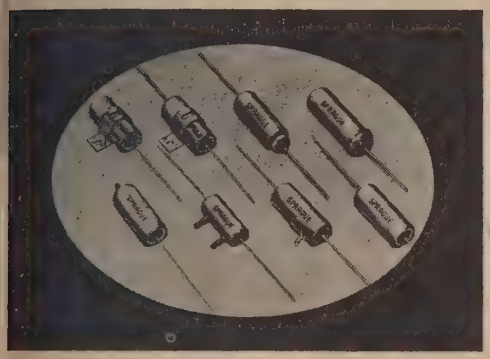
Copyright 1970, Sprague Products Company

All sizes subject to change without notice

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 260P
TUBULAR METAL-CLAD METALLIZED FILMITE® 'K' CAPACITORS



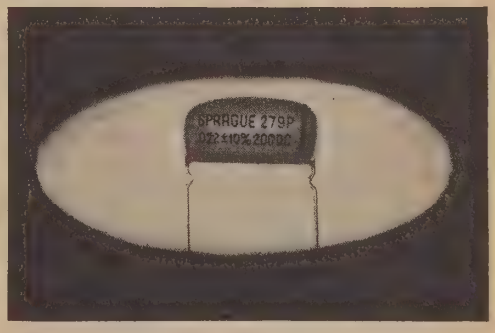
- Designed for Applications Such as Low-frequency Tuned Circuits, Analog Computer Reference Capacitors and Precision Timing and Integrating Circuits
- High Insulation Resistance, High Stability, Minimum Capacitance Change with Temperature, Low Dielectric Absorption and Low Dissipation Factor
- Capacitor Sections are of Non-inductive Construction
- Will Operate at Full Rated D-C Voltage Over the Temperature Range of −55C to +105C
- Capacitance Tolerance ±5%, Voltage Rating 200 WVDC
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletin 2705

Call Your Sprague Industrial Distributor for Current Quantity Prices

μF	WVDC	Size D. x L.	Catalog Number
.01	200	.175 x ¾	260P10352S4
.015	200	.195 x ¾	260P15352S4
.022	200	.235 x ¾	260P22352S4
.033	200	.235 x ¾	260P33352S4
.047	200	.312 x ⅞	260P47352S4
.056	200	.312 x ⅞	260P56352S4
.068	200	.312 x ⅞	260P68352S4
.1	200	.312 x ⅞	260P10452S4
.15	200	.312 x 1⅛	260P15452S4
.22	200	.400 x ⅞	260P22452S4
.33	200	.400 x 1⅛	260P33452S4
.47	200	.400 x 1⅜	260P47452S4
.68	200	.562 x 1⅛	260P68452S4
1.0	200	.562 x 1⅜	260P10552S4
2.0	200	.670 x 1⅝	260P20552S4
3.0	200	.750 x 1⅞	260P30552S4
4.0	200	.750 x 2⅛	260P40552S4
5.0	200	.750 x 2⅜	260P50552S4
7.0	200	1.000 x 1⅞	260P70552S4
8.0	200	1.000 x 2⅛	260P80552S4
10.0	200	1.000 x 2⅝	260P10652S4

TYPE 279P ISOFARAD® PLASTIC FILM CAPACITORS

- Isofarad Quality is a Must in Color TV Synchroguide Circuits, Horizontal and Vertical Oscillators, Bridge and Parallel-T Circuits and Other Tuned Circuit Applications Requiring Close Tolerance and Zero Temperature Coefficient of Capacitance
- Superior to Silvered Mica Capacitors, Yet Less Expensive
- Constant Capacitance—Will Not Change More Than ±0.2% from Room Temperature to +80C at a Maximum Rated Voltage. Will Withstand Operating Temperatures to 85C (185F)
- **Capacitance Tolerance: ±5%**
- For Complete Data, See Latest Issue of Sprague Engineering Bulletin 2071



CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	WVDC	Size D. x L.	Catalog Number
.001	500	⅜ x 1	279P10255VB3
.0015	500	⅜ x 1	279P15255VB3
.0022	500	⅜ x 1	279P22255VB3
.0033	500	⅜ x 1	279P33255VB3
.0039	500	⅜ x 1¼	279P39255WB3
.0047	500	⅜ x 1¼	279P47255WB3
.0068	500	⅜ x 1¼	279P68255WB3
.01	500	⅜ x 1¼	279P10355WB3
.015	500	7/16 x 1¼	279P15355XB3
.022	500	½ x 1½	279P22355YB3
.033	500	½ x 1½	279P33355YB3
.047	500	⅝ x 1⅞	279P47355ZB3
.068	500	⅝ x 1⅞	279P68355ZB3

Copyright 1970, Sprague Products Company

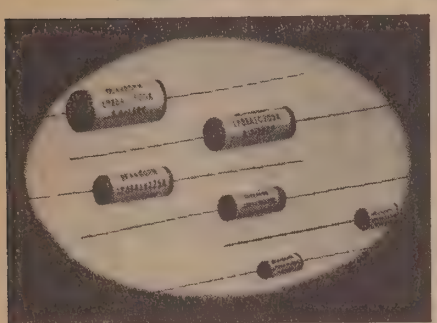
IND-REM-44-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

DEARBORN TYPE LP88 DELTAFILM® 'LP' METALLIZED POLYCARBONATE-FILM CAPACITORS



NOW AVAILABLE FROM SPRAGUE INDUSTRIAL DISTRIBUTORS

(Dearborn Electronics, Inc. is a subsidiary of the Sprague Electric Co.)

- Type LP88 Sets New Standards of Small Physical Size, While Maintaining the Superior Electrical Characteristics of Polycarbonate-film Capacitors.
- High Volume Efficiency . . . Superior Operational Reliability . . . Exceptional Life Expectancy . . . Extremely High Insulation Resistance . . . Low Dissipation Factor (High Q) . . . Low Temperature Coeffjcient . . . Excellent Resistance to Shock and Vibration.
- Fuz-ion Sealed*—Heat-Shrinkable Plastic Case is Fused to Epoxy, Ensuring Maximum Seal Efficiency. This Exclusive Plastic-to-Resin Sealed Case is Nonconductive, Fungus-Proof, Corrosion-Proof, and Highly Resistant to Humidity and to the Effects of Long-Term Shelf Life.
- Operating Temperature Range, —55C to +125C Without Voltage Derating.
- Capacitance Tolerance, ±10%.
- For Complete Technical Data, See Latest Issue of Dearborn Engineering Bulletin 154.

*Trademark.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

50 WVDC

μF	Diameter	Length	Cat. No.
.056★	.170	.400	LP88A1A563K
.068	.170	.400	LP88A1A683K
.082	.190	.400	LP88A1A823K
.10★	.230	.400	LP88A1A104K
.12	.230	.400	LP88A1A124K
.15	.230	.400	LP88A1A154K
.18	.260	.400	LP88A1A184K
.22★	.260	.400	LP88A1A224K
.27	.230	.530	LP88A1A274K
.33	.260	.530	LP88A1A334K
.39	.260	.530	LP88A1A394K
.47★	.310	.530	LP88A1A474K
.56	.310	.530	LP88A1A564K
.68	.350	.530	LP88A1A684K
.82	.350	.530	LP88A1A824K
1.0★	.310	.750	LP88A1A105K
1.2	.310	.750	LP88A1A125K
1.5	.350	.750	LP88A1A155K
1.8	.400	.750	LP88A1A185K
2.0★	.400	.750	LP88A1A205K
2.2	.400	.750	LP88A1A225K
2.7	.350	1.030	LP88A1A275K
3.0	.400	1.030	LP88A1A305K
3.3	.400	1.030	LP88A1A335K
3.9	.440	1.030	LP88A1A395K
4.7	.440	1.030	LP88A1A475K
5.0★	.490	1.030	LP88A1A505K
5.6	.490	1.030	LP88A1A565K
6.8	.490	1.250	LP88A1A685K
8.2	.560	1.250	LP88A1A825K
10★	.610	1.250	LP88A1A106K
12	.610	1.500	LP88A1A126K
15	.610	1.500	LP88A1A156K
18	.670	1.500	LP88A1A186K
22★	.740	1.500	LP88A1A226K
27	.870	1.500	LP88A1A276K
33	.870	1.500	LP88A1A336K
39	1.000	1.500	LP88A1A396K
47	1.000	1.750	LP88A1A476K
50★	1.000	1.750	LP88A1A506K

200 WVDC

μF	Diameter	Length	Cat. No.
.01	.170	.400	LP88A1C103K
.012	.190	.400	LP88A1C123K
.015★	.190	.400	LP88A1C153K
.018	.230	.400	LP88A1C183K
.022★	.230	.400	LP88A1C223K
.027	.260	.400	LP88A1C273K
.033★	.260	.400	LP88A1C333K
.039	.230	.530	LP88A1C393K
.047★	.230	.530	LP88A1C473K
.056	.260	.530	LP88A1C563K
.068★	.260	.530	LP88A1C683K
.082	.310	.530	LP88A1C823K
.10★	.310	.530	LP88A1C104K
.12	.350	.530	LP88A1C124K
.15	.310	.750	LP88A1C154K
.18	.310	.750	LP88A1C184K
.22★	.350	.750	LP88A1C224K
.27	.350	.750	LP88A1C274K
.33	.400	.750	LP88A1C334K
.39	.350	1.030	LP88A1C394K
.47★	.400	1.030	LP88A1C474K
.56	.400	1.030	LP88A1C564K
.68	.440	1.030	LP88A1C684K
.82	.490	1.030	LP88A1C824K
1.0★	.490	1.250	LP88A1C105K
1.2	.490	1.250	LP88A1C125K
1.5	.560	1.250	LP88A1C155K
1.8	.560	1.500	LP88A1C185K
2.0★	.560	1.500	LP88A1C205K
2.2	.610	1.500	LP88A1C225K
2.7	.670	1.500	LP88A1C275K
3.0	.670	1.500	LP88A1C305K
3.3	.740	1.500	LP88A1C335K
3.9	.740	1.500	LP88A1C395K
4.7	.870	1.500	LP88A1C475K
5.0★	.870	1.500	LP88A1C505K
5.6	1.000	1.500	LP88A1C565K
6.8	1.000	1.500	LP88A1C685K
8.2★	1.000	1.750	LP88A1C825K

★Preferred Value—For Fast Delivery.

Copyright 1970, Sprague Products Company

IND-REM-44A-7002

Sizes subject to change without notice

© United Technical Publications

SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS



- Tiny, Tough, Dependable In Every Application
- Low Self-Inductance Of Silvered Flat-plate Design Means Very High By-pass Efficiency In All TV Circuits
- Flat-plate Construction Permits Higher Self-resonant Frequency Than Tubular Ceramic Or Molded Mica Capacitors
- Tough Moisture-proof Coating Protects Against Short-circuiting And Assures Good Performance Under Severe Conditions Of Humidity And Vibration
- Cera-mite Capacitors Easily Fit Into Tight Spaces, Even Across Subminiature Tube Sockets
- Designed For 85C (185F) Continuous Operation

Call your Sprague Industrial Distributor for Current Quantity Prices

GENERAL APPLICATION TYPES

- Excellent Where Temperature Coefficient Is Not Important, Such As By-pass and Coupling Applications in IF and RF Circuits
- EIA Designation: 5GA=Z5U, TG=Z5U
- Low Cost, Smallest Size 1 kV General Application Type Available
- Same Characteristics Available In High Voltage Ratings At Low Cost

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
1000 WVDC (discs) ±20% Tol.			
5.0	5GA-V50	C023B102E5R0M	5/16 x 5/32
6.8	5GA-V68	C023B102E6R8M	5/16 x 5/32
7.5	5GA-V75	C023B102E7R5M	5/16 x 5/32
8.2	5GA-V82	C023B102E8R2M	5/16 x 5/32
10	5GA-Q10	C023B102E100M	5/16 x 5/32
12	5GA-Q12	C023B102E120M	5/16 x 5/32
15	5GA-Q15	C023B102E150M	5/16 x 5/32
18	5GA-Q18	C023B102E180M	5/16 x 5/32
20	5GA-Q20	C023B102E200M	5/16 x 5/32
22	5GA-Q22	C023B102E220M	5/16 x 5/32
25	5GA-Q25	C023B102E250M	5/16 x 5/32
27	5GA-Q27	C023B102E270M	5/16 x 5/32
30	5GA-Q30	C023B102E300M	5/16 x 5/32
33	5GA-Q33	C023B102E330M	5/16 x 5/32
39	5GA-Q39	C023B102E390M	5/16 x 5/32
47	5GA-Q47	C023B102E470M	5/16 x 5/32
50	5GA-Q50	C023B102E500M	5/16 x 5/32
56	5GA-Q56	C023B102E560M	5/16 x 5/32
68	5GA-Q68	C023B102E680M	5/16 x 5/32
75	5GA-Q75	C023B102E750M	5/16 x 5/32
82	5GA-Q82	C023B102E820M	5/16 x 5/32
100	5GA-T10	C023B102E101M	5/16 x 5/32
120	5GA-T12	C023B102E121M	5/16 x 5/32
150	5GA-T15	C023B102E151M	5/16 x 5/32
180	5GA-T18	C023B102E181M	5/16 x 5/32
200	5GA-T20	C023B102E201M	5/16 x 5/32
220	5GA-T22	C023B102E221M	5/16 x 5/32
250	5GA-T25	C023B102E251M	5/16 x 5/32
270	5GA-T27	C023B102E271M	5/16 x 5/32
300	5GA-T30	C023B102E301M	5/16 x 5/32
330	5GA-T33	C023B102E331M	5/16 x 5/32
360	5GA-T36	C023B102E361M	5/16 x 5/32
390	5GA-T39	C023B102E391M	5/16 x 5/32
470	5GA-T47	C023B102E471M	5/16 x 5/32
500	5GA-T50	C023B102E501M	5/16 x 5/32
560	5GA-T56	C023B102E561M	5/16 x 5/32
680	5GA-T68	C023B102E681M	5/16 x 5/32
750	5GA-T75	C023B102E751M	5/16 x 5/32
800	5GA-T80	C023B102E801M	5/16 x 5/32
820	5GA-T82	C023B102E821M	5/16 x 5/32
.001 μF	5GA-D10	C023B102E102M	5/16 x 5/32
.0012	5GA-D12	C023B102E122M	5/16 x 5/32
.0015	5GA-D15	C023B102E152M	5/16 x 5/32
.0018	5GA-D18	C023B102E182M	5/16 x 5/32
.002	5GA-D20	C023B102F202M	3/8 x 5/32
.0022	5GA-D22	C023B102F222M	3/8 x 5/32
.0025	5GA-D25	C023B102F252M	3/8 x 5/32
.0027	5GA-D27	C023B102F272M	3/8 x 5/32
.003	5GA-D30	C023B102F302M	3/8 x 5/32
.0033	5GA-D33	C023B102F332M	3/8 x 5/32
.0039	5GA-D39	C023B102G392M	7/16 x 5/32
.004	5GA-D40	C023B102G402M	7/16 x 5/32
.0047	5GA-D47	C023B102G472M	7/16 x 5/32
.005	5GA-D50	C023B102G502M	7/16 x 5/32
.0068	5GA-D68	C023B102H682M	1/2 x 5/32
.0082	5GA-D82	C023B102J822M	5/8 x 5/32
.01	5GA-S10	C023A102K103M	5/8 x 5/32
.015	5GA-S15	C023A102L153M	11/16 x 5/32
.02	5GA-S20	C023A102P203M	7/8 x 5/32
500 WVDC(discs) ±20% Tol.			
.01 μF	5GAS-S10	C023B501G103M	3/8 x 5/32
.02	5GAS-S20	C023B501J203M	3/8 x 5/32
.025	5GA-S25	C023B501K253M	5/8 x 5/32
.04	5GA-S40	C023A501P403M	7/8 x 5/32
.05	5GA-S50	C023A501P503M	7/8 x 5/32
.1	5GA-P10	41C92A10	7/8 x 3/16
3000 WVDC (discs) ±20% Tol.			
1.5	30GA-V15	19C306	3/8 x 1/4
3.3	30GA-V33	19C307	3/8 x 1/4
4.7	30GA-V47	19C308	3/8 x 1/4
5.0	30GA-V50	19C309	3/8 x 1/4
6.0	30GA-V60	19C310	3/8 x 1/4
6.8	30GA-V68	19C311	3/8 x 1/4
7.5	30GA-V75	19C291	3/8 x 1/4
8.2	30GA-V82	19C290	3/8 x 1/4
10	30GA-Q10	19C312	3/8 x 1/4
12	30GA-Q12	19C313	3/8 x 1/4
15	30GA-Q15	19C314	3/8 x 1/4
18	30GA-Q18	19C292	3/8 x 1/4
20	30GA-Q20	19C315	3/8 x 1/4
22	30GA-Q22	19C316	3/8 x 1/4
25	30GA-Q25	19C317	3/8 x 1/4
27	30GA-Q27	19C318	3/8 x 1/4
30	30GA-Q30	19C319	3/8 x 1/4
33	30GA-Q33	19C320	3/8 x 1/4
39	30GA-Q39	19C321	3/8 x 1/4
47	30GA-Q47	19C322	3/8 x 1/4
50	30GA-Q50	19C323	3/8 x 1/4
56	30GA-Q56	19C324	3/8 x 1/4
60	30GA-Q60	19C325	3/8 x 1/4
62	30GA-Q62	19C326	3/8 x 1/4
68	30GA-Q68	19C327	3/8 x 1/4
75	30GA-Q75	19C328	3/8 x 1/4
82	30GA-Q82	20C184	7/16 x 1/4
100	30GA-T10	20C43	7/16 x 1/4
120	30GA-T12	20C44	7/16 x 1/4
150	30GA-T15	20C45	7/16 x 1/4
180	30GA-T18	20C46	7/16 x 1/4
200	30GA-T20	20C47	7/16 x 1/4

Copyright 1970, Sprague Products Company

IND-REM-49-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS, continued

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
3000 WVDC (cont.)			
220	30GA-T22	20C48	7/16 x 1/4
250	30GA-T25	20C49	7/16 x 1/4
270	30GA-T27	20C50	7/16 x 1/4
300	30GA-T30	20C51	7/16 x 1/4
330	30GA-T33	20C28A	7/16 x 1/4
390	30GA-T39	20C176	7/16 x 1/4
400	30GA-T40	20C175	7/16 x 1/4
470	30GA-T47	29C289	19/32 x 1/4
500	30GA-T50	29C90	19/32 x 1/4
560	30GA-T56	29C290	19/32 x 1/4
680	30GA-T68	29C288	19/32 x 1/4
750	30GA-T75	29C298	19/32 x 1/4
820	30GA-T82	29C299	19/32 x 1/4
.001 µF	30GA-D10	29C300	19/32 x 1/4
.0012	30GA-D12	29C301	19/32 x 1/4
.0015	30GA-D15	29C302	19/32 x 1/4
.002	30GA-D20	29C303	19/32 x 1/4
.0022	30GA-D22	29C255A	19/32 x 1/4
.0025	30GA-D25	44C63	21/32 x 1/4
.0027	30GA-D27	44C65	21/32 x 1/4
.003	30GA-D30	33C31A1	11/16 x 1/4
.0033	30GA-D33	33C32A2	11/16 x 1/4
.0039	30GA-D39	36C155A	25/32 x 1/4
.004	30GA-D40	36C78A	25/32 x 1/4
.0047	30GA-D47	36C339	25/32 x 1/4
.005	30GA-D50	36C124A	25/32 x 1/4
.006	30GA-D60	41C34A	21/32 x 1/4
.0068	30GA-D68	41C153	29/32 x 1/4
.008	30GA-D80	41C151	29/32 x 1/4
.0082	30GA-D82	41C150	29/32 x 1/4
.01	30GA-S10	41C121A2	29/32 x 1/4

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
6000 WVDC (discs) ±20% Tol.			
1.5	60GA-V15	29C406	5/16 x 5/16
4.7	60GA-V47	29C407	5/16 x 5/16
6.8	60GA-V68	29C408	5/16 x 5/16
8.2	60GA-V82	29C409	5/16 x 5/16
10	60GA-Q10	29C410	5/16 x 5/16
12	60GA-Q12	29C411	5/16 x 5/16
15	60GA-Q15	29C412	5/16 x 5/16
18	60GA-Q18	29C413	5/16 x 5/16
20	60GA-Q20	29C414	5/16 x 5/16
22	60GA-Q22	29C415	5/16 x 5/16
25	60GA-Q25	29C416	5/16 x 5/16
27	60GA-Q27	29C417	5/16 x 5/16
30	60GA-Q30	29C418	5/16 x 5/16
33	60GA-Q33	29C419	5/16 x 5/16
39	60GA-Q39	29C420	5/16 x 5/16
47	60GA-Q47	29C421	5/16 x 5/16
50	60GA-Q50	29C422	5/16 x 5/16
56	60GA-Q56	29C423	5/16 x 5/16
60	60GA-Q60	29C424	5/16 x 5/16
68	60GA-Q68	29C425	5/16 x 5/16
75	60GA-Q75	29C426	5/16 x 5/16
82	60GA-Q82	29C427	5/16 x 5/16
100	60GA-T10	29C428	5/16 x 5/16
120	60GA-T12	29C429	5/16 x 5/16
150	60GA-T15	33C187	11/16 x 5/16
180	60GA-T18	33C188	11/16 x 5/16
200	60GA-T20	33C189	11/16 x 5/16
220	60GA-T22	33C190	11/16 x 5/16

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
6000 WVDC (cont.)			
250	60GA-T25	33C191	11/16 x 5/16
270	60GA-T27	33C192	11/16 x 5/16
300	60GA-T30	36C265	3/4 x 5/16
330	60GA-T33	36C266	3/4 x 5/16
390	60GA-T39	41C9A1	7/8 x 5/16
400	60GA-T40	41C142	7/8 x 5/16
470	60GA-T47	41C80A1	7/8 x 5/16
500	60GA-T50	33C185	11/16 x 5/16
560	60GA-T56	33C186	11/16 x 5/16
680	60GA-T68	33C107	11/16 x 5/16
750	60GA-T75	33C108	11/16 x 5/16
820	60GA-T82	33C109	11/16 x 5/16
.001 µF	60GA-D10	33C90A	11/16 x 5/16
.0012	60GA-D12	33C101	11/16 x 5/16
.0015	60GA-D15	36C253A	3/4 x 5/16
.0022	60GA-D22	41C152	7/8 x 5/16
.0025	60GA-D25	41C250	7/8 x 5/16
.0027	60GA-D27	41C251	7/8 x 5/16
.003	60GA-D30	41C252	7/8 x 5/16
.0033	60GA-D33	41C253	7/8 x 5/16
.0039	60GA-D39	41C254	7/8 x 5/16
.0047	60GA-D47	41C255	7/8 x 5/16

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
7500 WVDC (discs) ±20% Tol.			
4.7	75GA-V47	29C387	9/16 x 5/16
8.2	75GA-V82	29C380	9/16 x 5/16
10	75GA-Q10	29C382	9/16 x 5/16
12	75GA-Q12	29C383	9/16 x 5/16
15	75GA-Q15	29C378	9/16 x 5/16
18	75GA-Q18	29C379	9/16 x 5/16
20	75GA-Q20	29C405	9/16 x 5/16
22	75GA-Q22	29C118A	9/16 x 5/16
30	75GA-Q30	29C418A	9/16 x 5/16
33	75GA-Q33	29C419A	9/16 x 5/16
47	75GA-Q47	29C381	9/16 x 5/16
56	75GA-Q56	29C30A	9/16 x 5/16
100	75GA-T10	33C56A2	11/16 x 5/16
220	75GA-T22	33C224	11/16 x 5/16
470	75GA-T47	33C169	11/16 x 5/16
500	75GA-T50	44C89	21/32 x 5/16
560	75GA-T56	44C90	21/32 x 5/16
680	75GA-T68	44C92	21/32 x 5/16
750	75GA-T75	33C175	11/16 x 5/16
820	75GA-T82	33C177	11/16 x 5/16
.001 µF	75GA-D10	33C178	11/16 x 5/16
.0012	75GA-D12	36C334	3/4 x 5/16
.0015	75GA-D15	41C221	7/8 x 5/16
.0018	75GA-D18	41C223	7/8 x 5/16
.002	75GA-D20	41C224	7/8 x 5/16
.0022	75GA-D22	41C225	7/8 x 5/16
.0025	75GA-D25	41C226	7/8 x 5/16

HIGH-K TYPES

- Designed for By-Pass and Coupling Applications Where Additional Capacitance Will Not Affect Circuit Operation
- Smallest Physical Size
- EIA Designation: 5HK=Z5U
- 5HKS-S10 thru 5HK-P10, **500 WVDC,** Capacitance Tolerance: +80 —20%
- All Other 5HK are **1000 WVDC,** Capacitance Tolerance: GMV

µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
SINGLE UNITS			
.001	5HK-D10	C023B102E102P	5/16 x 5/32
.0015	5HK-D15	C023B102F152P	3/8 x 5/32
.002	5HK-D20	C023B102F202P	3/8 x 5/32
.0022	5HK-D22	C023B102F222P	3/8 x 5/32
.0033	5HK-D33	C023B102G332P	7/16 x 5/32
.0039	5HK-D39	C023B102G392P	7/16 x 5/32
.0047	5HK-D47	C023B102H472P	1/2 x 5/32
.005	5HK-D50	C023B102H502P	1/2 x 5/32
.0068	5HK-D68	C023B102J682P	5/16 x 5/32
.0082	5HK-D82	C023B102L822P	11/16 x 5/32
.01	5HK-S10	C023B102L103P	11/16 x 5/32
.01	5HKS-S10	C023B501G103Z	7/16 x 5/32
.015	5HK-S15	C023B501J153Z	5/16 x 5/32

µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
SINGLE UNITS (cont.)			
.02	5HK-S20	C023B501J203Z	5/16 x 5/32
.025	5HK-S25	C023B501K253Z	5/8 x 5/32
.04	5HK-S40	44C124A	11/16 x 3/16
.05	5HK-S50	33C58	11/16 x 3/16
.1	5HK-P10	41C92	7/8 x 3/16
DUAL UNITS			
2 x .001	5HK-2D10	20C253	7/16 x 5/32
2 x .0015	5HK-2D15	55C67	1/2 x 5/32
2 x .002	5HK-2D20	29C175	5/16 x 5/32
2 x .0022	5HK-2D22	29C27	5/16 x 5/32
2 x .0047	5HK-2D47	36C330	3/4 x 5/32
2 x .01	5HK-2S10	41C238	7/8 x 5/32
2 x .02	5HK-2S20	41C219	1 x 7/32

MINIATURIZED DISC CERAMIC CAPACITORS FOR TRANSISTORIZED CIRCUITRY

- Intended for Coupling and By-Pass Applications

Type TG Standard Tolerance ±20%

µF	Volts	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T
.005	100	TG-D50	C023B101E502M	5/16 x 5/32
.01	100	TG-S10	C023B101F103M	3/8 x 5/32
.02	100	TG-S20	C023B101H203M	1/2 x 5/32
.025	100	TG-S25	C023B101J253M	1/2 x 5/32
.03	100	TG-S30	C023A101J303M	5/8 x 5/32
.05	100	TG-S50	C023B101L503M	1/2 x 5/32
.1	100	TG-P10	33C41B6	11/16 x 5/32
.05	100	TGL-S50	C023B101L503M	11/16 x 5/32

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS, continued

SEMI-STABLE TYPES

- Better Stability Than the General Application Types.
- Tighter Tolerance of ±10% is Better Than General Application Types
- Ideal for Replacing Other Types of Capacitors Such as Molded Micas, Paper Tubulars, and Mylar Film Tubulars
- Available in 1KV and a Smaller Size 250 Volt Rating
- Small Size, Low Cost
- EIA Designation: 10SS=Z5P, 2SS=Z5P

SEMI-STABLE 250 WVDC STANDARD TOLERANCE ±10%

µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
750pF	2SS-T75	C067B251E751K	5/16 x 5/32	.0022	2SS-D22	C067B251F222K	3/8 x 5/32	.0068	2SS-D68	C067B251J682K	9/16 x 5/32
820pF	2SS-T82	C067B251E821K	5/16 x 5/32	.0027	2SS-D27	C067B251G272K	7/16 x 5/32	.0082	2SS-D82	C067B251L822K	11/16 x 5/32
.001	2SS-D10	C067B251E102K	5/16 x 5/32	.0033	2SS-D33	C067B251G332K	7/16 x 5/32	.01	2SS-S10	C067A251M103K	3/4 x 5/32
.0012	2SS-D12	C067B251E122K	5/16 x 5/32	.0039	2SS-D39	C067B251H392K	1/2 x 5/32	.012	2SS-S12	29C527	9/16 x 7/32
.0015	2SS-D15	C067B251F152K	3/8 x 5/32	.0047	2SS-D47	C067B251H472K	1/2 x 5/32	.015	2SS-S15	33C304	11/16 x 7/32
.0018	2SS-D18	C067B251F182K	3/8 x 5/32	.005	2SS-D50	C067B251H502K	1/2 x 5/32	.018	2SS-S18	33C291	11/16 x 7/32
.002	2SS-D20	C067B251F202K	3/8 x 5/32	.0056	2SS-D56	C067B251J562K	9/16 x 5/32	.02	2SS-S20	36C413	3/4 x 7/32

SEMI-STABLE 1000 WVDC STANDARD TOLERANCE ±10%

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
470	10SS-T47	C067B102E471K	5/16 x 5/32	.0018	10SS-D18	C067B102G182K	7/16 x 5/32	.0068	10SS-D68	C067A102M682K	3/4 x 5/32
500	10SS-T50	C067B102E501K	5/16 x 5/32	.002	10SS-D20	C067B102G202K	7/16 x 5/32	.0082	10SS-D82	C067A102P822K	7/8 x 5/32
560	10SS-T56	C067B102E561K	5/16 x 5/32	.0022	10SS-D22	C067B102H222K	1/2 x 5/32	.010	10SS-S10	C067A102P103K	7/8 x 5/32
680	10SS-T68	C067B102E681K	5/16 x 5/32	.0027	10SS-D27	C067B102H272K	1/2 x 5/32	.012	10SS-S12	33C249A	3/4 x 7/32
750	10SS-T75	C067B102F751K	3/8 x 5/32	.0033	10SS-D33	C067B102J332K	9/16 x 5/32	.015	10SS-S15	41C299A	15/16 x 7/32
820	10SS-T82	C067B102F821K	3/8 x 5/32	.0039	10SS-D39	C067B102J392K	9/16 x 5/32	.018	10SS-S18	41C300A1	15/16 x 7/32
.001µF	10SS-D10	C067B102F102K	3/8 x 5/32	.0047	10SS-D47	C067B102K472K	5/8 x 5/32	.02	10SS-S20	41C301A1	15/16 x 7/32
.0012	10SS-D12	C067B102F122K	3/8 x 5/32	.005	10SS-D50	C067B102K502K	5/8 x 5/32	.022	10SS-S22	41C310A1	15/16 x 7/32
.0015	10SS-D15	C067B102G152K	7/16 x 5/32	.0056	10SS-D56	C067B102L562K	11/16 x 5/32				

TEMPERATURE-STABLE TYPES

- Used Where Minimum Capacitance Change With Temperature Is An Important Consideration
- Rated at **1000 WVDC**
- Standard Capacitance Tolerance: ±10% except 10TS-S15, 10TS-S20, 10TS-S30 ±15%.
- EIA Designation: 10TS=X5E

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
3.3	10TS-V33	C028B102E3R3K	5/16 x 5/32	75	10TS-Q75	C028B102E750K	5/16 x 5/32	.001	10TS-D10	C106B102G102K	7/16 x 5/32
5.0	10TS-V50	C028B102E5R0K	5/16 x 5/32	82	10TS-Q82	C028B102E820K	5/16 x 5/32	.0012	10TS-D12	C016B102G122K	7/16 x 5/32
6.8	10TS-V68	C028B102E6R8K	5/16 x 5/32	91	10TS-Q91	C028B102E910K	5/16 x 5/32	.0015	10TS-D15	C016B102J152K	9/16 x 5/32
7.5	10TS-V75	C028B102E7R5K	5/16 x 5/32	100	10TS-T10	C028B102E101K	5/16 x 5/32	.0018	10TS-D18	C016B102J182K	9/16 x 5/32
8.2	10TS-V82	C028B102E8R2K	5/16 x 5/32	120	10TS-T12	C028B102E121K	5/16 x 5/32	.0020	10TS-D20	C016B102J202K	9/16 x 5/32
10	10TS-Q10	C028B102E100K	5/16 x 5/32	150	10TS-T15	C028B102E151K	5/16 x 5/32	.0022	10TS-D22	C016B102J222K	9/16 x 5/32
12	10TS-Q12	C028B102E120K	5/16 x 5/32	180	10TS-T18	C028B102E181K	5/16 x 5/32	.0025	10TS-D25	C016B102K252K	5/8 x 5/32
15	10TS-Q15	C028B102E150K	5/16 x 5/32	200	10TS-T20	C028B102E201K	5/16 x 5/32	.0027	10TS-D27	C016B102K272K	5/8 x 5/32
18	10TS-Q18	C028B102E180K	5/16 x 5/32	220	10TS-T22	C028B102E221K	5/16 x 5/32	.0030	10TS-D30	C016B102K302K	5/8 x 5/32
20	10TS-Q20	C028B102E200K	5/16 x 5/32	250	10TS-T25	C028B102E251K	5/16 x 5/32	.0033	10TS-D33	C016B102L332K	11/16 x 5/32
22	10TS-Q22	C028B102E220K	5/16 x 5/32	270	10TS-T27	C016B102E271K	5/16 x 5/32	.0039	10TS-D39	C016A102M392K	3/4 x 5/32
25	10TS-Q25	C028B102E250K	5/16 x 5/32	300	10TS-T30	C016B102E301K	5/16 x 5/32	.0040	10TS-D40	C016A102M402K	3/4 x 5/32
27	10TS-Q27	C028B102E270K	5/16 x 5/32	330	10TS-T33	C016B102E331K	5/16 x 5/32	.0047	10TS-D47	C016A102P472K	7/8 x 5/32
30	10TS-Q30	C028B102E300K	5/16 x 5/32	390	10TS-T39	C016B102E391K	5/16 x 5/32	.0050	10TS-D50	C016A102P502K	7/8 x 5/32
33	10TS-Q33	C028B102E330K	5/16 x 5/32	470	10TS-T47	C016B102E471K	5/16 x 5/32	.0056	10TS-D56	C016A102P562K	7/8 x 5/32
39	10TS-Q39	C028B102E390K	5/16 x 5/32	500	10TS-T50	C016B102F501K	3/8 x 5/32	.0068	10TS-D68	36C108A	13/16 x 7/32
47	10TS-Q47	C028B102E470K	5/16 x 5/32	560	10TS-T56	C016B102F561K	3/8 x 5/32	.0075	10TS-D75	36C395	13/16 x 7/32
50	10TS-Q50	C028B102E500K	5/16 x 5/32	680	10TS-T68	C016B102F681K	3/8 x 5/32	.0082	10TS-D82	41C306A	15/16 x 7/32
56	10TS-Q56	C028B102E560K	5/16 x 5/32	750	10TS-T75	C016B102F751K	3/8 x 5/32	.01	10TS-S10	41C121A1	15/16 x 7/32
68	10TS-Q68	C028B102E680K	5/16 x 5/32	820	10TS-T82	C016B102F821K	3/8 x 5/32				

DISC CERAMICS FOR AC APPLICATIONS

- Rated at 125 VAC or 1400 VDC
- Standard Tolerance ±20%
- For AC Line Bypass Application
- Heavy Duty for Long Life
- May Be Connected Across the Line or Chassis to Line

µF	Sprague Products Catalog No.	Sprague O.E.M. Part No.	D. x T.
.001	125L-D10	19C251	3/8 x 7/32
.0015	125L-D15	19C252	3/8 x 7/32
.002	125L-D20	19C253	3/8 x 7/32
.0047	125L-D47	29C145	9/16 x 7/32
.005	125L-D50	29C145A	9/16 x 7/32
.01	125L-S10	36C218	3/4 x 7/32
.02	125L-S20	36C220	3/4 x 1/4
2 x .005	125L-2D50	29C147	9/16 x 1/4
2 x .01	125L-2S10	36C219	3/4 x 1/4

DISC CERAMICS FOR BUFFER APPLICATIONS

- Rated at 2000 WVDC
- Standard Tolerance ±20%

µF	Sprague Products Catalog No.	Sprague O.E.M. Part No.	D. x T.
.001	BL-D10	29C162	9/16 x 7/32
.002	BL-D20	29C163	9/16 x 7/32
.003	BL-D30	29C164	9/16 x 7/32
.004	BL-D40	29C165	9/16 x 7/32
.005	BL-D50	29C251	9/16 x 7/32
.006	BL-D60	44C126	11/16 x 7/32
.007	BL-D70	33C82	11/16 x 7/32
.0075	BL-D75	33C81	11/16 x 7/32
.008	BL-D80	33C84	11/16 x 7/32
.01	BL-S10	36C151	3/4 x 7/32

Copyright 1970 Sprague Products Company

IND-REM-50A-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS, continued

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
N220 (cont.)			
5.0	10TCR-V50	C033B501S5R0D	3/8 x 1/4
5.6	10TCR-V56	C033B501S5R6D	3/8 x 1/4
6.8	10TCR-V68	C033B501E6R8D	5/16 x 5/32
8.2	10TCR-V82	C033B501E8R2D	5/16 x 5/32
10	10TCR-Q10	C033B501E100J	5/16 x 5/32
12	10TCR-Q12	C033B501E120J	5/16 x 5/32
15	10TCR-Q15	C033B501E150J	5/16 x 5/32
18	10TCR-Q18	C033B501E180J	5/16 x 5/32
20	10TCR-Q20	C033B501F200J	3/8 x 5/32
22	10TCR-Q22	C033B501F220J	3/8 x 5/32
25	10TCR-Q25	C033B501F250J	3/8 x 5/32
27	10TCR-Q27	C033B501F270J	3/8 x 5/32
30	10TCR-Q30	C033B501F300J	3/8 x 5/32
33	10TCR-Q33	C033B501G330J	7/16 x 5/32
39	10TCR-Q39	C033B501G390J	7/16 x 5/32
47	10TCR-Q47	C033B501G470J	7/16 x 5/32
50	10TCR-Q50	C033B501G500J	7/16 x 5/32
56	10TCR-Q56	C033B501H560J	1/2 x 5/32
68	10TCR-Q68	C033B501J680J	9/16 x 5/32
75	10TCR-Q75	C033B501J750J	9/16 x 5/32
82	10TCR-Q82	C033B501J820J	9/16 x 5/32
100	10TCR-T10	C033B501K101J	5/8 x 5/32
120	10TCR-T12	C033B501L121J	11/16 x 5/32
150	10TCR-T15	C033B501L151J	11/16 x 5/32
180	10TCR-T18	C033A501M181J	3/4 x 5/32
200	10TCR-T20	C033A501P201J	7/8 x 5/32
220	10TCR-T22	C033A501P221J	7/8 x 5/32
270	10TCR-T27	C033A501P271J	7/8 x 5/32
300	10TCR-T30	C033A501P301J	7/8 x 5/32
N330			
3.0	10TCS-V30	C034B501S3R0D	3/8 x 1/4
3.3	10TCS-V33	C034B501S3R3D	3/8 x 1/4
3.9	10TCS-V39	C034B501S3R9D	3/8 x 1/4
4.7	10TCS-V47	C034B501S4R7D	3/8 x 1/4
5.0	10TCS-V50	C034B501S5R0D	3/8 x 1/4
5.6	10TCS-V56	C034B501S5R6D	3/8 x 1/4
6.8	10TCS-V68	C034B501S6R8D	3/8 x 1/4
8.2	10TCS-V82	C034B501E8R2D	5/16 x 5/32
10	10TCS-Q10	C034B501E100J	5/16 x 5/32
12	10TCS-Q12	C034B501E120J	5/16 x 5/32
15	10TCS-Q15	C034B501E150J	5/16 x 5/32
18	10TCS-Q18	C034B501E180J	5/16 x 5/32
20	10TCS-Q20	C034B501E200J	5/16 x 5/32
22	10TCS-Q22	C034B501F220J	3/8 x 5/32
25	10TCS-Q25	C034B501F250J	3/8 x 5/32
27	10TCS-Q27	C034B501F270J	3/8 x 5/32
30	10TCS-Q30	C034B501F300J	3/8 x 5/32
33	10TCS-Q33	C034B501F330J	3/8 x 5/32
39	10TCS-Q39	C034B501G390J	7/16 x 5/32
47	10TCS-Q47	C034B501G470J	7/16 x 5/32
50	10TCS-Q50	C034B501G500J	7/16 x 5/32
56	10TCS-Q56	C034B501G560J	7/16 x 5/32
68	10TCS-Q68	C034B501H680J	1/2 x 5/32
75	10TCS-Q75	C034B501H750J	1/2 x 5/32
82	10TCS-Q82	C034B501J820J	9/16 x 5/32
100	10TCS-T10	C034B501J101J	9/16 x 5/32
120	10TCS-T12	C034B501K121J	5/8 x 5/32
150	10TCS-T15	C034B501L151J	11/16 x 5/32
180	10TCS-T18	C034A501M181J	3/4 x 5/32
200	10TCS-T20	C034A501M201J	3/4 x 5/32
220	10TCS-T22	C034A501P221J	7/8 x 5/32
270	10TCS-T27	C034A501P271J	7/8 x 5/32
300	10TCS-T30	C034A501P301J	7/8 x 5/32
N470			
3.0	10TCT-V30	C035B501S3R0D	3/8 x 1/4
3.3	10TCT-V33	C035B501S3R3D	3/8 x 1/4
3.9	10TCT-V39	C035B501S3R9D	3/8 x 1/4
4.7	10TCT-V47	C035B501S4R7D	3/8 x 1/4
5.0	10TCT-V50	C035B501S5R0D	3/8 x 1/4
5.6	10TCT-V56	C035B501S5R6D	3/8 x 1/4
6.8	10TCT-V68	C035B501S6R8D	3/8 x 1/4
8.2	10TCT-V82	C035B501S8R2D	3/8 x 1/4
10	10TCT-Q10	C035B501E100J	5/16 x 5/32
12	10TCT-Q12	C035B501E120J	5/16 x 5/32
15	10TCT-Q15	C035B501E150J	5/16 x 5/32
18	10TCT-Q18	C035B501E180J	5/16 x 5/32
20	10TCT-Q20	C035B501E200J	5/16 x 5/32
22	10TCT-Q22	C035B501E220J	5/16 x 5/32
25	10TCT-Q25	C035B501F250J	3/8 x 5/32
27	10TCT-Q27	C035B501F270J	3/8 x 5/32
30	10TCT-Q30	C035B501F300J	3/8 x 5/32
33	10TCT-Q33	C035B501F330J	3/8 x 5/32
39	10TCT-Q39	C035B501F390J	3/8 x 5/32
47	10TCT-Q47	C035B501G470J	7/16 x 5/32
50	10TCT-Q50	C035B501G500J	7/16 x 5/32
56	10TCT-Q56	C035B501G560J	7/16 x 5/32
68	10TCT-Q68	C035B501H680J	1/2 x 5/32
75	10TCT-Q75	C035B501H750J	1/2 x 5/32
82	10TCT-Q82	C035B501H820J	1/2 x 5/32
100	10TCT-T10	C035B501J101J	9/16 x 5/32
120	10TCT-T12	C035B501J121J	9/16 x 5/32
150	10TCT-T15	C035B501K151J	5/8 x 5/32
180	10TCT-T18	C035B501L181J	11/16 x 5/32
200	10TCT-T20	C035B501L201J	11/16 x 5/32
220	10TCT-T22	C035B501M221J	3/4 x 5/32
270	10TCT-T27	C035A501P271J	7/8 x 5/32
300	10TCT-T30	C035A501P301J	7/8 x 5/32
330	10TCT-T33	C035A501P331J	7/8 x 5/32
390	10TCT-T39	C035A501P391J	7/8 x 5/32
N750			
4.7	10TCU-V47	C036B501S4R7D	3/8 x 1/4
5.0	10TCU-V50	C036B501S5R0D	3/8 x 1/4
5.6	10TCU-V56	C036B501S5R6D	3/8 x 1/4
6.8	10TCU-V68	C036B501S6R8D	3/8 x 1/4
8.2	10TCU-V82	C036B501S8R2D	3/8 x 1/4
10	10TCU-Q10	C036B501S100J	3/8 x 1/4
12	10TCU-Q12	C036B501E120J	5/16 x 5/32
15	10TCU-Q15	C036B501E150J	5/16 x 5/32
18	10TCU-Q18	C036B501E180J	5/16 x 5/32
20	10TCU-Q20	C036B501E200J	5/16 x 5/32
22	10TCU-Q22	C036B501E220J	5/16 x 5/32
25	10TCU-Q25	C036B501E250J	5/16 x 5/32
27	10TCU-Q27	C036B501E270J	5/16 x 5/32
30	10TCU-Q30	C036B501E300J	5/16 x 5/32
33	10TCU-Q33	C036B501E330J	5/16 x 5/32
39	10TCU-Q39	CO36B501F390J	3/8 x 5/32
47	10TCU-Q47	C036B501F470J	3/8 x 5/32
50	10TCU-Q50	C036B501F500J	3/8 x 5/32
56	10TCU-Q56	C036B501F560J	3/8 x 5/32
68	10TCU-Q68	C036B501G680J	7/16 x 5/32
75	10TCU-Q75	C036B501G750J	7/16 x 5/32
82	10TCU-Q82	C036B501G820J	7/16 x 5/32
100	10TCU-T10	C036B501H101J	1/2 x 5/32
120	10TCU-T12	C036B501H121J	1/2 x 5/32
150	10TCU-T15	C036B501J151J	9/16 x 5/32
180	10TCU-T18	C036B501K181J	5/8 x 5/32
200	10TCU-T20	C036B501K201J	5/8 x 5/32
220	10TCU-T22	C036B501K221J	5/8 x 5/32
270	10TCU-T27	C036B501L271J	11/16 x 5/32
300	10TCU-T30	C036A501M301J	3/4 x 5/32
330	10TCU-T33	C036A501M331J	3/4 x 5/32
390	10TCU-T39	C036A501P391J	7/8 x 5/32
470	10TCU-T47	C036A501P471J	7/8 x 5/32
N1500			
10	10TCW-Q10	C048B501S100J	3/8 x 1/4
12	10TCW-Q12	C048B501S120J	3/8 x 1/4
15	10TCW-Q15	C048B501S150J	3/8 x 1/4
18	10TCW-Q18	C048B501E180J	5/16 x 5/32
20	10TCW-Q20	C048B501E200J	5/16 x 5/32
22	10TCW-Q22	C048B501E220J	5/16 x 5/32
25	10TCW-Q25	C048B501E250J	5/16 x 5/32
27	10TCW-Q27	C048B501E270J	5/16 x 5/32
30	10TCW-Q30	C048B501E300J	5/16 x 5/32
33	10TCW-Q33	C048B501E330J	5/16 x 5/32
39	10TCW-Q39	C048B501E390J	5/16 x 5/32
47	10TCW-Q47	C048B501F470J	3/8 x 5/32
50	10TCW-Q50	C048B501F500J	3/8 x 5/32
56	10TCW-Q56	C048B501F560J	3/8 x 5/32
68	10TCW-Q68	C048B501F680J	3/8 x 5/32
75	10TCW-Q75	C048B501G750J	7/16 x 5/32
82	10TCW-Q82	C048B501G820J	7/16 x 5/32
100	10TCW-T10	C048B501G101J	7/16 x 5/32
120	10TCW-T12	C048B501G121J	7/16 x 5/32
150	10TCW-T15	C048B501H151J	1/2 x 5/32
180	10TCW-T18	C048B501J181J	9/16 x 5/32
200	10TCW-T20	C048B501J201J	9/16 x 5/32
220	10TCW-T22	C048B501K221J	5/8 x 5/32
270	10TCW-T27	C048B501K271J	5/8 x 5/32
300	10TCW-T30	C048B501L301J	11/16 x 5/32
330	10TCW-T33	C048B501L331J	11/16 x 5/32
390	10TCW-T39	C048A501M391J	3/4 x 5/32
470	10TCW-T47	C048A501P471J	7/8 x 5/32
560	10TCW-T56	C048A501P561J	7/8 x 5/32
N2200			
10	10TCY-Q10	C041B501S100J	3/8 x 1/4
12	10TCY-Q12	C041B501S120J	3/8 x 1/4
15	10TCY-Q15	C041B501S150J	3/8 x 1/4
18	10TCY-Q18	C041B501S180J	3/8 x 1/4
20	10TCY-Q20	C041B501S200J	3/8 x 1/4
22	10TCY-Q22	C041B501E220J	5/16 x 5/32
25	10TCY-Q25	C041B501E250J	5/16 x 5/32
27	10TCY-Q27	C041B501E270J	5/16 x 5/32
30	10TCY-Q30	C041B501E300J	5/16 x 5/32
33	10TCY-Q33	C041B501E330J	5/16 x 5/32
39	10TCY-Q39	C041B501E390J	5/16 x 5/32
47	10TCY-Q47	C041B501E470J	5/16 x 5/32
50	10TCY-Q50	C041B501E500J	5/16 x 5/32
56	10TCY-Q56	C041B501E560J	5/16 x 5/32
68	10TCY-Q68	C041B501E680J	5/16 x 5/32
75	10TCY-Q75	C041B501E750J	5/16 x 5/32
82	10TCY-Q82	C041B501F820J	3/8 x 5/32
100	10TCY-T10	C041B501F101J	3/8 x 5/32
120	10TCY-T12	C041B501F121J	3/8 x 5/32
150	10TCY-T15	C041B501G151J	7/16 x 5/32
180	10TCY-T18	C041B501G181J	7/16 x 5/32
200	10TCY-T20	C041B501G201J	7/16 x 5/32
220	10TCY-T22	C041B501H221J	1/2 x 5/32
270	10TCY-T27	C041B501H271J	1/2 x 5/32
300	10TCY-T30	C041B501J301J	9/16 x 5/32
330	10TCY-T33	C041B501J331J	9/16 x 5/32
390	10TCY-T39	C041B501J391J	9/16 x 5/32
470	10TCY-T47	C041B501K471J	5/8 x 5/32
560	10TCY-T56	C041B501L561J	11/16 x 5/32
680	10TCY-T68	C041A501M681J	3/4 x 5/32
750	10TCY-T75	C041A501M751J	3/4 x 5/32
820	10TCY-T82	C041A501P821J	7/8 x 5/32
1000	10TCY-D10	C041A501P102J	7/8 x 5/32

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS, continued

TEMPERATURE-COMPENSATING AND NP0 TYPES

- Zero Temperature-coefficient Capacitors used Where Capacitance Change with Temperature is Undesirable
- Superior to Silvered-mica Types in Stability, High "Q", and Insulation Resistance
- Units listed below are discs
- Eliminate oscillator drift in TV, FM, VHF and AM receivers
- Negative Temperature Coefficient is 30 ppm/°C for N030 types, 80 ppm/°C for N080 types, 150 ppm/°C for N150 types, 220 ppm/°C for N220 types, 330 ppm/°C for N330 types, 470 ppm/°C for N470 types, 750 ppm/°C for N750 types, 1500 ppm/°C for N1500 types and 2200 ppm/°C for N2200 types.
- Standard Capacitance Tolerance of 12 pF and up; ±5%. On 10 pF and below: ±0.5 pF
- Rated at **500 WVDC**
- For Use in Tuned Circuits
- Temperature-compensating Types Have a Linear Negative Coefficient Curve
- Available in Standard 5% Decade Values in NPO and N030 thru N2200 Coefficients

pF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
NP0			
1.0	10TCC-V10	C030B501S1R0D	3/8 x 1/4
1.2	10TCC-V12	C030B501S1R2D	3/8 x 1/4
1.5	10TCC-V15	C030B501S1R5D	3/8 x 1/4
1.8	10TCC-V18	C030B501S1R8D	3/8 x 1/4
2.2	10TCC-V22	C030B501S2R2D	3/8 x 1/4
2.7	10TCC-V27	C030B501S2R7D	3/8 x 1/4
3.0	10TCC-V30	C030B501S3R0D	3/8 x 1/4
3.3	10TCC-V33	C030B501E3R3D	5/16 x 5/32
3.9	10TCC-V39	C030B501E3R9D	5/16 x 5/32
4.7	10TCC-V47	C030B501E4R7D	5/16 x 5/32
5.0	10TCC-V50	C030B501E5R0D	5/16 x 5/32
5.6	10TCC-V56	C030B501E5R6D	5/16 x 5/32
6.8	10TCC-V68	C030B501E6R8D	5/16 x 5/32
8.2	10TCC-V82	C030B501E8R2D	5/16 x 5/32
10	10TCC-Q10	C030B501E100D	5/16 x 5/32
12	10TCC-Q12	C030B501E120J	5/16 x 5/32
15	10TCC-Q15	C030B501F150J	3/8 x 5/32
18	10TCC-Q18	C030B501F180J	3/8 x 5/32
20	10TCC-Q20	C030B501F200J	3/8 x 5/32
22	10TCC-Q22	C030B501G220J	7/16 x 5/32
25	10TCC-Q25	C030B501G250J	7/16 x 5/32
27	10TCC-Q27	C030B501G270J	7/16 x 5/32
30	10TCC-Q30	C030B501G300J	7/16 x 5/32
33	10TCC-Q33	C030B501G330J	7/16 x 5/32
39	10TCC-Q39	C030B501H390J	1/2 x 5/32
47	10TCC-Q47	C030B501J470J	9/16 x 5/32
50	10TCC-Q50	C030B501J500J	9/16 x 5/32
56	10TCC-Q56	C030B501J560J	9/16 x 5/32
68	10TCC-Q68	C030B501K680J	5/8 x 5/32
75	10TCC-Q75	C030B501K750J	5/8 x 5/32
82	10TCC-Q82	C030B501L820J	11/16 x 5/32
100	10TCC-T10	C030B501L101J	11/16 x 5/32
120	10TCC-T12	C030A501M121J	3/4 x 5/32
150	10TCC-T15	C030A501P151J	7/8 x 5/32
180	10TCC-T18	33C307	3/4 x 7/32
200	10TCC-T20	33C308	3/4 x 7/32
220	10TCC-T22	33C418	3/4 x 7/32
270	10TCC-T27	41C410	13/16 x 7/32
300	10TCC-T30	41C411	13/16 x 7/32
330	10TCC-T33	41C412	15/16 x 7/32
N030			
1.0	10TCM-V10	C025B501S1R0D	3/8 x 1/4
1.2	10TCM-V12	C025B501S1R2D	3/8 x 1/4
1.5	10TCM-V15	C025B501S1R5D	3/8 x 1/4
1.8	10TCM-V18	C025B501S1R8D	3/8 x 1/4
2.2	10TCM-V22	C025B501S2R2D	3/8 x 1/4
2.7	10TCM-V27	C025B501S2R7D	3/8 x 1/4
3.0	10TCM-V30	C025B501S3R0D	3/8 x 1/4
3.3	10TCM-V33	C025B501S3R3D	3/8 x 1/4
3.9	10TCM-V39	C025B501S3R9D	3/8 x 1/4
4.7	10TCM-V47	C025B501E4R7D	5/16 x 5/32
5.0	10TCM-V50	C025B501E5R0D	5/16 x 5/32
5.6	10TCM-V56	C025B501E5R6D	5/16 x 5/32
6.8	10TCM-V68	C025B501E6R8D	5/16 x 5/32
8.2	10TCM-V82	C025B501E8R2D	5/16 x 5/32
10	10TCM-Q10	C025B501E100J	5/16 x 5/32
12	10TCM-Q12	C025B501E120J	5/16 x 5/32
15	10TCM-Q15	C025B501F150J	3/8 x 5/32
18	10TCM-Q18	C025B501F180J	3/8 x 5/32
20	10TCM-Q20	C025B501F200J	3/8 x 5/32
22	10TCM-Q22	C025B501G220J	7/16 x 5/32
25	10TCM-Q25	C025B501G250J	7/16 x 5/32
27	10TCM-Q27	C025B501G270J	7/16 x 5/32
30	10TCM-Q30	C025B501G300J	7/16 x 5/32
33	10TCM-Q33	C025B501G330J	7/16 x 5/32
39	10TCM-Q39	C025B501H390J	1/2 x 5/32
47	10TCM-Q47	C025B501H470J	1/2 x 5/32
50	10TCM-Q50	C025B501J500J	9/16 x 5/32
56	10TCM-Q56	C025B501J560J	9/16 x 5/32
68	10TCM-Q68	C025B501K680J	5/8 x 5/32
75	10TCM-Q75	C025B501K750J	5/8 x 5/32
82	10TCM-Q82	C025B501K820J	5/8 x 5/32
100	10TCM-T10	C025B501L101J	11/16 x 5/32
120	10TCM-T12	C025A501M121J	3/4 x 5/32
150	10TCM-T15	C025A501P151J	7/8 x 5/32
180	10TCM-T18	C025A501P181J	7/8 x 5/32
N080			
2.2	10TCN-V22	C026B501S2R2D	3/8 x 1/4
2.7	10TCN-V27	C026B501S2R7D	3/8 x 1/4
3.0	10TCN-V30	C026B501S3R0D	3/8 x 1/4
3.3	10TCN-V33	C026B501S3R3D	3/8 x 1/4
3.9	10TCN-V39	C026B501S3R9D	3/8 x 1/4
4.7	10TCN-V47	C026B501S4R7D	3/8 x 1/4
5.0	10TCN-V50	C026B501E5R0D	5/16 x 5/32
5.6	10TCN-V56	C026B501E5R6D	5/16 x 5/32
6.8	10TCN-V68	C026B501E6R8D	5/16 x 5/32
8.2	10TCN-V82	C026B501E8R2D	5/16 x 5/32
10	10TCN-Q10	C026B501E100J	5/16 x 5/32
12	10TCN-Q12	C026B501E120J	5/16 x 5/32
15	10TCN-Q15	C026B501F150J	3/8 x 5/32
18	10TCN-Q18	C026B501F180J	3/8 x 5/32
20	10TCN-Q20	C026B501F200J	3/8 x 5/32
22	10TCN-Q22	C026B501F220J	3/8 x 5/32
25	10TCN-Q25	C026B501G250J	7/16 x 5/32
27	10TCN-Q27	C026B501G270J	7/16 x 5/32
30	10TCN-Q30	C026B501G300J	7/16 x 5/32
33	10TCN-Q33	C026B501G330J	7/16 x 5/32
39	10TCN-Q39	C026B501G390J	7/16 x 5/32
47	10TCN-Q47	C026B501H470J	1/2 x 5/32
50	10TCN-Q50	C026B501H500J	1/2 x 5/32
56	10TCN-Q56	C026B501J560J	9/16 x 5/32
68	10TCN-Q68	C026B501J680J	9/16 x 5/32
75	10TCN-Q75	C026B501J750J	9/16 x 5/32
82	10TCN-Q82	C026B501J820J	9/16 x 5/32
100	10TCN-T10	C026B501L101J	11/16 x 5/32
120	10TCN-T12	C026B501L121J	11/16 x 5/32
150	10TCN-T15	C026A501P151J	7/8 x 5/32
180	10TCN-T18	C026A501P181J	7/8 x 5/32
200	10TCN-T20	C026A501P201J	7/8 x 5/32
220	10TCN-T22	C026A501P221J	7/8 x 5/32
N150			
2.2	10TCP-V22	C032B501S2R2D	3/8 x 1/4
2.7	10TCP-V27	C032B501S2R7D	3/8 x 1/4
3.0	10TCP-V30	C032B501S3R0D	3/8 x 1/4
3.3	10TCP-V33	C032B501S3R3D	3/8 x 1/4
3.9	10TCP-V39	C032B501S3R9D	3/8 x 1/4
4.7	10TCP-V47	C032B501S4R7D	3/8 x 1/4
5.0	10TCP-V50	C032B501S5R0D	3/8 x 1/4
5.6	10TCP-V56	C032B501E5R6D	5/16 x 5/32
6.8	10TCP-V68	C032B501E6R8D	5/16 x 5/32
8.2	10TCP-V82	C032B501E8R2D	5/16 x 5/32
10	10TCP-Q10	C032B501E100J	5/16 x 5/32
12	10TCP-Q12	C032B501E120J	5/16 x 5/32
15	10TCP-Q15	C032B501E150J	5/16 x 5/32
18	10TCP-Q18	C032B501F180J	3/8 x 5/32
20	10TCP-Q20	C032B501F200J	3/8 x 5/32
22	10TCP-Q22	C032B501F220J	3/8 x 5/32
25	10TCP-Q25	C032B501F250J	3/8 x 5/32
27	10TCP-Q27	C032B501F270J	3/8 x 5/32
30	10TCP-Q30	C032B501F300J	3/8 x 5/32
33	10TCP-Q33	C032B501G330J	7/16 x 5/32
39	10TCP-Q39	C032B501G390J	7/16 x 5/32
47	10TCP-Q47	C032B501G470J	7/16 x 5/32
50	10TCP-Q50	C032B501H500J	1/2 x 5/32
56	10TCP-Q56	C032B501H560J	1/2 x 5/32
68	10TCP-Q68	C032B501J680J	9/16 x 5/32
75	10TCP-Q75	C032B501J750J	9/16 x 5/32
82	10TCP-Q82	C032B501J820J	9/16 x 5/32
100	10TCP-T10	C032B501K101J	5/8 x 5/32
120	10TCP-T12	C032B501L121J	11/16 x 5/32
150	10TCP-T15	C032A501M151J	3/4 x 5/32
180	10TCP-T18	C032A501P181J	7/8 x 5/32
200	10TCP-T20	C032A501P201J	7/8 x 5/32
220	10TCP-T22	C032A501P221J	7/8 x 5/32
N220			
3.0	10TCR-V30	C033B501S3R0D	3/8 x 1/4
3.3	10TCR-V33	C033B501S3R3D	3/8 x 1/4
3.9	10TCR-V39	C033B501S3R9D	3/8 x 1/4
4.7	10TCR-V47	C033B501S4R7D	3/8 x 1/4

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

HYPERCON® CERAMIC DISCS



- Superior to Electrolytic Capacitors of Similar Capacitance Values because of the Very Low Power Factor of Hypercons
- Ultra-miniature Ceramic Discs Ideal for use in Transistorized Circuitry
- Designed for By-pass and Coupling Applications but Particularly Well-suited for any Low Voltage use Where High Capacitance and Low Power Factor are Important Considerations
- Tolerance: +80—20%

µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	D. x T.
3 VOLTS D-C			
.1	HY-120*	C052B3R0C104Z	1/4 x 5/32
.22	HY-125*	C052B3R0E224Z	5/16 x 5/32
2.2	HY-150*	C052A3R0P225Z	7/8 x 5/32
12 VOLTS D-C			
.022	HY-340	C080B120C223Y	1/4 x 5/32
.033	HY-345	C080B120E333Y	5/16 x 5/32
.047	HY-350	C080B120F473Y	3/8 x 5/32
.068	HY-355	C080B120F683Y	3/8 x 5/32
.1	HY-360	C080B120H104Y	1/2 x 5/32
.15	HY-365	C080B120J154Y	9/16 x 5/32
.22	HY-370	C080B120K224Y	5/8 x 5/32
.33	HY-375	C080A120M334Y	3/4 x 5/32
.47	HY-380	C080A120P474Y	7/8 x 5/32

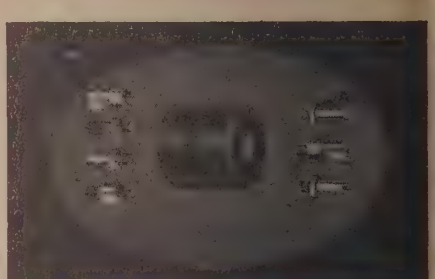
CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

µF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	D. x T.
16 VOLTS D-C			
.01	HY-420	C069B160E103Z	5/16 x 5/32
.033	HY-430	C069B160G333Z	7/16 x 5/32
.022	HY-425	C069B160F223Z	3/8 x 5/32
.047	HY-435	C069B160H473Z	1/2 x 5/32
.068	HY-440	C069B160K683Z	5/8 x 5/32
.1	HY-450	C069B160L104Z	11/16 x 5/32
.2	HY-470	C069A160P204Z	7/8 x 5/32
25 VOLTS D-C			
.0047	HY-510	C069B250C472Z	1/4 x 5/32
.01	HY-520	C069B250F103Z	3/8 x 5/32
.022	HY-525	C069B250G223Z	7/16 x 5/32
.033	HY-530	C069B250H333Z	1/2 x 5/32
.047	HY-535	C069B250J473Z	9/16 x 5/32
.068	HY-540	C069B250L683Z	11/16 x 5/32
.1	HY-550	C069A250M104Z	3/4 x 5/32

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

HIGH-VOLTAGE DOORKNOB CERAMICS

- For Bypass, Arc Suppression and Other High-Voltage Applications
- 20DK-T5 Comes Complete with 7 Terminals, as illustrated. (Packaged 2 per Plastic Box, with 14 terminals
- 30DK-T5 is Supplied with 2 Terminals, as per Style Marked "A"
- Capacitor Body has Female Threads for interchangeable Screw-in Terminals



pF	KV	Diam. x Length	Sprague Products Cat. No.	Sprague O.E.M. Part No.
500	20	1.000 x 1.122	20DK-T5	708C50
500	30	1.312 x 1.312	30DK-T5	709C2

Call Your Sprague Distributor for Current Prices

- Cast in Non-Flammable, Moisture-resistant, Epoxy Resin

SPARK GAPS

- A Spark Gap Consists of a Wire Loop Encased in Phenolic Resin. After the Loop Has Been Encased a Precise Slot is Cut Through The Wire Loop and Its Protective Case to Form a Spark Gap
- Suppress Transient Voltage Surges That Damage Costly Electronic Equipment
- Protect TV Circuits From Damage Caused By the Momentary Arcing or Shorting of Elements Within Expensive Set Components
- Mechanically Sturdy and Electrically Reliable
- Each Unit is Accurately Checked for Voltage Breakdown as Part of the Manufacturing Process
- See Latest Issue of Engineering Bulletin 6145



Capacitance	Arc-over Voltage	Catalog Number
0.75pF	1.5kV ±0.5kV	302C100A2
0.75pF	2.5kV ±0.5kV	302C100A3

TV YOKE CAPACITORS

- High Quality Factor
- High Corona Start Voltage
- Does Not Cause Interference or Failure Due to Arcing
- Standard Tolerance ±10%

pF	Sprague Products Catalog Number	Sprague O.E.M. Part Number	Size D. x T.
30TCY 3000 WVDC			
50	30TCY-Q50	29C483	3/4 x 9/32
75	30TCY-Q75	44C113	3/4 x 9/32
100	30TCY-T10	33C269	13/16 x 9/32
130	30TCY-T13	36C368	7/8 x 9/32
150	30TCY-T15	41C340	1 x 5/16
180	30TCY-T18	41C341	1 x 5/16
50TCY 5000 WVDC			
50	50TCY-Q50	44C115	3/4 x 9/32
75	50TCY-Q75	33C270	13/16 x 9/32
100	50TCY-T10	41C344	1 x 5/16
130	50TCY-T13	41C345	1 x 5/16
60TCY 6000 WVDC			
130	60TCY-T13	41C281A4	1 x 5/16

*Available until present stocks are exhausted.

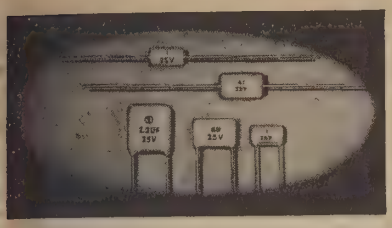
IND-REM-48A-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

2C, 3C, 4C, and 5C MONOLYTHIC® CERAMIC CAPACITORS



- Proven Reliable in Wide Usage Over Many Years of Exacting Service.
- Available in a Variety of Body Formulations, Capacitance Values, and Sizes.
- Made By Spraying Alternate Layers of Ceramic Dielectric Material and Metallic Electrodes, then Firing Into a Single, All But Indestructible Homogeneous Block.
- Protected Against Mechanical Damage and Moisture by a Tough Resin Coating.
- For Complete Technical Data, See Latest Issue of Engineering Bulletin 6201 For Axial-lead Capacitors, and 6204 for Radial-lead units.

Call Your Sprague Industrial Distributor For Current Quantity Prices

TEMPERATURE CHARACTERISTICS

Formulation	Temp. Range	Max. Change over Temp. Range
N030	−55C to +125C	−30 ±30 ppm/°C
N750	−55C to +125C +25C to + 85C	meets MIL-C-20 Char. UJ −750 ±120 ppm/°C
W5R	−55C to +125C	±15%
Z5U	+10C to + 85C	+22, −56%

DIMENSIONS (in inches)

Type Number*	Length	Width	Thickness†
2C	.300	.300	—
3C	.390	.202	.156
4C	.515	.296	.156
5C	.500	.500	.156

*1st and 2nd characters of catalog number signify Type number
†Axial-lead units only. Thickness of radial-lead units is .125, .156, or .238, depending on capacitance value.

AXIAL-LEAD MONOLYTHIC® CAPACITORS

pF	WVDC	Catalog Number ±20% Cap. Tol.	Catalog Number ±10% Cap. Tol.
FORMULATION N030			
51	200	3C025510X0201B1	3C025510X9201B1
56	200	3C025560X0201B1	3C025560X9201B1
62	200	3C025620X0201B1	3C025620X9201B1
68	200	3C025680X0201B1	3C025680X9201B1
75	200	3C025750X0201B1	3C025750X9201B1
82	200	3C025820X0201B1	3C025820X9201B1
91	200	3C025910X0201B1	3C025910X9201B1
100	200	3C025101X0201B1	3C025101X9201B1
110	200	3C025111X0201B1	3C025111X9201B1
120	200	3C025121X0201B1	3C025121X9201B1
130	200	3C025131X0201B1	3C025131X9201B1
150	200	3C025151X0201B1	3C025151X9201B1
160	200	3C025161X0201B1	3C025161X9201B1
180	200	3C025181X0201B1	3C025181X9201B1
200	200	3C025201X0201B1	3C025201X9201B1
220	200	3C025221X0201B1	3C025221X9201B1
240	200	3C025241X0201B1	3C025241X9201B1
270	200	3C025271X0201B1	3C025271X9201B1
300	200	3C025301X0201B1	3C025301X9201B1
330	200	3C025331X0201B1	3C025331X9201B1
360	200	3C025361X0201B1	3C025361X9201B1
390	200	3C025391X0201B1	3C025391X9201B1
430	200	3C025431X0201B1	3C025431X9201B1
470	200	3C025471X0201B1	3C025471X9201B1
510	200	3C025511X0201B1	3C025511X9201B1
560	200	3C025561X0201B1	3C025561X9201B1
620	200	3C025621X0201B1	3C025621X9201B1
680	200	3C025681X0201B1	3C025681X9201B1
750	200	3C025751X0201B1	3C025751X9201B1
FORMULATION N750			
820	200	3C075821X0201B1	3C075821X9201B1
910	200	3C075911X0201B1	3C075911X9201B1
1000	200	3C075102X0201B1	3C075102X9201B1
1100	200	3C075112X0201B1	3C075112X9201B1
1200	200	3C075122X0201B1	3C075122X9201B1
1300	200	3C075132X0201B1	3C075132X9201B1
1500	200	3C075152X0201B1	3C075152X9201B1
1600	200	3C075162X0201B1	3C075162X9201B1
1800	200	3C075182X0201B1	3C075182X9201B1
2000	200	3C075202X0201B1	3C075202X9201B1
2200	200	3C075222X0201B1	3C075222X9201B1
2400	200	3C075242X0201B1	3C075242X9201B1
2700	200	3C075272X0201B1	3C075272X9201B1
3000	200	3C075302X0201B1	3C075302X9201B1
3300	200	3C075332X0201B1	3C075332X9201B1
FORMULATION W5R			
3900	100	3C067392X0101B1	3C067392X9101B1
4700	100	3C067472X0101B1	3C067472X9101B1
5600	100	3C067562X0101B1	3C067562X9101B1
6800	100	3C067682X0101B1	3C067682X9101B1
8200	100	3C067822X0101B1	3C067822X9101B1
.010μF	100	3C067103X0101B1	3C067103X9101B1
.012	100	3C067123X0101B1	3C067123X9101B1

μF	WVDC	Catalog Number ±20% Cap. Tol.	Catalog Number +80, −20% Cap. Tol.
FORMULATION Z5U			
.015	50	3C023153X0500B1	3C023153D8500B1
.022	50	3C023223X0500B1	3C023223D8500B1
.033	50	3C023333X0500B1	3C023333D8500B1
.047	50	3C023473X0500B1	3C023473D8500B1
.068	50	3C023683X0500B1	3C023683D8500B1
.10	50	3C023104X0500B1	3C023104D8500B1
.15	50	3C023154X0500B1	3C023154D8500B1
.22	50	3C023224X0500B1	3C023224D8500B1
.33	50	4C023334X0500B1	4C023334D8500B1
.47	50	4C023474X0500B1	4C023474D8500B1
.68	50	4C023684X0500B1	4C023684D8500B1
1.0	50	5C023105X0500B1	5C023105D8500B1
1.5	50	5C023155X0500B1	5C023155D8500B1

RADIAL-LEAD MONOLYTHIC CAPACITORS (Formulation Z5U)

μF	Catalog Number +80,−20% Tol.	Catalog Number ±20% Tol.
TYPE 2C—25 WVDC		
.01	2C023103D8250A3	2C023103X0250A3
.015	2C023153D8250A3	2C023153X0250A3
.022	2C023223D8250A3	2C023223X0250A3
.033	2C023333D8250A3	2C023333X0250A3
.047	2C023473D8250A3	2C023473X0250A3
.068	2C023683D8250A3	2C023683X0250A3
.1	2C023104D8250A3	2C023104X0250A3
.15	2C023154D8250A3	2C023154X0250A3
.22	2C023224D8250A3	2C023224X0250A3
.33	2C023334D8250A3	2C023334X0250A3
.47	2C023474D8250A3	2C023474X0250A3
TYPE 3C—25 WVDC		
.01	3C023103D8250A3	3C023103X0250A3
.015	3C023153D8250A3	3C023153X0250A3
.022	3C023223D8250A3	3C023223X0250A3
.033	3C023333D8250A3	3C023333X0250A3
.047	3C023473D8250A3	3C023473X0250A3

Copyright 1970, Sprague Products Company

IND-REM-47-7002

Sizes subject to change without notice.

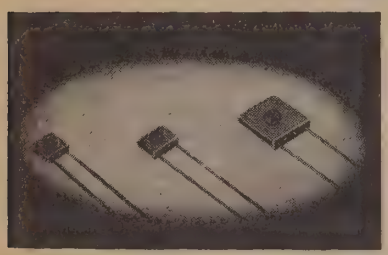
© United Technical Publications

SPRAGUE CAPACITORS

RADIAL-LEAD MONOLYTHIC CAPACITORS, continued

µF	Catalog Number +80,—20% Tol.	Catalog Number ±20% Tol.
.068	3C023683D8250A3	3C023683X0250A3
.1	3C023104D8250A3	3C023104X0250A3
.15	3C023154D8250A3	3C023154X0250A3
.22	3C023224D8250A3	3C023224X0250A3
.33	3C023334D8250A3	3C023334X0250A3
.47	3C023474D8250A3	3C023474X0250A3
TYPE 4C—25 WVDC		
.15	4C023154D8250A3	4C023154X0250A3
.22	4C023224D8250A3	4C023224X0250A3
.33	4C023334D8250A3	4C023334X0250A3
.47	4C023474D8250A3	4C023474X0250A3
.68	4C023684D8250A3	4C023684X0250A3
1.0	4C023105D8250A3	4C023105X0250A3
1.5	4C023155D8250A3	4C023155X0250A3
TYPE 5C—25 WVDC		
.1	5C023104D8250B3	5C023104X0250B3
.15	5C023154D8250B3	5C023154X0250B3
.22	5C023224D8250B3	5C023224X0250B3
.33	5C023334D8250B3	5C023334X0250B3
.47	5C023474D8250B3	5C023474X0250B3
.68	5C023684D8250B3	5C023684X0250B3
1.0	5C023105D8250B3	5C023105X0250B3
1.5	5C023155D8250B3	5C023155X0250B3
2.2	5C023225D8250B3	5C023225X0250B3
3.3	5C023335D8250B3	5C023335X0250B3
TYPE 5C—50 WVDC		
.1	5C023104D8500B3	5C023104X0500B3
.15	5C023154D8500B3	5C023154X0500B3
.22	5C023224D8500B3	5C023224X0500B3
.33	5C023334D8500B3	5C023334X0500B3
.47	5C023474D8500B3	5C023474X0500B3
.68	5C023684D8500B3	5C023684X0500B3
1.0	5C023105D8500B3	5C023105X0500B3
1.5	5C023155D8500B3	5C023155X0500B3

TYPE 7C MONOLYTHIC® CERAMIC CAPACITORS



- Radial Lead Style Especially Designed For Printed Wiring Board Mounting.
- New Phenolic Terminal Base With Stand-Off "Feet" Provides these Advantages: No Resin Run-Down on Leads; Uniform Lead Spacing; No Dirt and Moisture Entrapment; Degreasing Fluid Flows Freely Between Capacitors and Board.
- Made by Spraying Alternate Layers of Ceramic Dielectric Material and Metallic Electrodes, Firing into a Solid Homogeneous block, then Coating with a Tough Phenolic Resin.
- All Capacitors Listed Below Rated at 50 WVDC.
- For Complete Technical Data, See Latest Issue of Engineering Bulletin 6202.

Call Your Sprague Industrial Distributor For Current Quantity Prices

TEMPERATURE CHARACTERISTICS

Formulation	Temp. Range	Max. Change over Temp. Range
NP0	—55C to +125C	NP0 ±60ppm/°C
N750	—55C to +125C	meets MIL-C-20 Char. UJ
	+25C to + 85C	—750ppm/°C, ±120ppm/°C
W5R	—55C to +125C	±15%
Z5U	+10C to + 85C	+22, —56%

DIMENSIONS (in inches)
(Last letter of catalog number signifies the case code)

Case Code	Length	Width	Thickness
D	.390	.275	.160
E	.535	.550	.160
F	.535	.550	.260

pF	Catalog Number ±20% Cap. Tol.	Catalog Number ±10% Cap. Tol.
FORMULATION NP0		
51	7C082510X0500D	7C082510X9500D
56	7C082560X0500D	7C082560X9500D
62	7C082620X0500D	7C082620X9500D
68	7C082680X0500D	7C082680X9500D
75	7C082750X0500D	7C082750X9500D
82	7C082820X0500D	7C082820X9500D
91	7C082910X0500D	7C082910X9500D
100	7C082101X0500D	7C082101X9500D
110	7C082111X0500D	7C082111X9500D
120	7C082121X0500D	7C082121X9500D
130	7C082131X0500D	7C082131X9500D
150	7C082151X0500D	7C082151X9500D
160	7C082161X0500D	7C082161X9500D
180	7C082181X0500D	7C082181X9500D
200	7C082201X0500D	7C082201X9500D
220	7C082221X0500D	7C082221X9500D
240	7C082241X0500D	7C082241X9500D
270	7C082271X0500D	7C082271X9500D
300	7C082301X0500D	7C082301X9500D
330	7C082331X0500D	7C082331X9500D
360	7C082361X0500D	7C082361X9500D
390	7C082391X0500D	7C082391X9500D
430	7C082431X0500D	7C082431X9500D
470	7C082471X0500D	7C082471X9500D
510	7C082511X0500D	7C082511X9500D
FORMULATION N750		
560	7C075561X0500D	7C075561X9500D
620	7C075621X0500D	7C075621X9500D
680	7C075681X0500D	7C075681X9500D
750	7C075751X0500D	7C075751X9500D
820	7C075821X0500D	7C075821X9500D
910	7C075911X0500D	7C075911X9500D
1000	7C075102X0500D	7C075102X9500D

pF	Catalog Number ±20% Cap. Tol.	Catalog Number ±10% Cap. Tol.
FORMULATION W5R		
1200	7C067122X0500D	7C067122X9500D
1500	7C067152X0500D	7C067152X9500D
1800	7C067182X0500D	7C067182X9500D
2200	7C067222X0500D	7C067222X9500D
2700	7C067272X0500D	7C067272X9500D
3300	7C067332X0500D	7C067332X9500D
3900	7C067392X0500D	7C067392X9500D
4700	7C067472X0500D	7C067472X9500D
5600	7C067562X0500D	7C067562X9500D
6800	7C067682X0500D	7C067682X9500D
8200	7C067822X0500D	7C067822X9500D

µF	Catalog Number ±20% Cap. Tol.	Catalog Number +80, —20% Cap. Tol.
FORMULATION Z5U		
.010	7C023103X0500D	7C023103D8500D
.015	7C023153X0500D	7C023153D8500D
.022	7C023223X0500D	7C023223D8500D
.033	7C023333X0500D	7C023333D8500D
.047	7C023473X0500D	7C023473D8500D
.068	7C023683X0500D	7C023683D8500D
.10	7C023104X0500D	7C023104D8500D
.15	7C023154X0500D	7C023154D8500D
.22	7C023224X0500D	7C023224D8500D
.33	7C023334X0500E	7C023334D8500E
.47	7C023474X0500E	7C023474D8500E
.68	7C023684X0500E	7C023684D8500E
1.0	7C023105X0500E	7C023105D8500E
1.5	7C023155X0500E	7C023155D8500E
2.2	7C023225X0500F	7C023225D8500F

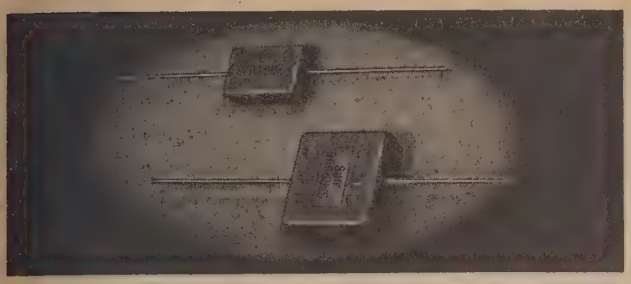
Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE MS and 1FM MICA CAPACITORS



- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micas are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Molding
- Available Until Present Stocks Are Exhausted

TYPE MS — SILVERED MICA
(Standard Capacitance Tolerance ±5%)

µF	Cat. No.*
500 WVDC, 1000 V Test	
.000005	MS-55
.000010	MS-41
.000012	MS-412
.000015	MS-415
.000018	MS-418
.000020	MS-42
.000022	MS-422
.000024	MS-424
.000025	MS-425
.000027	MS-427
.000030	MS-43
.000033	MS-433
.000036	MS-436
.000039	MS-439
.000040	MS-44
.000043	MS-443
.000047	MS-447
.000050	MS-45
.000051	MS-451
.000056	MS-456
.000060	MS-46
.000062	MS-462
.000068	MS-468
.000070	MS-47
.000075	MS-475
.000082	MS-482
.000091	MS-491
.000100	MS-31
.000110	MS-311
.000120	MS-312
.000130	MS-313
.000150	MS-315
.000160	MS-316
.000180	MS-318
.000200	MS-32
.000220	MS-322
.000240	MS-324
.000250	MS-325
.000270	MS-327
.000300	MS-33
.000330	MS-333
.000360	MS-336
.000390	MS-339
.000400	MS-34
.000430	MS-343
.000470	MS-347
.000500	MS-35
.000510	MS-351
.000560	MS-356
.000600	MS-36
.000620	MS-362
.000680	MS-368
.000700	MS-37
.000750	MS-375
.000800	MS-38
.000820	MS-382
.000900	MS-39
.000910	MS-391
.001000	MS-21
.001100	MS-211
.001200	MS-212
.001300	MS-213
.001500	MS-215
.001600	MS-216
.001800	MS-218
.002000	MS-22
.002200	MS-222
.002400	MS-224
.002500	MS-225
.002700	MS-227
.003000	MS-23
.003300	MS-233
.003600	MS-236
.003900	MS-239
.004000	MS-24
.004300	MS-243
.004700	MS-247
.005000	MS-25
.005100	MS-251
.005600	MS-256
.006000	MS-26
.006200	MS-262
300 WVDC, 600 V Test	
.006800	MS-268
.007000	MS-27
.007500	MS-275
.008000	MS-28
.008200	MS-282
.009000	MS-29
.009100	MS-291
.010000	MS-11

Call Your Sprague Distributor For Current Prices

*Available until present stocks are exhausted.

TYPE 1FM
(Standard Capacitance Tolerance ±20%)

µF	Cat. No.*
500 WVDC, 1000 V Test	
.000010	1FM-41
.000012	1FM-412
.000015	1FM-415
.000018	1FM-418
.000020	1FM-42
.000022	1FM-422
.000024	1FM-424
.000027	1FM-427
.000030	1FM-43
.000033	1FM-433
.000036	1FM-436
.000039	1FM-439
.000040	1FM-44
.000043	1FM-443
.000047	1FM-447
.000050	1FM-45
.000051	1FM-451
.000056	1FM-456
.000062	1FM-462
.000068	1FM-468
.000075	1FM-475
.000082	1FM-482
.000091	1FM-491
.000100	1FM-31
.000110	1FM-311
.000120	1FM-312
.000130	1FM-313
.000150	1FM-315
.000160	1FM-316
.000180	1FM-318
.000200	1FM-32
.000220	1FM-322
.000240	1FM-324
.000250	1FM-325
.000270	1FM-327
.000300	1FM-33
.000330	1FM-333
.000350	1FM-335
.000360	1FM-336
.000390	1FM-339
.000400	1FM-34
.000430	1FM-343
.000470	1FM-347
.000500	1FM-35
.000510	1FM-351
.000560	1FM-356
.000620	1FM-362
.000680	1FM-368
.000700	1FM-37
.000750	1FM-375
.000820	1FM-382
.000910	1FM-391
.001000	1FM-21
.001100	1FM-211
.001200	1FM-212
.001300	1FM-213
.001500	1FM-215
.001600	1FM-216
.001800	1FM-218
.002000	1FM-22
.002200	1FM-222
.002400	1FM-224
.002500	1FM-225
.002700	1FM-227
.003000	1FM-23
.003300	1FM-233
.003600	1FM-236
.003900	1FM-239
.004000	1FM-24
.004300	1FM-243
.004700	1FM-247
.005000	1FM-25
.005100	1FM-251
.005600	1FM-256
.006000	1FM-26
.006200	1FM-262
300 WVDC, 600 V Test	
.006800	1FM-268
.007000	1FM-27
.007500	1FM-275
.008000	1FM-28
.008200	1FM-282
.009000	1FM-29
.009100	1FM-291
.010000	1FM-11

Call Your Sprague Distributor For Current Prices

*Available until present stocks are exhausted.

MS and 1FM Dimensions

Catalog Numbers	L x W x T
MS-55 thru MS-35	61/64 x 15/32 x 7/32
MS-351 thru MS-222	53/64 x 53/64 x 9/32
MS-224	53/64 x 53/64 x 11/32
MS-225 thru MS-227	53/64 x 53/64 x 9/32
MS-23	53/64 x 53/64 x 11/32
MS-233	53/64 x 53/64 x 9/32
MS-236 thru MS-282	53/64 x 53/64 x 11/32
MS-29 thru MS-11	1 x 5/8 x 5/16
1FM-41 thru 1FM-462	51/64 x 15/32 x 7/32
1FM-468 thru 1FM-475	53/64 x 53/64 x 9/32
1FM-482 thru 1FM-356	61/64 x 15/32 x 7/32
1FM-362 thru 1FM-233	53/64 x 53/64 x 9/32
1FM-236 thru 1FM-282	53/64 x 53/64 x 11/32
1FM-29 thru 1FM-11	1 x 5/8 x 5/16

Copyright 1970 Sprague Products Company

IND-REM-54-7002

All sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

TYPE 424M DIPPED MICA CAPACITORS



- Expressly Made For Applications Requiring Optimum Capacitance Stability and Retrace Characteristics.
- Designed For Continuous Operation at Temperatures Up to +85C.
- Not Affected by High Relative Humidity.
- Critically-Tested Mica Dielectric With "Fired-On" Silver electrodes.
- Special Electrode Terminations to Minimize Capacitance Drift and Internal Noise.
- Resin-Impregnated Multiple Phenolic Coating for High Moisture Resistance and Mechanical Strength.
- Capacitance Tolerance, ±5%.
- For Complete Technical Data, See Latest Issue of Engineering Bulletin 1015.

Call Your Sprague Industrial Distributor
For Current Quantity Prices

pF	Dimensions Length	Width	Thickness	Catalog Number
500 WVDC				
47	.640	.500	.190	424MC47ROJ501
51	.640	.500	.190	424MC51ROJ501
56	.640	.500	.190	424MC56ROJ501
62	.640	.500	.190	424MC62ROJ501
68	.640	.500	.190	424MC68ROJ501
75	.640	.500	.190	424MC75ROJ501
82	.640	.500	.190	424MC82ROJ501
91	.640	.500	.190	424MC91ROJ501
100	.640	.500	.190	424MC1000J501
110	.640	.500	.190	424MC1100J501
120	.640	.500	.190	424MC1200J501
130	.640	.500	.190	424MC1300J501
150	.640	.500	.190	424MC1500J501
160	.640	.500	.190	424MC1600J501
180	.640	.500	.190	424ME1800J501
200	.640	.500	.190	424ME2000J501
220	.640	.500	.190	424ME2200J501
240	.640	.500	.190	424ME2400J501
270	.640	.500	.190	424ME2700J501
300	.640	.500	.190	424ME3000J501
330	.640	.500	.190	424ME3300J501
360	.640	.510	.200	424ME3600J501
390	.640	.510	.200	424ME3900J501
430	.640	.510	.200	424ME4300J501
470	.640	.510	.200	424ME4700J501
510	.650	.510	.200	424ME5100J501
560	.650	.510	.200	424ME5600J501
620	.650	.510	.200	424ME6200J501

pF	Dimensions Length	Width	Thickness	Catalog Number
500 WVDC, Continued				
680	.650	.510	.210	424ME6800J501
750	.650	.510	.210	424ME7500J501
820	.650	.510	.210	424ME8200J501
910	.650	.510	.210	424ME9100J501
1000	.650	.520	.220	424ME1001J501
1100	.650	.520	.220	424ME1101J501
1200	.660	.520	.220	424ME1201J501
1300	.660	.520	.220	424ME1301J501
1500	.660	.520	.230	424ME1501J501
1600	.660	.530	.230	424ME1601J501
1800	.670	.530	.240	424ME1801J501
2000	.670	.530	.240	424ME2001J501
2200	.670	.530	.250	424ME2201J501
2400	.670	.540	.260	424ME2401J501
2700	.680	.540	.270	424ME2701J501
3000	.680	.550	.280	424ME3001J501
3300	.680	.550	.290	424ME3301J501
3600	.680	.560	.300	424ME3601J501
3900	.690	.560	.310	424ME3901J501
4300	.690	.570	.330	424ME4301J501
4700	.700	.580	.350	424ME4701J501
5100	.710	.590	.370	424ME5101J501
300 WVDC				
5600	.680	.550	.310	424ME5601J301
6200	.690	.560	.320	424ME6201J301
6800	.690	.570	.330	424ME6801J301

Copyright 1970 Sprague Products Company

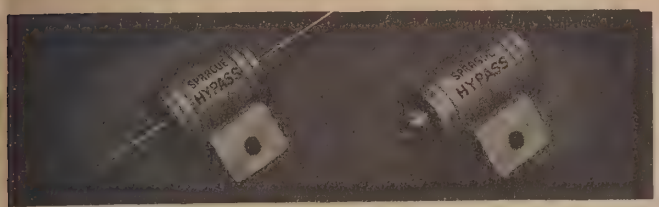
IND-REM-55-7002

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE CAPACITORS

HYPASS® CAPACITORS



- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

µF	Amps.	WVDC	Dia. x Length	Cat. No.
.5	40	50	1 x 1 13/16	*48P18
.5	60	50	1 x 1 13/16	48P100
.25	20	200	3/4 x 1 13/16	*48P10
.5	20	200	1 x 1 13/16	*48P14
.1	20	250(VAC)	1 1/16 x 1 13/16	*48P9
.1	20	400	1 1/16 x 1 13/16	*48P6
.1	20	400	1 1/16 x 1 13/16	†80P1
.002	15	600	1/4 x 1 3/8	46P12
.005	15	600	1/4 x 1 5/8	46P8
.01	20	600	7/16 x 1 1/4	47P6
.02	20	600	7/16 x 1 1/2	47P8
.1	20	600	1 1/16 x 1 13/16	*48P8
.1	20	600	1 1/16 x 1 13/16	*†80P3
.25	20	600	1 x 1 13/16	*48P12
.5	20	600	1 x 2 1/4	*48P16
.005	20	1000	7/16 x 1 1/4	47P12
.01	20	1000	7/16 x 1 1/2	47P13
.005	20	2500	1 x 1 5/16	47P14
.01	20	2500	1 x 1 5/16	47P15
.002	20	5000	1 x 1 5/16	47P16

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES

*Has female screw terminals †Bulkhead mounting.

TYPE F-400 MIRACLE FILTEROL®





A LINE FILTER THAT REALLY WORKS

- Effectively Suppresses Radio Interference by Filtering Power Lines of Receivers and Appliances
- Maximum Noise Eliminating Efficiency because of Practically Zero Length of Ground Lead
- Plugs into Standard Duplex Wall Outlet — Captive Screw Fastens Filterol F-400 to Outlet for Safe, Secure Mounting
- Direct Wall-Mounting Provides Neat Installation — No Unsightly Cord — Receiver or Appliance Plugs into Standard Outlet on Face of F-400
- Will Also Operate at Slightly Reduced Efficiency in Older Homes where Wiring is of Knob and Tube or 2-Conductor Non-Metallic Sheathed Cable Type by Using the External Grounding Post Provided for this Purpose
- Handsomely Finished in Tan Hammerloid Baked Enamel
- Rated at 5 Amperes, 125 Volts AC or DC

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES

TYPE IF FILTERS



IF-15 IF-11 IF-21 IF-S1 IF-37

IF-15 — TRIPLE-SECTION FILTER for small motor-operated devices such as fans, drills, etc. designed to prevent shocks from discharge of filter capacitors.

IF-11 — DUAL HIGH-CAPACITY FILTER designed for use on motors over 1 hp up to 220 volts ac-dc. Also used on high-current arcing devices.

IF-21 — COMPACT DUAL FILTER for use on fractional horsepower motors with case grounded to motor frame. Also used across line terminals of motors.

IF-S1 — SINGLE SECTION 2-LEAD FILTER for use across make-and-break contacts, such as thermostats, circuit breakers, etc.

IF-37 — 3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Also used on governor-type motors.

Underwriters' Laboratories, Inc. listed.

Cat. No.	Volts AC or DC	Dia. x Length
IF-15	220	1 x 2 3/16
IF-11	220	1 3/8 x 5 1/4
IF-21	220	1 x 2 3/16
IF-S1	220	3/4 x 2 1/16
IF-37	220	1 x 2"

FILTEROL® FILTERS



FILTEROL 1 FILTEROL 2 FILTEROL 3 FILTEROL 4

Filterol Types 1, 2, and 3 — Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4 — A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size
Filterol 1	1	115	7/8 x 1 1/4 x 1 3/4
Filterol 2	10	115	1 1/8 x 2 x 2
Filterol 3	35	115	1 7/8 x 2 7/8 x 3 1/8
Filterol 4	20	115	1" dia. x 1 13/16" long

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES

Copyright 1970 Sprague Products Company

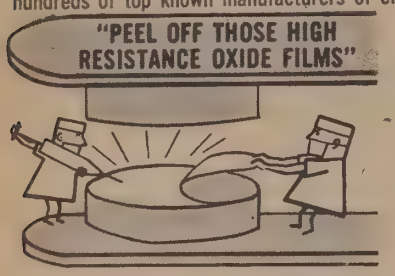
Sizes subject to change without notice.
© United Technical Publications

CAIG LABORATORIES INC.

CRAMOLIN-ELECTRONIC CONTACT CLEANER

"THE LESS YOU USE—THE BETTER IT WORKS!"

The amazing contact cleaner with a world wide reputation for excellence in performance. Used by the professionals who want only the best — Army, Air Force, Navy, Bureau of Standards and hundreds of top known manufacturers of electronic apparatus.



FEATURES:

- CLEANER
- LUBRICANT
- PRESERVATIVE
- ANTI-CORROSIVE

THE *BREAK-THRU* FOR

HIGHER PERFORMANCE ELECTRIC CONTACTS

Reduces contact resistance and sparking by dissolving oxide film formations. Temp. operating range —34°C. to 150°C. Effective on all metals and their alloys including gold, silver, copper, etc. Stays on moving contacts. Free of acids. Safe to use. Lasts for years.

Write for Tech Facts Bulletin C-200.

CRAMOLIN: Fluid for protection & cleaning of old & new contacts.
CRAMOLIN-SPECIAL: Fluid for protection of new contacts.
CRAMOLIN-PASTE: Semi-solid for protection & cleaning High Voltage/Amperage contacts.

PRICES

DESCRIPTION	CRAMOLIN (Red Color)	CRAMOLIN-SPECIAL (Blue Color)	CRAMOLIN-PASTE	*CAEON SOLVENT #27
2 oz. Glass Bottle	$2.25	$2.55		
4 oz. Glass Bottle				$1.60
½ pint Glass Bottle	7.45	8.25		2.85
1 pint, Glass Bottle	14.50	16.00		4.00
1 quart, Glass Bottle	28.00	31.00		6.00
¼ Kg Can (½ lb)			$2.90	
Engineers Kit	7.50	(Contains: CRAMOLIN, CR-Special & Paste.) With Tech Facts.		

"CRAMOLIN-SPRAY R"

FREE — 6" EXTENSION SPRAY TUBE



Contact Cleaner — Now — for those who prefer the spray can method of application. CRAMOLIN SPRAY R has same properties as CRAMOLIN FLUID. Packaged in neat spray can with automatic valve. Equipped with a whirl spray head, which will apply CRAMOLIN — breath thin — to most remote areas. The Hygrade propellant and speedy evaporating solvent leaves only a microfilm of actual CRAMOLIN on contact area.

$3.25 6 oz. can

"CRAMOLIN-SPRAY MR"



Moisture Repellent — Silicone — Protect — Restore — Clean — Lubricate — For all electric and electronic equipment • Effective as a general cleaner, hydro-repellent, dielectric sealer and lubricant • Has excellent adherence. Safe to use on metals, rubber and synthetic materials • Reduces arcing, stops sparking and creeping currents in high voltage parts, switchboards, control panels, isolators, tube sockets, etc. • Temperature consistency between —50°C to +200°C • Can be used on all electronic equipment which is constantly used in high humidity and water, dust and gas fumes • Prevents corrosion, will not evaporate, will not gum, improves lubricating and sliding properties. Contains silicone.

Write for Bulletin C-400

Sold in bulk. Ask for prices **$3.00** 16 oz. can

"CRAMOLIN-SPRAY PLASTIK"



Acrylic Plastic Permanent Coating for Printed Circuits — An air drying, colorless special plastic spray coating for electronic circuits, T.V., Radio, Aerial construction, automotive and many electric applications • It seals, protects, insulates and coats • Is age and weatherproof, water repellent, will not fade, has excellent adherence properties. Tropics proof • Resists acid and alkaline solutions as well as mineral oils • Withstands temperatures up to +180°C. Assures long lasting protective coatings on all metals, alloys & chrome • Protects against creeping currents, short circuits, weakened insulation breakdowns • As a sealant it helps to eliminate corrosion.

Sold in bulk. Ask for prices. **$3.00** 16 oz. can

"CRAMOLIN-PC SPRAY"

Solderable Spray Protective Coating for Printed Circuits — Prevents corrosion on printed circuits and serves as a neutral soldering agent (flux). Melts immediately on contact with hot iron. Excellent wetting of all metal surfaces. Minimizes heat transfer to adjacent electrical components. Dries quickly. Sold in bulk. Ask for prices.

Tech Facts Bulletin PC-100 **$4.25** 16 oz. can

CLEANING SOLVENT

"CAEON SOLVENT #27"

(Trichlorotrifluorethane)



A cleaning agent for removal of oil, grease, and dirt from objects without harm to metal, plastic, or elastomeric parts.

• NON-FLAMMABLE • VIRTUALLY NON-TOXIC • CHEMICALLY AND PHYSICALLY PURE • CHEMICALLY AND THERMALLY INERT • STABLE

The solvent exhibits a washing and penetrating action which aids its cleaning ability. High density and low surface tension enables Caeon #27 to wet the surface of most materials and wash away dirt and sludge.

The solvent is useful in ultrasonic and vapor degreasing equipment. Soils which are normally insoluable in any solvent can often be removed by this solvent with cavitation in ultrasonic units. Vapor rinsing is more easily accomplished without exposing object to high temperatures.

The solvent is compatible with most organic systems. It will remove soils or contaminants and leave the surface 'Residue-Free'. All standard methods of using a solvent may be employed.

Write for Tech Facts.

***See Price List on This Page**

Caeon Spray #27 also sold in aerosol spray container with extension tube.
$3.00 — 16 oz. can

WESCOLITE SOLDER KIT

SOLDERING SIMPLIFIED

Combines a New Wonder Flux and the finest silver solder for stronger bond. Fast and easy to use. Soldering of the difficult or impossible metals together or to each other.

$2.50
KIT



No Pre-Cleaning • No After Cleaning
Removes oxides, promotes tinning and capillary flow.

WESCOL FLUX

4 oz. dispenser	$1.70	½ gallon	$ 8.00
16 oz. dispenser	3.15	1 gallon	14.00

Wescol Solder 220 . . . Soft Silver Solder. 5/6% Silver. Balance Tin.
1/16" dia., 3/32" dia., 1/8" dia. ..... **$19.95/lb.**
1/32" dia., 3/64" dia. ..... **21.00/lb.**
Shipped in one (1) lb. reels

Net

© United Technical Publications

New super HUSH® miracle t.v. tuner cleaner

ENGINEERED FOR TUNERS MADE WITH PLASTIC PARTS

PURITY — All New Super HUSH* and EVER-QUIET* is made with "Freon" TF* solvents with added protective lubricant, with the ability to clean, dissolve or flush away contaminants leaving a residue-free protective surface, and yet will not attack metals, plastics or elastomers.

SAFETY — All New Super HUSH* and EVER-QUIET* is **Nonflammable** and virtually **Nontoxic.**

ELECTRICAL PROPERTIES — All New Super HUSH* and EVER-QUIET* has excellent dielectric properties and high resistance to the flow of electric current.

RESEARCH AND TESTING — New Super HUSH* and EVER-QUIET* was researched, engineered and is continually being tested daily by our own personnel with 40 years experience in the Radio, Electronics and TV Service Field.

ACTION — TV tuners, Color & B/W, push button assemblies, band switches, relays, volume controls, sockets, phono-motors, etc.

*Trade Mark



YOU CAN BE SURE WITH NEW SUPER HUSH THE ALL-PURPOSE TV TUNER-CLEANER for COLOR and BLACK/WHITE

FIRST IN QUALITY
100% SILICONE OILS

6 oz. Spray Can	$2.00
8 oz. Spray Can	2.50
16 oz. Economy Spray Can	3.50

FREE 6" Plastic Extender With Every Can

---

industrial CEE-16 contact and printed circuit cleaner

CEE-16 contains "Freon" TMC which has stronger solvent characteristics than "Freon" TF, but is gentle enough to be used as a cleaning agent for most common materials of construction including metals, plastics, and elastomers for a short exposure time of cleaning.

- **Removes Dirt, Oil, Grease, Oxidation and Operating Erosion Dust**
- **Resin-type Flux widely used in Printed Circuits**
- **Electrical Relays**
- **Semi-Conductors**
- **Distributors**
- **Distribution Panels**
- **Switchboards and Switching Devices**
- **Cam Operated Equipment**
- **Cleaning Computer Parts**
- **Guidance Systems and Components, and General Maintenance of Instruments**
- **Optical Lenses**



NOT SAFE FOR ALL PLASTICS
NO OILS
NON-FLAMMABLE

Contains
"FREON" TMC

$3.50 Net



New super EVER-QUIET

contact cleaner and protective lubricant

FREE 6" Plastic Extender With Every Can

New Low Price!
6 oz. Spray Can $1.00

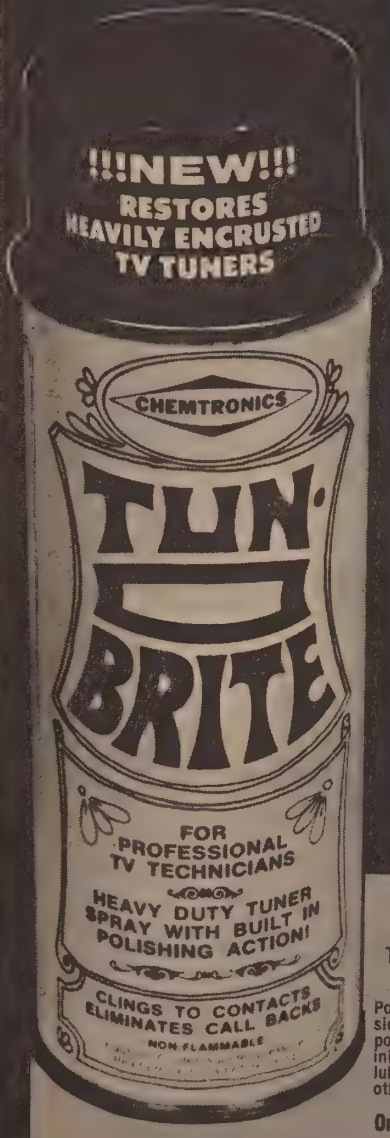
Prices Subject To Change Without Notice

FOR THE TECHNICIAN WHO WANTS A LOW PRICE, CONTACT CLEANER WITH HIGH QUALITY

CHEMICAL ELECTRONIC ENGINEERING, INC.

CHEMTRONICS

CHEMICALS FOR THE ELECTRONIC INDUSTRY



NEW! MORE POWERFUL DEGREASER



TUN-O-WASH

POWER SPRAY CLEANER-DEGREASER

Gets tuners really clean! Flushes away "gunk" grease, oil, dust and dirt. Harmless to plastics. Leaves no residue. Will not detune. Excellent for cleaning PC boards, switches, relays, instruments, motors, controls, etc. Recommended for industrial use.

Order No. 2400
24 oz. can only 3.25

SUPER FROST AID

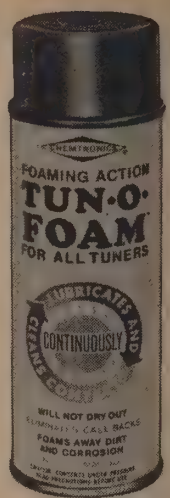
COMPONENT COOLER

- Cools Faster, to −50°F
- Leaves no liquid residue

Excellent for locating thermal intermittents, discovering faulty components, cracked PC boards, etc. One spray cools components to −50°F. Checks transistors fast. Cools twice as many components per oz. as ordinary circuit coolers.

Order No. 1550
15 oz. can only 2.79





TUN-O-FOAM

SPACE AGE TUNER LUBRICANT/CLEANER

- Cleans, Polishes and Lubricates, contacts each time channel is changed.
- Extremely long lasting lubricant works from −100°F to +400°F. Unique foaming action. Won't dry out or cake up. Will not cause detuning. Safe for all plastics. Keeps tuners working smoother, longer. Excellent for any electronic contact that requires long lasting lubrication.

Order No. TOF-8
8 oz. can only 2.39

TUN-O-LUBE 800

NUVISTOR/TRANSISTOR TUNER CLEANER

Recommended for sensitive Nuvistor and Transistor Tuners. Leaves no residue. Will not detune. Safe for all plastics.



Order No. 800 8 oz. can only 1.98

TUN-O-LUBE (REGULAR)

TUNER CLEANER/LUBRICANT

Recommended for Black and White Tuners. Will not harm plastics or detune. Provides long lasting lubricating film which minimizes noise, wear and oxidation.



Order No.	Spray Can	
301	3 oz. only	.98
810	8 oz. only	1.98
1610	16 oz. only	2.79

NEW! TUN-O-BRITE

THE HEAVY DUTY TUNER SPRAY WITH BUILT-IN CONTACT BRIGHTENERS

Polishes tuner contacts, removing all dirt and corrosion. Can't damage precious metal platings because polishing particles are hollow — disintegrate after initial wiping action. Leaves film of thick, protective lubricant with more body and staying power than any other aerosol lubricant on the market.

Order No. BT-8	8 oz. can only	2.39
BT-16	16 oz. can only	3.49

COLOR LUBE

TUNER CLEANER/LUBRICANT

Especially recommended for critical Color TV Tuners. Guaranteed safe for all plastics. Will not detune. Lubricates as it cleans.



Order No. CL-8
8 oz. can only 2.39
Order No. CL-16
16 oz. can only 3.25

CHEMTRONICS CHEMTRONICS CHEMTRONICS CHEMTRONICS CHEMTRONICS CHEM

Net

© United Technical Publications

REGULAR FROST AID



Second only to Super Frost Aid in cooling power. Proven effective in locating thermal intermittents, cracked PC boards, cooling components, etc. Spray onto diodes and transistors to prevent soldering damage. Leaves no liquid residue.

Order No. 850 8 oz. can only **1.59**
1650 16 oz. can only **2.49**

NEW! IMPROVED NO ARC

HIGH VOLTAGE INSULATOR

- Recommended for Potting and Waterproofing



Positively stops arcing and corona shorts in high voltage circuits. Withstands up to 30,000 volts. Insulates and protects printed circuits. Spray can jets out for pinpoint application.

Order No. 501-1 2 oz. bottle only **1.10** with brush
830 8 oz. spray can only **2.79**

KLEER SPRAY



Clear acrylic insulating and protective spray. Protects exposed wiring, auto ignition systems, antenna terminals etc. Waterproofs, insulates and prevents corrosion.

Order No. 890 16 oz. can only **1.59**

CONTACT KLEEN



CONTACT/CONTROL CLEANER

Leaves no oily residue. Cleans switches, relays, potentiometers and all other contact devices. Melts away oxidation, dirt and oily residue.

Order No. 605 8 oz. can only **1.79**

SUPER TROL AID



CONTROL AND CONTACT CLEANER/LUBRICANT

Cleans and lubricates in one spray. Maintains lubricity from −40°F to +280°F. For controls, switches, relays and all other sliding contact devices requiring lubrication.

Order No. 302 3 oz. spray can only **.98**
820 8 oz. spray can only **1.98**
506-5 2 oz. bottle **.79** with dropper

MASK-N-GLAS



GLASS AND PLASTIC CLEANER/POLISHER

ANTI-STATIC.

Especially recommended for cleaning TV picture tubes, masks, safety glass and plastic cabinets. Non-abrasive and scratch proof. Lint free polishing cloth in every can.

Order No. 840 8 oz. can only **1.79**

CHEM-OIL

PENETRATING & LUBRICATING OIL



Cuts through rust. Frees frozen yokes. Excellent lubricant for record changers, tape recorders and appliances.

Order No. 870 8 oz. can only **1.79**

LUBRIPLATE

WHITE GREASE LUBRICANT



Ideal for motors, gears, bearings and other electrical and electronic applications.

Order No. 105 1¾ oz. tube only **.75**

TAPE HEAD CLEANER



Cleans cassette and reel to reel tape heads. Protects heads and tapes. Guaranteed non abrasive and safe for all plastics.

Order No. THC-6 6 oz. can only **1.95**
504-3 2 oz. bottle only **.89** with felt applicator

RECORD CLEANER



Anti-static. Cleans records and leaves dust repellent coating. Lint free cloth with every can.

Order No. RC-33 6 oz. can only **.98**

NON-SLIP RUBBER RESTORER



Prevents slippage on rubber drives and belts to insure uniform speed. Thin coating provides excellent traction and restores speed.

Order No. 507-7 2 oz. bottle only **.98** with felt applicator

TV RADIO CEMENT



Recommended for repairing speakers. Excellent for joining glass, plastics and metals. Waterproof.

Order No. 502-2 2 oz. bottle only **.59** with applicator

ALL PURPOSE GLUE



Dries clear. Joins wood, metal and plastics. Great for repairing broken cabinets. Waterproof.

Order No. 503-6 2 oz. bottle only **.59** with applicator

SOLDER

- FAST FLOWING
- NON-CORROSIVE



Exceeds Requirements of Federal Spec QQ-S-571d

110 inches of top quality activated rosin core solder in a handy dispenser tube. 60/40 pure tin-lead alloy.

Order No. S-100 only **.39**
110″ Dispenser Tube

BULK SOLDER



Excellent for all industrial uses. Activated rosin core. Exceeds requirements of Federal Spec QQ-S-571d.

COMPOSITION	DIAMETER IN INCHES	WT.	DEALER NET
40% tin, 60% lead	.062(1/16)	1 lb.	1.87
50% tin, 50% lead	.062(1/16)	1 lb.	2.25
60% tin, 40% lead	.062(1/16)	1 lb.	2.55
60% tin, 40% lead	.047(3/64)	1 lb.	2.75
60% tin, 40% lead	.031(1/32)	1 lb.	3.30

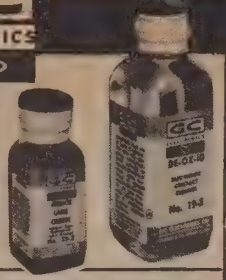
RONICS CHEMTRONICS CHEMTRONICS CHEMTRONICS CHEMTRONICS CHEN

ALL PRICES ARE DEALER NET

© United Technical Publications

GC ELECTRONICS

CHEMICALS AND KITS



GC Chemicals (Cements, Thinners, Paints, Oils, Varnishes, etc.), are available in handy 2 oz. bottles with brush-in-cap. Also supplied in larger sizes.

G-C RADIO-TELEVISION SERVICE CEMENT—This high grade cement is specially prepared for Radio, Television and Speaker Work. Unexcelled for cementing and replacing cones on dynamic speakers, repairing rattling or torn cones, cementing voice coils, spiders, etc.
Cat. No. 30-2 GC 2 oz. 50-2 Walsco — Net $ .59

G-C PLASTIC CEMENT—Excellent for cementing broken plastic cabinets, cementing grille cloth in place, cementing dial and glass crystal assemblies, cementing knots in dial, cords, etc.
Cat. No. 32-2A GC 2 oz. 40-02 Walsco — Net $ .59

G-C "BAKELITE" CEMENT—This cement is especially made for cementing "BAKELITE" to "BAKELITE" and to other materials.
Cat. No. 32-2 GC 2-oz. 66-02 Walsco — Net $ .99

G-C "VINYLITE" CEMENT—This new G-C Cement based upon "VINYLITE" vinyl resins, has great adhesion, high tackiness and extreme flexibility.
Cat. No. 58-2 GC 2-oz. 55-02 Walsco — Net $ .59

G-C FABRIC AND GRILLE CLOTH CEMENT—For cementing grille cloth and fabrics to either metal, plastic or wood cabinets.
Cat. No. 22-2 GC 2-oz. 53-02 Walsco — Net $ .60

G-C WOOD CABINET GLUE—This is the ordinary well-known wood glue that is used in repair of furniture, chairs, radio cabinets, etc.
Cat. No. 39-2 GC 2-oz. 78-02 Walsco — Net $ .59

G-C No. 28 CEMENT THINNER— This thinner is made of same solvents as G-C Service Cement and makes the best thinner for G-C Service Cement.
Cat. No. 28-2 GC 2-oz — Net $ .59

G-C RADIO SERVICE SOLVENT—The best solvent for loosening cement on speaker cones, frames, etc., made to dissolve all types of cements. Can also be used as a thinner for G-C Cement and other cements.
Cat. No. 31-2 GC 2-oz. 201-02 Walsco — Net $ .59

G-C No. 29 LACQUER THINNER—Solvent for thinning all lacquers, lacquer enamels, telephone black and gray, touch-up lacquers.
Cat. No. 29-2 2-oz. — Net $ .59

G-C No. 41 Q-DOPE THINNER—Excellent solvent for Polystyrene, Q-Dope and any other Polystyrene Coil Dopes and Cements. Will soften and disolve polystyrene rods, sheets, etc. Clear water-white solvent will not change characteristics of original materials.
Cat. No. 41-2 GC 2-oz. 56-02 Walsco — Net $ .59

G-C RUBBER-TO-METAL & PHONO DRIVE CEMENT Specially prepared for cementing ruber phono and dial drives to shafts and pulleys.
Cat. No. 35-2 GC 2-oz. 56-02 Walsco — Net $ .60

G-C PLIOBOND CEMENT—Bonds anything to anything—iron, steel, plastic, glass, aluminum, cotton, vinyl sheets, stainless steel, etc. A truly universal cement.
Cat. No. 43-2 GC 2-oz. 67-02 Walsco — Net $ .60

G-C ACRYLIC-PLEXIGLASS CEMENT — Specially prepared for cementing Lucite, Plexiglass and other arcylic materials.
Cat. No. 40-2 GC 2-oz. 65-02 Walsco — Net $ .60

G-C NE-O-PRENE CEMENT—For cementing neoprene rubber to neoprene or neoprene to other products, such as metal, wood, paper, etc.
Cat. No. 52-2 2-oz. — Net $ .98

G-C TV HIGH VOLTAGE CORONA DOPE—Prevents corona shorts on high voltage circuits in Television sets.
Cat. No. 47-2 GC 2-oz. 195-02 Walsco — Net $ .78

G-C RED-X TV CORONA DOPE—Prevents corona shorts in high voltage circuits in TV sets. Coat surfaces and sharp corners to stop corona effect.
Cat. No. 50-2 GC 2-oz. 198-02 Walsco — Net $ .78

G-C TV TUBE KOAT—For recoating the outside of TV picture tubes that have become scratched or the surface is peeling.
Cat. No. 49-2 GC 2-oz. 199-02 Walsco — Net $ .72

LIQUID NON-SLIP—Penetrating and fast-drying liquid dressing. Shrinks fibres, prolongs life of cables and belts and prevents slipping.
Cat. No. 1211 ½-oz. — Net $ .38

G-C No. 67 PAINT THINNER—Excellent for Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish and Rubber Cements.
Cat. No. 67-2 GC 2-oz. 204-02 Walsco — Net $ .59

G-C PHONO NON-SLIP COMPOUND—Prevents slippage of phono drives on changers, tape recorders, and all types of recorder drives.
Cat. No. 86-2-S GC 2-oz 144-02 Walsco — Net $ .96

G-C RED GLYPTAL INSULATING VARNISH—Most common of all protective insulating coatings, used on all solder connections, high voltage points, anti-corona.
Cat. No. 90-2 GC 2-oz. 134-02 Walsco — Net $ .63

G-C CARBON TETRA-CHLORIDE—100% pure Carbon Tetra-Chloride, non-explosive and non-inflammable. For cleaning electrical controls and contacts.
Cat. No. 211-2 2-oz. — Net $ .59

G-C CONTACT DOPE—Ideal contact cleaner for electronic switches, controls and contacts. Specially prepared to resist corrosion and oxidation on contacts.
Cat. No. 1214 2-oz. — Net $ .48

G-C NON-CORROSIVE LIQUID SOLDERING FLUX—Best quality non-corrosive flux for all types of radio and electrical soldering, for copper, brass, steel, nickel, etc.
Cat. No. 42-2 2-oz. — Net $ .55

G-C Q-DOPE (COIL DOPE)—Specially prepared for coating, doping, sealing, cementing and impregnating coils and paints in "Very High" and "Ultra High" frequency ranges.
Cat. No. 37-2 GC 2-oz. 57-02 Walsco — Net $ .55

G-C LIQUIDOPE—Gives coils a tough protective film that insures firmness and prevents characteristic changes due to weather.
Cat. No. 36-2 2-oz. — Net $ .60



G-C RADIO AND TELEVISION CEMENT—High grade speaker cement in a handy tube for those who prefer to use a tube. Cement can be applied directly from tube on the parts to be cemented without the use of a brush. Also used for television work, sealing nuts, bolts, etc., on antennas, rotators, etc.
Cat. No. 34-2
2-oz. tube Net $ .59

G-C INSULATING & DIPPING VARNISH—Produces a smooth, tough film that is water-proof, oil-proof and non-corrosive. Recommended for treating field coils, noisy or buzzing transformers and choke coils.
Cat. No. 56-2 GC 2-oz. 190-02 Walsco — Net $ .69

G-C FUNGUS VARNISH—Used on all types of Radio, Electronics and Communication equipment to prevent moisture absorption and fungus growth, when equipment is used in hot and humid climates.
Cat. No. 57-2 GC 2-oz. 135-02 Walsco — Net $ .79

G-C STRIP-X—Removes insulating enamel from wires for easy soldering. Use on magnet wire, etc.
Cat. No. 26-2 GC 2-oz. 251-02 Walsco — Net $ .78

G-C MAG-NETIK RECORDING HEAD CLEANER—Cleans without injury to the recording head that gradually lose their sensitivity if oxide accumulates.
Cat. No. 53-1 1-oz. — Net $ .67
53-2 2-oz. — $1.03

GC MAGNETIC CEMENT--Permanently bonds iron cores, broken loopsticks, slugs, flyback and yoke cores. Renews part to original function.
Cat.No. 38-2 2-oz. — Net $ .89

G-C No. 14-2 PRINT-KOTE SILICONE RESIN—After repairing or replacing parts in printed circuits, protect the panel joints and parts. Fast air drying.
Cat. No. 14-2 2-oz. — Net $1.40

G-C No. 13-2 PRINT-KOTE SOLVENT FOR SILICONE RESIN—The only solvent for G-C 14-2 Silicone Resin. Will dissolve and remove silicone resin from printed circuits.
Cat. No. 13-2 2-oz. — Net $/.42

G-C PRINT-KOTE SOLDERING FLUX—Non-corrosive liquid flux for easy soldering and repairing of printed circuits.
Cat. No. 12-2 2-oz. — Net $ .60

G-C CEMENT KIT—A kit containing a complete selection for every application. Kit includes 2-oz. samples of Service, Pli-O-Bond, Acrylic, Plastic, Bakelite, Vinylite, Grille Cloth, Model, Wood, Rubber-to-Metal, Electrical and Resistor, Neoprene, Label and Vinyl Cements. Ideal for research and development.
Cat. No. 345 — Net $9.05



GLASS TREATMENT COMPOUND
"For All Glass and Plastics"
- DEGREASES
- REMOVES STATIC
- WATERPROOFS

"GC 60" treatment compound makes all glass and plastics cleaner and brighter, degreases, removes static, waterproofs and keeps surfaces cleaner longer. Comes with handy spray applicator for easier application. Easy to use, just spray on and wipe clean.

GC No.		Std. Pkg.	
175-6	15 oz. bottle	12	$ 1.15
175-16	16 oz. bottle	3	$ 2.02
175-G	1 gallon	1	$12.99



EXTRA DRY
SUPER FREEZE MIST
EXTRA DRY SUPER FREEZE MIST

Extra Dry Super Freeze Mist is designed to locate problem capacitors, transistors, and oxidized joints by instantly cooling components.

The extra dry cooling agent in this freeze mist is especially formulated to be non-toxic, odor free and leave no liquid residue on parts.

Cat. No. 10-702 15 oz. Aerosol Std. Pk. 12. ..Net $2.50



"Most Powerful All-Purpose TV–Radio Cleaner"

The most ourstanding "All purpose" electronic contact cleaner. This is not a solvent-type cleaner but consists of active ingredients in light oil base. Use it on volume controls, tone controls, audio mixers, relays, etc. A small drop lasts for months or years.

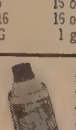


DE-OX-ID

GC No.		Std. Pkg.	Net
19-1	1 oz. bottle	6	.70
19-2	2 oz. bottle	12	1.03
19-2-S	2 oz. bottle carded	12	1.03
19-6	6 oz. aerosol can	6	2.45
19-16	16 oz. bottle	3	8.50

NO-OX

Walsco		Std. Pkg.	Net
100-01	1 oz. bottle	6	$ .70
100-02	2 oz. bottle	12	$ 1.03
100-02-S	2 oz. bottle carded	12	$ 1.03
100-06	6 oz. aerosol can	6	$ 2.45
100-16	16 oz. bottle	3	$ 8.50
100-33	1 gallon	1	$40.65



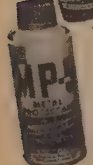
SPRA-KLEEN - eliminates noise due to dust, dirt and corrosion on contacts. Just spray, and work controls.
Cat. No. 8666...6 oz.. Net $ .99
Cat. No. 8666-16..... Net $1.95
16 oz (sprays upside-down)



RELAY-KLEEN - contact cleaner; excellent for cleaning relays and contacts in switchboards, automatic pinball or bowling machines, rocket or satellite circuitry.
Cat. No. 8682....6 oz.. Net $1.89
Cat. No. 8682-16..16 oz... Net $3.49



JIF - contact and control cleaner - will not harm plastics. Contains no harsh solvents. Cleans, lubricates, long-lasting protection.
Cat. No. 8679-6...6 oz. Net $1.79



MP-5 outdoor metal protectant; provides chemisorption type bond to metal surfaces. Superior to other organic compounds. Contains - UCARSIL* silicones.
*Trademark of Union Carbide Corp.
Cat. No. 8681 ...6 oz..... Net $1.79



ZERO-MIST SPRA KOAT - instantly locates defective(intermittent) circuit components due to temperature change. Circuits cooled instantly. Components isolated.
Cat. No. 8667...16 oz.. Net $2.19



RUF-KOAT WRINKLE VARNISH - hard, durable finish.
Cat. No. 60-12..... Net $2.25
12 oz. Black
Cat. No. 60-13..... Net $2.25
12 oz. Gray



GC DE-OX-ID - electrical contact cleaner for silver, detent and radar contacts. For TV, radio, telephone, relays, contacts, etc.
Cat. No. 19-6...6 oz... Net $2.45



GC ELECTRONIC DRY CLEANER
"Leaves Absolutely No Deposits"
Plastic Spray Extension Included FREE!

Clean contacts, relays, and other electronic devices with this "Dry" cleaner where no residual, oily deposits are desired. This product is also an excellent degreaser and general solvent for inks, gummy deposits, etc., on all electrical or mechanical devices such as typewriters, presses, etc.

No.		Std. Pkg.	Net
8669	16 oz. aerosol	12	$2.10

New MAGIC VISTA
Golden Foam Tuner Cleaner
"PUT NEW LIFE IN TELEVISION TUNERS"



Featuring the New
ANY-ANGLE CONSTANT DISCHARGE 360° VALVE
- Cleans, polishes and lubricates tuner contacts
- Lubricant will not run off or evaporate
- Safe for plastics

Cat. No.10-800 8 oz. Aerosol Std. Pk. 12. .....Net $2.29



K-27 PRINT-KOTE - TV silicone resin for printed circuits. Insulates, protects shorts. As used by the original manufacturer.
Cat. No. 14-6 GC 6-oz. 120-06 Walsco — Net $2.42



GC SILVER PRINT - for printed circuit repairs Same Pure Silver as used by original printed circuit manufacturers
Cat. No. 21-1 GC ½ troy oz. Net $4.75
36 Walsco
Cat. No. 21-2 GC 1 troy oz. Net $7.85
36-1 Walsco

GC COPPERPRINT 2 oz bottle
Cat. No 20-2 — Net $1.95



Spra-Koat
RED - X TV CORONA DOPE
Prevents Corona Shorts in High Voltage TV Circuits

New red color coats surface and corners to stop corona effect. Fast drying, silicone base. Has excellent dielectric strength
GC No. 50-12 16 oz. spray can Net $2.18
Standard Package 12

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

© United Technical Publications

CHEMICALS AND KITS

GC ELECTRONICS



GC NON-TOXIC ELECTRO-TET CLEANER

Closely parallels Carbon Tetrachloride, but much safer. Non-flammable, fast drying.
Cat. No. 10-G..1 gallon **Net $7.50**



GC KLEEN-TEX CLEANER

Removes grease, oil, wax. Safe, slow burning, high flash, inexpensive cleaner for motors, chassis, vacuum cleaners, etc.
Cat. No. 11-G..1 gallon **Net $3.75**



GC ELECTRONIC CONTACT CLEANER HYPODERMIC NEEDLE INJECTOR

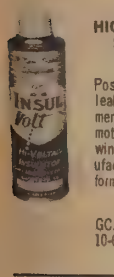
A handy applicator using the hypodermic injection method for cleaning and lubricating around controls and tight places.
Cat. No. 8383..... **Net $ .48**



WALSCOLUB-B

Electrically neutral lubricant that prevents corrosion.. Makes for smooth, noise-free operation of electrical contacts, band switches, attenuators, push button tuners, remote control switches and other contacts.

No.	Desc	
22-01S	1-3/4-oz tube	**Net $ .55**

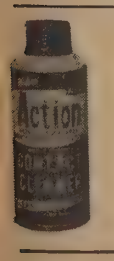


INSUL-VOLT

HIGH VOLTAGE INSULATING SPRAY WITH SURE-SHOT CONFINED STREAM

Positive insulation against hi-voltage leaks, arcing and corona shorts. Recommended for use on transformers, electric motors, generators, and all electrical windings. Ideal for servicemen and manufactors of generators, motors and transformers.

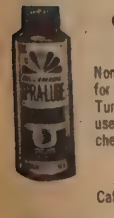
GC. No.	Walsco		Std. Pkg.	
10-608	40-804	6 ounce spray	12	**$1.99**



WALSCO ACTION

Electronic Silicone Contact Cleaner--won't harm plastics, non-flammable. Provides long-lasting protection.

No.		Net
99-06	6-ounce Spray Can	$ .99
99-16	16-ounce Spray Can	$1.79



COLORMAGIC SPRA LUBE COLOR TV TUNER CLEANER

Non-Drift cleaner especially formulated for cleaning and lubricating all color TV Tuners. Completely safe for plastics used in tuners. Made of highest quality chemicals. Safe to use - non-flammable.

Cat. No. 8888 ... 8 oz spray can **$1.79**



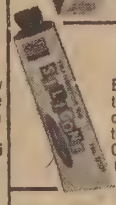
GC DE-OX-ID KIT WITH NEEDLE INJECTOR

Contains 2-ounce bottle of De-Ox-Id cleaner and hypodermic type of applicator.
Cat. No. 8460..... **Net $.145**



GC PHONO TURNTABLE MOTOR & GEAR LUBRICANT

A specially developed lubricant for phonographs. Lubricant clings to surface of parts; eliminates future repairs.
Cat. No. 1223-S 2-ounce **Net $ .59**



GC TRANSISTOR Z-5 SILICONE COMPOUND

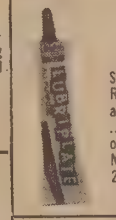
Essential in maintaining efficient transfer of heat from transistor to chassis. Use whenever replacing transistors.

Cat. No.	1-ounce tube
8101-S	**Net $2.39**



GC SKRATCH STIK KIT

For Walnut, Mahogany and Light wood surfaces. Kit of 3 sticks.
Cat.No. 909-K ..... **Net $1.80**



LUBRIPLATE

Super lubricant, grease type,protective. Reduces friction loss, prevents rust and corrosion. Extends bearing life 50% ...increases mechanical efficiency 20% over ordinary lubricant.

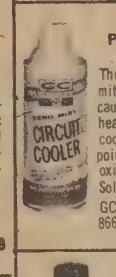
No.	Desc	
23-02-S	2-oz tube	$ .75



SUPER GLUE

New miracle cement. Bond strength of over 3000 lbs. per square inch. Particularly suitable for cementing non-porous materials. Cures at room temperature through chemical action. Supplied in two ingredients which must be mixed before application.

No.		Std.Pkg.	Net
40-100	2 - ¾ oz. tubes	12	$ .99



ZERO–MIST

PLASTIC SPRAY EXTENSION INCLUDED FREE!

The new scientific way to locate "intermittence" in electronic equipment, caused by component failures, due to heating. The application of GC Zero-Mist cools components instantly, thereby pinpointing faulty capacitors, transistors, oxidized junctions, etc. Use of GC Flex-Sol spray can extension is recommended.

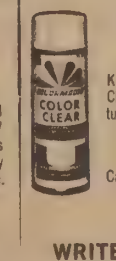
GC No.	Walsco		
8667	214-12	16 oz. Aerosol Standard Package 12	**$2.19**



WALSCO ACRY-SPRAY

Prevents corrosion, rust, oxidation on all metals.

No.		Net
140-12	Clear	1.50
8665 GC		
141-12	Aluminum	$1.50
8660 GC		

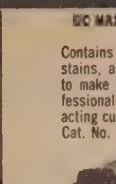


COLORMAGIC COLOR CLEAR COLOR TV TUBE CLEANER & ANTI-STATIC AGENT

Keeps away unsightly dust and lint. Cleans and destaticizes color TV picture tube surface sparkling clear.

Cat. No. 8890 ... 8 oz spray can

Net $ .99



GC MASTER DELUXE CABINET REPAIR KIT

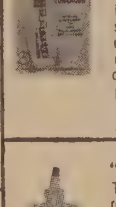
Contains varnishes, enamels, spirit stains, all of the essentials needed to make cabinet repairs like a professional. Satisfy even the most exacting customer.
Cat. No. 900..... **Net $9.65**



"TUNERLUB"

Assures quiet operation of television tuners. Tunerlub restores smooth positive action to worn and dirty television tuners. Compounded to form a strong film that gives lasting protection to high frequency switch contacts in TV and FM tuners. Free of zinc and other metal oxides which impair high frequency operation.

No.		Std. Pkg.	Net
26-01S	1⅛ oz. tube, carded	12	$ .99
26-17	1lb. Can	1	$2.55

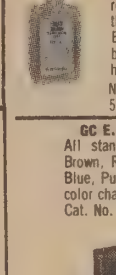


GC TUBE BASE CEMENT

"Repairs CRT and Octal Type Tubes"

Tube Base Cement is ideal for repairing octal and CRT type tubes that have separated from the glass. Easy to apply in plastic squeeze bottle. Set up in approximately 2 hours under normal conditions.

No.		Std. Pkg.	Net
54-2S	2 oz.	6	$ .99



GC E.I.A. COLOR CODING KIT

All standard E.I.A. colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray and White. E.I.A. color chart included.
Cat. No. 677..... **Net $2.50**



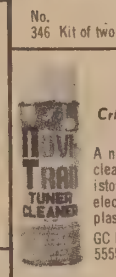
SUPER STRONG GC EPOX CEMENT

"Bond Anything to Anything"

GC Epoxy Adhesive is one of the new miracle cements with properties never before attainable. This adhesive cures at room temperature through chemical reaction. It will provide high bond strength and exceptional adhesion to many materials which are normally difficult, if not impossible, to cement.

This product is supplied in two ingredients which must be mixed before application.

No.		Std. Pkg.	Net
346	Kit of two tubes (approx. 3 oz.)	1	**$1.95**



NUVI-TRAN TUNER CLEANER

Formulated Especially for Critical Nuvistor and transistor Circuitry

A non-conductive, non-toxic cleaner for cleaning sensitive Nuvistor and Transistor Tuners. Nuvi-Tran will not affect electrical properties, and is safe for all plastics TV tuners.

GC No.		Net
5555	8 oz. spray can.....	**$2.29**
	Standard Package 12	



GC DRI-SPRA

FORMULA X-27 STOPS ELECTRICAL FAILURE?

Cleans and lubricates - seals out moisture - prevents rust and corrosion. New water displacement spray prevents 80% of electrical equipment failures.

Cat. No. 8678 6 oz spray can **Net $1.79**



GC PLASTIC & GLASS CLEANER

Spray on - wipe off dirt, dust and grime from all glass and plastic surfaces without streaks or dulling residue. Contains grease - cutting ammonia.

Cat. No. 9082 16 oz spray can

Net $ .79



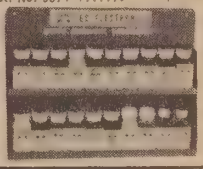
GC DIAL & SIGNAL LIGHT COLORING KITS

For signal systems, radio dials, decorative lighting, etc. Contains Red, Green, Blue, Amber, Purple and solvent.

Cat. No. 66-5, kit of 5, no purple	**Net $1.23**
Cat. No. 66-6, kit of 6	**Net $1.43**

GC RADIO TV CHEMICAL LAB

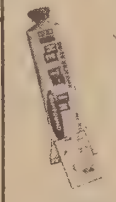
Twenty, 2-ounce bottles in permanent bench rack. Every needed chemical and cement is included for all types of repairs on speakers, coils, contacts, dials, etc.
Cat. No. 997..... **Net $12.19**





GC DELUXE RADIO-TV CHEMICAL LAB

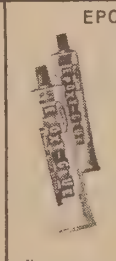
For service shop and industrial plant. Complete practical lab, designed for serviceman, engineer, technician. Contains solvents, cleaners, cements, etc.
Cat. No. 998..... **Net $17.32**



GC DC-Z9 SILICONE HEAT SINK COMPOUND

DC-Z9 increases the efficiency of electronic devices lowering overall temperature level. High heat conductive metallic oxides suspended in silicone dissipate "hot spots". DC-Z9 seals between transistors, diodes, etc., compound will not dry out or harden.

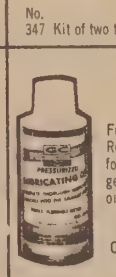
No.		Net
8109	1-oz. Tube	**$2.63**



EPOXY GLUE "SUPER GRIP"

This remarkable Epoxy Glue is specified by NASA for use in it's Space Program. The selection of this particular Epoxy Glue by NASA was made because of it's outstanding properties. Epoxy Glue is dimensionally stable... it won't shrink or expand. It is chemically stable, also resisting acids, alkali, grease, gas, water, etc. High electrical resistance is yet another of it's assets. Mixed in equal amounts from two tubes, it will harden in 5 minutes under 150 degrees F. heat lamp--2 to 4 hours at room temperature.

No.		Std. Pkg.	Net
347	Kit of two tubes (approx. 4 oz.)	6	**$2.50**



GC PRESSURIZED LUBRICATING OIL

For complete, thorough lubrication. Reaches into smallest areas. Excellent for ball bearings, moving machinery, gears, etc. A high-grade, light machine oil. No spilling, No waste.

Cat. No. 10-916 6 oz spray can

Net $ .75

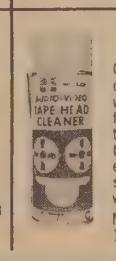


GC BENCH FIRE EXTINGUISHER

Works on all types of fires; electrical, oil, grease. Fast, low-cost method of fighting small fires - excellent supplemental fire protection. Keep one in garage shop or home.

Cat. No. 10-914 16 oz spray can

Net $1.57



AUDIO-VIDEO MAGNETIC TAPE HEAD CLEANER

GC Audio-Video Tape Head Cleaner quickly removes dirt and oxide build-up; won't harm tape, tape coating or paint finish. This cleaner will not interfere with transmission and may be used on running tape. Audio-Visual Tape Head Cleaner eliminates applying cleaner with brush or swab. 6" spray extension is furnished with each can for pinpointing spray.

No.		Std. Pkg.	Net
10-620	16 oz. aerosol	12	**$2.35**

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

CHEMICALS and TOOLS
INJECTORALL ELECTRONICS CORP.

ALIGNMENT TOOLS

IN 8606	5" HEX WRENCH — double end	net $ .48
IN 8606L	11" HEX WRENCH — double end	net $ .63
IN 8607	5" HEX WRENCH & SCREWDRIVER	net $ .48
IN 8727	7" TUNER SCREWDRIVER — double end	net $ .43
IN 8728L	12" TUNER SCREWDRIVER — double end	net $ .53
IN 9300	5" MIDGET HEX WRENCH — double end	net $ .48

KIT NO. 6 Six Alignment Tools. Glass filled yellow nylon alignment tools as listed above. Greater torque, stronger — net $2.49

AIR CONDITIONER

AERO-KLEEN

Oil spray for air-conditioner filters, dripless and scented.

495	16 oz. spray can	net $1.79

CEMENTS & GLUES

PHONO GRIP-WELL

Non-slip compound for dial cords, and slipping phono turntables.

68-2	2 oz. glass bottle	net $1.17

SPEAKER CEMENT

Vibration proof, fast drying, forms flexible bond; brush in cap, a plastic glue.

201	2 oz. glass bottle	net $1.00

STIK-IT GLUE

All purpose glue in squeeze bottle, spreads white, dries clear, spout with attached cap.

39	2 oz. squeeze bottle	net $ .39

CIRCUIT COOLERS

CHILL-IT

A refrigerant spray, to pin-point defective electronic components.

179-6	6 oz. spray can	net $1.32
179-16	16 oz. spray can	net $2.25

CLEANERS

CONTACT CLEANER

Superior non-toxic spray solvent, dries quickly; with 4" steel needle.

999WN	6 oz. spray can	net $1.79

DEGREASER NO. 3

Air drying cleaning compound, excellent for ultrasonic application.

3	1 gal. can	net $9.30

DRIVE WHEEL CLEANER

Cleans and renews neoprene and rubber drive wheels.

251-2	2 oz. glass bottle	net $1.17

LENS KLEEN

Plastic cleaner, antistatic, for plastic TV windows and meters; with cleaning cloth.

20	6 oz. aerosol can	net $1.79



CLEANERS

BLUE LUBE

A foam, spray, dripless cleaner and lubricant, with 6" plastic needle.

699-8 (NEW)	8 oz.	net $2.10

CLEAR SOUND

A tape head cleaner for cartridges and cassette players, spray can w/swab stick, blister-pack.

252-3 (NEW)	3-oz.	net $1.32

FIDELITY RECORD CLEANER

Antistatic spray, cleans and protects records; with record cleaning cloth.

70WC	3 oz. spray can	net $1.17

HI-FI CONTROL CLEANER

Cleaner and lubricant for volume controls; with plastic needle.

799-3	3 oz. spray can	net $1.00

TAPE HEAD CLEANER

Cleans tape recorder heads, removes squeal, flutter, wow, safe to use, with cotton-covered wire brush.

250-2	2 oz. glass bottle	net $1.00
250-8	8 oz. spray can	net 2.10

SPRAY CLEAN

Tuner degreaser and all purpose cleaner, safe for plastics, leaves no film, non-flammable, conforms to MIL SPEC O-T-620a.

3-24	24 oz. spray can with plastic nozzle	net $3.00

SUPER 100

Tuner cleaner and lubricant, will not affect plastics, contains ANTI-STATIC agent, for color and black & white TV tuners.

		NET
100-3	3 oz. spray w/plastic Needle	$1.00
100-6	6 oz. spray w/steel Needle	2.10
100-8	8 oz. spray w/steel Needle	2.25
100-16	16 oz. spray w/steel Needle	2.99

TUNER CLEANER

Cleaner and lubricant for TV tuners and controls, non-toxic, non-flammable.

		NET
899-6	6 oz. spray can only without Needle	$1.95
899WN	6 oz. spray w/steel Needle	2.10
899-16WN	16 oz. spray w/steel Needle	2.99

OILS & LUBRICANTS

SPOT LUBRICATING OIL

Non-gumming, for tape-recorders and record players; with plastic needle.

10-3	3 oz. spray can	net $1.00
10-16	16 oz. spray can	net $2.25

SQUEAL-STOP

Dry lubricant, leaves no oily film, won't affect wires; with plastic needle.

50	3 oz. spray can	net $1.32

PAINTS & VARNISHES

ANTI-FUNGUS VARNISH

Conforms to MIL 173B specifications, natural color; prevents fungus growth.

15-16	16 oz. spray can	net..$2.40

INJECTORALL SPRAY PAINTS

With FREE masking tape - 13 oz. ea. — net $1.35

GLOSS

300-13	Gloss White
301-13	Appliance White
302-13	Gloss Black
303-13	Clear
307-13	Fire Red
308-13	Ribbon Blue
309-13	Pink
310-13	Rich Blue
311-13	Mist Green
312-13	Light Gray
313-13	Hunter Green
316-13	Light Yellow

FLAT & METALLIC

304-13	Flat White
305-13	Flat Black
306-13	Metal Primer Grey
314-13	Gold
315-13	Aluminum

Fluorescent Paints - 13 oz. spray can — net $2.10

FLUORESCENT

325-13	Cerise Red
326-13	Green
327-13	Blue
328-13	Red Orange
329-13	Lemon Yellow

COATINGS & INSULATORS

CLEAR SPRAY

A transparent plastic spray, waterproofs, insulates metal, wood, rubber and paper surfaces.

399	16 oz. spray can	net $1.79

RED HI-VOLT

Fast drying insulator, prevents arcing and corona in high voltage circuits, has high dielectric strength.

129-2	2 oz. glass bottle	net $1.32
129-6	6 oz. spray can	1.50
129-16	16 oz. spray can	2.40
129G	1 gallon can	12.60

SERVICE AIDS

TAPE HEAD CLEANING STICKS

Package of 100 sticks with cotton-tipped swabs in a display bag.

255 (NEW)	6 inch	net $ .80

JET AIR

Removes dust, lint and dirt from electronic chassis, projectors and precision instruments. Dry air reaches hard-to-get-at places.

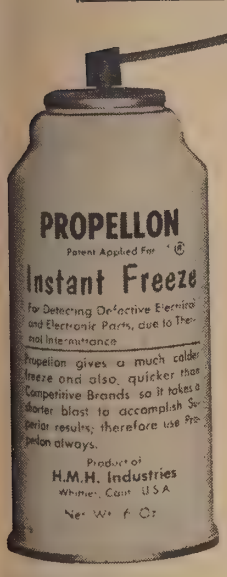
8	8 oz. spray can	net $1.45

Net

© United Technical Publications

Heeger, Inc., as national sales administrators, present the following chemicals that have found favor with engineers, laboratory technicians and production in industry, to assist them in procuring the best proven material to enable them to arrive at the best results.

From the laboratories of
H. M. H. INDUSTRIES



PROPELLON INSTANT FREEZE

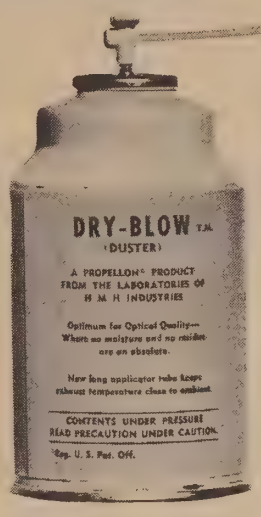
Used by electronic engineers and technicians for detecting defective electronic and electrical parts, due to thermal intermittance. Valuable in the laboratory, field testing, service bench or field work, maintenance of equipment and in the electronic and electrical analysis of trouble. Propellon "Instant Freeze" delivers the lowest temperature practical for above uses. Odorless, non-toxic and non-flammable.

The 12" extender facilitates in directing the spray directly onto the area tested. Also aids in getting into inaccessible places.

12 TO A CASE

PACKED IN 7 OZ. CANS AND 15 OZ. CANS — 12" EXTENDER FREE WITH EACH CAN

7 OZ. CAN, with 12" extender.....ea. $1.45
15 OZ. CAN, with 12" extender.....ea. $2.25



"DRY-BLOW" T.M.

(Duster)

A Propellon product for the service technician for cleaning before and after integrated circuitry repairs or replacements. For blowing dust and dirt out of chassis and between parts and tubes where it is impossible to reach with brush or cloth.

Used by electronic engineers and technicians, electronic and optical laboratories and any place where fine dust particles are a problem to eliminate.

12 TO A CASE

PACKED in 15 OZ. CANS — 18" EXTENDER FREE WITH EACH CAN

15 OZ. CAN, with 18" extender.....ea. $2.25

From the laboratories of
HASCOL ENTERPRISES

LOC-JAW



A SCIENTIFICALLY COMPOUNDED ADHERENT FORMULA

"Loc-Jaw" is an "Epoxy" base compound for bonding metal to metal, glass to glass, glass to wood, wood to wood, metal to wood, etc. Properly proportioned, it hermetically seals small parts and connections. After setting, it actively resists salt water and salt air, gasoline, chemicals and solvents of all types and withstands temperatures up to 300° F. Applicable to many industrial uses. Packed in its own plastic container and applicator. Indispensable where an adherent or sealer is needed.

INDIVIDUAL PLASTIC CONTAINER .....ea. $ .98
BAG OF 10 .....per bag $7.50

From HASCOL LABORATORIES

SAL-MET

NON-CORROSIVE FLUX

- **SOLDERS COPPER TO ALUMINUM**
- **ALUMINUM TO ALUMINUM**
- **SOLDERS ALL METALS**



A scientific laboratory non-corrosive flux for soldering all metals. By using "SAL-MET," copper can be soldered to aluminum, aluminum to aluminum, copper to steel, copper to copper; in fact, any metal to metal is possible. No special preparation on material to be soldered. Use conventional solder, applied with quick heat, regular soldering iron, torch or pot.

1 oz. Tubes.....ea. $1.08
1 lb. Can.....ea. $8.60

WRITE FOR COMPLETE CATALOG

PRICES SUBJECT TO CHANGE

L M B®

whatever electronic products
you require...

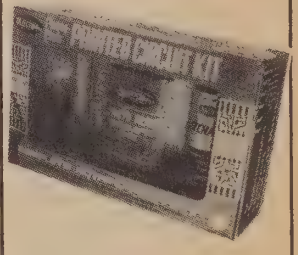
...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



PRINTED CIRCUITS
INJECTORALL ELECTRONICS CORP.

CAT. NO.	DESCRIPTION	NET WT.	NET EACH
PRINTED CIRCUITS			
500	P.C. KIT A low cost kit that comes complete with all materials to make a printed circuit board. Consists of two copper clad boards, a resist ink pen, resist ink solvent, a 6 oz. bottle of etchant, a 1/16" drill bit and a 5 x 7 x 2" plastic case in which the boards are etched. Comes with complete directions. Packaged on a display card.	16 oz.	$ 5.95
650 NEW	PHOTOSENSITIVE P.C. KIT KIT 650 is a complete kit using a photographic method to produce professional quality printed circuits. No dark room is necessary. Contains 2 photo-sensitive 3 x 4½" phenolic boards, a photographic test negative and an ultra-violet light source. Materials are included to make negatives of magazine layouts. Also contains exposure glass, clamps, developer, etchant, trays, resist remover, drill and complete instructions. Ideal for solid-state and integrated circuits. Packed in a display box. Weight 3 lbs.	4 lbs. ea.	10.80
651 NEW	BREADBOARD KIT Packed in hanging package, unclad perforated boards.	8 oz.	1.20
652 NEW	COPPER CLAD BOARD KIT 3 boards, packed in a hanging package.	6 oz.	1.20
195	RESIST INK PEN — Fine felt tip, blister-pack.	1 oz.	1.25
196	RESIST INK PEN — medium tip, blister-pack.	1 oz.	1.25
198	RESIST INK SOLVENT — Glass bottle.	2 oz.	.90
198G	RESIST INK SOLVENT — 1 gallon can.	1 gal.	9.30
199	ETCHANT — Bottle, removes excess copper.	1 pint	1.57
199Q	ETCHANT	1 qt.	2.25
199G	ETCHANT	1 gal.	8.50
65-16	POLY SPRAY A polyurethane insulator for coating printed circuits.	16 oz.	2.40
D2 NEW	DEVELOPER — For photosensitized boards.	8 oz.	2.00
PRINTED CIRCUIT REPLACEMENT BOARDS			
	1 oz. COPPER-CLAD BAKELITE LAMINATES — One side copper.		
PC1	1/16" XXXP bakelite	3" x 4½"	.40
PC2 NEW	1/16" XXXP bakelite	4" x 6"	.60
PC3	1/16" XXXP bakelite	6" x 9"	1.10
	1 oz. G-10 EPOXY GLASS BASE LAMINATES — One side copper.		
PC5	1/16" G-10 epoxy glass	3" x 4½"	.70
PC6 NEW	1/16" G-10 epoxy glass	4" x 6"	1.30
PC7	1/16" G-10 epoxy glass	6" x 9"	2.50
	2 oz. G-10 EPOXY GLASS BASE LAMINATES — One side copper.		
PC9	1/16" G-10 epoxy glass	3" x 4½"	.75
PC10 NEW	1/16" G-10 epoxy glass	4" x 6"	1.50
PC11	1/16" G-10 epoxy glass	6" x 9"	3.00
	LIGHT SENSITIZED COATED BOARD 1 oz. COPPER-CLAD BAKELITE LAMINATES — One side copper.		
PC13	1/16" XXXP bakelite, sensitized	3" x 4½"	.75
PC14 NEW	1/16" XXXP bakelite, sensitized	4" x 6"	1.00
PC15	1/16" XXXP bakelite, sensitized	6" x 9"	2.00
	1 oz. G-10 EPOXY GLASS BASE LAMINATES — One side copper.		
PC17	1/16" G-10 epoxy glass, sensitized	3" x 4½"	1.00
PC18 NEW	1/16" G-10 epoxy glass, sensitized	4" x 6"	2.00
PC19	1/16" G-10 epoxy glass, sensitized	6" x 9	4.00



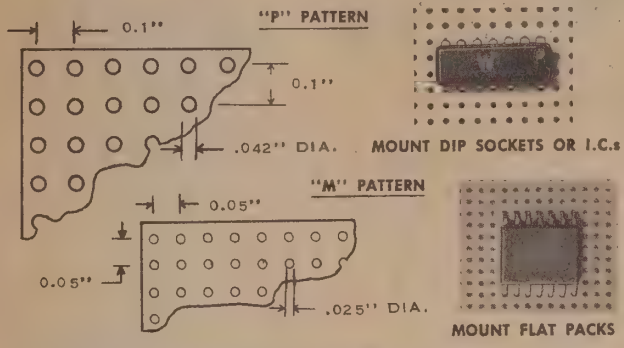






Vector Electronic Company
INCORPORATED

MICRO-VECTORBORD®



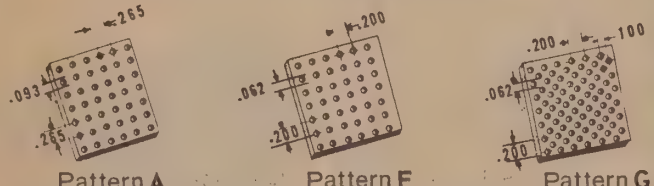
Micro-Vectorbord* has been specially designed to mount integrated circuits. "P" pattern accepts Dual-In-Line sockets or I.C.s; "M" pattern will accept flat pack leads. Many Vector terminals fit Micro-Vectorbord.* For material specification see block at right.

EXPLANATION OF MATERIALS FOR VECTORBORD* & MICRO-VECTORBORD*

Phenolic: Phenolic paper laminate Type PBE-P per Fed. Spec. L-P-513, flame retardant NEMA Grade FR-2.
All Epoxy Glass boards (WE) meet MIL-P-18177C Type GEE, NEMA Grade FR-4; except "P" and "H" which may be epoxy glass composite (CG).
Epoxy Paper laminate (EP) Type PEE per MIL-P-22324, flame retardant NEMA Grade FR-3.

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Material	Price 1-19
59P19-032	P	.042	2" x 6" x 1/32"	59 x 19	WE	$ .89
59P44-032	P	.042	4.5" x 6" x 1/32"	59 x 44	WE	1.61
64P44-062	P	.042	4.5" x 6.5" x 1/16"	64 x 44	WE	1.79
64P44-062EP	P	.042	4.5" x 6.5" x 1/16"	64 x 44	EP	1.69
84P44-062	P	.042	4.5" x 8.5" x 1/16"	84 x 44	WE	2.22
138P42-062EP	P	.042	4.5" x 13.9" x 1/16"	138 x 42	EP	3.26
169P44-062	P	.042	4.5" x 17" x 1/16"	169 x 44	WE	4.36
169P44-062EP	P	.042	4.5" x 17" x 1/16"	169 x 44	EP	3.83
169P47-062EP	P	.042	4.8" x 17" x 1/16"	169 x 47	EP	3.99
169P59-016	P	.042	6" x 17" x 1/64"	169 x 59	WE	5.69
169P59-047	P	.042	6" x 17" x 3/64"	169 x 59	WE	5.89
169P84-062	P	.042	8.5" x 17" x 1/16"	169 x 84	WE	7.99
169P84-062EP	P	.042	8.5" x 17" x 1/16"	169 x 84	EP	6.79
76M38-032	M	.025	2" x 4" x 1/32"	76 x 38	WE	.89
126M76-032	M	.025	4" x 6.5" x 1/32"	126 x 76	WE	2.29
168K38-032	K	.025	4" x 17" x 1/32"	(168 x 38) x 2	WE	4.89

VECTORBORD®



Pattern A Pattern F Pattern G

Pattern	Spacing	Pattern	Spacing	Pattern	Spacing
A	.265 Centers	B	.188 Centers	H	.100 Centers
C	.200 Centers	E	.141 Centers	G	.20 x .10
		F	.200 Centers		

Hole Dia.	Pattern	Hole Dia.	Pattern
.025"	M, K	.062"	B, E, F, G, H
.042"	P, Q	.093"	A, C

Versatile, economical, and easy-to-use Vectorbord* (Pre-Punched Terminal Board) having precision pre-punched holes at repetitive grid spacings is recommended for both experimental work and for many production jobs. Vectorbord* accepts eyelets, standard turned or Vector Push-In terminals as well as self tap screws for attaching necessary hardware. A complete line of such terminals is available from Vector. Save time, work, and money by using Vectorbord* and parts in your circuitry. May be sawed, drilled or punched.

Prices subject to change without notice.

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Material	Price 1-19
PHENOLIC						
18A18	A	.093	4.8" x 4.8" x 1/16"	18 x 18	Phenolic	$ .45
32A9	A	.093	8.51" x 2.41" x 1/16"	32 x 9	Phenolic	.47
32AA9	A	.093	8.51" x 2.41" x 3/32"	32 x 9	Phenolic	.62
32AA18	A	.093	8.51" x 4.8" x 3/32"	32 x 18	Phenolic	.87
64A18	A	.093	16.99" x 4.8" x 1/16"	64 x 18	Phenolic	1.30
64AA18	A	.093	16.99" x 4.8" x 3/32"	64 x 18	Phenolic	1.66
64AA32	A	.093	16.99" x 8.51" x 3/32"	64 x 32	Phenolic	2.86
45B30	B	.062	8.51" x 5.69" x 1/16"	45 x 30	Phenolic	.87
90B30	B	.062	16.97" x 5.69" x 1/16"	90 x 30	Phenolic	1.68
85C24	C	.093	16.99" x 4.8" x 1/16"	85 x 24	Phenolic	1.30
42G22	G	.062	8.51" x 4.5" x 1/16"	(42 x 22) x 2	Phenolic	.85
42G24	G	.062	8.51" x 4.8" x 1/16"	(42 x 23) x 2	Phenolic	.87
85G22	G	.062	16.99" x 4.5" x 1/16"	(85 x 22) x 2	Phenolic	1.52
85G24	G	.062	16.99" x 4.8" x 1/16"	(85 x 24) x 2	Phenolic	1.54
EPOXY GLASS						
64A18WE	A	.093	16.99" x 4.8" x 1/16"	64 x 18	WE	3.87
120E33WE	E	.062	17" x 4.8" x 1/16"	120 x 33	WE	4.15
175F99WE	F	.062	35" x 20" x 1/16"	175 x 99	WE	28.08
42G24WE	G	.062	8.51" x 4.8" x 1/16"	(42 x 23) x 2	WE	1.97
85G24WE	G	.062	16.99" x 4.8" x 1/16"	(85 x 23) x 2	WE	3.96
170H48WE	H	.062	17" x 4.8" x 1/16"	169 x 47	CG	4.23
170H48WE-032	H	.032	17" x 4.8" x 1/32"	169 x 47	WE	3.57
EPOXY PAPER						
32AA18EP	A	.093	8.51" x 4.8" x 3/32"	32 x 18	EP	1.64
64AA18EP	A	.093	16.99" x 4.8" x 3/32"	64 x 18	EP	3.05
64AA32EP	A	.093	16.99" x 8.51" x 3/32"	64 x 32	EP	5.39
120E33EP	E	.062	17" x 4.8" x 1/16"	120 x 33	EP	2.38
85F24EP	F	.062	16.99" x 4.8" x 1/16"	85 x 23	EP	2.28
85G24EP	G	.062	16.99" x 4.8" x 1/16"	(85 x 23) x 2	EP	2.28
85G42EP	G	.062	16.99" x 8.51" x 1/16"	(85 x 42) x 2	EP	3.95

* VECTORBORD is a registered trade mark of Vector Electronic Company.

COPPER CLAD VECTORBORD* FOR MOUNTING D.I.P. AND FLAT PACKS

User can make his own etched circuits. Ideal for prototypes and many production uses. The last number in each part number indicates whether a board is clad on one or two sides. Phenolic is NEMA Grade FR-2 flame retardant 1 oz. copper clad paper base phenolic. Epoxy glass (WE) is flame retardant Type FL-GF per MIL-P-13949D 2 oz. copper clad. Epoxy paper (EP) is flame retardant Type FL-PH per MIL-P-13949D 2 oz. copper clad.

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Material	Price
PRE-PUNCHED						
3070-1WE	F	.062	6.5" x 4.5" x 1/16"	28 x 22	WEC1	$2.11
42F22C1	F	.062	4.5" x 8.51" x 1/16"	42 x 22	Phen. C1	1.04
85F42WEC1	F	.062	16.99" x 8.51" x 1/16"	85 x 42	WEC1	5.90
42G22WEC1	G	.062	8.5" x 4.5" x 1/16"	(42 x 22) x 2	WEC1	2.65
42G22WEC2	G	.062	8.5" x 4.5" x 1/16"	(42 x 22) x 2	WEC2	2.70
169P44-062C1	P	.042	17" x 4.5" x 1/16"	169 x 44	WEC1	5.89
169P44-062EPC1	P	.042	17" x 4.5" x 1/16"	169 x 44	EPC1	5.36
169P44-062EPC2	P	.042	17" x 4.5" x 1/16"	169 x 44	EPC2	5.75
UNPUNCHED						
CU45/30WE-1			4.5" x 3" x 1/16"		WEC1	.72
CU65/45-1			6.5" x 4.5" x 1/16"		Phen. C1	.62
CU65/45WE-1			6.5" x 4.5" x 1/16"		WEC1	1.39
CU65/45WE-2			6.5" x 4.5" x 1/16"		WEC2	1.58
CU85/45-1			8.5" x 4.5" x 1/16"		Phen. C1	.73
CU85/45WE-1			8.5" x 4.5" x 1/16"		WEC1	1.78
CU85/45WE-2			8.5" x 4.5" x 1/16"		WEC2	2.03



PAD CUTTER TOOLS for isolating terminals from rest of copper cladding leave copper "do - nut" around hole for solder tie. Shank type fits hand or machine drill chuck. Handle type for hand use.

Cat. No.	Pilot Pin Dia.	Ring O.D.	Handle	Price
P116	.055	.250	No	$1.85
P116A	.055	.188	No	1.98
P116B	.055	.250	Yes	2.45
P116C	.055	.188	Yes	2.58
P138A	.040	.125	Yes	2.58
P138C	.040	.125	No	1.98
P138D	.022	.125	Yes	2.58
P138E	.022	.125	No	1.98



RUB-ON RESIST facilitates making prototype etched circuits. Patterns transfer onto copper clad board. Various multipurpose assortments are available with lines, pads, circles and 43 contact connector. Withstands ferric chloride or ammonium persulfate etchant. See special assortments below.

Cat. No.	Description	$2.00 per Sheet
R322	All purpose sheet with connect. pattern	
R405	Sheet of assorted straight lines	
R406	Transistor Pad patterns	
R393A-1	Letters and numbers, black ink, Display and etch use	
R393A-2	Letters and numbers, white ink, Display and etch use	

VECTOR ELECTRONIC CO. INC.

Net

© United Technical Publications

Vector PUSH-IN TERMINALS HOLD SNUGLY WITHOUT STAKING

INBORD PINS TO FIT .025" DIAMETER HOLES



K27A
K27C

K27A is phosphor bronze, nkl. plt. gold fl. Pkg. 50 $.86 net Bulk $11.61 M net.

K27C is phosphor bronze, tintillate plate. Pkg. 50 $.69 net Bulk $8.20 M net.

Insertion tool P131A



K36A
K36C

K36A is phosphor bronze, nkl. plt., gold flash. Pkg. 50 $1.25 Pkg. 1000 $17.98.

K36C is phosphor bronze, tintillate plate, Pkg. 50 $.95 Pkg. 1000 $14.50. Insertion tool P131A



K37A
K37C

K37A is phosphor bronze, nkl. plt., gold flash. Pkg. 50 $.95, Pkg. 1000 $12.95.

K37C is phosphor bronze, tintillate plate, Pkg. 50 $.80, Pkg. 1000 $9.10. Insertion tool P131A



K32

K32 "J" Pin has long .025" square tail for Wire-Wrap.* Tail can be used with patchcords, and soldered to connecting wires. Fits holes .025" sq. and .042" dia. Pins are phosphor bronze, .025" sq. with 0.1" spacing between legs. Tintillate plating. Pkg. 100 $1.49, Pkg. 1000 $11.50.

No insertion tool required.

*Gardner Denver T.M.

TERMINALS AND PINS TO FIT .042" DIAMETER HOLES



T42-1

T42-1 Micro-Klip. Beryllium copper, Tintillate plating. Main slot holds 3 or 4 .025" dia. wires. Hole in tab for .018" transistor lead. Pkg. 100 $1.82, Pkg. 1000 $13.51. P149 insertion tool $1.49 ea.



T44

T44 Miniwrap Terminal has .025" sq. Wire-Wrap* tail, extends 9/16" beyond board surface to permit 5 #26AWG connections, 6 turns ea., Phosphor bronze, tintillate plate. Pkg. 100, $2.96. Pkg. 1000, $25.70. A13 Installation Tool, $1.69 ea. *Gardner-Denver Trade Mark.



K32

See description above right. Will not fit snugly in .042" hole unless nestled in T42-1 terminal.



PART NO.	DIMENSION A	DIMENSION B	PKG. 50	PKG. 1000
K24A	.255	.375	$1.44	$20.59
K24C	.255	.375	.86	11.21
K26A	.160	.195	.92	13.16
K26C	.160	.195	.69	8.58
K31A	.160	.195	$ .99	$14.50
K31C	.160	.195	.79	9.50
K38A	.062	.600	1.49	25.50
K38C	.062	.600	.99	16.15

Material is phosphor bronze. "A" suffix indicates nickel, gold flash plating. "C" suffix indicates tintillate plating.

PUSH-IN TERMINALS TO FIT .062" DIAMETER HOLES



T28

T28 Miniklip. Beryllium copper, tintillate plating. Holds up to 6 leads. Pkg. 100, $1.61, Pkg. 1000, $11.44.

Insertion Tool P91, shaft, no handle, $.50. Tool P91A Insertion Tool with handle, $1.50.



T28-1

T28-1 Miniklip. Shorter version of T28. Tail extends .062" beyond 1/16" circuit board. Pkg. 100, $1.61, Pkg. 1000, $11.44.

Insertion Tool P91, shaft, no handle, $.50. Tool P91A Insertion Tool with handle, $1.50.



T28-2

T28-2 Miniklip. Same as T28 except has slotted bottom end. Pkg. 100, $2.14, Pkg. 1000, $15.60.

Insertion Tool P91, shaft, no handle, $.50. Tool P91A, Insertion Tool with handle, $1.50.



T32A-1

T32A-1 Springclip. For fast, reliable circuit set ups without soldering. Half hard brass with steel spring, tintillate plated. Pkg. 10, $1.40. Pkg. 100, $10.30. Pkg. 1000, $78.00.

P136 Insertion Tool $1.20. **PATENTED**

PUSH-IN TERMINALS TO FIT .093" DIAMETER HOLES



T9.4

T9.4 Zip Terminal. Holds wires in serrated slots until soldered. Half hard brass, tintillate plating. Pkg. 100, $1.44. Pkg. 1000, $10.18.

Insertion Tool P122B $1.40. **PATENTED**



T9.6

T9.6 Zip Terminal. Holds wires in serrated slot until soldered. Beryllium copper, tintillate plating. Pkg. 100, $2.40. Pkg. 1000, $15.66.

Insertion Tool P122B, $1.40. **PATENTED**



T30N-2

T30N-2 Springclip. For fast, reliable circuit set-ups without soldering. Half hard brass with steel spring, tintillate plated. Pkg. 10, $.99. Pkg. 100, $7.23. Pkg. 1000, $50.44.

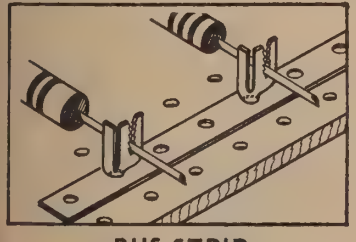
Insertion Tool P92A, $.50 ea. **PATENTED**



T32A

T32A Springclip. For fast, reliable circuit set-ups without soldering. Half hard brass with steel spring, tintillate plated. Pkg. 10, $1.40. Pkg. 100, $10.30. Pkg. 1000, $78.00.

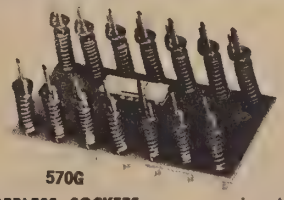
P136 Insertion Tool, $1.20. **PATENTED**



BUS STRIP

Prepunched narrow brass tinned strip mounts to prepunched boards with Zip Push-In terminals or screws. Make connections wherever required quickly.

Cat. No.	Description	Price
T57	16" long. .093" holes spaced .265"	$1.79 /Pkg. 10
T58	8" long. .093" holes spaced .265"	1.10/Pkg. 10
T104	17" long. .062" holes spaced .2"	1.21/Pkg. 10
T107	14" long .042" holes spaced .1"	2.39/pkg. 10



570G

SOLDERLESS SOCKETS save experimental time. Multiple connections can be made to any pin by connecting wires to corresponding SOLDERLESS SPRINGCLIP TERMINAL which is permanently connected to socket contact. Tube socket types mount on Vectorbord* with furnished hardware; 570B and 570G press fit in .093 holes spaced on .265 centers.

Cat. No.	Description	Price
567-1C	Solderless Octal Socket	$1.50
568-1C	Solderless Noval (9 pin) Socket	1.65
569-1C	Solderless Miniature (7 pin) Socket	1.35
570B	Solderless Universal Transistor Socket	1.20
570F	Solderless 12 Pin I.C. Breadboarding socket	3.95
570G	Solderless 14 pin D.I.P. Breadboard socket	3.95

VECTOR ELECTRONIC CO. INC.

INTEGRATED CIRCUIT SOCKETS (D.I.P.)



D.I.P. Socket
R-714 and R-716
Wire Wrap Type

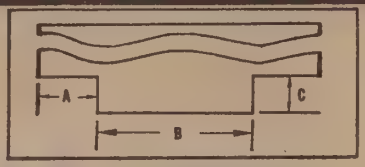
New D.I.P. R-714 Sockets, available with leads fitting .042 holes. R-714-1 intended for soldering directly to P.C. pads. R-716 and R-716-1 have 16 contacts and leads in similar arrangement, with 8 leads per side instead of 7.

CAT. NO.	DESCRIPTION	PRICE
R-714 (Pkg. 5)	Wire-wrap leads. 14 contacts on R-714, 16 contacts on R-716. Glass filled nylon, Phos. brz. nickel, gold plated contacts.	$4.90/pkg.
R-716 (Pkg. 5)		$5.90/pkg.
R-714-1 (Pkg. 5)	R-714-1, 14 contacts, R-716-1, 16 contacts. Nylon casting, Phos. brz. tin pltd. contacts.	$3.20/pkg. Short Tabs
R-716-1 (Pkg. 5)		$3.85/pkg. Short Tabs

Vector PLUGBORDS SPEED PLUG-IN CIRCUIT CONSTRUCTION



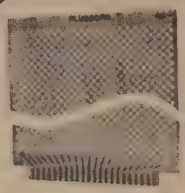
3677



3677 SERIES D.I.P. PLUGBORDS

Mount I.C. sockets and components (up to 24 D.I.P. units with 14 leads or 21 with 16). Supplied with overall punched grid of .042" diameter holes spaced .1" apart, etched buses 1 side for Vcc and ground plus 3 hole pad groups and individual pad areas are tinned. FR-4, epoxy glass per MIL-P-13949, Type FL-GF. Gold plated contacts (2 sides). Mate with R644 Receptacle.

Cat. No.	Contacts	Length	Width	Notch Dimension A	B	C	Net Price 1-19 pcs.
3677	44	9.6	4.5	.458	3.58	.375	$9.89
3677-2	44	6.5	4.5	.458	3.58	.375	8.84

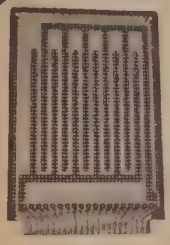


838WE-1GN

DISCRETE COMPONENT PLUGBORDS ETCHED CONTACT TYPES

These boards are 4½" x 6½" x 1/16" and have an overall grid of .062" diameter holes on alternate .1" centers for easy component placement. 2 oz. etched copper contacts are available both gold plated and unplated for economy. T28 push-in terminals, conventional turned terminals, or eyelets may also be used. Boards are supplied in epoxy glass Type FL-GF per MIL-P-13949 on types with "WE" in part number and epoxy paper Type PX per MIL-P-13949 on all other types. Mate with R644 Receptacle. "GN" denotes Gold plated contacts.

Cat. No.	Contacts	L	W	Material	Notch Dimension A	B	C	Net Price 1-19 pcs.
838	43	6.5	4.5	Epoxy paper	.408	3.58	.375	$3.89
838-1	43	6.5	4.5	Epoxy paper	.458	3.58	.375	3.89
838A	22	6.5	4.5	Epoxy paper	.408	3.58	.375	2.81
838A-1	22	6.5	4.5	Epoxy paper	.458	3.58	.375	2.81
838AWE	22	6.5	4.5	Glass epoxy	.408	3.58	.375	3.17
838AWE-1GN	22	6.5	4.5	Glass epoxy	.458	3.58	.375	4.70
838WE	43	6.5	4.5	Glass epoxy	.408	3.58	.375	3.86
838WE-1GN	43	6.5	4.5	Glass epoxy	.458	3.58	.375	5.81



3682

3682 TYPE D.I.P. PLUGBORD

Will mount up to 54 D.I.P. sockets with 14 pin or 48 units with 16 pins. Overall grid of .042" diameter holes on .1" centers specially for Wire-Wrap* D.I.P. socket types and Vector T44 Miniwrap terminals. Etched buses one side for Vcc and ground are tinned. 3682-4 type has ground plane on back with etched clearance around each hole for lead isolation. FR-4, epoxy glass per MIL-P-13949 Type FL-GF, 2 oz. copper etched gold plated contacts (2 sides) mates with R644 Receptacle. *T.M. Gardner-Denver.

Cat. No.	Contacts	Length	Width	Notch Dimension A	B	C	Net Price 1-19 pcs.
3682	44	9.6	4.5	.458	3.58	.375	$9.50
3682-2	44	6.5	4.5	.458	3.58	.375	8.49
3682-4	44	6.5	4.5	.458	3.58	.375	9.25

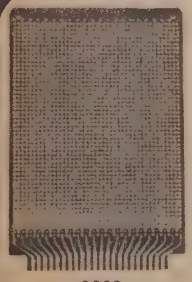


848WE

DISCRETE COMPONENT PLUGBORDS ELCO VARICON TYPE

These boards furnished with an overall grid of .062" holes on alternate .1" centers for easy component placement. Reliable Elco Varicon contacts are staked to bottom edge and mate with listed receptacles. T28 Push-In terminals or conventional turned terminals or eyelets may be used for component mounting. 812 and 837 types use single tier contacts. Material: Epoxy glass per MIL-P-18177, Type GEE.

Cat. No.	Contacts	L	W	Material	Notch Dimension A	B	C	Net Price
812	16	6.5	4.5	Epoxy paper	No notches			$2.98
812WE	16	6.5	4.5	Epoxy glass	No notches			3.53
837	12	4.5	3	Epoxy paper	No notches			2.33
837WE	12	4.5	3	Epoxy paper	No notches			2.58
848WE	35	6.5	4.5	Epoxy glass	.397	3.70	.750	6.09

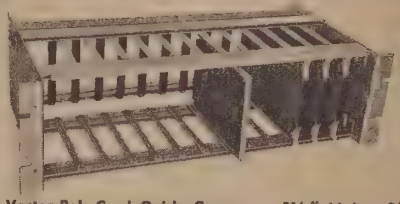


3662

UNIVERSAL TYPE 3662 AND 848PWE

Versatile D.I.P. type plugbords with boards punched in overall pattern of .042" diameter holes on .1" centers and furnished without any etched circuit pattern. Both models are FR-4, epoxy glass per MIL-P-13949 Type FL-GF. Model 3662 has 44 2 oz. etched gold plated contacts (total 2 sides). Mates with R644 Receptacle. Model 848PWE has 35 Elco Varicon contacts. Mates with R635 Receptacle.

Cat. No.	Contacts	Length	Width	Notch Dimension A	B	C	Net Price 1-19 pcs.
3662	44	6.5	4.5	.458	3.58	.375	$6.95
848PWE	35	6.5	4.5	.397	3.70	.750	6.29



VECTOR-PAK DISCRETE CARD GUIDE CAGE WITH VECTOR PLUGBORDS INSTALLED

Vector-Pak Card Guide Cages are 5¼" high x 9" deep x 19" wide slotted for rack mounting with six heavy extruded aluminum cross members, aluminum side walls, and will accommodate cards 3" to 4½" wide and up to 7⅞" in length. Infinitely variable connector mounting without drilling holes.

CCK-13 Cage is partially assembled for quick setup. This cage is supplied with discrete aluminum card guides to accommodate twenty cards at ¾" intervals. Guides can be easily adjusted for other spacing in multiples of ¼". $29.50 each.

CCK-3 Cage is partially assembled for quick setup. This cage has the same basic structure as CCK-13 but individual card guides are replaced with extruded aluminum guide plates with slots every .150" over entire width of cage. $23.75 each.



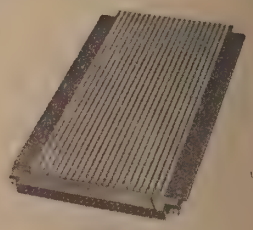
3474

X-Y TYPE D.I.P. PLUGBORDS

2 oz. copper .070" wide etched tinned lines running vertically one side, horizontally reverse side, or vertically one side only ("Y" Type). Vertical lines interrupted to mount twelve 14 lead D.I.P.'s. Connections between board sides are made with soldered Inbord Pins or wires. Etched tinned lines can be cut with knife or line cutter tool P-139. Board material epoxy paper Type PX per MIL-P-13949. Gold plated contacts. All boards are 6.5 x 4.5 including aluminum Kardej Frame which fits 1/16" card guides.

Cat. No.	Matrix	Contacts	Mating Recept.	Notch Dimension With Kardej A	B	C	Net Price 1-19 pcs.
3474	X-Y	44 etched, 2 sides	R644	.458	3.58	.375	$10.50
3474-3	Y	22 etched, 1 side	R644	.458	3.58	.375	8.08
3476	X-Y	35 Varicon, 1 side	R635	.400	3.70	.750	11.40
3476-3	Y	35 Varicon, 1 side	R635	.400	3.70	.750	8.98
3477	X-Y	44 etched, 2 sides	R636	No notches			9.94
3477-3	None	44 etched, 2 sides	R636	No notches			7.54

VECTOR ELECTRONIC CO., INC.

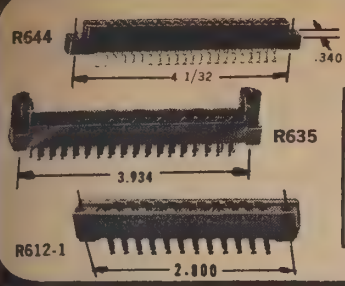


EXTENDER 3690

Extender permits operation of wired plugbords outside of card enclosures. Plug-in portion has 44 (total two sides) .156" spaced gold plated contacts connected to a 44 contact high grade permanently mounted receptacle mounted on top edge. Extender card is 4½" wide by 8" long by 1/16" thick, flame retardant epoxy glass. $11.30 ea. net.

Net

© United Technical Publications

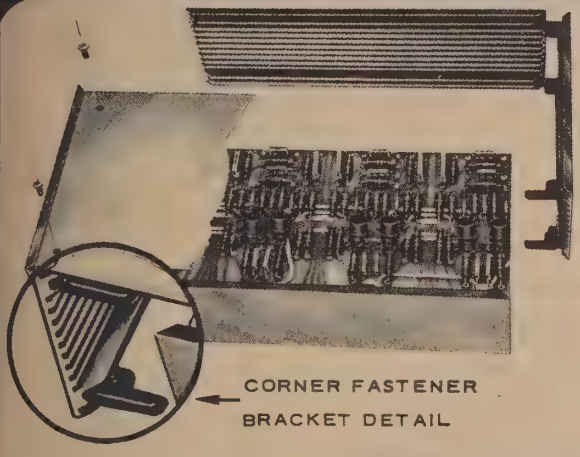




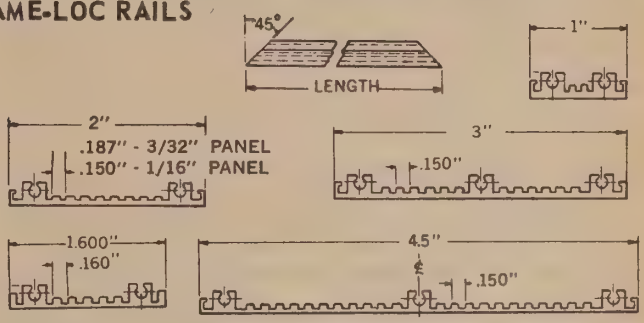
Vector RECEPTACLES

Cat. No.	No. of Contacts	Insultg. Mat'l.	Contact Plating	Description	Net Price
R612-1	12 pin Varicon	Diallyl Phthalate	Nickel Gold	Comb. .078" taper and solder tab	$2.08
R616-1	16 pin Varicon	Diallyl Phthalate	Nickel Gold	Solder tabs	2.60
R635	35 pin Varicon	Diallyl Phthalate	Nickel Gold	Solder tabs	5.35
R636	36/72 spaced .1" P.C.	Electrical Grade Phenolic	Contact Points Gold/Silver Alloy	Wire-Wrap* tabs, .025" sq.	4.70
R644	22/44 spaced .156" P.C.	Diallyl Phthalate	Sel Rex. .00003" gold flash	Single hole, solder tail tabs	2.97

* Gardner-Denver trade mark.



FRAME-LOC RAILS



Vector Frame Loc Rails are slotted aluminum rails with natural anodized finish designed to accommodate panels 1/16" or 3/32" in 2" width only. Rails may be used for making chassis and cases for circuit cards. Mitred lengths are furnished with push-in corner brackets plus corner gripping washers and screws for rigid fastening. Listed aluminum covers have four corner holes to pass screws into corner brackets.

PATENTED

EXTRUDED ALUMINUM RAILS FOR CHASSIS AND CASES

RAIL WIDTHS	RAIL LENGTHS — All rails have mitre cut ends and special fasteners except 24" length which have square cut ends. Prices are per pair							
	Square cut 24" long	3.1" long	4.6" long	4.9" long	6.6" long	8.6" long	10.0" long	17.1" long
1"	SR1-240-062 $2.93 pr.		SR1-46-062 $1.18 pr.		SR1-66-062 $1.40 pr.		SR1-100-062 $1.71 pr.	SR1-171-062 $2.44 pr.
1.6"			SR16-46-062 $1.39 pr.					
2"	SR2-240-062 $3.84 pr.	SR2-31-062 $1.23 pr.	SR2-46-062 $1.44 pr.	SR2-49-062 $1.46 pr.	SR2-66-062 $1.72 pr.	SR2-86-062 $1.92 pr.	SR2-100-062 $2.21 pr.	
2"*		SR2-30-093 $1.23 pr.	SR2-46-093 $1.44 pr.	SR2-48-093 $1.46 pr.	SR2-66-093 $1.72 pr.	SR2-85-093 $1.92 pr.	SR2-100-093 $2.21 pr.	SR2-170-093 $3.20 pr.
3"	SR3-240-062 $4.19 pr.		SR3-46-062 $1.52 pr.		SR3-66-062 $1.85 pr.		SR3-100-062 $2.32 pr.	SR3-171-062 $3.49 pr.
4½"	SR45-240-062 $5.92 pr.		SR45-46-062 $1.91 pr.		SR45-66-062 $2.40 pr.			

Quantity prices, special lengths and finishes available — consult factory.
* 2" width rail only with slots for .093" cards.

COVER PLATES (.064" Thick Aluminum)

Catalog No.	Length	Width	Price 1 - 49	Catalog No.	Length	Width	Price 1 - 49
PL2746	4.5	2.750	$ .48 each	PL4597	9.7	4.500	$1.22 each
PL4546	4.5	4.500	.63 each	PL8097	9.7	8.000	1.71 each
PL8046	4.5	8.000	1.01 each	PL27140	14.0	2.750	1.19 each
PL2766	6.5	2.750	.52 each	PL45140	14.0	4.500	1.31 each
PL4566	6.5	4.500	.69 each	PL80140	14.0	8.000	2.45 each
PL8066	6.5	8.000	1.25 each	PL48-170-Pkg 2	17.0	4.800	4.14 pair
PL48-85-Pkg 2	8.5	4.800	2.74 pair	PL85-170-Pkg 2	17.0	8.500	6.29 pair
PL2797	9.7	2.750	.70 each				

I.C.P. AND TRANSISTOR SOCKETS


RA10-1
I.C.P. Socket


RA9
Transistor Socket

Transistor Sockets accept 4 leads on 0.2" diam. circle. MFE and Beryl. Cop. contacts.

I.C.P. Sockets fit TO-5 size 8 or 10 leads. Formed to insert in 0.1" spaced holes (P or H pattern bds.) D.I.P. body and Beryl. copper contacts.

CAT. NO.	NO. TABS	SADDLE	PRICE 1 - 49
RA-9	4	No	.38
RA-9.1	4	Yes	.65
RA-88-1	8	No	1.00
RA-10-1	10	No	1.07


10-12


8-A12T

Vector Socket, Terminal and Transistor Turrets simplify electronic construction. Faster wiring, greater component density and higher reliability are assured by their use. Transistor sockets accommodate 3 - in - line or "top - hat" transistors. Commercial types have mica filled sockets, hot tin dipped steel saddles and XXXP phenolic turret posts with brass tinned terminals. Military types (premium grade) have MIL sockets with beryllium copper silver plated socket contacts, brass nickel plated hot tin dipped saddles and glass silicone turret posts with tinned brass terminals.

PATENTED

VECTOR ELECTRONIC CO., INC.

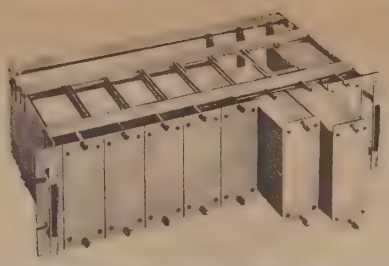
POST SOCKET TURRETS

Catalog Numbers Comm. Types	Military Types	Turret Details Height	No. of Term.	No. of Rings	Space Between Rings	Net Price Comm. Type 1-49
OCTAL SOCKET TURRETS						
8-0-9T	681	2"	9	2	1"	$ .68
10-0-9T	683	2½"	9	2	1⅜"	.72
7-PIN SOCKET TURRETS						
6-M-6T	687	1½"	6	1	—	.72
8-M-9T	688	2"	9	2	1"	.79
9-PIN SOCKET TURRETS						
6-N-6T	693	1½"	6	1	—	.72
8-N-9T	694	2"	9	2	1"	.79
TERMINAL TURRETS						
8-12	677	1-27/32"	12	2	1"	.66
10-12	678	2"	12	2	1⅜"	.70
TRANSISTOR TURRETS						
8-A-12T		2-11/32"	12	2	1⅜"	1.23

Note: Tolerance on dimensions 1/16"

Longer or shorter types and other terminal configuration to order.

VECTOR-STRUT CAGES



Vector-Strut Cages are uniquely adjustable aluminum frames designed for mounting in 19" equipment racks which accommodate "EFP" Modules shown **right**, or cards. Vector Strut Cages are sold in kit form in three heights, 3 1/32", 5 7/32", 8 23/32", and three depths, 8.975", 11.975", and 15.725". Kits consist of the side walls, cross members (Triple T Struts) and brackets, plus necessary assembly hardware. Extruded aluminum card and case guides, EFP Modules, and handles are ordered separately as required.

Ordering Information

CA-52-HE-89 General Purpose Module Cage Kit 5 1/4" high with 9" long sidewalls for 19" rack mounting.

CMG-7 Kit of case guides and mounting hardware to mount eight 2" wide EFP modules in CA-52-HE-89 Cage above.

CMG-4 Kit of case guides and mounting hardware to mount ten 1.6" wide EFP Modules in CA-52-HE-89 Cage above.

Completely Assembled Module Cages

CMA-3-20 completely assembled cage consisting of all parts supplied in CA-52-HE-89 and CMG-7 above. (Modules must be ordered separately.)

CMA-3-16 completely assembled cages with guides installed for ten 1.6" wide EFP Modules. (Modules must be ordered separately.)

Many other sizes and types available from stock. Contact factory.

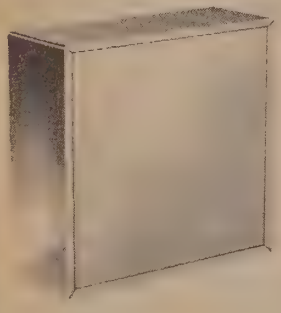
VECTOR "EFP" (EXTENDED FRONT PANEL) CASES



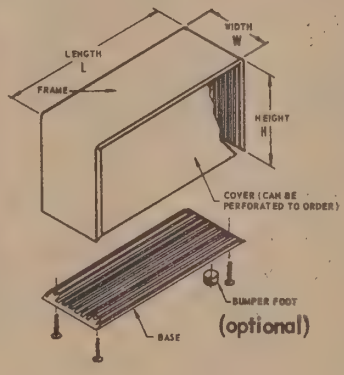
Vector "EFP" aluminum module cases are made in many sizes to accommodate circuit boards from 2.7" to 7.9" wide and 4.6" to 14" long. All EFP cases will fit Vector Strut Cages. EFP cases have identical top and bottom extruded rails with parallel .062" longitudinal grooves spaced for holding circuit boards, slide out .062" side covers, front and rear panels. Captive thumb screws are provided. Order eight EFP-204-6.6 Cases for CMA-3-20 Cage at $6.07 per case.

Order 16 EFP-164-6.6 Cases for CMA-3-16 Cage at $5.90 per case.

MULTI-MOD CASES



W20-46-46

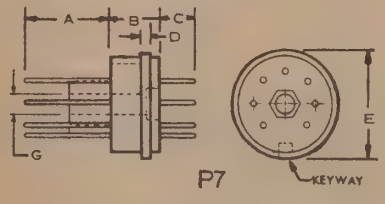


PATENTED FEATURES

Sleek sturdy aluminum cases with .075" wide slots on .150" centers across case width for effortless screw free mounting of cards or shielding panels. Easily removable 4th side permits side cover to slide off and provides quick access to cards. Good RFI shielding provided by overlapping cover joints. Clear anodized finish is standard.

CAT. No.	WIDTH	LENGTH	HEIGHT	FOR CIRCUIT CARD SIZE	PRICE 1 - 49
W16-31-31	1.6"	3.10"	3.10"	2.98 x 2.98	$ 3.41
W20-46-31	2.0"	4.61"	3.10"	2.98 x 4.50	3.93
W20-46-46	2.0"	4.61"	4.61"	4.49 x 4.50	4.34
W20-66-46	2.0"	6.61"	4.61"	4.49 x 6.50	5.15
W30-66-46	3.0"	6.61"	4.61"	4.49 x 6.50	5.95
W30-86-46	3.0"	8.61"	4.61"	4.49 x 8.50	6.50
W30-100-46	3.0"	10.00"	4.61"	4.49 x 9.89	7.00
W30-100-66	3.0"	10.00"	6.61"	6.49 x 9.89	7.80
W30-100-80	3.0"	10.00"	8.00"	7.88 x 9.89	8.35
W30-140-80	3.0"	14.00"	8.00"	7.88 x 13.89	10.10
W45-66-46	4.5"	6.61"	4.61"	4.49 x 6.50	6.15
W45 86-46	4.5"	8.61"	4.61"	4.49 x 8.50	6.95
W45-100-46	4.5"	10.00"	4.61"	4.49 x 9.89	7.60
W45-140-80	4.5"	14.00"	8.00"	7.88 x 13.89	11.78
FT-3-Pkg 8		Rubber Bump Feet			.40 Pkg

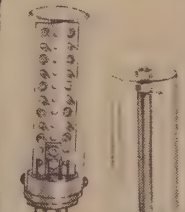
TUBE BASE PLUGS



VECTOR TUBE BASE PLUGS fit standard 7-pin miniature, 9-pin noval, and 14-pin relay sockets. Round metal cans may be attached with screws to sides. Plugs are mica filled phenolic with phosphor bronze .040" diameter tinned pins. All except K1.14 have center screw hole 1/8" and recessed bottom cavity for small pattern nut on under side.

Catalog No.	Type	DIMENSIONS A	B	C	D	E	Net Price 1-49
P7	7 p. min.	17/32	.300	.265	1/16	.621	$.47
P9	9 p. nov.	17/32	.300	.265	1/16	.748	.52
K1.402	(same as P9 except no center post)						.52
K1.334	7 Pin hooked		.300	.265	1/16	.621	.53
K1.434	9 Pin hooked		.300	.265	1/16	.748	.58
KR1.334	(same as K1.334 except with retaining ring)						.62
KR1.434	(same as K1.434 except with retaining ring)						.67
K1.14	14 pin	17/32	.300	.265	1/16	.750	.99
KF1.335	(Similar to K1.334 except has knurl nuts and no keyway.)						.87
KF1.435	(Similar to K1.434 except has knurl nuts and no keyway.)						.96

ROUND AND SQUARE PLUG-INS



G2.2-8-4

G2.1-8



C12-K1.02 (with 514)

Ideal for packaging hand wired, printed, or solid state plug-in modules. Aluminum cases provide shielding and strength. Wide variety of internal structures eases circuit wiring. 7-, 8- and 9-pin plugs are standard. 14-pin is relay type. Plug key in square Octal based units points toward case corner.

Catalog No.	Bottom Plug	Case Type	Case Height (Less Prongs)	Internal Structure	Net Price 1-49
B-8	8 P. Oct.	1.42" Sq.	2"	None	$1.56
B-10	8 P. Oct.	1.42" Sq.	2.5"	None	1.57
B-10-N	8 P. Oct.	1.42" Sq.	2.5"	Turret	2.46
B-10-T	8 P. Oct.	1.42" Sq.	2.5"	Turret	1.90
B-10-4†	8 P. Oct.	1.42" Sq.	2.5"	Card W/Terms.	2.19
C-10	8 P. Oct.	2" Sq.	2.5"	None	1.50
C-12	8 P. Oct.	2" Sq.	3"	None	1.44
C-12K1.02	8 P. Oct.	2" Sq.	3"	None	1.10
511 (Terminal Card 1.9" x 2.7")†					.69
514 (Terminal Card 1.9" x 2.7")†					.91
C-12-T	8 P. Oct.	2" Sq.	3"	Turret W/12 Lugs.	2.11
C-12-4†	8 P. Oct.	2" Sq.	3"	Card W/Terms.	3.14
G2-10	8 P. Oct.	1.25" Rd.	2.5"	None	1.16
G2-10-4†	8 P. Oct.	1.25" Rd.	2.5"	Card W/Terms.	2.46
G2.1-8	9 P. Min.	.75" Rd.	2"	Spacer	1.45
G2.1-8F	9 P. Min.	.75" Rd.	2"	None	1.49
G2.1-8-4†	9 P. Min.	.75" Rd.	2"	Card W/Terms.	2.30
G2.2-8F	7 P. Min.	.625" Rd.	2"	None	1.49
G2.2-8-4†	7 P. Min.	.625" Rd.	2"	Card W/Terms.	2.28

†511 has .093" holes spaced .265"; 514 has .062" holes, spaced alt. 0.1" Ctrs.; B-10-4 has wall 1.37" (W), 1.87" (L), W/.093" holes spaced .265" Ctrs. Trmls.; C-12-4 has wall 1.88" (W), 2.37" (L), W/.093" holes spaced .200" x .265" Ctrs., Trmls.; G-2-10-4 has wall 1.08" (W), 1.78" (L), W/.093" holes spaced .250", Trmls.; G2.1-8-4 has wall .60" (W), 1.62" (L), W/.062" holes spaced .141" Ctrs., Trmls.; G2.2-8-4 has wall .46" (W), 2" (L), W/.062" holes spaced .141" Ctrs., Trmls.

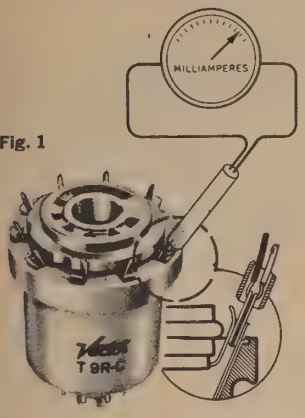
VECTOR ELECTRONIC CO., INC.

Net

© United Technical Publications

Vector TUBE SOCKET TEST ADAPTERS AND EXTENDED TUBE SOCKET TEST ADAPTERS

Fig. 1



T9R-C
WITH P-2 PROBE

Fig. 2



T9N

Fig. 3



T7MS

Fig. 4



TX-8-O
OCTAL

VERSATILE CURRENT TEST ADAPTER TYPE Fig. 1

Versatile VECTOR CURRENT TEST ADAPTERS make possible tube circuit current or voltage measurements without cutting leads or making computations. All measurements may be made from the tube side of the electronic equipment without disturbing the chassis. Vector Current Test Adapters have two spring test tube elements for each pin. These test tube elements break the circuit when a dual-sided probe is inserted in test position. Probes are gripped by the test tabs and need not be held in position. Current is read at the meter where the two test leads are connected. The same test adapters and probe also permit voltage and wave form readings on any pin position, merely by connecting the leads jointly to the meter. The adapters have mica-filled shell and keyways, and may be used in a horizontal or vertical position.

TUBE SOCKET TEST ADAPTERS — REGULAR Fig. 2

Similar to above adapters, except used to measure voltage and waveforms. Probe fits into tab holes which grip probe lead. High quality beryllium copper silver contacts and low loss mica filled phenolic shells. Adapters fit inside tube base shields and tube clamps.

TUBE SOCKET TEST ADAPTERS — SHIELDED TYPE Fig. 3

For most work the short, unshielded adapters are adequate. For hard to reach locations or where surrounding equipment restricts use of regular test adapters, the 3 to 4 inch extended adapter may be used. In these the leads between plug and socket are individually shielded to minimize coupling.

EXPERIMENTER'S AND MODIFICATION ADAPTERS Fig. 4

EXPERIMENTER'S TEST ADAPTERS. These are similar to the Socket Test Adapter but are less the shells and tabs so that connections can be cross-connected in any desired way. User must solder connections. Different plug and socket combinations available.

SOCKET EXTENDERS (NOT ILLUSTRATED)

SOCKET EXTENDERS provide a replaceable unit for use in tube testers and expensive meters. Wear is shifted from the socket in the tester to the one in the extender. Sockets have beryllium copper silver plated contacts for long life. An all molded outside shell is used with socket leads soldered to plug pins.

ORDERING INFORMATION

Cat. No.	Type	Length Less Prongs	Net Price 1-19
CURRENT TEST ADAPTERS			
T-7-M-C	7 Pin Miniature		$3.04
T-8-O-C	8 Pin Octal		3.83
T-9-N-C	9 Pin Noval		3.24
T-9-R-C	9 Pin Novar		3.65
T-12-C	12 Pin Compactron		3.95
P-2	Dual Sided Plug-in Probe, required for above. Any quantity.		1.09
T-789-C	Set of First 3 Adapters with P-2 Probe in Case		11.69
T-912-C	Set of Novar and Compactron Adapters With P-2 Probe in Case		9.89
TUBE SOCKET TEST ADAPTERS — REGULAR			
T-7-M	7 Pin Miniature	1.50″	1.85
T-8-O	8 Pin Octal	1.50″	1.95
T-9-N	9 Pin Noval	1.50″	1.95
T789	Set of types T-7-M, T-8-O, T-9-N, P1 in case.		6.27
TUBE SOCKET TEST ADAPTERS — SHIELDED TYPE			
T-7-M-S	7 Pin Miniature	3.25″	5.91
T-8-O-S	8 Pin Octal	4.00″	6.60
T-9-N-S	9 Pin Noval	3.25″	6.60
T-789-S	Set of above in Case with P1		19.47
P1	Plug-in Probe with 30″ lead		.52

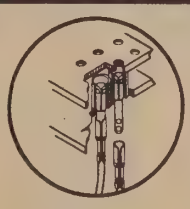
Experimenter's Test Adapters and Socket Extenders

Cat. No.	Socket Type	Net Price 1-19	Cat. No.	Socket Type	Net Price 1-19
TX-8-O	Octal	$2.47	1262	8 P. Octal	$1.95
TX-7-M	Miniature	.88	1263	9 P. Noval	1.75
TX-9-N	Noval	.94	1264	7 P. Miniature	1.75

PATCHBOARDS



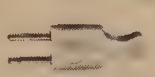
PB1020-2



DETAIL



PATCHCORD K2.06



JUMPER PLUG K2.02-1



PIGGY-BACK PATCHCORD

Vector Fixed Panel style Patchboards provide simple but reliable low-cost units for multiple connection, single conductor patching for test panels, automation and telemetry equipment, low cost computers, numerical control equipment, paging and speaker systems or other equipment where economy and connection multiplicity are desired.

Extremely low contact resistance (less than .001 ohms) and long contact life (over 2000 insertions per contact without resistance change) assures reliability.

All boards are marked front and back with horizontal rows lettered alphabetically and vertical columns numbered. Brackets for mounting are supplied.

Holes for plugs are .093″ diameter, spaced on .265″ centers. Front panels are removable and may be changed if necessary. Larger contact systems can be made by mounting standard panels adjacent. Special sizes, special marking and screening in colors are made to order at minimum cost.

SPECIFICATIONS:

Panels: Black XXXP phenolic, Type PBE-P. Grade EXXXP per MIL-P 3115, .093″ thick with silkscreened white numbers and letters.

Contacts: Beryllium copper, nickel plated gold flashed, 2 holes for soldering on leads. Add letter "A" to Cat. No. if Wire-Wrap*tabs are desired.

Patchcords: Plugs .087″—.091″ diameter x .468″ long, nickel plated with standard #20 gage wire vinyl insulation. 6″ black, 9″ yellow, 15″ blue.

Cat. No.	No. of Contacts	Hole Layout	L W THK	Net Price 1-49
PB33-2	9	3 x 3	1.130 x 1.130 x 1″	$ 2.95
PB110-2	10	10 x 1	2.985 x .600 x 1″	3.25
PB210-2	20	20 x 2	2.985 x .865 x 1″	4.25
PB510-2	50	10 x 5	2.985 x 1.660 x 1″	6.45
PB1010-2	100	10 x 10	2.985 x 2.985 x 1″	10.85
PB1020-2	200	20 x 10	5.635 x 2.985 x 1″	21.60
PB1520-2	300	20 x 15	5.635 x 4.310 x 1″	32.35
*K2.06	Patchcord, single contact ea. end 6″ (25 per bdl.)			bdl/3.04
*K2.09	Patchcord, single contact ea. end 9″ (25 per bdl.)			bdl/3.08
*K2.15	Patchcord, single contact ea. end 15″ (25 per bdl.)			bdl/3.53
†K9.06	Patchcord, Piggy-back each end 6″			ea. .93
†K9.09	Patchcord, Piggy-back each end 9″			ea. .93
†K9.15	Patchcord, Piggy-back each end 15″			ea. .93
*K2.02-1	Jumper Plug, Jumper type (25 per bdl.)			bdl/3.35
1723/41	Solderless slip on contact for rear connection			$38.50/M
P115	Crimping tool for above contact			Contact factory

*Net any quantity †Net price 1-999 *Gardner Denver T.M.

Removable Pre-Programming Patchboard and patchcords also available with 204, 300, 450, 600 and 1200 contacts. Write factory.

VECTOR ELECTRONIC CO., INC.

32X PHOTORESIST ETCHED CIRCUIT KIT



32X DIRECT POSITIVE PHOTORESIST ETCHING KIT — $8.95

Designed to produce in minimum time one or more sharply detailed etched circuit boards from easily made master positive. (This process differs from most other systems which use **NEGATIVE** acting photoresist.) Positive artwork is used with no photography or special darkroom required. Special integrated circuit patterns provided. Apply transfer patterns to mylar film for master positive, place on pre-photo-sensitized Vectorboard® and expose to suitable light source such as photoflood or sunlight. Developing quickly done in solution and tray provided. High speed etching with virtually no under-cutting is provided by vigorously shaking board and chemicals in closable plastic box.

KIT CONTENTS: One 4.5" x 6.5" and one 4.5" x 2.73" copper clad (1 side) phenolic board sensitized with **POSITIVE** acting photoresist, developer, etchant, transfer patterns, mylar sheet, cut and peel sheet, touch-up resist and brush, developing tray, and glass exposure plate.

27XA ETCHED CIRCUIT KIT
RESIST APPLIED DIRECTLY TO COPPER



27XA ETCHED CIRCUIT KIT—$6.50

LOW COST—FAST—HAS EVERYTHING EXCEPT HOT WATER. Specially designed for lab use in making uncomplicated etched circuits. Kit built around Vectoresist, Vector's rub-on resist transfer sheet. Resist lines, dots, or connector pattern transfer by rubbing to furnished 1 oz. copper clad prepunched boards in minutes. Then etch in etchant furnished in heavy plastic bag with special activator in as little as 30 minutes. Kit includes 2 copper clad boards, 4½" x 6½", 2 bags of etchant, 8½" x 11" sheet rub-on Vectoresist, layout paper, complete instructions. See Kit Accessories page for Vectoresist details.

INTEGRATED CIRCUIT EXPERIMENTER'S KITS



29X Kit

PATENTED FEATURES

The 30X Kit is a compact assortment similar to the popular Vector 20X Kit except that it is adapted for use with integrated circuits and other semi-conductor devices. Contains 8.6" x 4.6" extruded aluminum Frame-Loc Rail Chassis with "P" Pattern Micro-Vectorbord having .042" dia. holes on .1 ctrs., chassis bus strips, 100 Micro-Klip T42-1 terminals and one P149 Installing Tool, 50 K32 "J" terminals for Wire-Wrapping*, bare and insulated hook-up wire, 2 sheets grid layout paper and adhesive to mount D.I.P. sockets. $10.75. *T.M. Gardner-Denver.

Kit 31X provides a larger Micro-Vectorbord®, 4½" x 17", holes .042" dia., spaced .1" ctrs., with Frame-Loc Chassis, and a larger assortment of hardware. In addition to hardware supplied in 30X Kit, there are 50 K24C Inbords Pins, two B20F pot and switch mounting brackets, with mtg. screws, lockwashers and nuts and four additional sheets of grid layout paper supplied. $17.50.

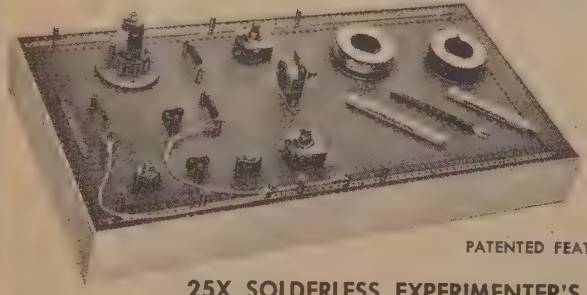
Kit 30XA provides I.C. mounting at minimum cost with an 8½" x 4½" "P" Pattern Micro-Vectorbord, as with 30X Kit, mounting supports and 100 T42-1 Micro-Klip terminals and installing tool. $4.50.

The 29X Kit is a special group of new Vector products especially designed for fast, easy hookups of nearly all package configurations of integrated circuits. The mounting surface is a pre-punched Micro-Vectorbord* having .042" diameter holes on 1/10" grid spacings supported on Vector Frame-Loc Rails 2" high. Dual-in-line packages may be fastened directly to the breadboard with the tails extending through the holes; or special sockets supplied may be used which have square tails which also push into the board. Integrated circuits of the TO-5 type may also be mounted with wafers, which are supplied, or in sockets supplied with leads formed to plug into the board. Transistor sockets whose leads also fit the board are supplied. Supplied T42-1 Micro-Klip push-in terminals fit board holes and are ideal for mounting discrete components of various types. Inbord Pins of .040" diameter also push into the holes for tie points or plug points. Wiring of these leads may be done by use of supplied polyurethane coated solderable wire which may be wrapped around the terminals and soldered through the insulation or by "Daisy Chain" patch cords which will connect directly to the Wire-Wrap* tabs or other pins, thus facilitating quick experimental connection. Flatpacks with .05" spaced leads may also be mounted by use of furnished adapter plates which plug into the holes of the breadboard. These will normally be soldered to the adapter plate terminals. $59.75. *Gardner-Denver Trade Mark.

KIT CONTENTS

14- and 16- pin DIP Sockets, TO-5 ICP Sockets, Transistor Sockets, Flatpack Adapter Plates, T42-1 ZIP Terminals, K24C Inbord Pins, Adapter Wafers, "Daisy Chain" Patchcords, DIP Extractor Tool, P149A Insertion Tool for T42-1 Terminals, Bus Strips, Layout Paper, Special Contacts, assorted wire, miscellaneous mounting hardware and P pattern Micro-Vectorbord.* * T.M.

VECTOR BASIC MODEL EXPERIMENTER KITS



PATENTED FEATURES

25X SOLDERLESS EXPERIMENTER'S KIT

25X SOLDERLESS TUBE AND TRANSISTOR EXPERIMENTER'S CHASSIS KIT- $21.45 Dual type solderless kit with full complement of tube and transistor sockets. Belongs in every electronics lab. Differs from other Vector kits because it includes large number of Solderless U-Clip terminals and special solderless connectors for pots and switches, plus more of all other components. Detail of contents: 8½" x 17" x 2" Extruded Aluminum chassis frame with 3/32" Vectorbord deck, 2 power and 6 universal transistor sockets with pigtails, 3 each 7 and 9 pin tube sockets, 2-8 pin octal; 100 Zip Push-In Terminals, 90 Solderless Springclip terminals, 10 Solderless U-Clips, 10 hookup patchcords, bus strip, 8 wafers to make solderless sockets, terminal installing tools, bare and insulated wire, grid layout paper, 4 pot and switch brackets, 204 assorted screws, nuts, brackets. Board has 3/32" dia. holes on .265" centers.

22X KIT FOR TRANSISTOR CIRCUITRY—Special parts assortment for transistor circuitry. 4.8" x 8½" x 2" extruded aluminum Frame-Loc Chassis rail with 3/32" Vectorbord deck. Transistor sockets include 2 power type, 6 universal type, 75 Zip Push In Terminals, 20 Solderless Springclip terminals, 6 hookup patchcords, bus strip, terminal installing tools, bare and insulated hookup wire, 4 pot and switch brackets, 134 assorted screws, nuts, spacers, brackets. Board as above. $11.50

22XA— $28.00 (Not illustrated)—Larger professional sized version of 22X above. Chassis extruded Aluminum Frame-Loc type 17" x 8½" x 2" with Vectorbord deck. Includes 2 power transistor sockets, 6 universal type transistor sockets with pigtail leads, 124 Zip Push-In Terminals, 100 Solderless Springclips, 18 Solderless U-Clips, 14 hookup patchcords, bus strip, terminal installing tools, bare and insulated wire, layout paper, 4 pot and switch brackets, 160 assorted brackets, screws, nuts. Board as in 25X Kit.

21X KIT BASIC MODEL FOR LABS—Large 4.8" x 17" x 2" new extruded aluminum Frame-Loc Rail chassis with 3/32" Vectorbord deck. Besides main deck, includes 2 extra Vectorbord pieces, more terminals and sockets. Detailed contents follow: 6 Transistor sockets include 2 power and 4 universal type; 3 each 7 and 9 pin skt. and 2 octal, 100 "Zip" Push-In Terminals, 50 solderless Springclips, 8 hookup patchcords, bus strip, terminal installing tools, grid layout paper, 4 pot and switch brackets, bare and insulated hookup wires, assorted screws, nuts, brackets, spacers. Board has 3/32" dia. holes on .265" ctrs. $16.75

20X STARTER ASSORTMENT — 4.8"x 8½"x 2" extruded aluminum Frame-Loc Chassis with 3/32" thick Vectorbord deck plus many other parts including: 3 each 7 and 9 pin tube sockets and 2 octal sockets with mounting hardware; 75 patented T9.4 Zip Push-In Terminals; 20 new T30N-2 Solderless Springclip with hand insertion tool; 3 sheets layout paper; 54 assorted screws, nuts, spacers. Ideal for beginners or simple circuits. $6.75 (Not illustrated) Board as above but smaller.

VECTOR ELECTRONIC CO., INC.

Net

© United Technical Publications

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

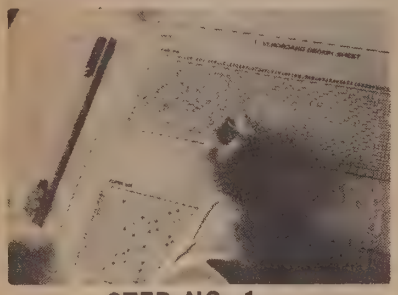
This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

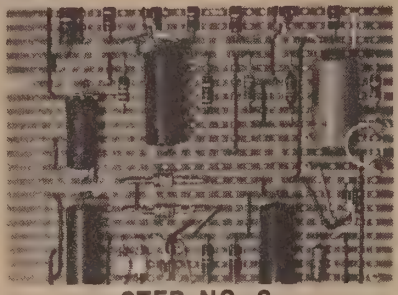
VERO ELECTRONICS inc.

VEROBOARD* BK-6 KITS ETC.



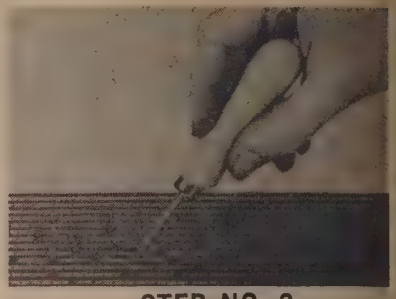
STEP NO. 1

First stage is to lay out the circuit plan on a Vero Design Sheet — printed to represent the plain and copper sides of the appropriate Veroboard — allowing proper spacing for components and indicating where the copper strips are to be broken.



STEP NO. 2

Layout components on the back (plain) side of the Veroboard across the copper strips inserting leads into appropriate holes. You now have connected your components as required using the copper strips as your interconnectors. Leads may be soldered directly to the strips using a light, printed circuit type iron. Careful soldering will enable you to remove components and replace them if required.



STEP NO. 3

Break the circuit where required by breaking the copper strips with the Vero spotface cutter provided in your kit. The cutter is a precision, hardened steel tool which has a pilot pin that fits into any hole, and two cutting edges. Simply turn the cutter several times and the copper strip in the area of the chosen hole will be removed. Your circuit is now complete.

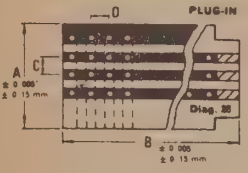
*PATENTED

VERO MODEL BK-6 Kit — With 6 assorted Veroboards, Vero spotface cutter and instructions. List Price **$5.95**

VERO MODEL BK-7 Kit — With 8 assorted Veroboards up to 18" lg., plain Veroboard with staggered grid, spotface cutter, terminal pin insertion tool, 500 terminal pins, reproducible design sheet and instructions. List Price **$29.95**

VERO MODEL MC-10 Kit — Integrated circuit breading kit designed for dual in line integrated circuits. Contains single sided 18" long board, plug in single and double sided Veroboard, plain glass board all pierced on .1" x .1" centers. Also includes connector, pins, tools and design sheet. List Price **$29.95**

"X-Y" PLUG-IN VEROBOARD — DOUBLE SIDED

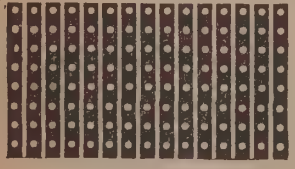


Part No.	Price 1-5	Contact No.	Thk.	A	B	C	D	Dia. of Hole	Compatible Connector
1912	7.75	32	.062	4.5	6.5	.1	.1	.040	2234

PLUG-IN VEROBOARD — SINGLE SIDED

Part No.	Price 1-5	Contact No.	Thk.	A	B	C	D	Dia. of Hole	Compatible Connector
322*	4.35	32	.062	4.5	6.5	.1	.1	.040	2234
323*	4.70	40	.062	4.5	6.5	.1	.1	.040	2236
308*	4.15	32	.062	3.75	5.1	.1	.1	.040	2234
11246	4.05	22	.062	4.5	6.5	.156	.1	.052	2245

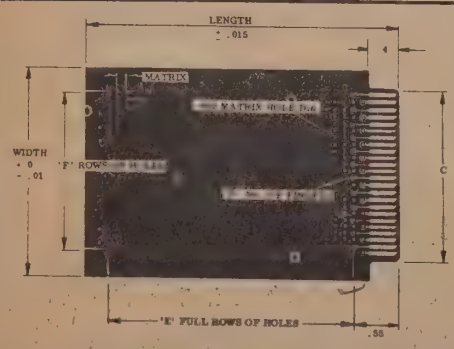
FULLY PIERCED COPPER CLAD SINGLE SIDED VEROBOARD .1 x .1 MATRIX



Part No.	Price 1-5	Length	Width	No. of Pierced Copper Strips	Thk.	Hole Dia.
126*	6.60	17.9	4.7	38	.062	.040
122*	4.75	17.9	3.75	34	.062	.040
124	8.65	17.9	7.05	60	.062	.040

*NOTE: For G10 FR4 Epoxy Glass add FG to Part No.

FINGER BOARDS — EPOXY GLASS, 1/16 THICK, .1x.1 MATRIX GOLD PLATED CONNECTOR FINGERS



Epoxy Glass Part No.	Size	D Contacts	Contact Spacing	C	E	F	Price 1-5	Compatible Connector
10236	4.5x6.5	22	.156	3.572	58	42	7.00	2243
10238	5x8	22	.156	3.572	73	42	7.50	2243
10239	5x8	32	.1	3.294	73	42	7.30	2234
10237	4.5x6.5	32	.1	3.294	58	42	6.60	2234
10295	4.5x6.5	40	.1	4.029	58	42	7.50	2236
11253	5x8	40	.1	4.029	73	42	8.30	2236
10290	4.5x6.5	44 (22 Each Side)	.156	3.572	52	42	7.15	2245/2
12846	4.5x6.5	80 (40 Each Side)	.1	4.029	58	42	7.25	2236/2

Trade Discount Applies To List Prices Only

© United Technical Publications

VERO ELECTRONICS inc.

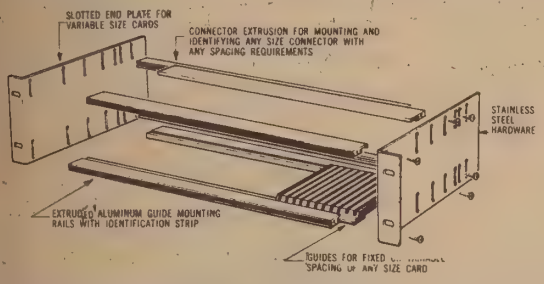
VERO D.I.P. BOARDS



Epoxy Glass Part #	Price 1-5	Paper Part #	Price 1-5	Width	Length	Contacts	Spacing	Compatible Connector #
11821	7.35	11820	5.50	4.5	6.5	40	.1	2236
11823	7.65	11822	5.85	4.5	6.5	43	.1	2238 Keyed
11825	8.85	11824	6.90	4.5	6.5	44 22 Each Side	.156	2245/2
12499	9.90			4.5	6.5	80-40 Each Side		2236/2

VERORACK 3 CARD FRAME KIT

To provide maximum versatility during the development of electronic equipment and thus reduce costs, System 3A Kits are provided with slotted end plates so that a range of card widths can be accommodated within each standard height. Variation in card depth is achieved by the use of three guide moulding lengths. Standard card spacing is 0.5". A unique universal connector rail extrusion allows mounting of connectors at any point along the 17.0" length and with the use of the connector locating strip connectors are automatically positioned on 0.5" centers. Hardware for 32 connectors, two identification strips numbered 1-32 and 32-1 and two plain strips are included. A 17" hinged front panel can also be supplied.



PART NUMBERING INFORMATION FOR VR3 KITS

VR3A 3U L HP

- HP — HINGED FRONT PANEL
- L — 6 3/8" LONG GUIDE
- M — 5 3/8" LONG GUIDE
- S — 2 5/8" LONG GUIDE
- 2U — 3.5" END PLATE HEIGHT
- 3U — 5.25" END PLATE HEIGHT
- 4U — 7.0" END PLATE HEIGHT
- 5U — 8.75" END PLATE HEIGHT
- VR3A — VERO RACK 3A SYSTEM

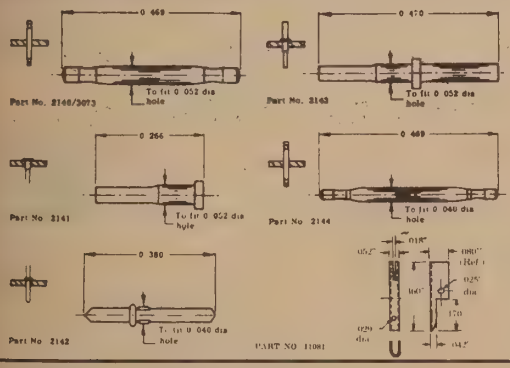
SPOT FACE CUTTERS



This cutter when used by hand, or, with the handle removed and fitted in a bench drill will remove the copper strips locally to make a copper break. Best results are obtained when light pressure is used.

Veroboard Hole Matrix

Part No.	ins.	Price
2022	0.1, 0.156 and 0.2	1.68



TERMINAL PINS AND PIN INSERTION TOOLS

These pins are intended for use in .040 ins. (1 mm.) and 0.052 ins. (1.3 mm.) diameter holes. Hand tools are available to insert "through" pin types.

Part No.	Hole Diameter ins.	Price	Compatible Insertion Tool Part No.	Price
2140	0.052	12.63M	2150	2.20
2141	0.052	12.09M	none	—
2142	0.040	12.09M	2151	2.20
2143	0.052	12.36M	2150	2.20
2144	0.040	12.36M	2151	2.20
11081	0.052	11.75M	2152	2.20
11082	0.040	11.75M	2152	2.20

All pins are packed in packets of 1000.

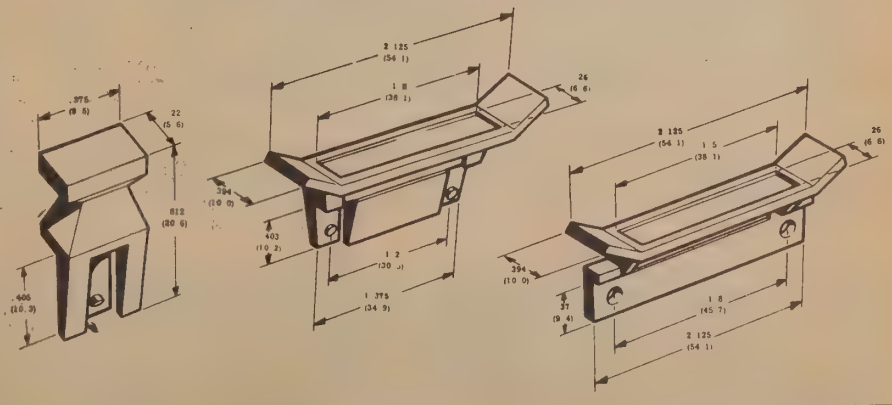
PC CARD HANDLES

SPECIFICATION

MATERIAL Noryl
Temperature Range —60° to +125° C.
Colors Available in Handles CH/C/10036 CH/C/10037, CH/C/10035 as follows:

Black	Standard
White	/1
Red	/2
Blue	/3
Green	/4
Yellow	/5

Vero Number	Net per Pkg. of 10 1-5 Pkgs.	6-25 Pkgs.
10035	$1.60	$1.30
10036	2.90	2.40
10037	2.90	2.40



DELEVAN

COILS

Delevan Series Parts	Nominal Size Dia. - Length	Inductance Range UH	Number Values Available	Q Minimum Range	Military Designation	
MICRO I ®						Designed to fit inside or outside IC's.
100	.065 x .100 sq.	.015 - 10.0	30	35 - 40	—	.100" Square
150	.065 x .150 sq.	12.0 - 100	12	45	—	.150" Square
155	.075 x .160 sq.	12.0 - 100	12	45	MS 15305	.160" Square
250	.065 x .250 sq.	120 - 1000	12	35 - 45	—	.250" Square
FIXED SERIES						
1025	.095 x .250	.10 - 1000.0	49	25 - 50	—	
1537	.155 x .375	.15 - 240.0	51	33 - 75	18130 90538	
1840	.185 x .437	.15 - 27.0	25	35 - 65	75008	
2150	.215 x .560	.47 - 39.0	26	35 - 70	90542	
2500	.190 x .440	270 - 1000	16	60 - 65	90539	
	.215 x .560	1000 - 3600	14	60 - 70	90540	
	.240 x .740	3900 - 10,000	12	80	90541	
2890	.280 x .900	1.2 - 120.0	25	40 - 95	91189	
3500	.250 x .560	47 - 150	7	18 - 75	75052	
	.310 x .560	180 - 390	5	75 - 80	75053	
	.375 x .625	470 - 1000	5	70 - 80	75054	
	.468 x .687	1500 - 10,000	8	70 - 85	75055	
	.375 x .687	10,000	1	70	—	
SHIELDED						
2307	.157 x .395	.10 - 10,000	61	39 - 67	90537	
PLUG IN						
4500	.235 x .725	.47 - 39.0	20	35 - 60	—	
	.282 x .625	47 - 150	7	15 - 60	—	
	.375 x .625	180 - 390	5	55 - 60	18100	
	.437 x .625	470 - 1000	5	35 - 50	—	
	.500 x .825	1500 - 10,000	8	40 - 55	—	
2534	.250 x .345	100 - 150,000	39	< 10 - 80	—	
VARIABLE						
4000/4100	.400 x .952	.18 - 70,000	62	20 - 110	90543 - 46	For chassis or AC mounting, crimp on terminals.
4450	.330 x .750	.10 - 1000	48	30 - 50	LT 4K	Fine tuning — 80 threads per inch.
DSV 405	.380 x .500	.10 - 10,000	31	38 - 110	—	
DSH 406	.375 sq. x .500	.10 - 10,000	31	38 - 110	—	

Delevan coils offer the designer a wide choice of characteristics for specific applications. Standard coils are listed above. For information on custom designed coils, contact Delevan direct.

To obtain factory prices in quantities over 2,500, contact Delevan direct. To order, indicate series number and inductance desired.

Delevan Division — AMERICAN PRECISION INDUSTRIES INC.

OTHER DIVISIONS OF AMERICAN PRECISION INDUSTRIES INC.: BASCO • DUSTEK • MOELLER INSTRUMENT CO. • OXFORD CORP. • TRUCK EQUIPMENT CO.

© United Technical Publications

J. W. MILLER CO. Comprehensive Coil Service...
Engineering Assistance • Custom Winding • Environmental Testing
Samples-10 Days/Production Delivery-3 Weeks After Approval

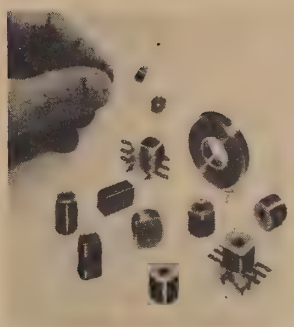
Special Coils



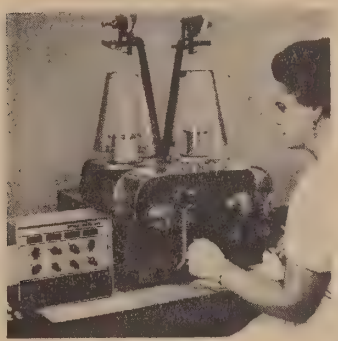
Special 16 Pi/30 KV windings for oil-filled high voltage transformers . . . special coil samples are shipped within 1 to 2 weeks after receipt of order.



Production shipments of special coils begin within 3 weeks after sample approval. Intensive specialization in coil design and manufacture assures excellent performance.



Where space limitations dictate one or more dimensions, Miller engineers will make recommendations to help you obtain optimum performance in your circuit.



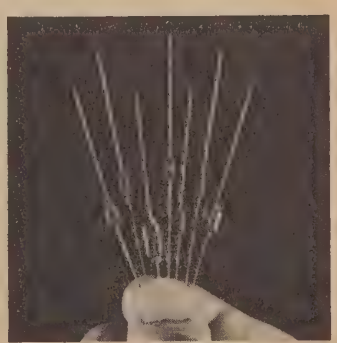
Custom wound bobbins are now available in an extensive range of inductance values and current ratings on many standard forms.

Custom Wound Bobbins

Standard Coils



Series 7830 heavy duty filter chokes provide up to 250 uh, carry up to 75 amps; widely used for RFI filters and reducing surge peaks; available from L.A. shelf stock.



RF and IF coils, chokes and filters are carried in stock, in depth, in extensive range of values and ratings, most are available from distributors' shelves at factory prices.

MILLER QUALITY PRODUCTS

J.W. MILLER COMPANY

NORTH HILLS · HIGH-PERFORMANCE COILS, ADJUSTABLE & FIXED

TO COVER ALL FREQUENCY RANGES FROM AUDIO TO 200 MHZ

COILS ON CERAMIC FORMS PER MIL-I-10



Series No.	Dimensions (Inches) Dia.	Length	Mtg. Hole Dia. (Inches)
1000	.50	.88	.196
1020	.50	.63	.050, .500 Apart
1100	.33	.63	.166
1300	.70	1.80	.252
1010	.43	.88	.196

Miniature 1000 Series

Part No.	Range Microhenries	Average Q
1000-A	1.0- 1.6	70 @ 7.9 MHz
1000-B	1.6- 2.7	80 @ 7.9 MHz
1000-C	2.7- 4.5	85 @ 7.9 MHz
1000-D	4.5- 8.5	85 @ 7.9 MHz
1000-E	8.5-14.5	75 @ 2.5 MHz
1000-F	14.5-22	65 @ 2.5 MHz
1000-G	22-29	65 @ 2.5 MHz
1000-H	29-55	85 @ 2.5 MHz
1000-I	55-110	80 @ 2.5 MHz
1000-J	110-185	85 @ .79 MHz
1000-K	185-305	85 @ .79 MHz
1000-L	305-515	85 @ .79 MHz
1000-M	515-820	85 @ .79 MHz
1000-N	820-1100	75 @ .79 MHz

RF Printed Circuit Coils

1020-A	0.41- 0.53	75 @ 25 MHz
1020-B	0.85- 1.15	65 @ 7.9 MHz
1020-C	1.87- 2.50	65 @ 7.9 MHz
1020-D	4.0 - 5.4	70 @ 7.9 MHz
1020-E	7.5 -12.5	70 @ 2.5 MHz
1020-F	20 -29	80 @ 2.5 MHz
1020-G	33 -61	80 @ 2.5 MHz
1020-H	80 -120	60 @ 0.79 MHz
1020-I	170 -260	70 @ 0.79 MHz

Subminiature 1100 Series

1100-A	0.9- 1.4	60 @ 7.9 MHz
1100-B	1.4- 1.9	70 @ 7.9 MHz
1100-C	1.9- 2.6	65 @ 7.9 MHz
1100-D	2.6- 3.7	65 @ 7.9 MHz
1100-E	3.7- 5.5	65 @ 7.9 MHz
1100-F	5.5- 7.4	60 @ 7.9 MHz
1100-G	7.4-12.5	70 @ 7.9 MHz
1100-H	12.5-18.0	65 @ 2.5 MHz
1100-I	18.0-28.0	70 @ 2.5 MHz
1100-J	28.0-38.0	70 @ 2.5 MHz
1100-K	38.0-55.0	70 @ 2.5 MHz

Transmitter 1300 Series

1300-A	For use from 90-200 MHz	
1300-B	For use from 40-90 MHz	
1300-C	For use from 20-40 MHz	
1300-D	0.7- 1.1	170 @ 25 MHz
1300-E	1.1- 1.7	130 @ 7.9 MHz
1300-F	1.7- 2.7	140 @ 7.9 MHz
1300-G	2.7- 4.5	140 @ 7.9 MHz
1300-H	4.5- 6.8	140 @ 7.9 MHz
1300-I	6.8-10.8	140 @ 7.9 MHz
1300-J	10.8-17.0	110 @ 2.5 MHz
1300-K	17.0-29.0	95 @ 2.5 MHz
1300-L	29.0-45.0	100 @ 2.5 MHz
1300-M	45.0-75.0	100 @ 2.5 MHz

HF Coils, Variable Approx. ±15%

1010-A	0.118	115 @ 50 MHz
1010-B	0.225	125 @ 25 MHz
1010-C	0.315	130 @ 25 MHz

WIDE ADJUSTMENT RANGE 120 SERIES



120 Series Mica-filled form
PCS-120 Series Phenolic form
.75" O.D. x 1.3" H.
.196" dia. mtg. hole
PC-120 Series Phenolic form
.5" O.D. x 1.25" L.
.05" Pins,
.70" Apart

Part No.	Range Microhenries	Average Q
120-A	2-3	70 @ 7.9 MHz
120-B	3-5	80 @ 7.9 MHz
120-C	5-9	85 @ 7.9 MHz
120-D	9-18	65 @ 2.5 MHz
120-E	18-36	70 @ 2.5 MHz
120-F	36-64	65 @ 2.5 MHz
120-G	64-105	85 @ 2.5 MHz
120-H	105-200	80 @ .79 MHz
120-I	200-500	75 @ .79 MHz
120-J	500-1000	85 @ .79 MHz
120-K	1000-2000	50 @ .25 MHz



Subminiature 600 Series

- Variable ±10%
- Shielded
- 0.3" O.D. x 0.4" H
- .020" Leads .30" Apart

Part No.	Nominal Microhenries	Average Q
600U1X0	1.0	120 @ 7.9 MHz
600U1X5	1.5	120 @ 7.9 MHz
600U2X2	2.2	120 @ 7.9 MHz
600U3X3	3.3	130 @ 7.9 MHz
600U4X7	4.7	125 @ 7.9 MHz
600U6X8	6.8	140 @ 7.9 MHz
600U10X	10	135 @ 7.9 MHz
600U15X	15	130 @ 2.5 MHz
600U22X	22	135 @ 2.5 MHz
600U33X	33	130 @ 2.5 MHz
600U47X	47	130 @ 2.5 MHz
600U68X	68	120 @ 2.5 MHz
600MX10	100	100 @ 2.5 MHz
600MX15	150	125 @ .79 MHz
600MX22	220	130 @ .79 MHz
600MX33	330	125 @ .79 MHz
600MX47	470	120 @ .79 MHz
600MX68	680	100 @ .79 MHz
600M1X0	1000	100 @ .79 MHz

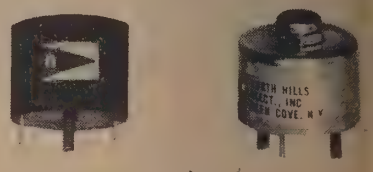


High Q RF Coils, Fixed

- .75" O.D. x .63" H
- Hermetically sealed
- Complete shielding
- For printed circuitry
- For standard circuitry

Part No.	Nominal Microhenries	Average Q
1219-A	0.47 ± 5%	170 @ 20 MHz
1219-B	1.0 ± 5%	170 @ 10 MHz
1219-C	2.2 ± 5%	170 @ 8 MHz
1219-D	4.7 ± 5%	170 @ 5 MHz
1219-E	10 ± 5%	170 @ 3 MHz
1219-F	22 ± 3%	170 @ 1.5 MHz
1219-G	47 ±3%	170 @ 1 MHz
1219-H	100 ±3%	170 @ 0.8 MHz
1219-I	220 ±3%	170 @ 0.7 MHz
1219-J	470 ±3%	170 @ 0.6 MHz
1219-K	1000 ±3%	170 @ 0.5 MHz
1219-L	2200 ±3%	150 @ 0.25 MHz

Hi Q 801, 802 Series, Adjustable ±10%



Industrial
801, 802 Series
1.18" O.D. x .93" H

Hermetically Sealed
MS801, MS802 Series
1.25" O.D. x 1.25" H

Part No.	Nominal Millihenries	Peak Q
801M1X0	1.0	100 @ 10 kHz
801M1X5	1.5	100 @ 10 kHz
801M2X2	2.2	100 @ 10 kHz
801M3X3	3.3	100 @ 10 kHz
801M4X7	4.7	100 @ 10 kHz
801M6X8	6.8	100 @ 10 kHz
801M10X	10	200 @ 20 kHz
801M15X	15	200 @ 20 kHz
801M22X	22	200 @ 20 kHz
801M33X	33	200 @ 20 kHz
801M47X	47	200 @ 20 kHz
801M68X	68	200 @ 20 kHz
801HX10	100	300 @ 30 kHz
801HX15	150	300 @ 30 kHz
801HX22	220	300 @ 30 kHz
801HX33	330	250 @ 20 kHz
801HX47	470	250 @ 20 kHz
801HX68	680	250 @ 20 kHz
801H1X0	1000	150 @ 15 kHz
802M1X0	1.0	400 @ 100 kHz
802M1X5	1.5	400 @ 100 kHz
802M2X2	2.2	400 @ 100 kHz
802M3X3	3.3	400 @ 100 kHz
802M4X7	4.7	400 @ 100 kHz
802M6X8	6.8	400 @ 100 kHz
802M10X	10	400 @ 70 kHz
802M15X	15	400 @ 70 kHz
802M22X	22	400 @ 70 kHz
802M33X	33	400 @ 70 kHz
802M47X	47	400 @ 40 kHz

SHIELDED COILS



- Shielded
- Encapsulated

- .44" Diameter **900 Series**

Part No.	Range Microhenries	Average Q
900-A	0.5- 0.8	80 @ 25 MHz
900-B	0.8- 1.3	70 @ 18 MHz
900-C	1.3- 2.0	60 @ 15 MHz
900-D	2.0- 4.0	70 @ 8 MHz
900-E	4.0- 7.0	70 @ 5 MHz
900-F	7.0-12.0	70 @ 4 MHz
900-G	12.0-20.0	70 @ 3 MHz
900-H	20.0-35.0	70 @ 2.5 MHz
900-I	35.0-60.0	70 @ 2.0 MHz
900-J	60.0-100.0	70 @ 1.0 MHz

- .63" Diameter **1500 Series**

Part No.	Range Millihenries	Average Q
1500-A	.100- .175	80 @ 790 kHz
1500-B	.175- .300	80 @ 790 kHz
1500-C	.300- .500	80 @ 790 kHz
1500-D	.500- .800	75 @ 790 kHz
1500-E	.800-1.15	55 @ 500 kHz
1500-F	1.15-1.50	55 @ 250 kHz
1500-G	1.50-2.30	55 @ 250 kHz
1500-H	2.30-3.50	50 @ 250 kHz
1500-I	3.50-7.50	40 @ 250 kHz

SEE EEM SECTION 5600 FOR WIDE BAND TRANSFORMERS AND HYBRIDS

NORTH HILLS ELECTRONICS, INC.

© United Technical Publications

OHMITE

power line chokes

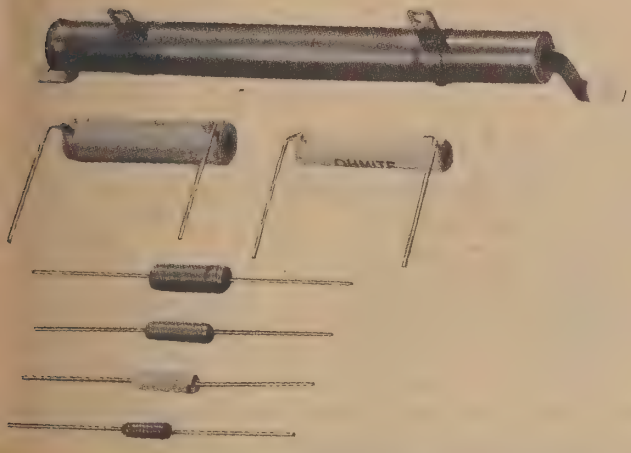


Catalog No.[1]	Inductance Micro-henries	Amps.	Total D.C. Ohms	Core	Weight lbs.
Z-20	14	5	0.15	4" x 5/16"	.11
Z-21	15	10	0.07	6½" x ¾"	.31
Z-22	18	20	0.045	8½" x 1⅛"	.73
(*Z-30)	110	20	0.085	8½" x 1⅛"	1.45

*One section is wound as a second layer over the other.
Non-magnetic brackets furnished with each choke.

Prevents high-frequency currents of radio transmitters, diathermy and therapeutic equipment from going out over the power lines and interfering with nearby radio receiving sets. They are used as filters in conjunction with two grounding capacitors of 0.1 microfarad capacity each. The Z-20 Choke is also used at radio receivers to keep out interference. All chokes consist of two, single-layer windings on a single ceramic core, insulated and protected by moisture-proof coating.

radio frequency plate chokes



This series of seven, single-layer-wound, solenoid type radio frequency plate chokes, covers the entire frequency range of 3 to 520 megacycles. The stock number corresponds to the approximate frequency at which maximum efficiency will be obtained, but the chokes may be used at any other frequencies within their operating ranges, as listed in the price table.

Chokes of the four highest frequencies are wound on low power factor plastic cores while the other three units are wound on steatite tubes. Windings are insulated and protected by a moisture-proof coating. The single layer winding is designed to avoid adverse harmonic effects and also prevents breakdown from high r.f. potentials. Non-magnetic mounting brackets are furnished with the largest size, Z-7. The Z-14 and Z-28 have wire leads welded to lug type terminals; the Z-50, Z-144, Z-235 and Z-460 have axial-type wire leads.

Catalog No.[1]	Operating Range	Inductance Micro-henries	D.C. Res. Ohms*	Rated Current Amps	Resonant Freq. Mc	Core	Wt. Lbs.
Z-7	3 to 20 Mc.	84.0	4.70	1.00	13	6" x 5/16"	.106
Z-14	7 to 35 Mc.	44.0	2.60	0.68	23	2" x 5/16"	.026
Z-28	20 to 60 Mc.	21.0	2.70	0.60	41	1¾" x 5/16"	.011
Z-50	35 to 110 Mc.	7.0	0.98	1.00	79	1" x 3/32"	.005
Z-144	80 to 200 Mc.	1.8	0.33	1.10	168	¾" x 3/16"	.002
Z-235	160 to 350 Mc.	0.84	0.14	1.70	300	¾" x 3/16"	.002
Z-460	320 to 520 Mc.	0.20	0.034	4.00	500	½" x 5/32"	.001

Non-magnetic Brackets Furnished with Z-7.
* At 100 ma, 25°C ambient.

Any one of these chokes may be selected for a particular frequency within its recommended operating range with the assurance that it will give excellent performance. Selection should be made, however, subject to the following qualification. It is generally advisable to select a choke with a resonant frequency (see chart) slightly higher than the desired operating frequency since any additional capacity to ground will tend to shift the resonant frequency closer to the operating frequency. Also, for this reason, the frequency designated by the catalog number of a choke is lower than its natural resonant frequency.

parasitic suppressor



The P-300 Suppressor is designed to prevent unwanted ultra-high-frequency parasitic oscillations which occur in the plate and grid leads of push-pull and parallel tube circuits. The P-300 is a non-inductive, 50 ohm, vitreous enameled resistor combined with a choke (in parallel) of .3 microhenries inductance and .003 ohms D.C. resistance. The two form a small integral unit only 1¾" long overall and 21/32" diameter. The unit may be mounted directly in the grid lead without extra support.

Model P-300 Wt. .04 lb. .....Net 1-9 $1.90

diode metersaver protects meters



Designed to protect sensitive (high internal resistance) meters against burnout due to overload even where potential is reversed. Introduces negligible error. Consists of 2 silicon diodes in compact case with leads and lugs. Connects across meter terminals without regard for polarity. Shunts excess current around meters — for example, can convert 200 times overload to 3 times overload. Allows use of less expensive meter fuses. Can be used with meters of low internal resistance but use of series resistor is then recommended.

Catalog No. OMC7111 .....Net (1-99) $1.98

Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

HIGH Q COILS & INDUCTANCE DECADE

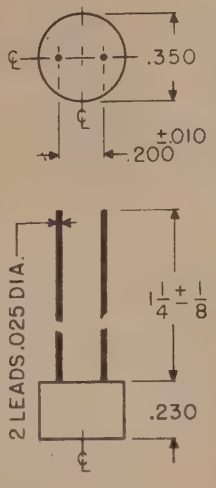
Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.

See UTC Electric Wave Filter in filter section 2700 and Transformers in transformer section 5600.

MS* MINIATURE TOROIDAL HIGH Q INDUCTORS

IMMEDIATE DELIVERY ON ALL ITEMS

CONTACT YOUR LOCAL DISTRIBUTOR FOR CURRENT PRICES & DISCOUNTS



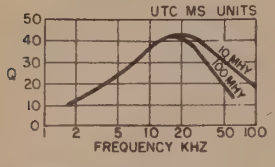


MS UNIT WEIGHT 1.3 GM

Stock Type No.	Ind. Mhy (0 DC)	ma DC Max.*	DCRΩ Max.
MS-1	1	60	1.4
MS-5	5	28	7
MS-10	10	20	11
MS-25	25	13	38
MS-50	50	9	75
MS-100	100	6	132

* The maDC shown is for approximately 5% drop in inductance.

TYPICAL Q CURVE



PHYSICAL CHARACTERISTICS

UTC's new MS series of high Q coils are only .23" high x .35" diameter. The low profile makes them ideal for high-density packaging requirements. All coils are molded in black epoxy.

Base diameter (.35") and lead spacing (.2") fall within TO-5 envelope dimensions.

Leads are .025" diameter gold-plated dumet, type D per MIL-STD-1276A, and are both weldable and solderable.

Q CHARACTERISTICS

Excellent Q in the 10 kHz to 50 kHz range, matching and often excelling the performance of much larger units. Designed for application over the wider range of 1 kHz to 100 kHz. See Q Response Curve.

MIL SPECS

All units have been designed, manufactured and successfully tested to complete MIL-27C environmental requirements. MIL Type TF5RX20ZZ.

TOLERANCE AND TEMPERATURE STABILITY

MS units have an inductance tolerance of ±2% at 0.1V RMS, 1 kHz, 0 DC, 25°C. All have excellent inductance stability with temperature: less than ±2% from −55°C to +105°C.

NEW "FE,* FI,* FO"* MINIATURE INDUCTORS



Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications

FE, FI, FO miniature inductors are ideal for transistor and printed circuit applications, having both pin terminals and a molded flat construction. These units are symmetrical toroids providing maximum Q in minimum size. The FE and FI inductors are adjusted at 1 V, 1 kHz. The FO units are adjusted at 1 V, 400 Hz. All units are adjusted to a tolerance of ±1%. The ma DC Max shown is for approximately 5% drop in inductance. The temperature stability is unequalled from −55°C to +100°C. For AC level limitations, a general rule of thumb would be to consider the maximum AC current approximately equal to the maximum DC current rating. However, for specific applications, contact UTC with exact level, frequency, and Q requirements to determine suitability of part in application. All FE, FI, FO inductors are equally well suited for vacuum tube application. All units Mil Type: TF5RX20ZZ.

DIMENSIONS:
FE: 13/16" sq. x 1/2" h., wt. 0.7 oz.
FI: 1 3/16" sq. x 5/8" h., wt. 1.5 oz.
FO: 1 27/32" sq. x 27/32" h., wt. 5 oz.

Type No.	Ind. Hy, (0 DC)	ma DC Max.	DCR Max.
FE-.01	.0100	70	2.5
FE-.02	.0200	50	5.1
FE-.05	.0500	30	12
FE-.1	.100	22	22
FE-.5	.500	10	122
FE-1	1.00	7	250
FE-2	2.00	5	500
FI-.04	.0400	50	4.3
FI-.1	.100	30	11
FI-.25	.250	20	27
FI-.5	.500	14	60
FI-1	1.00	10	110
FI-4	4.00	5	430
FO-.1	.100	60	4.2
FO-.5	.500	25	23
FO-1	1.00	18	43
FO-2	2.00	12	92
FO-5	5.00	8	240
FO-10	10.0	6	440

MILITARY STANDARD INDUCTORS

Two windings for series or parallel connection. Inductance shown for series connection. All but Z-847 are standard MIL case types. Rated 3500 WVDC, unless otherwise noted.

UTC Type	MS No.	MIL Type	Induct. Hy.	ma DC	DCR Ohms	MIL Case Pg. 15
Z-848•	90009-2	04FA001■	16	80	645	FA
Z-849•	90010-2	04GA002■	25	80	670	GA
Z-850•	90011-2	04HA003■	40	80	1020	HA
Z-851†	90013-2	04HA005■	16	125	330	HA
Z-852†	90014-2	04JB006■	25	125	460	JB
Z-853	90037-2	04KA007■	40	125	535	KA
Z-854	75000-2	04LA009•	16	200	180	LA
Z-855	75001-2	04MA010•	25	200	210	MA
Z-856	75002-2	04NA012•	16	315	105	NA
Z-857	75003-2	04YY013•	25	315	150	YY

*1000 WVDC. †2000 WVDC. ■TF1RX-. •TF4RX.

HIGH Q PRECISION INDUCTANCE DECADE

Invaluable instruments for design and experimental work with tuned circuits, wave filters, and equalizers. The low hum pickup toroid coils employ a new permalloy dust core which, combined with special winding methods, provides very high Q, excellent voltage and temperature stability, and high self resonance frequency. The inductance values are laboratory adjusted to better than 1% precision, with calibration noted on base. Not to MIL-T-27C.



DI CASE
Length ..... 4 1/2"
Width ..... 4 3/8"
Height ..... 2 3/8"
Weight ..... 2 lbs.

Type No.	Induct. Henries	Optimum Range	Max. Q	Max. ACma	Ins. Test Volts RMS
DI-1	10 x .01	2-60 KC	200	500	500
DI-2	10 x .1	.25-20 KC	200	150	500
DI-3	10 x 1	.25-10 KC	200	50	500
DI-4	10 x 10	.2-1.5 KC	100	15	500

UNITED® TRANSFORMER CO. **TRW®**

UTC PAGE I-1

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publication

HIGH Q COILS & INDUCTORS

** Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.**

MINIDUCTORS*

All these ultracompact high Q units are grade 5, hermetically sealed to (MIL-T-27C). Temperature stability rated from ±1% to ±3%, −55°C to +105°C, depending on series.



MM—Ultraminiature epoxy molded toroidal inductors with pin terminals for printed circuit application. Maximum Q at 30 kHz. 3/16 dia. x 1/4"; wt. .07 oz.
MH—Ultraminiature epoxy molded toroidal inductors similar to MM except maximum Q at 100 kHz. Size & wt. as MM.
ML—Ultraminiature hipermalloy cased inductors with epoxy board and pin terminals for printed circuit application. Maximum Q at 800 Hz to 2 kHz, depnding on inductance. 3/16 x 31/64 x 3/8"; wt. .2 oz.
MO—Miniature epoxy molded inductors with pin terminals for printed circuit application. Maximum Q at 600 Hz to 1500 Hz depending on inductance. 3/4 x 1 3/16 x 1 3/4"; wt. 1 oz.
MW—Miniature epoxy molded toroidal inductors with pin terminals for printed circuit application. Maximum Q at 5 to 10 kHz. 25/32 dia. x 13/32"; wt. .25 oz.

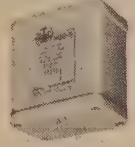
UTC Type	Induct., Hys.	UTC Type	Induct., Hys.	UTC Type	Induct., Hys.
ML-0	.15	MM-6	.03	MO-2	2
ML-1	.25	MM-7	.06	MO-5	5
ML-2	.40	MM-8	.12	MO-7.5	7.5
ML-3	.70	MH-1	.0006	MO-20	20
ML-4	1.4	MH-2	.0015	MO-50	50
ML-5	2.5	MH-3	.0025	MO-100	100
ML-6	4.0	MH-4	.006	MW-.05	.05
ML-7	6.0	MH-5	.01	MW-.10	.10
ML-8	10	MH-6	.015	MW-.25	.25
ML-9	25	MH-7	.025	MW-.5	.5
ML-10	60	MH-8	.04	MW-.75	.75
MM-1	.003	MO-.1	.1	MW-1	1
MM-2	.005	MO-.15	.15	MW-1.2	1.2
MM-3	.008	MO-.3	.3	MW-2	2
MM-4	.0125	MO-.5	.5	MW-3	3
MM-5	.02	MO-1	1	MW-5	5

HIGH Q TOROID INDUCTORS

Favorites for over fifteen years, UTC HQ Toroids are only excelled by the preferred new "M" series. As typical Q curves show, HQ coils are available for application from 100 Hz to 100 kHz. Adjusted to 1%, the inductance is virtually independent of frequency, temperature, and vibration. Voltage stability is excellent, and shielding case assures 80 db coupling attenuation. Hermetically to MIL-T-27C. All units MIL type TF4RX-20YY.



HQA and HQC CASE
Diamter 1 3/16"
Height 1 3/16"
Mounting 1 1/8"
Screws 6-32
Cutout 5/8 x 13/16"
Weight 5 oz.



HQB CASE
Length 2 5/8"
Width 1 5/8"
Height 2 5/8"
Mounting 1 11/64 x 2 11/64"
Screws 6-32
Cutout 3/8 x 1 1/8"
Weight 14 oz.



HQE CASE
Length 1 1/16"
Width 1/2"
Height 1 7/32"
Mounting 3/4"
Screws 4-40
Cutout 5/16 x 1/2"
Weight 1.5 oz.

Type No.	Inductance (O DC)		DC ma Max.	Type No.	Inductance (O DC)		DC ma Max.
HQA-1	5	mhy.	400	HQB-1	10	mhy.	410
HQA-2	12.5	mhy.	260	HQB-2	30	mhy.	240
HQA-3	20	mhy.	200	HQB-3	70	mhy.	170
HQA-4	30	mhy.	160	HQB-4	120	mhy.	120
HQA-5	50	mhy.	130	HQB-5	.5	hy.	60
HQA-6	80	mhy.	100	HQB-6	1	hy.	41
HQA-7	125	mhy.	85	HQB-7	2	hy.	30
HQA-8	200	mhy.	65	HQB-8	3.5	hy.	22
HQA-9	300	mhy.	50	HQB-9	7.5	hy.	16
HQA-10	.5	hy.	40	HQB-10	12	hy.	11
HQA-11	.75	hy.	35	HQB-11	18	hy.	9
HQA-12	1.25	hy.	26	HQB-12	25	hy.	8
HQA-13	2	hy.	20	HQC-1	1	mhy.	1350
HQA-14	3	hy.	16	HQC-2	2.5	mhy.	850
HQA-15	5	hy.	13	HQC-3	5	mhy.	600
HQA-16	7.5	hy.	10	HQC-4	10	mhy.	420
HQA-17	10	hy.	9	HQC-5	20	mhy.	300
HQA-18	15	hy.	8	HQE-1	5	mhy.	155
				HQE-2	10	mhy.	110
				HQE-3	50	mhy.	50
				HQE-4	100	mhy.	35
				HQE-5	200	mhy.	25

HERMETIC "M" TYPE TOROIDS

UTC permalloy dust toroids provide highest Q factor with miniaturized dimensions. Lab adjusted to 1% tolerance and sealed to MIL-T-27C specs. Magnetic case plus toroid provide 80 db shielding.

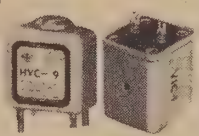


Type MQA 40 at 500 Hz, 160 at 5 kHz, approx. 40 at 20 kHz. SIZE 1 1/16" x 1 13/32" x 1 25/64" h.; wt. 4 oz.
MQB 40 at 250 Hz, 250 at 3 kHz, approx. 40 at 20 kHz. SIZE 1 3/16" x 2 3/16" x 2 13/64" h.; wt. 14 oz.
MQD 40 at 5 kHz, 185 at 50 kHz, approx. 40 at 300 kHz. SIZE 1 1/16" x 1 5/32" x 1 25/64" h.; wt. 4 oz.
MQE 20 at 600 Hz, 140 at 10 kHz, approx. 40 at 40 kHz. SIZE 1/2" x 1 1/16" x 1 1/32" h.; wt. 1.5 oz.

TQA units are similar to MQA but enter tapped for oscillator application, etc. Net each: TQA-1 thru TQA-15, $1.50 more than MQA's; TQA-16, 14.70; TQA-17, 15.90; TQA-18, 17.40; TQA-19, 21.00; TQA-20, 23.40.

UTC Type	Ind., Hys.	UTC Type	Ind., Hys.	UTC Type	Ind., Hys.
MQA-1	.007	MQB-1	.010	MQD-6	.020
MQA-2	.012	MQB-2	.030	MQD-7	.030
MQA-3	.020	MQB-3	.070	MQE-0	.004
MQA-4	.030	MQB-4	.120	MQE-1	.007
MQA-5	.050	MQB-5	.50	MQE-2	.012
MQA-6	.070	MQB-6	1.0	MQE-3	.020
MQA-7	.120	MQB-7	2.0	MQE-4	.030
MQA-8	.20	MQB-8	3.5	MQE-5	.050
MQA-9	.30	MQB-9	7.5	MQE-6	.070
MQA-10	.50	MQB-10	12	MQE-7	.100
MQA-11	.70	MQB-11	18	MQE-8	.150
MQA-12	1.0	MQB-12	25	MQE-9	.250
MQA-13	1.5	MQB-13	40.0	MQE-10	.40
MQA-14	2.5	MQB-14	60.0	MQE-11	.60
MQA-15	4.0	MQD-0	.001	MQE-12	.90
MQA-16	6.0	MQD-1	.002	MQE-13	1.5
MQA-17	10.0	MQD-2	.003	MQE-14	2.0
MQA-18	15.0	MQD-3	.005	MQE-15	2.8
MQA-19	22.0	MQD-4	.007	MQE-16	4.0
MQA-20	35.0	MQD-5	.012		

VARIDUCTORS



HVC & HVV (*VIC is not a MIL item) — **VIC**

These variable inductors are ideal for use in tuned circuits, equalizers, oscillators, etc. TYPE HVC:—Gives highest Q and stability; adjustable −70% to +200% of mean value. Hermetically sealed to MIL-T-27C.

HVV Types: For precise matching; vernier inductance variation ±10% of nominal value. Offer high Q over a wide frequency range and high temperature stability.

VIC:—Adjustable −45% to +85% of mean value.

Size: HVC, TVC and HVV types, 1 1/8" lg. x 25/32" w. x 1 7/32" h.; weight 2 oz. VIC type, 1 11/32" lg. x 1 1/4" w. x 1 3/16" h.; weight 5 1/2 oz.

TVC type inductors are identical to HVC units, but provide taps at 30% and 50% of total turns — ideal for oscillator circuits, etc.
HVC & TVC: U. S. Pat. No. 2,879,489.
HVV: U. S. Pat. No. 3,267,400.

UTC Type	Mean Hys.	DC ma	UTC Type	Mean Hys.	DC ma
HVC-1	.006	100	TVC-6	.6	15
HVC-2	.015	60	TVC-7	1.5	10
HVC-3	.040	40	TVC-8	4	7
HVC-4	.1	30	TVC-9	10	5
HVC-5	.25	20	TVC-10	25	3.5
HVC-6	.6	15	TVC-11	60	2
HVC-7	1.5	10	TVC-12	150	1.5
HVC-8	4	7			
HVC-9	10	5			
HVC-10	25	3.5	VIC-1	.0085	75
HVC-11	60	2	VIC-2	.013	60
HVC-12	150	1.5	VIC-3	.021	50
			VIC-4	.034	40
HVV-.006	.006	200	VIC-5	.053	35
HVV-.015	.015	120	VIC-6	.084	30
HVV-.04	.04	80	VIC-7	.13	25
HVV-.1	.10	50	VIC-8	.21	21
HVV-.25	.25	30	VIC-9	.34	18
HVV-.6	.6	20	VIC-10	.54	15
HVV-1.5	1.5	13	VIC-11	.85	12
HVV-4	4	6	VIC-12	1.3	10
HVV-10	10	4.5	VIC-13	2.2	8
HVV-25	25	3	VIC-14	3.4	7
HVV-60	60	2	VIC-15	5.4	6
HVV-150	150	1.3	VIC-16	8.5	5
			VIC-17	13	4
TVC-1	.006	100	VIC-18	21	3.5
TVC-2	.015	60	VIC-19	33	3
TVC-3	.040	40	VIC-20	52	2
TVC-4	.1	30	VIC-21	83	1.5
TVC-5	.25	20	VIC-22	130	1

LOW FREQUENCY HIGH Q COILS

MQL TYPES

All these units of MIL type TF4RX20YY induct value to 2% tolerance at 1v., 60 Hz. Exceptional Q and stability, inductance swing less than 3% from −55°C to +105°C. The case, sealed hermetically to MIL-T-27C is 1 3/16" dia. 2 1/2" h. Transformer, parallel, series or center-tapped connections are permitted due to dual windings to 4 terminals. Mounting 1 1/2" sq. with a 6-32 screw. Cutout 1 1/2" dia wt. 1 lb.

Type No.	Hys. (0 DC) Series	Parallel	Type No.	Hys. (0 DC) Series	Parallel
MQL-0	1	.25	MQL-3	200	50
MQL-1	10	2.5	MQL-4	400	100
MQL-2	20	5	MQL-5	2500	625



MQM TYPES

Designed for high Q at low frequencies. Structure provides exceptional stability, adjusted to 2% at 1V. 60 Hz. Inductance variation less than 2% from −55°C to +130°C. Made to MIL-T-27C, MIL type TF4SX20YY. Size 1 5/16" d x 1 3/16" h., cutout: 1" d., wt. 5 oz.

Type No.	Series Hy (0 DC)	Parallel Hy (0 DC)	Series DCRΩ ±20%
MQM-2	2	.5	21
MQM-16	16	4	143
MQM-40	40	10	368
MQM-300	300	75	3700
MQM-600	600	150	5720

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.
© United Technical Publications

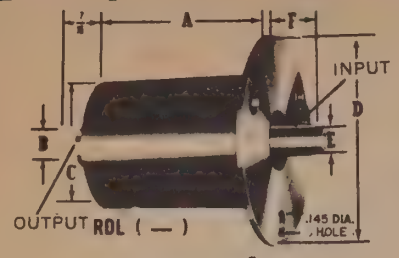
RATIO DRIVES

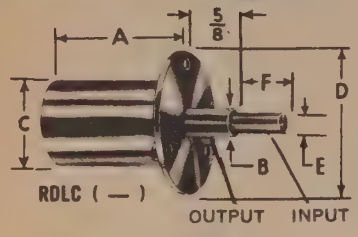
for FINE INSTRUMENT AND MACHINE CONTROLS

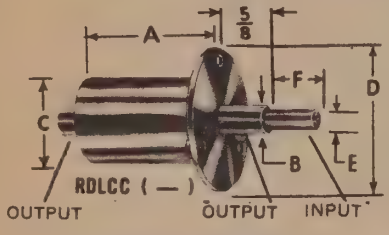
Ball Bearing Type **Compact, durable, exceptionally smooth action**

These unique ratio drives employ precision ball bearings. Used for rotary control of components in instruments, they provide unexcelled smooth motion. Ruggedly built, permanently sealed and lubricated, JAN Ratio Drives accommodate applications where miniaturization is essential.

Input and output shafts of these units operate in the SAME DIRECTION. Type "RDL" provides "in-line" input-output shafts. Type "RDLC" is supplied with **concentric** shafts whereby the output envelopes the input shaft. An added feature of type RDLCC is the output shaft in the rear.







CAT. No.	RATIO	B A	B O.D.	B I.D.	C	D	Input Shaft E	F	Bolt-Mtg. Dia.
RDL-1	2.6:1	1	3/8	1/4	1 1/8	1 13/16	1/4	3/4	1 15/32
RDL-2	7.0:1	1 13/32	3/8	1/4	1 1/8	1 13/16	1/4	3/4	1 15/32
RDL-3	17.0:1	1 13/16	3/8	1/4	1 1/8	1 13/16	1/4	3/4	1 15/32
RDLC-1	2.6:1	1	3/8	1/4	1 1/8	1 13/16	1/4	1 1/2	1 15/32
RDLC-2	7.0:1	1 13/32	3/8	1/4	1 1/8	1 13/16	1/4	1 5/64	1 15/32
RDLC-3	17.0:1	1 13/16	3/8	1/4	1 1/8	1 13/16	1/4	23/32	1 15/32
RDLCC-1	2.6:1	1 13/32	3/8	1/4	1 1/8	1 13/16	1/4	1 5/64	1 15/32
RDLCC-3	17.0:1	2 49/64	3/8	1/4	1 13/16	1 55/64	1/4	1 1/16	1 15/32

ALL RATIOS ARE ±10%

KNOB RATIO DRIVE

9 to 1 ratio (to dial skirt). 1:1 to potentiometer.

Cat. No. KRD-11
(plain gripping surface)

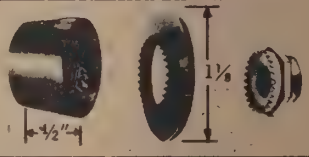
Cat. No. KRD-12
(knurled gripping surface)

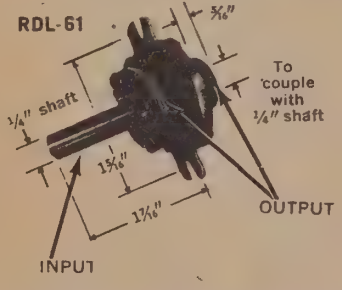


Exploded view shows engineered miniature gear system, to permit precise, fine tuning of controls. As shown, 9 to 1 ratio (to dial skirt). 1:1 to potentiometer. Other ratios designed to specifications.

Brass gears; black anodized aluminum knob and dial. Available with knurled or non-knurled outside knob.

Available for 1/8" shafts. 1/4" on special order.





Now! Corrosion Resistant!

IN-LINE RATIO DRIVE

6.3 : 1

Variations available to customers specifications.

For smooth rotary control of components requiring Vernier adjustments. Suitable for use where panel space is at a premium. Durable, ruggedized ball bearing mechanism.

LIMIT STOP COMPONENTS

Designers can now consider the limit stop as a component to design with, such as potentiometers, capacitors, or other standard units. The simplicity of adjustment and the large number of available turns enables the stop range to be set with extreme precision. Conveniently located dual locking screws maintain settings under all conditions of shock and vibration.

Available for 1/4" and 3/16" shafts.
Specify — (3) for 3/16"
— (4) for 1/4"


LS 552 Washer


LS 554 Collar


LS 556 Stop Plate

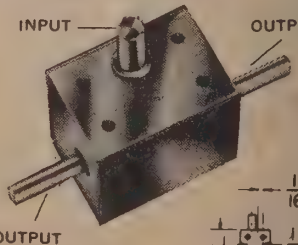

Typical End Product

RIGHT ANGLE RATIO DRIVES

Versatile, miniaturized, right angle rotary controls.

Featuring dual output stainless steel shafts at right angles to input, these engineered drives provide an ideal type of instrument control. Available with matched bevel or worm gears covering a wide range of ratios.

JAN'S RIGHT ANGLE DRIVES are especially useful for handling spring or gravity-loaded components since the output shaft automatically locks in any desired position yet remains free for smooth adjustment by the input shaft. Assembled in dust-proof housings, the gears are permanently pinned in place on stainless-steel shafts mounted in oilite bearings and held under constant pressure.



RAWG (—)
RABG (—)

BEVEL GEAR RIGHT ANGLE DRIVES



CAT. No.	RATIO	"A"
RABG-1	1:1	7/8
RABG-2	2:1	7/8
RABG-3	3:1	7/8

WORM GEAR RIGHT ANGLE DRIVES



CAT. No.	RATIO	"A"
RAWG-1	5:1	3/4
RAWG-2	10:1	3/4
RAWG-22	12:1	3/4
RAWG-3	20:1	3/4



JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

© United Technical Publications

JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

U.S. PATENT NO. 2,681,378

HI-VOLTAGE INSULATED COUPLINGS

MEETS MIL SPECS: TEMPERATURE - HUMIDITY - SHOCK - VIBRATION - FUNGUS

HI-VOLTAGE INSULATED COUPLINGS
15 KV Breakdown 10 inch pounds torque
Series No. AK-5079 & No. AK-5164

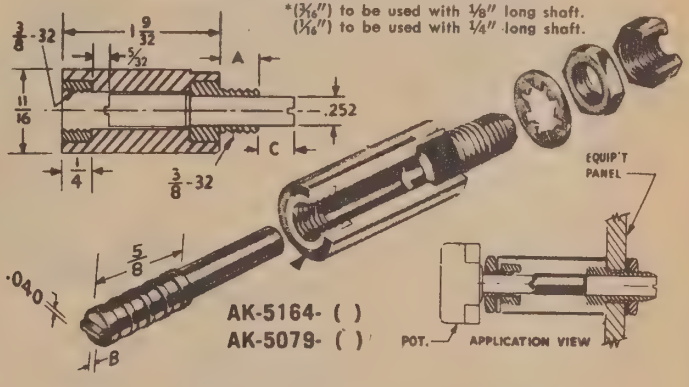
Engineered with stainless steel shaft and precision, screwdriver tip molded integrally with Diallyl Phthalate Material in accordance with Military Specifications. Completely shock, vibration and fungus proof, they operate with ease over an ambient temperature range of —75 to +175° C. Supplied complete with nickel plated mounting hardware.

Stainless steel screw driver tip fits all standard slotted shafts (potentiometer, etc.) without need for further machining. Ideally suited to adjust high voltage controls thus protecting operating personnel against danger. They are also used to reduce ground capacitance on other types of sensitive instrument controls.

For Commercial Instrument Applications . . .
These couplings are available in general Purpose Black Bakelite.
Cat. No. 5164-(X or B)-( ) For Standard Type
Cat. No. 5079-(X or B)-( ) with Locking Type Bushing.
Dimensions are identical with 5000 series, in chart above.

	CAT No.	"A"	"B" *	SHAFT	"C"
STANDARD TYPE	AK-5164-X-1	3/8"	3/16"	Slotted	5/16"
	AK-5164-B-1	3/8"	1/4"	Slotted	3/16"
	AK-5164-X-2	3/8"	3/16"	Slotted	15/32"
	AK-5164-B-2	3/8"	1/16"	Slotted	15/32"
	AK-5164-X-3	3/8"	3/16"	No Slot	15/16"
	AK-5164-B-3	3/8"	1/4"	No Slot	15/16"
	AK-5164-X-4	3/8"	3/16"	No Slot	1 1/16"
	AK-5164-B-4	3/8"	1/16"	No Slot	1 1/16"
	AK-5164-X-5	3/8"	3/16"	Slotted	Minus 1/16"
	AK-5164-B-5	3/8"	1/16"	Slotted	Minus 1/16"
WITH LOCKING TYPE BUSHING	AK-5079-X-1	3/16"	3/16"	Slotted	1/8"
	AK-5079-B-1	5/16"	1/16"	Slotted	1/8"
	AK-5079-X-2	5/16"	3/16"	Slotted	5/32"
	AK-5079-B-2	5/16"	1/16"	Slotted	5/32"

*(3/16") to be used with 1/8" long shaft.
(1/16") to be used with 1/4" long shaft.

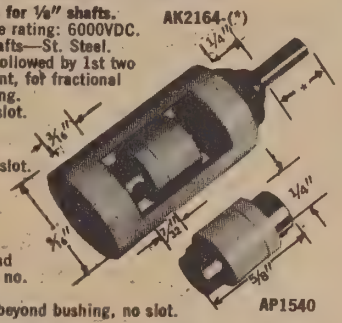


Hi-Voltage Insulated Couplings for 1/8" shafts.
White Cycalac material. Voltage rating: 6000VDC.
Hubs—Brass, Nickel Pltd.; Shafts—St. Steel.
*Insert letter "S" or "N" followed by 1st two numbers of decimal equivalent, for fractional length of shaft beyond bushing.
"S"=with slot. "N"=no slot.

Typical part number:
AK2164-N31=1/4" long shaft beyond bushing (standard), no slot.

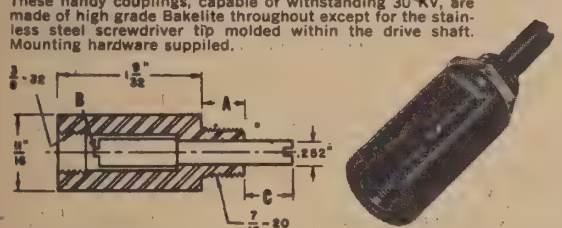
If length is 1" use "X"
Typical part numbers:
AK2164-SX=1" long shaft beyond bushing, slotted.

If length exceeds 1", use "X" and decimal equivalent for balance of no.
Typical part numbers:
AK2164-NX31=1 5/16" long shaft beyond bushing, no slot.



COMMERCIAL INSULATED COUPLINGS
30 KV Breakdown **Series No. AK-4160**
10 inch pounds torque **For TV and Industrial Applications**

These handy couplings, capable of withstanding 30 KV, are made of high grade Bakelite throughout except for the stainless steel screwdriver tip molded within the drive shaft. Mounting hardware supplied.

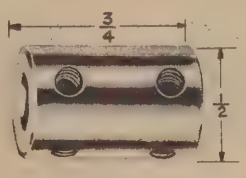


	CAT No.	"A"	"B"	SHAFT	"C"
STANDARD TYPE	AK-4160-X-1	3/8"	3/16"	Slotted	1/8"
	AK-4160-B-1	3/8"	1/4"	Slotted	
	AK-4160-X-2	3/8"	3/16"	No Slot	1/2"
	AK-4160-B-2	3/8"	1/4"	No Slot	

SHAFT COUPLING EXTENDER
Cat. No. AP1010

Nickel plated brass with 2 set screws for firm attachment to shaft.
1/2" O.D.; 1 3/4" overall length.





SHAFT COUPLING
Cat. No. AP-15150

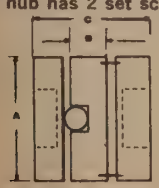
A rugged, nickel plated brass coupling for joining two 1/4" shafts. Supplied with 4 set screws for firm attachment to shafts.

Cat. No. AP-15151
Same as above, 2 set screws.

AUTOLINEAR (INSULATED) SHAFT COUPLINGS
2.5 - 5KV BREAKDOWN
Universal, miniature, self-aligning
Cat. No. AP-1530 & AP-1538



A unique series of shaft couplers that accommodate either similar or disimilar 1/8", 3/16" or 1/4" shafts. Permits offset misalignment to 1/16" and 5° angle. Operates free of backlash. Self-extinguishing low water absorption characteristic plastic insulator between precision cast aluminum hubs. Each hub has 2 set screws for firm attachment. Alodine finish.



PART NO.		DIA. HOLE	"A"	"B"	"C"
AP-1530	-2	1/8"	1/2"	15/64"	5 5/64" ± 1/32"
	-3	3/16"			
	-4	1/4"			
AP-1538	-2	1/8"	1/2"	27/64"	1 11/64" ± 1/32"
	-3	3/16"			
	-4	1/4"			

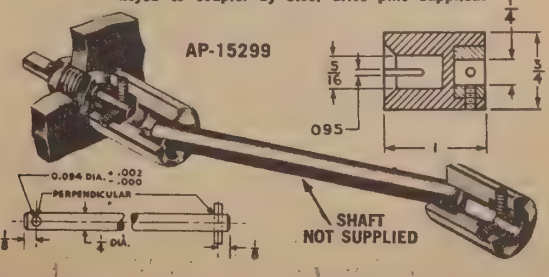
TYPICAL PART NUMBERS:
AP-1530-34
AP-1538-22

VOLTAGE RATING:
AP-1530 — 2500 VOLTS
AP-1538 — 5000 VOLTS

OFFSET-SHAFT (INSULATED) COUPLINGS
10 KV Breakdown—±30° Offset
Cat. No. AP-15299

Highly versatile, durable insulated couplings made with single-unit, molded Nylon-to-metal insert construction. Application requires two couplings—permits smooth control for two parallel shafts offset from each other up to 30 degrees at separations greater than 3 inches. Secured to component and control shafts by 2 set screws.

Note: Coupling is accomplished with a 1/4" shaft of any length (not furnished). Coupling shaft keyed to coupler by steel drive pins supplied.



© United Technical Publications

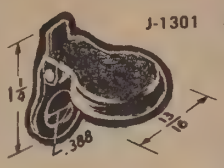
JACK COVERS (TRIMMER COVERS)

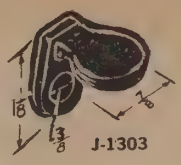
These sturdy Jack Covers fit jack or panel bushings and are used to keep out dust and moisture as well as to prevent inadvertent disturbance of control settings. Outer surfaces are finished in standard colors of baked enamel.

To Order Colors: Specify:
(-1) Black Wrinkle; (-2) Smooth Gray; (-3) Smooth Olive; (-4) Smooth Black. Other colors on request.

Example: Jack cover, color black wrinkle, order as J-1301 (-1)

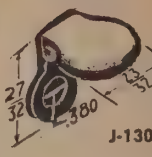
J-1301 ( ) STANDARD JACK COVER

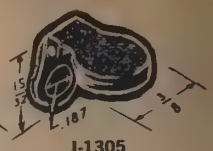




J-1303 ( ) WATERPROOF JACK COVER Gasket & Nut

J-1304 ( ) MINI-JACK COVER





J-1305 ( ) SUB-MINI JACK COVER

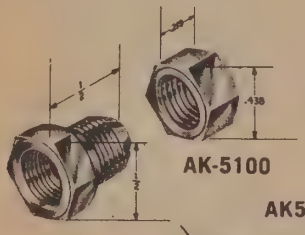
SHAFT LOCKS

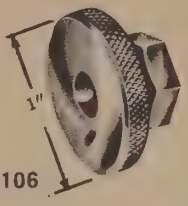
Cat. No. AK-5100 thru No. AK-5107
Split-bushing, collet type locks.

Used to securely hold the shaft of volume controls, capacitors, switches, etc. in position. Body and lock nut are brass—nickel plated. Supplied with nickel plated internal tooth lock washers, upon request.

SPLIT BUSHING TYPE For ¼" shafts

AK-5100 Standard Lock Nut
AK-5101 Panel Mount Type
AK-5106 Knurled Shaft Lock (1" O.D. Knurl)
AK-5107 Lock Nut (Round Head)





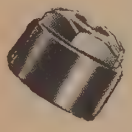




DIAL LOCK
Cat. No. AP1060



Supplied completely assembled. Securely locks dial in position. Nickel plated on brass. Knurled head. 1⅜" overall length.



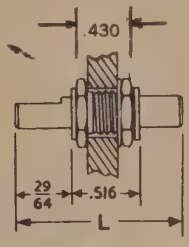
NYLON SHAFT LOCK Cat. No. AK-1050

One-piece, black nylon; fits standard ⅜"-32 thread of shaft bushing. Friction grip holds ¼" shaft to prevent accidental or vibrational disturbance of control settings. Adjustment for semi-permanent locking, provided.

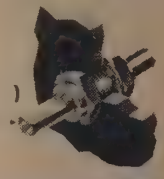
PANEL BEARING & SHAFT ASSEMBLIES

Cat. No. AP-15350 series

Used for rotary control of components. Passivated stainless steel shaft is ¼" dia. with one end flattened for attaching to knob control by set screws. Supplied completely assembled with two retaining rings, jam nut with lock washer and nickel plated, brass panel bearing. Fits panels up to 3/16" thick; mounts in 13/32" dia. hole.



AP 15350- ( )
STAINLESS STEEL





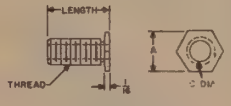
AP 15350



Cat. No. AK 5511 Panel Bearing Assembly.
Shafts available on special order

Cat. No.	Item	"L" Shaft Length
AP 15350	Panel Bearing	—
AP 15350-1	Panel Bearing &	1 1/16"
AP 15350-2	Shaft Assembly	3"
AP 15350-3		6"

PANEL BUSHING FOR 1/4 & 3/8 SHAFT
TOL ± 005



LENGTH	A=3/8 1/4-28 THREAD	A=1/2 3/8-32 THREAD	THREAD "C" DIA
3/8	PB 60614	PB 80638	1/4-28 .127
7/16	PB 60714	PB 80738	3/8-32 .252
1/2	PB 60814	PB 80838	
5/8	PB 61014	PB 81038	
3/4	PB 61214	PB 81238	

EXAMPLE (TO ORDER)
PT NO PB 60814-B= 1/4-28 THRD., 1/2 LG. PANEL BUSHING - BRASS W/.127 HOLE.

BUSHING SUPPLIED WITH MTG NUT & INT TOOTH LOCKWASHER

Can be made to order with special nylon bearings.

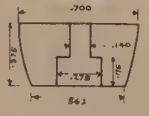
CHASSIS & CABINET BUMPERS

Durable, low-friction polyethylene. Guards against scuffing. Supplied in either black or russet brown, with recessed hole for screw or bolt usage.

To Order Colors:
Black, specify (4);
Brown specify (7).
Other colors on request.

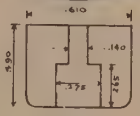
Cat. No. AK575 ( )

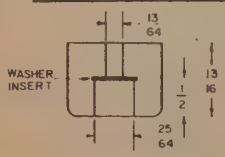




Cat. No. AK574 ( )





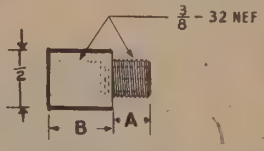


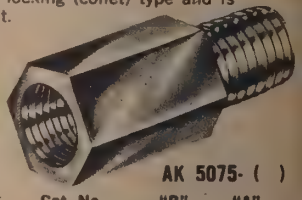
No. AK 576-4 HEAVY DUTY CHASSIS & CABINET BUMPER.
(with steel washer insert).
Molded neoprene. 1" Diameter, 13/16" high. Configuration similar to AK 574 above. Color. Black. Other colors on request.

BUSHING EXTENDERS Cat. No. AK-5075-1 thru No. AK-5075-11

Permit staggered mounting of components having ¼" shafts, behind a panel. Useful in meeting problems of space economy. Supplied in nickel plated brass.

Note: Extender No. AK-5075-9 is a locking (collet) type and is supplied by JAN with lock nut.





AK 5075- ( )

Cat. No.	"B"	"A"
AK5075-1	5/8"	3/8"
AK5075-2	5/8"	1/4"
AK5075-3	5/8"	3/16"
AK5075-4	3/4"	1/4"
AK5075-5	2 1/4"	1/4"

Cat. No.	"B"	"A"
AK5075-6	1 3/8"	1/4"
AK5075-7	1 7/16"	3/16"
AK5075-8	1 3/16"	1/4"
AK5075-9	11/16"	1/2"
AK5075-10	1 31/64"	3/16"
AK5075-11	55/64"	3/16"

JAN
JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

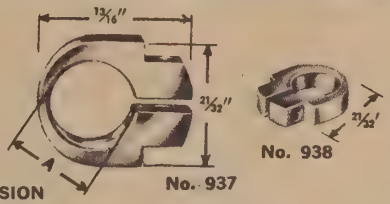
© United Technical Publication

JAN HARDWARE
MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

"NO-MAR" CLAMPS

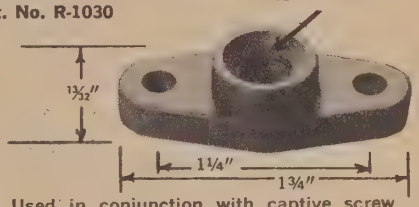
Set screw does not touch shaft.
Ideal for knob and gear applications.
Variety of sizes available.



A DIMENSION

Cat. No.	–2	–3	–4	–5	–6	–7	–8
937	1/8"	3/16"	1/4"	5/16"	3/8"	13/32"	7/16"
938	1/8"	3/16"	1/4"	5/16"	3/8"	13/32"	

RETAINER NUT
Cat. No. R-1030



Used in conjunction with captive screw and nut assemblies. Die casting. Can be painted. Other thread sizes available upon special order.



Cat. No. H 465
VIEWING HOOD and/or ADAPTER

Can be used as viewing hood, on 2¾" dia. bezels. (#1427; 1428; 1429). Also serves as adapter to permit use of face-fitting neoprene rubber viewing hoods. (see above). All aluminum. Dull black enamel finish



VIEWING HOOD
No. H-689-1 (5⅝" I.D.)

Black neoprene rubber. contour-molded, fits shape of face. Keeps out ambient light when viewing scope.

Used with following Jan Bezels: 19636; 19495; 13584; 1465

No. H-689-2 (4⅞" I.D.)

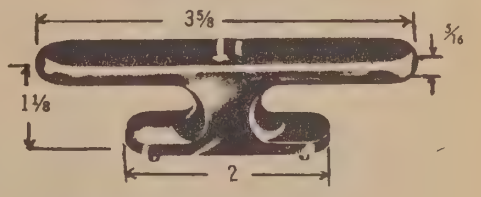
Used with Jan Bezel #545



VIEWING HOOD
to fit rectangular bezels
Cat. No. H-1008

Black, contour molded neoprene rubber. Keeps ambient light out, when viewing scope. Fits shape of face. Can be adapted for smaller I.D.'S.

Can be used with JAN Bezel CP1328P. Can be adapted for #1533-P



HANDLE, CORD **Cat. No. H-692-1**

This durable, die-cast aluminum handle is designed for use on small instrument panels. Single integral hole accepts No. 10 screw.

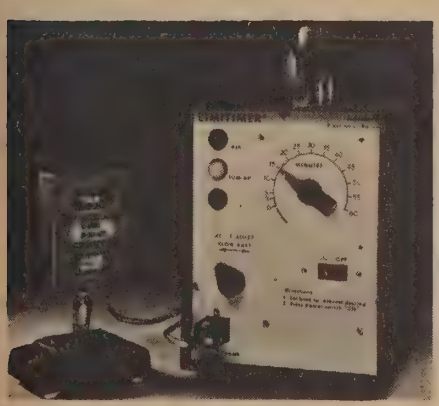
Colors:
(-1) Grey.
Special colors on request.

The service of JAN's design engineers is available to assist you with your Component requirements.

JAN will design and manufacture special Components to customers' specifications.

Complete facilities for prototype work.

new LIMITIMER



KEEPS EVERY PROGRAM EXACTLY ON SCHEDULE

Perfected during years of intensive trials in meetings, and conferences of all sizes, this compact, remote controlled timer known as **LIMITIMER**, has been acclaimed by chairmen, speakers and audiences alike.

* Particularly essential for events organized with two or more sessions carried out simultaneously, **LIMITIMER** assures that programs need never be curtailed because speakers talk too long.

* Each speaker is alerted automatically, gently, and with dignity, three minutes before his time is up, by remote control! Moderators are spared the embarrassment of interrupting speakers who are running overtime.

Resembling a miniature traffic light, **LIMITIMER** automatically triggers in sequence a Green "TALK", an Amber "3-MINUTE SUM—UP", and a Red "CLOSE" series of lights, to guide each speaker's alloted time. The control unit (placed at the moderator's position) connects to the speaker's signal light. Both audience and speaker have full view of the two-sided signal light.

Completely self-contained, and weighing less than 10 pounds, this portable unit is easily carried to any hall or conference room.

Size: 8" X 8" X 6" Weight: 9 1/4 pounds

Max. power consumption: 10 Watts (use only on 110-115 Volt A.C.)

Standard equipment consists of:

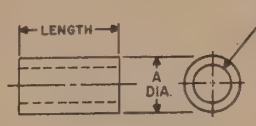
Remote-control Timer with rear storage compartment for all equipment

Triple Signal Light, Swivel Base, power and cable extensions.

© United Technical Publications

SPACER-THRU HOLE

TOL. ±.005



CLEARANCE HOLE	CODE
.091 DIA. (No.2 SCREW)	1
.116 DIA. (No.4 SCREW)	2
.141 DIA. (No.6 SCREW)	3
.171 DIA. (No.8 SCREW)	4
.194 DIA. (No.10 SCREW)	5
.219 DIA. (No.12 SCREW)	6
.257 DIA. (No.1/4 SCREW)	7

LENGTH	A=1/8	A=3/16	A=1/4	LENGTH	A=3/16	A=1/4
1/16	SP 021	SP 031		11/16	SP 0311	SP 0411
1/8	SP 022	SP 032	SP 042	3/4	SP 0312	SP 0412
3/16	SP 023	SP 033	SP 043	7/8	SP 0314	SP 0414
1/4	SP 024	SP 034	SP 044	15/16	SP 0315	SP 0415
5/16	SP 025	SP 035	SP 045	1	SP 0316	SP 0416
3/8	SP 026	SP 036	SP 046	1-1/8		SP 0418
7/16	SP 027	SP 037	SP 047	1-1/4		SP 0420
1/2	SP 028	SP 038	SP 048	1-3/8		SP 0422
9/16	SP 029	SP 039	SP 049	1-1/2		SP 0424
5/8		SP 0310	SP 0410			

EXAMPLE (TO ORDER)

PT. NO. SP035-2-B = 3/16 DIA. X 5/16 LG. SPACER-BRASS W/.116 CLEARANCE HOLE FOR # 4 SCREW

LENGTH	A=5/16	A=3/8	A=1/2	LENGTH	A=5/16	A=3/8	A=1/2
1/8	SP 052	SP 062	SP 082	7/8	SP 0514	SP 0614	SP 0814
3/16	SP 053	SP 063	SP 083	15/16	SP 0515	SP 0615	SP 0815
1/4	SP 054	SP 064	SP 084	1	SP 0516	SP 0616	SP 0816
5/16	SP 055	SP 065	SP 085	1-1/8	SP 0518	SP 0618	SP 0818
3/8	SP 056	SP 066	SP 086	1-1/4	SP 0520	SP 0620	SP 0820
7/16	SP 057	SP 067	SP 087	1-3/8	SP 0522	SP 0622	SP 0822
1/2	SP 058	SP 068	SP 088	1-1/2	SP 0524	SP 0624	SP 0824
9/16	SP 059	SP 069	SP 089	1-5/8		SP 0626	SP 0826
5/8	SP 0510	SP 0610	SP 0810	1-3/4		SP 0628	SP 0828
11/16	SP 0511	SP 0611	SP 0811	1-7/8		SP 0630	SP 0830
3/4	SP 0512	SP 0612	SP 0812	2		SP 0632	SP 0832

EXAMPLE (TO ORDER)

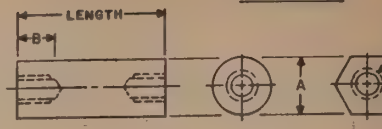
PT. NO. SP064-3-PH = 3/8 DIA. X 1/4 LG. SPACER-PHENOLIC W/.141 CLEARANCE HOLE FOR # 6 SCREW

MATERIALS

B = BRASS A = ALUMINUM SS = STAINLESS STEEL PH = PHENOLIC

STANDOFF THREADED ENDS HEX & ROUND

TOL. ±.005



THREAD	DEPTH B
0-80	3/16
4-40	1/4
6-32	3/8
8-32	7/16

LENGTH	A=1/8 DIA 0-80 THREAD		A=1/4 DIA. 4-40 THREAD		A=1/4 DIA. 6-32 THREAD		A=1/4 DIA 8-32 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX	ROUND	HEX
1-1/16	DR 217	DH 217	DR 4174	DH 4174	DR 4176	DH 4176	DR 4178	DH 4178
1-1/8	DR 218	DH 218	DR 4184	DH 4184	DR 4186	DH 4186	DR 4188	DH 4188
1-3/16	DR 219	DH 219	DR 4194	DH 4194	DR 4196	DH 4196	DR 4198	DH 4198
1-1/4	DR 220	DH 220	DR 4204	DH 4204	DR 4206	DH 4206	DR 4208	DH 4208
1-5/16	DR 221	DH 221	DR 4214	DH 4214	DR 4216	DH 4216	DR 4218	DH 4218
1-3/8	DR 222	DH 222	DR 4224	DH 4224	DR 4226	DH 4226	DR 4228	DH 4228
1-7/16	DR 223	DH 223	DR 4234	DH 4234	DR 4236	DH 4236	DR 4238	DH 4238
1-1/2	DR 224	DH 224	DR 4244	DH 4244	DR 4246	DH 4246	DR 4248	DH 4248
2			DR 4324	DH 4324	DR 4326	DH 4326	DR 4328	DH 4328
2-1/8			DR 4344	DH 4344	DR 4346	DH 4346	DR 4348	DH 4348
2-3/4			DR 4444	DH 4444	DR 4446	DH 4446	DR 4448	DH 4448
3			DR 4484	DH 4484	DR 4486	DH 4486	DR 4488	DH 4488

EXAMPLE (TO ORDER)

PT. NO. DH219-B = 1/8 DIA X 1-3/16 LG. HEX STANDOFF-TAPPED BOTH ENDS BRASS W/0-80 X 3/16 HOLE.

LENGTH	A=5/16 DIA. 6-32 THREAD		A=3/8 DIA. 6-32 THREAD		A=3/8 DIA. 8-32 THREAD		A=1/2 DIA. 8-32 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX	ROUND	HEX
1-1/16	DR 5176	DH 5176	DR 6176	DH 6176	DR 6178	DH 6178	DR 8178	DH 8178
1-1/8	DR 5186	DH 5186	DR 6186	DH 6186	DR 6188	DH 6188	DR 8188	DH 8188
1-3/16	DR 5196	DH 5196	DR 6196	DH 6196	DR 6198	DH 6198	DR 8198	DH 8198
1-1/4	DR 5206	DH 5206	DR 6206	DH 6206	DR 6208	DH 6208	DR 8208	DH 8208
1-5/16	DR 5216	DH 5216	DR 6216	DH 6216	DR 6218	DH 6218	DR 8218	DH 8218
1-3/8	DR 5226	DH 5226	DR 6226	DH 6226	DR 6228	DH 6228	DR 8228	DH 8228
1-7/16	DR 5236	DH 5236	DR 6236	DH 6236	DR 6238	DH 6238	DR 8238	DH 8238
1-1/2	DR 5246	DH 5246	DR 6246	DH 6246	DR 6248	DH 6248	DR 8248	DH 8248
1-3/4	DR 5286	DH 5286	DR 6286	DH 6286	DR 6288	DH 6288	DR 8288	DH 8288
2	DR 5326	DH 5326	DR 6326	DH 6326	DR 6328	DH 6328	DR 8328	DH 8328
2-1/4	DR 5366	DH 5366	DR 6366	DH 6366	DR 6368	DH 6368	DR 8368	DH 8368
2-1/2	DR 5406	DH 5406	DR 6406	DH 6406	DR 6408	DH 6408	DR 8408	DH 8408
3	DR 5486	DH 5486	DR 6486	DH 6486	DR 6488	DH 6488	DR 8488	DH 8488
3-1/2	DR 5566	DH 5566	DR 6566	DH 6566	DR 6568	DH 6568	DR 8568	DH 8568
4	DR 5646	DH 5646	DR 6646	DH 6646	DR 6648	DH 6648	DR 8648	DH 8648

EXAMPLE (TO ORDER)

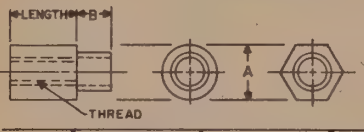
PT. NO. DR6186-A = 3/8 DIA. X 1-1/8 LG. ROUND STANDOFF-ALUMINUM-TAPPED BOTH ENDS W/6-32 X 3/8 TH'D.

MATERIALS

B = BRASS A = ALUMINUM SS = STAINLESS STEEL PH = PHENOLIC

STANDOFF-RIVET HEX & ROUND

TOL. ±.005



CODE	BOARD THICKNESS	SHANK B
1	1/32	.075
2	1/16	.105
3	3/32	.135
4	1/8	.165
5	3/16	.230
6	1/4	.290

LENGTH	A=1/8 DIA. 0-80 THREAD		A=1/4 DIA. 2-56 THREAD		A=5/16 DIA. 4-40 THREAD		A=3/8 DIA. 6-32 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX	ROUND	HEX
1/8	RR 202	RH 202	RR 4022	RH 4022	RR 5024	RH 5024	RR 6026	RH 6026
3/16	RR 203	RH 203	RR 4032	RH 4032	RR 5034	RH 5034	RR 6036	RH 6036
1/4	RR 204	RH 204	RR 4042	RH 4042	RR 5044	RH 5044	RR 6046	RH 6046
5/16	RR 205	RH 205	RR 4052	RH 4052	RR 5054	RH 5054	RR 6056	RH 6056
3/8	RR 206	RH 206	RR 4062	RH 4062	RR 5064	RH 5064	RR 6066	RH 6066
7/16	RR 207	RH 207	RR 4072	RH 4072	RR 5074	RH 5074	RR 6076	RH 6076
1/2	RR 208	RH 208	RR 4082	RH 4082	RR 5084	RH 5084	RR 6086	RH 6086
9/16	RR 209	RH 209	RR 4092	RH 4092	RR 5094	RH 5094	RR 6096	RH 6096
5/8	RR 210	RH 210	RR 4102	RH 4102	RR 5104	RH 5104	RR 6106	RH 6106
11/16	RR 211	RH 211	RR 4112	RH 4112	RR 5114	RH 5114	RR 6116	RH 6116
3/4	RR 212	RH 212	RR 4122	RH 4122	RR 5124	RH 5124	RR 6126	RH 6126
7/8	RR 214	RH 214	RR 4142	RH 4142	RR 5144	RH 5144	RR 6146	RH 6146
1	RR 216	RH 216	RR 4162	RH 4162	RR 5164	RH 5164	RR 6166	RH 6166

EXAMPLE (TO ORDER)

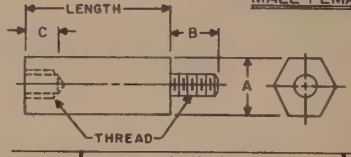
PT. NO. RR4052-2-B = 1/4 DIA. X 5/16 LG. ROUND, RIVET STANDOFF-BRASS W/2-56 THREAD. SHANK=.105 FOR 1/16 BOARD.

MATERIALS

B = BRASS A = ALUMINUM SS = STAINLESS STEEL PH = PHENOLIC

STANDOFF MALE-FEMALE

TOL. ±.005



THREAD	B	C
4-40	3/16	1/4
6-32	1/4	3/8
8-32	3/8	7/16
10-32	3/8	1/2

LENGTH	A=1/4 AC. FLTS.				A=3/8 AC. FLTS.			
	4-40	6-32	8-32	10-32	4-40	6-32	8-32	10-32
1/4	MF 4044	MF 4046	MF 4048	MF 40410	MF 6044	MF 6046	MF 6048	MF 60410
3/8	MF 4064	MF 4066	MF 4068	MF 40610	MF 6064	MF 6066	MF 6068	MF 60610
1/2	MF 4084	MF 4086	MF 4088	MF 40810	MF 6084	MF 6086	MF 6088	MF 60810
5/8	MF 4104	MF 4106	MF 4108	MF 41010	MF 6104	MF 6106	MF 6108	MF 61010
3/4	MF 4124	MF 4126	MF 4128	MF 41210	MF 6124	MF 6126	MF 6128	MF 61210
7/8	MF 4144	MF 4146	MF 4148	MF 41410	MF 6144	MF 6146	MF 6148	MF 61410
1	MF 4164	MF 4166	MF 4168	MF 41610	MF 6164	MF 6166	MF 6168	MF 61610
1-1/8	MF 4184	MF 4186	MF 4188	MF 41810	MF 6184	MF 6186	MF 6188	MF 61810
1-1/4	MF 4204	MF 4206	MF 4208	MF 42010	MF 6204	MF 6206	MF 6208	MF 62010
1-3/8	MF 4224	MF 4226	MF 4228	MF 42210	MF 6224	MF 6226	MF 6228	MF 62210
1-1/2	MF 4244	MF 4246	MF 4248	MF 42410	MF 6244	MF 6246	MF 6248	MF 62410
1-5/8	MF 4264	MF 4266	MF 4268	MF 42610	MF 6264	MF 6266	MF 6268	MF 62610
1-3/4	MF 4284	MF 4286	MF 4288	MF 42810	MF 6284	MF 6286	MF 6288	MF 62810
2	MF 4324	MF 4326	MF 4328	MF 43210	MF 6324	MF 6326	MF 6328	MF 63210
2-1/2	MF 4404	MF 4406	MF 4408	MF 44010	MF 6404	MF 6406	MF 6408	MF 64010
3	MF 4484	MF 4486	MF 4488	MF 44810	MF 6484	MF 6486	MF 6488	MF 64810

EXAMPLE (TO ORDER)

PT. NO. MF 4146-B = 1/4 AC. FLTS. STANDOFF-BRASS 6-32 MALE-FEMALE THREADS.

MATERIALS

B = BRASS
A = ALUMINUM
SS = STAINLESS STEEL

SPECIAL SIZES AND MATERIALS MANUFACTURED TO ORDER

JAN HARDWARE MANUFACTURING COMPANY INC.

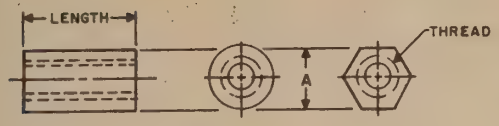
QUALITY
RELIABILITY
ECONOMY

© United Technical Publications

JAN HARDWARE
MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

STANDOFF-THREADED
HEX & ROUND
TOL. ±.005



MATERIALS
B = BRASS
A = ALUMINUM
SS = STAINLESS STEEL
PH = PHENOLIC

LENGTH	A=1/8 DIA. 0-80 THREAD		A=3/16 DIA. 2-56 THREAD		A=3/16 DIA. 4-40 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX
1/16	SR201	SH201	SR3012	SH3012	SR3014	SH3014
1/8	SR202	SH202	SR3022	SH3022	SR3024	SH3024
3/16	SR203	SH203	SR3032	SH3032	SR3034	SH3034
1/4	SR204	SH204	SR3042	SH3042	SR3044	SH3044
5/16	SR205	SH205	SR3052	SH3052	SR3054	SH3054
3/8	SR206	SH206	SR3062	SH3062	SR3064	SH3064
7/16	SR207	SH207	SR3072	SH3072	SR3074	SH3074
1/2	SR208	SH208	SR3082	SH3082	SR3084	SH3084
9/16	SR209	SH209	SR3092	SH3092	SR3094	SH3094
5/8	SR210	SH210	SR3102	SH3102	SR3104	SH3104
3/4	SR212	SH212	SR3122	SH3122	SR3124	SH3124
1			SR3162	SH3162	SR3164	SH3164

EXAMPLE (TO ORDER)
PT. NO. SR3032-A = 3/16 DIA. X 3/16 LG. ROUND STANDOFF - ALUMINUM W/2-56 THREADED HOLE

SPECIAL SIZES AND MATERIALS MANUFACTURED TO ORDER

LENGTH	A=5/16 DIA. 4-40 THREAD		6-32 THREAD		8-32 THREAD		10-32 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX	ROUND	HEX
1/8	SR5024	SH5024	SR5026	SH5026	SR5028	SH5028	SR50210	SH50210
3/16	SR5034	SH5034	SR5036	SH5036	SR5038	SH5038	SR50310	SH50310
1/4	SR5044	SH5044	SR5046	SH5046	SR5048	SH5048	SR50410	SH50410
5/16	SR5054	SH5054	SR5056	SH5056	SR5058	SH5058	SR50510	SH50510
3/8	SR5064	SH5064	SR5066	SH5066	SR5068	SH5068	SR50610	SH50610
7/16	SR5074	SH5074	SR5076	SH5076	SR5078	SH5078	SR50710	SH50710
1/2	SR5084	SH5084	SR5086	SH5086	SR5088	SH5088	SR50810	SH50810
9/16	SR5094	SH5094	SR5096	SH5096	SR5098	SH5098	SR50910	SH50910
5/8	SR5104	SH5104	SR5106	SH5106	SR5108	SH5108	SR51010	SH51010
3/4	SR5124	SH5124	SR5126	SH5126	SR5128	SH5128	SR51210	SH51210
7/8	SR5144	SH5144	SR5146	SH5146	SR5148	SH5148	SR51410	SH51410
1	SR5164	SH5164	SR5166	SH5166	SR5168	SH5168	SR51610	SH51610

EXAMPLE (TO ORDER)
PT. NO. SR5146-PH=5/16 DIA. X 7/8 LG. ROUND STANDOFF - PHENOLIC W/6-32 THREADED HOLE.

LENGTH	A=1/4 DIA. 4-40 THREAD		6-32 THREAD		8-32 THREAD		10-32 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX	ROUND	HEX
1/8	SR4024	SH4024	SR4026	SH4026	SR4028	SH4028	SR40210	SH40210
3/16	SR4034	SH4034	SR4036	SH4036	SR4038	SH4038	SR40310	SH40310
1/4	SR4044	SH4044	SR4046	SH4046	SR4048	SH4048	SR40410	SH40410
5/16	SR4054	SH4054	SR4056	SH4056	SR4058	SH4058	SR40510	SH40510
3/8	SR4064	SH4064	SR4066	SH4066	SR4068	SH4068	SR40610	SH40610
7/16	SR4074	SH4074	SR4076	SH4076	SR4078	SH4078	SR40710	SH40710
1/2	SR4084	SH4084	SR4086	SH4086	SR4088	SH4088	SR40810	SH40810
9/16	SR4094	SH4094	SR4096	SH4096	SR4098	SH4098	SR40910	SH40910
5/8	SR4104	SH4104	SR4106	SH4106	SR4108	SH4108	SR41010	SH41010
3/4	SR4124	SH4124	SR4126	SH4126	SR4128	SH4128	SR41210	SH41210
7/8	SR4144	SH4144	SR4146	SH4146	SR4148	SH4148	SR41410	SH41410
1	SR4164	SH4164	SR4166	SH4166	SR4168	SH4168	SR41610	SH41610

EXAMPLE (TO ORDER)
PT. NO. SH4086-B = 1/4 DIA. X 1/2 LG. HEX STANDOFF-BRASS W/6-32 THREADED HOLE.

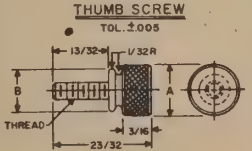
LENGTH	3/8 DIA. 6-32 THREAD		8-32 THREAD		10-32 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX
1/8	SR6026	SH6026	SR6028	SH6028	SR60210	SH60210
3/16	SR6036	SH6036	SR6038	SH6038	SR60310	SH60310
1/4	SR6046	SH6046	SR6048	SH6048	SR60410	SH60410
5/16	SR6056	SH6056	SR6058	SH6058	SR60510	SH60510
3/8	SR6066	SH6066	SR6068	SH6068	SR60610	SH60610
7/16	SR6076	SH6076	SR6078	SH6078	SR60710	SH60710
1/2	SR6086	SH6086	SR6088	SH6088	SR60810	SH60810
9/16	SR6096	SH6096	SR6098	SH6098	SR60910	SH60910
5/8	SR6106	SH6106	SR6108	SH6108	SR61010	SH61010
3/4	SR6126	SH6126	SR6128	SH6128	SR61210	SH61210
7/8	SR6146	SH6146	SR6148	SH6148	SR61410	SH61410
1	SR6166	SH6166	SR6168	SH6168	SR61610	SH61610

EXAMPLE (TO ORDER)
PT. NO. SH6068-B = 3/8 DIA. X 3/8 LG. HEX STANDOFF-BRASS W/8-32 THREADED HOLE.

LENGTH	A=1/2 DIA. 8-32 THREAD		10-32 THREAD		12-24 THREAD		1/4-20 THREAD	
	ROUND	HEX	ROUND	HEX	ROUND	HEX	ROUND	HEX
1/8	SR8028	SH8028	SR80210	SH80210	SR80212	SH80212	SR80214	SH80214
3/16	SR8038	SH8038	SR80310	SH80310	SR80312	SH80312	SR80314	SH80314
1/4	SR8048	SH8048	SR80410	SH80410	SR80412	SH80412	SR80414	SH80414
5/16	SR8058	SH8058	SR80510	SH80510	SR80512	SH80512	SR80514	SH80514
3/8	SR8068	SH8068	SR80610	SH80610	SR80612	SH80612	SR80614	SH80614
7/16	SR8078	SH8078	SR80710	SH80710	SR80712	SH80712	SR80714	SH80714
1/2	SR8088	SH8088	SR80810	SH80810	SR80812	SH80812	SR80814	SH80814
9/16	SR8098	SH8098	SR80910	SH80910	SR80912	SH80912	SR80914	SH80914
5/8	SR8108	SH8108	SR81010	SH81010	SR81012	SH81012	SR81014	SH81014
3/4	SR8128	SH8128	SR81210	SH81210	SR81212	SH81212	SR81214	SH81214
7/8	SR8148	SH8148	SR81410	SH81410	SR81412	SH81412	SR81414	SH81414
1	SR8168	SH8168	SR81610	SH81610	SR81612	SH81612	SR81614	SH81614

EXAMPLE (TO ORDER)
PT. NO. SR80910-A = 1/2 DIA. X 9/16 LG. ROUND STANDOFF-ALUMINUM W/10-32 THREADED HOLE.

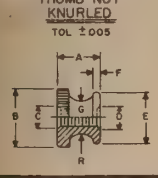
THUMB SCREW
TOL. ±.005



THREAD	A DIA.	B DIA.	PT. NO.
6-32	3/8	5/16	TS6056
	7/16	3/8	TS7066
	1/2	7/16	TS8076
8-32	3/8	5/16	TS6058
	7/16	3/8	TS7068
	1/2	7/16	TS8078
10-32	3/8	5/16	TS60510
	7/16	3/8	TS70610
	1/2	7/16	TS80710

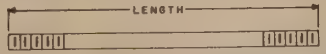
EXAMPLE (TO ORDER)
PT. NO. TS6058-B = 8-32 X 13/32 LG. THREAD, THUMB SCREW-BRASS

THUMB NUT KNURLED
TOL ±.005



THREAD SIZE	A	B DIA.	C DIA.	D DIA.	E DIA.	F	G	R RAD.	PART NO.
4-36	1/4	3/8	1/8	.147	5/16	3/64	7/32	3/64	KN436
4-40	1/4	3/8	1/8	.147	5/16	3/64	7/32	3/64	KN440
6-32	1/4	3/8	9/64	.169	5/16	3/64	7/32	3/64	KN632
6-32	9/32	13/32	9/64	13/64	11/32	3/64	7/32	1/16	KN6321
8-32	5/16	7/16	11/64	15/64	3/8	1/16	1/4	1/16	KN832
10-24	21/64	1/2	13/64	17/64	7/16	1/16	9/32	070	KN124
10-32	21/64	1/2	13/64	17/64	7/16	1/16	9/32	070	KN132
12-24	11/32	9/16	7/32	19/64	1/2	1/16	21/64	070	KN224
1/4-20	3/8	5/8	17/64	21/64	9/16	1/16	23/64	5/64	KN420

THREADED ROD
1/4-20 THREAD
2" EACH END



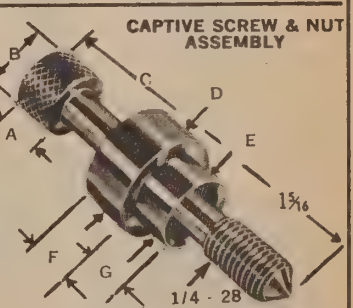
LENGTH		LENGTH		LENGTH		LENGTH		LENGTH		LENGTH	
4-1/2	TR 1445	7	TR 1470	9-1/2	TR 1495	12	TR 14120	14-1/2	TR 14145	17-1/2	TR 14175
5	TR 1450	7-1/2	TR 1475	10	TR 14100	12-1/2	TR 14125	15	TR 14150	18	TR 14180
5-1/2	TR 1455	8	TR 1480	10-1/2	TR 14105	13	TR 14130	15-1/2	TR 14155	18-1/2	TR 14185
6	TR 1460	8-1/2	TR 1485	11	TR 14110	13-1/2	TR 14135	16	TR 14160	19	TR 14190
6-1/2	TR 1465	9	TR 1490	11-1/2	TR 14115	14	TR 14140	16-1/2	TR 14165	19-1/2	TR 14195
								17	TR 14170	20	TR 14200

MATERIALS B = BRASS, A = ALUMINUM, SS = STAINLESS STEEL

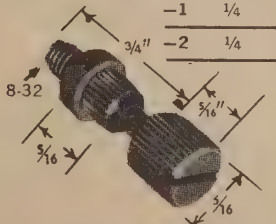
CAPTIVE SCREW & NUT ASSEMBLY

No. AP711-(1) -(2)

Consists of slotted, knurled thumb screws made of corrosion resistant steel bar, and nickle-plated (on brass) panel inserts.



	A	B	C	D	E	F	G
-1	1/4	3/8	1 5/16	5/16	13/32	5/16	3/8
-2	1/4	29/64	1 1/16	5/16	13/32	5/16	3/8



Cat. No. AP1040
Screw, Captive

Cat. No. AP1039
Insert, Captive

Cat. No. AP1197
Screw, captive.

5/16" slotted knurled head (7/16" O.D.) 1 1/4" overall length; 8-32 thread.

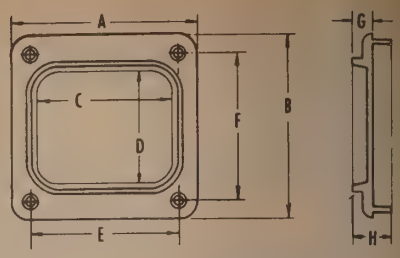
© United Technical Publications

JAN's Bezels enhance the appearance of the instruments on which they are used. These units are functionally designed to provide OPTIMUM UTILIZATION OF THE CRT SCREEN, as well as safety against tube breakage and danger to operating personnel.

JAN Bezel Assemblies are supplied with a bezel, calibrated graticule, (where applicable) light filter and CRT cushion. Bezels are finished in a smooth dull black non-reflecting surface. These units fit JAN Mu-Metal Shields.

Edge-lit Bezels (E.L.B.A.)** These Bezels are designed to provide edge lighting of the engraved scale-calibrated graticule by means of pilot lights.

Camera Mount Bezel These units provide an integral cast mounting flange that fits all standard 3", 5" and 7" CRT cameras.

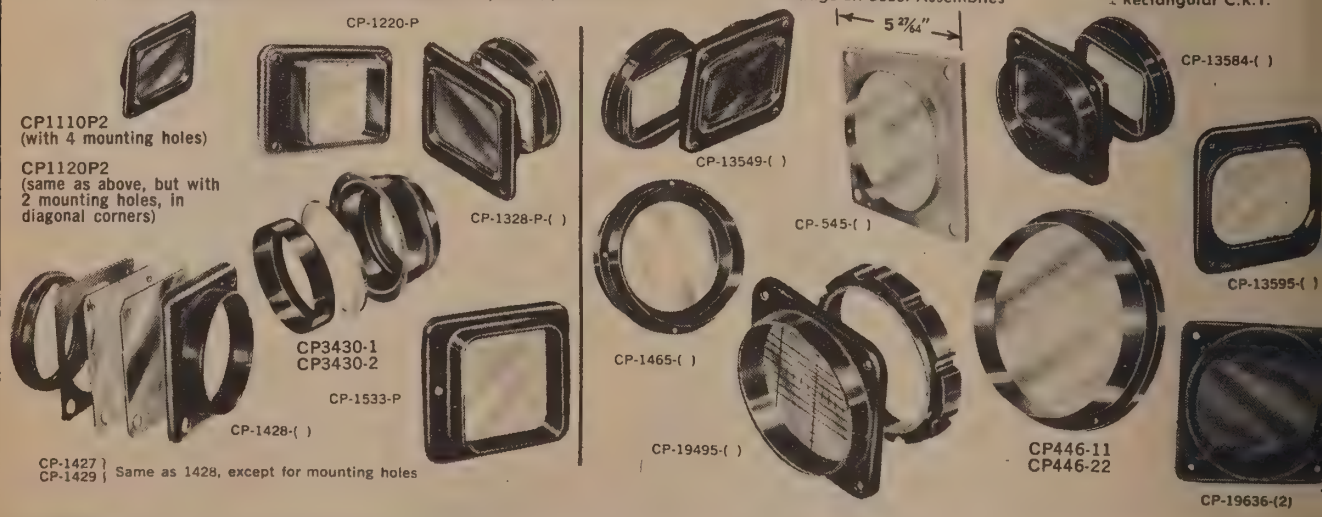


Catalog No.	CRT Face	Material	Type	Panel Opening	A Overall Width	B Overall Height	C D Visible Area (Bezel) Width	Height	E F Mounting Holes Width	Height	G Thickness (Face Only)	H Thickness (Incl. Flange)	Visible Area (Cushion) Height	Width
BEZELS FOR 2" C.R.T.														
CP-1110-P-2	Flat	Plastic*	Standard	2 1/16"	2 3/8"	2 3/8"	1 3/4"	1 3/4"	2"	2"	3/16"	7/16"	1 3/4"	1 3/4"
BEZELS FOR 3" C.R.T.														
CP-1220-P‡	Curved or Flat	Plastic*	Camera Mount	—	4 7/8"	3 1/4"	2 3/4"	2 1/4"	4"	2 1/2"	3/16"	1 1/16"	—	
CP-1328-P-1 CP-1328-P-2	Curved Flat	Plastic*	Standard	3 33/64"	3 3/4"	3 3/4"	2 5/8"	2 5/16"	3"	3"	3/8"	45/64	2 1/2"	2 1/16"
CP-1427-1 CP-1427-2	Curved Flat	Aluminum	Camera Mount	3 17/64"	4"	4"	2 3/4" Dia.		3"	3"	3/16"	27/32"	2 25/32" Dia.	
CP-1428-1** CP-1428-2**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	3 17/64"	4"	4"	2 3/4" Dia.		3"	3"	3/16"	27/32"	2 25/32" Dia.	
CP-1429-1 CP-1429-2	Curved Flat	Aluminum	Camera Mount	3 17/64"	4"	4"	2 3/4" Dia.		3"	3"	3/16"	27/32"	2 25/32" Dia.	
CP-3430-1 CP-3430-2	Curved Flat	Steel	Standard	—	4 1/16" Dia.		3 3/8" Dia.		3 3/4"	3 3/4"	1 41/64"	1 41/64"	2 25/32" Dia.	
BEZELS FOR 4" C.R.T.														
CP-1533-P‡		Plastic*	Camera Mount	3 1/32"	4 39/64"	3 61/64"	3"	3"	4"		1 3/32"	1 3/32"	No Cushion	
BEZELS FOR 5" C.R.T.														
CP-13549-1 CP-13549-2	Curved Flat	Aluminum	Standard	6.0"	6 1/4"	6 1/4"	4 7/8"	3 3/4"	4 15/16"	4 15/16"	1 1/32"	1 3/32"	4 1/4"	3 3/16"
CP-13584-1 CP-13584-2	Curved Flat	Aluminum	Camera Mount	6.0"	6 1/4"	6 1/4"	4 7/8"	3 3/4"	4 15/16"	4 15/16"	1 3/32"	1 33/32"	4 1/4"	3 3/16"
CP-13595-1** CP-13595-2**	Curved Flat	Aluminum	Standard E.L.B.A.**	5 7/16"	6 1/4"	6 1/4"	4 7/8"	3 3/4"	4 15/16"	4 15/16"	1 1/32"	—	4 3/4" Dia.	
CP-1465 CP-1465-2	Curved or Flat Flat	Steel	Camera Mount	5 5/16" 5 11/32"	6 1/8" Dia.		5 35/64" Dia.		6"	6"	7/8"	7/8"	No Cushion 4 1/2" Dia.	
CP-19495-1** CP-19495-2**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	5 7/16"	6 1/4"	6 1/4"	5 1/4" Dia.		4 15/16"	4 15/16"	1 3/32"	—	4 3/4" Dia.	
CP-19636-2**	Flat	Aluminum	Camera Mount E.L.B.A.**	5 5/8"	5 7/8"	5 7/8"	4 1/2" Dia.	3"	4 7/8"	4 7/8"	1 1/4"	—	4 1/2" Dia.	
CP-446-11 CP-446-22	Flat	Steel	Camera Mount	—	6 9/16" Dia.		5 9/16" Dia.		6 33/32" 6 1/8"	6 33/32" 6 1/8"	1"	1 19/64" 1 3/16"	4 1/2" Dia.	
CP-545	Curved or Flat	Aluminum	Camera Mount	5"	5 27/32"	5 27/32"	4 25/32"		5"	5"	25/32"	—	—	

* All Plastic Bezels are furnished in shock resistant plastic, per MIL P-3414

** Edge Lit Bezel Assemblies

‡ Rectangular C.R.T.



JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

© United Technical Publicatio

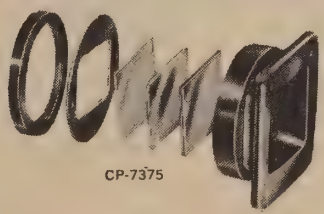
JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

Catalog No.	CRT Face	Material	Type	Panel Opening	A Overall Width	B Overall Height	C Visible Area (Bezel) Width	D Visible Area (Bezel) Height	E Mounting Holes Width	F Mounting Holes Height	G Thickness (Face Only)	H Thickness (Incl. Flange)	Visible Area (Cushion) Height	Visible Area (Cushion) Width
BEZELS FOR 7" C.R.T.														
CP-7330 1 CP-7331-2**	Curved Flat	Aluminum	Standard E.L.B.A.**	7 13/32"	7 13/16"	7 13/16"	6 5/16" Dia.		6 3/16"	6 3/16"	3/4"	3/4"	6 3/8" Dia.	
CP-7375-1** -2**	Curved Flat	Aluminum	E.L.B.A.**	7 13/32"	8"	8"	4 1/2"	4 1/2"	6 3/16"	6 3/16"	1 17/32"	2 29/32"	4 1/2"	4 1/2"
CP-7420-1** -2**	Curved Flat	Aluminum	Camera Mount	7 13/32"	7 13/16"	7 13/16"	6 15/16" Dia.		6 3/16"	6 3/16"	3/4"	1 3/8"	6 3/8" Dia.	
CP-7550	Curved or Flat	Aluminum	Camera Mount	4 23/32"	7 3/8"	6 1/4"	4 3/4"	4 3/4"	6 1/4"	5 1/8"	1 3/16"	1 3/16"	No Cushion	
BEZEL FOR 10" C.R.T.														
CP-10860	Curved or Flat	Aluminum	Standard	11 1/32"	12 1/4" Dia.		8 1/16"	6 1/4"	11 1/2" B.C.		1 1/16"	1 3/16"	No Cushion	

** Edge Lit Bezel Assemblies


CP-7330


CP-7375


CP-7420

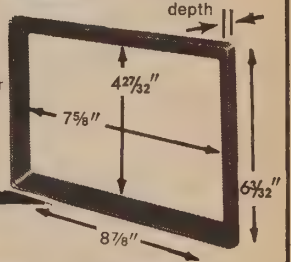

CP-7550


CP-10860

DISTINCTIVE FEATURES

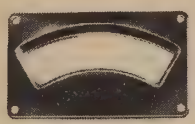
- Engineered for 2", 3", 4", 5", 7", 8" and 10" CRT
- Maximum display area
- Precision engraved, scale-calibrated graticules; standard or to customer's specifications
- Materials and finish to "Mil Spec"
- Heavy buna-S shock cushion
- Models for edge-lighting
- Phosphor-matched light filters
- Non-reflecting matte surfaces
- Rugged camera mounts
- Models for curved and flat-faced CRT

Cat. No. CP5900
Die-Cast Aluminum. Suitable for computer and digital readout applications.
Finishes available to suit your design requirements.



ESCUTCHEON PLATES For Elegant Framing of Panel Openings

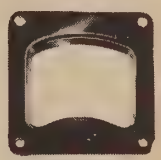

ET-120


ET-150


ET-160


EM-310

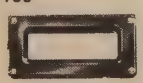

EM-320


EM-325

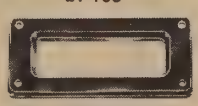

ET-125


ET-165


ET-140

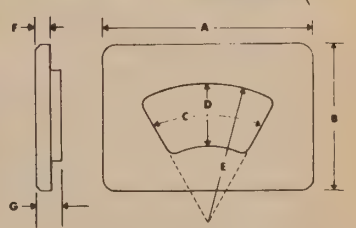

ET-155


ET-135


ET-130


ET-145


EM-315



SPECIFICATIONS — JAN ESCUTCHEONS

Escutcheon Cat. No.	A Overall Width	B Overall Height	C Window Width	D Window Height	E Effective Outer Dial Radius	Thickness F=Face Only	Thickness G=Incl. Flange	Panel Opening Width	Panel Opening Height	Mounting Holes Width	Mounting Holes Height	Type of Dial	Material
* ET-128	2 21/32	1 7/8	1 3/4	1"	1 17/32	3/16	3/16	2 11/32	1 3/8	2 5/16 top 2 5/16 bottom	1 5/16		Injection
* ET-125	3 3/8	2 15/16	2 7/8	1"	3 1/4	3/16	3/16	3 1/2	1 1/2	3 1/2	1 15/16		Molded
* ET-135	2 3/4	1 7/8	1 1/2	3/8	1 7/8	3/16	1/4	1 31/32	1 7/32	2 1/4	1 3/8	Circular	Tenite II,
* ET-150	3 7/8	2 5/16	2 7/8	3/4	3 1/16	3/16	3/4	3 5/32	1 7/32	3 1/2	1 15/16		Black Matte
* ET-165	2 5/8	1 3/8	1 49/64	5/16	2 5/32	1/8	1/4	2 1/16	1 1/2	2 1/16	1 1/16		Finish
* ET-130	4	1 13/16	2 1/4	1 3/16	—	3/16	1/4	2 13/32	1 11/32	3 1/2	1 3/16	Flexible Tape,	Injection
* ET-140	2 1/2	1 1/2	1 1/4	3/4	—	1/8	3/16	1 13/32	1 1/32	2	1	Digital	Molded
* ET-145	3 1/4	2 1/16	1 13/16	3/4	—	3/32	3/32	2 13/32	1 5/32	2 3/4	1 3/16	Counter,	Tenite II,
* ET-155	2 1/2	1 3/16	1 1/16	1/2	—	3/32		2 1/32	2 9/32	2 1/4	1 3/16	Cylinder	Black Matte
* ET-160	3 7/8	2 1/2	2 15/16	1 3/8	—	1/8	1/8	3	2 1/32	3 5/8	2 1/4	or Drum	Finish
EM-310	3	3	2 1/16	1 13/16	2 5/16	1/32	1/4	3 1/32	2 1/2	2 1/2	2 1/2	Helical	Soft Aluminum
EM-315	3 1/4	3	2 1/4	5/8	2 1/16	1/32	1/8	2 13/32	1 3/4	2 3/4	2 5/8	Circular	with Black
EM-320	3 1/4	2 3/4	2 1/4	5/8	2 1/16	1/32	1/8	2 29/64	1 3/4	2 3/4	2 1/4	Circular	Matte Enamel
EM-325	3	3	2 1/16	1 1/2	2 5/16	1/32	1/4	2 11/32	1 49/64	2 1/2	2 1/2	Helical	Finish

* To Order specify: (1) frame only; (2) frame with clear window; (3) frame with clear window scribed with a center line.

JAN'S molded, black, shock-resistant plastic escutcheons are available in an exceptionally wide variety of different types and sizes. They provide a pleasing window to frame dial plates mounted behind the panel.
Plastic escutcheons are available in the following ways: frame only; frame with clear windows; frame with clear window scribed with a center line.
For especially large working areas, stamped aluminum escutcheons, finished in dull black are available to meet the needs for space economy.
Withstands temperature shock −65° to +85° C.
NON INFLAMMABLE

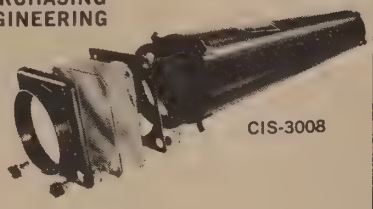
© United Technical Publications



PACKAGED SHIELD-BEZEL ASSEMBLIES

ELIMINATES \ MULTIPLE PURCHASING / COMPLEX ENGINEERING

SAVES \ TIME / MONEY



CIS-3008

All necessary items for CRT Magnetic Shield and Bezel applications are packaged in one unit.

EACH ASSEMBLY CONTAINS } Shield, JAN Bezel, CRT Rubber Cushion, Graticule, Filter, Light Sockets, Pilot Lamps (for edge-lit bezel-shield assemblies) plus Hardware.

When ordering specify:
"JAN PACKAGED UNIT" giving JAN shield No., JAN bezel No. and CRT tube type with which it is to be used.

PILOT LIGHT ASSEMBLIES FOR EDGE LIGHTING



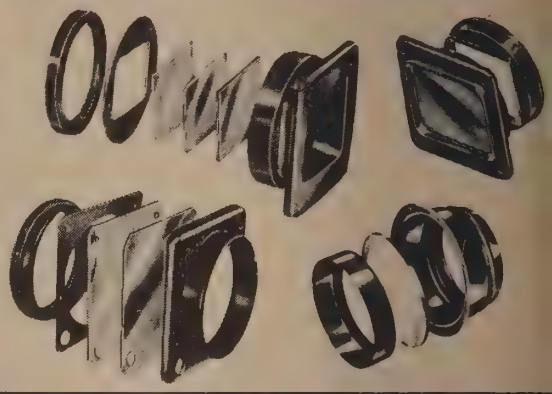
Cat. No. 100306



Cat. No. 100232

SHIELD/BEZEL ASSEMBLIES

Assorted Sizes and Shapes



JOLTA SHOCK TEST MACHINES For reproducible impact-shock test pulses

Four models engineered to reproduce the entire spectrum of all significant impact shock waves.

Designed for laboratory and production testing of light to medium weight components as well as complete instrumentation. Produced to meet practically all requirements of common Mil. Spec. qualification tests. Each JOLTA is electronically calibrated to certify compliance with test specifications.

JOLTA – Bench Model No. 1001 – Produced to meet JAN-S-44 & Mil-Std. 202 (202A). Standard model range-30-120G. Accessory plate springs available for test pulses to 500 G.

JOLTA – Bench Model No. M-500 – Produced to meet Mil-T-12679A (Sig. C) and Mil. T-19500A. Standard model range –200 to 1000 G at 1.0 millisecs. Alternate anvil and pad kits available to order.

JOLTA—Floor Model Nos. F-3003-C1, C2, C-3—Designed for high impact shock testing for small and moderate-sized components. Precision-machined magnesium casting utilized for higher shock amplitudes. Typical tests with these units 50 to 5000 G at .2 to 11.0 millisecs. For high impact testing, accessory springs and twin anvil combinations yield impulses of 0.2 millisecs to 5000 G.

Note: New design allows for quick changeovers of accessories.

For Production Testing, can be automated for continuous operation.

FEATURES

- Economical
- Simple to operate
- Rugged
- Uniformly accurate

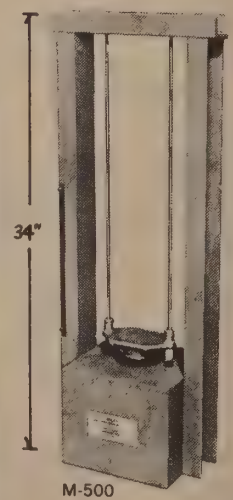
SPECIFICATIONS – JOLTA SHOCK TESTERS

Model No.	Carriage Volume	Test Weight	"G" Ranges
1001	4" x 4" x 5"	0-12 lbs.	25-500
M-500	3" cube	0-2.0 lbs.	100-1000
F-3003-C-1	5" cube	0-12 lbs.	50-1500
F-3003-C-2	5" cube	0-4.0 lbs.	350-5000

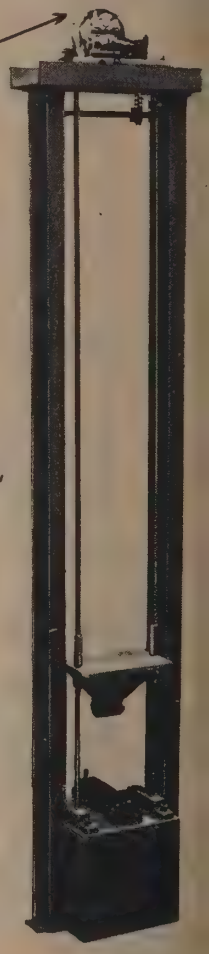
Free engineering services available to customers where adaptation or conversion of standard machines are needed to meet Mil. Spec. changes or other special needs.



1001



M-500



F-3003-C

NEW! Plastic impact pad for clean ½ MS-2000 G impact shock.

JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

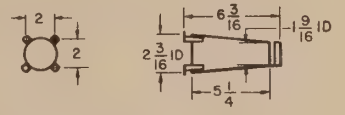
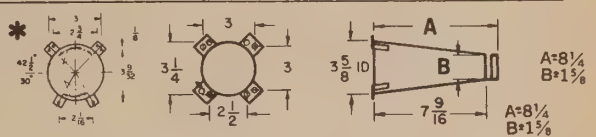
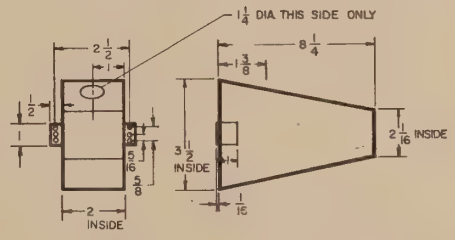
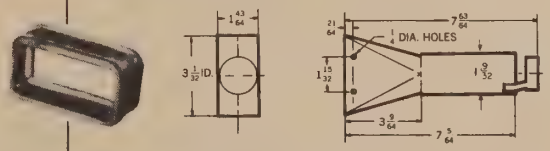
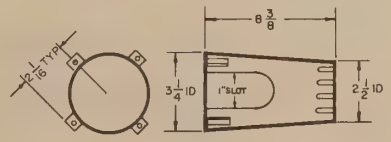
© United Technical Publications

JAN HARDWARE MANUFACTURING COMPANY INC.

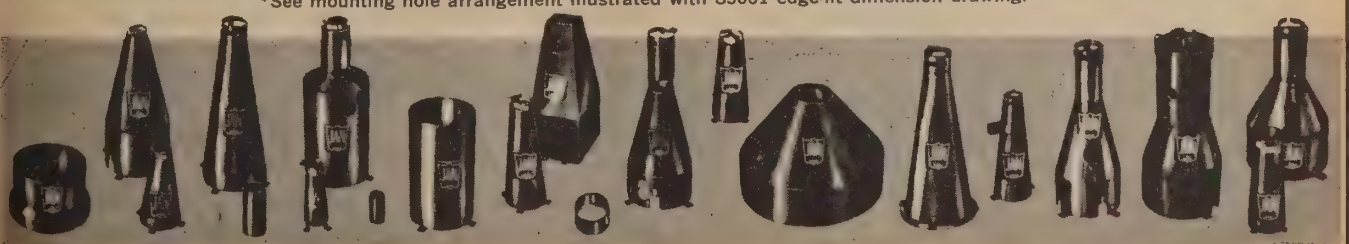
QUALITY
RELIABILITY
ECONOMY

JAN'S MAGNETIC SHIELDS are made of MU-Metal or equal and are hydrogen annealed by a special process to assure optimum orientation of the molecular structure of the alloy for best magnetic shielding. JAN'S MAGNETIC SHIELDS prevent distortion and intensity modulation of the electron beam due to stray magnetic fields.

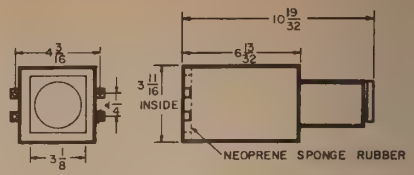
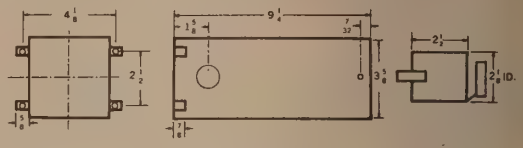
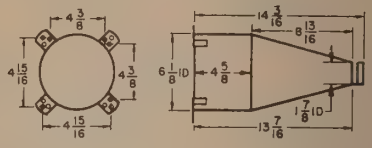
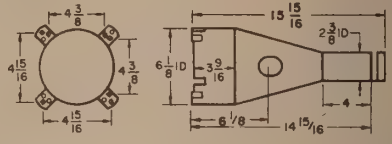
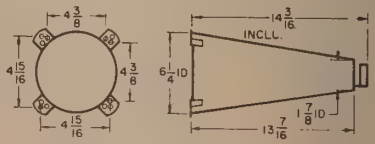
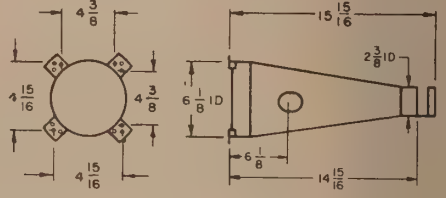
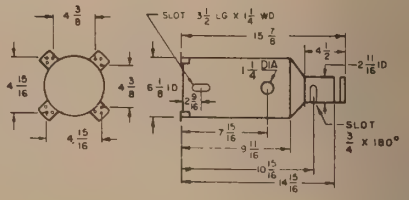
In addition, the use of these shields protect personnel against the dangers of accidental tube breakage. Mounting holes are tapped for No. 6-32 screws as shown. These shields are designed to fit JAN'S standard bezels as listed below. See preceding pages for specifications on JAN'S BEZEL ASSEMBLIES.

SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S2001 S2001-1	902 2AP 2BP	CP1110P2 CP1120P2	
S3001 adaptable for edge-lighting graticule using S3010 with Bezel CP1428✱	3RP 3RPA	CP1328-P-1 CP1427-1 CP1429-1 CP1328-P2 CP1427-2 CP1429-2 CP3430-1 CP3430-2	 A=8¼ B=1⅝ A=8¼ B=1⅝
S3003 S3003-1	3KP 908A 3AP	CP1328-P1 CP1427-1 CP1429-1	Same type as S-3001, except A=10⅛ B=2
S3004—12 (less anode hole) S3004—22 (with anode hole) adaptable for edge-lighting graticule using S3012 with Bezel CP1428✱	3BP 3JP 3ACP	Same as S3003 Same as S3005	Same type as S-3001, except A=8⅝ B=2⅜
S3005 adaptable for edge-lighting graticule using S3008 with Bezel CP1428✱	3WP	CP1328-P2 CP1427-2 CP1429-2	Same type as S-3001, except A=10⅝ B=1⅞
S3016	3ASP		
S3019	3XP	CP-725	
S3031	3BFP		

ALL SHIELDS ARE FABRICATED WITH OVERLAPPED AND SPOT WELDED CONSTRUCTION
*See mounting hole arrangement illustrated witn S3001 edge-lit dimension drawing.



© United Technical Publications

SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S3027	4KP 4ER	CP1533P	
S4001	SC3511 4MP	CP-1533P	
S5001	5UP	CP1465 CP13584-1 CP13549-1 CP13595-1 CP19495-1 CP446-11 CP446-22	
S5002 adaptable for edge-lighting	5BP 5CP 5ABP 5ADP	Same as S5001 Same as S5006	
S5003	5UP	CP1465 CP13584-1 CP13549-1 CP13595-1 CP19495-1	
S5005 adaptable for edge-lighting	5AQP 5ABP 5ADP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP446-11 CP446-22	
S5006 adaptable for edge-lighting	5RPA 5 AWP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2	

Shielding for EMC, RFI, and EMI now available, as bezels, shields, cushions, gaskets . . . in strip, sheet, formed and molded.

CUSHIONS — Assorted Sizes and Shapes



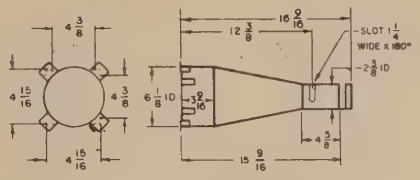
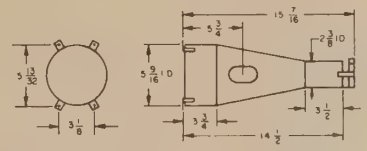
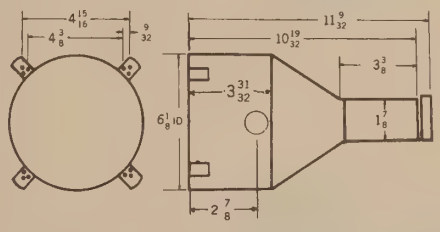
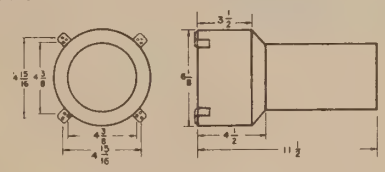
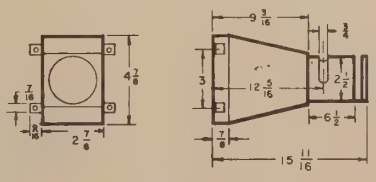
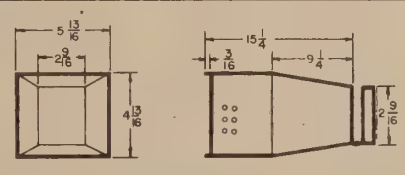
JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

© United Technical Publications

JAN HARDWARE
MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

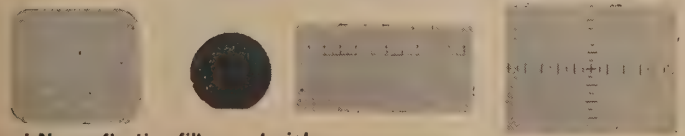
Shielding for EMC, RFI, and EMI now available, as bezels, shields, cushions, gaskets . . . in strip, sheet, formed and molded.

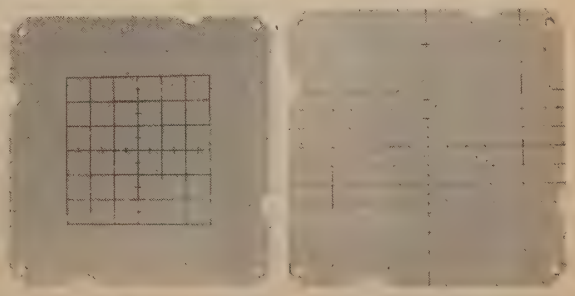
SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S5008 adaptable for edge-lighting	5AMP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2	
S5017 adaptable for edge-lighting	5ABP 5ADP	CP1465-2 CP19636-2	
S5027	5BTP	CP19495-2	
S5032	5CEP	CP19495-2	
S5500	5BXP		
S6600	6E17P		

ALL SHIELDS ARE FABRICATED WITH OVERLAPPED AND SPOT WELDED CONSTRUCTION

We will design and manufacture special Shields & Bezels to customers specifications. Complete facilities for prototype work.

GRATICULES — FILTERS — Assorted Sizes and Shapes

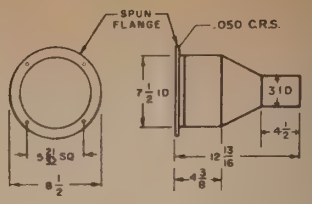
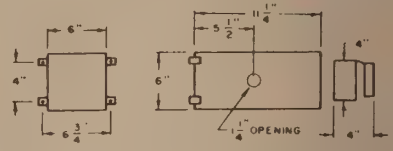
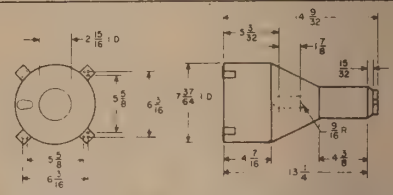




New! Non-reflective filter material.

Matte 1 side. Grey or Blue. Other colors on special order.

© United Technical Publications

SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S7001	7GP 7JP 7VP	CP7330 CP7445 CP7331 CP7550 CP7420	
S7003 (Shield supplied as two separate sections)	7YP3	CP-7550	
S7006	7AEP	CP7330 CP7445 CP7331 CP7550 CP7420	
S10002	10KP 10WP		

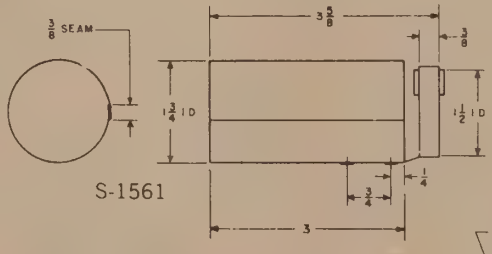
When ordering, be sure to specify CRT type number. Anode openings provided, where required.

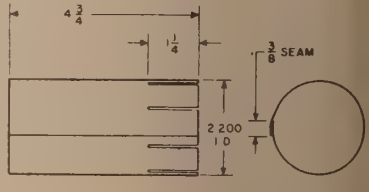
Shielding for EMC, RFI, and EMI now available, as bezels, shields, cushions, gaskets . . . in strip, sheet, formed and molded.

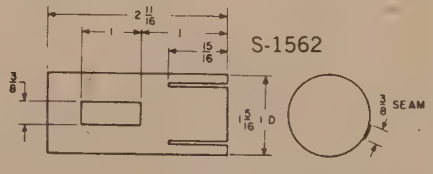
MAGNETIC SHIELDS FOR PHOTO-MULTIPLIER & SPECIAL PURPOSE TUBES

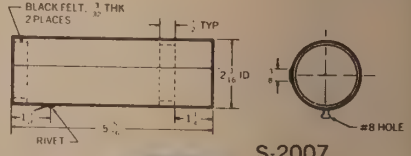
SHIELD	TUBE
S-1091	ICP1
S-1181	929 930 5581 5653 IP39 IP40
S-1500	6291
S-1561	6199 7102
S-1562	931 6323 6328 IP21 IP22 IP28
S-1563	1EP1
S-2002	6810 7264

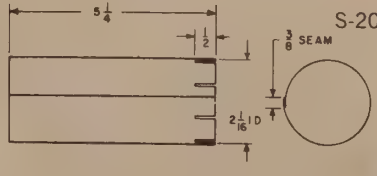
SHIELD	TUBE
S-2003	6903
S-2004	5819 6292 6342 6571 6655
S-2005	6372
S-2007	7850
S-2008	6217
S-3015	1197 6363
S-5013	1112
S-5018	1198 6364
S-7009	1238 1287



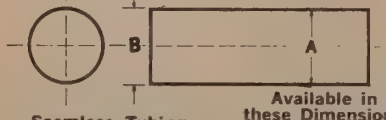












Seamless Tubing.
Can be supplied cut to your length, with holes and/or cut-outs to your specifications.

Available in these Dimensions

A	B
1.010	1.050
.948	.998
.740	.783
.632	.663

JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

© United Technical Publication

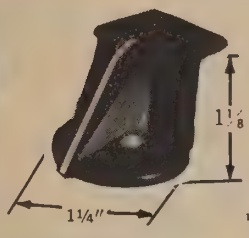
JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

TRANSILLUMINATED POINTER KNOBS



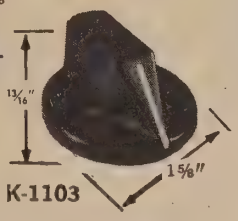
NAS 539-1B
NAS 539-1C



USAF 61D 404 74
Cat. No. K997



MS25165-1



Cat. No. K-1103

MS91528



Precision molded of JAN's transparent plastic material, to NAS specs, with dull finish. Transilluminated pointers permit easy reading under subdued lighting conditions. For use on instrument panels, switchboards electrical and electronic apparatus.

NEW METAL MINIATURE KNOBS

AK 1326
For 1/4" Shaft



AK 1326

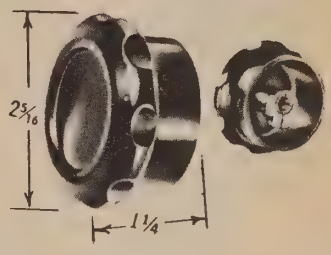
BK 1080
For 1/8" Flatted Shaft



BK1080

TUNING KNOB
Cat. No. K243

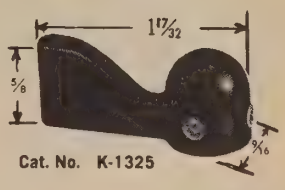
For 5/16" shaft. Die cast aluminum. Made to Fed. Spec. QQ-A-591 and MIL-F-14072. Use no-mar clamp Cat. No. 937-8 for mounting. (Not supplied).



BAR-KNOB

Cat. No. K-1325

Precision cast aluminum for 1/4" shafts. Furnished with twin 8-32 set screws for shaft attachment. Provides a 1.0" integrally cast lever arm for heavy-load switching. Finished to specifications.



Cat. No. K-1325

Cat. No. K936-5

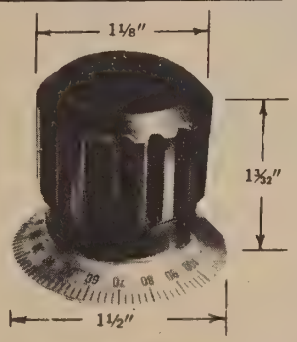
Black phenolic molded knob, with beveled satin aluminum skirt, anodized finish.

Deeply etched and filled contrasting markings.

Accurately centered brass insert, for 5/16" shafts.

Cat. No. K936-4 (1/4" shaft)

Variations on shaft sizes and markings available in production quantities.





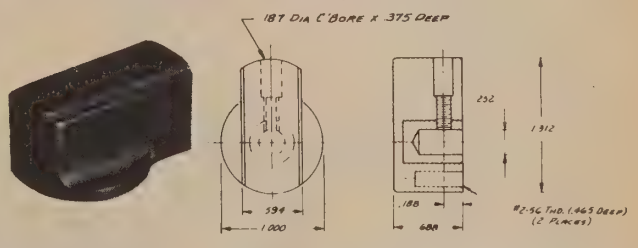
KNOB ONLY

Cat. No. K 929-5 (5/16" shaft)
Same as above, less skirt

Cat. No. K-929-4 (1/4" shaft)

BAR KNOB Cat. No. K783

Phenolic molded knob, with metal insert. Set screw at back, for shaft attachment. Finished to specifications.



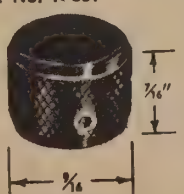
POINTER KNOB Cat. No. K-706

Molded thermosetting phenolic. Type CFG per MIL-P-14. Designed for square shaft, providing positive action.



KNOB Cat. No. K-897

Machined knurled edge for easy turning. Has set screw for firm attachment to 1/4" shafts. Height 7/16" x 5/8" diam.



STANDARD PLASTIC KNOBS



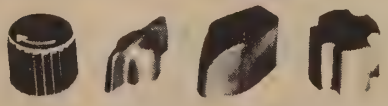
Knobs to satisfy almost any design or demand. Can be produced in any color or finish, either illuminated or non-illuminated.



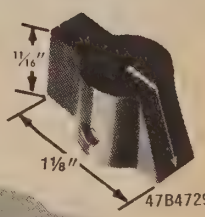
Knobs shown are only part of our stock.

Let us quote on your specifications.

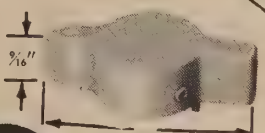




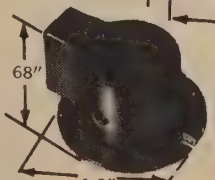




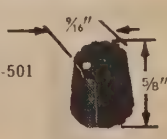
47B47299



51A30C82



1007267-501



1575289PC-2

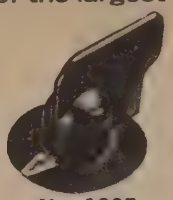
- **Knobs back lighted on special request, only.**
- **Special marking by engraving or screening, available to your specifications.**

KNOBS TO MILITARY SPECIFICATIONS

One of the largest assortment of Military Knobs in the country.


SMD500502


SMD500501



No. 1005
Available with or without skirt

MACHINED KNOBS





No. 1006-(2) -(3) **No. 1007-(2) -(4)**
3/4" high; 3/8" dia. 3/4" high; 3/4" O.D.





No. 1020 **No. 1021**
For 1/4" shaft. Other shaft diameters on request.
1 1/16" high; 3/16" base dia. 1 1/16" high; 1" base dia.

CAST ALUMINUM KNOBS

Available in black. Other colors on request. Specify shaft hole size required.

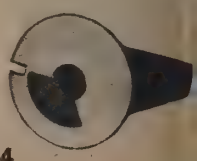


No. 1022
Full Round Skirt
1/4" hole; 1 1/32" high; 15/16" base dia.



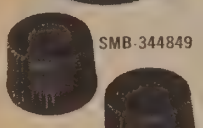
No. 1023
Flat Back Round Skirt
1/4" hole; 1 1/32" high; 15/16" base dia.; (2 9/32" to flat back)





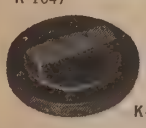
No. 1024
With Cam Shape Cut-out.
1/4" hole; 1 1/32" high; 15/16" base dia.


SCB-41848

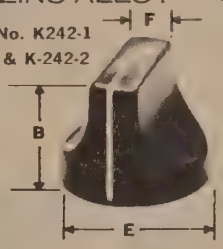

SMB-344849

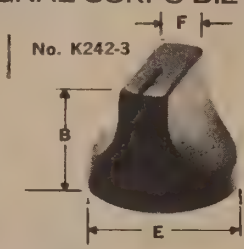
SMB-344848


K-1047


K-1124

ZINC ALLOY SIGNAL CORPS DIE CAST KNOBS ALUMINUM

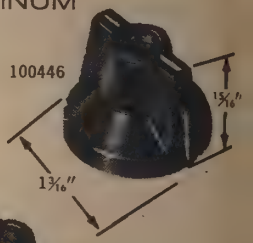


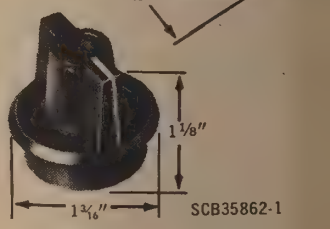


Cat. No.	B	E	F	Marking
242-1	3/4"	15/16"	5/16"	White
242-2	7/8"	1 1/8"	3/8"	White
242-3	3/4"	15/16"	5/16"	None



Cat. No. 984
Dimensions as per 242-3
No markings.
Aluminum.
.257 tear drop shaft hole.

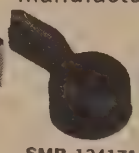




MS SIGNAL CORPS DIE-CAST ALUMINUM & ZINC ALLOY CONTROL KNOBS

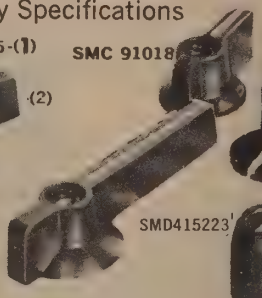
Manufactured in accordance with applicable Military Specifications


SMB 134094


SMB 134171


SMC 414401


MS 91525-(1) -(2) -(3)-(4) longer


SMC 91018


SMC 414393


SMC 414399


SMC503203


K 680-(3)


MS 91524 -(1)

SMB144319


SMD415223

(Many sizes available. Lengths from 1 1/16" to 2 5/16").

SMC 414680-1 Thru 10

PARTIAL LIST OF GOV'T KNOBS MFG'D BY JAN

SMC	100446	SMB	134957	SMB	182273	SCB	35863	SMD	415223	NAS	539 1B	SMB	601422	SCB	72585
SCB	104717	SMB	143975	SMB	249242-3	SMB	393998	BUORD	416956 PT2	NAS	539 1C	SMC	60158	SCB	72687
SMC	108874	SMB	144318	MS	25165	SCB	40771	SCB	41848	SMB	540595-2	SCB	60744	NAVORD	814528
SMC	108875	SMB	144319	SCD	2593-5	SCB	40859	SMB	422875	SMB	541048	USAF	61D40474	SCB	82716
SMC	108876	SMB	144358	SMB	283419	SCB	40860	SMB	424034	SMC	541119	SCC	614661	SMB	902574-1
SMC	108952	SMB	149064	SMB	314747	SMB	414393	SMC	447062	SMB	541127	SCB	63251	SMC	91018
SMC	108951	SMB	144517	SMB	320816	SMC	414399	SMC	447226	SMB	541150	SMB	633276	MS	91522
SMB	120139	SMB	16505	SMC	328271	SMC	414401	SMC	447307	SMB	552131-1	SCC	65018	MS	91523
SMD	131010	SCB	16532	SMB	336784	SMC	414680-1	SMB	456374	SMB	552258	SCC	65018-1	MS	91525-1
SMB	134093	SMB	16552	SMC	344847		thru -10	SMC	500407	SMC	558544-1	SCB	65411		thru -4
SMB	134094	SMB	180200A2	SMC	345389	SMD	415160	SMC	500501	SMB	601249	SCC	65673	MC	91528
SMB	134171	SMB	180288A2	SCB	35862	SMC	415161	SMC	502491	SMC	60125	SCB	65884	SMC	97250
SMB	134884	SMB	180465A1												

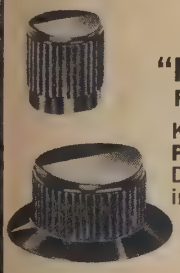
JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

© United Technical Publication

JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

SAFETY KNOBS



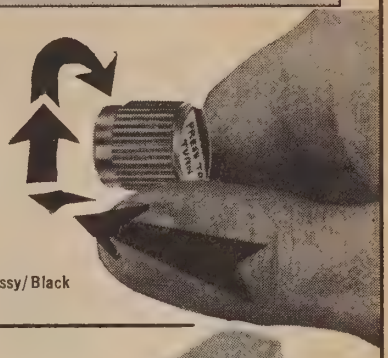
"PRESS-TO-TURN" KNOBS

For Low Torque Applications

Knobs spin freely . . . and **MUST BE PRESSED-IN** while making changes. Developed specifically to prevent inadvertent changing of settings.

For basic dimensions, see our "De-luxe Instrument Knobs" (9, 12, 17 and 22 body diameter series).

When ordering, be sure to substitute prefix "T" for 9 Series and "Q" for 17 Series, as per typical part nos.



11C4GA=.90 Dia./Press-to-Turn/Round/ Dial/¼"/Glossy/Black

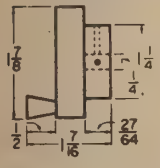
SLIP-CLUTCH KNOB With Spinners

Cat. Nos. K-1375 & K-1376 (For ¼" Shafts)

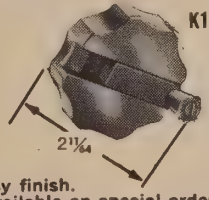
For driving devices such as variable capacitors, inductors, potentiometers, etc., the "slip-clutch"* automatically disengages and slips when the pre-determined torque has been exceeded. Knobs are fluted, and are equipped with either fixed or retractable spinner for fast turning. Backlash-free units safeguard delicate and costly instruments against careless or inadvertent cranking beyond their normal stops.

****Normally set for 3-6" lbs. Can be modified for other requirements.***

Model No. K-1376 is identical with No. K-1375 but has the additional feature of a retractable spinner. Spring loading provides positive, toggle-type action to lock spinner in either open or closed position. Model No. K-1376 is designed for use where economy of space is essential.







SPINNER KNOBS

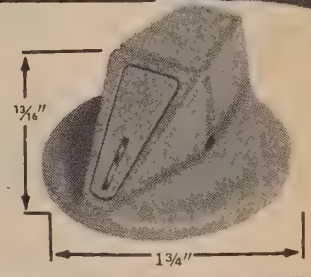
With Fixed or Retractable Spinners | **Standard: glossy finish. (Matte finish available on special order).**

Cat. Nos. K-1275 & K-1276 (For ¼" shafts)

In appearance, these knobs are identical with No. K-1375 and No. K-1376 but without JAN'S Slip-Clutch mechanism. Made with single-unit, molded Bakelite-to-metal-insert construction, with two set screws for firm attachment to shafts.

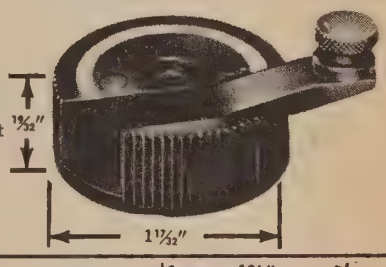
Cat. No. LM USED ON LUNAR MODULES!

Precision aluminum casting. Adaptable for back lighting. With slip clutch features similar to K1375 (at left).



Cat. No. MS 91522-1 CRANK KNOB Retractable Spinner.

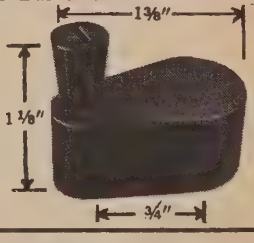
Aluminum Olive Drab. For ¼" shaft. Other colors and shaft diameters on request. 2⅝" minimum clearance required with handle in open position.



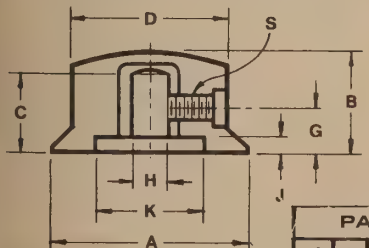
Cat. No. K 1125 SPINNER KNOB

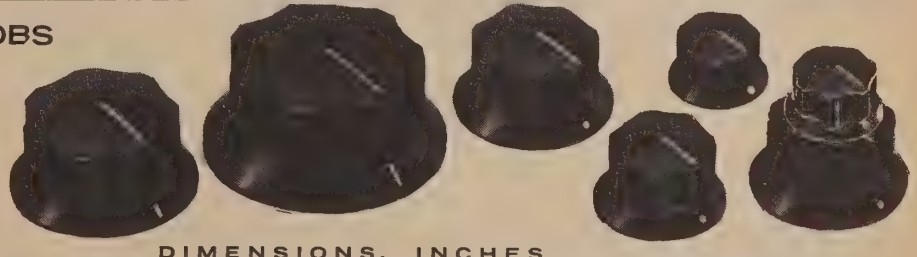
For limited space applications.

For ¼" shaft. Other shaft diameters on request.



INSTRUMENT KNOBS





DIMENSIONS, INCHES

PART NO.				A	B	C	D	G	H	J	K	S
6	1	C	SPECIFY AS REQUIRED	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	6-32
8	1	C		1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	8-32
10	1	C		1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	8-32
13	1	C		1-1/2	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	8-32
16	1	C		2	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	8-32

BODY DIA.
6=⅝"
8=1⅜"
10=1"
13=1¼"
16=1⅝"

BODY STYLE
1=ROUND
2=POINTER

SKIRT
A=NONE
C=SKIRT W/ INDICATOR MARKER

SHAFT HOLE DIA.
2=⅛"
4=¼"
(Standard—with metal insert.
"0" preceding number means without metal insert)
(Other shaft holes to order)

FINISH
G=GLOSSY (Standard)
M=MATTE

COLOR
A=BLACK
B=RED
C=GREY
D=GREEN
E=YELLOW
F=PURPLE
G=BLUE
H=WHITE
J=ORANGE

TYPICAL PART NUMBERS

81C4GB=1⅜" Dia./Round/Skirt w/indicator marker/¼" Shaft Hole dia./Glossy/Red
101C4MA=1" Dia./Round/Skirt w/indicator marker/¼" Shaft Hole dia./Matte/Black
101C04MA=1" Dia./Round/Skirt w/indicator marker/¼" Shaft Hole dia. without metal insert/Matte/Black

Available with Metal Tops

© United Technical Publications

DELUXE INSTRUMENT KNOBS

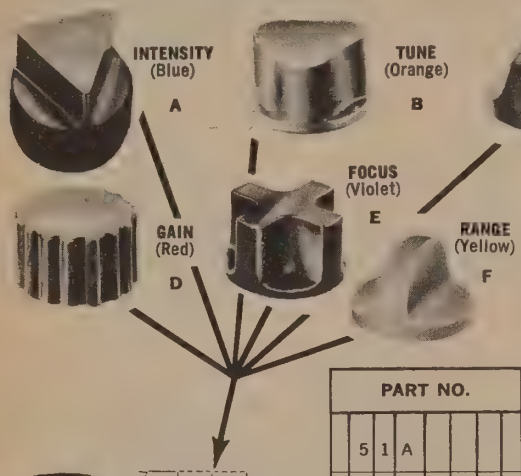
MEETS PERFORMANCE OF MIL-STD-242D (SHIPS) AND MS 91528D

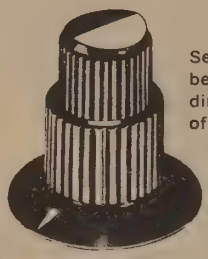
JAN's Standard Instrument Control Knobs for use with electronic equipment. Molded of polycarbonate, these knobs will withstand the extreme environmental conditions of MIL-E-16400. Either knob-cap or entire knob is available in a variety of colors, in MATTE (M) or GLOSSY (G) finish. Complete range of sizes . . . send for catalog.

QPL #3926 — T.R. #J101

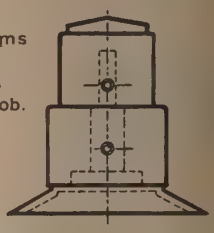
TACTILE SHAPE CONTROL KNOBS

Expressly made for both visual and tactile function identification. Each Tactile knob is produced in the standard recognizable color identified with its configuration. Available in other colors on special order.
See column—below, for applicable tactile shape.





See diagrams below for dimensions of each knob.



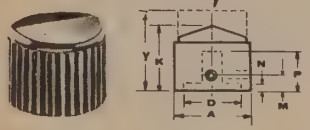


SUPER DELUXE
Aluminum Anodized Top.
(Numbering as below)

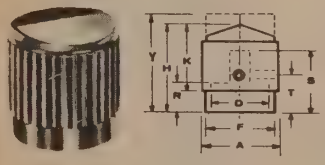
DUAL KNOBS FOR CONCENTRIC CONTROLS

APPROVED FOR USE
MIL STD 242D and MS 91528C

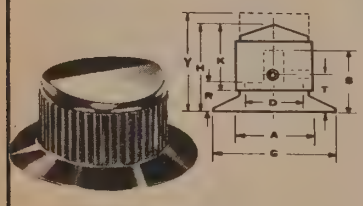
Molded of polycarbonate plastic, these "piggy-back" knobs are used with dual concentric potentiometers and in other similar applications. Meet performance of military specs above.



NO SKIRT



PLAIN SKIRT



DIAL SKIRT

DIMENSIONS

PART NO.	A	D	F	G	H	K	M	N	P	R	S	T	Y
5 1 A	.505	.435				.509	.158	.026	.408				
7 1 A	.708	.486				.626	.187	.026	.406				.915
9 1 A	.911	.645				.798	.255	.114	.521				1.171
12 1 A	1.255	.974				.703	.260	.115	.458				1.220
17 1 A	1.755	1.465				.854	.255	.114	.521				
22 1 A	2.255	1.870				.885	.255	.114	.521				
5 1 B	.505	.435	.450		.660	.509				.181	.563	.324	
7 1 B	.708	.486	.670		.805	.626				.188	.568	.340	1.100
9 1 B	.911	.654	.826		1.027	.798				.323	.730	.484	1.399
12 1 B	1.255	.974	1.155		.870	.703				.262	.605	.427	1.399
17 1 B	1.755	1.465	1.666		1.088	.854				.333	.740	.489	
22 1 B	2.255	1.870	2.153		1.114	.885				.333	.740	.489	
5 1 C	.505	.435		.885	.660	.509				.181	.563	.324	
7 1 C	.708	.486		1.135	.805	.626				.188	.568	.340	1.100
9 1 C	.911	.645		1.510	1.027	.798				.323	.730	.484	1.399
12 1 C	1.255	.974		1.822	.870	.703				.262	.605	.427	1.399
17 1 C	1.755	1.465		2.453	1.088	.854				.333	.740	.489	
22 1 C	2.255	1.870		3.005	1.114	.885				.333	.740	.489	

SPECIFY AS REQUIRED

1 TOP (Color or Tactile)	2 BODY DIA.	3 BODY STYLE	4 SKIRT	5 SHAFT HOLE DIA.	6 FINISH	7 COLOR
0=NO TOP— Shaft Hole Drilled Thru.	5=.51	1=ROUND	A=NONE	2=.128	M=MATTE	A=BLACK
A=(INTENSITY—Blue)	7=.71	2=POINTER	B=PLAIN	3=.190	G=GLOSSY	B=RED
B=(TUNE—Orange)	9=.90		C=DIAL W/ POINTER	4=.253		C=GREY
C=(DIMMER-White)	I=.90	Press-to-Turn		5=.312		D=GREEN
D=(GAIN—Red)	12=1.25		D=DIAL W/O POINTER	6=.375		E=YELLOW
E=(FOCUS—Violet)	17=1.75			7=.268		F=PURPLE
F=(RANGE—Yellow)	Q=1.75	Press-to-Turn*	H=Slot	"D" FLAT SHAFT HOLES		G=BLUE
M=ALUM ANODIZED TOP	22=2.25			B=.107 (⅛")		H=WHITE
				D=.222 (¼")		J=ORANGE

*T=STANDARD Should only be used when color of standard shape top is different than body color. Precede T by color code from Column 7 (BT—would mean standard shape RED top)

TYPICAL PART NUMBERS

91C4GA=.90 Dia./Round/Dial/¼"/Glossy/Black
I1C4GA=.90 Dia./Press-to-Turn/Round/Dial/¼"/Glossy/Black
A71B4MA=Triangle Top Blue/.72/Round/Plain/¼"/Matte/Black
BA71B4MA=Triangle Top Red/.72/Round/Plain/¼"/Matte/Black
BT71B4MA=Standard Top Red/.72/Round/Plain/¼"/Matte/Black
** 071B4MA=No Top, Shaft hole drilled thru/.72/Round/Plain/¼"/Matte/Black

**—Specify if .127, .190, .250 hole is required for dual mounting
NOTE: *T—Preceded by color code (BT—would mean Standard RED top)

IF WHITE DOTS ARE REQUIRED—ADD SUFFIX/WD TO CATALOG NO.
IF FLORESCENT DOTS ARE REQUIRED—ADD SUFFIX/FD TO CATALOG NO.
IF PHOSPHORESCENT DOTS ARE REQUIRED—ADD SUFFIX/PD TO CATALOG NO.
IF FLORESCENT ARROW IS REQUIRED—ADD SUFFIX/FA TO CATALOG NO.
IF PHOSPHORESCENT ARROW IS REQUIRED—ADD SUFFIX/PA TO CATALOG NO.
FOR SPECIAL KNOBS—GIVE FULL DESCRIPTION OR SKETCH WITH ORDER.

© United Technical Publication

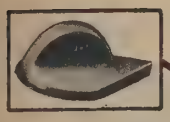
DELUXE INSTRUMENT KNOBS

MEETS PERFORMANCE OF MIL-STD-242D (SHIPS) AND MS 91528D

JAN's Standard Instrument Control Knobs for use with electronic equipment. Molded of polycarbonate, these knobs will withstand the extreme environmental conditions of MIL-E-16400. Either knob-cap or entire knob is available in a variety of colors, in MATTE (M) or GLOSSY (G) finish. Complete range of sizes . . . send for catalog.

QPL #3926 — T.R. #J101

POINTER KNOBS





POINTER



POINTER WITH SKIRT

DIMENSIONS

PART NO.	A	D	F	H	K	M	N	P	R	S	T	Y
52A	.750	.406			.505	.158	.026	.402				
72A	1.038	.486			.619	.187	.026	.406				.918
92A	1.344	.645			.796	.255	.114	.555				1.171
52B	.750	.406	.669	.655	.505			.402	.177	.563	.324	
72B	1.038	.486	.940	.791	.619			.406	.193	.573	.364	1.100
92B	1.344	.645	1.251	1.015	.796			.555	.328	.796	.479	1.400

SPECIFY AS REQUIRED

1 TOP (Color or Tactile)	2 BODY DIA.	3 BODY STYLE	4 SKIRT	5 SHAFT HOLE DIA.	6 FINISH	7 COLOR
G=(RANGE—Yellow)	5=.51 7=.72 9=.90	2=POINTER	A=NONE B=PLAIN	2=.128 3=.190 4=.253 5=.312 6=.375 7=.268	M=MATTE G=GLOSSY	A=BLACK B=RED C=GREY D=GREEN E=YELLOW F=PURPLE G=BLUE H=WHITE J=ORANGE

"D" FLAT SHAFT HOLES
B=.107 (⅛")
D=.222 (¼")

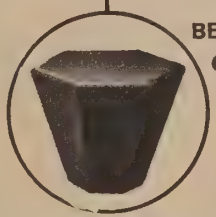
TYPICAL PART NUMBERS
72B4MA=Regular Top
G72A4MA=Tactile Top

CRANK KNOBS

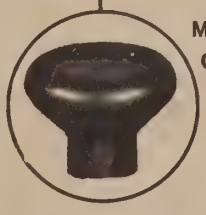
STANDARD HANDLE

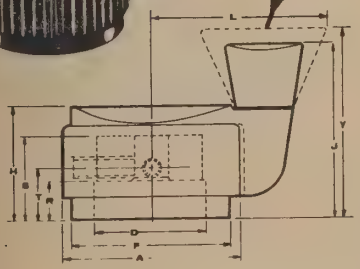


BEARING GREY



MARKER GREEN





PART NO.	A	D	F	H	J	L	P	R	S	T	Y
124B	1.250	0.685	1.185	.850	1.350	1.275		.250	.605	.427	1.475
174B	1.750	0.685	1.690	1.070	1.758	1.735		.320	.740	.489	1.940
224B	2.250	0.685	2.185	1.095	1.782	1.970		.320	.740	.489	1.970

SPECIFY AS REQUIRED

1 HANDLE (Color or Tactile)	2 BODY DIA.	3 BODY STYLE	4 SKIRT	5 SHAFT HOLE DIA.	6 FINISH	7 COLOR
H=GREEN J=GREY	12=1.25 17=1.75 22=2.25	4=SPINNER	B=PLAIN	4=.253	M=MATTE G=GLOSSY	A=BLACK B=RED C=GREY D=GREEN E=YELLOW F=PURPLE G=BLUE H=WHITE J=ORANGE

TYPICAL PART NUMBERS
J174B4MA=Grey Tactile Handle
124B4MA=Standard Handle

SHAFT KNOB LOCK



Cat. No. AK 1057-2 (*) (⅛" shaft)
AK 1057-4 (*) (¼" shaft)
(Used with 71 Series Knob)
Cat. No. AK 1059-4 (*) (¼" shaft)
(Used with 91 Series Knob)

*Specify "M" or "G" for matte or glossy finish

Prevents movement of controls due to shock . . . vibration . . . or accidental manual contact. Available in matte or glossy finish, for commercial or military applications.

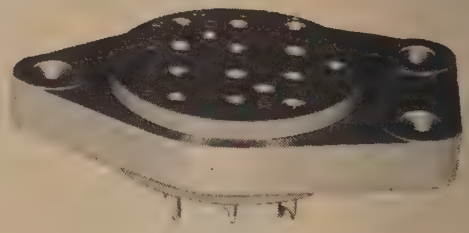
Typical Part Nos.
AK 1057-2MA=For ⅛" Shaft/matte finish/Black
AK 1059-4GA=For ¼" Shaft/glossy finish/Black

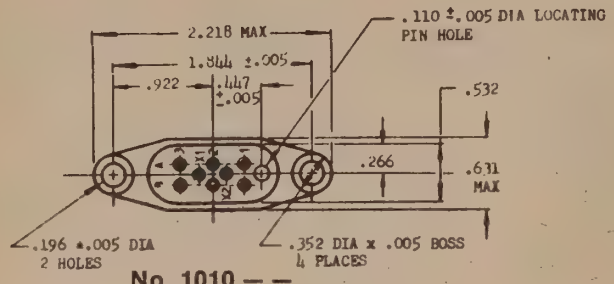
© United Technical Publications

RELAY SOCKETS with Fixed or Removable Contacts!

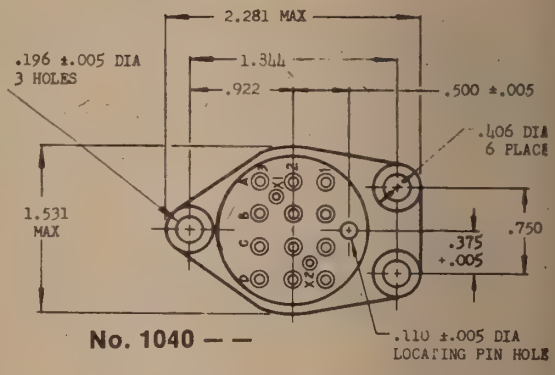
Jan's relay sockets are specifically designed for use with plug-in relays . . . in electronic circuit applications which demand quick and easy assembly and maintenance.
Available with dip-solder pin terminals for printed circuit assembly, or solder cup and turret terminals for direct wiring. For applications requiring removable contacts, solderless wire crimp terminations are available for #16, 20, 22, or 24 AWG wire sizes.
A variety of mounting styles are offered including . . . tapped inserts with studs for top chassis mounting; thru hole; or tapped inserts with removable standoffs and screws for mounting on either side of chassis or panel. Unexpected disconnect because of vibration is eliminated by fastening the relay to the socket. Polarization dots and/or index holes (optional) aid in plugging in relay correctly. Socket contact material is spring tempered phosphor bronze gold plate over silver plate. Body material is Diallyl Phthalate, fiberglass filled per MIL-M-19833.

1000 SERIES

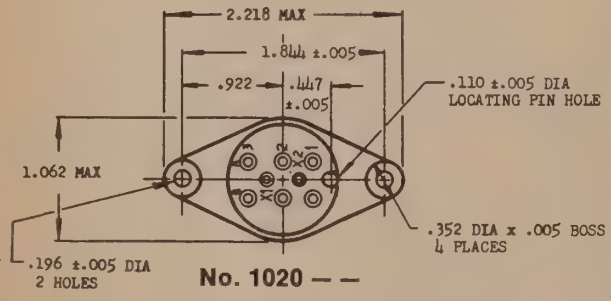




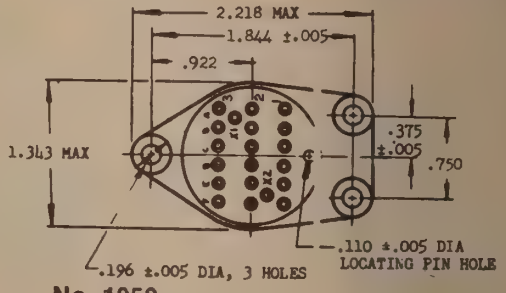
No. 1010 — —



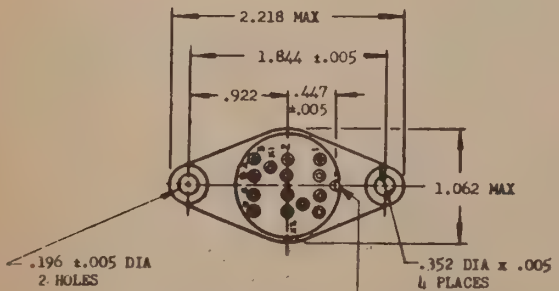
No. 1040 — —



No. 1020 — —



No. 1050 — —

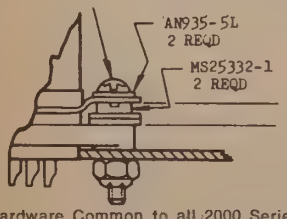


No. 1030 — —

Numbering System

1000 — —
- 1 = Solder Cup
- 2 = Eyelet
- 3 = Turret
- 4 = Dip Solder
- 5 = Taper

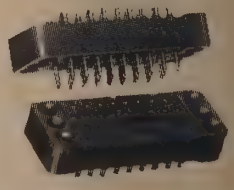
A = Closed Entry
B = Slotted



Hardware Common to all 2000 Series.
Available for above or below chassis mounting.

MS No.	JAN Part No.	MS No.	JAN Part No.
MS25322	No. 1010	MS25456	No. 1060
MS25324	No. 1020	MS25458	No. 1070
MS25326	No. 1030	MS25460	No. 1080
MS25328	No. 1040	MS25462	No. 1090
MS25330	No. 1050	MS25464	No. 1100

The service of JAN's design engineers is available to assist you in the design and manufacture of special sockets and connectors.



JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

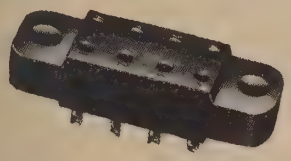
© United Technical Publications

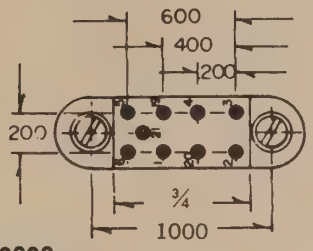
JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

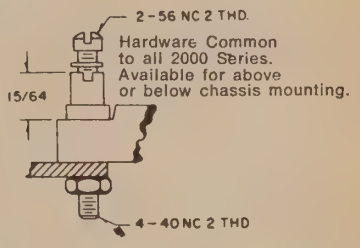
RELAY SOCKETS with Fixed or Removable Contacts!

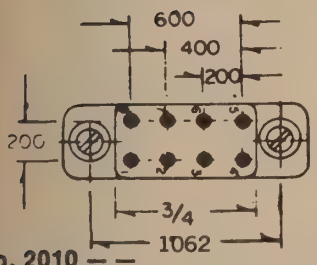
2000 SERIES



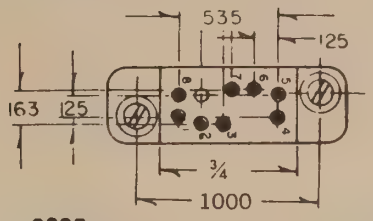


No. 2020 — —





No. 2010 — —



No. 2030 — —

Numbering System

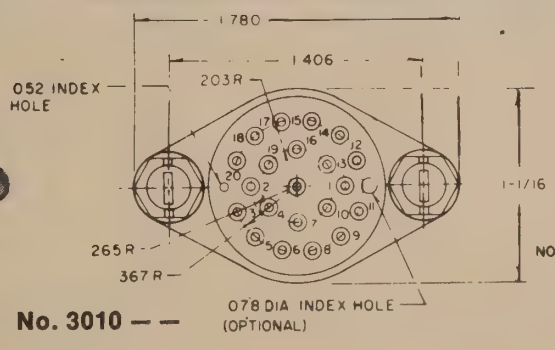
2000 — — —

A = Closed Entry
B = Slotted

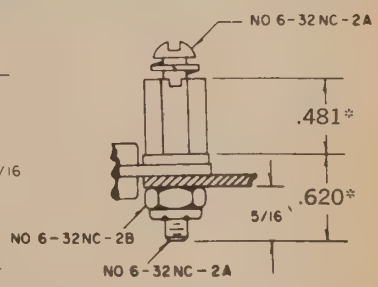
1 = Solder Cup
2 = Eyelet
3 = Turret
4 = Dip Solder
5 = Taper

3000 SERIES

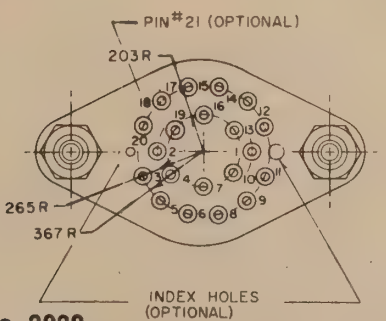




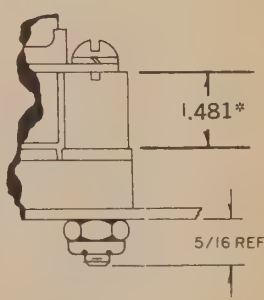
No. 3010 — —







No. 3020 — —



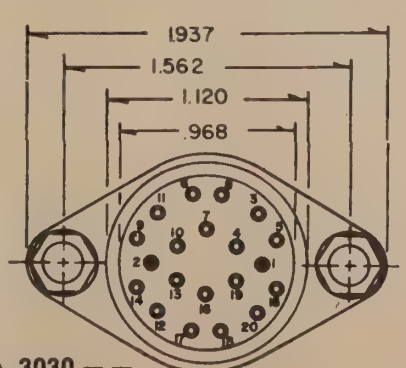
Numbering System

3000 — — —

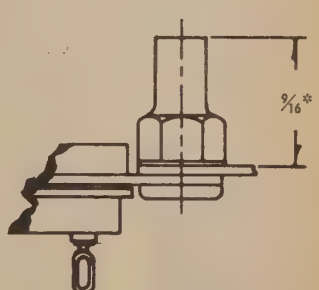
A = Closed Entry
B = Slotted

1 = Solder Cup
2 = Eyelet
3 = Turret
4 = Dip Solder
5 = Taper

JAN Part No.			Relay Type	No. of Contacts
No. 3010	No. 3020	No. 3030	6PDT	20
No. 3011	No. 3021	No. 3031	6PDTL	21
No. 3012	No. 3022	No. 3032	4PDT	14
No. 3013	No. 3023	No. 3033	4PDTL	15
No. 3014	No. 3024	No. 3034	3PDT	10
No. 3015	No. 3025	No. 3035	3PDTL	11



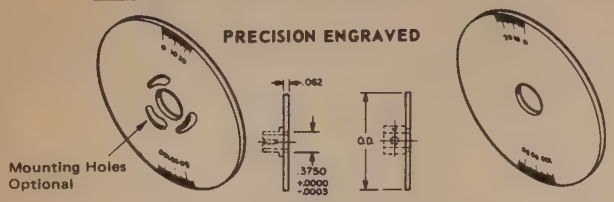
No. 3030 — —



*Special lengths available on request.

© United Technical Publications

PRECISION DISC DIALS
CLOCKWISE & COUNTER CLOCKWISE

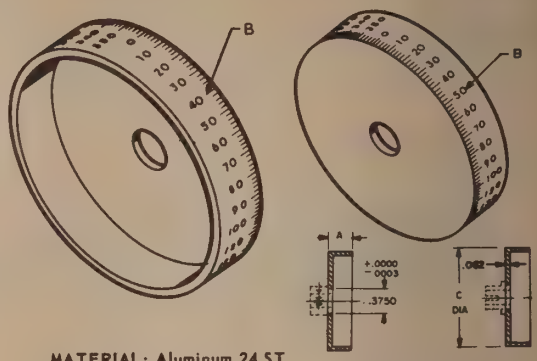


MATERIAL: Aluminum 24ST Black Anodized

Catalog Number	Range	O.+.000 D.-.003	Steps in Degrees	Graduations
DA-1	——	1.500	——	BLANK
DA-2	0-360		2^0	180
DA-3	0-100		3^0-36'	100
DA-4	0-60		6^0	60
DA-5	0-50		7^0-12'	50
DA-6	0-25		14^0-24'	25
DA-7	0-10		36^0	10
DA-8	——	2.000	——	BLANK
DA-9	0-360		2^0	180
DA-10	0-120		3^0	120
DA-11	0-100		3^0-36'	100
DA-12	0-72		5^0	72
DA-13	0-60		6^0	60
DA-14	0-50		7^0-12'	50
DA-15	0-25		14^0-24'	25
DA-16	0-10		36^0	10
DA-17	——	3.000	——	BLANK
DA-18 *	0-360		1^0	360
DA-19 *	0-360		2^0	180
DA-20	0-200		1^0-48'	200
DA-21	0-180		2^0	180
DA-22	0-120		3^0	120
DA-23 *	0-100		3^0-36'	100
DA-24	0-72		5^0	72
DA-25	0-50		7^0-12'	50
DA-26	0-10		36^0	10
DA-27	——	4.000	——	BLANK
DA-28 *	0-360		1^0	360
DA-29 *	0-360		2^0	180
DA-30	0-200		1^0-48'	200
DA-31	0-180		2^0	180
DA-32	0-100		3^0-36'	100
DA-33	0-50		7^0-12'	50
DA-34	0-10		36^0	10

* Available counter clockwise. To order, use prefix DC in place of DA.

PRECISION DRUM DIALS
CLOCKWISE & COUNTER CLOCKWISE



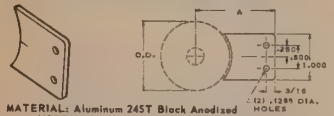
MATERIAL: Aluminum 24 ST Black Anodized

PRECISION ENGRAVED

Catalog Number	A	B	C	Range	Steps in Degrees
DB-1	3/8	——	.990	BLANK	——
DB-2		100		0-100	3^0-36'
DB-3		180		0-360	2^0
DB-4	3/8	——	1.490	BLANK	——
DB-5		60		0-60	6^0
DB-6		100		0-100	3^0-36'
DB-7		180		0-360	2^0
DB-8	3/8	——	1.990	BLANK	——
DB-9		50		0-50	7^0-12'
DB-10		25		0-25	14^0-24'
DB-11		10		0-10	36^0
DB-12		180		0-180	2^0
DB-13		180		0-360	2^0
DB-14	1/2	——	2.490	BLANK	——
DB-15		200		0-200	1^0-48'
DB-16		180		0-180	2^0
DB-17 *		180		0-360	2^0
DB-18 *		360		0-360	1^0
DB-19		100		0-100	3^0-36'
DB-20	1/2	——	2.990	BLANK	——
DB-21		180		0-180	2^0
DB-22		100		0-100	3^0-36'
DB-23		10		0-10	36^0
DB-24 *		360		0-360	1^0
DB-25 *		180		0-360	2^0

* Available counter clockwise. To order, use prefix DD in place of DB.

PRECISION DISC DIAL INDEX



MATERIAL: Aluminum 24ST Black Anodized
NOTE: Use with "DA" and "DC" -Type Disc Dials

CATALOG NUMBER	A	O.D. OF DIAL
DG-1	1.760	1.500
DG-2	2.010	2.000
DG-3	2.510	3.000
DG-4	3.010	4.000

PRECISION DRUM DIAL INDEX

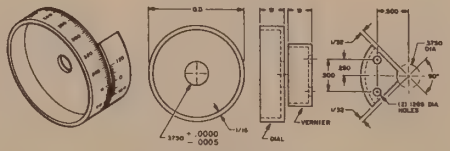


MATERIAL: Aluminum 24ST Black Anodized
NOTE: Use with "DB" and "DD" Type Drum Dials

CATALOG NUMBER	A	O.D. OF DRUM
DF-1	.375	1.490
DF-2	.375	1.990
DF-3	.500	2.490
DF-4	.500	2.999

VERNIER AND DRUM DIAL SETS

PRECISION ENGRAVED



MATERIAL: Aluminum 24ST Black Anodized
NOTE: Special Sets Available on Request

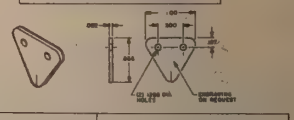
FOR ADDITIONAL INFORMATION SEE TECHNICAL SECTION

Catalog Number	O. +.005 D. -.005	W	Dial Graduations	Dial Range	Vernier Reading
DJ-1	1.490	.375	360^0 IN 2^0 STEPS	0^0-360^0	12'
DJ-2	1.990	.375			12'
DJ-3	2.490	.500	360^0 IN 1^0 STEPS		6'
DJ-4	2.990	.500			6'

We invite your inquiries for special dials and drums.

Also available from stock — precision ground shafts.

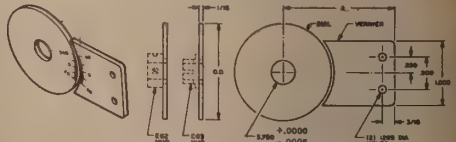
PRECISION INDEX



CATALOG NUMBER	MATERIAL
DE-1	CLEAR PLEXIGLASS
DE-2	ALUM 24ST BLACK ANODIZED

VERNIER AND DISC DIAL SETS

PRECISION ENGRAVED



MATERIAL: Aluminum 24ST Black Anodized
NOTE: Special Sets Available on Request

FOR ADDITIONAL INFORMATION SEE TECHNICAL SECTION

Catalog Number	O. +.000 D. -.005	A	Dial Graduations	Dial Range	Vernier Reading
DH-1	1.500	1.760	360^0 IN 2^0 STEPS	0^0-360^0	12'
DH-2	2.000	2.010			12'
DH-3	3.000	2.510	360^0 IN 1^0 STEPS		6'
DH-4	4.000	3.010			6'

JAN HARDWARE
MANUFACTURING COMPANY INC.
QUALITY
RELIABILITY
ECONOMY

© United Technical Publications

JAN HARDWARE MANUFACTURING COMPANY INC.

QUALITY
RELIABILITY
ECONOMY

POTENTIOMETERS — PRECISION WIRE WOUND

• Linear and Non-Linear • Single and Multi-Turn
• Pendulum Operated • Sectors and Gyro Pickoffs
• Switches

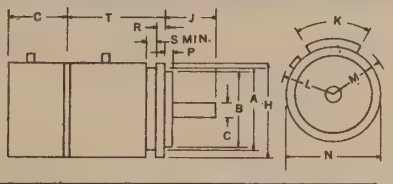
Reliable, competitively priced wire-wound potentiometers for commercial, industrial and military electronic equipment manufacturers.

- **EXCELLENT LINEARITY: 0.03%** available in single turn 5" diam. unit.
- **LONG LIFE:** Over two million revolutions with base metal windings.
- **WIDE TEMPERATURE RANGE:** Available for operation from −55°C to +125°C.
- **MAXIMUM STORAGE LIFE:** Platinum alloy winding also insures low noise level.
- **RELIABILITY:** Welded taps for better mechanical and electrical connections.
- **HIGH RESOLUTION:** Wire as fine as 0.0003" diameter can be used.
- **CUSTOM DESIGNS:** Fast prototype delivery on special linear or non-linear units.
- **PRECISION CONSTRUCTION:** Anodized aluminum housings and polished steel shafts.
- **ACCURATE FUNCTIONS:** Welded taps to a single turn of wire eliminates shorted sections of winding at intermediate taps.
- **RUGGEDNESS:** Meets all applicable MIL Specs.
- **LOW NOISE:** Maintained over long life and extreme environments by unique wiper designs compatible with winding configurations.



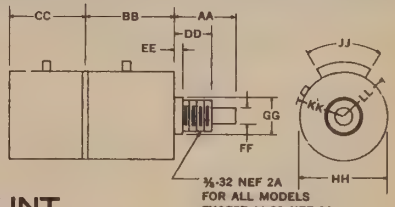
DIAMETER	1/2"	7/8"	1-1/16"	1-7/16"	1-3/4"	2"	3"
SERIES	05	09	11	15	18	20	30
ELECTRICAL							
STANDARD RESISTANCE RANGE, OHMS	100 To 100K	100 To 100K	200 To 110K	200 To 120K	200 To 155K	200 To 180K	200 To 230K
STANDARD RESISTANCE TOLERANCE %	5% 3%	5% 3%	5% 3%	5% 2%	5% 1%	5% 0.5%	5% 0.5%
STANDARD LINEARITY %	0.5	0.5	0.5	0.5	0.3	0.3	0.3
BEST LINEARITY %	0.2	0.2	0.15	0.12	0.1	0.1	0.05
POWER RATING, WATTS AT 40 DEG.[5]	1.2	1.2	2.0	3.0	3.5	4.0	6.0
NOISE MAX. IN OHMS	100	100	100	100	100	100	100
TEMP. COEFFICIENT OF WIRE PPM/°C	± 20	± 20	± 20	± 20	± 20	± 20	± 20
ELECTRICAL ROTATION (NOMINAL)	352°	354°	354°	354°	356°	356°	358°
MECHANICAL							
MECHANICAL ROTATION	AS REQUIRED						
WEIGHT, OZ., SINGLE SECTION	0.5	0.6	0.8	1.7	2.5	3.5	6.0
EACH ADDITIONAL SECTION	0.2	0.3	0.5	1.0	1.3	1.5	1.8
TORQUE, MAX. STARTING, OZ. IN. B.B., SINGLE SECTION	0.1	0.1	0.3	0.4	0.7	0.8	1.1
EACH ADDITIONAL SECTION	0.1	0.1	0.2	0.4	0.5	0.6	0.6
TORQUE, MAX. RUNNING, OZ. IN., SINGLE SECTION	0.1	0.1	0.15	0.2	0.5	0.6	0.6
EACH ADDITIONAL SECTION	0.1	0.1	0.15	0.2	0.5	0.6	0.6
TAPS, MAXIMUM	4	9	12	17	20	24	27
TAP TOLERANCE	AS REQUIRED ± 1 TURN OF WIRE						
GANGED SECTION, MAXIMUM	3	6	6	8	8	9	9
LIFE EXPECTANCE, SHAFT REVOLUTIONS	2×10^6	2×10^6	2×10^6	2×10^6	2×10^6	2×10^6	2×10^6
SHAFT RUNOUT, MAX. T.I.R., IN.	.001	.001	.001	.001	.001	.001	.001
SHAFT RADIAL PLAY MAX. T.I.R. IN.	.001	.001	.001	.001	.001	.001	.001

SERVO MOUNT



SERIES	05A	09A	11A	15A	18A	20A	30A
A	.450	.781	.975	1.312	1.625	1.875	2.875
B	.437	.750	.968	1.312	1.562	1.875	2.875
C	.380 max.	.380 max.	.380 max.	.500 max.	.500 max.	.500 max.	.500 max.
G	.124	.124	.124	.249	.249	.249	.249
H	.500	.875	1.062	1.437	1.750	2.000	3.000
J	1/2	1/2	7/8	9/16	9/16	9/16	9/16
K	40°	40°	60°	60°	36°	36°	24°
L	.200	.572 max.	.671 max.	.875 max.	1.109 max.	1.359 max.	1.843 max.
M	45/64	5/8 max.	23/32 max.	1-1/16 max.	1-1/4 max.	1-3/8 max.	1-7/8 max.
N	1/2 max.	7/8 max.	1-1/16 max.	1-7/16 max.	1-3/4 max.	2" max.	3" max.
P	.062	.062	.062	.062	.062	.062	.062
R	.062	.062	.062	.093	.093	.093	.093
S	.062	.057	.057	.073	.073	.073	.073
T	.660	.500	.687	.800	.800	.800	.800

BUSHING MOUNT



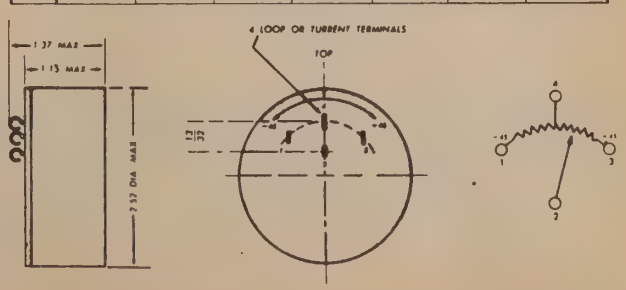
SERIES	05B	09B	11B	15B	18B	20B	30B
AA	1/2	1/2	7/8	7/8	7/8	7/8	7/8
BB	.660	.687	.687	.705	.703	.706	.703
CC	.380 max.	.380 max.	.380 max.	.500 max.	.500 max.	.500 max.	.500 max.
DD	5/16	5/16	3/8	3/8	3/8	3/8	3/8
EE	1/16	1/16	1/16	1/16	1/16	1/16	1/16
FF	.124	.124	.124	.249	.249	.249	.249
GG	.281	.406	.406	.406	.406	.406	.593
HH	.500	40°	1.062	1.437	1.562	2.000	3.000
JJ	40°	60°	60°	40°	36°	36°	24°
KK	.200	.572 max.	.671 max.	.875 max.	1.109 max.	1.359 max.	1.843 max.
LL	45/64	5/8 max.	23/32 max.	1-1/16 max.	1-1/4 max.	1-3/8 max.	1-7/8 max.

NOTE: UNITS WILL MEET MILITARY REQUIREMENTS PER MIL-R-12934
MIL-R-19A
NAS-710

ENVIRONMENTAL DATA WILL BE SUBMITTED ON REQUEST.

NOTE: VARIATIONS OF THE ABOVE SPECIFICATIONS AVAILABLE ON ORDER TO SUIT USER REQUIREMENTS.

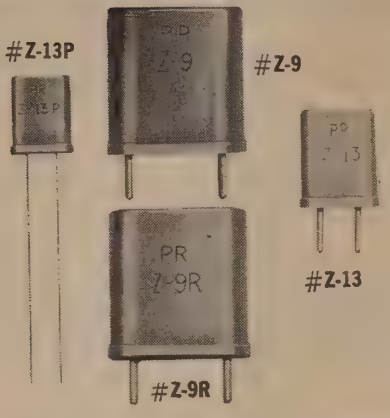
STANDARD UNITS UTILIZE BALL BEARINGS AND ALUMINUM HOUSINGS. PLASTIC HOUSINGS AND SLEEVE BEARINGS AVAILABLE ON REQUEST.



© United Technical Publications

CRYSTALS

"Makers of fine crystals since 1934"



AIRCRAFT • AMATEUR • CITIZENS • BAND • MARINE • MONITOR • VHF-UHF





UHF-4460 FOUR-CHANNEL UHF MONITOR RECEIVER

The UHF-4460 reaches up—beyond the crackle and hiss of the VHF band.
The UHF-4460 reaches out—beyond the stuff everybody else hears. It can be your ears on a whole new ballgame.
For $174, this solid-state Petersen monitor gives you four-channel, push-button selection of the more exclusive listening you can get on UHF. It already has the necessary controls to become an Auto-Search monitor with the addition of the optional automatic switching module ($17).
The UHF-4460 features plug-in modular construction (450-470 MHz in 10 MHz ranges) and dual power supplies for 110VAC and 12VDC.
UHF-4460 four channel UHF Monitor Receiver with AC and DC power cords, mobile mounting bracket, built-in speaker, and one UHF plug-in module (455-465 MHz unless other size specified) **$174**

HL-44 DUO-BAND AUTO-SEARCH MONITOR RECEIVER

You can program the HL-44 to sweep any channels you choose—from two to eight. It automatically locks on an active channel, then automatically resumes the search when that channel goes quiet. Or you can lock it on one channel manually.

You can control the rate of search—from about two channels per second to around 12 per second.

HL-44 Duo-Band Auto-Search Monitor includes two frequency modules, AC cord, DC cord, mobile mounting bracket, and built-in speaker. Supplied w/modules for 150-160 MHz and 35-45 MHz unless otherwise specified. (30-40, 40-50, 160-170 MHz). **$159.95**

PETERSEN RADIO COMPANY, INC.

© United Technical Publications

Philmore 50

YEARS of SERVICE to the ELECTRONICS INDUSTRY

NEW CONSUMER PRODUCTS



STR1000

60 Watt I.H.F. FM-AM-FM Stereo Receiver. Complete facilities for all music sources. Separate AM & FM tuner front ends. All silicon transistors throughout the circuitry. Calibrated precise tuning meter and automatic stereo beacon indicator. Walnut cabinet.



SA1500

15-Watt Stereo Amplifier with Remote and Main Speaker selection. Response 20 to 20,000 Hz. Choice of phone or auxiliary input, separate channel volume controls.



BE69

Versatile Adaptor, 117 Volts AC to 6 & 9 Volts DC at 150 Ma. and 200 Ma. Plus and minus polarity connector. Adapts to miniature and subminiature phone plugs and coaxial power jacks. Compact. Packaged in clear vinyl bag and header.



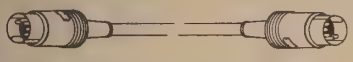
DC145

Professional High Fidelity Microphone. Dual impedance cardioid dynamic, 50K ohms and 600 ohms. 100 to 12,000 Hz response. See-thru display box.



VC66

Car Vacuum Cleaner, works from 12 V DC, plugs into cigarette lighter socket. Three different nozzles. Supplied with permanent storage pouch.



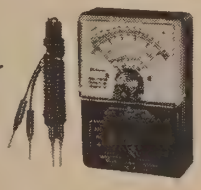
EA7

Molded 5-pin DIN plug on both ends. Shielded cable length 72". This is only one of over 100 different cable assemblies and adaptors in our line.



TS45

Stereo Car Speakers, can be mounted anywhere without drilling holes. Impedance 8 ohms.



PNH200D

Volt-Ohm-Milliammeter 20,000 ohm with diode to protect against overloading. Complete with all accessories.



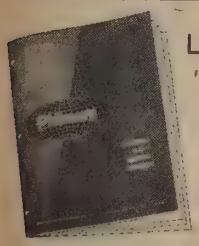
PS123

Solid State Regulated Power Supply. Convert 117 V AC to 12 V DC at 3 Amps. Extremely low ripple.



TEC30

Telephone Extension Cable. Completely assembled with telephone plug and jack. Blister-packed.



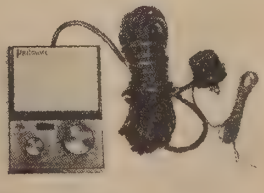
Let this new GOLD CATALOG be your Silent Salesman

For EVERYTHING in Electronic-Hi-Fi Equipment and Components for Consumer and Industrial Applications, see Philmore MASTER CATALOG No. 701.

TW8

2-Station Solid State Wireless Intercom. Power output 80 Mw. Carrier frequency 200 Kc. Blister packed.





TR60

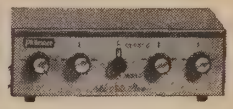
Remote Control Center. Includes 60-minute timer switch, remote speaker, private listening earphone.

PROVEN PROFITABLE PRODUCTS FOR 1970-71



WSLP8

Impedance 8 ohms. Designed to adjust and match levels of two separate speaker systems in a stereophone setup.

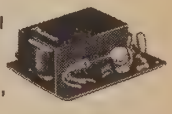


5M190

Solid State Stereo/Mono Mike Mixer. 1 to 4 channels in mono and 2 channels in stereo, independently of each other.

AA900

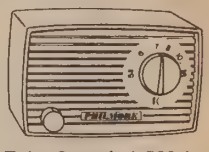
Miniature 3-watt Pushpull Audio Amplifier. 4 transistor. For phonos, intercoms, tape recorders, etc. Skin-packaged.





SP8

"Supertone" Stereo Headphones with retractable coil cable. Sturdy, lightweight, comfortable. 20-17000 Hz response. 8-ohms impedance.



205

AC-DC Radio Kit. 5-Tube Superhet 530 to 1600 Kc. Ultra compact smartly styled high quality table radio. Point-to-point wiring.



SS2

2-Way Speaker System with Built-in Crossover Network; 8" woofer, 3½" tweeter. Oiled walnut cabinet.



219 SPST ⅜" shank
220 SPDT ⅜" shank
221 DPDT ⅜" shank

Bat Handle Toggle Switches With "on-off" plates. Molded bakelite case.

— ALSO —

Adaptors . . . Battery Chargers
Code Practice Oscillators . . .
Connectors . . . Demagnetizers
Dials . . . Earphones . . . Hi-Fi
Speakers . . . Jacks . . . Knobs . . .
Telegraph Keys . . . Magnifier
Meters . . . Microphones . . .
Switches . . . Test Leads . . .
Telephone Plugs and Jacks.

and many other proven profitable electronic components and accessories

PHILMORE MANUFACTURING CO., INC.

© United Technical Publications

TUBE/RELAY SOCKETS

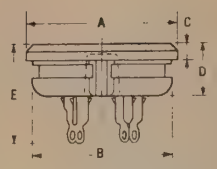
AMPHENOL
THE BUNKER-RAMO CORPORATION

"S" Type Tube Sockets WITH RETAINER RING MOUNTING

These quick-mounting sockets use no screws or rivets; they are securely held by the retainer ring and can be easily mounted with a screwdriver or AMPHENOL hand tool 51-3.

"S" type sockets may also be used with plug caps to make up high quality, low cost cable connections.

SPECIFY CHASSIS THICKNESS. Unless otherwise specified, "S" type sockets are grooved to fit 22 gauge (.031") to 18 gauge (.050") panels or chassis. This standard grooving also fits plug caps. They can be grooved to fit up to 13 gauge (.093").





78-S8

Black Phenolic Part No.	Steatite Part No.	Contacts	Pin Circle Dia.	Voltage Rating (RMS)	Current Rating	Mating Plug	DIMENSIONS A	B	C	D	E
78-S4	49-SS4	4	.640	2000	5	86-CP4	1¼	1⅝₃₂	.135	.420	27/32
78-S5	49-SS5	5	.750	1250	5	86-CP5	1¼	1⅝₃₂	.135	.420	27/32
78-S6	49-SS6	6	.750	1250	5	86-CP6	1¼	1⅝₃₂	.135	.420	27/32
—	49-SS7L	7 Large	.855	1250	5	—	1⅜	1¹⁵⁄₆₄	.135	.420	27/32
78-S7S	49-SS7S	7 Std.	.750	1250	5	86-CP7S	1¼	1⅝₃₂	.135	.420	27/32
78-S8	49-SS8	8 Octal	.687	1250	3	86-CP8	1¼	1⅝₃₂	.145	.490	⅞
78-S8L	—	8 Loktal	.750	1250	3	—	1¼	1⅝₃₂	3/32	23/64	31/32
78-S9	—	9	.687	1250	3	86-CP9	1¼	1⅝₃₂	.145	.490	⅞
78-S11	—	11	.750	1250	3	86-CP11	1¼	1⅝₃₂	.145	.490	⅞
78-S16	—	16	†	500	3	86-CP16	1¼	1⅝₃₂	.145	.490	⅞
78-B	—	Blank	—	—	—	—	1¼	1⅝₃₂	.145	.490	⅞

† Outer circle .750"; inner eccentric

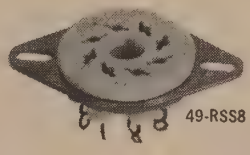


"S" Type Replacement Sockets

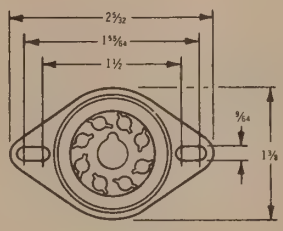
These sockets are regular "S" type sockets, assembled with a retainer ring holding a sturdy nickel-plated steel mounting plate. To order replacement socket, insert "R" before "S" in applicable part number; for example 78-RS4 is replacement socket comparable to 78-S4.

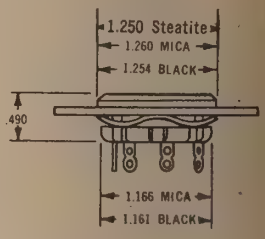


78-RS8



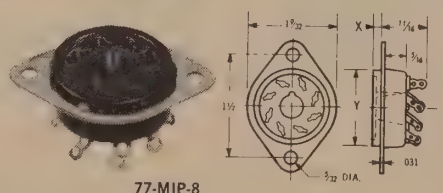
49-RSS8





"MIP" Molded-In Plate Tube Sockets

X=3/32 on MIP-4-5-6-7S
X=.145 on MIP 8-9-11-12
X=.145 on 77-MIP-8FK & 59-103
Y=1 7/64 on MIP-4-5-6-7S
Y=1¾ on MIP-11-12
Y=1 7/64 on 77-MIP-8FX
Y=1.110 on 59-103



77-MIP-8

Steel mounting plate molded directly into solid phenolic body.

Two holes in each contact provide wiring and anchoring points for resistors, capacitors, chokes, and other components.

All sockets are designed for above-chassis mounting in round holes 1 3/16" diameter except 77-MIP-20 (1 5/16" dia.).

MIP Part No.	Contacts	Pin Circle Diameter	Voltage Rating (RMs)	Current Rating (Amps)	Mating Plug (Page 5)
77-MIP-4	4	.640	2000	5	86-CP4
77-MIP-5	5	.750	1250	5	86-CP5
77-MIP-6	6	.750	1250	5	86-CP6
77-MIP-7S	7 Std.	.750	1250	5	86-CP7S
77-MIP-8	8 Octal	.687	1250	3	86-CP8
77-MIP-9	9	.687	1250	3	86-CP9
77-MIP-11	11	.750	500	3	86-CP11
77-MIP-12	12	.750	500	3	86-CP12
77-MIP-20	20	1.000 Outer .687 Inner	500	3	70-20

DEVIATIONS — When no deviations are specified, mounting plate is steel, contacts are cadmium plated brass, contact tails are not tinned, and dielectric is black phenolic. To specify any of the following deviations add the designation at the end of the part number.

T — Mica-filled phenolic **M** — Phosphor bronze, silver plated contacts and stainless steel mounting plate **1** — Contact tails tinned

Compact "MIP" Sockets

Similar to standard "MIP" types except smaller. They mount in 1⅛" diameter round hole, have two .136" diameter mounting plate holes on 1 5/16" centers.

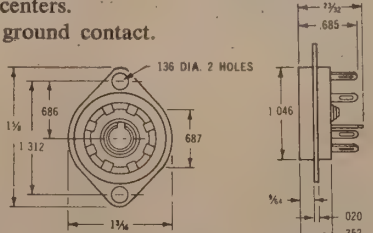
Loktal style has center ground contact.



88-8 Octal



88-8X Loktal



Part No.	Pin Circle Diameter	Voltage Rating (RMS)	Current Rating (Amps)
88-8	.687	1250	3
88-8X	.687	1250	3

Octal is like the standard "MIP" octal but has exclusive, patented Clover Leaf contacts. Body is mica-filled phenolic, mounting plate is stainless steel, contacts are silver plated phosphor bronze, contact tails are hot dipped. Rated 1250 V at 5 Amps.



Part Number: 59-103

Floating Octal are like standard "MIP" octal sockets but have live rubber grommets that fit into mounting holes to cushion socket for vibration-free operation; may be mounted above or below chassis.



77-MIP-8FK

Part No.		Pin Circle Dia.
77-MIP-8FK	Octal. Complete with 4 rubber grommets, 2 mounting screws, nuts and washers.	.687
77-3K	Kit for making any "MIP" into floating socket. 4 grommets, 2 mounting screws, nuts and washers.	.687

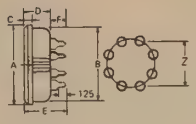
© United Technical Publications

TUBE/RELAY SOCKETS

AMPHENOL
THE BUNKER-RAMO CORPORATION

NEW! Standard 78S and 77MIP Series Sockets FOR PC BOARD INSTALLATION

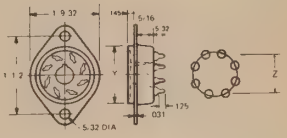




Rugged copper alloy contacts, 5/32" long, have .125" tapered lead-in sections for quick insertion in plated-through holes in circuit boards. Broader shoulder section allows .020" clearance for air circulation.

To order: Add suffix "W0125" to part number. Where strain on terminals is expected use MIP style with screws and standoffs. For extra insulation and dielectric strength add letter "T" to number. EX: 77MIP8*TW-0125*.





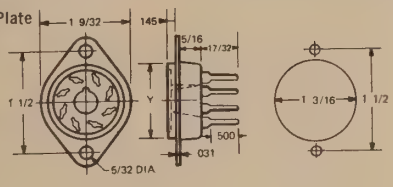
DIMENSIONS

Sockets	A	B	C	D	E	F
78-S8, -S9, -S11, -S12, -S16	1¼	1 5/32	.145	.490	.646	5/32

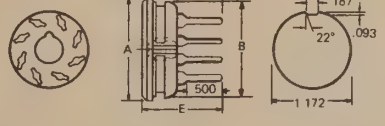
MIP Sockets	"Y" Dimension	"Z" Dimension
77 MIP 8-9	1 7/64	.687
77 MIP 11-12	1 9/64	.750
77 MIP 20	1 15/64	1.000

NEW! Standard 78S and 77MIP Series Sockets WITH WIRE WRAP TERMINATIONS











Wire-wrap terminations permit users of hand and semi-automatic wrapping equipment to terminate tube sockets in the same operation as other components without extra soldering. Two mounting styles and two types of dielectric: phenolic/mica-filled phenolic.

CONTACTS: Copper alloy (Lubaloy) with cadmium plated finish; "tuning fork" shaped for low contact resistance. Tails are ½" long; 1/16" wide. Available in two thicknesses: *Standard* .016" rated at 3 amps continuous with 3 oz. min. retention force; *heavy-duty* .025" rated at 7.5 amps continuous with 5 oz. retention.

DIMENSIONS

Sockets	Y
77 MIP 8-9	1 7/64
77 MIP 11-12	1 9/64

Sockets	A	B	C	D	E	F
78-S8, -S9, -S11, -S12	1¼	1 5/32	.145	.490	1⅛ Approx.	5/16

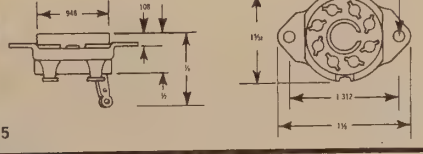
ORDERING INFORMATION

Number of Contacts	Standard Contacts Molded-In-Plate Style	Standard Contacts Retaining Ring Style	Heavy Duty Contacts Molded-In-Plate Style	Heavy Duty Contacts Retaining Ring Style
8	77-MIP8W-0500	78-S8W-0500	77-MIP8W-0525	78-S8W-0525
9	77-MIP9W-0500	78-S9W-0500	77-MIP9W-0525	78-S9W-0525
11	77-MIP11W-0500	78-S11W-0500	77-MIP11W-0525	78-S11W-0525
12	77-MIP12W-0500	78-S12W-0500	77-MIP12W-0525	78-S12W-0525

For sockets with mica-filled phenolic dielectric, add "T" in part number, for example: 77-MIP8TW-0500

Saddle Type Octal





High quality economical sockets with 4 lugs for below-chassis mounting. Choice of brass wrap around or copper alloy tuning fork contacts. Mounts in 1" diameter round hole. Dielectric is black phenolic. Mica-filled phenolic sockets are available when specified.

Part No.	Contacts No.	Contacts Material	Pin Circle Diameter	Voltage Rating (RMS at Sea Level)	Current Rating (Amps)
168-001	8	Brass	.687	1250	3
168-015	8	Lubaloy	.687	1250	3

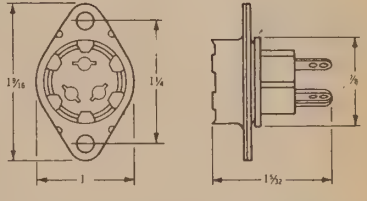
Shielded Chassis Type



Mount on surface or behind chassis or panel in ⅞" diameter hole on 1¼" centers.

For a fully shielded connection, mate with 91 Series Long Shell Shielded Plugs.

Part No.	Contacts No.	Pin Circle Diameter	Current Rating (Amps)	Mating Plugs Unshielded	Mating Plugs Shielded
78-PCG3	3	.344	3	71-3S	91-MPM3L
78-PCG4	4	.406	3	71-4S	91-MPM4L
78-PCG5	5	.406	3	71-5S	91-MPM5L
78-PCG6	6	.406	3	71-6S	91-MPM6L



Miniature Tube Bases

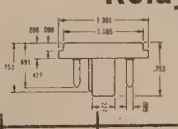


For photo cells or miniature tubes, 3 and 4-contact bases are available on special order.

Part No.	Contacts	Pin Circle Diameter	Voltage Rating (RMS Sea Level)	Current Rating (Amps)	Mating Socket
50-821*	4	.406	1250	5	78-S4S
50-034*	3	.343	1250	5	78-S3S
50-035	3	.343	1250	5	78-S3S

Relay & Tube Bases





Four notches allow quick staking of a relay plate to either 8 or 11-pin plug base.

Part No.	Contacts	Pin Circle Diameter	Voltage Rating (RMS Sea Level)	Current Rating (Amps)	Mating Socket
50-801	8	.687	1250	5	77-MIP-8
50-820	11	.750	1250	5	77-MIP-11

© United Technical Publications

MINIATURE SOCKETS

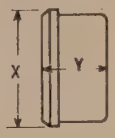
AMPHENOL
THE BUNKER-RAMO CORPORATION

Miniature Tube and Chassis Sockets WITH RETAINER RING MOUNTING

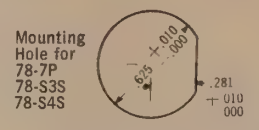




Sockets are easily mounted without screws or rivets in ⅝" round or "D" shaped hole. Correct size retainer ring supplied with all sockets is easily assembled which assures a tight and secure mounting. Body is black phenolic but is also available in mica-filled phenolic when specified.



Part	X	Y
78-7P 78-S3S 78-S4S	45/64	15/32
78-S5S	¾	½



Part No.	Contacts No.	Pin Circle Diameter	Voltage Rating (RMS)	Current Rating (Amps)	Mating Plugs	
					Unshielded	Shielded
78-S3S	3	.344	500	3	71-3S	91-MPM31
78-S4S	4	.406	500	3	71-4S	91-MPM4L
78-S5S	5	.406	500	3	71-5S	91-MPM5L
78-S6S	6	.406	500	3	71-6S	91-MPM6L
78-7P	7	.375	500	3	86-896	86-895

78 Series Miniature Sockets WITH PC OR WIRE WRAP TERMINATIONS

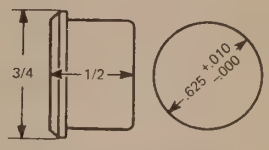




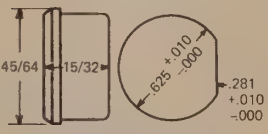


Pin Circle Diameter (A)

Number of Contacts	3	4	5	6
Diameter (inches)	.344"	.406"	.406"	.406"



Size and Mounting Hole for 3 and 4 Contact Sockets.



Size and Mounting Hole for 5 and 6 Contact Sizes.

To meet customer requirements for low cost terminations, Amphenol introduces miniature sockets for PC board mounting and Wire Wrap termination. These sockets can be used for vacuum tubes, relays, input or output cable connections and many other circuit requirements where standard size sockets won't fit. Performance is equal to larger sockets; general purpose or mica-filled dielectric available. Wire-wrap termination type mounts in ⅝" diameter round or D shaped panel cut out; friction-type retainer ring included. PC board types mount through 1/16" diameter holes in PC board arranged in proper pin circle diameter as shown (view "A").

Contact shoulders prevent socket from bottoming, allow clearance for air circulation and cleaning.

Number of Contacts	Wire Wrap Termination		Printed Circuit Board Mounting
	Standard Contact	Heavy Duty Contact	
3	78-S3SW-0500	78-S3SW-0525	78-S3SW-0125
4	78-S4SW-0500	78-S4SW-0525	78-S4SW-0125
5	Not Available	Not Available	78-S5SW-0125
6	Not Available	Not Available	78-S6SW-0125

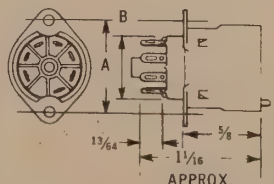
For mica-filled phenolic dielectric, add "T" to part number. EX: 78-S3STW-0125

7 & 9 Contact Miniature

147 and 59 Series sockets, suitable for any miniature application, may be ordered with or without tube shield base or center shield, for top or below-chassis mounting.



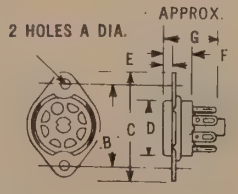
7 Pin
147-905
(Shown)
9 Pin
59-407



Part	A	B
147 Series	.875	.615
59 Series	1.125	47/64



7 Pin
147-500
(Shown)
9 Pin
59-409



Part	A	B	C	D	E	F	G
147 Series	.125	.875	1⅛	.610	.113	.306	5/16
59 Series	.095	1.125	—	47/64	.062	.295	19/32

147 Series — 7 Contacts

Insulator Material	Part Number		Mtg. Hole Dia. Saddle	Center Shield
	Phosphor Bronze, Cadmium Plated Contacts	Beryllium Copper, Silver Plated Contacts		
SHIELDED BASE TYPE				
Black	147-905	*	.095	Large
Mica	147-913	*	.095	Small
Mica	—	147-916	.125	Small
SADDLE TYPE — Bottom Mounting (Top mounting available when specified).				
Mica	147-170-20	*	.125	No
Black	147-500	*	.125	Large
Black	147-504	*	.125	No
Mica	147-505	*	.125	Small
Mica	—	147-840	.125	No

59 Series — 9 Contacts

Insulator Material	Part Number		Mtg. Hole Dia. Saddle	Center Shield
	Phosphor Bronze, Cadmium Plated Contacts	Beryllium Copper, Silver Plated Contacts		
SHIELDED BASE TYPE				
Mica	*	59-403	.125	Large
Mica	59-405	*	.095	No
Black	59-406	*	.095	Large
Mica	59-407	*	.095	Large
Black	59-461	*	.125	Large
SADDLE TYPE — Bottom Mounting				
Black	59-409	*	095	Large
Mica	59-410	*	.095	Large
Mica	59-411	*	.095	No
Mica	*	59-412	.125	Large
Mica	59-410-1000	*	.125	Large
Black	59-446	*	.125	No

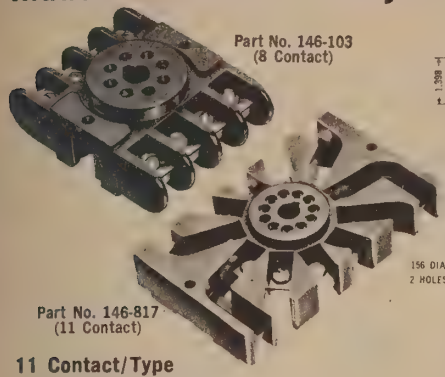
* *Must be specified.*

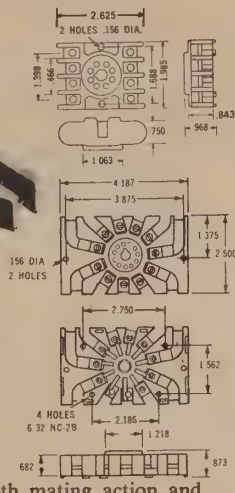
© United Technical Publications

SOCKETS/PLUGS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Industrial Tube and Relay Sockets





11 Contact/Type

Rated 10 amps., 600 volts. May be gang mounted, either above or below chassis. High, thick insulating barriers provide long creepage paths between contacts.

Socket-type contacts assure firm, smooth mating action and excellent relay retention even after repeated matings.

RETMA-numbered solderless, reversible screw terminals. 4 molded-in threaded-brass insert tie points. Replaceable contacts

Electrical and Mechanical Characteristics

Dielectric: Melamine
Threaded insert: Brass
Contacts: Phosphor bronze Grade A, plated .0002-.0004" nickel per QQN-290
Part Number to Order: 146-817

8 Contact Type

Molded in one piece of melamine. Rugged insulating barriers provide long creepage paths between contacts and to ground. Patented "Clover Leaf" contacts offer minimum contact resistance. Removable contacts. RETMA-numbered reversible screw type terminals simplify wiring and permit use of wiring harness and terminal lug type connections. Above or below chassis mounting. May be gang mounted. Voltage rating is 1250V RMS at 5 amps.

Part No.	Description
146-103	Standard Socket Without Tie Point Inserts — Top Mounted
146-104	Socket With Four Molded-in Threaded Inserts for Tie Points — Top Mounted
146-203	Same As 146-103 Except For Bottom Mounting
146-204	Same As 146-104 Except For Bottom Mounting

14 Contact Type



Part No. 59-106

Cadmium plated steel mounting plate with two .125" dia. holes on 1.125" centers. Mounting hole is .750" minimum diameter. Wrap around type contacts of silver plated phosphor bronze with hot tin dipped tails. Dielectric is mica-filled phenolic. Mates with 14-contact relay plugs.

20 Contact Relay Socket



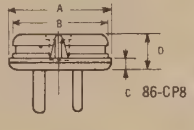
Part No. 59-470

Molded of diallyl phthalate. Contacts are heat-treated, half-hard beryllium copper, hooded and with turret type terminals. Mounting plate is passivated stainless steel with two .144" dia. holes on 1.406" centers. Mounting hole is 1.000" diameter. Mates with 20-contact relay plugs.

"CP" Type Plugs with Retainer Ring Mounting

Plugs with 4, 5, 6, and 7 contacts do not have center guide post but are polarized for correct insertion by use of two pins of larger diameter than others.

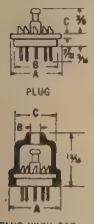
Molded-in contacts are nickel plated brass. Standard dielectric is black phenolic, but all sizes are available also in mica-filled phenolic. To order, just add T to the part number — for example, 86-CP8T.





Part No.	Contacts	Pin Circle Dia.	Volt. Rating (RMS)	Curr. Rating (Amps)	Mating Sockets: Ret.Ring Type (Pg. 3)	Mating Sockets: "MIP" Type (Pg. 3)	Dimensions A	B	C	D
86-CP4	4	.640	2000	5	78-S4	77-MIP4	1¼	15/32	5/32	7/16
86-CP5	5	.750	1250	5	78-S5	77-MIP5	1¼	15/32	5/32	7/16
86-CP6	6	.750	1250	5	78-S6	77-MIP6	1¼	15/32	5/32	7/16
86-CP7S	7 Std.	.750	1250	5	78-S7S	77-MIP7S	1¼	15/32	5/32	7/16
86-CP8	8 Octal	.687	1250	5	78-S8	77-MIP8	1¼	15/32	.145	7/16
86-CP9	9	.687	1250	5	78-S9	77-MIP9	1¼	15/32	.145	7/16
86-CP11	11	.750	500	5	78-S11	77-MIP11	1¼	15/32	.145	7/16
86-CP12	12	.750	500	3	78-S12	77-MIP12	1¼	15/32	.145	7/16
86-CP16	16	Outer: .750 Inner: Eccentric	500	5	78-S16	—	1¼	15/32	.145	7/16

Miniature "CP" Plugs







Molded from diallyl phthalate. Feature a molded-in strain relief post. Gold-over-silver plated contacts.

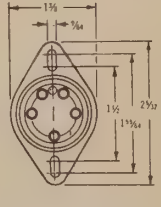
Styles with rubber plug caps in end and cable outlet on side also available.

ELECTRICAL & MECHANICAL CHARACTERISTICS
Voltage Rating: 1500 V RMS Sea Level
Current Rating: 5 Amps.
Insulation Resistance (Min): 10,000 Megohms
Contact Pins: .040 dia. S.A.E #72 Brass

Part No.	Description	A	B	C	Pin Circle Diameter
86-896	7-Pin Plug	.685	.575	.070	.375
86-893	9-Pin Plug	.778	.668	.070	.468
86-895	7-Pin Plug with Cap	.781	171	.625	.375
86-897	9-Pin Plug with Cap	.875	.285	.718	.468
86-894	7-Pin Plug with Side Outlet Cap	.750	.468	.171	.375

"CP" Replacement





To order replacement type plugs add "R" to regular part number, for example, 86-RCP5. Replacement plugs are of black phenolic but are available also in mica-filled phenolic; just add "T" to the part number.

Unshielded Miniatures


71-3S
Below Chassis


86-CP-4S
Above Chassis

BELOW CHASSIS

Part No.	Contacts	Pin Circle Dia.	Voltage Rating (RMS)	Current Rating (amps)	Mating Sockets: Unshielded	Mating Sockets: Shielded
71-3S	3	.343	500	5	78-S3S	78-PCG3
71-4S	4	.406	500	5	78-S4S	78-PCG4
71-5S	5	.406	500	5	78-S5S	78-PCG5
71-6S	6	.406	500	5	78-S6S	78-PCG6

ABOVE CHASSIS

86-CP-3S	3	.343	500	5	78-S3S	91-MPF3S
86-CP-4S	4	.406	500	5	78-S4S	91-MPF4S
86-CP-5S	5	.406	500	5	78-S5S	91-MPF5S
86-CP-6S	6	.406	500	5	78-S6S	91-MPF6S

Molded Speaker Type Plugs


71-5

Part No.	Contacts	Mating Sockets: "S" Type	Mating Sockets: "MIP" Type
71-4	4	78-S4	77-MIP-4
71-5	5	78-S5	77-MIP-5
71-6	6	78-S6	77-MIP-6
71-7	7	78-S7S	77-MIP-7S
70-8	8	78-S8	77-MIP-8
70-9	9	78-S9	77-MIP-9
70-12	12	78-S12	77-MIP-12
70-20	20	—	77-MIP-20

© United Technical Publications

CABLE CONNECTORS SCR SOCKETS/HARDWARE

AMPHENOL
THE BUNKER-RAMO CORPORATION

Miniature Cable Connectors


91-MPF3S

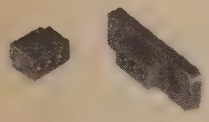

91-MPM3L

High quality compact connectors for shielded or unshielded cables. Make ideal battery or antenna connectors. Can also serve as inexpensive microphone connectors.

Black phenolic elements, housed in cadmium plated brass shells and held in place by set screws in side. Polarized contact spacing prevents incorrect insertion. Accommodate cables up to ¼" diameter. Rated 3 amps., 500 volts.

Cable Sockets					Mating Plugs			
Short Shell 13/16" Long	Long Shell 1 3/16" Long	Flared End Shell 1 3/16"	Chassis Shielded	Chassis Unshielded	Cable Plug Short 13/16"	Cable Plug Long 1 3/16"	Chassis Shielded	Chassis Unshielded
91-MPF3S	91-MPF3L	91-MPF3	78-PCG3	78-S3S	91-MPM3S	91-MPM3L	86-PCG3	86-CP3S
91-MPF4S	91-MPF4L	91-MPF4	78-PCG4	78-S4S	91-MPM4S	91-MPM4L	86-PCG4	86-CP4S
91-MPF5S	91-MPF5L	91-MPF5	78-PCG5	78-S5S	91-MPM5S	91-MPM5L	86-PCG5	86-CP5S
91-MPF6S	91-MPF6L	91-MPF6	78-PCG6	78-S6S	91-MPM6S	91-MPM6L	86-PCG6	86-CP6S

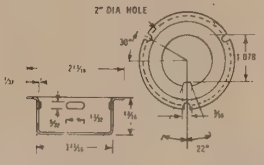
SCR Sockets



Three contact receptacle designed to accept General Electric Company's C106 SCR (Silicone controlled rectifier). Nickel silver contacts. Black nylon insulator. Voltage rating: 500 volts RMS. Current rating: 5 amps. Contact spacing: .200" centers. Mating engagement depth: .160" min. Contact length: Approximately .323" x .020" square. Contact tails designed for wire wrap or printed circuit board mounting.

77-115	Press fit style without flange. To fit rectangular panel or chassis cut dimensions .335" (±.005) x .1625" (±.0015).
77-116	Mounting flange style. Molded mounting flange has two .125" diameter mounting holes on .625" centers. Assembly fits rectangular panel or chassis cut-out .325" x .200".

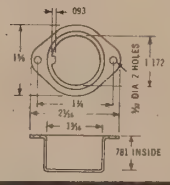
Receptacle Shells



Aluminum shells extend "S" sockets, "CP" plugs, and outlet type connectors 13/16" above or below surface. Knockouts on 4 sides of shell provide wire entrances from any angle. Mount in 1¾" hole; have 3 notched holes for No. 6 screws.

Part Number to Order: 23-1S — For standard "S" sockets or "CP" Plugs.

Recessed Mounting Shells



Cadmium plated steel shells lower S sockets, CP plugs, and outlet type connectors 1-3/16" below surface. Mount in 1-7/16" hole; have two 5/32" dia. screw holes on 1¾" centers.

Part Number to Order: 61-61.

Tip Jacks

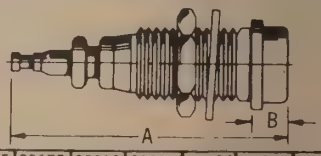

350-19175


350-19200


350-50200

Complete selection of tip jacks in different terminal styles, variety of contact and mounting shell platings, wide range of colors, and other options.

SPECIFICATIONS: INSULATORS — Nylon (Zytel 101) per MIL-P-17091; or teflon.
MOUNTING SHELLS — Brass per Q-4-B-746 Comp. A. Nickel or cadmium plated.
HEX NUTS — Standard thickness .062" brass per QQ-B-626, Comp. 22. Nickel or cadmium plated.
LOCKWASHERS — Phosphor bronze per QQ-B-746 Comp. A. Nickel or cadmium plated.
CONTACTS — Beryllium copper per QQ-C-530, Cond. H. Silver, gold or nickel plated or electro-tinned.
FEED THRU TERMINAL — Brass per QQ-B-611 Comp. B.
RATED CURRENT — 5 amps.
MILLIVOLT DROP — 20 Mv. maximum at rated current.
MAXIMUM OPERATING VOLTAGE — 1000 volts rms.
INSULATION RESISTANCE — 5000 megohms min.
MAXIMUM OPERATING TEMPERATURE—256°F. All jacks mount through a ¼" hole.



DIMENSIONS

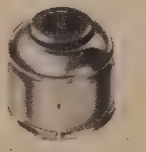
Part No. 350-	14400	16175	19175	29175	39175	60000	61000	61004	19200	29200	50200
A	5/64	5/64	5/64	5/64	5/64	5/64	5/64	5/16	1 1/32	1 5/16	1 1/8
B	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64	3/64

COLORS AVAILABLE (Add suffix for desired color at end of part number.)

-1 Red -4 Green -7 Blue
-2 Black -5 Orange
-3 Brown -6 White

Caps


Nylon 3-858


Rubber Grommet


Side Outlet Rubber Grommet

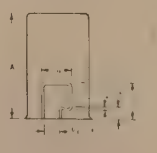

Cable Clamp

Makes inexpensive cable connectors of standard sockets, plugs and receptacles such as 78, 60, 61, 86 and 160 Series. For applications requiring frequent mating and unmating use 3-858 or 3-859 with molded finger grip.

FINISH				
Black Thermo Plastic	Black Epoxy	Clear Cadmium	Cable Outlet	Maximum Cable O.D.
—	3-10	3-10-1000	None	Dust Cap
—	3-12	—	Metal	5/16"
—	3-13	3-857	Rubber	7/16"
—	3-17	—	Side, Rubber	7/16"
—	3-24	3-856	Cable Clamp	3/8"
3-858	—	—	Finger Grip Style	5/16"
3-859	—	—	Finger Grip Style	5/16"

Tube Shields

Cadmium plated steel with internal spring holds tube securely.

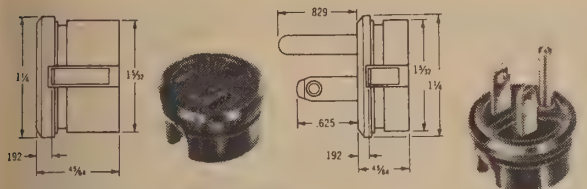




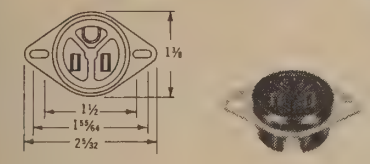
	Miniature Tube	Maximum Tube Length
5-401	7 Pin	1 3/16
5-402	7 Pin	1 3/4
5-405	9 Pin	1 1/2
5-408	9 Pin	1 13/16
5-409	9 Pin	2 3/8

© United Technical Publications

Plugs and Receptacles, 125 Volt Home and Industrial Type U/L APPROVED



Heavy duty outlet plugs and receptacles that meet Underwriters' Laboratories requirements for grounding home appliances and tools. All have UL approval except the 160-10 and 160-11 which requires grounding after mounting. Rated at 15 amp 125 volt or 10 amp 250 volt.



Inserts

Molded thermoplastic bodies.
Part Number to Order: 160-10N 2-Pole Receptacle Insert — 160-11N 2-Pole Plug Insert



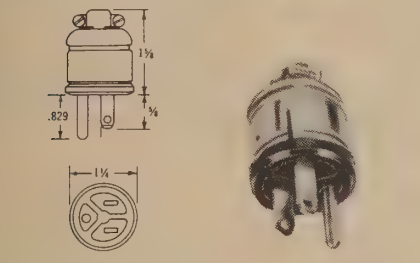
With Mounting Plate

Nickel plated steel mounting plate assembled to molded thermoplastic body.
Part Number to Order: 160-2N 2-Pole Receptacle — 160-3N 2-Pole Plug



Flush Motor Type

Consist of 160-10N and 160-11N inserts assembled in cadmium plated steel shells for below-surface mounting.
Part Number to Order: 160-4N 2-Pole Flush Motor Receptacle — 160-5N 2-Pole Flush Motor Plug



Shielded

Consists of inserts 160-10N and 160-11N assembled in sturdy steel plug caps finished in cadmium plate.

Part Number to Order:
160-6N 2-Pole Shielded Receptacle with Rubber Grommet
160-7N 2-Pole Shielded Plug with Rubber Grommet
160-8N 2-Pole Shielded Receptacle with Cable Clamp
160-9N 2-Pole Shielded Plug with Cable Clamp

110 Volt Home and Industrial Type U/L APPROVED



Inserts

Compact black phenolic units built to Underwriters' Laboratories standards. Rated at 15 amp, 110 volt or 10 amp, 250 volt. Available in either retainer ring or mounting plate style.

Assemble retainer ringe style with plug caps for required type. Mounts in $1\frac{11}{64}$" keyed hole on chassis up to .125" thick. Mounting plate style requires $1\frac{9}{32}$" dia. hole. Mounts on $1\frac{1}{2}$" to $1\frac{55}{64}$" centers.

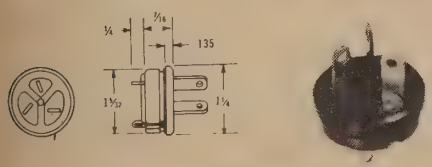
61-M plug has standard ¼" blades spread ½". 61-MP has one $\frac{5}{16}$" blade spread ½". 60-M has three ¼" blades staggered spaced. Binding screws for connecting cables are used on both plugs and receptacles.

Part Number Retainer Ring Type	Part Number Mounting Plate Type	Description
PLUGS		
61-M	61-M1	2-pole, Standard
61-MP	61-MP1	2-pole, Polarized
60-M	60-M1	3-pole, Polarized
RECEPTACLES		
61-F	61-F1	2-pole, Universal
60-F	60-F1	3-pole, Polarized



Molded-In-Plate Receptacle

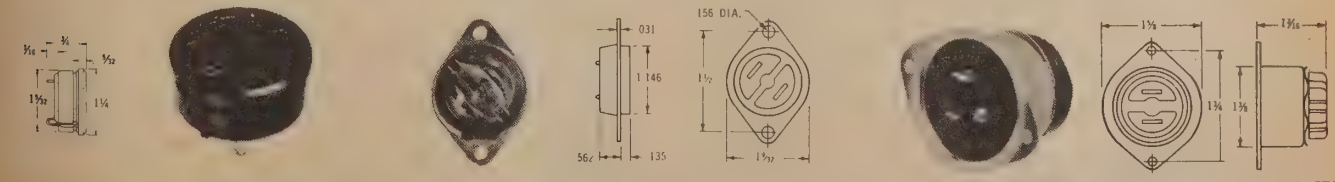
High quality 110-volt receptacle identical to 61-F except for steel mounting plate molded into phenolic body. Mounts in $1\frac{3}{16}$" dia. hole on $1\frac{1}{2}$" centers. Mounting hole, $\frac{5}{32}$" dia.
Part No. 61-MIP-61F



Flush Motor Plug & Receptacle

Compact plug or receptacle assembled in No. 61-61 steel shell for below-surface mounting. Mounts in $1\frac{7}{16}$" hole; two $\frac{5}{32}$" screw holes on $1\frac{3}{4}$" centers.

Part No.	Description
60-F10	3-pole Polarized Receptacle
60-M10	3-pole Polarized Plug
61-F10	2-pole Universal Receptacle
61-M10	2-pole Standard Plug
61-MP10	2-pole Polarized Plug



© United Technical Publications

NEW! EXCELLITE Audio Type Plugs and Receptacles

For quality performance and appearance in a lightweight, competitively-priced audio connector

—Exceptionally rugged, molded plastic bodies make these microphone connectors lightweight . . . yet uniquely durable.

—Satin-smooth nickel plating provides effective shielding for high impedance audio circuits PLUS that touch of "deluxe" you want on all your audio accessories.

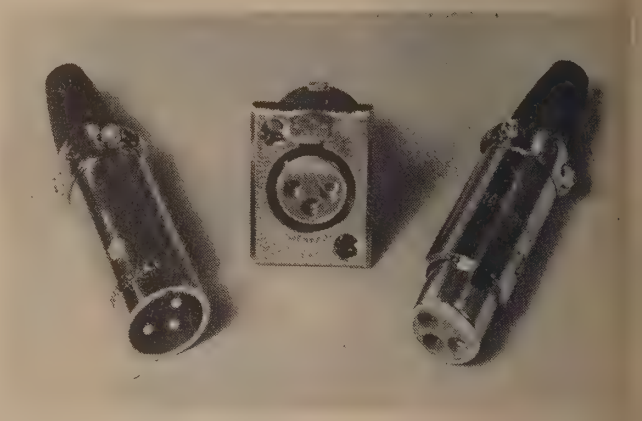
—Quick-release latch, removable inserts and solder cup contacts enable fast, easy removal and maintenance.

Especially designed and **styled** for use in modern, streamlined audio and other low-level circuits, AMPHENOL/EXCELLITE Connectors are intermateable with industry-standard connectors, yet are lighter weight and more competitively priced than metal-body types.

EXCELLITE Connectors can be used on: test equipment, sound and recording systems, computers and a large variety of other high performance applications with consistently better-than-adequate results.

Taking full advantage of modern technology and materials, their superior design assures you of their dependable service and long life. Just look at these quality features: tough-molded ABS molded plastic bodies; satin-nickel plating inside and out; push-button lock and release; positive-gripping cable clamps (for cable up to 5/16" O.D.); unitized, removable inserts of high impact thermo-plastic; machine screw design silver-plated brass contacts and positive grounding action when contacts engage/disengage (#1 engages first). The cable boot is black rubber.

Voltage rating: test: 1400 v. RMS; service: 133 v. RMS. **Current rating** varies with the number of contacts. (See below).

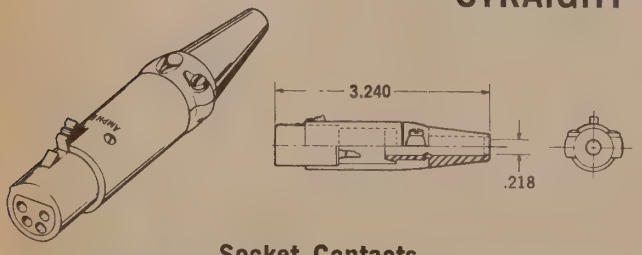


STANDARD CONTACT ARRANGEMENT
(Face view — pin insert)



3—#12 Contacts 15 AMPS	4—#16 Contacts 10 AMPS	5—#18 Contacts 7.5 AMPS

STRAIGHT CORD PLUGS



Socket Contacts

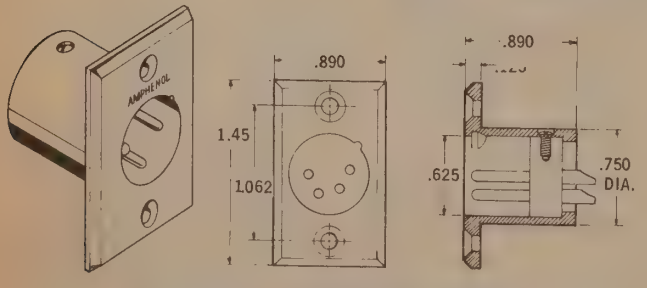
Number of Contacts		3	4	5
Part Number		91-454	91-458	91-462
Electrical Equivalent	Cannon	XLR-3-11C	XLR-4-11C	XLR-5-11C
	Switchcraft	A3F	A4F	None



Pin Contacts

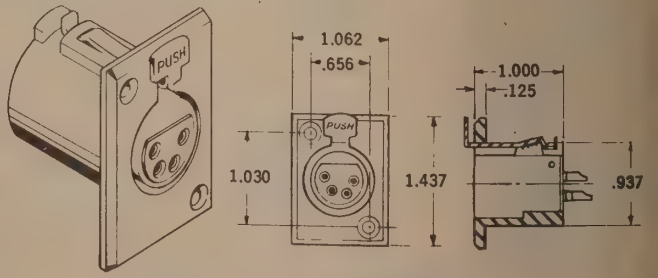
Number of Contacts		3	4	5
Part Number		91-453	91-457	91-481
Electrical Equivalent	Cannon	XLR-3-12C	XLR-4-12C	XLR-5-12C
	Switchcraft	A3M	A4M	None

WALL MOUNTING RECEPTACLE



Pin Contacts (mates with above)

Number of Contacts		3	4	5
Part Number		91-455	91-459	91-463
Electrical Equivalent	Cannon	XLR-3-32	XLR-4-32	XLR-5-32
	Switchcraft	D3M	D4M	None



Socket Contacts (mates with above)

Number of Contacts		3	4	5
Part Number		91-456	91-460	91-464
Electrical Equivalent	Cannon	XLR-3-31	XLR-4-31	XLR-5-31
	Switchcraft	D3F	D4F	None

© United Technical Publications

MICROPHONE CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

75 Series


75-PC1M


75CL-PC1M

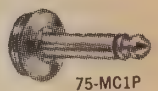

75-CCC1


75-MC1M


75-MC1S


75-MC1F


75-MC1FA


75-MC1P

Single Contact

Standard with leading manufacturers for many years. Widely used also on amplifiers, transmitters, phono-electric devices, home recorders, PA speakers, headphones, theft alarms and coin operated devices.

Unbreakable shielded cable type connectors of chrome plated, machined brass. The threaded ends engage with the coupling rings to make a positive, noise-free, leak-proof connection by pressing the center contacts firmly together. Spring cord protectors accommodate cables up to ¼" diameter. Receptacles mount in .385" holes when grounding to chassis; mount in .500" holes for ungrounded two-circuit applications. Can be screwed into housing or stand with standard ⅜"-24 tapped hole.

Part No.	Description
75-PC1M	Locknut Receptacle
75CL-PC1M	Locknut Receptacle w/Spring Loaded Contact
75-MC1M	Cable Jack
75-MC1F	Straight Plug
75-MC1FA	Angle Plug
75-CCC1	Cap and Chain
75-MC1P	Phone Plug Adapter
75-MC1S	Microphone Switch

Miniature 75-1, 75-2, 75-3

Designed for transistor audio equipment, they have the same simplicity of connection and reliability of operation as the world-recognized AMPHENOL regular microphone connectors, but only about half their size and weight.

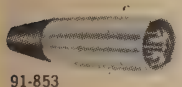
Part No.	Description	Length	Weight
75-1	Plug	1 11/64"	.011 lb.
75-2	Jack	1"	.009 lb.
75-3	Receptacle Locknut	⅝"	.008 lb.


75-1


75-2


75-3

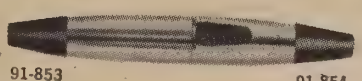
91 Series


91-853


91-856


91-855


91-854


91-853 91-854

Qwiks

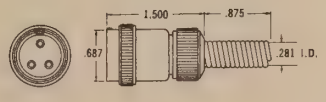
Efficient, easy-to-operate, quick-disconnect microphone connectors. Disconnect by means of a button, slid forward in the jack, depressed in the female receptacle. Connect by simply clicking-in plug or jack. Plug and jack also mate.

Qwiks are finished in attractive corrosion-resistant satin nickel, with bodies of high grade zinc alloy. Contacts are bronze, gold-plated over silver for high conductivity. Dielectric is diallyl phthalate.

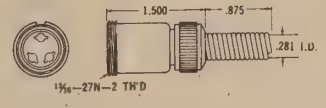
Part Number 3 Contacts	Part Number 4 Contacts	Description
91-853	91-857	Male Plug
91-854	91-858	Female jack
91-855	91-859	Male chassis receptacle
91-856	91-860	Female chassis receptacle

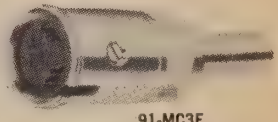
Electrical and Mechanical Characteristics

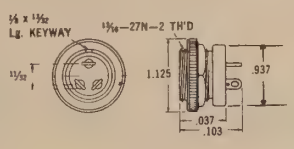
	3-Contact Female	3-Contact Male	4-Contact Female	4-Contact Male	6-Contact Female	6-Contact Male
Voltage Rating (RMS) Sea Level	600 V	800 V	600 V	600 V	600 V	600 V
Current Rating	3 Amps	5 Amps	3 Amps	5 Amps	3 Amps	5 Amps
Voltage Breakdown (RMS) Between Terminal and Ground	2000 V	2000 V	2000 V	2000 V	2000 V	2000 V




91-MC3M




91-MC3F



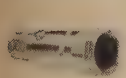

91-PC3F

These are 3, 4, and 6-contact connectors designed for audio equipment but used extensively on all types of equipment.

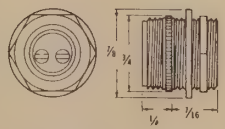
Dielectric is molded from black phenolic. Shell is of brass, with bright nickel plating. Also available in chrome finish. (Part number below is for chrome plating. To get nickel plating, substitute "N" for "C" in part number, for example, 91-MN3M.)

Plugs Part No.	Plugs Contacts	Jacks Parts No.	Jacks Contacts	Receptacles Part No.	Receptacles Contacts
91-MC3M	3 Male	91-MC3F	3 Female	91-PC3F	3 Female
91-MC3F1	3 Female	91-MC3M1	3 Male	91-PC3M	3 Male
91-MC4M	4 Male	91-MC4F	4 Female	91-PC4F	4 Female
91-MC4F1	4 Female	91-MC4M1	4 Male	91-PC4M	4 Male
91-MC6M	6 Male	91-MC6F	6 Female	91-PC6F	6 Female

80 Series


80-MC2F


80-PC2F




80-MC2M



Single and double-contact connectors. Element is black phenolic; shell is machined from solid brass and finished in polished chrome. All mounts in ⅝" holes. Maximum chassis thickness for lock-nut type receptacles is 11/32".

Electrical and Mechanical Characteristics

	Single Contact Male	Single Contact Female	Double Contact Male	Double Contact Female
Voltage Rating (RMS Sea Level)	1250 V	100 V	600 V	600 V
Current Rating	5 Amps	3 Amps	3 Amps	3 Amps
Voltage Breakdown Between Terminals and Ground (RMS)	3000 V	4000 V	2000 V	2000 V

Plugs Part No.	Plugs Contacts	Jacks Part No.	Jacks Contacts	Receptacles Part No.	Receptacles Contacts
80-M	1 Male	80-F	1 Female	80-C	1 Female
80-F1	1 Female	80-M1	1 Male	80-C1	1 Male
80-MC2M	2 Male	80-MC2F	2 Female	80-PC2F	2 Female
80-MC2F1	2 Female	80-MC2M1	2 Male	80-PC2M	2 Male

© United Technical Publications

BNC RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION


31-320


31-002

BNC - Bayonet Coupled
Popular and Lightweight

Your choice of six different styles: Regular, Improved with Captivated Contacts and Improved in addition to the three "Crimp" versions described below.

MIL-Crimp BNC's are recommended as the optimum BNC, giving optimum operating performance at low installed cost. Using standard crimping tools, these units can be assembled in a fraction of the time usually required for braid-clamp type connectors by eliminating critical assembly and soldering operations and reducing the parts to handle. Captivated center contacts prevent circuit discontinuity under environmental or mechanical stress. MIL-Crimps are weatherproof; their constant 50-ohm impedance provides excellent performance through X-band frequencies.

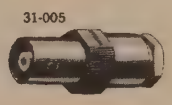
Quick-Crimp: gold-plated semi-captivated contacts, classed as weather proof. Heat shrink tubing for severe environmental conditions.

Original-Crimp: gold-plated contacts, classed as weatherproof. Each has a silicone rubber boot. For a complete listing of all BNC Connectors to the latest revision of MIL-C-39012/A, refer to your distributor or Amphenol.

ASTROplate®
Finish Available

Amphenol's exclusive, non-tarnish finish is available from stock on most popular rf connectors. **(See part numbers marked with ‡; others available on special order.)** ASTROplate® is corrosion and abrasion resistant. Mates safely with silver; is equally solderable. **To order: add suffix 1050 to part number.**


31-333


31-005

CHARACTERISTICS

ELECTRICAL: Impedance: unimproved BNC; non-constant; all others: 50 ohms. **Frequency range:** 0-10 GHz. **Voltage rating:** 500 volts peak. **Dielectric Withstanding Voltage:** 1500 volts rms. **SWR:** Improved: 1.3; MIL-Crimps: 1.2 (solder), 1.3 per spec. **Other:** contact resistance: 2.1 mv; RF leakage: —55 db; insertion loss: .04 db; insulation resistance: 5000 megohms.

ENVIRONMENTAL: Thermal Limits: Teflon insulators: —67° to 390°F (—55° to 199°C); Rexolite insulators: —67° to 185°F (—55° to 85°C). **Weatherproof:** standards with clamp gaskets; MIL-Crimps with heat-shrink tubing. **Hermetic Seals:** pass helium leak test of 2×10^{-8} cc/sec. **Shock:** MIL-Std-202 method 202. **Vibration:** MIL-Std-202 method 204 (test cond. D). **Moisture Resistance:** MIL-Std-202 method 106. **Corrosion:** MIL-Std-202 method 101 (test cond. B). **Temperature Cycling:** MIL-Std-202 method 102 (test cond. D). **Altitude:** MIL-Std-202 method 105 (test cond. C).

MECHANICAL: Mating: BNC: 2-stud bayonet lock; TNC: 7/16-28 thread cplg. **Cable Affixment (Braid or Jacket):** standards: screw-thread nut and braid clamp; MIL-crimps: hex braid crimp. **Cable Affixment (Center Conductor):** MIL-Crimps: 4 indent crimp or solder; others: solder only. **Captivated Contact:** all MIL-Crimps; others: where specified. **Cable Retention:** standards: 20 to 50 lbs; crimps: 80 to 100 lbs.

MATERIAL: Contacts (Center): male: brass; female: beryllium copper or phosphor bronze (all MIL-Crimps). **Contacts (Outer):** MIL-Crimps: phosphor bronze; others: brass or beryllium copper where specified. **Other Metal Parts:** brass. **Plating:** center contacts, MIL-Crimps: .0001" gold over .0001" copper; all others: .0002" silver. **Insulators:** Teflon (all crimps); Rexolite; glass-Teflon (hermetically sealed). **Clamp Gaskets:** synthetic rubber; silicone rubber. **Heat-Shrink Tubing:** MIL-Crimps: Thermofit plastic. **Crimp Ferrule:** copper.

MILITARY SPECIFICATIONS: MIL-Crimps: MIL-C-23329A; Standard BNC: MIL-C-3608.

STRAIGHT PLUGS

RG/U Cable	Part No.	UG/U No.	Insulation	Clamp Gasket	Dimensions, Inches Length	O.D.	Cable Entry	Notes
6	9350	—	Rexolite	syn. rubber	1¼	5/16	.348	—
8.9	6775	959	Teflon	syn. rubber	1 23/32	11/16	.437	—
55, 142, 223	31-326	M23329/3-02-04	Teflon	—	1 13/64	5/16	.220	MIL-Crimp ■
55, 58, 141, 142, 223	31-002‡	88	Teflon	syn. rubber	31/32	5/16	.212	—
	14525	88A	Teflon	syn. rubber	1	5/16	.212	—
	14625	—	Teflon	syn. rubber	1	5/16	.212	female contact/polarized
	31-018‡	88B	Teflon	—	31/32	5/16	.212	non-weatherproof
	31-202▲‡	88C	Teflon	sil. rubber	1 1/16	5/16	.224	improved
	31-301▲	—	Teflon	sil. rubber	1 5/32	5/16	.219	improved/captivated contact
	31-2202▲	88D	Teflon	sil. rubber	1 5/32	5/16	.224	improved/beryl. outer contact
	31-3202▲	88E	Teflon	sil. rubber	1 5/32	5/16	.224	improved/beryl. outer contact
	84800▲		Teflon	sil. rubber	1 1/16	5/16	.224	improved/captivated contact
58C	31-3301	88G						MIL-C-39012/16-0001
58, 141	31-320	M23329/3-01-03	Teflon	—	1 13/64	5/16	.206	MIL-Crimp ■
59, 62, 71, 140, 210	31-321	M23329/3-05	Teflon	—	1 13/64	5/16	.261	MIL-Crimp ■
	31-012‡	260	Rexolite	sil. rubber	31/32	5/16	.258	—
	31-021‡	260A	Rexolite	—	1	5/16	.258	non-weatherproof
	31212▲‡	260B	Teflon	sil. rubber	1 1/16	5/16	.255	improved
	31-304▲	—	Teflon	sil. rubber	1 5/32	5/16	.255	improved/captivated contact
59, 62, 71, 140, 210	31-2212▲	260C	Teflon	sil. rubber	1 5/32	5/16	.255	improved/beryl. outer contact
	31-3212▲‡	260D	Teflon	sil. rubber	1 5/32	5/16	.255	improved/beryl. outer contact
	70000	—	Teflon	syn. rubber	1	5/16	.258	female contact/polarized
	86475▲	—	Teflon	sil. rubber	1 1/16	5/16	.257	improved/75 ohm
59, 62	31-3302	260F						MIL-C-59012/16-8002
71	31-322	—	Teflon	—	1 13/64	5/16	.275	MIL-Crimp ■
114A	17400	—	Teflon	syn. rubber	1 21/32	11/16	.437	"b" dim. is body od
122	31-324	M23329/3-06	Teflon	—	1 13/64	5/16	.175	MIL-Crimp ■
122, 180, 195,	31-323	M23329/3-07	Teflon	—	1 13/64	5/16	.175	MIL-Crimp ■
	12000	—	Teflon	syn. rubber	1	5/16	.177	
	84975	1033	Teflon	sil. rubber	1 1/16	5/16	.177	improved
122	31-3303	1033G						MIL-C-39012/16-0003
174, 179, 187, 188	31-242	—	Teflon	—	1 13/64	5/16	.115	MIL-Crimp ■
	31-315	—	Teflon	—	1 13/64	5/16	.115	MIL-Crimp ■
	69475	—	Teflon	sil. rubber	1 1/16	5/16	.116	improved
178, 196	15875	—	Teflon	syn. rubber	1	5/16	.094	—
180	16300	—	Teflon	syn. rubber	1	5/16	.150	—
	31-325	—	Teflon	—	1 13/64	5/16	.175	MIL-Crimp ■
#18, 20, 22 H.V.	13925	—	Teflon	syn. rubber	1	5/16	.123	—

ANGLE PLUGS

55, 142, 223	31-334	—	Teflon	—	1 3/16	5/16	.220	MIL-Crimp ■
55, 58, 141, 142, 223	31-204	913	Teflon	sil. rubber	1 5/32	5/16	.224	
	31-2204▲	913A	Teflon	sil. rubber	1 5/32	5/16	.224	improved/beryl. outer contact
	31-3361	MIL-C-39012/20-0001						UG Clamp
	8525	—	Teflon	syn. rubber	1¼	5/16	.212	
	38250	—	Teflon	syn. rubber	29/32	5/16	.214	
58, 141	31-335	—	Teflon	—	1 3/16	5/16	.206	MIL-Crimp ■
59, 62, 71, 140, 210	31-336	—	Teflon	—	1 3/16	5/16	.261	MIL-Crimp ■
	31-850	—	Rexolite	syn. rubber	1¼	5/16	.258	
	8575	—	Teflon	syn. rubber	1¼	5/16	.259	
	33750	—	Teflon	syn. rubber	29/32	5/16	.259	
	86225▲	—	Teflon	sil. rubber	1 1/16	5/16	.257	improved
71	31-337	—	Teflon	—	1 3/16	5/16	.275	MIL-Crimp ■
122	31-339	—	Teflon	—	1 3/16	5/16	.175	MIL-Crimp ■
122, 180, 195,	31-338	—	Teflon	—	1 3/16	5/16	.175	MIL-Crimp ■
	33775	—	Teflon	syn. rubber	1¼	5/16	.177	—
174, 179, 187, 188	31-243	—	Teflon	—	1 3/16	5/16	.115	MIL-Crimp ■
	31-316	—	Teflon	—	1 3/16	5/16	.115	MIL-Crimp ■
	33275	—	Teflon	sil. rubber	1¼	5/16	.115	—
178, 196	21975	—	Teflon	syn. rubber	1¼	5/16	.096	—
180	16975	—	Teflon	syn. rubber	1¼	5/16	.150	—
	31-340	—	Teflon	—	1 3/16	5/16	.175	MIL-Crimp ■

STRAIGHT JACKS

55, 142, 223	31-333	M23329/3-09	Teflon	—	1 25/64	5/16	.220	MIL-Crimp ■
	31-305▲	—	Teflon	sil. rubber	1 13/64	5/16	.258	improved/captivated contact
	31-2215▲	261C	Teflon	sil. rubber	1 9/64	5/16	.258	improved
59B, 62A, 71B	31-3320	261D						MIL-C-39012/17-0002
73	31-329	—	Teflon	—	1 25/64	5/16	.275	MIL-Crimp ■
122	31-331	M23329/3-13	Teflon	—	1 25/64	5/16	.175	MIL-Crimp ■
122, 180, 195	31-330	M23329/3-14	Teflon	—	1 25/64	5/16	.175	MIL-Crimp ■
	84650	1056	Teflon	sil. rubber	1 9/64	5/16	.177	improved
174, 179, 187, 188	31-244	—	Teflon	—	1 25/64	5/16	.115	MIL-Crimp ■
	31-317	—	Teflon	—	1 25/64	5/16	.115	MIL-Crimp ■
180	16925	—	Teflon	syn. rubber	1 9/64	5/16	.150	
	31-332	—	Teflon	—	1 25/64	5/16	.175	MIL-Crimp ■
55, 58, 141, 142, 223	31-005‡	89	Teflon	syn. rubber	1 1/8	5/16	.212	
	31-019	89A	Teflon	—	1 9/64	5/16	.212	non-weatherproof
	31-205▲	89B	Teflon	sil. rubber	1 9/64	5/16	.224	improved
	31-302▲		Teflon	sil. rubber	1 13/64	5/16	.221	improved/captivated contact
	31-2205▲	89C	Teflon	sil. rubber	1 9/64	5/16	.224	improved
55B, 58C, 223	31-3314	89D						MIL-C-39012/17-0001
58, 141	31-327	M23329/3-08	Teflon	—	1 25/64	5/16	.206	MIL-Crimp ■
59, 62, 71, 140, 210	31-328	M23329/3-12	Teflon	—	1 25/64	5/16	.261	MIL-Crimp ■
	31-015	261	Rexolite	sil. rubber	1 1/8	5/16	.258	70 ohm
	31-022	261A	Rexolite	—	1 9/64	5/16	.258	non-weatherproof/70 ohm
	31-215▲	261B	Teflon	sil. rubber	1 9/64	5/16	.258	improved

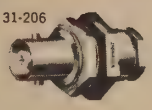
‡ See note on ASTROplate® Finish

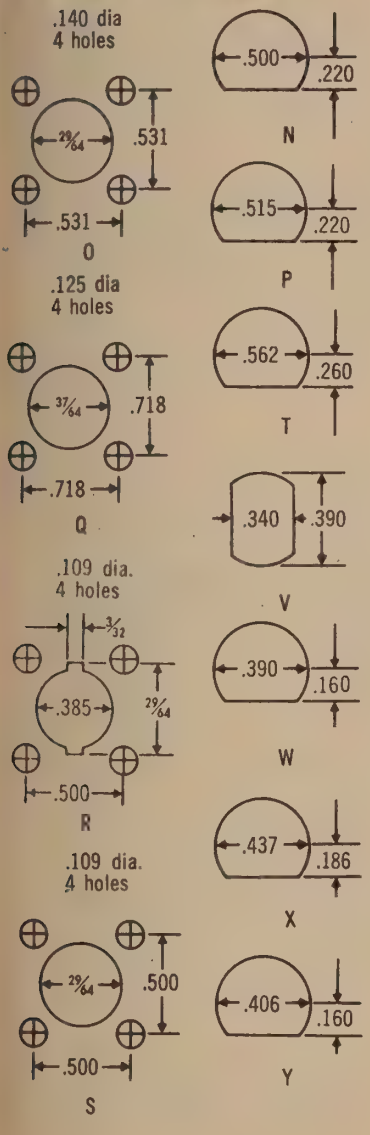
© United Technical Publications

BNC RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION


33275


31-206



BULKHEAD JACKS (rear mounting, except where noted)

RG/U Cable	Part No.	UG/U No.	Insulation	Clamp Gasket	Dimensions, Inches Length	O.D.	Cable Entry	Notes	Mounting Holes
55, 142, 223	31-4341	M23329/3-16	Teflon	—	1 3/8	11/16	.220	MIL-Crimp ■	N-hole
55, 58, 141, 142, 223	31-206▲	909	Teflon	sil. rubber	1 1/8	11/16	.212	improved	P-hole
	2475	—	Teflon	syn. rubber	1 1/16	5/8	.212	front mounting	T-hole
	2575	—	Teflon	syn. rubber	1 5/64	5/8	.212	—	T-hole
	31-2206▲	909A	Teflon	sil. rubber	1 5/64	11/16	.224	improved	P-hole
	31-3206▲	909B	Teflon	sil. rubber	1 5/64	3/4	.224	improved	P-hole
	17725	—	Teflon	sil. rubber	1 49/64	5/8	.219	improved/herm. sealed	P-hole
55B, 58C, 223	31-3347	909C						MIL-C-39012/19-0001	N-hole
58. 141	31-4342	M23329/3-15	Teflon	—	1 25/64	11/16	.206	MIL-Crimp ■	N-hole
59, 62, 71, 140, 210	31-4343	M23329/3-19	Teflon	—	1 25/64	11/16	.261	MIL-Crimp ■	N-hole
	31-207▲	910	Teflon	sil. rubber	1 1/8	11/16	.258	improved	P-hole
	31-2207▲	910A	Teflon	sil. rubber	1 5/64	11/16	.258	improved	P-hole
	31-3207▲	910B	Teflon	sil. rubber	1 5/64	11/16	.258	improved	P-hole
	2075	624	Rexolite	syn. rubber	1 1/16	5/8	.258	front mounting	T-hole
	2675	—	Rexolite	syn. rubber	1 5/64	5/8	.258	—	T-hole
71	31-4344	—	Teflon	—	1 25/64	11/16	.275	MIL-Crimp ■	N-hole
122	31-4346	M23329/3-20	Teflon	—	1 3/8	11/16	.175	MIL-Crimp ■	N-hole
122, 180, 195	31-345	M23329/3-21	Teflon	—	1 3/8	11/16	.175	MIL-Crimp ■	N-hole
	84725	—	Teflon	sil. rubber	1 5/64	11/16	.177	improved	N-hole
174, 179, 187, 188	31-245	—	Teflon	—	1 3/8	11/16	.115	MIL-Crimp ■	N-hole
	31-318	—	Teflon	—	1 3/8	11/16	.115	MIL-Crimp ■	N-hole
178, 196	86850	—	Teflon	sil. rubber	1 5/64	11/16	.098	improved	N-hole
	31-347	—	Teflon	—	1 3/8	11/16	.175	MIL-Crimp ■	N-hole

ANGLE BULKHEAD JACKS (rear mounted)

55, 58, 141, 142, 223	14325	—	—	syn. rubber	1 11/32	3/64	.212	—	P-hole
59, 62, 71, 140, 210	14225	—	—	sil. rubber	1 11/32	3/64	.258	—	P-hole

PANEL JACKS (#3-56 tapped flange holes & rear mounted, except where noted)

RG/U Cable	Part No.	UG/U No.	Insulation	Clamp Gasket	Dimensions, Inches Length	Flange (Sq.)	Cable Entry	Notes	Mounting Holes
8	6750	—	Teflon	syn. rubber	1 13/32	1	.438	.125 dia. flange holes	Q-hole
55, 58, 141, 142 223	31-001	291	Teflon	syn. rubber	1 1/8	11/16	.214	△	R-hole
	31-020	291A	Teflon	—	1 5/64	11/16	.214	non-weatherproof/△	R-hole
	31-201▲	291B	Teflon	sil. rubber	1 5/64	11/16	.214	improved	S-hole
	31-300▲	—	Teflon	sil. rubber	1 13/64	11/16	.221	improved/captivated contact	S-hole
	31-2201▲	291C	Teflon	sil. rubber	1 5/64	11/16	.221	improved	S-hole
	1300	90	Teflon	syn. rubber	1 5/64	3/4	.214	.136 dia. flange holes	O-hole
55B, 58C, 141A, 142B, 223	31-3333	291D						MIL-C-38012/18-0002	R-hole
59, 62, 71, 140,	31-011	262	Rexolite	sil. rubber	1 1/8	11/16	.259	△	R-hole
210	31-023	262A	Rexolite	—	1 5/64	11/16	.259	non-weatherproof/△	R-hole
	31-211▲	262B	Teflon	sil. rubber	1 5/64	11/16	.258	improved	S-hole
	31-303▲	—	Teflon	sil. rubber	1 13/64	11/16	.258	improved/captivated contact	S-hole
	31-2211▲	262C	Teflon	sil. rubber	1 5/64	11/16	.258	improved	S-hole
	71000	—	Teflon	syn. rubber	1 5/64	11/16	.259	male contact/polarized/△	R-hole
59B, 62A, 71B	31-3334	262D						MIL-C-39012/18-0001	R-hole
122	31-3335	1055						MIL-C-39012/18-0003	R-hole
122, 180, 195,	16475	—	Rexolite	syn. rubber	1 5/64	11/16	.177	△	R-hole
	86400	—	Teflon	sil. rubber	1 5/64	11/16	.160	improved	S-hole
174, 179, 187, 188	86425	—	Teflon	sil. rubber	1 5/64	11/16	.117	improved	S-hole

▲ To adapt connector for use with **RG-141/142-type** CUJAK cable, specify accessory adapter kit 31-885.
△ May be front or rear mounted using "S" mounting hole, "R" hole for rear mounting only.
‡ Non-tarnish Astroplate finish available. To order: add suffix 1050 to part number. Other numbers also available on special order from factory.
■ Gold plated captivated contact.
□ To ground cable shield, specify Amphenol Accessory Lug 31-759.

BULKHEAD RECEPTACLES (front mounted)

Part No.	UG/U No.	Insulation	Dimensions, Inches Length	O.D.	Max. Panel Thickness	Notes	Mounting Holes
5575‡	625	Rexolite	1 1/32	1/2	.155	□	X-hole
31-236‡	625B	Teflon	1 1/16	1/2	.125	improved/□	X-hole
31-3375	625C	—	—	—	—	MIL-C-39012/21-0001	X-hole
31-102‡	657	Rexolite	1 19/64	37/64	.200	pressurized/□	V-hole
31-239	657A	Teflon	1 19/64	37/64	.234	pressurized/□	V-hole
31-238	912	glass-Teflon	1 13/64	19/32	.250	improved/herm. sealed/lug term./□	Y-hole
31-2221‡	1094A	glass-Teflon	1 13/64	19/32	.250	improved/herm. sealed/lug term./□	W-hole
31-221‡	1094	Teflon	1 1/16	1/2	.104	improved/□	W-hole
31-4237	911A	Teflon	1 3/16	1/2	.155	impr./□rear mounted	W-hole
31-3376	1094B	—	—	—	—	MIL-C-39012/21-0002	W-hole
11300	—	Teflon	1 1/32	1/2	.155	□	X-hole
11325	—	Teflon	1 1/32	1/2	.155	male contact/polarized/□	X-hole
78725	—	glass-Teflon	1 7/64	19/32	.145	improved/herm. sealed/gold plt.cont.	Y-hole
86250	—	glass-Teflon	1 13/32	3/16	.148	herm. sealed/polarized/plug (male) receptacle/□	W-hole
87225	—	glass-Teflon	1 13/32	3/4	.323	herm. sealed/lug terminal/□	V-hole
31-016	254A	Rexolite	1 13/32	13/16	.152	pressurized/rear mounted	.516 dia.hole
31-4238	912A	glass-Teflon	1 13/64	11/16	.250	improved/lug term./herm. sealed	P-hole

ANGLE RECEPTACLES

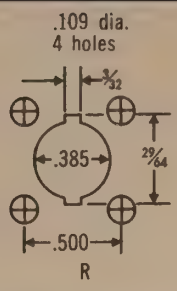
31-222	1098	Teflon	29/32	19/32	.168	improved/□	Y-hole
31-2222	1098A	Teflon	29/32	19/32	.313	improved/□	Y-hole
5075	—	Teflon	1 1/16	11/16	.150	#3-56 flange holes	S-hole
5675	535	Teflon	1 1/32	3/4	.150	.140 dia. flange holes	S-hole

© United Technical Publications

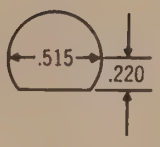
BNC RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

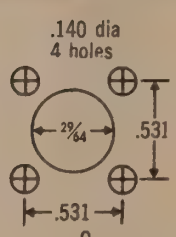

31-009



R



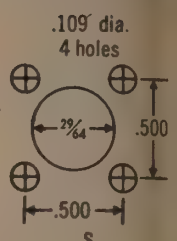
P



O



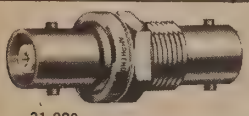
U



S

PANEL RECEPTACLES (#3-56 tapped flange holes, except as noted)

Part No.	UG/U No.	Insulation	Dimensions Inches Length	Flange (Sq.)	Notes	Mtg. Holes
31-003‡	290	Rexolite	1 1/32	11/16		R-hole
31-104	—	Polystyrene	1 3/32	3/4	.140 dia. flange holes	O-hole
31-105	—	Rexolite	1 1/32	11/16	.120 dia. flange holes	R-hole
31-203‡	290A	Teflon	1 1/16	11/16	improved	R-hole
31-3377	290B	—	—	—	MIL-C-38012/22-0001	R-hole
31-817	447	Rexolite	1 1/32	11/16	.109 dia. flange holes	R-hole
31-842	—	Teflon	1 1/32	11/16		O-hole
1100	928	Rexolite	2 7/32	3/4	spade term.	R-hole
2775	—	Teflon	1 1/16	11/16	turret terminal male recept./	O-hole
3150	—	Teflon	1 1/4	3/4	.136 dia flange holes turret term./	O-hole
4500	185	Rexolite	1 5/64	3/4	.136 dia flange holes	O-hole
13550	—	Teflon	1 5/64	3/4	turret term./ .136 dia flange holes	O-hole
14275	—	Rexolite	1 1/32	3/4	.136 dia. flange holes	O-hole
14375	—	Rexolite	1 1/32	11/16	.136 dia. flange holes	O-hole
18225	—	Teflon	2 5/32	11/16	printed circuit/ .092 dia. flange holes	U-hole


31-220


87175


31-759

STRAIGHT ADAPTERS

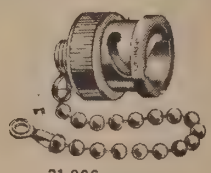
Part No.	UG/U No.	Insulation	Adapter Ends	Dimensions, In. Length	O.D.	Notes
31-218‡	491A	Teflon	plug-plug	1 1/4	5/16	improved
31-219‡	914	Teflon	jack-jack	1 3/32	7/16	improved
31-2218	491B	Teflon	plug-plug	1 1/4	5/16	improved/beryl outer cont.
8425	491	Teflon	plug-plug	1 1/4	5/16	—
21925	—	Teflon	plug-jack	1 17/32	5/16	—
75000	—	Teflon	jack-jack	1 3/32	7/16	—

ANGLE ADAPTERS

31-009‡	306	Teflon	jack-plug	1	5/16	—
31-209	306A	Teflon	jack-plug	1 1/16	5/16	improved/beryl outer cont.
31-2209	306B	Teflon	jack-plug	1 1/16	5/16	improved/beryl outer cont.

BULKHEAD & PANEL ADAPTERS

Part No.	UG/U No.	Insulation	Adapter Ends	Dimensions, Inches Length	O.D.	Max. Panel Thickness	Notes	Mtg. Hole
31-220‡	492A	glass-Teflon	jack-jack	1 13/32	11/16	.181	improved/herm. seal	P-hole
31-2220	492B	glass-Teflon	jack-jack	1 25/64	11/16	.163	improved/herm. seal/O ring	P-hole
31-3220	492D	glass-Teflon	jack-jack	1 17/32	11/16	.275	improved/herm. seal/O ring	P-hole
4525	—	Teflon	jack-jack	1 13/32	11/16	.170	—	P-hole
47000	414	Teflon	jack-jack	1 3/32	11/16	.250	panel mount	R-hole
47025	414A	Teflon	jack-jack	1 3/32	11/16	.260	improved/panel mt.	R-hole
75500	—	glass-Teflon	plug-plug	1 11/16	13/16	.185	hermetically sealed	S-hole


31-006


39575

MALE CAPS

Part No.	CW No.	Dimensions, Inches Length	O.D.	Chain Length	Notes
31-006	123	1 1/16	5/16	2 1/4	—
31-007	155	37/64	5/16	—	—
31-017	159	1 1/16	5/16	2 1/4	shorting male contact
31-026‡	123A	45/64	5/16	2 1/4	improved
31-027	155A	37/64	5/16	—	improved
900	—	2 3/32	5/16	3 1/2	—
5275	—	1 9/32	5/16	—	shorting male contact
87300	—	2 3/32	5/16	2 1/2	solder lug

TEE ADAPTERS

Part No.	UG/U No.	Insulation	Adapter Ends	Dimensions, Inches Length	O.D.	Notes
31-008‡	274	Rexolite	jack-plug-jack	1 3/32	5/16	—
31-208‡	274A	Teflon	jack-plug-jack	1 3/32	5/16	improved/beryl outer cont.
31-2208	274B	Teflon	jack-plug-jack	1 3/32	5/16	improved/beryl outer cont.
4725	—	Teflon	plug-plug-plug	1 13/16	5/16	—
17450	—	Rexolite	jack-jack-jack	1 3/32	11/16	panel mt. mounting hole R
21900	—	Teflon	plug-jack-jack	1 17/32	3/8	—
27750	—	Teflon	plug-jack-plug	1 13/16	7/16	—
33725	—	Teflon	cable-plug-cable	1 3/4	5/16	RG-58/U cable/syn rubber clamps

RESISTOR TERMINATED CAPS

Part No.	MX No.	Insulation	Dimensions, Inches Length	O.D.	Chain Length	Notes
4700 ☐	554 (100 OHM)	Rexolite	1 1/4	5/16	3 1/2	—
39575	554A	Teflon	1 1/4	5/16	3 1/2	100 ohm resistor
35650 ☐	—	Teflon	1 1/4	5/16	3 1/2	—
35725 ☐	—	Teflon	1 13/64	5/16	—	—
40750 ☐	—	Rexolite	1 3/64	5/16	—	—
46650	—	Teflon	1 1/2	5/16	—	51 or 75 ohm 1 watt resistor

☐ To order without resistor, add 1 to part number; to order with resistor, add resistor value to part number. ½ watt 5% resistor values (ohms) stocked: 47, 51, 68, 75, 82, 91, 100, 120, 130, 150, 180, 240, 270, 300, 470, 510, 560, 680, 750, 820, 1000, 1500, 3900, 4700, 10000, 100000, 150000.

FEMALE CAPS

31-210	282	1 1/16	1/2	3	improved
1550	—	5/8	7/16	—	shorting female contact
1750	—	25/32	5/16	—	—
2025	—	25/32	5/16	3 1/2	—
15300	—	25/32	5/16	—	shorting female contact

HOODS & ACCESSORIES

Part No.	MIL No.	Length Inches	Notes
HOODS			
10900	MX-195	7/8	RG-55, 58/U cable, square flange
10925	MX-367	7/8	RG-55, 62/U cable square flange
87175	MX-195A	13/16	RG-55, 58, 59, 62/U cables, plug-in
NUT STRAP			
1600	MT-412	3/4	4 holes with no. 4-40 NC-2B thds
SHIELD GROUNDING LUG			
31-759‡	—	29/32	used on front-mount receptacles

‡ ASTROplate® finish available, add -1050 to part number.

© United Technical Publications

TNC RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Threaded Coupling RF Connectors — TNC

TNC's were developed by Amphenol for aircraft, missile and other applications in which extreme vibration may be encountered. The TNC threaded coupling mechanism eliminates "rock" under vibration — a characteristic of bayonet coupled connectors such as BNC that introduces noise into the system and causes erratic performance. Other than coupling, TNC's are dimentionally and electrically similar to BNC, and have a constant impedance of 50 ohms.

Their rugged mechanical construction makes them an excellent choice for applications requiring a high degree of vibration.

ASTROplate® Finish Available

Amphenol's exclusive, non-tarnish finish is available from stock on most popular rf connectors. **(See part numbers marked with ‡; others available on special order.)** ASTROplate® is corrosion and abrasion resistant. Mates safely with silver; is equally solderable. **To order: add suffix 1050 to part number.**

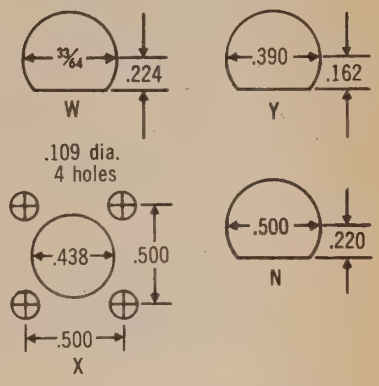
CHARACTERISTICS

MECHANICAL: Mating: 7/16-28 thread coupling.

ALL OTHERS: Similar to BNC

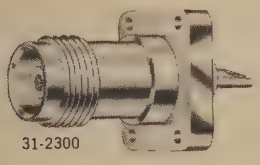
Notes: GC - Gold-plated Contact; PM - Polarized Male Contact; PF - Polarized Female Contact; BOC - Beryllium Outer Contact; SW - Holes for Safety Wiring; H - Hermetically Sealed; FM - Front Mounting; T - Teflon; GT - Glass Teflon; P - Plug; J - Jack.

MOUNTING HOLES

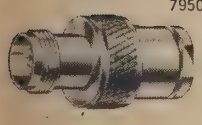




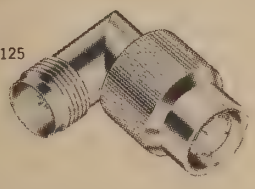
79525



31-2300



79500



79125

50 ohm impedance • male contacts • weatherproof

STRAIGHT PLUGS

For RG-/U Cable	No.*	Ins.	Notes	Lgth.
55, 58, 141, 142, 223	77175‡	T	BOC	1 1/8
	79050	T	PF, BOC	1 1/8
	79875	T		1 1/16
	76175	T	GC, SW, BOC	1 1/8
59, 62, 71, 140, 210	79475	T	PF, BOC	1 1/8
	79525	T		1 1/8
122, 180, 195	79725	T	BOC	1 1/8
180	78625	T		1
	79375	T	BOC	1 1/8
174, 179, 187, 188	73475	T		1 1/16

ANGLE PLUGS

55, 58, 141, 142, 223	79075	T	BOC	1 1/8
	79550	T	BOC	1 3/16
59, 62, 71, 140, 210	79400	T	BOC	1 3/32

*Add—1000 to part number to order connectors with safety wiring holes.

STRAIGHT JACKS

55, 58, 141, 142, 223	79600	T	GC	1 1/4
59, 62, 71, 140, 210	79450	T	PM	1 9/64
180, 195	7705C	T		1 9/64

BULKHEAD JACKS (mounting hole W)

55, 58, 141, 142, 223	79425	T	GC	1 9/64
59, 62, 71, 140, 210	77350	GT	H	1 27/32
180	77100	T		1 27/32

‡ See note on ASTROplate® Finish

50 ohm impedance • female contacts non-weatherproof

PANEL RECEPTACLES (mounting hole X)

No.	Ins.	Notes	Lgth.
31-2300‡	T	GC	1 1/16
78200	T	GC, PM	1 1/16
79650	T	GC	1 5/32
79750	GT	GC, H	3/4

BULKHEAD RECEPTACLES (mounting hole Y)

31-2301‡	T	GC, FM	1 1/16
77300	T	GC, *FM	27/32
79775	T	GC, FM	27/32
79800	GT	H, FM	1 1/16

*Gold Plated

50 ohm impedance • non-weatherproof

ANGLE ADAPTERS

No.	Ins.	Adapter Ends	Lgth.
79125	T	PJ	1 1/32

BULKHEAD ADAPTERS (Hermetically Sealed)

79100	GT	JJ (Mtg Hole W)	1 13/32

TEE ADAPTERS

79700	T	JPJ	1 3/32

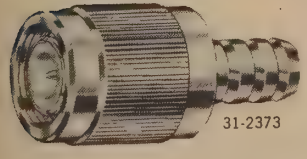
MALE CAPS — non-weatherproof

No.	Lgth.
78750	3/8

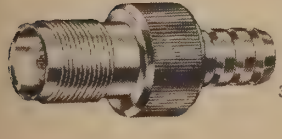
FEMALE CAPS

78400	37/64

MIL-Crimp TNC



31-2373



31-2375

STRAIGHT PLUGS

For RG-/U Cable	No.	MIL. No. M23329/	Ins.	Notes	Length
55, 142, 223	31-2373	4-02-04	T	GC	1 3/32
58, 141	31-2367	4-01-03	T	GC	1 3/32
59, 62, 140, 210	31-2368	4-05	T	GC	1 3/32
71	31-2369	—	T	GC	1 3/32
122	31-2371	—	T	GC	1 3/32
174, 188	31-2315	—	T	GC	1 3/32
179, 187	31-2242	—	T	GC	1 3/32
180, 195	31-2370	4-06	T	GC	1 3/32
Essex 21-597 or equiv.	31-2372	—	T	GC	1 3/32

STRAIGHT JACKS

55, 142, 223	31-2380	4-08	T	GC	1 3/8
58, 141	31-2374	4-07	T	GC	1 3/8
59, 62, 140, 210	31-2375	4-11	T	GC	1 3/8
71	31-2376	—	T	GC	1 3/8
122	31-2378	—	T	GC	1 3/8
179, 187	31-2244	—	T	GC	1 3/8
174, 188	31-2317	—	T	GC	1 3/8
180, 195	31-2377	4-12	T	GC	1 3/8
Essex 21-597 or equiv.	31-2379	—	T	GC	1 3/8

ANGLE PLUGS

For RG-/U Cable	No.	MIL. No. M23329/	Ins.	Notes	Length
55, 142, 223	31-2381	—	T	GC	1 3/16
58, 141	31-2382	—	T	GC	1 3/16
59, 62, 140, 210	31-2383	—	T	GC	1 3/16
71	31-2384	—	T	GC	1 3/16
122	31-2386	—	T	GC	1 3/16
179, 187	31-2243	—	T	GC	1 3/16
174, 188	31-2316	—	T	GC	1 3/16
180, 195	31-2385	—	T	GC	1 3/16
Essex 21-597 or equiv.	31-2387	—	T	GC	1 3/16

BULKHEAD JACKS (mounting hole N)

55, 142, 223	31-2388	4-14	T	GC	1 5/16
58, 141	31-2389	4-13	T	GC	1 5/16
59, 62, 140, 210	31-2390	4-17	T	GC	1 5/16
71	31-2391	—	T	GC	1 5/16
122	31-2393	—	T	GC	1 5/16
179, 187	31-2245	—	T	GC	1 5/16
174, 188	31-2318	—	T	GC	1 5/16
180, 195	31-2392	4-18	T	GC	1 5/16
Essex 21-597 or equiv.	31-2394	—	T	GC	1 5/16

© United Technical Publications

UHF RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series UHF

Series UHF are low-cost, general purpose connectors for use in a wide variety of lower frequency applications (up to 300 mc) where constant impedance is not necessarily required. Available in small and large body sizes, they have a peak voltage rating of 500 volts.

While most UHF connectors have conventional solder-type cable affixment, Quick-Crimp UHF feature Amphenol's patented hex crimp design which permits faster, easier and more reliable assembly.

The 83-850 and 83-851 plugs eliminate one or both of two common soldering operations in assembly. The 83-850 has completely solderless braid and contact assembly; the 83-851 has solderless braid assembly.

CHARACTERISTICS

ELECTRICAL: Impedance: non-constant. **Frequency range:** 0-300 MHz. **Voltage rating:** 500v. peak.

ENVIRONMENTAL: Thermal limits: Teflon: —67°F to 390°F; Rexolite and polystyrene: —67°F to 185°F; mica-filled Bakelite: —67°F to 300°F. **Non-weatherproof,** except as noted.

MECHANICAL: Mating: 5/8-24 thrd. coupling (small body), 1-20 thrd. coupling (large body). **Cable affixment:** braid solder, Quick Crimp or Solderless.

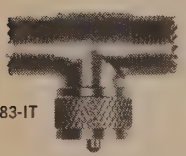
MATERIAL: Contacts: male: brass; female: beryllium copper. **Bodies:** die cast zinc or brass. **Plating:** .0002" silver min. **Insulators:** Teflon, Rexolite, polystyrene or mica-filled Bakelite.

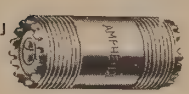
OTHER DATA: small and large body types do not intermate. UHF connectors ordered will be small size body unless large is specified.

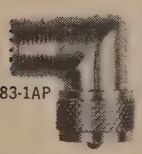
ASTROplate® Finish Available

Amphenol's exclusive, new non-tarnish finish is available from Distributor stock on all of our most popular rf connectors. **(See part numbers marked with ‡; other numbers are available on special order).** ASTROplate® is corrosion, heat and abrasion resistant. Mates with silver without danger of galvanic reaction; has equal solderability to silver's. **To order: add suffix 1050 to part numbers indicated below.**


83-ISP


83-IT


83-1J


83-1AP


83-1R


83-877


83-1AC


83-1BC


58000

non-constant impedance • male contacts
non-weatherproof
small body, except as noted

STRAIGHT PLUGS

For RG-/U Cable	MIL No.	No.	Ins.	Notes	Lgth.
8, 9, 11, 13, 63, 87, 149, 213, 214, 216, 225	PL-259	83-822 ‡	T		1 1/2
	PL-259	83-ISP ‡	FB		1 1/2
	PL-259A	83-756	T		1 3/16
	PL-259A	83-ISPN ‡	FB		1 3/16
	—	83-ISP-1002	FB		1 1/2
	—	83-851	FB	SBC	1 43/64
8, 11, 149, 213	—	83-87	B	QC	1 23/32
11, 149	—	83-850	FB	SC, SBC	1 43/64
17, 218	—	83-86	T		2 1/8
	—	10450	R		2 1/8
34	UG-358/U	83-21SP	FB	LB, W	1 13/16
55, 142, 223	—	83-90	B	QC	1 23/32
58, 141	UG-203/U	83-776	FB		1 3/16
	—	83-89	B	QC	1 23/32
59, 62, 71, 140, 210	UG-111/U	83-750 ‡	FB		1 11/16
	—	83-88	B	QC	1 23/32

small body

ANGLE PLUGS

For RG-/U Cable	MIL No.	No.	Ins.	Notes	Lgth.
8, 9,11 13, 63	—	83-67	T		1 3/8
87, 149, 213, 214, 216, 225	—	83-59	PST		1 3/8

non-constant impedance
female contact • non-weatherproof
small body, except as noted

PANEL RECEPTACLES

MIL No.	No.	Ins.	Notes	Lgth.
SO-239	83-1R ‡	FB		1 1/16
SO-239A	83-798 ‡	T		1 1/16
UG-357/U	83-21R	FB	LB	1 5/64
—	83-716	C	Pressurized	1 3/16
—	83-876	B	—	1 1/16
—	83-878 ‡	—	Single Hole	—

small body

BULKHEAD RECEPTACLES

UG-266/U	4575	R	Pressurized	1 13/32
—	83-875	R, T	FM	1 3/32
—	74525	GT	H, RM	1 13/32
—	83-875-1002	RT	FM	1 3/32

‡ ASTROplate® finish available, add -1050 to part number.

non-constant impedance • non-weatherproof
small body, except as noted
adapter ends are Jack-Jack

STRAIGHT ADAPTERS

UG-/U No.	No.	Ins.	Notes	Lgth.
224	29500	R		1 3/8
PL-258	83-1J ‡	PST		1 1/4
360	83-21J	PST	LB	1 1/8
363	83-1F ‡	PST		2
—	11850	T		1 1/8
—	13725	T		1 3/8
—	83-877 ‡	—	Plug/Plug	—

small body

ANGLE ADAPTERS

MIL No.	No.	Ins.	Adapter Ends	Lgth.
M-359A	83-58	PST	JP	1 27/32
UG-646/U	83-1AP ‡	PST	PJ	1 5/32

small body

TEE ADAPTERS

M-358	83-1T ‡	PST	JPJ	1 5/8

small body

REDUCING ADAPTERS

For RG-/U Cable	UG-/U No.	No.	Length
55, 58, 141, 142	175	83-185 ‡	1
59, 62, 71, 140, 210	176	83-168 ‡	1

non-weatherproof • small body

HOODS

For RG-/U Cable	MIL No.	No.	Lgth.
8, 9, 10, 11, 12, 63, 79, 87, 115, 149, 213, 215	MX-543	5475	1
	UG-106/U	83-1H ‡	3/4
	UG-372/U	83-1HP	7/8
58, 141	UG-177/U	83-765 ‡	3/4
55, 59, 140, 142, 223	MX-539	5375	1

weatherproof • small body

MALE CAPS

No.	Length
83-1AC ‡	15/32

FEMALE CAPS

83-1BC	11/16

non-weatherproof • male contact

BINDING POST

UG-/U No.	No.	Ins.	Length
332	58000	R	1 7/8

NOTES: B — Bakelite; C — Ceramic; FB — Filled Bakelite; FM — Front Mounted; G — Glass; H — Hermetic Sealed; J — Jack; LB — Large Body; P — Plug; PST —

© United Technical Publications

SERIES "C" RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series C

Constant 50-ohm impedance C series connectors are design-matched to 50-ohm cables. They may be used with 75-ohm cable, at lower frequencies (below 300 MHz) where the connector introduces no serious mismatch. Standard connectors have a peak voltage rating of 1500 volts and provide low SWR up to 10 GHz; 4000-volt units are also available with good performance up to 2 GHz. The improved cable clamp provides excellent cable grip and weatherproof seal with a minimum of cable indentation; it utilizes a "V" groove split silicone rubber gasket and peaked braid clam. Accessory Clamping Adapter Kits are available for metal jacketed cables (AK). For armored cables, see armor clamp (AC).

ASTROplate® finish available, add -1050 to part number.

CHARACTERISTICS

ELECTRICAL: Impedance: 50 ohm constant. **Frequency Range:** 0-10 GHz, 1,500 volt type; 0-2 GHx, 4,000 volt type. **Voltage Rating:** 1,500 volts peak—standard; 4,000 volts peak as noted. **Dielectric Withstanding Voltage:** 3,000 volts RMS, 1,500 volt type; 6,000 volts RMS, 4,000 volt type. **SWR:** 1.25.

ENVIRONMENTAL: Thermal Limits: —67° to 390°F (—55° to 199°C). **Weatherproof:** except as noted, all C Series connectors are Weatherproof. **Hermetic Seals:** pass helium leak test of 2x10-8 cc/sec. **Pressurized:** compression seal.

MECHANICAL: Mating: 2-stud bay net lock. **Cable Affixment:** Improved: screw-thread nut and braid clamp.

MATERIAL: Contacts: male: brass; female and outer: beryllium copper. **Other Metal Parts:** brass. **Plating:** .0002" silver min. **Insulators:** Teflon, glass-Teflon (herm. sealed). **Weatherproof Gaskets:** silicone rubber.

MILITARY SPECIFICATIONS: Meet applicable sections of MIL-C-3989.

50 ohm impedance • male contacts
weatherproof

STRAIGHT PLUGS

For RG-/U Cable	UG-/U No.	No.	Ins.	Notes	Lght.
5, 21, 143, 212, 222	626A	80025	T		1 3/64
8, 9, 87, 213, 214, 225	573A	82-530	T	AK	1 3/64
	573B	28650	T	AK	1 3/64
	628A	82-532	T	4000, AK	1 3/4
	—	79150	T	4000*	1 3/4
10, 12, 116, 215, 227	943A	82-538	T	AC, AK	2 1/8
14, 217	707A	82-533	T		1 5/16
17, 218	708A	80075	T		2 5/32
55, 58, 141, 142, 223	709A	82-534	T		1 3/8
59, 62, 71, 140, 210	—	81650	T	4000	1 5/16
	—	80375	T	4000	1 5/16
	627A	82-548	T		1 11/32
63, 114	—	80300	T		1 3/64
117, 118	711A	80200	T		2 5/32

* Polarized Female Contact

ANGLE PLUGS

8, 9, 87, 213, 214, 225	710A	82-531	T		1 3/8
55, 58, 141 142, 223	—	80775	T		1 5/16

female contacts • 50 ohm impedance
weatherproof

PANEL RECEPTACLES

UG-/U No.	No.	Ins.	Notes	Lgth.
568	82-504	T		1 3/32
—	82275	T		1 5/16

BULKHEAD RECEPTACLES (rear mtd.)

569	82-505	T		1 3/32
634	82-515	T	4000	1 5/16
705	82-511	GT	Hermetic	1 7/16
706	82125	T	Front Mt.	1 5/32

male contact • weatherproof

RESISTOR TERMINATED CAP

MX No.	No.	Notes	Length
—	83925	*	1 5/16

* Add resistor value (ohms) to part no. when ordering: 47, 51, 75, 82, 91, 100, 120, 130, 150, 180, 240, 270, 300, 470, 510, 560, 680, 750, 820, 1000, 1500, 3900, 4700, 10000, 150000.

MALE CAPS weatherproof

1142	82-512	—	51/64
—	83675	*	7/8

FEMALE CAPS

1143	82-513	—	27/32
—	83700	**	1 3/16

* Shorting Male Contact
** Shorting Female Contact

STRAIGHT JACKS

For RG-/U Cable	UG-/U No.	No.	Ins.	Notes	Lght.
8, 9, 87, 213, 214, 225	572	82-503	T		1 13/32
55, 58, 141, 142, 223	—	81575	T		1 1/4
59, 62, 71, 140, 210	—	81550	T		1 1/4

BULKHEAD JACKS (Rear Mtd.)

8, 9, 87, 213, 214, 225	570	82-502	T	AK	1 13/32
	570A	82-614	T		1 13/32
	632	82-521	T	4000, AK	1 11/16
10, 12, 116, 215, 227	937	82-522	T		2
55, 58, 141, 142	704	81175	T		1 1/4
	704A	74475	T	Ft. Mt.	1 1/4
	—	81425	GT	Herm.	1 3/8
	—	81400	T		1 1/4
59, 62, 71, 140, 210	—	81600	T	Ft. Mt., 4000	1 15/32

PANEL JACKS (rear mtd.)

8, 9, 87, 213, 214, 225	571	82-501	T	AK	1 13/32
10, 12, 116, 215, 227	938	82-523	T	AC, AK	2
	—	81275	T		2
55, 58, 141, 142	—	74675	T	Ft. Mt.	1 1/4
	—	81150	T		1 1/4
59, 62, 71, 140, 210	—	81100	T	Ft. Mt.	1 1/4

50 ohm impedance • weatherproof

STRAIGHT ADAPTERS

UG-/U No.	No.	Ins.	Adapter Ends	Notes	Lgth.
642A	83150	T	PP		1 29/64
643	82-514	T	JJ	Non-W	1 3/32

ANGLE ADAPTERS (Non-weatherproof)

567A	82-535	T	JP	Non-W	1 1/4

TEE ADAPTERS

566A	82-536	T	JPJ		1 33/64
—	83525	T	CJC	RG-13/U	2 3/4

BULKHEAD ADAPTERS (Hermetic Sealed)

701	83050	GT	JJ		1 5/16
—	82250	GT	JJ	4000	2 1/32

weatherproof • improved N type

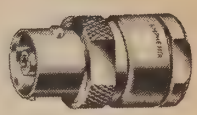
ARMOR CLAMPS

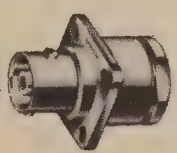
For RG-/U Cable	MX No.	No.	Length
10, 12, 79, 116, 215, 227	1286	82-517	1 1/8
18, 219	1441	92100	1 3/8
74, 224	1462	16850	1 3/16

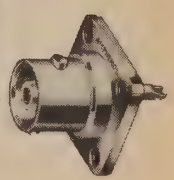
HOODS non-weatherproof

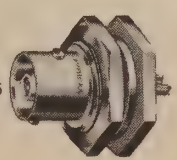
MX No.	No.	Notes	Length
—	82-510	—	3/4

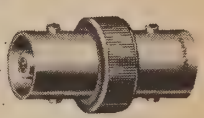

82-530

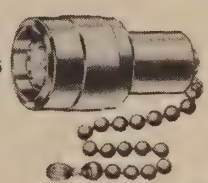

82-503


82-501

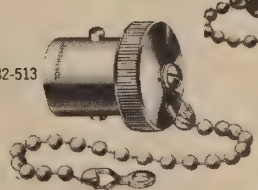

82-504


82-505


82-514


83925


82-512


82-513


82-510


82-517

Polystyrene; QC — Quick Crimp; R — Rexolite; RM — Rear Mounted; SBC — Solderless Braid Clamp; SC — Solderless Contact; T — Teflon; W — Weatherproof.

© United Technical Publications

TYPE "N" RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

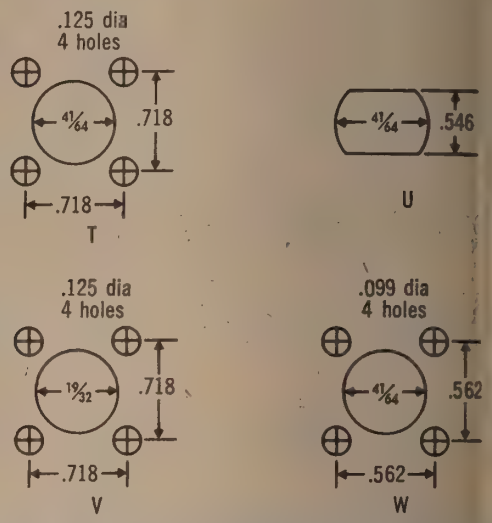
Series N

Medium-size, weatherproof, threaded coupling units that may be used in systems up to microwave. This series was the original microwave connector developed during World War II and SWR is consistently low across this broad frequency spectrum. Available in Regular, Improved and Improved/Captivated Contact constructions and have the MIL-Crimp/MIL-Clamp designs to MIL-C-39012. For further information, request Coaxial Connectors Catalog CC-7, or contact your distributor.

ASTROplate® Finish Available

Amphenol's exclusive, non-tarnish finish is available from stock on most popular rf connectors. **(See part numbers marked with ‡; others available on special order.)** ASTROplate® is corrosion and abrasion and heat resistant. Mates safely with silver; has equal solderability. **To order: add suffix 1050 to part number.**

MOUNTING HOLES



CHARACTERISTICS

ELECTRICAL: Impedance: as noted, 50 or 70 ohms. **Frequency Range:** 0-11 GHz. **Voltage Rating:** 1,500 volts peak. **Dielectric Withstanding Voltage:** 2,500 volts rms. **SWR:** MIL-Crimp/MIL-Clamp: 1-15 (solder) 1.35 per spec; others; 1.25. **Other:** contact resistance 1.0 mv, RF leakage —90db, insertion loss .15 db, insulation resistance 5,000 megohms.

ENVIRONMENTAL: Thermal Limits: Teflon: —67°F to 390°F (—55° to 199°C); Rexolite: —67°F to 185°F (—55° to 85°C). **Weatherproof:** all Series N with gaskets are weatherproof. **Hermetic Seals:** pass helium leak test of 2 x 10^{-8} cc/sec. **Pressurized:** compression seal. **Shock:** MIL-Std. 202 method 202. **Vibration:** MIL-Std. 202 method 204 (test cond. B). **Moisture Resistance:** MIL-Std. 202 method 106. **Corrosion:** MIL-Std. 202 method 101 (test cond. B). **Temperature:** MIL-Std. 202 method 102 (test cond. C). **Altitude:** MIL-Std. 202 method 105 (test cond. C).

MECHANICAL: Mating: 5/8-24 threaded coupling. **Cable Affixment (Braid or Jacket):** MIL-Crimp: hex crimp; all others: screw-thread nut and braid clamp. **Cable Affixment (Center Conductor):** MIL-Crimp/MIL-Clamp: 4 indent crimp, hex crimp or solder. All others: solder. **Captivated Contact:** all MIL-Crimp/MIL-Clamp; others, where specified. **Cable Retention:** MIL-Crimp/MIL-Clamp 90-120 lbs. (70 lb. per MIL-Spec). All others 30-70 lbs.

MATERIAL: Contacts: male: brass; female: MIL-Crimp/MIL-Clamp phosphor bronze; all others: beryllium copper; Outer: MIL-Crimp/MIL-Clamp. Improved phosphor bronze, all others: brass or phosphor bronze. **Other Metal Parts:** brass. **Plating:** center contacts, MIL-Crimp/MIL-Clamp: .0001" gold over .0001" copper, all other: .0002" silver. **Insulators:** Teflon (all MIL-Crimp/MIL-Clamp) Rexolite, glass-Teflon (herm. seal). **Weatherproof Gaskets:** silicone rubber (all MIL-Clamp) synthetic rubber. **Crimp Ferrule:** copper.

MILITARY SPECIFICATIONS: MIL-Crimp/MIL-Clamp: MIL-C-39012; **Standards:** MIL-C-71B.

MIL-Crimp N

weatherproof • captivated center contact
50 ohms impedance • male contacts


82-340

STRAIGHT PLUGS

For RG-/U Cable	Part No.	MIL. No. M39012/	UG-/U No.	Ins.	Lgth.
5, 21, 143, 212, 222	82-341	01-0006	1680	T	1 31/64
8, 213	82-340	01-0007	1681	T	1 31/64
9, 214	82-332	01-0008	1682	T	1 31/64
11, 149	82-342	01-0013	1695	T	1 31/64
55, 142, 223	82-5370	—	—	T	1 31/64
58, 141	82-5375	—	—	T	1 31/64
59, 62, 71, 140, 210	82-5380	—	—	T	—


82-349

ANGLE PLUGS

5, 21, 143, 212, 222	82-5350	—	—	T	1 9/16
8, 213	82-349	05-0002	1707	T	1 9/16
9, 214	82-336	05-0003	1708	T	1 9/16
11, 149	82-5351	—	—	T	1 9/16
55, 142, 223	82-5374	—	—	T	1 9/16
58, 141	82-5379	—	—	T	1 9/16


82-343

female contacts

STRAIGHT JACKS

5, 21, 143, 212, 222	82-338	02-0007	1687	T	1 9/16
8, 213	82-337	02-0008	1688	T	1 9/16
9, 214	82-333	02-0009	1689	T	1 9/16
11, 149	82-339	02-0014	1694	T	1 9/16
55, 142, 223	82-5371	—	—	T	1 9/16
58, 141	82-5376	—	—	T	1 9/16


82-337

PANEL JACKS (mounting hole T)

5, 21, 143, 212, 222	82-344	02-0015	1696	T	1 9/16
8, 213	82-343	02-0016	1697	T	1 9/16
9, 214	82-334	02-0017	1698	T	1 9/16
11, 149	82-5345	—	—	T	1 9/16
55, 142, 223	82-5372	—	—	T	1 9/16
58, 141	82-5377	—	—	T	1 9/16


82-346

BULKHEAD JACKS (mounting hole U)

5, 21, 143, 212, 222	82-347	03-0003	1699	T	1 27/32
8, 213	82-346	03-0004	1700	T	1 27/32
9, 214	82-335	03-0005	1701	T	1 27/32
11, 149	82-348	03-0010	1706	T	1 27/32
55, 142, 223	82-5373	—	—	T	1 27/32
58, 141	82-5378	—	—	T	1 27/32

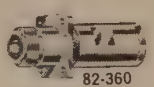
MIL-Clamp N

weatherproof • captivated center contact
50 ohm impedance • male contacts


82-357

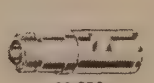
STRAIGHT PLUGS

For RG-/U Cable	Part No.	MIL. No. M39012/	UG-/U No.	Ins.	Lgth.
5, 21, 143, 212, 222	82-354	01-0001	18F	T	1 25/32
8, 9, 213, 214	82-352	01-0005	1185B	T	1 25/32
	82-352-1	01-0002	21H	T	1 25/32
11, 13, 149, 216	82-5355	—	—	T	1 25/32
55, 58, 141, 142, 223	82-5381	—	—	T	1 25/32
59, 62, 71, 140, 210	82-5386	—	—	T	1 25/32


82-360

ANGLE PLUGS

5, 21, 143, 212, 222	82-5361	—	—	T	1 1/2
8, 9, 213, 214	82-357	05-0001	594C	T	1 1/2
11, 13, 149, 216	82-5353	—	—	T	1 1/2
55, 58, 141, 142, 223	82-5385	—	—	T	1 1/2


82-356

female contacts

STRAIGHT JACKS

5, 21, 143, 212, 222	82-358	02-0001	20F	T	1 7/8
8, 9, 213, 214	82-356	02-0003	1186B	T	1 7/8
	82-356-1	02-0002	23G	T	1 7/8
11, 13, 149, 216	82-5359	—	—	T	1 7/8
55, 58, 141, 142, 223	82-5382	—	—	T	1 7/8


32-364

PANEL JACKS (mounting hole T)

5, 21, 143, 212, 222	82-362	02-0004	19F	T	1 17/32
8, 9, 213, 214	82-360	02-0006	1187B	T	1 17/32
	82-360-1	02-0005	22G	T	1 17/32
11, 13, 149, 216	82-5363	—	—	T	1 17/32
55, 58, 141, 142, 223	82-5383	—	—	T	1 17/32

BULKHEAD JACKS (mounting hole U)

5, 21, 143, 212, 222	82-366	03-0001	159D	T	1 51/64
8, 9, 213, 214	82-364	03-0002	160E	T	1 51/64
11, 13, 149, 216	82-5365	—	—	T	1 51/64
55, 58, 141, 142, 223	82-5384	—	—	T	1 51/64

NOTES: AC — Armored Clamp; AK — Adapter Kit; CC — Captivated Contact; FM — Front Mounted; I — Improved Construction; SW — Safety Wire Holes; H — Hermetic

SERIES N CONTINUED

© United Technical Publications

TYPE "N" RF COAXIAL CONNECTORS

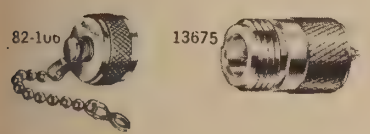
AMPHENOL
THE BUNKER-RAMO CORPORATION

Standard Type N



82-97 82-66

2-86



82-1uo 13675



male contacts • weatherproof

STRAIGHT PLUGS

For RG-/U Cable	UG-/U No.	Part No.	Imp. Ohms.	Ins.	Notes	Lgth.
5, 21, 143 212, 222	18	3400	50	R	Non-W	2
	18B	82-86	50	T		1 7/8
	18C	82-203	50	T	I	1 1/2
	18D	82-3203	50	T	I, SW	1 1/2
6	91A	7200	70	T		1 3/4
8, 9, 213, 214	21	3900	50	R		2
8, 9, 87, 213, 214, 225	21B	82-61‡	50	T	AK	1 7/8
	21C	82-96	50	T	AK	1 7/8
	21D	82-202‡	50	T	I, SW, AK	1 1/2
	21E	82-3202	50	T	I, SW, AK	1 1/2
	1185	82-312	50	T	I, CC, AK	1 1/2
	1185A	82-3312	50	T	I, CC, AK	1 1/2
10, 12, 116, 215, 227	941A	82-204	50	T	I, AC, AK	2 1/8
	941B	82-3204	50	T	I, AC, AK	2 1/8
11, 13. 149, 216	94A	82-84	70	T	AK	1 7/8
	—	91150	75	T	I	1 1/2
14, 217	204A	82-105	50	R		2
	204C	82-214	50	T	I	1 31/32
17, 218	167A	82-104	50	T		2 3/8
	167D	82-215	50	T	I, SW	2 1/8
	167F	82-3215	50	T	I, SW	2 1/8
18, 219	982	92125	50	T	I	3
55, 58, 141, 142	188	23250	50	R	Non-W	1 3/4
	536	34000‡	50	R		2 1/8
	536B	24025‡	50	T	I	1 3/8
35	—	82-113	70	T		2 3/8
59, 62, 71, 140, 210	603	34500	50	R		1 25/32
	603A	34525	50	T	I	1 7/8
	—	34750	70	T	I	1 5/8
	—	91300	70	T	I	1 3/8
63, 114	1003	12400	50	T		1 3/4

ANGLE PLUGS

5, 21, 143, 212, 222	—	15950	50	T	I	1 3/8
8, 9, 87, 213, 214, 225	594A	15425	50	T		1 1/16
	—	82-326	50	T	I, CC	1 11/64
	—	82-835	50	T		1 1/16
	—	6875	50	T		1 5/8
	—	15975	50	T	I	1 3/32
11, 13, 149, 216	—	17025	70	T		1 5/8

ANGLE PLUGS CONTINUED

For RG-/U Cable	UG-/U No.	Part No.	Imp. Ohms.	Ins.	Notes	Lgth.
55, 58, 141, 142	—	18750	50	T		1 5/8
59, 62, 71, 140, 210	—	19250	50	T		1 5/8

female contacts • weatherproof

STRAIGHT JACKS

5, 21, 143, 212, 222	20	42000	50	R		2
	20B	82-88	50	T		1 5/16
	20C	82-210	50	T	I	1 1/16 -
	20D	82-3210	50	T	I	1 1/16
6	92A	7700	70	T		1 7/8
	—	91225	75	T	I	1 1/16
8, 9, 213, 214	23	48000	50	R	Non-W	2
8, 9, 87, 213, 214, 225	23A	7600	50	R		1 7/8
	23B	82-63	50	T		1 13/16
	23C	82-94	50	T	I	1 13/16
	23D	82-209	50	T	I	1 1/16
	23E	82-3209	50	T	I	1 1/16
	1186	82-313	50	T	I, CC	1 1/16
10, 12, 116, 215, 227	940A	82-212	50	T	I, AC	2 1/4
	940B	82-3212	50	T	I, AC	2 1/4
11, 13, 149, 216	95A	82-89	70	T		1 5/16
17	—	14850	50	T		2 3/16
55, 58, 141 142	—	35000	50	R		1 13/16
	—	35025	50	T	I	1 1/2
59, 62, 71, 140, 210	602	36500	50	R		1 5/8

PANEL JACKS (mounting hole T)

5, 21, 143, 212, 222	19	3500	50	R		2
	19B	82-87	50	T		1 13/16
	19C	82-207	50	T		1 3/16
	19D	82-3207	50	T	I	1 1/16
6	93A	7800	70	T		1 7/8
8, 9, 87, 213, 214, 225	22B	82-62	50	T		1 13/16
	22C	82-95	50	T		1 13/16
	22D	82-208	50	T		1 3/16
	22E		50	T	I	1 1/16
	1187	82-314	50	T	I, CC	1 1/16
10, 12, 116, 215, 227	935A	82-211	50	T	I	2 1/4
	935B	82-3211	50	T	I	2 1/4
11, 13, 149, 216	96A	82-90	70	T		1 13/16
55, 58, 141, 142	1052	36000	50	R		1 13/16
55, 58, 141, 142, 223	1095A	36250	50	T	I	1 1/2
59, 62, 71, 140, 210	593	35500	50	R		1 13/16
	—	35550	70	T		1 13/16
	—	91250	70	T	I	1 1/2

BULKHEAD JACKS (mounting hole U)

5, 21, 143, 212, 222	159B	15550	50	T	I	1 3/4
8, 9, 87, 213, 214, 225	160A	82-67	50	T		1 13/16
	160B	82-93	50	T		1 13/16
	160D	91025	50	T	I	1 3/4
8, 9, 213, 214	—	23025	50	gT	H	2 5/32
55, 58, 141, 142	556	35250	50	T		1 13/16
55, 58, 141, 142, 223	556B	35275	50	T	I	1 49/64
59, 62, 71, 140, 210	—	18250	50	R		1 27/32

male • male contact • weatherproof

PANEL RECEPTACLES (mounting hole V)

UG-/U No.	Part No.	Imp. Ohms	Ins.	Notes	Lgth.
—	49000	50	R	FM	1 3/32

PANEL RECEPTACLES (mounting hole T)

female • female contacts • weatherproof

UG-/U No.	Part No.	Imp. Ohms	Ins.	Notes	Lgth.
58	82-24‡	50	T		1 7/64
58A	82-97‡	50	T		1 7/64
58B	82-368	50	T	M39012/ 04-0002	1 7/64
231	2750	50	R	RG-58/U	1 3/4
—	82-112	70	T		1 7/64
—	9575	50	T	(Mtg Hole W)	1 7/64

BULKHEAD RECEPTACLES (mtg hole U)

680	82-811	50	GT	H, FM	1 37/64
680B	82-369	50	G	M39012/ 04-0001	1 37/64
—	13275	50	gT	H, FM	1 3/8
—	31150	50	T	W, FM	1 15/32
—	19550	50	GT	H, FM	1 1/16

ANGLE RECEPTACLES (mounting hole V)

997A	8975	50	T		1 7/16
—	23775	50	T		1 7/16

weatherproof

STRAIGHT ADAPTERS

UG-/U No.	Part No.	Imp. Ohms.	Ins.	Notes	Adapter Ends	Lgth.
29	15000	50	R		JJ	1 3/4
29A	82-65	50	T		JJ	1 3/4
29B	82-101	50	T		JJ	1 3/4
57A	45250	50	T		PP	1 15/32
57B	82-100‡	50	T		PP	1 15/32
—	17075	70	T		PP	1 15/32
—	21650	70	T		JJ	1 3/4

ANGLE ADAPTERS

27A	82-64	50	T		JP	1 7/16
27B	82-98	50	T		JP	1 13/32
27C	82-213	50	T		JP	1 5/16

BULKHEAD ADAPTERS (mounting hole U)

30	82-66	50	R	P	JJ	1 5/8
30C	82-201	50	G	H	JJ	1 3/4
30D	91100	50	G	H	JJ	1 17/32
—	82-849	50	T	P	JJ	1 5/8
—	90950	50	G	H	JJ	1 15/16

EXCEPTION: 82-201 mounts in .630 dia. hole.

TEE ADAPTERS

28A	82-99	50	T		JJJ	1 3/4
107	4800	50	R		JPJ	3
107A	82-36	50	T		JPJ	2
107B	82-102	50	T		JPJ	1 3/4
—	4850	50	R		PPP	3 1/32

CROSS ADAPTERS

—	17125	50	T		JJJJ	2 1/4

weatherproof

MALE CAPS

MX No.	Part No.	Notes	Length
913	82-106‡		5/16
—	9225		7/16
—	13700	SMC	27/32
—	18575		5/16

FEMALE CAPS

—	6950		3 1/32
—	13675	SFC	1

non-weatherproof

ARMOR CLAMPS

For RG-/U Cable	MX No.	Part No.	Notes	Lgth.
10, 12, 79, 116, 215, 227	564	82-48	N or HN	7/8
	564A	82-109	N or HN	1 1/16
	1286	82-517	I	1 1/8
18, 219	1441	92100	I	1 3/8
74, 224	1462	16850	I, W	1 3/16

‡ See note on ASTROplate® Finish

Sealed; P — Pressurized; SMC — Shorting Male Contact; SFC — Shorting Female Contact.

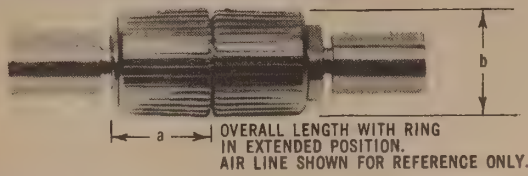
© United Technical Publications

PRECISION RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series 131 Precision 7mm Connectors TWO DISTINCTLY DIFFERENT LINES

— APC-7 with sexless coupling

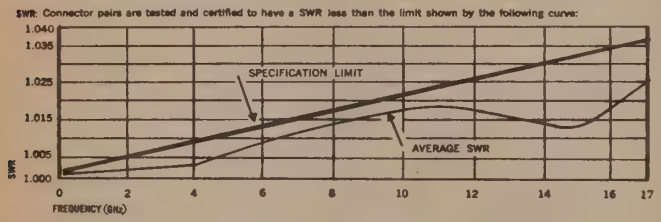


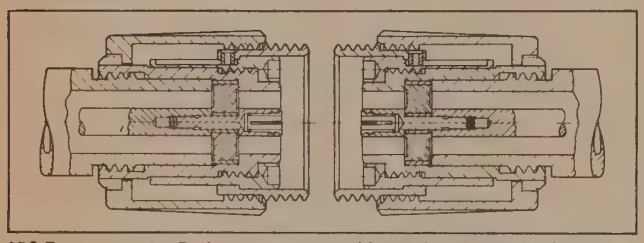
APC-7. Precision 50-ohm connector for use with 7mm (inner diameter of outer conductor) rigid air line and semi-rigid (ALJAK) coaxial cable.

Sexless coupling permits interconnection of any two APC-7's. Identical plane of electrical and mechanical contact permits accurate determination of the electrical length of a mated pair or of an air line assembly with a connector at each end. All components held captive.

Connectors packaged in pairs in protective wooden box; assembly instructions and certified SWR test report included with each pair.

Specially designed for microwave and precision test equipment — Component manufacturers now using APC-7 fittings include: Alford, Alfred, EG&G, Hewlett-Packard, Maury Microwave, Microlab/FXR, Narda, PRD, Rantec, and Weinschel Engineering.





APC-7 components. Both connectors are identical and completely sexless.

CHARACTERISTICS (TYPICAL)

ELECTRICAL (for mated pair): **Impedance:** 50 ohm ±0.1 ohms. **Frequency Range:** 0-18 GHz. **SWR:** 1.039 max. to 18 GHz. **Insertion loss (in db):** $< 7 \times 10^{-3} \sqrt{\text{Freq. GHz}}$ (example: 0.028 db at 16.0 GHz). **RF Leakage:** < signal inside coaxial line by ratio > 120 db▲. **Electrical length:** 0.723 ±0.001 inches (1.836 ±.00254 cm). **Contact Resistance:** inner: < 1.0 milliohm, outer: < 0.1 milliohm.

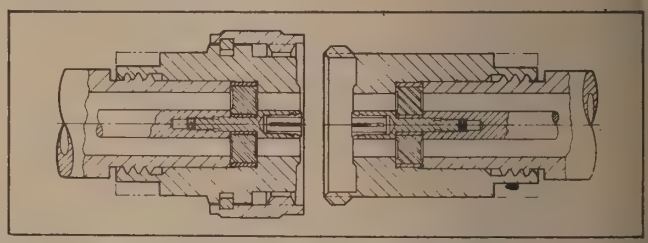
▲ RF leakage: Until satisfactory test methods are developed, the maximum frequency of measurement is limited to 6.0 GHz.

ENVIRONMENTAL: **Thermal Limits:** storage: −67° to 158°F (−55° to 70°C) operating: 55° to 91°F (13° to 33°C). **Humidity:** 20 to 80% RH. **Pressure:** 590 to 780 mm Hg. MECHANICAL: **Mating:** sexless, coplanar by means of threaded ring housed within coupling nut. **Life:** > 5000 connect/disconnect operations. MATERIAL: **Coupling Mechanism:** stainless steel. **Body:** gold plated beryllium copper. **Center Contact:** gold plated beryllium copper. **Bead Assembly:** Rexolite insulation.

For use with	APC-7 Maximum SWR for a mated pair	APC-7 (13/16" max. dia.) (b) Part No.	Lgth. (in.) (a)
7mm Air Line	1.039 to 18 GHz	131-1050	5/64
131-182 (.325 dia. semi-rigid Aljak)	1.10 to 12.4 GHz	131-1019	1 53/64
.250 dia. Cujak cable	1.10 to 12.4 GHz 1.13 to 18 GHz	131-10020	1 1/64
RG-214/U	1.15 to 12.4 GHz Crimp	131-1031	2 2/32
	1.15 to 12.4 GHz Clamp	131-1032	2 13/32

TOOL KIT 131-2025

For disassembly; assembly to air line. Contains collet extractor, spanner wrench, torque wrench & line wrench.



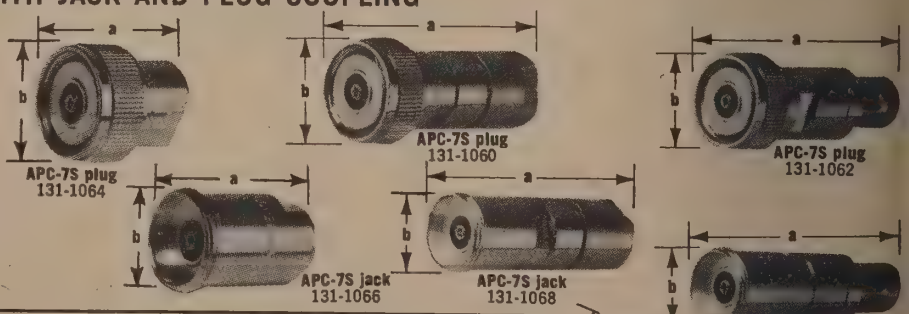
APC-7S components. Center contact, sexless; female threads on Jack; male coupling ring on Plug.

— APC-7S Economy Family WITH JACK AND PLUG COUPLING

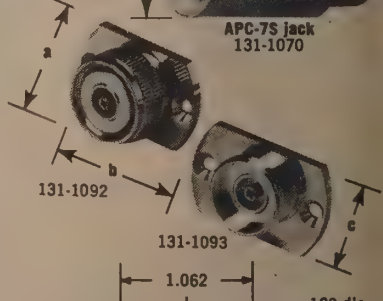
APC-7S, the newest addition to Amphenol's expanding precision connector family was created to meet the need for an economical but equally reliable precision connector. Except for the coupling mechanism all other characteristics are identical to APC-7. Performance is equal, yet APC-7S costs almost two-thirds less than the original precision 7mm connector.

CHARACTERISTICS (Same as APC-7) except:)

MECHANICAL: Mating: 7/16-24 threaded coupling. APC-7S plus and jacks also mate with APC-7 connectors. **MATERIAL:** Same as APC-7 except: Coupling nut: nickel plated brass.



For use with	APC-7S Maximum SWR for a mated pair	Plugs (13/16" max. dia.) (b) Part No.	Plugs Lgth. (in.) (a)	Jacks (13/16" max. dia.) (b) Part No.	Jacks Lgth. (in.) (a)
7mm Air Line	1.039 to 18 GHz	131-1064	7/16	131-1066	7/16
131-182 (.325 dia. semi-rigid Aljak)	1.10 to 12.4 GHz	131-1060	1 51/64	131-1062	1 29/64
.250 dia. Cujak cable	1.10 to 12.4 GHz 1.13 to 18 GHz	131-10024	1 13/16	131-10025	2 1/32
RG-214/U	1.150 to 12.4 GHz Crimp	131-1068	2 7/64	131-1070	2 7/32
	1.150 to 12.4 GHz Clamp	131-1072	2 13/32	131-1073	2 11/64



PANEL RECEPTACLES

Configuration	Maximum SWR for a mated pair	Part No.	Dimensions a	b	c
Plug	1.039 to 18 GHz	131-1092	7/16	1 3/16	7/16
Jack	1.039 to 18 GHz	131-1093	5/16	1 3/16	7/16

© United Technical Publications

PRECISION N AND SMA RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series 131 Precision N Connectors — APC-N

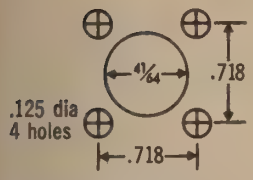


131-10005

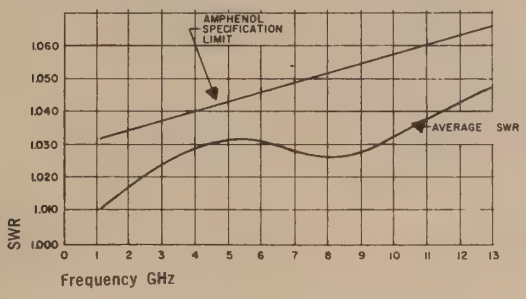

131-10006


131-10003


131-10004



APC-N, 50-ohm connectors. Use interchangeably with APC-7; mate with all other type N's. Their excellent electrical performance will make them an "industry standard" for future equipment. SWR for mated pairs: only 1.06 through 12 GHz; 1.08 through 18 GHz.



CHARACTERISTICS (TYPICAL)

ELECTRICAL (for mated pair APC-N connectors). **Impedance:** 50 ohm ±0.2 ohms. **Frequency Range:** 0-18 GHz. **SWR:** 1.08 max. to 18 GHz. **Insertion Loss (in db):** $< 3 \times 10^{-2} \sqrt{\text{Freq. GHz}}$. **RF Leakage:** < signal inside coaxial line by ratio > 90 db▲. **Contact Resistance:** inner: < 1.0 milliohm; outer: < 1.1 milliohm.

▲**RF Leakage:** Until satisfactory test methods are developed, the maximum frequency of measurement is limited to 6.0 GHz.

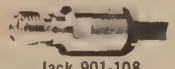
ENVIRONMENTAL: **Thermal Limits:** storage: −67 - 158°F (−55 - 70°C); operating: 55 - 91°F (13 - 33°C). **Humidity:** 20 to 80% RH. **Pressure:** 590 to 780 mm Hg.

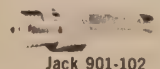
MECHANICAL: **Mating:** 5/8-24 threaded coupling. Mating dimensions are MIL-C-39012 Class II nominal with tighter tolerances. The APC-N mates with all existing Type N connectors including MIL-C-71.

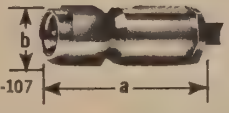
MATERIAL: **Body and Coupling Nut:** stainless steel. **Center Contacts:** gold plated beryllium copper. **Bead Assembly:** Rexolite insulation.

	APC-N						
		Plugs (13/16" max. dia.) (b)		Jacks (5/8" max. dia.) (b)		Panel Jacks (1" sq. fl.)	
For use with	Maximum SWR for a mated pair	Part No.	Lgth. (in.) (a)	Part No.	Lgth. (in.) (a)	Part No.	Lgth. (in.) (a)
7mm Air Line	1.08 to 18 GHz	131-10003	1 1/64	131-10004	1 1/32	—	—
131-182 (.325 dia. semi-rigid Aljak	1.125 to 12.4 GHz	131-10005	2 5/32	131-10006	2 3/16	131-10013	2 1/8
.250 dia. Cujak cable	1.125 to 12.4 GHz 1.19 to 18 GHz	131-10021	2 3/8	131-10022	2 7/32	131-10023	2 7/32
RG-214/U	Crimp 1.175 to 12.4 GHz Clamp	131-10009 131-10011	2 23/64 2 23/64	131-10010 131-10012	2 7/8 2 7/8	131-10014 131-10015	2 7/8 2 7/8

Semi-Precision 3mm High-Frequency Connectors — SMA


Jack 901-108


Jack 901-102



Plug 901-107


Plug 901-101

SMA's offer excellent mechanical and electrical performance from DC to 18 GHz — even after 100 mating cycles. "Thin wall" beryllium copper bodies (yield strength 3 times stainless steel) have an interface mating cross-section of 0.00452". Coupling nut torque can be twice that of other SMA designs.

SMA assembly is easier, most require only a simple, low-cost tool kit; "crimp" style uses standard BNC/TNC Crimper #227-350.

CHARACTERISTICS

ELECTRICAL: **Impedance:** 50 ohm. **Frequency:** .141" & .085" O.D. Copper jacket semi-rigid cable: 0-18 GHz. Flexible cables: 0-12.4 GHz. **Voltage Rating:** RG-55, 58, 141, 142, 223, 303: 500 V RMS max. @ sea level. RG-122, 174, 188, 316: 375 V RMS max. @ sea level. **Dielectric Withstanding Voltage:** RG-55 group: 1000 V RMS max @ seal level. RG-122 group: 750 V RMS max. @ sea level. **SWR:** .141" O.D. Copper jacket cable: 1.05 +.005 f (GHz) RG-55 group: 1.15 +.01 f (GHz). RG-122 group: 1.15 +.02 f (GHz). **Contact Resistance:** Center: 2.0 milliohms — Body: 2.0 milliohms. Braid to body: 0.5 milliohms. **Insulation Resistance:** 5000 megohms. **R. F. Leakage:** 60 dB minimum.

ENVIRONMENTAL: **Thermal Limits:** −67° to 390°F (−55° to 199°C). **Weatherproof:** Clamp type: with clamp gaskets. Crimp type: with heat shrink tubing. Solder type: with gaskets. **Hermetic Seals:** Pass Helium leak test of 10^{-5} cc/sec. **Shock:** MIL-STD-202 method 202; acceleration: 50 G at 7 millisecs. **Vibration:** MIL-STD-202 method 204 (test cond. D). **Moisture Resistance:** MIL-STD-202 method 106 (high humidity measurements do not apply). **Corrosion:** MIL-STD-202 method 101 (test cond. B); 5% salt solution. **Temperature Cycling:** MIL-STD-202 method 102 (test cond. C). **Altitude:** MIL-STD-202 method 105 (test cond. C); no corona at 70,000 ft. RG-55 group: 250 V RMS — RG-122 group: 190 V RMS.

MECHANICAL: **Mating:** 1/4-36 threaded coupling. **Mating Torque:** Recommended: 7-10 inch-pounds. Non-destructive: 25-inch-pounds max. **Cable affixment to braid or jacket:** Clamp type: field serviceable with screw thread nut and braid clamp— Crimp type: hex braid crimp. Solder type: screw thread solder nut. **Cable affixment to center conductor:** All types: solder only. **Captivated contact:** Crimp type and clamp type for flexible cable. **Cable Retention:** Clamp type for RG-58, 141 = 40 lbs. min for RG-55, 142, 223 = 60 lbs. min. for .141 copper jacket cable = 60 lbs. min. — Crimp type for RG-58, 141, 303 = 60 lbs. min. for RG-55, 142, 223 = 80 lbs. min. **Cable Assembly:** Instructions are packaged with each connector shipped.

MATERIAL: **Contacts, bodies, coupling nuts:** Beryllium copper per QQ-C-530, heat treated per MIL-H-7199. **Other metal parts:** Half hard brass. **Plating:** Center Contacts, .C001 gold per MIL-G-45204 Type II, Class 2 — Other metal parts gold plated and meet corrosion requirements of MIL-C-39012. **Insulators:** TFE Fluorocarbon per MIL-P-19468. **Weatherproof Gaskets:** Silicone rubber. **Lockwashers:** Phosphor bronze, internal tooth supplied with all bulkhead mounted connectors. **Crimp Ferrules:** Copper.

MILITARY SPECIFICATIONS: Proposed MIL-C-39012 SMA specification sheets.

Config.	Cable Affixment	Description	Dimensions, in a	Dimensions, in b	Wt. ozs.	Part No.
.141 dia. Semi-Rigid Cujak Cable						
Plug	Solder	Less contact & insulator	1/2	5/16 hex	.09	901-113■
Plug	Solder	With contact & insulator	49/64	5/16 hex	.13	901-105■
Plug	Clamp	Less contact & insulator	31/32	11/32 dia.	.26	901-111
Plug	Clamp	With contact & insulator	31/32	11/32 dia.	.27	901-107■
Jack	Solder	With contact & insulator	41/64	1/4 hex	.09	901-106■
Jack	Clamp	With contact & insulator	59/64	11/32 dia.	.23	901-108■
RG-55, 58, 141, 142, 223 / U Cable (Clamp Type)						
Plug	Clamp	Straight	31/32	11/32 dia.	.22	901-103
Jack	Clamp	Straight	13/16	11/32 dia.	.18	901-104
Jack	Clamp	Panel mounted	13/16	1/2 sq.	.21	901-121■
Jack	Clamp	Bulkhead mounted, rear	13/16	7/16 dia.	.22	901-122■
RG-55, 142, 223 / U Cable (Crimp Type)						
Plug	Crimp	Straight	1 1/32	5/16 hex	.15	901-101■
Jack	Crimp	Straight	1	1/4 hex	.11	901-102■
RG-58, 141, 303 / U Cable (Crimp Type)						
Plug	Crimp	Straight	1 1/32	5/16 hex	.15	901-109
Jack	Crimp	Straight	1	1/4 hex	.11	901-110

Description	Dimensions, in a	Dimensions, in b	Wt. ozs.	Part No.	Max. SWR
Receptacles					
Panel mounted	5/16	1/2 sq.	.10	901-112■	—
Bulkhead mounted, rear	21/32	7/16 dia.	.11	901-116■	—
Bulkhead mounted, front	11/16	7/16 dia.	.15	901-117■	—
Adapters within series					
Straight, plug-plug	57/64	5/16 hex	.19	901-118	1.15+ .01f (GHz)
Straight, jack-jack	19/32	1/4 dia.	.07	901-119	1.15+ .01f (GHz)
Bulkhead, jack-jack	13/16	3/8 dia.	.13	901-120■	1.15+ .01f (GHz)
Adapters between series					
APC-N plug to SMA plug	1 3/4	13/16	1.53	131-1075	1.09 @ 4 GHz
APC-N plug to SMA jack	1 5/8	13/16	1.53	131-1075	1.09 @ 9 GHz
APC-N jack to SMA plug	1 23/64	5/8	1.41	131-1076	1.10 @ 12 GHz
APC-N jack to SMA jack	1 19/32	5/8	1.30	131-1077	1.14 @ 18 GHz
APC-7 to SMA jack	1 11/32	13/16	1.32	131-1028■	1.07 @ 12.4 GHz
ACP-7 to SMA plug	1 3/8	13/16	1.38	131-1038■	1.10 @ 18 GHz

Tool kit & cable assemblies

TOOL KIT P/N 901-2500. Contains recommended jacket and dielectric trim tools for precise cable preparation required to obtain the electrical performance specified.

CABLE ASSEMBLIES. Custom semi-precision cable assemblies are available with .141" and .085" dia. semi-rigid Cujak cable fitted with SMA connectors. Contact factory with your specifications.

© United Technical Publications

RF COAXIAL BETWEEN SERIES ADAPTERS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Adapters Between Series

Amphenol series-to-series adapters are of non-constant impedance, but designed so that inherent electrical discontinuities are minimal. They are built to the same precision tolerances as the rest of our coaxial line. For typical characteristics, see pages describing the connector series.

CHARACTERISTICS

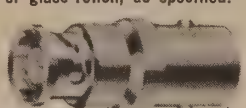
ELECTRICAL: Impedance: non-constant. **Frequency:** per cable used. **Voltage:** per cable used.

ENVIRONMENTAL: Thermal Limits: Teflon: −67°F to 390°F; Rexolite: −67°F to 185°F; Kel-F: −67° to 390°F; mica-filled; Bakelite: −67°F to 300°F; polyethylene: −67°F to 185°F. **Weatherproof:** except as noted. **Hermetic Seals:** pass helium leakage test of 2×10^{-8} cc/sec. P = Pressurized; H = Hermetic Sealed.

MECHANICAL: Mating: per series.

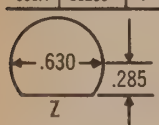
MATERIAL: Contacts: male: brass; female: beryllium copper. **Other Metal Parts:** brass. **Plating:** .0002" silver min. **Insulators:** Teflon, Rexolite, Kel-F, mica-filled Bakelite, polyethylene or glass-Teflon, as specified.

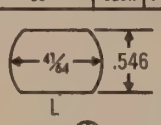
83175

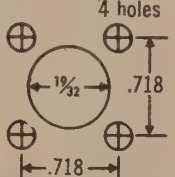


BNC TO C
weatherproof

UG-/U No.	No.	Ins.	Imp. Ohms/Notes	BNC	C	Lgth.
635	83175	T	50	Plug	Jack	1 9/32
636A	83200	T	50	Jack	Plug	1 11/64







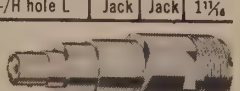
BNC TO N
weatherproof



31-217

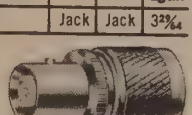
UG-/U No.	No.	Ins.	Imp. Ohms/Notes	BNC	N	Lgth.
201	31-830	T	—	Jack	Plug	1 13/32
201A	21-216‡	T	Improved	Jack	Plug	1 5/16
335	3025	T-R	50 hole M	Plug	Jack	1 3/4
349	2975	T-R	50	Plug	Jack	1 3/4
349A	31-217‡	T	Improved	Plug	Jack	1 5/16
1034	5225	T	50	Plug	Plug	1 1/2
—	2800	T	50/* hole M	Jack	Jack	1 7/16
—	4250	T	70	Jack	Plug	1 5/16
—	4900	T	50	Plug	Plug	1 1/2
—	5850	T-R	50/P hole Z	Jack	Jack	1 27/32
—	21850	T	50 hole M	Jack	Jack	1 1/2
—	93075	GT	—/H hole L	Jack	Jack	1 11/16

82350



C TO LC
weatherproof

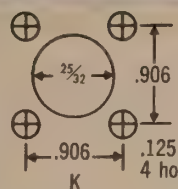
UG-/U No.	No.	Ins.	Imp. Ohms/Notes	C	LC	Lgth.
—	82350	T	—	Jack	Jack	3 23/64



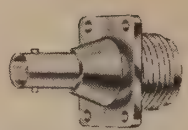
C TO N
weatherproof

82-508

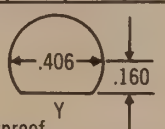
UG-/U No.	No.	Ins.	Imp. Ohms/Notes	C	N	Lgth.
564	82-508	T	50	Jack	Plug	1 3/8
565A	82-540	T	50	Plug	Jack	1 17/32
—	83875	T	50/*	Jack	Plug	1 9/32



BNC TO HN
weatherproof



UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	BNC	HN	Lgth.
309	8900	T	50	Jack	Plug	1 1/2
559	17750	R	50/*	Plug	Jack	1 1/2
—	32750	T-R	—	Plug	Jack	1 3/8
—	35050	T	50 hole K	Jack	Jack	1 3/8

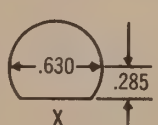


BNC TO SM non-weatherproof

UG-/U No.	Part No.	Ins.	Notes	BNC	SM	Lgth.
691	89250	GT	H hole Y	Jack	Jack	1 1/8

BNC TO UHF non-weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	BNC	UHF	Lgth.
255	2900‡	R	50	Plug	Jack	1 3/16
273	31-028‡	R	—	Jack	Plug	1 3/16
—	2925	T	50	Plug	Jack	1 5/16
—	12025	T	50	Jack	Plug	1 9/32



C TO MB
weatherproof (Mounting hole X)

83950



UG-/U No.	Part No.	Ins.	Notes	C	MB	Lgth.
—	83950	gT	H	Jack	Jack	1 7/32

MB TO UHF
non-weatherproof

47400



UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	MB	UHF	Lgth.
—	47400	T	—	Jack	Plug	1 11/32

MHV TO UHF weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	MHV	UHF	Lgth.
—	28050	T	—	Jack	Plug	1 3/32
—	28075	T	—	Plug	Jack	1 3/8

BNC TO SUBMINAX 27
non-weatherproof

27-29



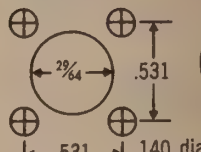
Part No.	Ins.	Imp. Ohms/Notes	Mates With Sub. 27 Plug	Used In BNC UG-/U	Lgth.
27-28	T	50	50 ohm, Screw-On	88	1 3/16
27-29	T	50	50 ohm, Push-On	88	1 3/16
27-40	T	50/GC	50 ohm, Screw-on	89, 291	1 5/16
27-41	T	75	75 ohm, Push-On	260B	1 1/4
27-42	T	75	75 ohm, Screw-On	261B, 262B	1.355
27-805	T	75	75 ohm, Screw-On	260B	1 7/64

20625

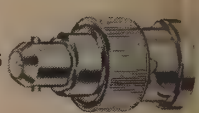


HN TO MHV
weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	HN	MHV	Lgth.
—	20625	T	50	Plug	Jack	1 1/2



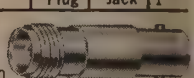
47275



BNC TO MB
weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	BNC	MB	Lgth.
—	33200	T-K	50 hole O	Jack	Jack	1 9/32
—	47200	GT	50/H hole Y	Jack	Jack	1 1/8
—	47250	T-K	50	Jack	Plug	1 5/16
—	47275	T-K	50	Plug	Jack	1

76400



BNC TO TNC
non-weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	BNC	TNC	Lgth.
—	76400	T	50	Jack	Jack	1 9/32
—	79025	T	50	Plug	Jack	1 1/4
—	79675‡	T	50	Jack	Plug	1 1/4

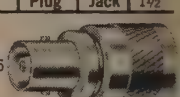
83350



C TO HN
non-weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	C	HN	Lgth.
702	83350	T	—	Jack	Plug	1 1/2
703A	83400	T	—	Plug	Jack	1 1/2

83225



C TO UHF
non-weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	C	UHF	Lgth.
637	83225	T	—	Jack	Plug	1 3/8

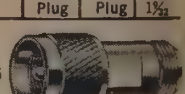
78800



N TO TNC
non-weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	N	TNC	Lgth.
—	78800	T	50	Plug	Jack	1 5/16
—	78825	T	50	Jack	Jack	1 25/64
—	78875	T	50/W	Plug	Plug	1 9/32
—	79825	T	50	Jack	Plug	1 27/32
—	79850	T	50/W	Plug	Plug	1 9/32

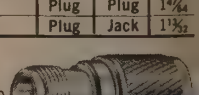
34125



N TO UHF
weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	N	UHF	Lgth.
83	14000	T-R	—	Jack	Plug	1 5/16
83B	34125	T	—	Jack	Plug	1 13/16
146	4400‡	R	Non-W	Plug	Jack	1 13/32
318	26700	R	—	Plug	Plug	1 47/64
—	14650	T	Non-W	Plug	Jack	1 13/32

16050



HN TO N
weatherproof

UG-/U No.	Part No.	Ins.	Imp. Ohms/Notes	HN	N	Lgth.
—	16050	T	50	Plug	Jack	1 5/16
—	16075	T	50	Jack	Plug	1 5/16
—	16100	T-R	50	Jack	Jack	1 49/64

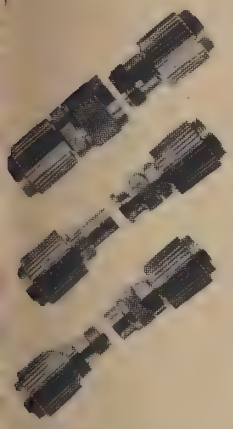
‡Non-tarnish Astroplate finish available. To order: add suffix 1050 to part number. Other numbers also available on special order from factory. * Angle Body.

© United Technical Publications

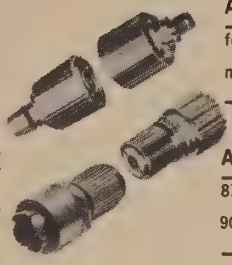
PRECISION ADAPTERS AND RF CRIMPING TOOLS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Precision Adapters For APC-7



	Part No.	Maximum SWR For a Single Adapter	Dimens., Ins. Length	O.D.
APC-7 TO N				
female	131-1025	1.03 @ 4 GHz	1 43/64	13/16
male	131-1035	1.04 @ 9 GHz 1.08 @18 GHz	1 13/16	13/16
APC-7 TO BNC				
female	131-1027	1.035@ 4 GHz	1 39/64	13/16
male	131-1037	1.045@ 9 GHz 1.08 @12 GHz 1.12 @18 GHz	1 23/32	13/16
APC-7 TO TNC				
female	131-1026	same as BNC	1 39/64	13/16
male	131-1036		1 3/4	15/16



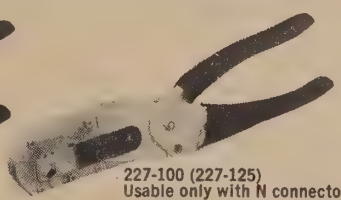
	Part No.	Maximum SWR For a Single Adapter	Dimens., Ins. Length	O.D.
APC-7 TO SMA				
female	131-1028	1.07 @12.4 GHz	1 11/32	13/16
male	131-1038	1.15 @18 GHz	1 3/8	13/16
APC-7 TO GR				
874	131-1022 or GR874-QAP7L*	1.04 @ 4 GHz 1.06 @ 9 GHz	2 1/16	1
900	131-1023 or GR900-QAP7*	1.011@ 4 GHz 1.021@ 8.5 GHz	2 3/16	1 1/16

* Available from General Radio and Amphenol.

N, BNC and TNC SERIES



227-350 (227-375)



227-100 (227-125)
Usable only with N connectors

Braid Crimp Tools
Meet MIL-T-55619 (proposed) for MIL-C-39012 Crimp Connectors.

Crimp Tools

The crimp tools selected for use with Amphenol crimp connectors have been designed for superior performance over a considerable period. The most commonly used crimp tools are shown below. The Amphenol Tool Number is given first and in parenthesis, other tools which are very similar in appearance. Refer to the Tool Summary for detailed application for each tool.

BRAID CRIMP TOOL SUMMARY

Series	type of crimp Description &	Tool No.	Die No.	Die Cavity No.	Die Setting ±.003"	For use with RG-/U Cables
N	MIL-Crimp (Hex)	227-350▲	227-920-1	A	.213	55, 58, 141, 142, 223
		227-375▲	227-920-2	D	.255	59, 62, 140, 210
				C	.268	71
		227-100▲■	227-920-3	E	.415	8, 9, 11, 149, 213, 214
		227-125▲■	227-920-4	G	.324	5, 21, 143, 212, 222
BNC and TNC	MIL-Crimp and Quick-Crimp (Hex)	227-350▲	227-920-1	A	.213	55, 58, 141, 142, 223
				B	.178	122, 174, 179, 180, 187, 188,195
		227-375▲	227-920-2	D	.255	59, 62, 140, 210
				C	.268	71
	Original Crimp*(Hex)	WT-200(T&B)	—	—	.128	174, 179, 187, 188
SUB-Minax 27	Radial Crimp	227-900	May Require Adapter - see p. 27-9, Cable Ass'y Instr.	—	—	174, 179, 187, 188
		227-901		—	—	180, 195
	Quick-Crimp (Hex)	WT-200(T&B)	—	—	.128	174, 177, 187, 188
		WT-203(T&B)	—	—	.178	180, 195, 21-597
SUB-Minax 5116	Quick-Crimp (Inner Braid)	227-911	—	—	Contact Factory	174, 178, 179, 180, 187, 188, 195, 196
MB, SM	Crimp (Inner Braid)	Standard Pliers	—	M	M	174, 178, 179, 180, 187, 188, 195, 196
MHV	Original Crimp(Hex)	Same as BNC/TNC	—	—	—	55, 58, 141, 142, 223
UHF	Quick-Crimp (Hex)	WT-218(T&B)	—	—	.384	8, 11, 149, 213
		227-350▲	227-920-1	A	.213	55, 58, 141, 142, 223
		227-375▲	227-920-2	D	.255	59, 62, 140, 210

Notes: * Original Crimp, same as MIL- and Quick-Crimp except for the cables shown
(T&B) Manufactured and available from Thomas & Betts Co., Elizabeth, New Jersey
▲ Same tool frame no. 227-921 may be used with any interchangeable 227-920- type die
■ Tool and appropriate die have capability as well of hex crimping center contacts for all the cables listed here for the N Series
All Tools are supplied with Dies or Bushings unless noted otherwise

N, BNC and TNC SERIES
Center Contact Tools



227-932-1 (227-932-2, 3)



MS-3191-A
Mil-spec Crimp Tool

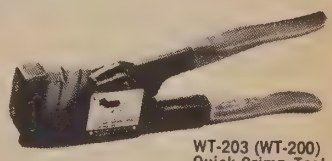


227-927
Usable only with BNC/TNC connectors

SUBMINAX 27 SERIES

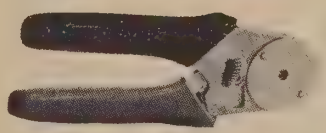


227-900 (227-901)
Radial Crimp Tool



WT-203 (WT-200)
Quick-Crimp Tool

SUBMINAX 5116 SERIES



227-926
Center Contact Tool



227-911
Inner Braid Tool

CENTER CRIMP TOOL SUMMARY

Series	Description & type of crimp	Tool No.	Bushing No.	Die Cavity No.	Die Setting (+.001)	For use with RG-/U Cables
N	MIL-Crimp (4-Indent)	227-932-3△	—	—	.087	5, 8, 9, 11, 21, 55, 58, 59, 62, 71, 140, 141, 142, 143, 149, 210, 212, 213, 214, 222, 223
	MIL-Crimp (Hex)	227-100☐	227-920-3	F	(±.002) .100	
		227-125☐	227-920-4	H		
BNC and TNC	MIL-Crimp and Quick-Crimp (4-Indent)	227-932-1△	227-1157	—	.058	55, 58, 59, 62, 71, 122, 140, 141, 142, 174, 179, 180, 187, 188, 195, 210, 223
		227-927°	—	—	.058	
		MS-3191A (Mil. Spec. Tool) (not avail. RF)	order separately 227-918 (MIL-Crimp Male) 227-919 (MIL-Crimp Female) 227-1156 (Quick-Crimp M & F)	—	.058	
5116	Quick-Crimp (4-Indent)	227-926	—	—	.034	174, 178, 179, 180, 187, 188, 195, 196

☐ Tool and appropriate die have capability as well of braid crimping certain cable sizes — see Braid Crimp Tool Summary
△ Same tool frame no. 227-1189, may be used with either Bushing no. 227-1194, 227-1157 or 227-1199

© United Technical Publications

27 SERIES SUBMINAX RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series 27 — SUBMINAX with three types of low cost assembly

The original **quality** rf subminiature, **designed** for more critical electrical applications. These connectors are available in three types of cable affixment: **Radial Crimp,** a unique Amphenol low cost crimp design; **Quick Crimp,** a standard tex type crimp; and **Field Serviceable,** a design which is the easiest in the industry to assemble and contains the fewest parts. All have soldered centered contacts.

Two types of coupling mechanism. Specify push-on (snap-on) for frequent fast mating or screw-on for vibration type applications.

CHARACTERISTICS

ELECTRICAL: **Impedance:** 50 ohm, 75 ohm. **Frequency Range:** 0-10 GHz. **Voltage Rating:** 500 volts peak. **Dielectric Withstanding Voltage:** 1,500 volts rms. **SWR (50 ohm):** 1.2 (0-4 GHz); 1.5 (4-10 GHz); 1.3 (UG's) (0-6 GHz); 1.5 (UG's) (6-10 GHz). **Other:** multivolt drop 6 MV. insulation resistance 1,000 megohms.

ENVIRONMENTAL: **Thermal Limits:** −67° to 390°F (−55° to 199°C). **Weatherproof:** all 27 series are non-weatherproof, radial crimp have plastic boot or optional heat shrink tubing. **Hermetic Seals:** pass helium leakage test of 2 x 10^{-8} cc/sec. **Thermal Shock:** Mil. Std. 202 method 107. **Shock:** Mil. Std. 202 method 202. **Vibration:** Mil. Std. 202 method 204 (test cond. D). **Moisture Resistance:** Mil. Std. 202 method 106A. **Corrosion:** Mil. Std. 202 method 101 (test cond. B).

MECHANICAL: **Contacts:** radial crimp, not captivated; quick crimp, full captivated; field serviceable, semicaptivated. **Mating:** push-on (snap-on) and screw-on, (50 ohm have 10-32 threaded coupling; 75 ohms, 5/16-32). **Cable Affixment (Braid or Jacket):** radial crimp: Quick-Crimp (hex crimp); field serviceable clamp mechanism. **Cable Affixment (Center Conductor):** solder only. **Coupling Nut:** recommended torque (hex nuts); 50 inch-ounces. Axial pull-off force: Withstand up to 50 lbs.

MATERIAL: **Contacts:** male and outer (push-on): brass female: beryllium copper. **Other Metal Parts:** brass. **Plating (All Metal Parts):** .000050 gold over copper, (UG's .0001″ gold over copper). **Insulators:** Teflon, Kel-F-Teflon, glass Teflon (hermetically sealed) as specified.

MILITARY SPECIFICATIONS: UG items fully comply with MIL-C-22557A.


27-1


27-34


27-8


27-26


27-31

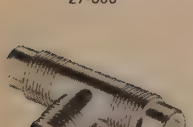

27-3


27-4


27-839


27-800


27 11


27-70


27-5

NOTES:

Radial Crimp:

Connector is gently squeezed for a reliable mechanical and electrical connection. See "RC" in notes below.

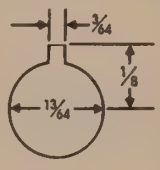
Quick Crimp:

No need to comb braid; assembles faster than any other subminiature. Has captivated contact, termination stronger than cable itself. See "QC" in notes below.

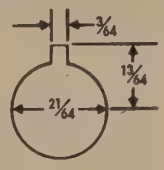
Field Serviceable:

Needs no crimping tool. Has semi-captivated contact. UG connectors comply with MIL-C-22557A. See "FS" below.

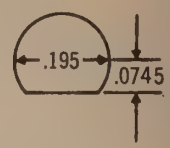
CC = Captivated Contacts; HOC = Hooded Outer Contact; RM = Rear Mounted.



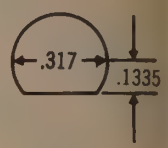
U



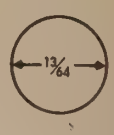
V



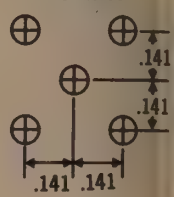
W



X



Y



Z

PUSH-ON — STRAIGHT PLUGS — SCREW-ON

For RG-/U Cable	No.	Imp. Ohms	Notes	Lgth.	Mtg. Hole	For RG-/U Cable	No.	Imp. Ohms	Notes	Lgth.	Mtg. Hole
174, 179, 187, 188	27-841	50	QC, CC	1		174, 179, 187, 188	27-844	50	QC, CC	1 1/32	
	27-1	50	RC	19/32			27-7	50	RC	19/32	
180, 195	27-828	75	QC, CC	1 3/64			†27-106	50	FS, CC	21/32	
	27-13	75	RC	5/8		180, 195	27-835	75	QC, CC	1 3/64	
178, 196	37-30	50	FS,CC	25/32			27-19	75	RC	19/32	
						178, 196	27-34	50	FS, CC	25/32	
			* UG-1460				*27-104	50	FS, CC	27/32	
			† UG-1465								

PUSH-ON — ANGLE PLUGS — SCREW-ON

174, 179, 187, 188	27-843	50	QC, CC	41/64		174, 179, 187, 188	27-846	50	QC, CC	1 3/32	
	27-6	50	RC	9/16			27-26	50	RC	3 3/4	
180, 195	27-834	75	QC ,CC	41/64			27-836	75	QC ,CC	41/64	
	27-18	75	RC	39/64		180, 195	27-25	75	RC	5/8	
178, 196	27-33	50	FS, CC	9/16			27-37	50	FS, CC	23/64	
	27-823	50	FS,CC,HOC	19/32		178, 196					

PUSH-ON — STRAIGHT JACKS — SCREW-ON

174, 179, 187, 188	27-849	50	QC, CC	1		174, 179, 187, 188	27-8	50	RC	1 1/32
	27-2	50	RC	35/64			*27-105	50	FS, CC	3/4
180, 195	27-837	75	QC, CC	1		178, 196	27-35	50	FS, CC	3/4
	27-14	75	RC	9/16			†27-107	50	FS, CC	3/4
178, 196	27-31	50	FS, CC	47/64		180, 195	27-20	75	RC	19/32
									* UG-1467	† UG-1462

PUSH-ON — BULKHEAD JACKS — SCREW-ON

174, 179, 187, 188	27-842	50	QC, CC	1 1/16	W	174, 179, 187, 188	27-845	50	QC, CC	1 1/16	W
	27-4	50	RC	41/64	U		27-10	50	RC	21/32	U
180, 195	27-838	75	QC, CC	1 3/64	X		†27-103	50	FS, CC	7/8	W
	27-16	75	RC	41/64	V	180, 195	27-839	75	QG, CC	1 1/8	X
178, 196	27-32	50	FS, CC	13/16	U		27-22	75	RC	21/32	V
			†UG-1468			178, 196	27-36	50	FS, CC	51/64	U

PUSH-ON — BULKHEAD RECEPTACLES — SCREW-ON

—	27-3	50	T	—	37/64	U	—	27-9	50	I	—	1 3/32	U
—	27-15	75	T	—	37/64	V	—	27-12	50	GT	Hermetic	41/64	Y
—	27-57	50	GT	Hermetic	45/64	Y	—	27-21	75	T	—	1 3/32	V
—	27-45	75	GT	Hermetic	23/32	21/64 dia.	—	27-24	75	GT	Hermetic	11/16	21/64 dia.
							—	27-800	50	T	Prtd. Ckt.	43/64	Z
							UG1619	27-101	50	T	RM, FS, CC	5/8	W
							UG1464	27-108	50	T	FM, FS, CC	41/64	W

PUSH-ON — BULKHEAD ADAPTERS — SCREW-ON

Part No.	Impedance Ohms	Adapter Ends	Length (Inches)	Mounting Hole	Part No.	Impedance Ohms	Adapter Ends	Length (inches)	Mounting Hole
27-5	50	Jack/Jack	5/8	V	27-11	50	Jack/Jack	21/32	U
27-17	75	Jack/Jack	5/8	V	27-23	75	Jack/Jack	21/32	V

SCREW-ON TEE ADAPTERS

No.	Impd. Ohms	Adapter Ends	Lgth.
27-70	75	Jack/Jack/Jack	1.050

© United Technical Publications

5116 SERIES SUBMINAX RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series 5116 — low cost QUICK CRIMP assembly

WITH TWO MATING STYLES — FULLY CAPTIVATED CONTACTS

Series 5116 combines good electrical performance with fast, economical cable assembly. Plugs and jacks, for example, have only four parts, including body assembly. Cable stripping is easier, with less critical dimensions. Ultra-reliable, gold-plated contacts are fully captivated, can be crimped or soldered. Extremely low cost of the crimping tool (Amphenol No. 227-911) makes field use of this connector series feasible.

Two types of coupling mechanism are available. Specify push-on (snap-on) for frequent fast mating, or screw-on for vibration-applications. Push-on will not mate with screw-on types; 50 ohm, 75 ohm and 95 ohm types mate only with like types.

ABBREVIATIONS:
Insulation: T — Teflon, gT — glass-Teflon.
Notes: W — Weatherproof, SMC — Shorting Male Contact, PC — Used on printed-circuit boards, H — Hermetically Sealed, MLC — Male Contact

CHARACTERISTICS

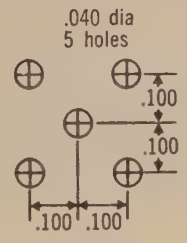
ELECTRICAL
Impedance: 50, 75 or 95 ohm.
Frequency range: 0-4 Gc.
Voltage: 500 v. peak.
High potential: 1500 v. rms. 60 cycles, 1 min.

ENVIRONMENTAL
Thermal limits: —67°F to 390°F.
Weatherproof: screw-on types.
Hermetic seals: pass helium leak test of 2×10^{-8} cc/sec.

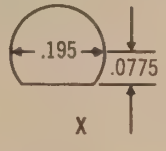
MECHANICAL
Mating: push-on or screw-on.
Cable affixment: Quick-Crimp.

MATERIAL
Contacts: male: brass; female: beryllium copper.
Other metal parts: brass.
Contact plating: .0002" gold-over-silver min.
Other plating: .0002" silver min.
Insulators: Teflon or glass-Teflon.

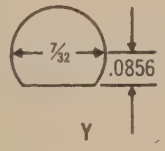
MOUNTING HOLES



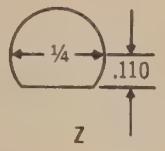
W



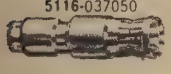
X

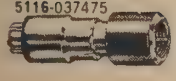


Y



Z


5116-037050


5116-037475


5116-037275


5116-054825


5116-054850

STRAIGHT PLUGS

PUSH-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole	SCREW-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole
178A, 178B, 196, 196A	-037050	50		13/32		178A, 178B, 196, 196A	-037475	50	W	1	
179A, 179B, 187, 187A	-037100	75		13/32		179A, 179B, 187, 187A	-037525	75	W	1	
180, 180A. 180B, 195, 195A	-037125	95		13/32		180, 180A. 180B, 195, 195A	-037550	95	W	1	
188, 188A, 316	-037075	50		13/32		188, 188A, 316	-037575	50	W	1	

ANGLE PLUGS

PUSH-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole	SCREW-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole
178A, 178B, 196, 196A	-037150	50		49/64		178A, 178B, 196, 196A	-037600	50	W	5/8	
179A, 179B, 187, 187A	-037200	75		25/32		179A, 179B, 187, 187A	-037625	75	W	41/64	
180, 180A. 180B, 195, 195A	-037225	95		25/32		180, 180A, 180B, 195, 195A	-037650	95	W	45/64	
188, 188A, 316	-037175	50		25/32		188, 188A, 316	-037675	50	W	41/64	

STRAIGHT JACKS

PUSH-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole	SCREW-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole
178A, 178B, 196, 196A	-037275	50		1		178A, 178B, 196, 196A	-037700	50	W	1	
179A, 179B, 187, 187A	-037325	75		1		179A, 179B, 187, 187A	-037725	75	W	1	
180, 180A, 180B, 195, 195A	-037350	95		1		180, 180A, 180B, 195, 195A,	-037750	95	W	1	
188, 188A, 316	-037300	50		1		188, 188A, 316	-037775	50	W	1	

BULKHEAD JACKS

PUSH-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole	SCREW-ON For RG-/U Cable	No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole
178A, 178B, 196, 196A	-037375	50		29/32		178A, 178B, 196, 196A	-037800	50	W	25/32	
179A, 179B, 187, 187A	-037425	75		29/32		179A, 179B, 187, 187A	-037825	75	W	25/32	
180, 180A, 180B, 195, 195A	-037450	95		29/32		180, 180A, 180B, 195, 195A	-037850	95	W	25/32	
188, 188A, 316	-037400	50		29/32		188, 188A, 316	-037875	50	W	25/32	

STRAIGHT RECEPTACLES

PUSH-ON No. 5116-	Imp. Ohms	Ins.	Notes	Lgth.	Mtg. Hole	SCREW-ON No. 5116-	Imp. Ohms	Ins.	Notes	Lgth.	Mtg. Hole
-054825	50	T	PC	15/32	W	-058375	50	T	PC, W	15/32	W
						-054875	95	T	PC, W	15/32	W
						-057350	50	gT	H, W	5/16	.195dia.
						-057375	95	gT	H, W	5/16	.250dia.

ANGLE RECEPTACLES

PUSH-ON						SCREW-ON					
-054850	50	T	PC	5/16	W	-054900	50	T	PC, W	15/32	W
						-054925	95	T	PC, W	15/32	

BULKHEAD RECEPTACLES

PUSH-ON						SCREW-ON					
-054300	50	T	MLC	45/64	.221 dia.	-058350	50	T		1/4	X
-054325	50	T		29/32		-056825	75	T		5/32	Y
						-057400	95	T		5/16	Z

SCREW-ON BULKHEAD ADAPTERS

No. 5116-	Imp. Ohms	Ins.	Adapter Ends	Lgth.	Mtg. Hole
-054475	50	T	Jack/Jack	15/32	5/16 dia.
-054525	75	T	Jack/Jack	15/32	
-054550	95	T	Jack/Jack	15/32	

SCREW-ON MALE CAPS

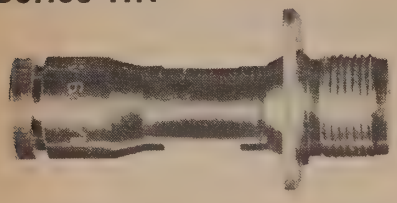
No. 5116-	Imp. Ohms	Notes	Lgth.	Mtg. Hole
-054575	50	SMC	3/8	
-054650	50		13/64	
-054600	75	SMC	5/16	
-054675	75		13/64	
-054625	95	SMC	5/16	
-054700	95		13/64	

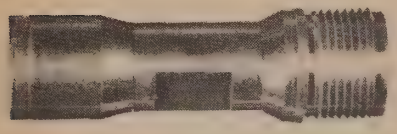
© United Technical Publications

RF COAXIAL CONNECTORS

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series HN





Amphenol HN Series are constant 50 ohm impedance connectors designed for high voltage applications. Connectors are weatherproof and are available in Regular, Improved and Improved/Captivated Contact constructions.

Amphenol's patented Captivated Contact Design prevents possible contact recession under temperature extremes. Contacts are fixed within the connector body by front and rear contact insulators that butt against metal body parts.

CHARACTERISTICS, TYPICAL

ELECTRICAL: Frequency range: 0 — 4GHz. **Voltage rating:** 1,500 volts peak; **dielectric withstanding voltage:** 5,000 volts rms. **SWR:** 1.3.

ENVIRONMENTAL: Thermal limits: Teflon insulation: —67° to 390°F (—55° to 199°C); Rexolite insulation: —67° to 185°F (—55° to 85°C). **Weatherproof:** all HN Series are weatherproof. **Hermetic seals:** pass helium lead test of 2×10^{-8} cc/sec. **Pressurized:** Compression seal.

MECHANICAL: Mating: ¾ —20 threaded coupling. **Cable affixment:** screw-thread nut and braid clamp.

MATERIALS: Contacts: male: brass; female: beryllium copper; outer: brass; **other metal parts:** brass. **Plating:** .0002" silver min. **Insulators:** Teflon, Rexolite, glass-Teflon (hermetic seal). **Weatherproof gaskets:** synthetic rubber; silicone rubber.

MILITARY SPECIFICATIONS: HN Connectors meet applicable sections of MIL-C-3643.

STRAIGHT JACKS

RG/U Cable	Part No.	UG/U No.	Insulation	Clamp Gasket	Dimensions, Inches Length	O.D.	Diam.	Notes
8, 9, 87, 213, 214, 225	82-39	60A△	Rexolite	syn. rubber	2½	1⅜₁₆	.444	—
	82-814	60B△	Teflon	sil. rubber	2½	1⅜₁₆	.444	modified cable clamp
	82-321	1214△	Teflon	sil. rubber	2⅞	1⅜₁₆	.444	improved/captivated contac
10, 12, 116, 215, 227	33250	927	Teflon	sil. rubber	3	¾	—	armor clamp
17, 218	82-107	333A	Rexolite	syn. rubber	2⅞₁₆	1⅝₁₆	.900	modified cable clamp
	44025	333B	Teflon	sil. rubber	2½	1⅝₁₆	.900	improved
19	82-56	333	Rexolite	syn. rubber	2¾	1⅜	.900	armor clamp
	82-175	—	Teflon	nat. rubber	2½	¾	.333	82-887 kit clamping

PANEL JACKS

8, 9, 87, 213, 214, 225	82-40	61A△	Rexolite	syn. rubber	2½	1⅜₁₆	.444	—
	11150	61C△	Teflon	sil. rubber	2⅝₁₆	1⅜₁₆	.444	improved
	82-815	61B△	Teflon	sil. rubber	2½	1⅜₁₆	.444	modified cable clamp
	82-324	1215△	Teflon	sil. rubber	2⅝₁₆	1⅜₁₆	.444	improved/captivated contac
17	82-108	334A	Rexolite	syn. rubber	2⅞₁₆	1⅝₁₆	.960	modified cable clamp
18	82-57	334	Rexolite	syn. rubber	2¾	2	.984	armor clamp/.257 dia. flange holes

△ Amphenol adapter kit 82-887 will adapt connector for use with ALJAK/CUJAK metal jacketed cables.

STRAIGHT PLUGS

8, 9, 87, 213 214, 225	82-38	59A△	Rexolite	syn. rubber	2⅜	⅞	.444	—
	82-804	59B△	Teflon	sil. rubber	2⅜	⅞	.444	modified cable clamp
	82-320	1213△	Teflon	sil. rubber	2¾	⅞	.444	improved/captivated contac
	17900	59D△	Teflon	sil. rubber	2⅞₂	⅞	.444	improved/beryl. outer contact
10, 12, 116, 215, 227	9375	925	Teflon	sil. rubber	2⁴⁹⁄₆₄	2⁷⁄₃₂	.511	armor clamp
14, 217	8125	494	Rexolite	sil. rubber	2	1	.562	—
17, 218	82-111	495A	Rexolite	syn. rubber	2¹¹⁄₁₆	1⅝₁₆	.900	—
	82-325	—	Rexolite	syn. rubber	2¹¹⁄₁₆	1⅝₁₆	.900	captivated contact
	30350	495D	Teflon	sil. rubber	2¹³⁄₃₂	1⅝₁₆	.900	improved/beryl. outer contact
54A	82-816	—	Teflon	sil. rubber	1⅜₁₆	⅞	.257	—
55, 58, 141 142	16750	—	Teflon	syn. rubber	1⅜₁₆	2⁷⁄₃₂	.214	—

ANGLE PLUGS

RG/U Cable	Part No.	Insulation	Cable Clamp	Dimensions, Inches Length	O.D.	Cable Diam.	Notes
8, 9, 87, 213, 214, 225	82-833	Rexolite	sil. rubber	1½	⅞	.444	—
	82-856	Teflon	sil. rubber	1½	⅞	.444	—
55, 58, 141 142	19625	Teflon	syn. rubber	1⅜₁₆	⅞	.214	1500 VRMS

PANEL RECEPTACLES

Part No.	UG/U No.	Insulation	Dimensions, Inches Length	O.D.	Max. Panel Thickness
82-92	496	Rexolite	1¹⁷⁄₃₂	1⅜₁₆	—
82-805	560	Teflon	1⅞	1⅜₁₆	—
45750	—	Teflon	1½	1⅜₁₆	—

female contacts • hermetically sealed

BULKHEAD RECEPTACLES

82-836	—	glass-Teflon	1¾	1³⁄₁₆	.187
82-843	—	glass-Teflon	1⁴⁹⁄₆₄	1¼	.187

plug ends • weatherproof • 50 ohm impedance

STRAIGHT ADAPTER

16800	—	Teflon	2⅛	⅞	—

ANGLE ADAPTERS

Part No.	UG/U No.	Insulation	Adapter Ends	Dimensions, Inches Length	O.D.	Notes
82-91	212A	Rexolite	jack-plug	1¹³⁄₃₂	⅞	—
82-115	212C	Teflon	jack-plug	1¹³⁄₃₂	⅞	beryl. outer contact
12100	212B	Teflon	jack-plug	1⅞₁₆	⅞	modified const.

BULKHEAD ADAPTER

Part No.	UG/U No.	Insulation	Dimensions, Inches Length	O.D.	Max. Panel Thickness
11050	1019	Teflon	1³¹⁄₃₂	1	.343

TEE ADAPTERS

Part No.	UG/U No.	Insulation	Length In Inches
9950	413	Rexolite	1¹³⁄₁₆
11950	—	Teflon	1¹³⁄₁₆

ARMOR CLAMPS

RG/U Cable	Part No.	MX No.	Dimensions, Inches Length	O.D.	Cable Entry	Notes
10, 12, 79, 116, 215, 227	82-48	564	⅞	1⅛₁₆	.470	use with regular const.
	82-109	564A	1⅛₁₆	1⅛₁₆	.511	use with regular const.
	82-517	1286	1⅜	¾	.511	use with improved connectors
18, 219	92100	1441	1⅜	1⅝₁₆	.963	use with improved connectors
74, 224	16850	1462	1¾₁₆	⅞	.625	use with improved connectors

male contact • weatherproof • ½ watt ± 5% resistor • 48 ohms impedance

RESISTOR TERMINATED CAP

Part No.	DA No.	Insulation	Dimensions, Inches Length	O.D.	Chain Length
9550	12A	Rexolite	1¼	2³⁄₃₂	2¼

MALE CAPS • weatherproof

Part No.	Dimensions, Inches Length	O.D.	Chain Length	Notes
82-130	1⁹⁄₃₂	⅞	2⅜₁₆	—
9900	7⁄₁₀	⅞	—	cap only
10250	7⁄₁₀	⅞	2¼	—

FEMALE CAPS

13650	2⁹⁄₃₂	⅞	4	—

(ADC) Bantam jack panels

Bantam Jack Panels are designed to satisfy the increasing demand for more compact patchfields in modern electronic and communication equipment. Bantam Jack Panels, with miniaturized jacks, provide twice the number of jacks in a standard size panel. They require only ½ the rack space previously used by conventional panels. The new panel assemblies weigh 65% less when compared to an assembly using an equivalent number of jacks on a conventional jack panel. ■ Bantam Jack Panels are compact, lightweight, and yet provide the same dependable service as the long established telephone types. This new design offers 96 jacks (48 pairs) in a 1¾ inch x 19 inch standard sized panel. The jacks on this panel are spaced to prevent the cross patching of adjacent circuits when using double plugs.

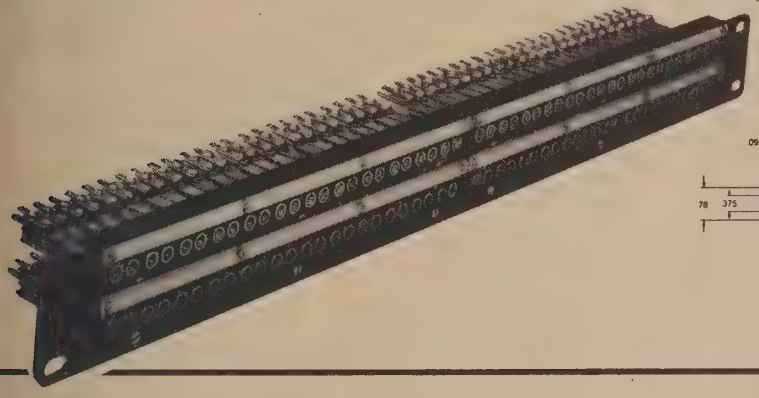
specifications

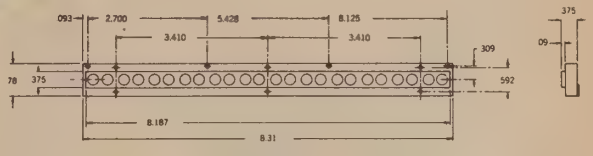
1. **Panel:** Aluminum alloy, extruded. Finished black anodized per Mil-A-8625A. Overall dimensions 1¾"x19"—Standard EIA mounting centers.
2. **Jack Mounting:** Four moulded plastic inserts, each provides for 24 jacks. Pairs of jacks on 5/16 inch centers. Double-row panel provides 96 jacks total. Blank inserts can be furnished where only single row of jacks is required.
3. **Designation Strip:** Extruded clear plastic.
4. Panel assemblies are available with a wide variety of two and three-conductor jacks. See listing of Bantam jacks for complete details.

PJ-731	Double row panel, assembly less jacks, holds 96 jacks.
PJ-737	Double row panel, with 48 pair (96 total) PJ-818 jacks.
PJ-739	Double row panel, with 48 pair (96 total) PJ-839 jacks.
PJ-724	Panel inserts, less jacks, 24 holes.
PJ-700	Panel inserts, blank (same as PJ-724 without holes).
PJ-736*	Double row panel, with 104 PJ-818 jacks.
PJ-738*	Double row panel, with 104 PJ-839 jacks.

*Panels with 104 jacks (26 per insert, jacks all on 5/16 inch centers) are available on special order.

Custom panel assemblies with up to 104 jacks are available on special order.



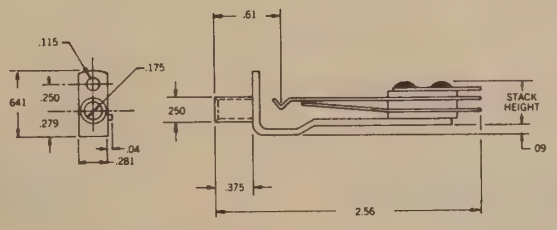


PJ-724 PANEL INSERT

(ADC) Bantam jacks

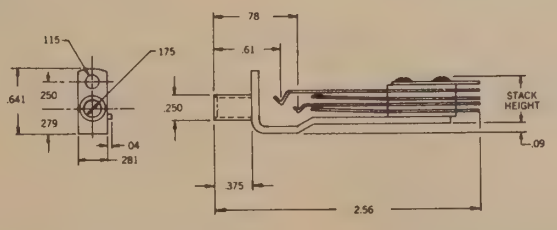
Bantam Jacks will meet the electrical, mechanical and environmental requirements of the military specification for long frame telephone jacks. Although reduced in size these jacks will provide the same reliable service equal to that expected from regular size telephone jacks. These jacks are available in a variety of two and three conductor types, with isolated circuit contacts as well as normalling contacts.

FOR COMPLETE LINE OF BANTAM LITES, SWITCHES, ACCESSORIES, SEE ADC COMMUNICATIONS COMPONENTS CATALOG.



2 CONDUCTOR JACK

3 CONDUCTOR JACK



SCHEMATIC DIAGRAM	PART NO.	STACK HEIGHT (Inches)
	PJ-803	13/32
	PJ-808	43/64
	PJ-815	35/64
	PJ-816	35/64
	PJ-818	13/32
	PJ-823	27/64
	PJ-836	5/8
	PJ-805	43/64
	PJ-824	43/64
	PJ-838	35/64
	PJ-839	17/32
	PJ-841	43/64
	PJ-880	3/4

specifications

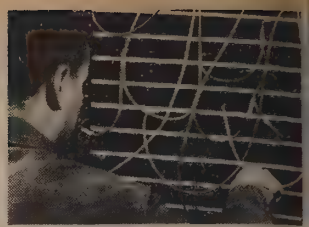
Frame: Steel, Cadmium plate with chromate conversion coating to withstand 50 hours of salt spray.
Springs: Nickel silver.
Contacts: W. E. #1 gold alloy, cross-bar contacts are welded to springs.
Insulation: Spacers, Phenolic Type PBE-P per MIL-P-3115B.
Bushing: Brass, silver soldered to frame. Finish same as frame.

All of the above jacks are available on special order with Palladium cross-bar contacts.
If gold plating is required for all surfaces, jacks should be ordered as the PJ number with a "G" suffix. ADC uses .00005 gold per MIL-G-45204, TYPE II. The solder lugs are not tinned for gold plated jacks. Any requirements other than those described require special notation.

© United Technical Publications

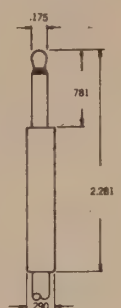
ADC Bantam patch cords

Bantam Patch Cords are plastic jacketed, shielded cords complete with molded-on plugs. The plugs are made with molded insulation between conductors. Bantam Patch Cords are available with single and double two and three conductor plugs. A cord strain relief feature is included in the plug construction. Note: Bantam plugs can be gold plated on special order per MIL-G-45204, Type 11, 0.00005 inch thick.



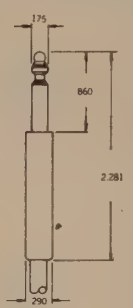
2 CONDUCTOR SINGLE PLUG

Length (see Note 1)	Single (2) Conductor Plug
6 inch	PJ-701
12 inch	PJ-702
18 inch	PJ-703
24 inch	PJ-704
30 inch	PJ-705
36 inch	PJ-706
48 inch	PJ-708
60 inch	PJ-710



3 CONDUCTOR SINGLE PLUG

Length (see Note 1)	Single (3) Conductor Plug
6 inch	PJ-711
12 inch	PJ-712
18 inch	PJ-713
24 inch	PJ-714
30 inch	PJ-715
36 inch	PJ-716
48 inch	PJ-718
60 inch	PJ-720



specifications

Cord: Plastic jacketed, strand copper conductors, braided shie Jacket color — gray.

Plugs: Conductor parts are bra finished to 32 microinch finish ma mum.

Plug Insulation: Molded polystyrer

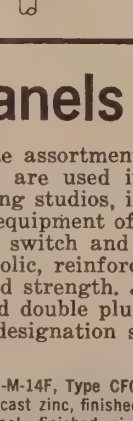
Internal Connections: Soldered.

Plug Shell: Plastic, black, rigid th moplastic.

NOTE 1: Length is measured from t rear of the plug shell to rear of pl shell on opposite end.

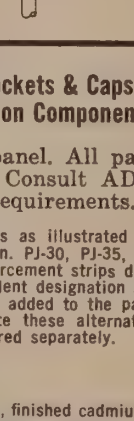
2 CONDUCTOR (DOUBLE)

Length	Double (2) Conductor Plug
6 inch	PJ-751
12 inch	PJ-752
18 inch	PJ-753
24 inch	PJ-754
30 inch	PJ-755
36 inch	PJ-756
48 inch	PJ-758
60 inch	PJ-760



3 CONDUCTOR (DOUBLE)

Length	Double (3) Conductor Plug
6 inch	PJ-761
12 inch	PJ-762
18 inch	PJ-763
24 inch	PJ-764
30 inch	PJ-765
36 inch	PJ-766
48 inch	PJ-768
60 inch	PJ-770



specifications

Cord: Plastic jacketed, strand copper conductors, braided shiel Jacket color — gray.

Plugs: Conductor parts are bras finished to 32 microinch finish ma mum.

Plug Insulation: Molded polystyren

Internal Connections: Soldered.

Plug Shell: Plastic, gray, flexib thermoplastic.

ADC jack panels

For Lamp Sockets & Caps, See ADC Communication Components Catalog

ADC offers the most complete assortment of jack panels available today. ADC panels are used in television and broadcasting stations, recording studios, industrial paging systems, and communication equipment of all kinds where there is a need to efficiently switch and distribute audio signals. Molded of solid phenolic, reinforced with steel to provide maximum rigidity and strength. Jacks are spaced to permit use of any standard double plug with ⅝" spacing. Mounting brackets and designation strips* furnished with each panel. All panels designed to fit standard 19 relay rack. Consult ADC for your standard and specia jack panel requirements.

*The jack panels as illustrated are equipped with ADC standard designatio strips as shown. PJ-30, PJ-35, PJ-36 and PJ-37 type panels can be supplie with the reinforcement strips drilled and tapped to accommodate the Weste Electric equivalent designation strips (PJ-899A, PJ-899B, PJ-903A and PJ-903B The suffix "A" added to the part number denotes panels which are modifie to accommodate these alternate type designation strips. Designation strip are to be ordered separately.

SPECIFICATIONS

Panel: Molded, thermoset plastic per Mil-M-14F, Type CFG, black.
Mounting Brackets: PJ-31 and PJ-33: Die cast zinc, finished black lacquer. PJ-30, PJ-35, PJ-36, PJ-37: Steel, finished cadmium + chromate per Mil-F-14072 #M262, Type I
Reinforcing Strips: PJ-31 and PJ-33: Steel, finished nickel plated. PJ-30, PJ-35, PJ-36, PJ-37: Steel, finished cadmium + chromate per Mil-F-14072 #M262, Type I



PJ-30
Double Panel. Holds 52 jacks — requires 1¾" panel space. Double designation strip. Brackets for flush rack mounting. All jack mounting holes on ⅝" centers.



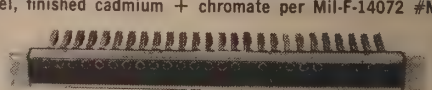
PJ-31
Double Panel. Holds 48 jacks. Holes spaced to prevent patching adjacent circuits. Requires 2⅛" panel space.



PJ-33
Single Panel. Holds 24 jacks. Holes spaced to prevent patching adjacent circuits. Requires 1¾" panel space.



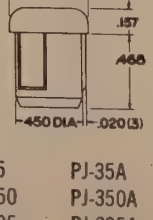
PJ-35
Same as PJ-30, except has 7" standoff mounting brackets.



PJ-36
Single Panel. Holds 26 jacks — requires 1¾" panel space. Brackets for flus rack mounting. All jack mounting holes on ⅝" centers.



PJ-37
Triple-Row Panel. Holds 78 jacks. Requires 2⅝" panel space (1½" standard rac spaces). Provided with brackets for flush rack mounting and PJ-901 designatio strips top and bottom.



HOLE PLUG

Molded of black polyethylene plastic. Fits a ADC standard jack panels. Made to plug unuse jack mounting holes in jack panels. **PJ-29**

PANELS LESS JACKS	PJ-30	PJ-30A	PJ-31	PJ-33	PJ-35	PJ-35A	PJ-36	PJ-36A	PJ-37	PJ-37A
PANEL WITH PJ-318	PJ-340	PJ-340A	PJ-341	PJ-343	PJ-350	PJ-350A	PJ-360	PJ-360A	PJ-370	PJ-370
PANEL WITH PJ-339	PJ-390	PJ-390A	PJ-391	PJ-393	PJ-395	PJ-395A	PJ-396	PJ-396A	PJ-397	PJ-397

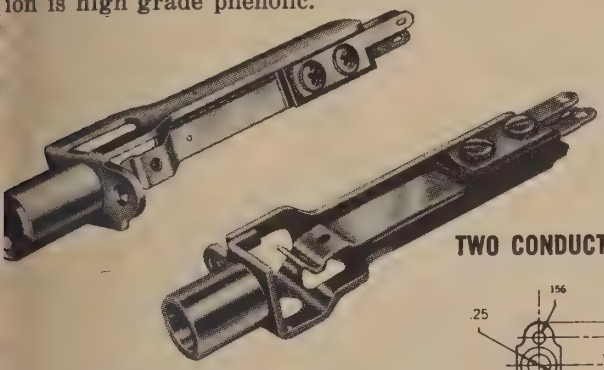
© United Technical Publicatio

acks

ADC

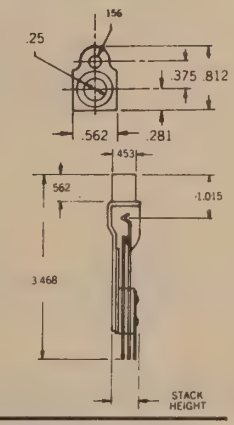
ELEPHONE TYPE

.DC is recognized as a leading supplier of long frame, elephone type jacks. As evidence of their outstanding uality, ADC jacks are used by the country's foremost ıanufacturers of communication equipment. The unique, .DC one-piece frame is strong, dimensionally stable and eadily interchangeable both mechanically and electrically ith commonly used jacks. Plating withstands 50-hour alt spray tests. W. E. #1 gold alloy contacts are welded o nickel silver springs. Lugs are hot tin dipped. Insula- ion is high grade phenolic.

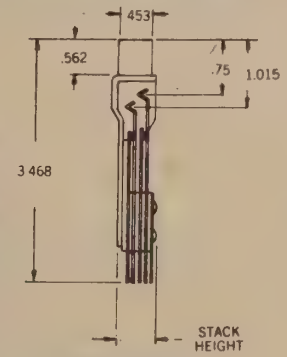


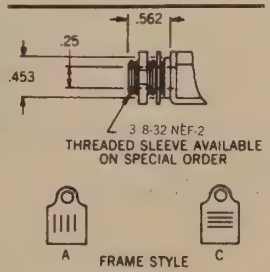
Schematic Diagram	Jacks	WE Equiv.	Frame Style	Stack Height (Inches)
	PJ-115	215-A	A	5/8
	PJ-116	216-A	A	5/8
	PJ-117	217-A	A	9/16
	PJ-123	223-A	A	7/16
	PJ-125	225-A	A	21/32
	PJ-202	None	C	3/4
	PJ-203	303-A	A	9/16
	PJ-204**	None	A	3/4
	PJ-205**	240-A	A	3/4
	PJ-206**	242-A	A	3/4
	PJ-207**	285-A	A	27/32
	PJ-208**	284-A	A	63/64
	PJ-209**	411-A	A	27/32
	PJ-226	226-A	A	5/8
	PJ-237	237-A	A	15/32
	PJ-238	238-A	A	9/16
	PJ-240	240-C	C	3/4
	PJ-241**	241-A	A	3/4
	PJ-242	242-C	C	3/4
	PJ-280	280-C	C	23/32
	PJ-318	218-A	A	1/2
	PJ-336	236-C	C	19/32
	PJ-338	438-C	C	13/16
	PJ-339	239-A	A	9/16
	PJ-418	218-C	C	1/2
	PJ-246*	246-A	A	9/16
	PJ-248*	248-A	A	9/16
	PJ-249*	249-A	A	9/16

TWO CONDUCTOR



THREE CONDUCTOR





FRAME STYLE

SPECIFICATIONS:

Frame: Steel, plated to withstand 50 hours salt spray per Mil-STD-202, Method.
Sleeve: Brass, nickle plated.
Springs: Nickle silver with tinned lugs.
Insulators: Phenolic, per Mil-P-3115 B type.

FOR COMPLETE LINE OF COAXIAL PLUGS, SEE ADC COMMUNICATIONS COMPONENTS CATALOG.

MILITARY JACKS

Designed to meet the rugged, exacting requirements of military applications. These ADC jacks are made in accordance with Mil-J-641B specifications. Highest quality materials and closely held tolerances on dimensions conform with military specifications.

Schematic Diagram	MIL Jacks	Frame Style	Stack Height (Inches)	Schematic Diagram	MIL Jacks	Frame Style	Stack Height (Inches)
	JJ-015	C	3/4		JJ-073**	A	3/4
	JJ-016	A	9/16		JJ-074	A	3/4
	JJ-017**	A	3/4		JJ-075**	A	3/4
	JJ-019	C	11/16		JJ-077	A	27/32
	JJ-022	A	9/16		JJ-078**	A	63/64
	JJ-024	A	1/2		JJ-084	A	5/8
	JJ-035	A	5/8		JJ-085	A	9/16
	JJ-042	A	9/16		JJ-086	A	7/16
	JJ-072	A	5/8		JJ-087**	A	27/32

*For use with PJ-309 or other similar type plugs having .207" diameter sleeves.

**Caution — Because of Stack Height these "A" frame jacks cannot be installed on 5/8" centers. "C" Frame version if not listed can be furnished on special order.

TWIN JACKS



ADC Twin Jacks are essentially two jacks with a common mounting frame. Jack sleeves are on 5/8" centers for vertical mounting in standard jack panels. Normal springs are cross-connected or strapped. Jack sleeves are brass, nickel plated. Die formed springs are nickel silver. Frame and hardware are steel, cadmium-chromate plated to withstand 50 hours salt spray.

Part No.	WE Equivalent	No. Conductors	Use With Plug
PJ-410	410A	2	PJ-047, PJ-1 and PJ-327
PJ-482	482A	3	PJ-051, PJ-7

WRAPID JACKS (For Wrapped Solderless Connections)



ADC offers a variety of Wrapid Jacks with .032" by .062" rectangular terminals for wrapped wire connections. These jacks feature cross-bar contacts. Overall length is 3.825" maximum, otherwise, dimensionally the same as telephone jacks.

Schematic Diagram	Wrapid Jack	Frame Style
	PJ-238W	A
	PJ-240W	C
	PJ-241W	A
	PJ-242W	C
	PJ-339W	A

© United Technical Publications

ADC plugs



TWO CONDUCTOR



PJ-1 — Equivalent WE-241. Heavy duty die cast frame. Black phenolic shell. Has self-aligning plug sleeves on 5/8" centers for use with all standard jack panels. Two tip conductors, plus sleeve connection common to both sleeves.



PJ-047R — Equivalent WE-347. Designed for use with tip and sleeve jacks. Molded insulation, red plastic handle, design and construction in accordance with MIL-P-642B specifications.

PJ-047B — Same as above except black plastic handle.



PJ-055B — Formerly ADC PJ-5, fits 1/4" phone jacks. Black plastic shell. Screw terminals, designed and manufactured in accordance with MIL-P-642B.

PJ-055M — Same as above except has metal handle, brass, nickel plated.

PJ-055R — Same as above except has red plastic handle.



PJ-327 — Equivalent WE-327. Twin plug provides two electrically independent 2 conductor plugs in a black phenolic shell which is notched to indicate polarity. Self-aligning plug sleeves are on 5/8" centers. Designed and constructed in accordance with specification MIL-P-642B.

THREE CONDUCTOR



PJ-2—Equivalent WE-291A. Designed for use with 1/4" diameter tip, ring and sleeve jacks. Especially designed cone-shaped tip to prevent momentary shorting of tip and ring conductors when used with ADC PJ-339, WE-239A or similar three circuit jacks.



PJ-4 — Looping plug, dual three conductor type. Same conductor configuration as PJ-051 except has conductors wired internally, tip to tip, ring to ring and sleeve to sleeve. Black plastic shell.



PJ-6 — Equivalent WE-213. Designed for applications requiring two separate 3 conductor circuits. Popularly used with operator's intercom / monitor headsets. Black shell notched for polarity identification. Self-aligning plug on 1/16" centers. (**Note:** Not intended for use with standard jack panels where jacks are mounted on 5/8" centers.)

See ADC Catalog for Coaxial Plugs



PJ-7 — Equivalent WE-425. Twin type plug with tip, ring and sleeve conductors on 5/8" centers for use with all standard jack panels. Designed to mate with three conductor jacks having 1/4" diameter sleeves. Molded insulation. Black phenolic shell is notched to indicate polarity.



PJ-8 — Dual three conductor type with same conductor configuration as PJ-2, designed for non-shorting of tip and ring circuits when used with PJ-339, WE-239A or similar jacks. Black plastic handle notched to indicate polarity.



PJ-9 — Equivalent WE-338. Designed for applications requiring two separate 3 conductor circuits. Will mate with three-conductor jacks having 1/4" diameter sleeves. Molded insulation, black plastic handle notched to indicate polarity. Self-aligning plug sleeves on 5/8" centers. Has two separate cord entry holes and requires "Y" type cord or two separate cords.



PJ-051R — Equivalent WE-310. Formerly ADC PJ-3. Designed for use with 1/4" tip, ring and sleeve jacks. Molded insulation, red plastic shell, three conductor. Is in accordance with MIL-P-642B.

PJ-051B — Same as above except black plastic handle.

ADC patch cords



ADC Patch Cords have become standards in the communications industry. The heavy Nylon braided jacket excels in abrasion resistance. All cords have been designed to give the ultimate combination of durability, flexibility and reliability. ADC has numerous combinations of special cord assemblies using virtually every plug combination required. You are invited to submit your requests or requirements for quotations.

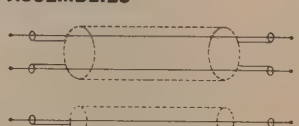
PATCH CORD LENGTH	TOLERANCE
6 inch	+ .375" —.00"
1 foot	+ .75 " —.00"
2 feet	+1.125" —.00"
3 feet	+1.375" —.00"
4 feet	+1.625" —.00"
5 feet	+2.0 " —.00"
6 feet	+2.25 " —.00"
10 feet	+2.625" —.00"

NOTES

1. Patch cord lengths are measure from backs of plug shells.
2. When outer jacket colors other tha noted are required add suffix:
   S — For Slate G — For Gree
   R — For Red B — For Blac
3. All cords and cord assemblies wi withstand 500 V, 60 Hz PBT betwee all conductor. Cordage is designed t have minimum leakage resistance c 50 Megohms with 100 volts appliec

2 CONDUCTOR SHIELDED, CORD ASSEMBLIES

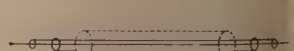
Length	Cord w/ PJ-1 Plugs	Cord w/ PJ-055B Plugs	Replacement Cords Only
6 inch	PJ-10½	PJ-50½	PJ-20½
1 foot	PJ-11	PJ-51	PJ-21
2 feet	PJ-12	PJ-52	PJ-22
3 feet	PJ-13	PJ-53	PJ-23
4 feet	PJ-14	PJ-54	PJ-24
5 feet	PJ-15	PJ-55	PJ-25
6 feet	PJ-16	PJ-56	PJ-26
10 feet	PJ-10	PJ-50	PJ-20



These cords provide two tinsel wire conductors plus a braided shield. The overall jacket is braided nylon. Black nylon is standard, also available in slate, green and red on special order. See Note 2.

3 CONDUCTOR SHIELDED, CORD ASSEMBLIES

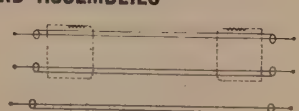
Length	Cord w/ PJ-2 Plugs	Cord w/ PJ-051R Plugs	Replacement Cords Only
1 foot	PJ-71	PJ-81	PJ-61
2 feet	PJ-72	PJ-82	PJ-62
3 feet	PJ-73	PJ-83	PJ-63
4 feet	PJ-74	PJ-84	PJ-64
5 feet	PJ-75	PJ-85	PJ-65
6 feet	PJ-76	PJ-86	PJ-66



These cords provide two tinsel wi conductors plus a braided shiel Overall jacket is braided nylon. Bla nylon is standard with slate color jacket also stocked. Green and red a available on special order. See Note

2 CONDUCTOR UNSHIELDED, CORD ASSEMBLIES

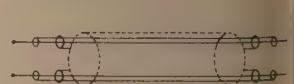
Patch Cords Length	Cord w/ PJ-327 Plugs	Cord w/ PJ-047R Plugs
1 foot	PJ-181	PJ-471
2 feet	PJ-182	PJ-472
3 feet	PJ-183	PJ-473
4 feet	PJ-184	PJ-474
5 feet	PJ-185	PJ-475
6 feet	PJ-186	PJ-476



The PJ-180 and PJ-470 series cords offer tinsel wire conductors, thermo plastic insulated. Standard color for PJ-180 series patch cords is slate. The standard color for the PJ-470 series cords is red. Other colors are available on special order. See Note 2.

3 CONDUCTOR SHIELDED, CORD ASSEMBLIES

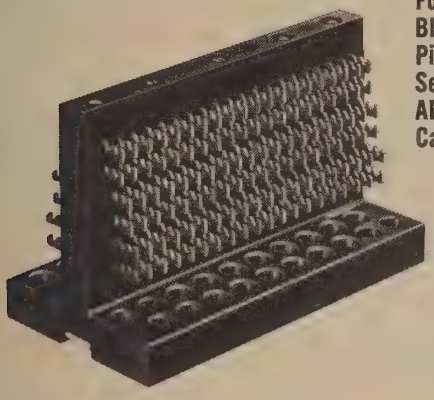
Length	Cord w/ PJ-7 Plugs	Cord w/ PJ-8 Plugs
1 foot	PJ-171	PJ-91
2 feet	PJ-172	PJ-92
3 feet	PJ-173	PJ-93
4 feet	PJ-174	PJ-94
5 feet	PJ-175	PJ-95
6 feet	PJ-176	PJ-96



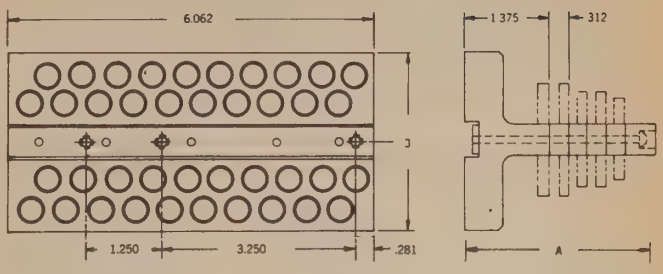
The PJ-90 and PJ-170 series cords p vide four tinsel wire conductors, pl a shield common to both sleeves the plugs. Standard color for the cords is black. They are also availal in slate, green or red on special ord See Note 2.

(ADC) molded terminal blocks—20 pin

Known for their ruggedness, ADC "Christmas Tree" Terminal Blocks have become standards in the Broadcast and Telecommunications Industries. The ADC 20-Pin Terminal Blocks are molded of durable, black, thermo-set plastic per Military specifications MIL-M-14F. Terminals are brass with a tin alloy plating for lasting solderability (see specifications below for details on solderability). The PJ-101 series blocks have terminals graduated in length for ease of wiring. The Figure 2 solderless terminals as furnished on the PJ-161 series blocks are designed to accommodate AMP No. 60197-1 Connectors as supplied by American Pamcor, Inc. or may be used as regular solder terminals. All Terminal Blocks are numbered along the top row for easy terminal identification.



For Wrap Terminal Block or 26-Pin Blocks, See Complete ADC Products Catalog



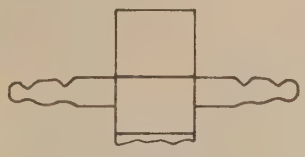


FIG. 1
Solder Type
Mat'l. .040 Thick

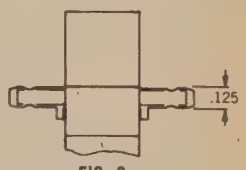


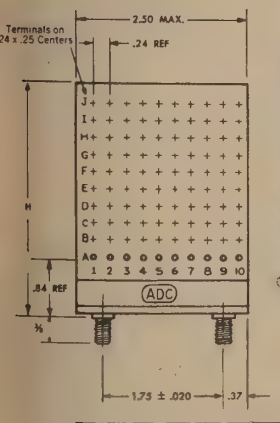
FIG. 2
Solderless or Solder
Mat'l. .032 Thick

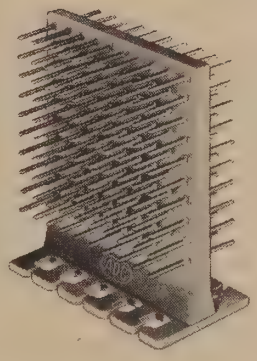
specifications

Terminals: Brass, Tin alloy plated.
Insulating Strips and Base: Black Thermoset plastic per MIL-M-14F, Type CFG.
Mounting Strip: Steel, Cadmium-Chromate per MIL-F-14072, #M262, Type II.
Current Carrying Capacity: 5 Amperes.
Insulation Resistance: 1000 Megohms Min.
Dielectric Strength: 2500 V RMS 60 Hz. between terminals.
Solderability: Per MIL-STD-202C, Method 203A
Initial: Excellent (over 95% coverage).
After 49 hour salt spray per MIL-STD-202C, Method 1013: good (90% coverage).
After 240 hours conditioning at +150 F and 95-98%. Relative Humidity: excellent.
After 90 day storage at room temperature: excellent.

Catalog No.				
Fig. 1 Terminal	Fig. 2 Terminal	No. Rows	No. Terminals	Dim. A
PJ-101	PJ-161	1	20	1.906
PJ-102	PJ-162	2	40	2.250
PJ-103	PJ-163	3	60	2.593
PJ-104	PJ-164	4	80	2.937
PJ-105	PJ-165	5	100	3.281
PJ-106	PJ-166	6	120	3.625
PJ-107	PJ-167	7	140	3.968
PJ-108	PJ-168	8	160	4.312
PJ-109		9	180	4.656
PJ-110		10	200	4.968
PJ-111		11	220	5.281
PJ-112		12	240	5.593

(ADC) "wrapid" terminal blocks FOR WRAPPED WIRE CONNECTIONS

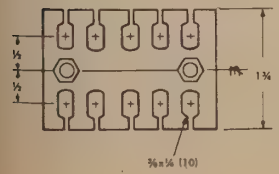




ADC's Wrapid Terminal Blocks provide for up to 100 connections in a space of 2½" wide by 3⅜" high. ADC offers a variety of Wrapid Terminal Blocks designed for specific wiring applications. The Wrapid Terminal Blocks can be used for wrapped solderless connections, wrapped and soldered connections, or in applications requiring wrap to solder or solderless connectors. Wrapped wire terminations can be accomplished with any commercially available wrapping tool. Behind the development of these terminal blocks is 30 years of experience in meeting rigid commercial and military specifications on a wide variety of devices. This is your assurance of top performance and long dependable service life.

specifications

Terminals: Brass, Electro-Tin Plated.
Block and Fanning Strip: PJ-600 Series — Asbestos Filled Polypropylene Molded. PJ-620 and 640 Series — Glass-filled NYLON (high temperature). Color — Natural (White). Heat Distortion — 442°F with 264 P.S.I.
Mounting Studs: (2) 8-32 Steel, Cadmium-Chromate Plating per MIL-F-14072 No. M262 II.



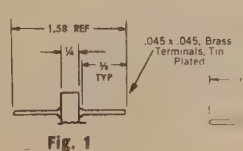


Fig. 1

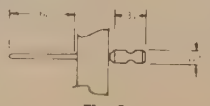


Fig. 2

No. of Terminals	Wrapped Solderless Application Fig. 1 Terminal	Wrapped and Solder Application Fig. 1 Terminal	Wrapped to Solder or Solderless Application Fig. 2 Terminal	H. Dim.
40	PJ-604	PJ-624	PJ-644	1.75
60	PJ-606	PJ-626	PJ-646	2.25
80	PJ-608	PJ-628	PJ-648	2.75
100	PJ-610	PJ-630	PJ-650	3.25

© United Technical Publications

AVA Electronics & Machine Corp.

No. AC-52



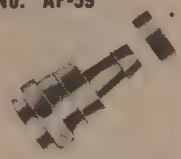
No. AC-52 — "C" type cable connector for RG/59/U cable. **Net $.36 ea.**

No. AF-56



No. AF-56 — "F" male cable connector for RG6/U foam cable **Net $.45 ea.**

No. AF-59



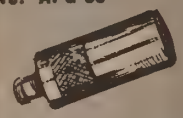
No. AF-59 — "F" male RG-59/U cable connector. **Net $.30 ea.**

No. AF-59A



No. AF-59A — "F" male RG-59/U cable connector, ferrule built on. **Net $.30 ea.**

No. APG-59



No. APG-59 — "F" male pushon connector with pin for RG-59/U cable. **Net $1.25 ea.**

No. AG-59



No. AG-59 — "F" male pushon connector for RG-59/U cable. **Net $.50 ea.**

No. AF-59-TS



No. AF-59-TS — "F" terminating male connector. **Net .75 ea.**

No. AC-52-TS



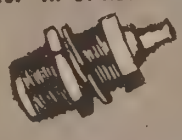
No. AC-52-TS — "C" terminating male connector. **Nt $.75 ea.**

No. AF-61A



No. AF-61A — "F" Female spring contact chassis connector. **Net $.50 ea.**

No. AF-61-ABM



No. AF-61-ABM — "F" female back mount chassis connector spring contact. **Net $.50 ea.**

No. AF61-APO



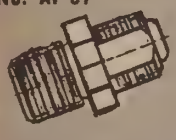
No. AF61-APO — "F" female spring contact push-on chassis connector. **Net $.75 ea.**

No. AF61-AP



No. AF61-AP — "F" female pressurized spring contact chassis connector. **Net $.90 ea.**

No. AF-81



No. AF-81 — "F" female adaptor, mates with F-59 and F-59A male connector. **Net $.50 ea.**

No. AF81-A



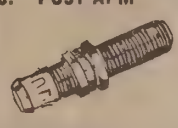
No. AF81-A — "F" female adaptor, with spring contact, fits all "F" male connectors. **Net $.95 ea.**

No. AF81-AB



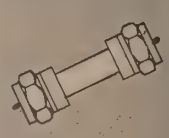
No. AF81-AB — "F" bulk head spring contact connector 1¾" long **Net $1.25 ea.**

No. P091-APM



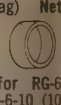
No. P091-APM — "F" pushon panel mount connector, spring contacts front and rear. **Net $2.95 ea.**

No. AF-71



No. AF-71 — "F" male adaptor. **Net $1.25 ea.**

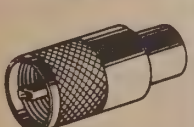
Crimping Ring for RG-59 cable, ACR-59-10 (10 per bag). **Net $.30 bag;** ACR-59-100 (100 bag) **Net $2.50 bag.**



Crimping Ring for RG-6 foam cable, ACR-6-10 (10 per bag). **Net $.50 bag;** ACR-6-100 (100 per bag). **Net $3.50 bag.**



No. PL-259



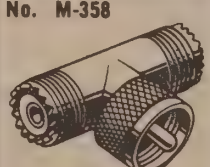
No. PL-259 — Male UHF cable connector. **Net $.50 ea.**

No. M-359



No. M-359 — Right angle UHF adaptor. **Net $1.25 ea.**

No. M-358



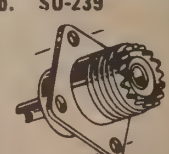
No. M-358 — "T" UHF adaptor. **Net $1.95 ea.**

No. PL-258



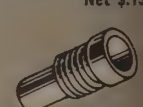
No. PL-258 — Female UHF adaptor. **Net $1.15 ea.**

No. SO-239



No. SO-239 — Female chassis UHF connector. **Net $.45 ea.**

No. UG-175/U — Adaptor for RG-58/U cable. **Net $.15 ea.**



No. UG-176/U — Adaptor for RG-59/U cable. **Net $.15 ea.**

No. 5804



No. 5804 — Female UHF chassis connector, ½" demounting. **Net $1.15 ea.**

No. A56-5804



No. A56-5804 — UHF male to "F" female adaptor. **Net $3.50 ea.**

No. B-259-PO

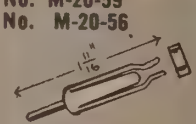


No. B-259-PO — UHF pushon male connector for RG-59/U cable. **Net $1.95 ea.**



WALL PLATES
all types
TV - CATV - MATV

No. M-20-59
No. M-20-56



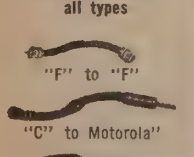
No. M-20-59 for RG-59/U, No. M-20-56 for RG-6/U — RF and shielded connectors. **Net $.20 ea.**

No. AF-61-APSO



No. AF-61-APSO — "F" female pushon chassis connector, staked or soldered body to chassis. **Net $.75 ea.**

CABLE ASSEMBLIES
all types



"F" to "F"

"C" to Motorola"

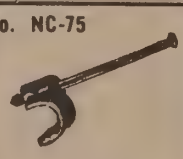
"C" to transformers.

No. CT-5911

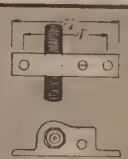


No. CT-5911 — Crimping tool — crimps ferrules on RG-6, RG-59 and RG-11/U cables. **Net $2.95 ea.**

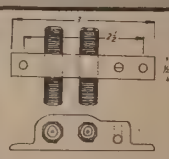
No. NC-75



No. NC-75 — Cable clip — for installing RG-59/U and other cables, up to .0250 OD, to wood or brick. **Net $2.00 C**



No. GB-568—Single cable ground block "F" female spring contact on each end of connector SS hardware. **Net $2.50 ea.**



No. GB-668-2 — Dual cable ground block, "F" female spring contacts on each end of connector, SS hardware. **Net $3.95 ea.**



No. FK-36 — Kits — assorted "F" connectors — Contents: 6 ea. — AC-52, AF-56, AF-59, AF-59A, AF-61A, AF-81. **Net $12.95 per kit**

AVA FOR ALL YOUR CONNECTOR NEEDS

Net

© United Technical Publicatio

CANNON® AUDIO CONNECTORS for low level circuit applications

CANNON PLUGS

ITT Cannon Audio Connectors are designed for use on audio/video and other low level circuit applications in the electronic/industrial fields where reliability, quiet operation and the elimination of mechanical interference are necessary. Some common uses are: microphones, tape recorders, hi-fi equipment, medical instruments, cameras, test instrumentation and computers.

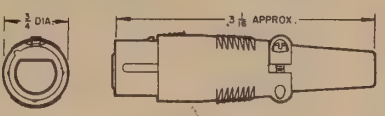
XLR CONNECTOR SERIES

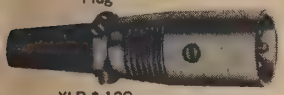
The XLR incorporates the most advanced audio/electronic design concepts. Small and compact, it features resilient insulators on the socket side plus resilient ribs for shock protection and quiet operation.

Shells are aluminum alloy (receptacles), or steel or aluminum alloy (plugs), with satin nickel finish. Insulators are rigid molded plastic (pin side), or resilient polychloroprene (socket side). Contacts are brass, silver plated. Coupling is by the latch-lock method.

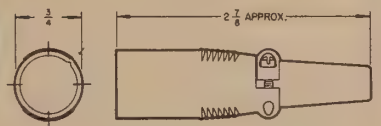


XLR-*-11C
XLR-*-11SC (steel shell)
SOCKET
Straight Cord Plug



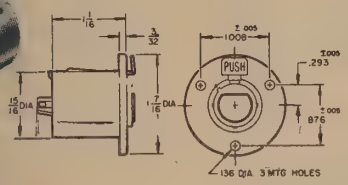


XLR-*-12C
XLR-*-12SC (steel shell)
PIN
Straight Cord Plug



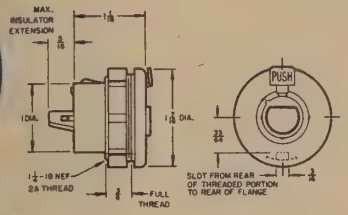


XLR-*-13
SOCKET
Wall Mounting Receptacle



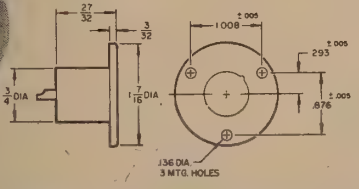


XLR-*-14
PIN
Wall Mounting Receptacle





XLR-*-13N
SOCKET
Panel Mounting Receptacle



CONTACT ARRANGEMENTS



3
3-15 AMP CONTACTS



4
4-10 AMP CONTACTS



5
5-7½ AMP CONTACTS

*Add contact arrangement to complete part number. Example: XLR-4-12C.

FEATURES

• QUIET OPERATION

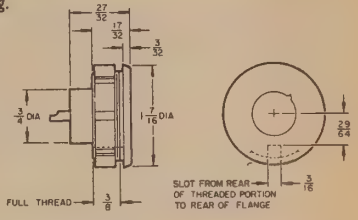
Thick aluminum cross sections for shell strength, plus resilient insulators and resilient ribs on the socket side, insure elimination of mechanical interference from shock.

• EASY TO WORK WITH

Finger grips for positive handling.
Integral cable clamp with two clamping positions for positive grip on cable sizes from 7/32 to 5/16 of an inch.
Large internal space for ease of wiring.

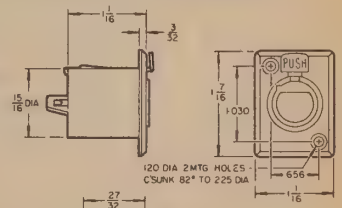


XLR-*-14N
PIN
Panel Mounting Receptacle



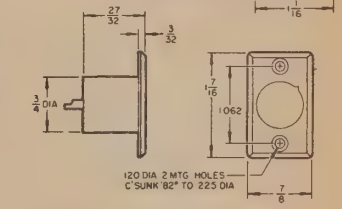


XLR-*-31
SOCKET
Wall Mounting Receptacle



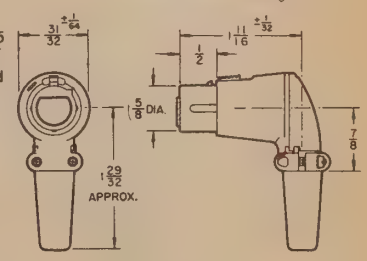


XLR-*-32
PIN
Wall Mounting Receptacle



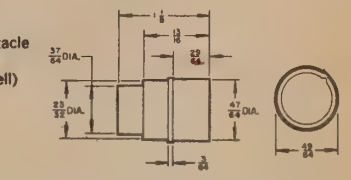


XLR-*-15
SOCKET
90° Cord Plug





Adapter Receptacle
XLR-*-50
(with plain shell)



P CONNECTOR SERIES

The ITT Cannon P is a versatile connector in terms of the wide range of contact arrangements offered. It is a proven connector and has been the standard of quality in the audio field for many years. Socket contacts are full floating and precision-made from milled bar stock.

Shells are zinc (receptacles), or steel or zinc (plugs), with satin chrome finish. Insulators are phenolic. Contacts are brass, silver plated. Coupling is by the latch-lock method.

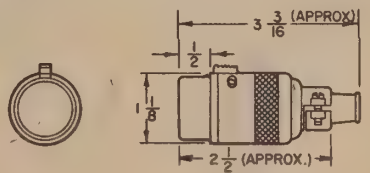
Other P Series connectors not shown.

P*-CG-12S Straight cord plug. (Pin)
P*-13 Flush panel receptacle. (Socket)
P*-CG-16 90° angle cord plug. (Pin)

*Add contact arrangement to complete part number. Example: P2-CG-11S.

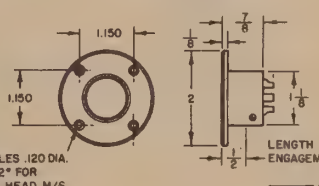


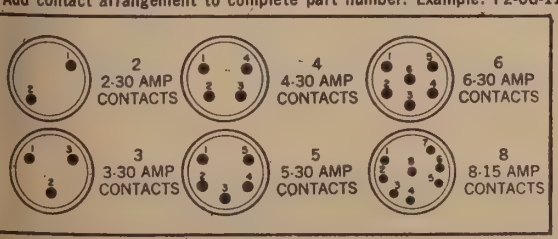
P-*-CG-11S
SOCKET
Straight Cord Plug





P-*-14
PIN
Wall Mounting Receptacle





CANNON ITT
ITT CANNON ELECTRIC,
A DIVISION OF INTERNATIONAL
TELEPHONE AND TELEGRAPH CORPORATION.

SEE YOUR ITT CANNON AUTHORIZED DISTRIBUTOR

© United Technical Publications

BINDING POSTS

BINDING POST

"Standard" Type

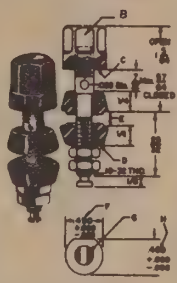


DESCRIPTION: Banana Plug Receptacle, .161 I.D.; Head non-removable from Stud; Molded in Brass Bushing in Head; Molded in Brass Bushing in Washers; For Panels 1/16" to 1/4" thick; Drill 1/2" hole for mounting washers; Wire Hole is at right angle to Flat on Insulated Washers; Production Punch for keyed Slot for mounting Washers.

Cat. No. 274 Standard Brass Red or Black

BINDING POST

30 Amp. 2000 VDC



Molded Nylon Body Banana Plug Receptacle, .161 I.D.; Head non-removable from Stud; Molded in Brass Bushing in Head; Molded in Brass Bushing in Washers; For Panels 1/16" to 1/4" thick; Drill 1/2" hole for mounting washers; Wire Hole is at right angle to Flat on Insulated Washers; Production Punch for keyed Slot for mounting Washers.

WRAP AROUND TYPE **COLORS**

Cat. No. 275 Brass, Nickel Plated, Red, Black, Yellow, Green, White, Blue, Brown, Grey.

Cat. No. 275A Brass Plated, Red, Black, Yellow, Green, White, Blue, Brown, Grey.

TIP JACK TYPE

Similar to 275A, Plated, Brass, except with Tip Jack receptacle.

Cat. No. 277 Red, Black

BINDING POST FLUTED HEAD



New fluted nut design is attractive and functional molded nylon body per MIL-P-20693A completely insulates panel from binding post. Makes ideal connection for electrical and electronic equipment. Brass nickel plated "Wrap Around Type" solder connection to stud rated 30 amp. 2000 VAC test capacitance 5.0 mmfd. Similar construction as our No. 275.

Cat. No. 273 Nickel plated Red, Black

BINDING POST

NEW! BIRNBACH "Multi-Use" Binding Posts

Safe-Positive-Heavy Duty



Rugged, versatile "Multi-Use" binding post made of molded nylon with molded-in brass inserts in head and washer for complete insulation from panel. For use on panels 1/16" to 1/4" thick. Mounting hole 1/2". Current Capacity: 30 Amps. Voltage: 2000 VAC. RMS Test. **No. 276 can be soldered directly to stud. Will permit six different methods of connection above panel and three below panel.**

Cat. No. 276 Nickel Plated; Red, Black, Yellow, Green, White, Blue, Brown, Grey.

BINDING POST

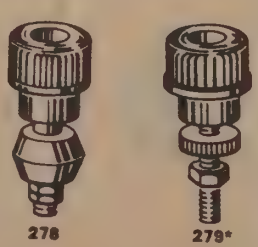
Wrap Around Type



Designed to accept phone tip plug, spade lug, banana plug, alligator clip and wire strand. Direct solder connection. Molded nylon head (non-removable from stud) and washer completely insulates post from panel. Mounts in 1/2" or keyed hole for panels 1/16-1/4" thick. Nickel-plated brass metal parts. Molded-in brass bushings in head and washers. Rated 2,000 volts AC RMS test. 30 amp safe current-carrying capacity.

Cat. No. 271 Red, Black

STANDARD DUTY 5-WAY BINDING POST



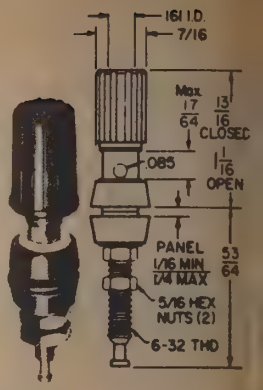
Molded-in brass bushings for complete insulation. Useful for standard duty work. Available in Red or Black. Specify color. Body is brass nickel plated.

6 AMPS

Cat. No. 278 Red, Black
Cat. No. 279* Red, Black

* Same as above, but normally grounded. (Without bottom insulating section.)

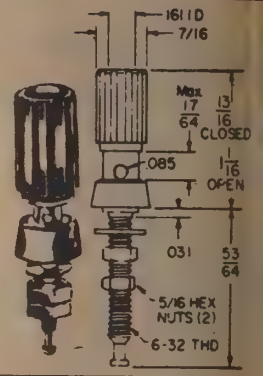
NYLON BINDING POST



Head: MOLDED NYLON, with brass plated insert. **Body:** Brass Plated. **Washers:** MOLDED NYLON, brass plated inserts. **Accepts:** Phone tip plug, spade lug, banana plug, alligator clip, or wire strand. **Rating:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd., Molded washers completely insulate post from panel. Miniature washers and narrow fluted head require minimum panel space. Mounts in 3/4" round or "D" hole in panel as indicated. Wrap-around solder terminal on stud for direct connection.

Cat. No. 280 Red, Black, Yellow, Green.

METAL BINDING POST

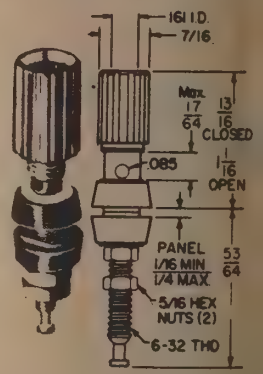


Head: Fluted Brass, Plated. **Body:** Brass, Plated. **Washer:** MOLDED BLACK NYLON, with brass plated insert. **Accepts:** Phone tip plug, spade lug, banana plug, alligator clip, or wire strand. **Rating:** 15 Amps AC for 10°C temp. rise, continuous duty, Fluted-head metal post to match our No. 280. For use where direct ground connection is made to panel or chassis. Supplied with brass, gold-plated flat metal washer for grounding.

Cat. No. 281

METAL BINDING POST

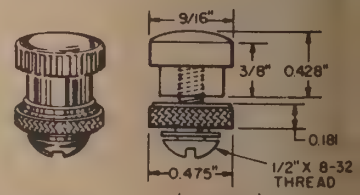
Insulated



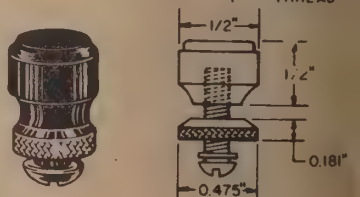
Head: Fluted Brass, plated. **Body:** Brass plated. **Washer:** MOLDED BLACK NYLON, with brass plated insert. **Accepts:** Phone tip plug, spade lug, banana plug, alligator clip, or wire strand. **Rating:** 15 Amps AC for 10°C temp. rise, continuous duty. 1 K Volts, 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd, Fluted-head metal post to match our No. 280. Molded washers insulate post from panel for use where internal ground circuit is isolated from chassis or panel.

Cat. No. 282

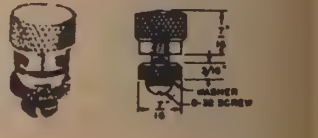
INSULATED BINDING POST



Molded bakelite head with brass insert molded-in. Supplied complete with 8/32 x 1/2" screw, lock washer. Has brass insert molded-in. Supplied with washer. Available in black. **Cat. No. 184**



Binding Post Molded bakelite head with brass insert molded-in. Supplied complete with 8/32 x 1/2" screw, lock washer. Has brass nickel-plated retaining washer. Red, Black. **Cat. No. 185**



Binding Post Brass, heavily nickel-plated overall. Complete with screw and lock washer. Designed for high amperage, low resistance connections.

Cat. No. 186
Metal Binding Post

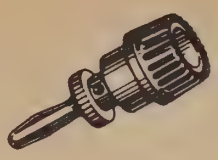
BIRNBACH COMPANY INC.

FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

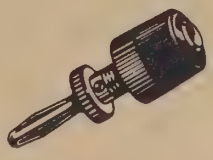
BINDING POSTS

COMBINATION POST-PLUG



Head: CAPTIVE, Molded Butyrate. **Body:** Brass, nickel plated. **Spring:** Four-leaved phosphor bronze, nickel plated. **Rating:** 15 Amps AC for 10°C Temp. rise, continuous duty. Converts any panel-mounted banana jack into a five-way binding post termination. Accepts phone tip, spade lug, banana plug, alligator clip, or solid or stranded wire.

Cat. No. 283 Red, Black



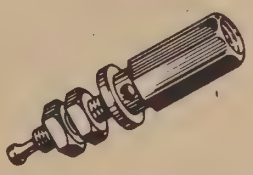
Head: Molded Nylon, SPECIFY COLOR. **Body:** Brass, nickel plated. **Spring:** Four - leaved phosphor bronze, nickel plated. **Rating:** 15 Amps AC for 10°C Temp. rise, continuous duty.

Converts any panel-mounted banana jack into a nylon five-way binding post terminatiion. Accepts phone tips, spade lugs, banana plug, alligator clips, or solid or stranded wires.

Cat. No. 284 Red, Black, Yellow, Green, Blue, White.

BINDING POST

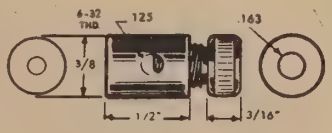
Metal Five-Way



Head: CAPTIVE, Hex brass nickel plated. **Body:** Brass, nickel plated. **Accepts:** Phone tip, spade lug, banana plug, alligator clip or wire strand.

Cat. No. 285 Wrap-around

METAL BINDING POST



Head: BRASS nickel plated. **Body:** Brass nickel plated.
Accepts standard phone tips or banana plugs.

Cat. No. 286

COMBINATION TERMINALS

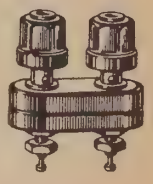


Material: BRASS, nickel plated. Combination Screw and Turret Terminal. Knurled shank prevents turning.

Cat. No.	A	B	C	D	E	F	G	Bhms	Panel Thk.
187	5/16	1/4	1/16	3/64	1 1/64	1/8	.220	6-32	3/32
188	3/8	3/8	3/32	1 3/64	1 3/64	5/32	.257	10-32	3/16

DUAL ASSEMBLY

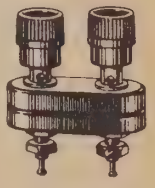
Nylon



MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward or sideways. **Body:** Brass, nickel plated. **Head:** Captive: MOLDED NYLON, with molded in brass insert. **Rating:** 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 3.0 mmfd. to panel. Mounts in two 1/2" holes on 3/4" mounting centers in panels up to 1/4" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Cat. No. 188BB Two Black Heads
Cat. No. 188RR Two Red Heads
Cat. No. 188RB One Red, One Black Head

DUAL BINDING POST



MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward or sideways. **Body:** Brass, nickel plated. **Head:** Captive: MOLDED BUTYRATE, Red, Black. **Rating:** 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 3.0 mmfd. to panel. Mounts in two 1/2" holes on 3/4" mounting centers in panels up to 1/4" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Cat. No. 189BB Two Black Heads
Cat. No. 189RR Two Red Heads
Cat. No. 189RB One Red, One Black Head

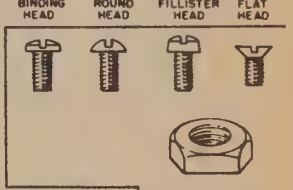
BLACK STYRENE INSULATOR



Insul: STYRENE. **Rating:** 2 K Volts 60 cycle AC continuous working voltage.
Mounts in two 1/2" holes on 3/4" mounting centers in panels up to 1/4" thick.

Cat. No. 190

ALL-NYLON FASTENINGS — Screws and Nuts - Washers - Standoffs



Zytel 101 per MIL P 20693 Spec., MIL S 7742 Spec. Birnbach All-Nylon Fastenings are made of Zytel 101*, a Polymide plastic of the Nylon 6.6 Type. They offer outstanding insulating properties plus resistance to heat, shock, vibration and chemical solvents plus lightness elasticity and superior torque strength. In most cases, because of their high dielectric strength, they eliminate the need of bushings, washers or other insulation. They are corrosion resistant, non-magnetic and good torque strength thru a wide temperature range. Continuous service temperature to 300°F (150°C). Stock color: Natural. Additional colors & types available to order. Zytel 101 per MIL-D-7019B. — All parts are manufactured to American Thread Standards to a class 2A or 2B fit. B 18.2 (hex nuts), B 18.6 (machine screws), B 1.1 (thread specs.)

*Reg. T.M. of DuPont

ALL NYLON MACHINE SCREWS

STANDARD PKG.: 100, 1000

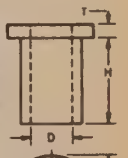
Cat. No.	Size	Type
6640	2-56x1/4"	Round Head
6640A	2-56x1/4"	Fillister Head
6640B	2-56x1/4"	Binding Head
6641	2-56x3/8"	Round Head
6641A	2-56x3/8"	Fillister Head
6641B	2-56x3/8"	Binding Head
6550	2-56x1/2"	Round Head
6551	2-56x1/2"	Fillister Head
6551A	2-56x1/2"	Binding Head
6643	4-40x1/4"	Round Head
6643A	4-40x1/4"	Fillister Head
6643B	4-40x1/4"	Binding Head
6644	4-40x3/8"	Round Head
6644A	4-40x3/8"	Fillister Head
6644B	4-40x3/8"	Binding Head
6552	4-40x1/2"	Round Head
6552A	4-40x1/2"	Fillister Head
6552B	4-40x1/2"	Binding Head
6646	6-32x1/4"	Round Head
6646A	6-32x1/4"	Fillister Head
6646B	6-32x1/4"	Binding Head
6553	6-32x3/8"	Round Head
6554	6-32x3/8"	Binding Head
6555	6-32x"3/4	Fillister Head
6556	6-32x3/8"	Flat Head
6557	6-32x1/2"	Round Head
6558	6-32x1/2"	Binding Head

ALL NYLON MACHINE SCREWS

STANDARD PKG.: 100, 1000

Cat. No.	Size	Type
6559	6-32x1/2"	Fillister Head
6560	6-32x1/2"	Flat Head
6648	6-32x3/4"	Round Head
6648A	6-32x3/4"	Fillister Head
6648B	6-32x3/4"	Binding Head
6561	6-32x 1"	Round Head
6561C	6-32x 1"	Flat Head
6650	8-32x1/4"	Round Head
6650A	8-32x1/4"	Fillister Head
6650B	8-32x1/4"	Binding Head
6562	8-32x3/4"	Round Head
6563	8-32x3/8"	Binding Head
6564	8-32x3/8"	Flat Head
6565	8-32x3/8"	Fillister Head
6566	8-32x1/2"	Round Head
6567	8-32x1/2"	Binding Head
6568	8-32x1/2"	Flat Head
6569	8-32x1/2"	Fillister Head
6570	8-32x3/8"	Round Head
6571	8-32x3/8"	Fillister Head
6572	8-32x3/4"	Round Head
6572A	8-32x3/4"	Fillister Head
6572B	8-32x3/4"	Binding Head
6573	8-32x 1"	Flat Head
6573A	8-32x 1"	Fillister Head
6574	10-32x3/8"	Round Head
6575	10-32x1/2"	Round Head
6576	10-32x1/2"	Flat Head
6577	10-32x3/8"	Round Head
6578	10-32x 1"	Round Head
6579	10-32x 1"	Flat Head

BIRNBACH NYLON BUSHINGS AND SPACERS



Designed with wide flanges to completely isolate screw from mounting surface, useful where hi tensile and torque requirements require high strength non-insulating screws Natural color.

Cat. No.	Used with Screw Size	I	W	T	H	D
6549A	#6	.140"	.290"	3/64"	1/4"	.170"
6549B	#8	.173"	.344"	1/16"	3/16"	.205"
6549C	#10	.200"	.399"	1/16"	3/16"	.260"
6549D	1/4"	.260"	.513"	1/16"	3/16"	.312"
6549	#4	.115"	.235"	3/64"	1/4"	.146"



Birnbach All-Nylon Hex Nuts

STANDARD PKG.: 100, 1000

Cat. No.	Size	Cat. No.	Size
6585	2-56	6588	8-32
6586	4-40	6589	10-32
6587	6-32	6590	1/4-20



Birnbach All-Nylon Washers

STANDARD PKG.: 100, 1000

Cat. No.	Fits Screw No.	O.D.	I.D.	Thickness
6592	2	1/4"	3/32"	.016"
6593	4	1/4"	1/8"	.016"
6594	6	5/16"	5/32"	.031"
6595	8	3/8"	.170"	.031"
6596	10	3/8"	.195"	.031"
6597	1/4"	5/16"	3/16"	.063"



BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

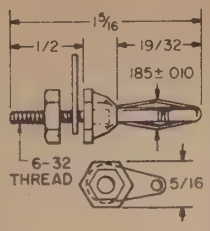
NON-INSULATED BANANA PLUGS

Variations of Standard Plugs Available to Order. Plated to Gov't. Specs.

BANANA PLUG No. 400

Hexed brass nickel plated. Fits all standard banana plugs. Complete with hex brass n.pl. nut and tinned copper lug. Spring is four-leaved nickel plated. Rated at 5 amps.

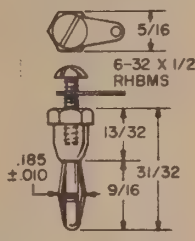
Cat. No.	Spring	Dim. "A"
400	Phos. Bronze	1/2"
400A	Phos. Bronze	3/8"
400B	Beryl. Copper	1/2"



BANANA PLUG No. 401

Hexed brass nickel plated. One-piece four-leaved spring. Complete with brass n.pl. screw and tinned copper lug. Rated at 5 amps. Fits all standard banana jacks.

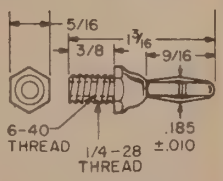
Cat. No.	Spring
401	Phos. Bronze
401B	Beryl. Copper



BANANA PLUG No. 404A

Hexed brass and four-leaved phosphor bronze spring all nickel plated. Rated at 5 amps. Fits all standard banana jacks.

Cat. No.	Spring
404A	Banana Plug

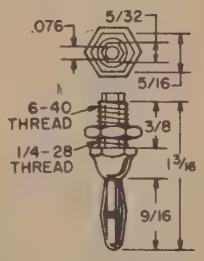


BANANA PLUG No. 404S

Hexed brass nickel pl. Complete with hex brass n.pl. nut. Has solderless Scrulok connection. Fits all standard banana plugs. Spring is four-leaved phosphor bronze nickel plated. Rated at 5 amps.

Cat. No.	Spring
404S	Phos. Bronze
404SB	Beryl. Copper

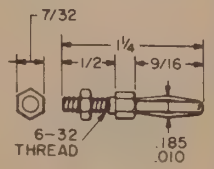
Scrulok Banana Plug



BANANA PLUG No. 414

Hexed brass, nickel plated. One-piece construction. Four - leaved phosphor bronze spring. Complete with brass hexed nut n.pl. Rated at 5 amps. Fits all standard banana jacks.

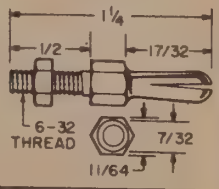
Cat. No.	Spring
414	Phos. Bronze



BANANA PLUG No. 416

Hexed brass nickel plated. Cross slotted for positive contact. One-piece construction. Fits all standard banana jacks. Complete with hexed brass n.pl. nut.

Cat. No.	
416	Banana Plug

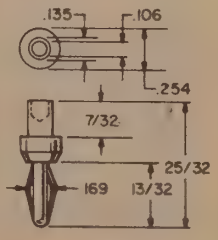


MIDGET BANANA PLUG
Rivet Type — No. 426

Brass silver plated body. One-piece four-leaved phosphor bronze spring silver plated. Also made to Rigid Jan specs.

Cat. No.	"A"
426	7/32"
426A	5/32"

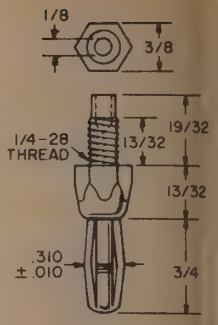
Midget Banana Plug Rivet Type



GIANT PLUG No. 392A

Body is hexed brass nickel plated. Rated at 25 amps. Has large soldering well in threaded shank. Fits all Giant Banana Jacks.

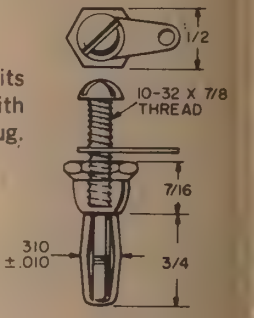
Cat. No.	Spring
392A	Phos. Bronze



GIANT PLUG No. 396

Body is hexed brass, nickel plated. Fits all giant banana jacks. Complete with nickel plated screw and soldering lug. Rated at 25 amps.

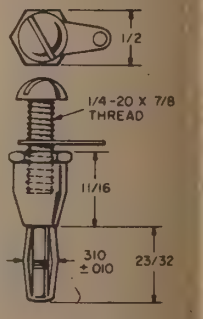
Cat. No.	Spring
396	Phos. Bronze
396B	Beryl. Copper



GIANT PLUG No. 397

Body is hexed brass, nickel plated. Fits all giant banana jacks. Complete with nickel plated screw and soldering lug. Heavy duty, 25 amp. rating.

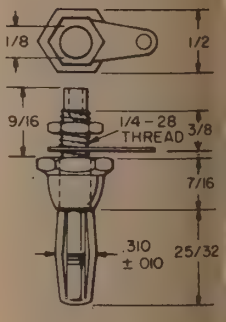
Cat. No.	Spring
397	Phos. Bronze
397B	Beryl. Copper



GIANT PLUG No. 398

Body is hexed brass, n.pl. nut and tinned copper lug. Has large soldering well in threaded shank. Used in high amperage circuits rated at 25 amps. Fits all giant banana jacks.

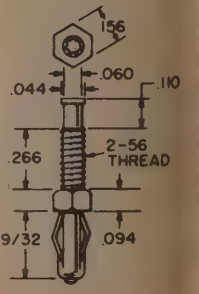
Cat. No.	Spring
398	Phos. Bronze
398B	Beryl. Copper



SUB MINIATURE BANANA PLUGS

One piece beryllium copper springs insure positive and lasting contact. Silver plated overall.

Cat. No.	Description
590	Rivet Type Plug
591	Screw Type Plug



BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

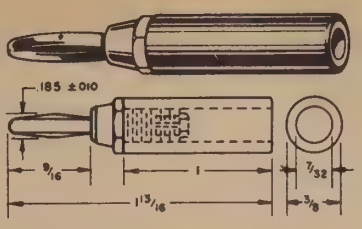
INSULATED BANANA PLUGS

INSULATED BANANA PLUG

Hexed brass n.pl. spring type. Fits standard banana jacks. Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No.	Spring	Plating
404	Phos. Brz.	Nickel
404CB	Beryl. Cop.	Nickel
404SP	Phos. Brz.	Silver
404CB-SP	Beryl. Cop.	Silver

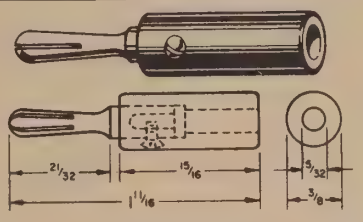


INSULATED BANANA PLUG

Split type plug brass n.pl. fits standard banana jacks. Set screw. Solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No.	
604	Banana Plug

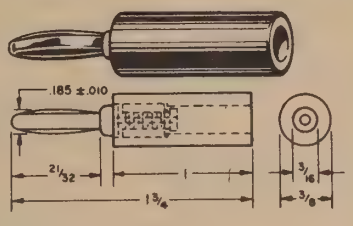


INSULATED BANANA PLUG

Brass n.pl. plug. Fits standard banana jacks. Spring type. Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No.	Spring	Plating
465	Phos. Brz.	Nickel
465B	Beryl. Cop.	Nickel
465SP	Phos. Brz.	Silver
465B-SP	Beryl. Cop.	Silver

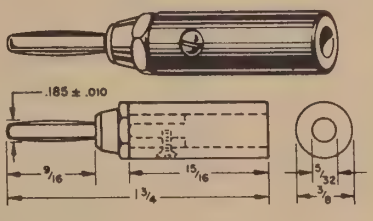


SPRING BANANA PLUG

Hexed brass n.pl. plug. Set screw solderless connection 404BC Beryllium springs, highly resilient. Molded handle.

Colors: Red, Black Yellow, Blue, Green, White.

Cat. No.	Spring
404B	Phos. Brz.
404BC	Beryl. Cop.

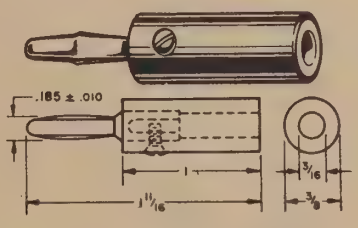


INSULATED BANANA PLUG

Plug brass n.pl. set screw solderless connection. Spring type. Fits standard banana jacks. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No.	Hdl.	Spring
466	1"	Ph. Brz.
466A	1½"	Ph. Brz.

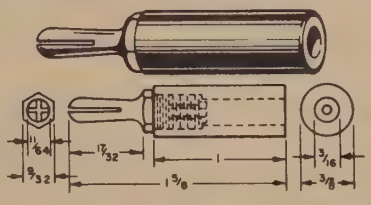


INSULATED BANANA PLUG

Split type, brass n.pl. Scrulok solderless connection. Fits standard jacks. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No.	
606	Banana Plug

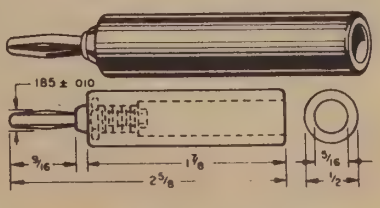


INSULATED BANANA PLUG

Plug brass n.pl. Scrulok solderless connection. Spring type. Fits standard jacks. Plastic handle.

Colors: Red, Black.

Cat. No.	Spring
341	Phos. Brz.
341B	Beryl. Cop.

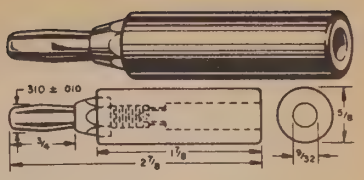


INSULATED GIANT PLUG

Plug brass n.pl. Wire can be soldered to plug. Spring type. Fits giant banana jacks. Plastic handle.

Colors: Red, Black.

Cat. No.	Spring
392	Phos. Brz.
392B	Beryl. Cop.

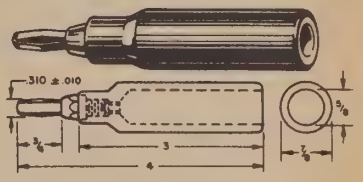


INSULATED GIANT PLUG

Plug brass n.pl. Wire can be soldered to plug. Spring type. Fits giant banana jacks. Polished giant hard rubber handle.

Colors: Red, Black.

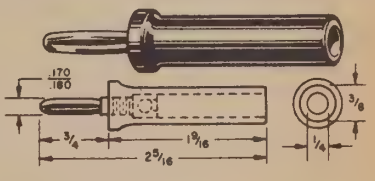
Cat. No.	Spring
342	Phos. Brz.
342B	Beryl. Cop.



Long Shoulder Handle INSULATED BANANA PLUG

Long shoulder handle insulated banana plug. Handle made of bakelite. Available in various colors. Red, Black, Yellow, Blue, Green, White.

Cat. No.	
424	

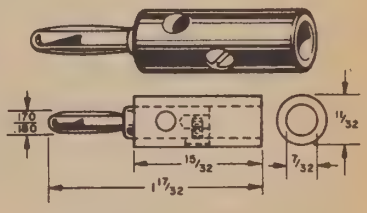


STACK BANANA PLUG Solderless

Brass, nickel plated, solderless connection. Accepts standard banana plugs in top and side. Interconnects unlimited amount of multiple circuits.

Colors: Red, Black, Yellow, Green.

Cat. No.	Spring
425	Phos. Brz.
425A	Bery. Cop.

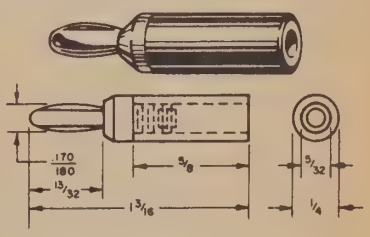


INSULATED MIDGET BANANA PLUG

Spring type. Fits all standard Banana jacks. Beryllium spring retains resiliency after thousands of insertions. Wire soldered directly into plug.

Colors: Red, Black.

Cat. No.	Spring	Plating
455	Phos. Brz.	Nickel
455BC	Beryl. Cop.	Silver
455A	Phos. Brz.	Silver
455A-BC	Beryl. Cop.	Nickel

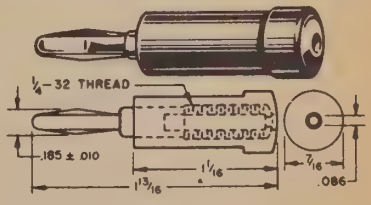


TIP PLUG TO BANANA PLUG ADAPTER

Fits standard banana jacks. Adapter for phone tip to banana plug. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

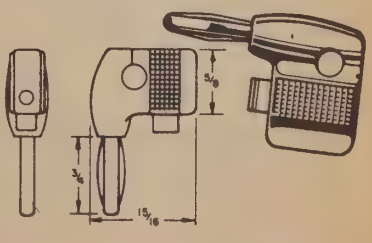
Cat. No.	Spring
467	Phos. Brz.
467B	Beryl. Cop.



PUSH BUTTON BANANA PLUG

Wire is fastened easily, speedily, and securely without soldering. Simply by pressing the push buttons the bare wire can be inserted into the opening of the plug.

Cat. No. 122 Push Button Banana Plug, Red, Black, Yellow, Green, White.
No. 122 Banana Plug will fit all Standard Banana Jacks.



BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

INSULATED PHONE TIPS, TEST PRODS

SOLDERLESS PHONE TIPS

Brass, nickel plated. Wire fits thru body of tip, tightened around screw with nickel plated knurled nut. Fits all standard phone tip jacks.

Cat. No.
23 Junior Solderless Phone Tip
24 Senior Solderless Phone Tip

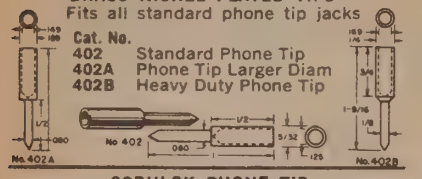
No. 23 No. 24



BRASS NICKEL PLATED TIPS

Fits all standard phone tip jacks

Cat. No.
402 Standard Phone Tip
402A Phone Tip Larger Diam
402B Heavy Duty Phone Tip

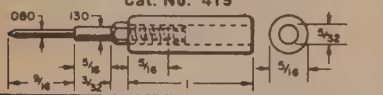


SCRULOK PHONE TIP

Fits standard phone tip jacks. Plug is brass, nickel plated. Has Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 419

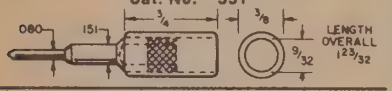


PHONE TIP

Plugs into standard phone tip jacks. Brass nickel plated plug. Accommodates standard banana plug in molded plastic handle.

Colors: Red, Black, Yellow, Blue, Green, White.

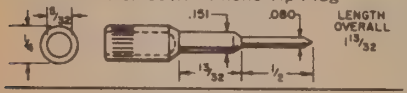
Cat. No. 331



PHONE TIP PLUG No. 331A

Plugs into all standard phone tip jacks. Barrel of plug accommodates all standard banana jacks. Brass, nickel plated.

Cat. No. 331A Phone Tip Plug

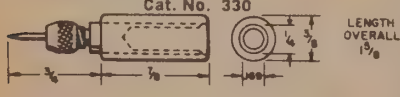


NEEDLE POINT PLUG

Brass nickel plated body. Needle point tip. Accommodates standard banana plug in molded plastic handle.

Colors: Red, Black.

Cat. No. 330

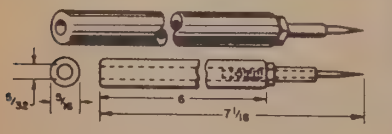


BAKELITE PENCIL TEST PROD

Body is brass nickel plated with steel n.pl. needle. Has Scrulok solderless connection Bakelite handle.

Colors: Red, Black.

Cat. No. 411 Bakelite Pencil Test Prod

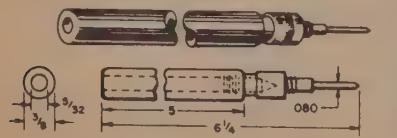


SOLDERLESS TEST PRODS

Body is brass nickel plated with solderless knurled nut connection. Heavy duty needle-point, nickel plated.

Colors: Red, Black.

Cat. No.	(A) Overall	(B) Handle Length
410	5 1/8"	4"
343	6 1/4"	5"

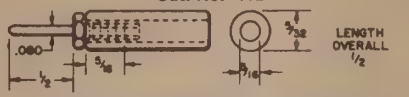


SCRULOK PHONE TIP

Brass nickel plated. Fits standard phone tip jacks. Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 412

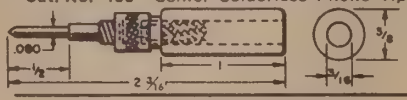


INSULATED SOLDERLESS PHONE TIPS No. 409

Insulated handles, fitted to solderless phone tips. Made of Brass, Nickel Plated. Wire easily attached by threading through hole in handle and tightening knurled nut.

Colors: Red, Black, Yellow, Blue, Green, White

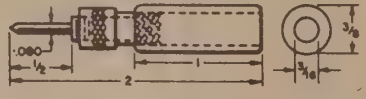
Cat. No. 409 Senior Solderless Phone Tip



JUNIOR SOLDERLESS PHONE TIP

Same as above except 2" overall length. Specify colors.

Cat. No. 415Jr.

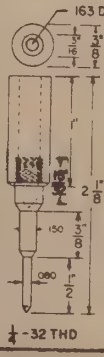


HEAVY DUTY TIP PLUG
Threaded

BODY: Brass, nickel plated.

DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits standard phone tip jacks. Threaded for easy assembly in plastic handle.

No. 349A



INSULATED TIP PLUG
Heavy Duty Type

HANDLE: plastic. Red Yellow, Green, Blue, White and Black

SPECIFY COLOR

PLUG: Brass, nickel plated.

DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks

No. 349

TEST PRODS

NEEDLEPOINT TEST PRODS

Brass nickel plated body with steel nickel plated needle. Chuck threaded in end of handle is removable for replacing needles. Polished cast phenolic handle.

Cat. No.	(A) Overall	(B) Handle Length
344	4 13/16"	4"
345	5 13/16"	5"

Colors: Red, Black.

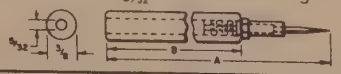


SCRULOK NEEDLEPOINT TEST PRODS

Phenolic insulated prod, has Scrulok solderless connection. Body is brass nickel plated with steel n.pl. needle.

Colors: Red, Black.

Cat. No.	(A) Overall	(B) Handle Length
417	5 3/32"	4"
418	6 3/32"	5"

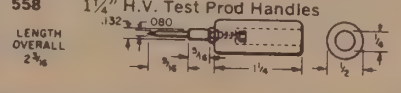


HEAVY DUTY HIGH VOLTAGE TEST PROD HANDLES No. 558

These bakelite prods are the same as used on the meter end of high voltage test leads Cat. No. 562. Tips are heavy brass with nickel plating.

Colors: Red, Black.

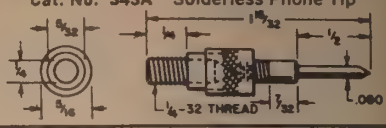
Cat. No.
558 1 1/4" H.V. Test Prod Handles



SOLDERLESS PHONE TIP No. 343A

Brass, nickel plated. Wire easily attached by threading thru hole provided, and tightening knurled nut. Threaded to take plastic handle.

Cat. No. 343A Solderless Phone Tip



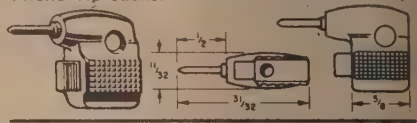
PUSH BUTTON PHONE TIP PLUGS

Wire is fastened easily, speedily, and securely without soldering. Simply by pressing the push buttons the bare wire can be inserted into the opening of the plug.

Colors: Red, Black.

Cat. No. 121 Push Button Phone Tip Plug

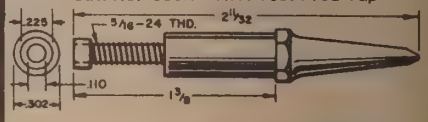
No. 121 Phone Tip Plug will fit all Standard Phone Tip Jacks.



HIGH VOLTAGE TEST PROD TIP No. 559A

Heavy brass, nickel plated. Large solder well accommodates heavy wires. As used on Birnbach High Voltage Test prod Handle. No. 559 and 562 Test Leads.

Cat. No. 559A H.V. Test Prod Tap

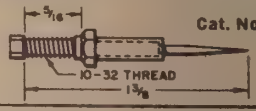


NEEDLE POINT PROD TIP No. 439

Extra heavy needle point for piercing insulations or plating. Solderless Scrulok wire connection. Brass, nickel plated body; needle point, steel, nickel plated. Replacement tip for No. 408 Leads.

Replacement Needle Point Prod Tip

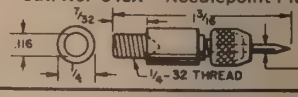
Cat. No. 439



NEEDLE POINT PLUG No. 345A

Has a brass, nickel plated body, steel nickel plated needle. Sharp point will pierce insulation or plating. Has removable chuck for replacing needle. Threaded to take handle.

Cat. No. 345A Needlepoint Plug

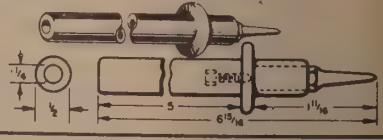


HEAVY DUTY HI-VOLTAGE TEST PROD HANDLE

Tip is heavy brass nickel plated. Bakelite finger guard. Accommodates IN-34 diode and condenser for use as RF Probe.

Colors: Red, Black.

Cat. No.
559 6" H.V. Test Prod Handles

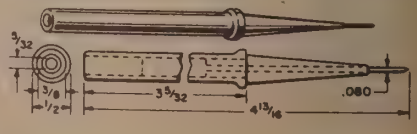


TEST PROD No. 424A

Shouldered insulated handle made of bake lite. Tip made of nickel-plated brass has set screw in side for securing conductor and thus making a solderless connection. Tip screw into handle. Available in Red and Black. Indicate color.

TEST PROD No. 424B with Banana Plug Adapter

Same as No. 424A except with a banana plug adapter in back of handle.

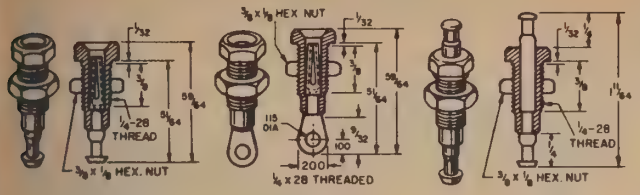


BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

NYLON TIP JACKS AND PLUGS

ALL NYLON TIP JACKS



No. 1180 No. 1182 No. 1184

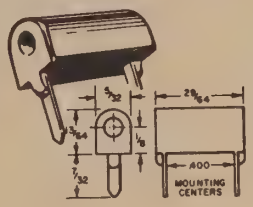
Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in ¼" hole in panels up to ¼" thick. Meets following requirements:

● Salt Spray Test — Withstands 100 hours ● Rated Voltage & Current — 1000 volts peak at 5 amps max. ● Test Voltage — 9000 volts DC peak ● Insulation Resistance — 5000 megohms ● Operating Temperature — 55 to +150C ● Nominal Capacity — 2.0 mmf. ● Material Specifications — A. Body: Nylon Grade FM 10001; A. Center Contact: Numbers 1180 and 1182 Heat Treated Beryllium Copper Silver plated per Spec 72-53. Number 1184 Brass Tin Pl.; Hex Nut: Brass Nickel Pl.

● **Colors:** Red, Black, Orange, Green, Blue, White, Brown, Yellow, Grey & Purple. Specify Color.

Cat. No. 1180 Wrap Around **Cat. No. 1182** Spade Terminal
Cat. No. 1184 Feed Through

PRINTED CIRCUIT TEST JACKS

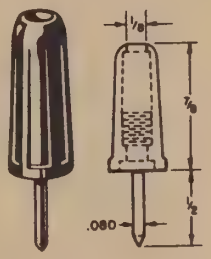


Designed for permanent, soldered assembly to printed circuit boards. Nylon bodies. Has gold over silver plated Beryllium copper contacts which provide low resistance contact. Takes standard .080" diameter test probes.

Colors: Red, Black, Green, Brown, Yellow, Blue, Purple, Grey, Orange, White.

Cat. No. 1177 Printed Circuit Jack
PER MIL-F-14072, M301

NYLON INSULATED PLUG

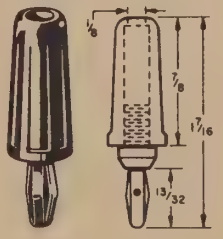


Molded of tough low-loss Nylon — provides high voltage insulation. Withstands extreme temperature changes without chipping or cracking. This series fits all standard Banana Jacks and standard Phone Tip Jacks.

Nylon Solderless Short Tip Plug. Molded nylon handle, recessed metal head provides flush contact without metal exposure in any standard tip jack brass nickel plated plug. Solderless wire fits thru handle.

NYLON PER MIL-P-20693A
Cat. No. 1169
Specify color as indicated below.

NYLON BANANA PLUG — MIDGET



NYLON PER MIL-P-20693A

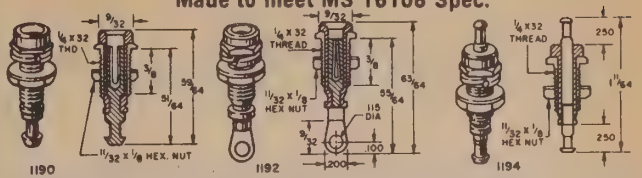
Molded Nylon Handle Brass N.Pl. Wire can be soldered directly into stud. Fits all Standard Banana Jacks.

Cat. No.	Spring Material	Plating
1172	Phospor	Nickel Bronze
1173	Phospor	Silver Bronze
1174	Berylium	Nickel Copper
1175	Berylium	Silver

Specify color as indicated in Color Code below.

NYLON TIP JACK WITH METAL SHELL

Made to meet MS 16108 Spec.



Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements: ● Salt Spray Test—Withstands 100 hours. ● Rated Voltage & Current—1000 volt peak @ 5 amps. maximum.

● Test Voltage—2500 peak. ● Insulation Resistance—5000 megohms.

● Operating Conditions—A. Continuous; 23 hours on, 1 hour off; B. Elevation: Up to 15,000 feet; C. Temperature: —55 to +85 C; D. Humidity: Up to 95%.

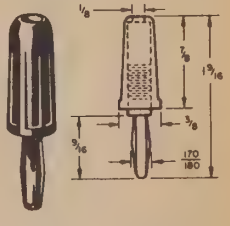
● Material Specifications—A. Insulator: Nylon, Grade FM 10001; B. Shell & Nut: Brass Nickel Plated Per Spec 72-53; C. Lockwasher: Phosphor Bronze Nickel Plated Per Spec 72-53; D. Center Contact. Numbers 1190 and 1192 Heat Treated Bery. Copper Silver Plated per Spec 72-53. Number 1194 Brass, Tin Plated.

● Non-Operating Conditions—A. Elevation: Up to 50,000 feet; B. Temperature: Continuous exposure for 72 hours @ +160 F and 240 hours @ —80 F; C. Humidity: Up to 100%.

● **Colors:** Red, Black, Orange, Green, Blue, White, Brown, Yellow, Grey and Purple. Specify Color.

Cat. No. 1190 Wrap Around **Cat. No. 1192** Spade Terminal
Cat. No. 1194 Feed Through

NYLON BANANA PLUG



Molded Nylon handle, Brass N.Pl. plug. Springs Phosphor Bronze or Berylium Copper. Nickel or Silver plated. Wire can be soldered into plug or brass stud.

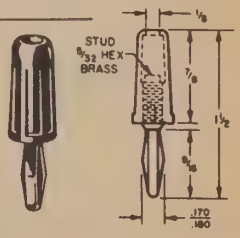
NYLON PER MIL-P-20693A

Cat. No.	Spring	Plating
1160	Phos. Brz.	Nickel
1161	Phos. Brz.	Silver
1162	Beryl. Cop.	Nickel
1163	Beryl. Cop.	Silver

Specify color as indicated in color code below.

Same as above with Solderless Scrulock Connection

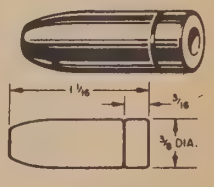
MIL-P-20693A



Cat. No.	Spring	Plating
1164	Phos. Brz.	Nickel
1165	Phos. Brz.	Silver
1166	Beryl. Cop.	Nickel
1167	Beryl. Cop.	Silver

Specify color as indicated in color code below.

NYLON HANDLE JACK

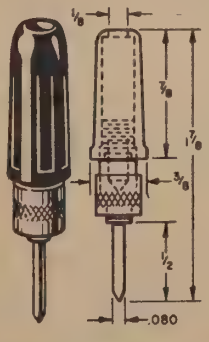


Made with our Nylon Tip Jack #1180 without mounting nut inside of threaded molded nylon insulated sleeve.

Cat. No.
1179 Nylon Handle Jack

Specify color as indicated below.
NYLON PER MIL-P-20693A

NYLON SOLDERLESS TIP PLUG

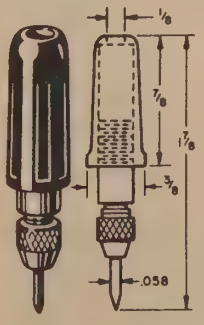


Molded Nylon handle, Brass N.Pl. Solderless plug. Wire fits thru body of tip and is wrapped around screw portion and then tightened. Fits all standard tip jacks.

Cat. No. 1170

Specify color as indicated above.

PHONE NEEDLE TIP PLUG

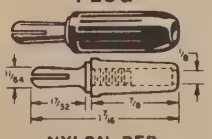


Molded Nylon Handle, Brass N.Pl. Plug. Has removable chuck for easy replacement of needles. Needle makes positive contact thru insulation or corrosion.

Cat. No. 1171
NYLON PER MIL-P-20693A

Specify color as indicated above.

NYLON BANANA PLUG



NYLON PER MIL-P-20693A

Molded Nylon handle, brass N.P. plug, split type with solderless scrulock connection.
Cat. No. 1168
Specify color as indicated above.

Color Code For NYLON HANDLE PLUGS

Add to Catalog Numbers

—01 White
—02 Red
—03 Black
—04 Dk. Green
—05 Lt. Blue
—06 Orange
—07 Yellow
—08 Brown
—09 Lt. Green
—10 Dk. Blue
—11 Ivory
—12 Violet (Purple)
—13 Grey

BIRNBACH COMPANY INC. **FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.**

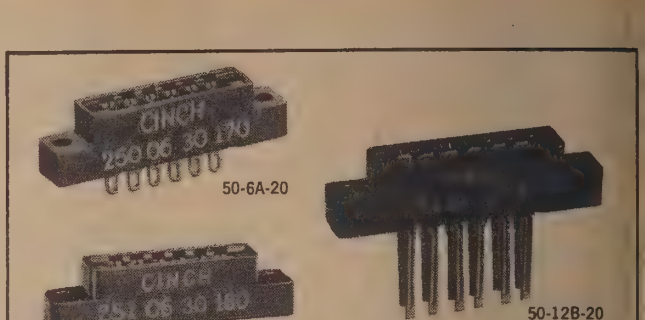
© United Technical Publications

CINCH

PRINTED CIRCUIT EDGE CONNECTORS

PRECISION MILITARY AND COMMERCIAL PRINTED CIRCUIT BOARD EDGE CONNECTORS

These Cinch printed circuit connectors are designed for minimum printed circuit card wear, low insertion force and positive contact with the printed circuit board. Insulation is glass-filled diallyl phthalate, type SDG-F per MIL-M-14. Contacts are of phosphor bronze with a minimum of 30 micro-inches thickness gold plate. Units with solder tab or dip solder terminations utilize bifurcated contacts permitting two flexing surfaces instead of one for positive contact. Bifurcated contacts are especially recommended for added conact reliability where vibration or printed circuit board irragularities would otherwise cause trouble. Types meeting Military Specification MIL-C-21097B are also available as indicated. These connectors have beryllium copper contacts with 50 micro-inches gold finish.



COMMERCIAL TYPES Without Bushings

SINGLE READOUT

CONTACT POSITIONS	CINCH PART NO.	FACTORY NO.
CONVENTIONAL SOLDER TAILS		
6	50-6A-20	250-06-30-170
10	50-10A-20	250-10-30-170
12	50-12A-20	250-12-30-170
15	50-15A-20	250-15-30-170
18	50-18A-20	250-18-30-170
22	50-22A-20	250-22-30-170
25	50-25A-20	250-25-30-170
DIP SOLDER TAILS (STANDARD LENGTH)		
6	50-6B-10	252-06-30-240
10	50-10B-10	252-10-30-240
15	50-15B-10	252-15-30-240
18	50-18B-10	252-18-30-240
22	50-22B-10	252-22-30-240
25	50-25B-10	252-25-30-240
DIP SOLDED TAILS (EXTENDED LENGTH)		
6	50- 6S-10	252-06-30-230
10	50-10S-10	252-10-30-230
12	50-12S-10	252-12-30-230
15	50-15S-10	252-15-30-230
18	50-18S-10	252-18-30-230
22	50-22S-10	252-22-30-230
25	50-25S-10	252-25-30-230

DOUBLE READOUT

CONTACT POSITIONS	CINCH PART NO.	FACTORY NO.
CONVENTIONAL SOLDER TAILS		
6	50-12A-30	251-06-30-160
10	50-20A-30	251-10-30-160
12	50-24A-30	251-12-30-160
15	50-30A-30	251-15-30-160
18	50-36A-30	251-18-30-160
22	50-44A-30	251-22-30-160
25	50-50A-30	251-25-30-160
DIP SOLDER TAILS		
6	50-12B-10	252-06-30-160
10	50-20B-10	252-10-30-160
12	50-24B-10	252-12-30-160
15	50-30B-10	252-15-30-160
18	50-36B-10	252-18-30-160
22	50-44B-10	252-22-30-160
DIP SOLDER TAILS (EXTENDED LENGTH)		
6	50-12S-20	252-06-30-260
10	50-20S-20	252-10-30-260
12	50-24S-20	252-12-30-260
15	50-30S-20	252-15-30-260
18	50-36S-20	252-18-30-260
22	50-44S-20	252-22-30-260
25	50-50S-20	252-25-30-260

CONTACT POSITIONS	CINCH PART NO.	FACTORY NO.
CARD EXTENDER TYPE (.050" TAIL SPACING) (Gold plated beryllium copper contacts)		
6	50-12S-30	251-06-30-390
10	50-20S-30	251-10-30-390
12	50-24S-30	251-12-30-390
15	50-30S-30	251-15-30-390
18	50-36S-30	251-18-30-390
22	50-44S-30	251-22-30-390
25	50-50S-30	251-25-30-390
WIRE WRAP POST		
6	50-12B-20	253-06-30-140
10	50-20B-20	253-10-30-140
12	50-24B-20	253-12-30-140
15	50-30B-20	253-15-30-140
18	50-36B-20	253-18-30-140
22	50-44B-20	253-22-30-140

POLARIZING KEYS		
PART NO.	DESCRIPTION	FACTORY NO.
50-PK-2	Between-Contact Type	456-07-35-003
50-PK-1	In-Contact Type	474-11-54-200

NOTE: Polarizing keys are not furnished with connectors and must be ordered as a separate item.

MILITARY PC CONNECTORS (Per MIL-C-21097B) With Conventional Wiring Tails

SINGLE READOUT

CONTACT POSITIONS	CINCH PART NO.	MIL PART NO.	FACTORY NO.
NO BUSHINGS			
6	50-6A-20M	M21097/1-001	250-06-30-220
10	50-10A-20M	M21097/1-037	250-10-30-220
15	50-15A-20M	M21097/1-073	250-15-30-220
18	50-18A-20M	M21097/1-109	250-18-30-220
22	50-22A-20M	M21097/1-145	250-22-30-220
MOLDED-IN BUSHINGS			
6	50-6A-20-MB	M21097/1-004	250-06-30-230
10	50-10A-20MB	M21097/1-040	250-10-30-230
15	50-15A-20MB	M21097/1-076	250-15-30-230
18	50-18A-20MB	M21097/1-112	250-18-30-230
22	50-22A-20MB	M21097/1-148	250-22-30-230
FLOATING BUSHINGS			
6	50-6A-20MFB	M21097/1-007	250-06-30-240
10	50-10A-20MFB	M21097/1-043	250-10-30-240
15	50-15A-20MFB	M21097/1-079	250-15-30-240
18	50-18A-20MFB	M21097/1-115	250-18-30-240
22	50-22A-20MFB	M21097/1-151	250-22-30-240

DOUBLE READOUT

CONTACT POSITIONS	CINCH PART NO.	MIL PART NO.	FACTORY NO.
NO BUSHINGS			
6	50-12A-30M	M21097/1-019	251-06-30-270
10	50-20A-30M	M21097/1-055	251-10-30-270
15	50-30A-30M	M21097/1-091	251-15-30-270
18	50-36A-30M	M21097/1-127	251-18-30-270
22	50-44A-30M	M21097/1-163	251-22-30-270
MOLDED-IN BUSHINGS			
6	50-12A-30MB	M21097/1-022	251-06-30-280
10	50-20A-30MB	M21097/1-058	251-10-30-280
15	50-30A-30MB	M21097/1-094	251-15-30-280
18	50-36A-30MB	M21097/1-130	251-18-30-280
22	50-44A-30MB	M21097/1-166	251-22-30-280
FLOATING BUSHINGS			
6	50-12A-30MFB	M21097/1-025	251-06-30-290
10	50-20A-30MFB	M21097/1-061	251-10-30-290
15	50-30A-30MFB	M21097/1-097	251-15-30-290
18	50-36A-30MFB	M21097/1-133	251-18-30-290
22	50-44A-30MFB	M21097/1-169	251-22-30-290

DOUBLE READOUT WITH DIP SOLDER TAILS — No Bushings

CONTACT POSITIONS	CINCH PART NO.	MIL PART NO.	FACTORY NO.
6	50-12B-10M	M21097/1-028	252-06-30-220
10	50-20B-10M	M21097/1-064	252-10-30-220
15	50-30B-10M	M21097/1-100	252-15-30-220
18	50-36B-10M	M21097/1-136	252-18-30-220
22	50-44B-10M	M21097/1-172	252-22-30-220

ELECTRICAL SPECIFICATIONS

VOLTAGE RATING (AC RMS, adj. terminals): 830 (Sea Level); 300 (3.4 Hg, 50,000 Feet); 200 (1.3 Hg, 70,000 Feet); CURRENT: 5.0 Amps; CONTACT RESISTANCE: .005 Ohms at Rated Current; INSULATION RESISTANCE: 5000 Megohms.

ENVIRONMENTAL SPECIFICATIONS (Per MIL-C-21097 and MIL-STD-202, latest versions.)

SHOCK: 3 blows of 50G, Method 202B; TEMPERATURE CYCLING: 5 continuous cycles per Method 107B, Test Condition B; Beryllium copper, —65°C to 125°C; Phosphor bronze, —65°C to 105°C; SALT SPRAY: 48 hrs. per Method 101B, Condition B; VIBRATION: Per Method 204A, Condition B for bifurcated contacts; Method 201A for non-bifurcated contacts; HUMIDITY: Per Method 103B, Condition B.

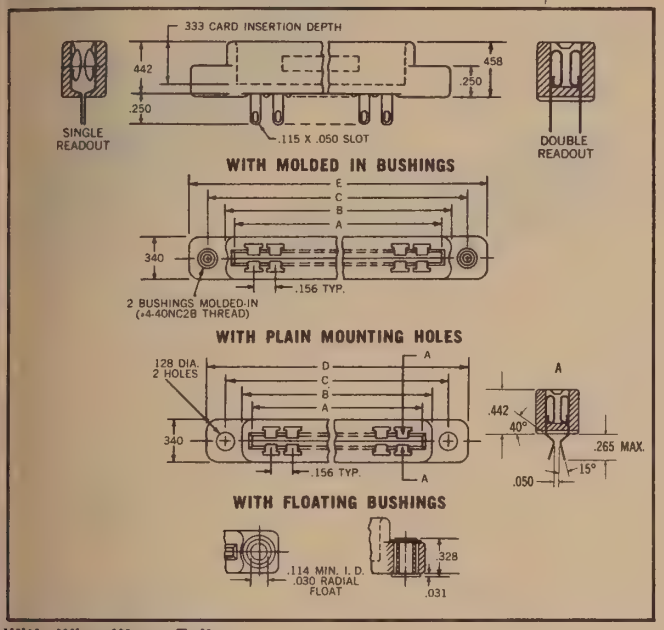
© United Technical Publications

CINCH

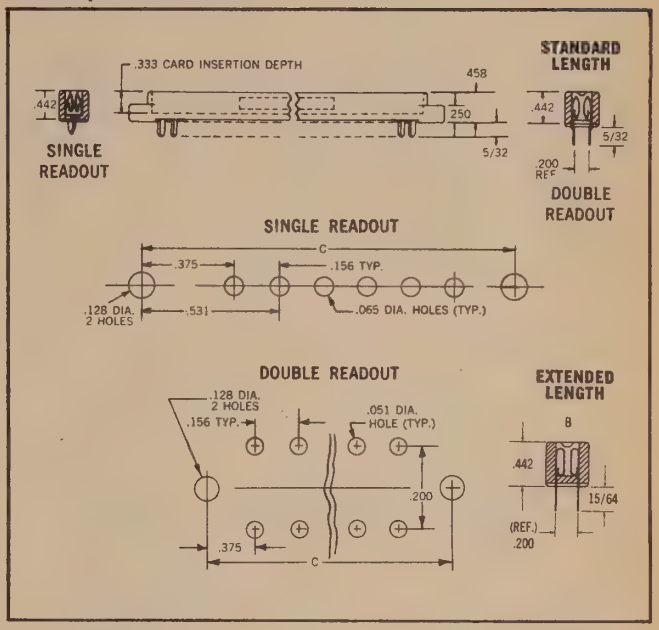
PRINTED CIRCUIT EDGE CONNECTORS (Cont'd.)

DIMENSIONS:

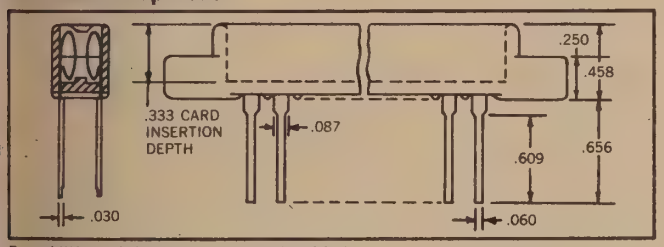
With Conventional Wiring Tails



With Dip Solder Tails



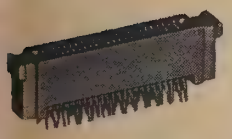
With Wire Wrap Tails



For additional information see catalog CC24

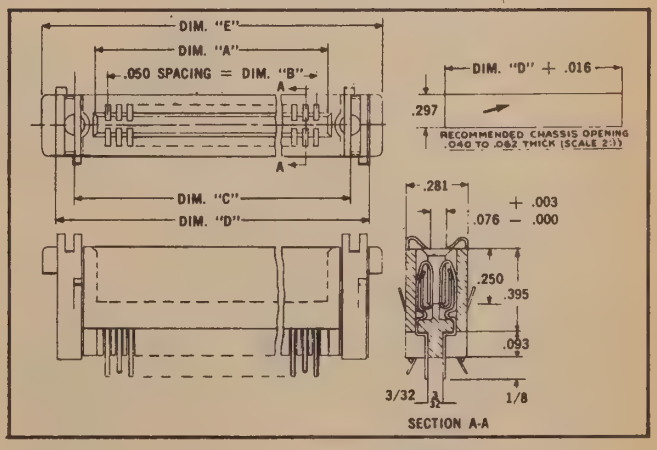
NO. OF CONTACT POSITIONS	DIMENSIONS A	B	C	D	E
6	1.100	1.239	1.531	1.785	1.937
10	1.724	1.864	2.156	2.410	2.562
12	2.036	2.177	2.469	2.723	2.875
15	2.504	2.645	2.937	3.191	3.343
18	2.972	3.114	3.406	3.660	3.812
22	3.596	3.739	4.031	4.285	4.437
25	4.067	4.208	4.500	4.754	4.906

TYKON® HIGH DENSITY EDGE CONNECTORS*



High density edge connectors with .050" centers for use with double sided .062" pc boards. Furnished with conventional wiring tails suitable for welding or soldering. Insulator is glass filled diallyl phthalate per MIL-M-14F, Type SDG-F. Contacts are beryllium copper with finish of copper flash plus .00003 gold plate per MIL-G-45204 Type II. Available in 6, 10, 15, 20 or 25-position sizes.

*Patent Pending



ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS: a.) At sea level (adj. terminals) 500 Volts AC RMS, 730 Volts DC; b.) At sea level (to ground) 1160 Volts AC RMS, 1660 Volts DC, c.) At an altitude of 60,000 ft. (adj. terminals) 165 Volts AC RMS, 230 Volts DC, d.) At an altitude of 60,000 ft. (to ground) 300 Volts AC RMS, 400 Volts DC; CURRENT RATING: .050 amps; CONTACT RESISTANCE at 20 Millivolts: .040 ohms maximum, .020 ohms average; MILLIVOLT DROP at 0.50 amps: 20 millivolts maximum; INSULATION RESISTANCE (As received): 5000 megohms minimum.

TYKON MOUNTING CLIP

For use in semi-flush pc board mounting. Separate item. Made of carbon steel with cadmium-plate plus yellow chromate finish. Part No. 50-MC.

TYKON POLARIZING KEY

"T" shaped cellulose acetate. Part No. 50-PK.

PART NUMBERS

ITEM	FACTORY NO.	PART NO.	CONTACT POSITIONS	DIMENSIONS A	B	C	D	E
6-position connector	255-06-30-190	50-12A-40	6	.350	.250	.550	.725	.850
10-position connector	255-10-30-190	50-20A-40	10	.550	.450	.750	.925	1.050
15-position connector	255-15-30-190	50-30A-40	15	.800	.700	1.000	1.175	1.300
20-position connector	255-20-30-190	50-40A-40	20	1.050	.950	1.250	1.425	1.550
25-position connector	255-25-30-190	50-50A-40	25	1.300	1.200	1.500	1.675	1.800
Mounting Clip	422-24-23-011-113	50-MC						
Polarizing Key	456-99-99-190	50-PK						

© United Technical Publications

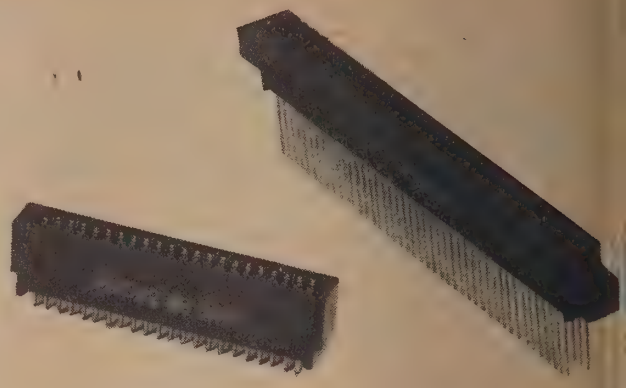
CINCH

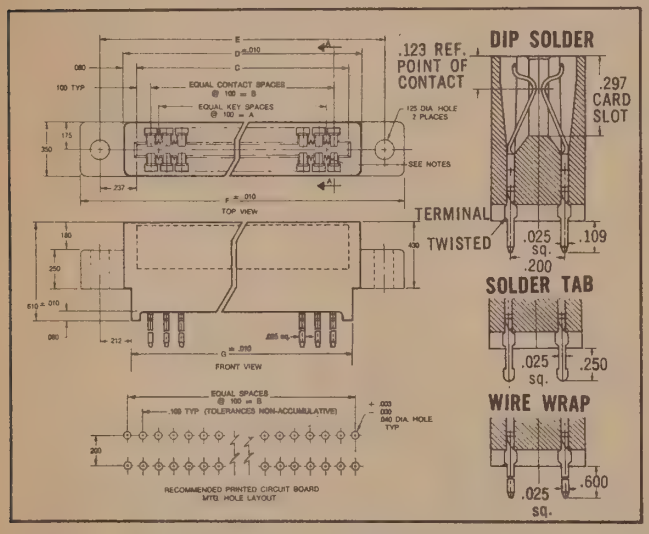
PRINTED CIRCUIT EDGE CONNECTORS (Cont'd)

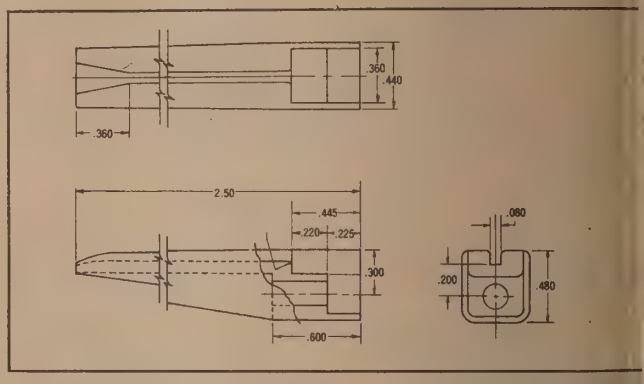
PRECISION DOUBLE READ-OUT PRINTED CIRCUIT BOARD EDGE CONNECTORS WITH 0.100 INCH CENTERS

This new connector series features a unique bifurcated cantilever contact construction that provides a simple, dependable design capable of handling 1/16" thick printed circuit boards. These contacts are pre-loaded against an insulator stop to provide gap uniformity and assure rapid build-up of force to the PC board. This design combines minimum insertion force with maximum contact pressure.

Contacts are fabricated from grade A phosphor bronze, selectively gold plated with 30 micro-inches of gold over 50 micro-inches of nickel in the contacting area and 10 micro-inches minimum gold on the remainder of the contact, per MIL-G-45204, Type II. Insulation is glass-filled diallyl phthalate, type SDG-F per MIL-M-14.







No. of Contact Positions	DIMENSIONS				
	A	B	C	D	E
15	1.600	1.760	2.075	2.335	1.650
22	2.300	2.460	2.775	3.035	2.350
36	3.700	3.860	4.175	4.435	3.750
40	4.100	4.260	4.575	4.835	4.150
43	4.400	4.560	4.875	5.135	4.450

NOTE: Polarizing keys are not furnished with connectors and must be ordered separately.

POLARIZING KEY	Part No.	Factory No.
	50-PK-3	474-11-76-229

0.100 INCH CENTERS DOUBLE READ-OUT EDGE CONNECTORS

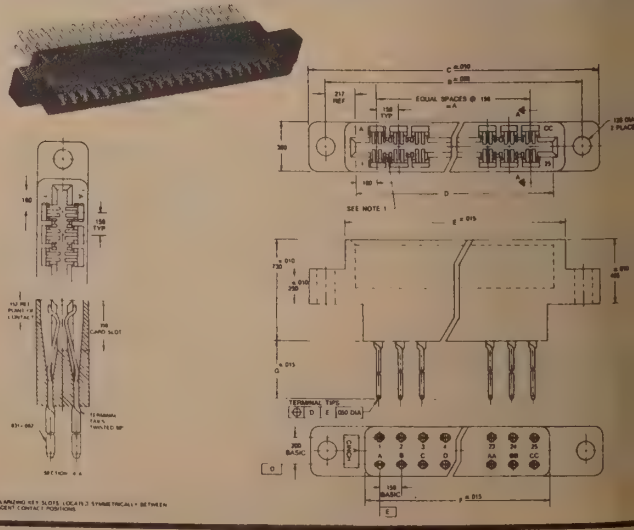
Contact Positions	CINCH Part No.	Factory No.	CINCH Part No.	Factory No.	CINCH Part No.	Factory No.
	CONVENTIONAL SOLDER TAILS		DIP SOLDER TAILS		WIRE WRAP TAILS	
15	50-30C-10	251-15-30-410	50-30C-20	252-15-30-360	50-30C-30	253-15-30-260
22	50-44C-10	251-22-30-410	50-44C-20	252-22-30-360	50-44C-30	253-22-30-260
36	50-72C-10	251-36-30-410	50-72C-20	252-36-30-360	50-72C-30	253-36-30-260
40	50-80C-10	251-40-30-410	50-80C-20	252-40-30-360	50-80C-30	253-40-30-260
43	50-86C-10	251-43-30-410	50-86C-20	252-43-30-360	50-86C-30	253-43-30-260

ECONOMY 22-POSITION DOUBLE READ-OUT PRINTED CIRCUIT BOARD EDGE CONNECTORS WITH 0.156" CENTER WIRE WRAP* TERMINALS

Similar to the precision edge connectors described above, these feature cantilever contact construction, selectively gold plated for 30 micro-inches of gold over 50 micro-inches of nickel in the contracting area and 10 micro-inches minimum of gold on the balance at the contact. The insulator is precision fabricated from black colored general purpose impact phenolic.

The selective plating technique used on the contact provides the performance of a 30 micro-inch plating at a substantially reduced cost. These connectors are available in three contact tail lengths to accommodate one, two, or three levels of wire wrap.

*Trademark — Gardner Denver



Type	Tail Length	CINCH Part No.	Factory No.
E	0.550	50-44E-10	253-22-00-250
F	0.750	50-44F-10	253-22-00-251
G	1.051	50-44G-10	253-22-00-252

© United Technical Publications

CINCH

D-SUBMINIATURE CONNECTORS†

The Cinch D Subminiature Connectors are designed for applications where space and weight are prime considerations. These high contact density connectors are especially well-suited for aircraft, missile and ground support installations. Although designed essentially for rack-and-panel installations, D series connectors may be adapted for cable attachment by means of accessory junction shells with integral clamps.

In addition to the original D series with two-piece insulators, Cinch offers Golden D and MARK III ROYAL D connectors utilizing monobloc insulators. The Golden D connector is available with either crimp-type, snap-in, removable contacts or standard solder pot contacts. MARK III ROYAL D connectors have the "Little Caesar" rear release contact assembly. Contacts are inserted by hand and extracted at the rear of the connector with a simple plastic tool. The "Little Caesar" contact assembly was selected by the National Aerospace Standards Committee for vital programs demanding great operational reliability.

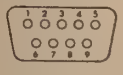
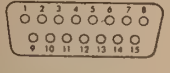
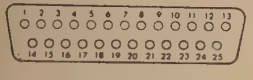
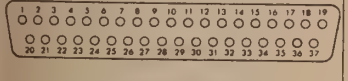
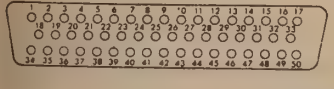
All D Subminiature connectors will inter-mate if insert arrangements correspond. These connectors are designed to meet or exceed most of the requirements of MIL-C-8384 Rev. B.

Combination layouts are supplied with unfilled coaxial and/or HV contact cavities. Coaxial and HV contacts must be ordered separately, and may be used interchangeably in any of the layouts listed. HV contacts accommodate wire sizes up to #20. Coaxial contacts (with crimp or solder type terminations) and HV contacts are snap-in and removable. Solder type coaxial and HV contacts have captivated center contacts.

Royal D, Mark III and Golden D, Mark II contacts use crimp tool MS-3191-1. Extraction tool 599-11-11-150 is used with each Royal D, Mark III commercial connectors; insertion-extraction tool 599-11-11-165 is used with each military connector.
For detailed test data and technical information see Cinch Catalog CM-46.

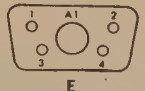
TYPE	DESCRIPTION	COMMON NAME	INSULATOR TYPE	CONTACT TERMINATION
D*MA	D connectors for the most critical applications. Monobloc insulators and "Little Caesar" contact assemblies Military version meets MIL-C-24308.	Mark III ROYAL D	Monobloc diallyl, thalate, GD-1-30F	Crimp insert by hand, remove with small tool.
D*M	D connectors with monobloc insulator for more critical application requirements.	Golden D, Mark I	Monobloc, diallyl phthalate, SDG	Solder pot Solder pot with coaxial
		Golden D, Mark I Combination	Monobloc, diallyl phthalate, SDG	and/or HV
D*SM	D connectors with crimp, snap-in contacts in monobloc insulators for quick assembly in more critical applications.	Golden D, Mark II	Monobloc, diallyl phthalate, MDG	Crimp, snap-in removable
D*	Original D connectors with two-piece insulators.	Original D	Two-piece, zytel	Solder pot
DATA-PHONE	Same as D*	—	Diallyl phthalate, GDI-30	Same as D*

†Manufactured under license agreement with ITT Cannon Electric, Inc.

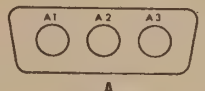
BASIC LAYOUT CONNECTORS (#20 contacts only)	LAYOUT	SHELL SIZE	PART NUMBER D*	D*M	D*SM	D*MA Commercial	D*MA Military	DATAPHONE**
	9 Contact Plug	E	DE-9P	DEM-9P	DESM-9P	DEMA-9P	M24308/4-1	—
	Socket	E	DE-9S	DEM-9S	DESM-9S	DEMA-9S	M24308/2-1	—
	15 Contact Plug	A	DA-15P	DASM-15P	DASM-15P	DEMA-15P	M24308/4-2	DA-19603-403
	Socket	A	DA-15S	DASM-15S	DASM-15S	DEMA-15S	M24308/2-2	DA-19603-404
	25 Contact Plug	B	DB-25P	DBM-25P	DBSM-25P	DEMA-25P	M24308/4-3	DB-19604-432
	Socket	B	DB-25S	DBM-25S	DBSM-25S	DEMA-25S	M24308/2-3	DB-19604-433
	37 Contact Plug	C	DC-37P	DCM-37P	DCSM-37P	DEMA-37P	M24308/4-4	—
	Socket	C	DC-37S	DCM-37S	DCSM-37S	DEMA-37S	M24308/2-4	—
	50 Contact Plug	D	DD-50P	DDM-50P	DDSM-50P	DEMA-50P	M24308/4-5	—
	Socket	D	DD-50S	DDM-50S	DDSM-50S	DEMA-50S	M24308/2-5	—

Add suffix "F" for shell with float mounts, as DEF, DEMF, etc. ** Require Dataphone Hoods.

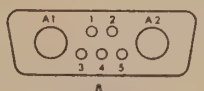
COMBINATION LAYOUTS (#20 contacts with coaxial and/or HV cavities*)



SHELL SIZE — E
PLUG PART NO. — DEM-5W1P
SOCKET PART NO. — DEM-5W1S



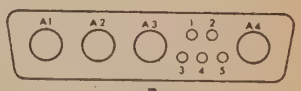
A
DAM-3W3P
DAM-3W3S



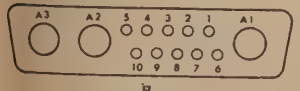
A
DAM-7W2P
DAM-7W2S



A
DAM-11W1P
DAM-11W1S



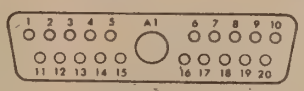
B
DBM-9W4P
DBM-9W4S



B
DBM-13W3P
DBM-13W3S



B
DBM-17W2P
DBM-17W2S



B
DBM-21W1P
DBM-21W1S



C
DCM-13W6P
DCM-13W6S

PERFORMANCE DATA

VOLTAGE RATING: 1250 VAC test, 1700 flashover; CURRENT RATING: 5 Amperes; INSULATION RESISTANCE: Greater than 5,000 megohms, determined in accordance with MIL-STD-202A, Method 302; CONTACT VOLTAGE DROP: (#20 contacts) 2.67 millivolts maximum per amp when tested in accordance with MIL-C-8384B, Paragraph 4.6.4; INDIVIDUAL CONTACT SEPARATION FORCE: 1 to 8 ounces; CONTACT RETENTION FORCE: 10 lbs. min. after 10 insertions; 5 lbs. min. after 100 insertions; MOISTURE RESISTANCE: Exceeds test requirements of MIL-STD-202A, Method 106†; VIBRATION: Exceeds test requirements of MIL-STD-202A, Method 204†; SHOCK: Exceeds test requirements of MIL-STD-202A, Method 202A†; CORROSION RESISTANCE: Exceeds requirements of 50 hour exposure to salt spray in accordance with MIL-STD-202A, Method 101A, Condition B†; HIGH POTENTIAL: MIL-STD-202A, Method 301†; TEMPERATURE CYCLING: MIL-STD-202A, Method 102A, Condition D.†

MATERIALS

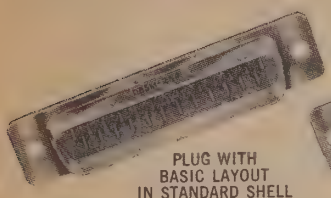
SHELLS: Steel cadmium plated with yellow chromate coating, except Dataphone connectors have clear chromate coating; INSULATORS: D*-Zytel; D*M and Dataphone-Diallyl phthalate, glass filled per MIL-M-14F, Type SDG; D*SM-Diallyl phthalate asbestos filled per MIL-M-14F, Type MDG; D*MA-Diallyl phthalate, glass fibre filled per MIL-P-19833; PIN CONTACTS: D* and D*M-Brass, gold plated (.00003) over silver; D*SM and D*MA-Leaded copper, gold plated (.00003) over silver; Dataphone-Brass, gold plated (.00005) over copper; SOCKET CONTACTS: D*-Phosphor bronze, gold plated (.00003) over silver; D*M-Brass, gold plated (.00003) over silver; D*SM-Leaded copper, gold plated (.00003) over silver; Copper alloy, gold plate over silver plate with stainless steel sleeves. Dataphone-Phosphor bronze, gold plated (.00005) over copper.

† As referenced in MIL-C-24308..

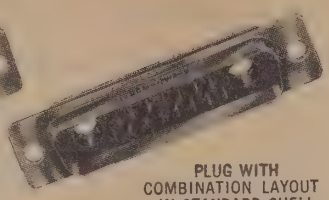
© United Technical Publications

CINCH

D-SUBMINIATURE CONNECTORS (Cont'd.)



PLUG WITH BASIC LAYOUT IN STANDARD SHELL



PLUG WITH COMBINATION LAYOUT IN STANDARD SHELL

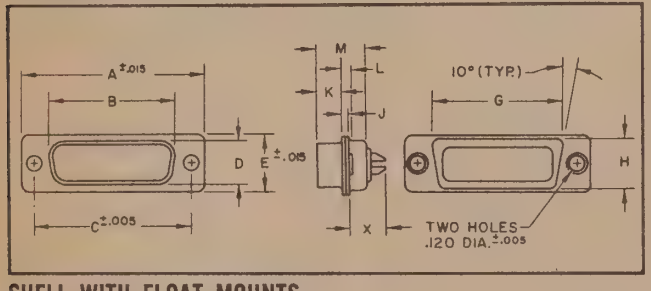


SOCKET WITH BASIC LAYOUT IN SHELL WITH FLOAT MOUNTS

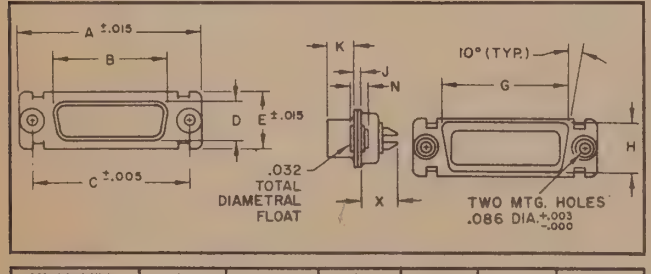


SOCKET WITH COMBINATION LAYOUT IN SHELL WITH FLOAT MOUNTSt

STANDARD SHELL



SHELL WITH FLOAT MOUNTS



SHELL SIZE	A	B	C	D	E	G
E—Plug	1.213	.697	.984	.360	.494	.759
E—Socket	1.213	.640	.984	.308	.494	.759
A—Plug	1.541	1.025	1.312	.360	.494	1.083
A—Socket	1.541	.968	1.312	.308	.494	1.083
B—Plug	2.088	1.583	1.852	.378	.494	1.625
B—Socket	2.088	1.508	1.852	.308	.494	1.625
C—Plug	2.729	2.231	2.500	.378	.494	2.272
C—Socket	2.729	2.156	2.500	.308	.494	2.272
D—Plug	2.635	2.127	2.406	.484	.605	2.178
D—Socket	2.635	2.026	2.406	.420	.605	2.178

SHELL SIZE	H	J	K	L	M	N	X†
E—Plug	.422	.030	.236	.045	.422	.120	.422
E—Socket	.422	.030	.243	.045	.429	.120	.390
A—Plug	.422	.030	.236	.045	.422	.120	.422
A—Socket	.422	.030	.243	.045	.429	.120	.390
B—Plug	.422	.039	.231	.060	.426	.129	.422
B—Socket	.422	.030	.243	.045	.429	.120	.390
C—Plug	.422	.039	.231	.060	.426	.129	.422
C—Socket	.422	.030	.243	.045	.429	.120	.390
D—Plug	.534	.039	.231	.060	.426	.129	.422
D—Socket	.534	.030	.243	.045	.429	.120	.390

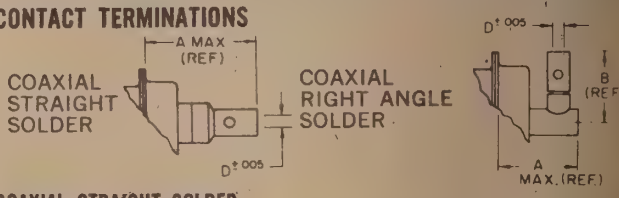
*Add F to Part Nos. In the above table for Float Mounts (Ex. DEMF-5WIP).
All tolerances are ± .010 unless noted otherwise.
Dimensions B and D are measured as outside dimensions at the bottom of the draw.
†D*SM only; D* dimension is .312, D*M dimension is .390 for all plugs and sockets.



Connectors Individually Packed in Heat-Sealed Containers to Assure Extended Shelf Life

To protect D-Subminiature connectors from contamination and other corrosive elements in the air, Cinch individually packs each connector in heat-sealed polyvinyl-chloride containers (as shown) with an inert gas, oxygen-free atmosphere. This assures every customer of extended shelf life. A separate compartment is also provided in each container for the loose crimp-type contacts supplied with the Golden D, Mark II and Mark III connector.

CONTACT TERMINATIONS



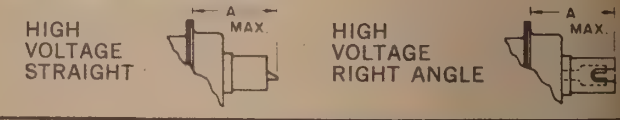
COAXIAL STRAIGHT SOLDER

	Order Number	Contact Ext. from Rear of Flange A	Dielectric Entry D	Overall Length	RG Cables
Plug	DM-53740-5008	.739	.040	.929	196/U
Plug	DM-53740-5001	.739	.067	.929	187/U 188/U
Plug	DM-53740-5002	.847	.110	1.037	195/U
Plug (Short Type)	DM-53740-5000	.670	.040	.860	196/U
Receptacle	DM-53742-5001	.739	.067	.929	187/U 188/U
Receptacle	DM-53742-5002	.847	.110	1.037	195/U
Receptacle	DM-53742-5004	.847	.125	1.037	58/U

COAXIAL RIGHT ANGLE SOLDER

	Order Number	Contact Ext. from Rear of Flange A	B	Dielectric Entry D	Overall Length	RG Cables
Plug	DM-53741-5000	.530	.492	.040	.734	196/U
Plug	DM-53741-5001	.530	.492	.067	.734	187/U 188/U
Receptacle	DM-53743-5003	.530	.601	.110	.734	195/U
Receptacle	DM-53743-5004	.530	.601	.125	.734	58/U

HIGH VOLTAGE COMBINATIONS

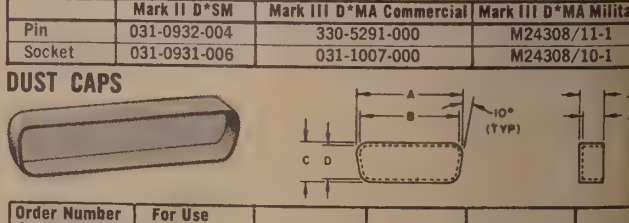


	Order Number	Contact Ext. from Rear of Flange A	Wire Size	Overall Length
Plug	DM-53745-0000	.539	#20	.734
Receptacle	DM-53744-0000	.539	#20	.734
Plug	DM-53745-5000	.491	#20	.697
Receptacle	DM-53744-5000	.491	#20	.697

STANDARD CRIMP CONTACTS (Style 1)

	Mark II D*SM	Mark III D*MA Commercial	Mark III D*MA Military
Pin	031-0932-004	330-5291-000	M24308/11-1
Socket	031-0931-006	031-1007-000	M24308/10-1

DUST CAPS



Order Number by Shell Size	For Use with	A	B	C	D
DE-59-20	DE-9S	.694	.627	.362	.295
DE-60-20	DE-9P	.749	.682	.412	.345
DA-59-20	DA-15S	1.022	.955	.362	.295
DA-60-20	DA-15P	1.077	1.010	.412	.345
DB-59-20	DB-25S	1.562	1.495	.362	.295
DB-60-20	DB-25P	1.635	1.568	.430	.363
DC-59-20	DC-37S	2.210	2.143	.362	.295
DC-60-20	DC-37P	2.283	2.216	.430	.363
DD-59-20	DD-50S	2.116	2.049	.474	.407
DD-60-20	DD50P	2.179	2.112	.536	.469

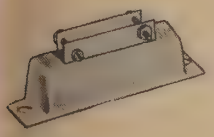
MATERIAL: Polypropylene (clear)

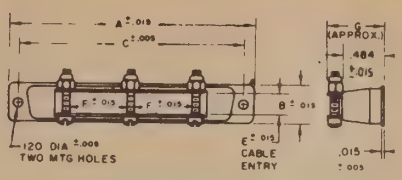
© United Technical Publications

CINCH

D-SUBMINIATURE CONNECTORS (Cont'd.)

UNCTION SHELLS



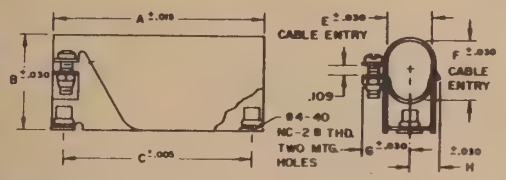


STRAIGHT CLAMP

Order Number by Shell Size	No. of Cable Locking Screws Required	A	B	C	E	F	G
DA-19678-1	2	1.531	.500	1.312	.296	.312	.640
DB-19678-2	2	2.078	.500	1.852	.296	.796	.640
DC-19678-3	3	2.718	.500	2.500	.296	.687	.640
DD-19678-4	3	2.625	.609	2.406	.390	.687	.703



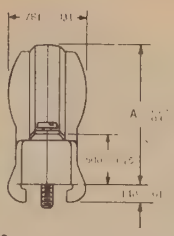
RIGHT ANGLE

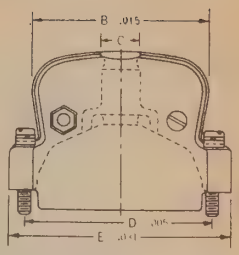


Order Number by Shell Size	A	B	C	E	F	G	H
DE-19977-5	1.203	.718	.984	.437	.437	.468	.281
DA-19977-1	1.531	.718	1.312	.437	.437	.468	.281
DB-19977-2	2.078	.968	1.852	.437	.625	.468	.281
DC-19977-3	2.718	1.187	2.500	.437	.812	.468	.281
DD-19977-4	2.625	1.250	2.406	.562	.906	.531	.343

DATAPHONE HOODS





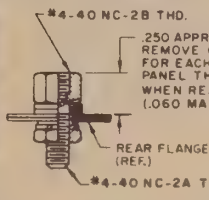


MATERIAL: Gray Melamine

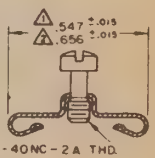
Part No.	Contacts	A	B	C	D	E
DA-51225-1	15	1.297	1.219	.266	1.312	1.641
DB-51226-1	25	1.406	1.797	.328	1.852	2.203

SCREW LOCK ASSEMBLIES





MOUNTED POSITION



FEMALE



MALE

Order Number	Type	Usage
D-20418-2	Female	DE, DA, DB, DC, DD PIN OR SOCKET WITH OR WITHOUT JUNCTION SHELL
D20419	Male	DA, DE PIN OR SOCKET; DB, DC SOCKET
D20420	Male	DD SOCKET

HINGE CONNECTORS AND ACCESSORIES

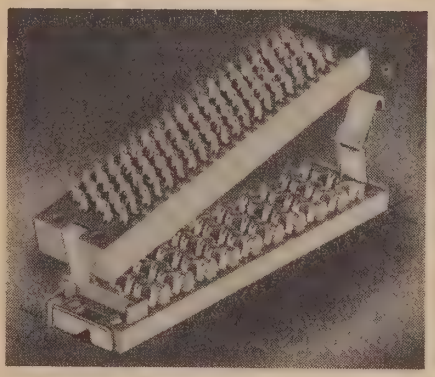
Cinch hinge connectors eliminate contact damage caused by high insertion and extraction forces.

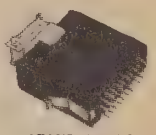
Caps are available, furnished with liners and cable clamps. For more secure locking, an alternate lock with a hook fits into a cutout in the cap. If the alternate lock is required, order Part No. 37AL.

The castings are black phenolic, type CFG. Contacts are phosphor bronze, cadmium-plated (.0001). Caps are finished in black wrinkle and the cable clamps are nickel-plated. Liners are formed fibre.

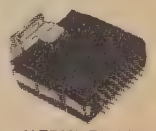
ELECTRICAL SPECIFICATIONS

VOLTAGE: Adjacent Terminals — 930 Volts R.M.S., 1300 Volts DC; VOLTAGE: to Ground — 1400 Volts R.M.S., 2000 Volts DC; CURRENT RATING: 4.5 Amperes; CONTACT RESISTANCE: at Rated Current — .020 ohm; INSULATION RESISTANCE: 1000 megohms; CAPACITANCE: Adjacent Contacts — .75 MMF.

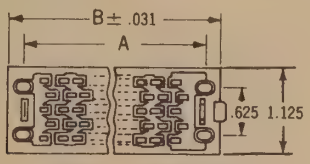




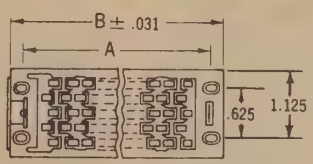
STANDARD LOCK



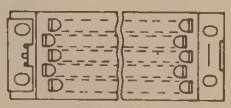
ALTERNATE LOCK



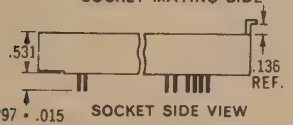
SOCKET MATING SIDE



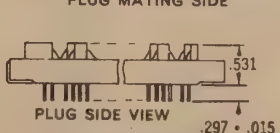
PLUG MATING SIDE



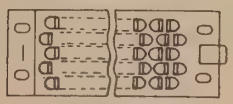
PLUG WIRING SIDE



SOCKET SIDE VIEW



PLUG SIDE VIEW



SOCKET WIRING SIDE

PART NUMBERS

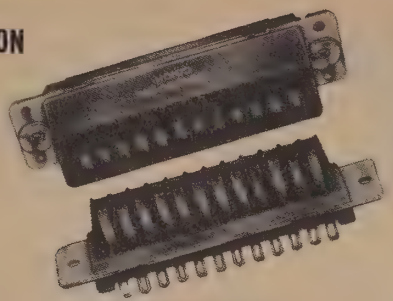
No. Contacts	Plug W.O. Lock	Skt. W. Lock	Skt. W.O. Lock	Plug W. Lock	Mtg. Dim.	Overall Dim.	Plug Cap Part No.	Hole Size
20	37M20	37F20L	37F20	37M20L	1.375	1.750	37C20	¾"
30	37M30	37F30L	37F30	37M30L	1.812	2.187	37C30	13/16"x1"
40	37M40	37F40L	37F40	37M40L	2.250	2.625	37C40	13/16"x1"
50	37M50	37F50L	37F50	37M50L	2.687	3.062	37C50	13/16"x1"
60	37M60	37F60L	37F60	37M60L	3.125	3.500	37C60	13/16"x1½"
70	37M70	37F70L	37F70	37M70L	3.562	3.937	37C70	13/16"x1½"
80	37M80	37F80L	37F80	37M80L	4.000	4.375	37C80	13/16"x1½"
90	37M90	37F90L	37F90	37M90L	4.438	4.812	37C90	13/16"x1½"
100	37M100	37F100L	37F100	37M100L	4.875	5.250	37C100	13/16"x1½"

© United Technical Publications

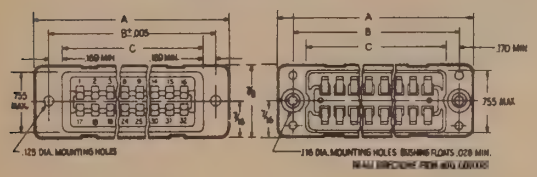
CINCH

BLUE RIBBON* and MICRO RIBBON* RACK and PANEL CONNECTORS

BLUE RIBBON



DIMENSIONAL DATA





ELECTRICAL SPECIFICATIONS

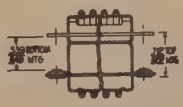
VOLTAGE RATINGS: (a) At Sea Level 800 VDC, (b) At 70,000 Feet 300 VDC CONTACT CURRENT RATING: 5 Amperes; CONTACT RESISTANCE: .003 Ohms Maximum; INSULATION RESISTANCE (As Received): 100,000 Megohms Minimum

MECHANICAL SPECIFICATIONS

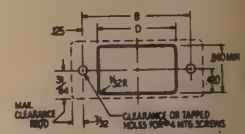
CONTACTS: Plug, Copper, ASTM-B-152, Type ETP, Socket, Phosphor bronze ASTM-B-103, MIL-B-892, Grade A; FINISH: .00002 Gold per MIL-G-45204, Type II over copper flash; MOUNTING PLATE: Passivated stainless steel.

No. of Contacts	Part Numbers Plug	Part Numbers Socket	A	Dimensions B	Dimensions C	D (Min.)
8	26-4100-8P	26-4200-8S	1 23/32	1.375	1 1/32	1.120
16	26-4100-16P	26-4200-16S	2 15/32	2.125	1 25/32	1.868
24	26-4100-24P	26-4200-24S	3 7/32	2.875	2 11/32	2.620
32	26-4100-32P	26-4200-32S	3 31/32	3.625	3 9/32	3.370

*Tolerances: Fractions ± 1/64
Decimals ± .005



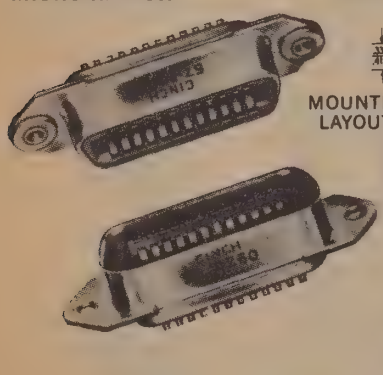
MATING PLUG & RECEPTACLE



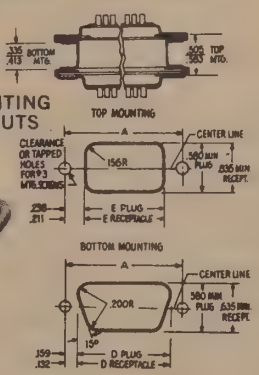
MOUNTING LAYOUT

MICRO-RIBBON

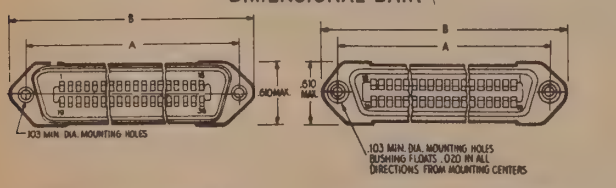
MATING PLUG & RECEPTACLE

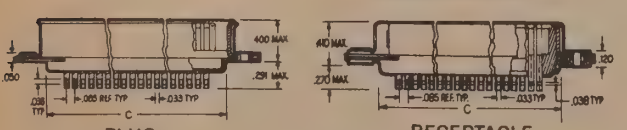


MOUNTING LAYOUTS

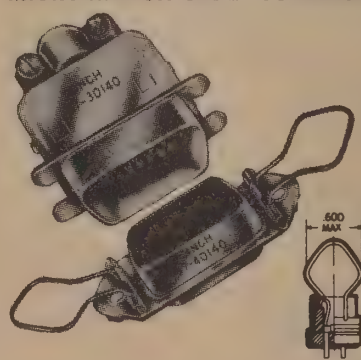


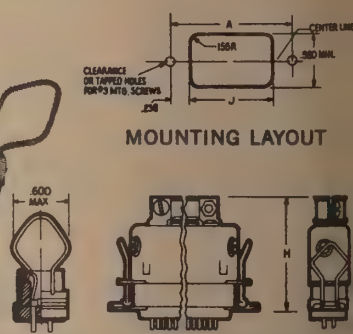
DIMENSIONAL DATA





MICRO-RIBBON CABLE-TO-CHASSIS

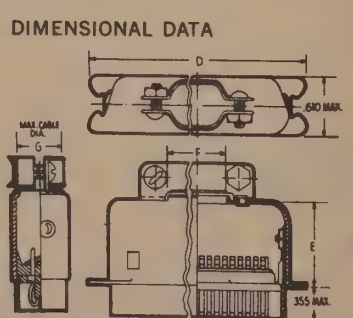


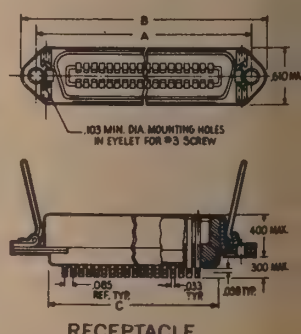


MOUNTING LAYOUT

MATING PLUG AND RECEPTACLE

DIMENSIONAL DATA





No. of Contacts	Socket No.	Plug No.	Socket No.	Plug No.	A	B	C	D	D min.	E	E min.	F	G	H	J min.
14	57-20140	57-10140	57-40140	57-30140	1.417	1.750	.910	1.495	1.098	.843	.940	.306	.422	1.668	.940
24	57-20240	57-10240	57-40240	57-30240	1.842	2.175	1.335	1.920	1.523	.825	1.365	.473	.473	1.668	1.365
36	57-20360	57-10360	57-40360	57-30360	2.352	2.685	1.845	2.431	2.033	.905	1.875	.640	.473	1.730	1.875
50	57-20500	57-10500	57-40500	57-30500	2.947	3.270	2.440	3.025	2.628	.995	2.472	.766	.473	1.825	2.472

ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS: (a) At Sea Level 500 VRMS, 700 VDC, (b) At 70,000 Feet 125 VRMS, 200 VDC; CONTACT CURRENT RATING: 5 Amperes; CONTACT RESISTANCE: .003 Ohms Average; INSULATION RESISTANCE (As Received): 5000 Megohms Minimum.

MECHANICAL SPECIFICATIONS

CONTACTS: Cadmium bronze, ASTM-B-105; FINISH: .00002 Gold per MIL-G 45204, Type II, over copper flash; HOUSINGS: Brass alloy with .0002 to .000 zinc. Plus clear chromate.

*Manufactured under license from Bunker-Ramo, Inc.

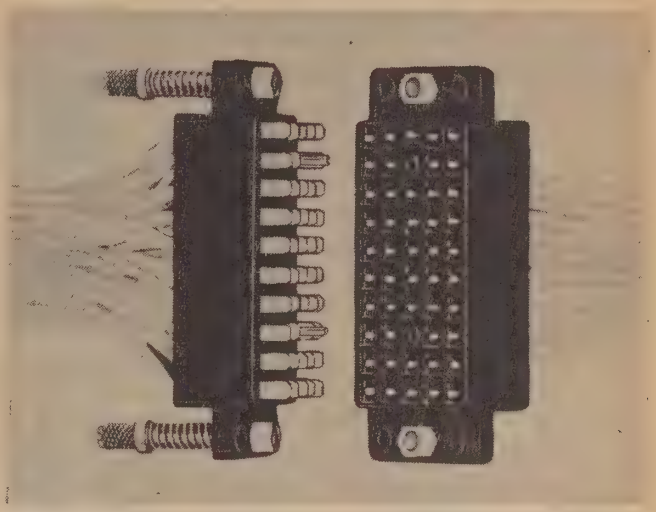
© United Technical Publication

CINCH

MINI-JONES CRIMP-ON, SNAP-IN CONNECTORS

The "MINI-JONES" contact density of 25 contacts per square inch results in a space saving of 40% compared to conventional connectors. No tools are required for inserting contacts. Pin and contact terminations will accommodate either one AWG 18, 20, 22 or 24; or two AWG 22 or 24. Supplied unassembled with loose contacts and insulators.





ELECTRICAL SPECIFICATIONS

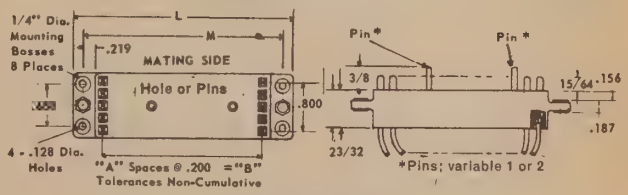
VOLTAGE RATING: 830 VRMS, 1230 VDC; CURRENT RATING: 4.0 amperes; CONTACT RESISTANCE: .0065 ohms maximum; LOW LEVEL CONTACT RESISTANCE: current flow at 0.1 micro volts, no variation of contact resistance at 6.5 ma and 16.25 ma; INSULATION RESISTANCE: 1000 megohms.

MATERIALS and FINISHES

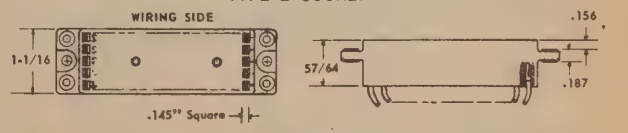
Component	Material	Finish
Male contacts	Phosphor Bronze	Tinned in strip
Female contacts	Phosphor Bronze	Tinned in strip
Insulators	General purpose black phenolic	
Polarizing pins	Brass	.0003 cadmium + yellow chromate
Lock nuts	Brass	.0003 cadmium + yellow chromate
Locking screw	Steel	.0003 cadmium + yellow chromate
Locking spring	Music Wire	.0003 cadmium + yellow chromate

DIMENSIONS

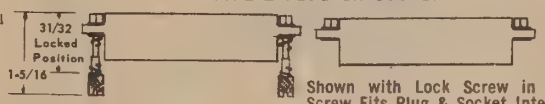
TYPE 1 PLUG



TYPE 2 SOCKET

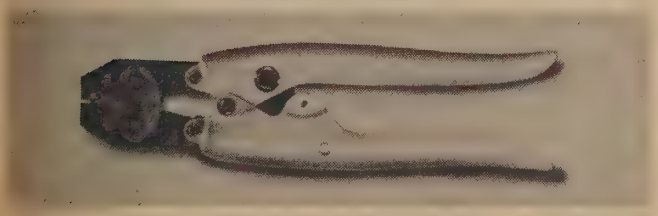


TYPE 2 PLUG OR SOCKET

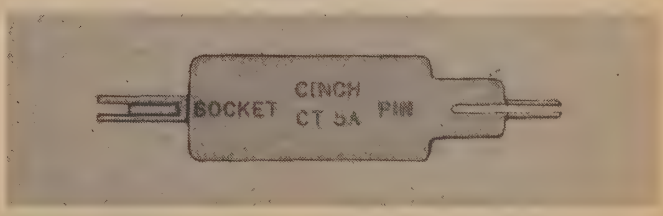


Shown with Lock Screw in Place. Lock Screw Fits Plug & Socket Interchangeably.

CRIMPING TOOL



PIN-REMOVAL TOOL



PART NUMBERS

NO OF CONTACTS	STANDARD CONNECTORS (TYPE 1) PLUG	SOCKET	CONNECTORS WITH PROVISION FOR LOCKS (TYPE 2) PLUG	SOCKET	NO. OF "A" SPACES	"B"	DIMENSIONS "M"	"L"
19	MJP-19	MJS-19	MJP-2-19	MJS-2-19	3	.600	1.288	1.600
29	MJP-29	MJS-29	MJP-2-29	MJS-2-29	5	1.000	1.688	2.000
39	MJP-39	MJS-39	MJP-2-39	MJS-2-39	7	1.400	2.088	2.400
48	MJP-48	MJS-48	MJP-2-48	MJS-2-48	9	1.800	2.488	2.800
58	MJP-58	MJS-58	MJP-2-58	MJS-2-58	11	2.200	2.888	3.200
68	MJP-68	MJS-68	MJP-2-68	MJS-2-68	13	2.600	3.288	3.600

Screw lock and spring to complete lock for Type 2	MJ-SL	Crimping tool	CT-5B
Plug pin	MJP-P	Pin removal tool	CT-5A
Socket pin	MJS-C		

© United Technical Publications

CINCH

"JONES" PLUGS and SOCKETS — 300 SERIES

In addition to the 300 series listed here, Jones Connectors are available in higher ratings.

400 Series: 1200V, 15 amps
2400 Series: 1700V, 15 amps
500 Series: 3KV, 25 amps

For information on these connectors and additional data on the units listed here, contact any Cinch Electronics District Office, or your Cinch Distributor, who has these items in stock for immediate delivery.

P-302-CCT





S-302-AB

ELECTRICAL SPECIFICATIONS

All connector ratings are based on a continuously mated condition. "Rated Voltage" is ⅓ of Voltage Breakdown.

Rated Voltage ..... 730 Volts rms. Contact Resistance .... .016 Ohms max.

Under most normal operating conditions where not all contacts are carrying substantially full rated current, maximum current per contact is rated at 10 amperes. The Jones 300 series plugs and sockets are recognized under the Component Program of Underwriters' Laboratories, Inc. In accordance with UL Standard #498, the Underwriters' Laboratories ratings are derived from the condition whereby all contacts are carrying "rated" current simultaneously. The resultant ratings are as follows:

Rated Current	Rated Wattage
(2-12 contacts) ..... 7.5 amperes	(2-12 contacts) .....1875 watts
(15-33 contacts) ..... 4.5 amperes	(15-33 contacts) .....1125 watts

MECHANICAL SPECIFICATIONS

INSULATOR: Molded phenolic;; CONTACTS: Phosphor bronze, cadmium plated; HOUSING: Formed metal, black wrinkle finish.

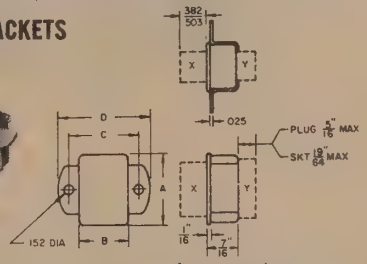
TYPE AB WITH ANGLE BRACKETS



P-306-AB



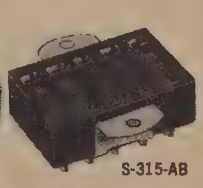
S-306-AB



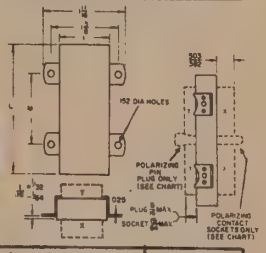
No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches A	B	C	D
2	P-302-AB	S-302-AB	21/32 Dia.	—	31/32	1 7/32
3	P-303-AB	S-303-AB	1	7/16	3/4	1 1/16
4	P-304-AB	S-304-AB	3/4	1 1/16	1	1 5/16
6	P-306-AB	S-306-AB	1	1 1/4	1	1 5/16
8	P-308-AB	S-308-AB	1 1/4	1 1/16	1	1 5/16
10	P-310-AB	S-310-AB	1 5/16	1 1/16	1	1 5/16
12	P-312-AB	S-312-AB	1 1/4	1 5/16	1 1/4	1 5/16



P-315-AB



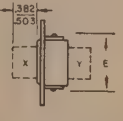
S-315-AB



No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches L	M	Polarizing Pin†
15	P-315-AB	S-315-AB	1 5/8	See Note	NO
18	P-318-AB	S-318-AB	1 13/16	1 1/4	NO
21	P-321-AB	S-321-AB	2 1/4	1 5/16	NO
24	P-324-AB	S-324-AB	2 7/16	1 1/4	14
27	P-327-AB	S-327-AB	2 7/8	1 9/16	14
30	P-330-AB	S-330-AB	3 3/16	1 7/8	14
33	P-333-AB	S-333-AB	3 1/2	2 5/16	17

Note: P-315-AB and S-315-AB require only two mounting brackets, mounted on center of connector.

TYPE FP WITH FLUSH PLATE

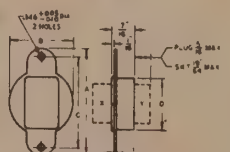




P-306-FP



S-306-FP



No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches A	B	C	D	E (Max.)
2	P-302-FP	S-302-FP	2 1/16	1 1/4	1 3/4	—	23/32
3	P-303-FP	S-303-FP	2 1/16	1 1/4	1 3/4	1 5/16	1/2
4	P-304-FP	S-304-FP	2 1/16	1 1/4	1 3/4	1 1/16	3/4
6	P-306-FP	S-306-FP	2 1/16	1 1/4	1 3/4	1 5/16	3/4
8	P-308-FP	S-308-FP	2 1/16	1 3/4	2 1/4	1 3/16	3/4
10	P-310-FP	S-310-FP	2 1/16	1 3/4	2 1/4	1 13/64	3/4
12	P-312-FP	S-312-FP	2 1/16	1 3/4	2 1/4	1 3/16	1

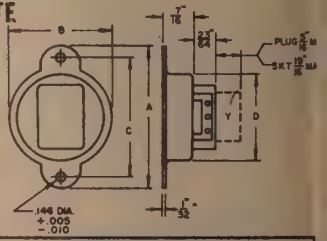
TYPE RP WITH RECESSED PLATE



P-306-RP



S-306-RP



No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches A	B	C	D (Max.)
2	P-302-RP	S-302-RP	2 1/16	1 1/2	1 3/4	1.350
3	P-303-RP	S-303-RP	2 1/16	1 1/2	1 3/4	1.350
4	P-304-RP	S-304-RP	2 1/16	1 1/2	1 3/4	1.350
6	P-306-RP	S-306-RP	2 1/16	1 1/2	1 3/4	1.350
8	P-308-RP	S-308-RP	2 1/16	2	2 1/4	1.850
10	P-310-RP	S-310-RP	2 1/16	2	2 1/4	1.850
12	P-312-RP	S-312-RP	2 1/16	2	2 1/4	1.850

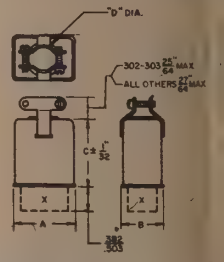
TYPE CCT WITH CABLE CLAMP IN TOP



P-306-CCT



S-306-CCT



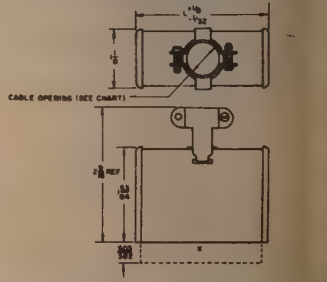
No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches A	B	C	D
2	P-302-CCT	S-302-CCT	21/32 Dia.	—	61/64	3/8
3	P-303-CCT	S-303-CCT	1	7/16	61/64	5/16
4	P-304-CCT	S-304-CCT	3/4	1 1/16	61/64	3/8
6	P-306-CCT	S-306-CCT	1	1 1/16	1 5/64	7/16
8	P-308-CCT	S-308-CCT	1 1/4	1 1/16	1 5/64	1/2
10	P-310-CCT	S-310-CCT	1 5/16	1 1/16	1 13/64	1/2
12	P-312-CCT	S-312-CCT	1 1/4	1 5/16	1 13/64	9/16



P-315-CCT



S-315-CCT



No. of Contacts	Plug Part Nos.	Socket Part Nos.	L +1/8 —1/32	Cable Opening Standard	Max.	Polarizing Pin
15	P-315-CCT	S-315-CCT	1 11/16	5/16	7/8	NO
18	P-318-CCT	S-318-CCT	2	9/16	7/8	NO
21	P-321-CCT	S-321-CCT	2 5/16	5/8	7/8	NO
24	P-324-CCT	S-324-CCT	2 5/8	5/8	7/8	14
27	P-327-CCT	S-327-CCT	2 15/16	5/8	7/8	14
30	P-330-CCT	S-330-CCT	3 1/4	3/4	7/8	14
33	P-333-CCT	S-333-CCT	3 9/16	3/4	7/8	17

© United Technical Publications

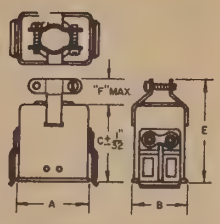
CINCH

"JONES" PLUGS AND SOCKETS — 300 SERIES (Cont'd.)

TYPE CCT-K WITH CABLE CLAMP IN TOP OF CAP AND WITH KEEPERS



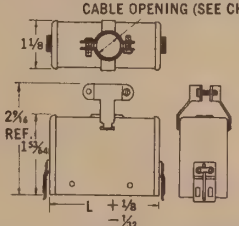
S-306-CCT-K



No. of Contacts	Socket Part Nos.	Dimensions in Inches A	B	C	E	F	Cable Opening
2	S-302-CCT-K	2 1/32 Dia.	—	61/64	1 3/8	25/64	3/8
3	S-303-CCT-K	1	7/16	61/64	1 3/8	25/64	5/16
4	S-304-CCT-K	3/4	11/16	61/64	1 13/32	27/64	3/8
6	S-306-CCT-K	1	11/16	1 5/64	1 1/2	27/64	7/16
8	S-308-CCT-K	1 1/4	11/16	1 5/64	1 5/8	27/64	1/2
10	S-310-CCT-K	1 5/16	11/16	1 13/64	1 21/32	27/64	1/2
12	S-312-CCT-K	1 1/4	15/16	1 13/64	1 5/8	27/64	9/16



S-315-CCT-K



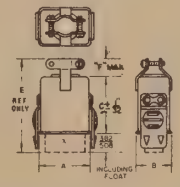
No. of Contacts	Socket Part Nos.	L +1/8 −1/32	Cable Opening	Polarizing Pin
15	S-315-CCT-K	1 11/16	9/16	NO
18	S-318-CCT-K	2	9/16	NO
21	S-321-CCT-K	2 5/16	5/8	NO
24	S-324-CCT-K	2 5/8	5/8	14
27	S-327-CCT-K‡	2 15/16	5/8	14
30	S-330-CCT-K‡	3 1/4	3/4	14
33	S-333-CCT-K‡	3 9/16	3/4	17

‡Keepers are centered on each side, not on each end as shown.

TYPE CCT-L WITH CABLE CLAMP IN TOP OF CAP AND WITH LOCKS



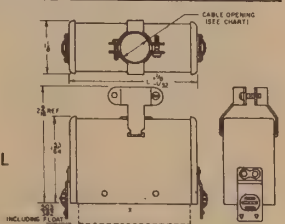
P-306-CCT-L



No. of Contacts	Plug Part Nos.	Dimensions in Inches A	B	C	E	F	Cable Opening
2	P-302-CCT-L	2 1/32 Dia.	—	61/64	1 13/16	25/64	3/8
3	P-303-CCT-L	1	7/16	61/64	1 13/16	25/64	5/16
4	P-304-CCT-L	3/4	11/16	61/64	1 27/32	27/64	3/8
6	P-306-CCT-L	1	11/16	1 5/64	1 13/16	27/64	7/16
8	P-308-CCT-L	1 1/4	11/16	1 5/64	2 1/16	27/64	1/2
10	P-310-CCT-L	1 5/16	11/16	1 13/64	2 5/32	27/64	1/2
12	P-312-CCT-L	1 1/4	15/16	1 13/64	2 1/16	27/64	9/16



P-315-CCT-L



No. of Contacts	Plug Part Nos.	L +1/8 −1/32	Cable Opening Standard	Cable Opening Max.	Polarizing Pin
15	P-315-CCT-L	1 11/16	9/16	7/8	NO
18	P-318-CCT-L	2	9/16	7/8	NO
21	P-321-CCT-L	2 5/16	5/8	7/8	NO
24	P-324-CCT-L	2 5/8	5/8	7/8	14
27	P-327-CCT-L‡	2 15/16	5/8	7/8	14
30	P-330-CCT-L‡	3 1/4	3/4	7/8	14
33	P-333-CCT-L‡	3 9/16	3/4	7/8	17

‡Locks are centered on each side, not on each end as shown.

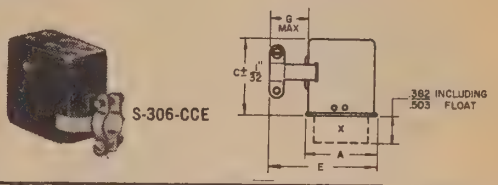
TYPE CCE WITH CABLE CLAMP IN END



P-306-CCE



S-306-CCE

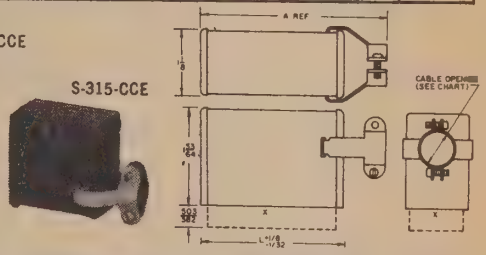


No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches A	B	C	E	G	Cable Opening
6	P-306-CCE	S-306-CCE	1	11/16	1 1/16	1 1/16	27/64	7/16
8	P-308-CCE	S-308-CCE	1 1/4	11/16	1 1/16	1 13/16	27/64	1/2
10	P-310-CCE	S-310-CCE	1 5/16	11/16	1 3/16	2 3/32	27/64	1/2
12	P-312-CCE	S-312-CCE	1 1/4	15/16	1 3/16	1 3/4	27/64	9/16

P-315-CCE



S-315-CCE



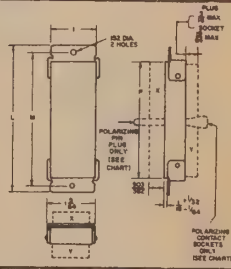
No. of Contacts	Plug Part Nos.	Socket Part Nos.	A (Ref.)	L +1/8 −1/32	Cable Opening Standard	Cable Opening Max.	Polarizing Pin
15	P-315-CCE	S-315-CCE	2 7/16	1 11/16	9/16	13/16	NO
18	P-318-CCE	S-318-CCE	2 3/4	2	9/16	13/16	NO
21	P-321-CCE	S-321-CCE	3 1/16	2 5/16	5/8	13/16	NO
24	P-324-CCE	S-324-CCE	3 3/8	2 5/8	5/8	13/16	14
27	P-327-CCE	S-327-CCE	3 11/16	2 15/16	5/8	13/16	14
30	P-330-CCE	S-330-CCE	4	3 1/4	3/4	13/16	14
33	P-333-CCE	S-333-CCE	4 5/16	3 9/16	3/4	13/16	17

TYPE EB WITH END BRACKETS

P-315-EB



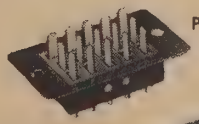
S-315-EB



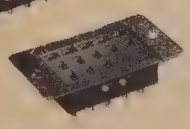
No. of Contacts	Plug Part Nos.	Socket Part Nos.	L ± 1/32"	M ± 1/32"	P ± 1/16"	Polarizing Pin
15	P-315-EB	S-315-EB	2 5/16	2	1 3/4	NO
18	P-318-EB	S-318-EB	2 5/8	2 5/16	1 15/16	NO
21	P-321-EB	S-321-EB	2 15/16	2 5/8	2 1/4	NO
24	P-324-EB	S-324-EB	3 1/4	2 15/16	2 5/16	14
27	P-327-EB	S-327-EB	3 5/16	3 1/4	2 7/8	14
30	P-330-EB	S-330-EB	3 7/8	3 5/16	3 1/16	14
33	P-333-EB	S-333-EB	4 3/16	3 7/8	3 1/2	17

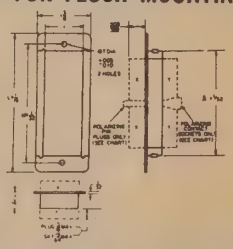
TYPE SB WITH SHALLOW BRACKETS FOR FLUSH MOUNTING

P-315-SB



S-315-SB





No. of Contacts	Plug Part Nos.	Socket Part Nos.	A ± 1/32"	M ± 1/32"	L ± 1/16"	Polarizing Pin
15	P-315-SB	S-315-SB	1 11/16	2 1/8	2 35/64	NO
18	P-318-SB	S-318-SB	2	2 7/16	2 55/64	NO
21	P-321-SB	S-321-SB	2 5/16	2 3/4	3 11/64	NO
24	P-324-SB	S-324-SB	2 5/8	3 1/16	3 33/64	14
27	P-327-SB	S-327-SB	2 15/16	3 3/8	3 51/64	14
30	P-330-SB	S-330-SB	3 1/4	3 11/16	4 3/4	14
33	P-333-SB	S-333-SB	3 9/16	4	4 27/64	17

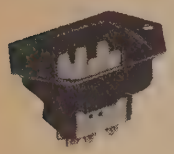
© United Technical Publications

CINCH

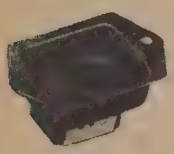
"JONES" PLUGS and SOCKETS — 300 SERIES (Cont'd.)

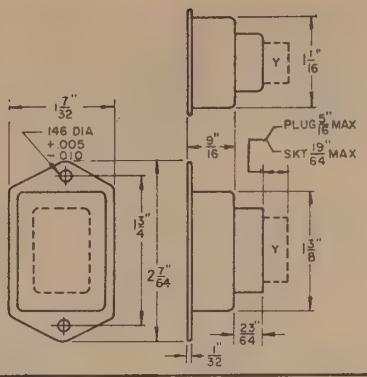
TYPE DB WITH DEEP BRACKET FOR RECESSED MOUNTING

P-306-DB



S-306-DB





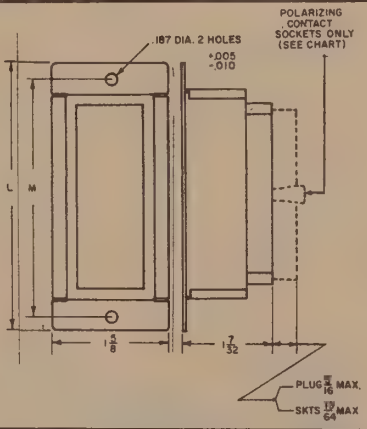
No. of Contacts	Plug Part Nos.	Socket Part Nos.	TYPE DB With Deep Bracket for Recessed Mounting
2	P-302-DB	S-302-DB	See Dimensions On Diagram
3	P-303-DB	S-303-DB	
4	P-304-DB	S-304-DB	
6	P-306-DB	S-306-DB	
8	P-308-DB	S-308-DB	
12	P-312-DB	S-312-DB	

P-315-DB



S-315-DB





No. of Contacts	Plug Part Nos.	Socket Part Nos.	Dimensions in Inches L ±1/16"	Dimensions in Inches M ±1/32"	Polarizing Contact Pins†
15	P-315-DB	S-315-DB	2 13/16	2 3/8	NO
18	P-318-DB	S-318-DB	3 1/8	2 11/16	NO
21	P-321-DB	S-321-DB	3 7/16	3	NO
24	P-324-DB	S-324-DB	3 3/4	3 5/16	14
27	P-327-DB	S-327-DB	4 1/16	3 5/8	14
30	P-330-DB	S-330-DB	4 3/8	3 15/16	14
33	P-333-DB	S-333-DB	4 11/16	4 1/4	17

†See Polarizing Chart on page 16.
Y is the dimension for contact tail extension.

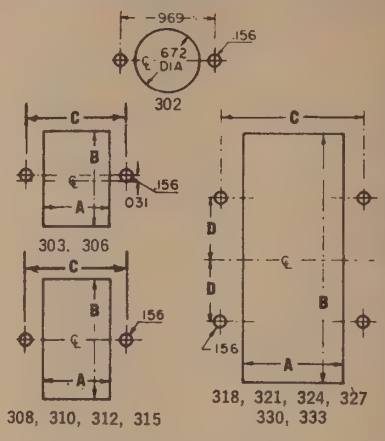
REPLACEMENT DRIVE PINS FOR 300 SERIES CAP-TYPE PLUGS AND SOCKETS



*10-contact size and 15 thru 33-contact sizes require 2 pins per unit; all other sizes require only 1.

NO. OF CONTACTS	PART NOS.	DIM. L ± .005
2	302-R	.687
3	303-R	.468
4, 6, 8, 10*	304-R	.718
12	312-R	.953
15-33*	333-R	1.125

TYPE AB (Angle Bracket) MOUNTING DIMENSIONS

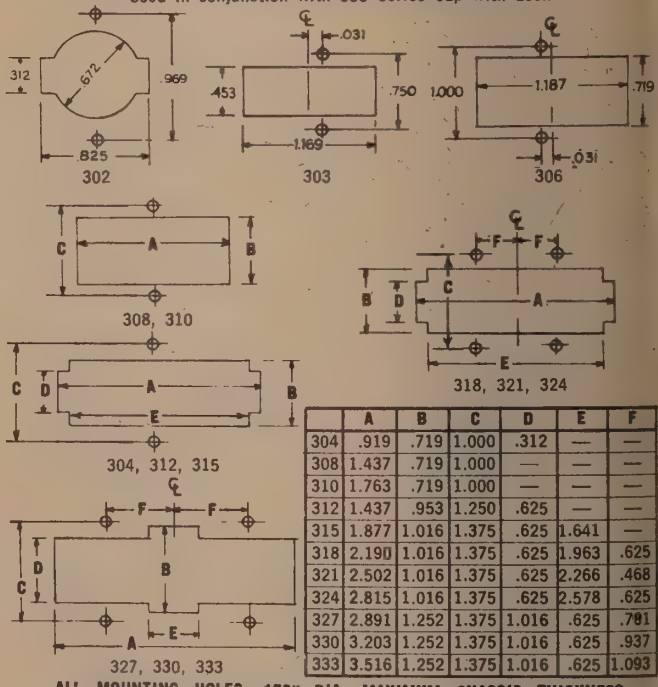


For 300 Series 2-33 contact Angle Bracket Connectors (type AB).

	A	B	C	D
303	.719	1.016	.750	—
304	.719	.781	1.000	—
306	.719	1.031	1.000	—
308	.719	1.281	1.000	—
310	.719	1.578	1.000	—
312	.953	1.266	1.250	—
315	1.016	1.641	1.375	—
318	1.016	1.953	1.375	.625
321	1.016	2.266	1.375	.469
324	1.016	2.578	1.375	.625
327	1.016	2.891	1.375	.781
330	1.016	3.203	1.375	.938
333	1.016	3.516	1.375	1.094

TYPE AB PANEL CUT-OUTS

For 300 Series 2-33 contact Angle Bracket Connectors (type AB) Used in conjunction with 300 Series Cap with Lock

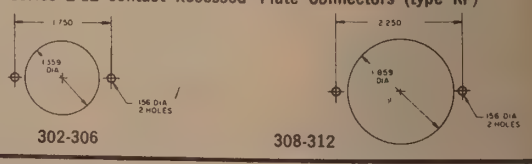


	A	B	C	D	E	F
304	.919	.719	1.000	.312	—	—
308	1.437	.719	1.000	—	—	—
310	1.763	.719	1.000	—	—	—
312	1.437	.953	1.250	.625	—	—
315	1.877	1.016	1.375	.625	1.641	—
318	2.190	1.016	1.375	.625	1.963	.625
321	2.502	1.016	1.375	.625	2.266	.468
324	2.815	1.016	1.375	.625	2.578	.625
327	2.891	1.252	1.375	1.016	.625	.781
330	3.203	1.252	1.375	1.016	.625	.937
333	3.516	1.252	1.375	1.016	.625	1.093

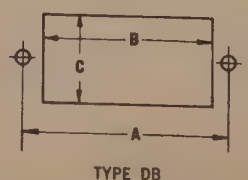
ALL MOUNTING HOLES .156" DIA. MAXIMUM CHASSIS THICKNESS 1/16" FOR BOTTOM MOUNTING
Mounting holes to be located on center line unless otherwise shown.

TYPE RP RECESSED PLATE MOUNTING

For 300 Series 2-12 contact Recessed Plate Connectors (type RP)



TYPE DB (Deep Bracket) MOUNTING DIMENSIONS



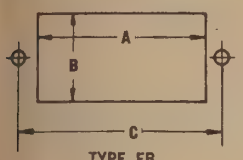
	A	B	C
302-312 DB	1.375	1.0625	.625
315 DB	2.000	1.438	1.188
318 DB	2.313	1.438	1.344
321 DB	2.625	1.438	1.500
324 DB	2.938	1.438	1.656
327 DB	3.250	1.438	1.813
330 DB	3.562	1.438	1.969
333 DB	3.875	1.438	2.125

© United Technical Publications

CINCH

"JONES PLUGS AND SOCKETS — 300 SERIES (Cont'd.)

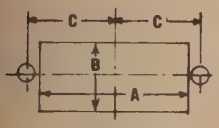
TYPE EB (End Bracket) MOUNTING DIMENSIONS



TYPE EB

	A	B	C
315 EB	1.641	1.016	2.000
318 EB	1.953	1.016	2.313
321 EB	2.266	1.016	2.625
324 EB	2.578	1.016	2.938
327 EB	2.891	1.016	3.250
330 EB	3.203	1.016	3.563
333 EB	3.516	1.016	3.875

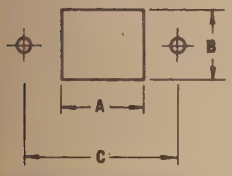
TYPE SB (Shallow Bracket) MOUNTING DIMENSIONS



TYPE SB

	A	B	C
315 SB	1.750	1.156	1.063
318 SB	2.063	1.156	1.219
321 SB	2.375	1.156	1.375
324 SB	2.688	1.156	1.531
327 SB	3.000	1.156	1.688
330 SB	3.313	1.156	1.844
333 SB	3.625	1.156	2.000

TYPE FP (Flush Plate) MOUNTING DIMENSIONS



303 FP, 304 FP, 306 FP,
308 FP, 310 FP, 312 FP

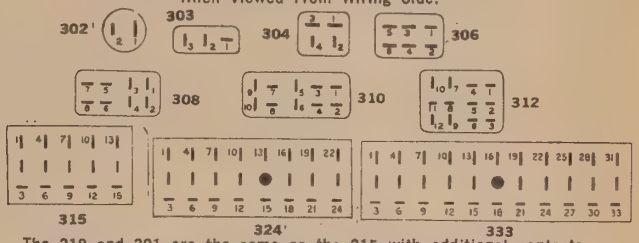


302 FP

	A	B	C
303 FP	.953	.516	1.750
304 FP	.703	.766	1.750
306 FP	.953	.766	1.750
308 FP	1.203	.766	2.250
310 FP	1.516	.766	2.250
312 FP	1.203	1.016	2.250

POLARIZING POSITION DATA

Polarization and Numbering of Contacts on Socket Units When Viewed From Wiring Side.



The 318 and 321 are the same as the 315 with additional contacts. The 324, 327 and 330 plugs have a round locating pin in position No. 14. This pin is in position No. 17 on the 333 plug. All of the series contacts start with number 1.

AUXILIARY LOCKS



For securing 300, 400 and 2400 Series Plugs and Sockets.

Spring Lock for Use With 400 Series Panel Mounted Connectors: Can be used with type AB or SB. Proper operation requires that the mounted plug or socket body be flush with the top of the panel. The standard screws must be replaced by filister head screws. **Part No. 63**

Spring Lock For Use With 300 Series 15-33 Contact Panel-Mount Connectors as follows: For Type EB or SB, mating connector with cap must be type CT (or CCE-63A-SB). For type DB, mating connector with cap must be CCT-63A-DB. **Part No. 63A**

Extension-Cable Lock For Use With 400 Series: Can be used with any 400 Series unmounted (cap-type) connector. The binder head screws in the socket cap must be replaced with filister head screws. **Part No. 93**

"JONES" PLUGS and SOCKETS — 400 and 2400 SERIES

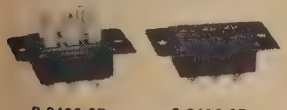
[1]Type LAB
Less Angle Brackets
Drilled and Tapped
Except in 2-contact Size


P-2406-LAB . S-2406-LAB

[2]Type AB
With Angle Brackets


P-406-AB S-406-AB

[3]Type SB
With Shallow Bracket
for Flush Mounting


P-2406-SB S-2406-SB

[4]Type DB
With Deep Bracket
for Recessed Mounting


P-2406-DB S-2406-DB

[5]Type CCT
With Cable Clamp in Top


P-406-CCT S-406-CCT

[6]Type CCE
With Cable Clamp in End


P-406-CCE S-406-CCE

400 series and 2400 series plugs and sockets are suitable for cap or panel mounting. Plug prongs are cadmium plated brass. Caps are finished in black wrinkle and equipped with a fibre lining. 400 series and 2400 series plugs and sockets are intermatable.
A special bracket, Type 46, is supplied for mounting the 2-contact angle bracket (AB) type socket to a panel or chassis.



Series 2400 plugs and sockets have recessed pockets with barriers around the contacts, both on the mating side and the solder connecting side. A shoulder extends around the face (mating) side of both plug and socket presenting a finished appearance when mounted in bracket or cap. Angle brackets can be ordered as specials for the 2400 Series.

ELECTRICAL SPECIFICATIONS

All connector ratings are based on a continuously mated condition. "Rated Voltage" is 1/3 of voltage breakdown.

SERIES 400 — RATED VOLTAGE: 1200; CONTACT RESISTANCE (Average): .001 ohm; RATED CURRENT: 15 amps; RATED WATTAGE PER CONTACT: 3750.

SERIES 2400 — RATED VOLTAGE 1700; CONTACT RESISTANCE (Average): .001 ohm; RATED CURRENT: *15 amps, **10 amps; RATED WATTAGE PER CONTACT: 3750, 2500.

*Standard Commercial Service. **As rated by U.L. to U.L. Standard No. 498.

400 SERIES PART NUMBERS

No. of Contacts	Type LAB[1] Part Nos.*	Type AB[2] Part Nos.*	Type SB[3] Part Nos.*	Type DB[4] Part Nos.*	Type CCT[5] Part Nos.*	Type CCE[6] Part Nos.*
2	P-402-LAB S-402-LAB	P-402-AB S-402-AB	P-402-SB S-402-SB	P-402-DB S-402-DB	P-402-CCT S-402-CCT	P-402-CCE S-402-CCE
4	P-404-LAB S-404-LAB	P-404-AB S-404-AB	P-404-SB S-404-SB	P-404-DB S-404-DB	P-404-CCT S-404-CCT	P-404-CCE S-404-CCE
6	P-406-LAB S-406-LAB	P-406-AB S-406-AB	P-406-SZ S-406-SB	P-406-DB S-406-DB	P-406-CCT S-406-CCT	P-406-CCE S-406-CCE
8	P-408-LAB S-408-LAB	P-408-AB S-408-AB	P-408-SB S-408-SB	P-408-DB S-408-DB	P-408-CCT S-408-CCT	P-408-CCE S-408-CCE
10	P-410-LAB S-410-LAB	P-410-AB S-410-AB	P-410-SB S-410-SB	P-410-DB S-410-DB	P-410-CCT S-410-CCT	P-410-CCE S-410-CCE
12	P-412-LAB S-412-LAB	P-412-AB S-412-AB	P-412-SB S-412-SB	P-412-DB S-412-DB	P-412-CCT S-412-CCT	P-412-CCE S-412-CCE

2400 SERIES PART NUMBERS

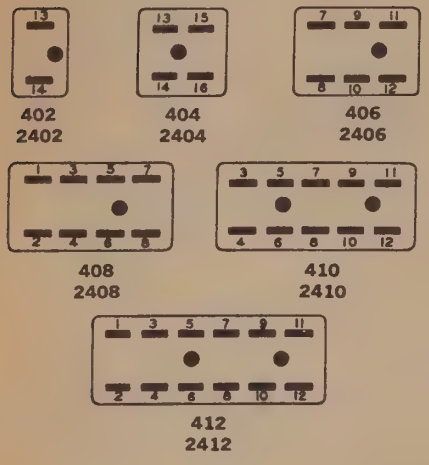
No. of Contacts	Type LAB[1] Part Nos.*	Type SB[2] Part Nos.*	Type DB[3] Part Nos.*	Type CCT[5] Part Nos.*	Type CCE[6] Part Nos.*
2	P-2402-LAB S-2402-LAB	P-2402-SB S-2402-SB	P-2402-DB S-2402-DB	P-2402-CCT S-2402-CCT	P-2402-CCE S-2402-CCE
4	P-2404-LAB S-2404-LAB	P-2404-SB S-2404-SB	P-2404-DB S-2404-DB	P-2404-CCT S-2404-CCT	P-2404-CCE S-2404-CCE
6	P-2406-LAB S-2406-LAB	P-2406-SB S-2406-SB	P-2406-DB S-2406-DB	P-2406-CCT S-2496-CCT	P-2406-CCE S-2406-CCE
8	P-2408-LAB S-2408-LAB	P-2408-SB S-2408-SB	P-2408-DB S-2408-DB	P-2408-CCT S-2408-CCT	P-2408-CCE S-2408-CCE
10	P-2410-LAB S-2410-LAB	P-2410-SB S-2410-SB	P-2410-DB S-2410-DB	P-2410-CCT S-2410-CCT	P-2410-CCE S-2410-CCE
12	P-2412-LAB S-2412-LAB	P-2412-SB S-2412-SB	P-2412-DB S-2412-DB	P-2412-CCT S-2412-CCT	P-2412-CCE S-2412-CCE

© United Technical Publications

CINCH

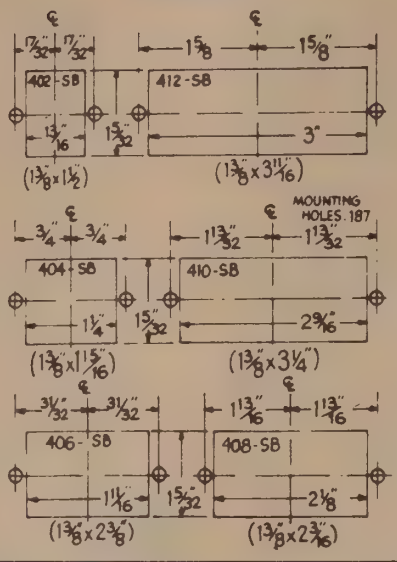
"JONES" PLUGS AND SOCKETS—400 AND 2400 SERIES (Cont'd.)

POLARIZING POSITION DATA

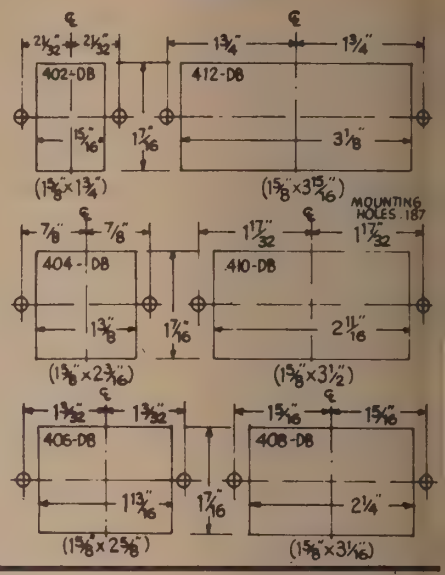


MOUNTING SPECIFICATIONS

TYPE SB



TYPE DB



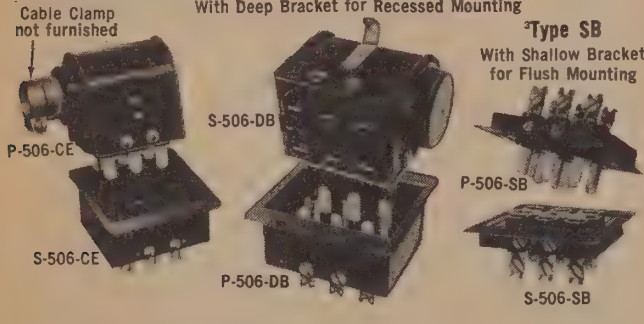
"JONES" PLUGS and SOCKETS—500 SERIES

[2]Type CE
for Cable Clamp in End

Cable Clamp not furnished

[1]Type DB
With Deep Bracket for Recessed Mounting

[3]Type SB
With Shallow Bracket for Flush Mounting



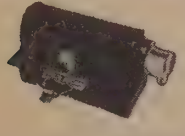
ELECTRICAL SPECIFICATIONS

RATED VOLTAGE: 3 KV max; RATED CURRENT: 25 amperes per contact; POWER CAPACITY: 5 KW max.

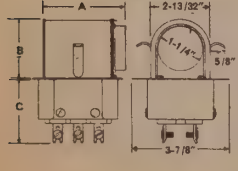
MECHANICAL SPECIFICATIONS

CONTACTS: MALE — Cadmium plated brass; FEMALE — Cadmium plated phosphor; CAPS AND BRACKETS: Parkerized steel.

LOCKS FOR 500 SERIES PLUGS AND SOCKETS



No. 500-L LOCKS fit any deep bracket and cap combination. They hold securely, but can be released instantly. The locks are fastened by the same screws or rivets that hold the deep brackets to the panel. Locks are sold in pairs only and cannot be used on shallow brackets.

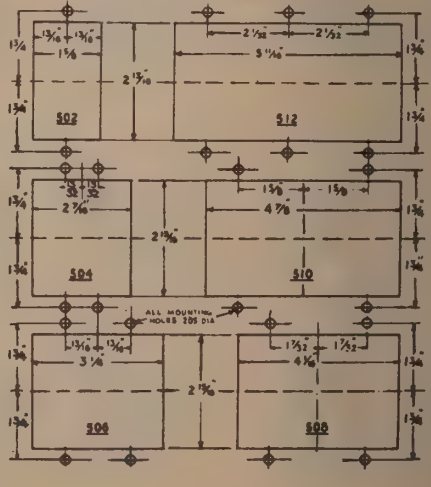


DIMENSIONS

For type DB connectors, dimension B is 2¼" and dimension C is 2⅝" reference on the socket and 2 7/16" reference on the plug. For type SB connectors, dimension C is 1 5/16", cap height is 2 57/64".

500 SERIES MOUNTING SPECIFICATIONS

FOR DEEP OR SHALLOW BRACKETS

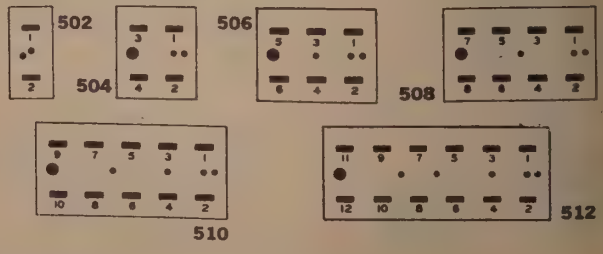


PART NUMBERS

No. of Contacts	Type DB[1] Part Nos.*	Type CE[2] Part Nos.*	Type SB[3] Part Nos.*	Dimension "A"
2	P-502-DB S-502-DB	P-502-CE S-502-CE	P-502-SB S-502-SB	1 11/16"
4	P-504-DB S-504-DB	P-504-CE S-504-CE	P-504-SB S-504-SB	2½"
6	P-506-DB S-506-DB	P-506-CE S-506-CE	P-506-SB S-506-SB	3 5/16"
8	P-508-DB S-508-DB	P-508-CE S-508-CE	P-508-SB S-508-SB	4⅛"
10	P-510-DB S-510-DB	P-510-CE S-510-CE	P-510-SB S-510-SB	4 15/16"
12	P-512-DB S-512-DB	P-512-CE S-512-CE	P-512-SB S-512-SB	5¾"

*P — Indicates Plug S — Indicates Socket

POLARIZING POSITION DATA



© United Technical Publications

CINCH

TERMINAL BLOCKS and ACCESSORIES

The Jones barrier terminal blocks are made of molded phenolic. Eyelets and screws are nickel-plated brass and terminals are hot solder dipped brass. Fibre or phenolic marker strips are available for all barrier blocks. Barrier blocks are available in standard terminal configurations as shown. Optional terminals are available as indicated by the Y, W, or ¾ W suffix on the part numbers in the charts.


2-140


2-172-W

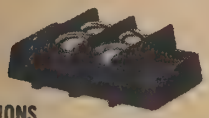

2-164¾-W

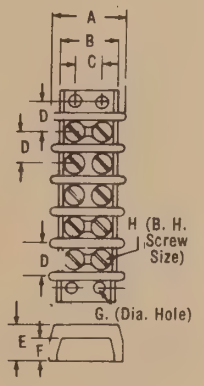

2-164-Y

The standard terminal block with binder head screws can be used for wire or special terminal attachment.
¾ W terminals are available for solder attachment of wires on one side of the terminal block. W terminals are available for solder connection of wires to both sides of the terminal block. (Available as standard on 172 series; special order on others.) Y terminals are available for solder connection of wires underneath the terminal block.

BARRIER TERMINAL BLOCKS

SERIES 140/141/142/164





DIMENSIONS

	140	141	142	164
A	7/8"	1 1/8"	1 3/8"	7/8"
B	1 1/16"	7/8"	1 1/16"	1 1/16"
C	5/16"	27/64"	1/2"	5/16"
D	3/8"	7/16"	9/16"	3/8"
E	13/32"	1/2"	5/8"	13/32"
F	1/4"	5/16"	3/8"	1/4"
G	.160"	.175/.185"	.209"	.171/.175"
H	5/40 x 3/16	6/32 x 1/4	8/32 x 5/16	6/32 x 1/4

140 SERIES

No. of Terminals	Std.*	¾W	Y
1	1-140	1-140-¾W	1-140-Y
2	2-140	2-140-¾W	2-140-Y
3	3-140	3-140-¾W	3-140-Y
4	4-140	4-140-¾W	4-140-Y
5	5-140	5-140-¾W	5-140-Y
6	6-140	6-140-¾W	6-140-Y
7	7-140	7-140-¾W	7-140-Y
8	8-140	8-140-¾W	8-140-Y
9	9-140	9-140-¾W	9-140-Y
10	10-140	10-140-¾W	10-140-Y
11	11-140	11-140-¾W	11-140-Y
12	12-140	12-140-¾W	12-140-Y
13	13-140	13-140-¾W	13-140-Y
14	14-140	14-140-¾W	14-140-Y
15	15-140	15-140-¾W	15-140-Y
16	16-140	16-140-¾W	16-140-Y
17	17-140	17-140-¾W	17-140-Y
18	18-140	18-140-¾W	18-140-Y
19	19-140	19-140-¾W	19-140-Y
20	20-140	20-140-¾W	20-140-Y
21	21-140	21-140-¾W	21-140-Y
22	22-140	22-140-¾W	22-140-Y
23	23-140	23-140-¾W	23-140-Y
24	24-140	24-140-¾W	24-140-Y
25	25-140	25-140-¾W	25-140-Y

*140 series barrier blocks are available with up to 25 terminal positions on special order. Part Nos. follow the conventional numbering system.

141 SERIES

No. of Terminals	Std.	¾W	Y
1	1-141	1-141-¾W	1-141-Y
2	2-141	2-141-¾W	2-141-Y
3	3-141	3-141-¾W	3-141-Y
4	4-141	4-141-¾W	4-141-Y
5	5-141	5-141-¾W	5-141-Y
6	6-141	6-141-¾W	6-141-Y
7	7-141	7-141-¾W	7-141-Y
8	8-141	8-141-¾W	8-141-Y
9	9-141	9-141-¾W	9-141-Y
10	10-141	10-141-¾W	10-141-Y
11	11-141	11-141-¾W	11-141-Y
12	12-141	12-141-¾W	12-141-Y
13	13-141	13-141-¾W	13-141-Y
14	14-141	14-141-¾W	14-141-Y
15	15-141	15-141-¾W	15-141-Y
16	16-141	16-141-¾W	16-141-Y
17	17-141	17-141-¾W	17-141-Y
18	18-141	18-141-¾W	18-141-Y
19	19-141	19-141-¾W	19-141-Y
20	20-141	20-141-¾W	20-141-Y

ELECTRICAL SPECIFICATIONS

Series	Max. Volts r.m.s. Without Marker Strip	Max. Volts r.m.s. With Marker Strip	Max. Current In Amps.	Max. Watts per Terminal
140	1100	1200	15	3,750
141	1100	1600	20	5,000
142	1600	2500	30	7,500
150	1700	2600	50	12,500
151	1800	3400	70	17,500
152	2100	3800	90	54,000
164	1100	1200	15	3,750
171	1000	—*	5	625
172	1000	2000	5	625
173	1000	2000	5	625
174	1000	2000	5	625

*No marker strip available.

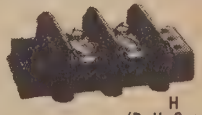
142 SERIES

No. of Terminals	Std.	¾W	Y
1	1-142	1-142-¾W	1-142-Y
2	2-142	2-142-¾W	2-142-Y
3	3-142	3-142-¾W	3-142-Y
4	4-142	4-142-¾W	4-142-Y
5	5-142	5-142-¾W	5-142-Y
6	6-142	6-142-¾W	6-142-Y
7	7-142	7-142-¾W	7-142-Y
8	8-142	8-142-¾W	8-142-Y
9	9-142	9-142-¾W	9-142-Y
10	10-142	10-142-¾W	10-142-Y
11	11-142	11-142-¾W	11-142-Y
12	12-142	12-142-¾W	12-142-Y
13	13-142	13-142-¾W	13-142-Y
14	14-142	14-142-¾W	14-142-Y
15	15-142	15-142-¾W	15-142-Y
16	16-142	16-142-¾W	16-142-Y
17	17-142	17-142-¾W	17-142-Y

164 SERIES

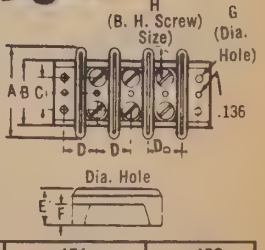
No. of Terminals	Std.	¾W	Y
1	1-164	1-164-¾W	1-164-Y
2	2-164	2-164-¾W	2-164-Y
3	3-164	3-164-¾W	3-164-Y
4	4-164	4-164-¾W	4-164-Y
5	5-164	5-164-¾W	5-164-Y
6	6-164	6-164-¾W	6-164-Y
7	7-164	7-164-¾W	7-164-Y
8	8-164	8-164-¾W	8-164-Y
9	9-164	9-164-¾W	9-164-Y
10	10-164	10-164-¾W	10-164-Y
11	11-164	11-164-¾W	11-164-Y
12	12-164	12-164-¾W	12-164-Y
13	13-164	13-164-¾W	13-164-Y
14	14-164	14-164-¾W	14-164-Y
15	15-164	15-164-¾W	15-164-Y
16	16-164	16-164-¾W	16-164-Y
17	17-164	17-164-¾W	17-164-Y
18	18-164	18-164-¾W	18-164-Y
19	19-164	19-164-¾W	19-164-Y
20	20-164	20-164-¾W	20-164-Y
21	21-164	21-164-¾W	21-164-Y

SERIES 150/151/152



DIMENSIONS

	150	151	152
A	1 13/16"	2"	2 1/2"
B	1 5/16"	1 1/2"	1 13/16"
C	5/8"	3/4"	7/8"
D	1 1/16"	7/8"	1 1/8"
E	3/4"	15/16"	1 1/8"
F	7/16"	1/2"	5/8"
G	.160"	.180"	.209"
H	10/32 x 5/16	12/32 x 3/8	1/4/28 x 1/2



No. of Terminals	150 SERIES Std.	150 SERIES Y	151 SERIES Std.	152 SERIES Std.
1	1-150	1-150-Y	1-151	1-152
2	2-150	2-150-Y	2-151	2-152
3	3-150	3-150-Y	3-151	3-152
4	4-150	4-150-Y	4-151	4-152
5	5-150	5-150-Y	5-151	5-152
6	6-150	6-150-Y	6-151	6-152
7	7-150	7-150-Y	7-151	
8	8-150	8-150-Y	8-151	
9	9-150	9-150-Y		
10	10-150	10-150-Y		

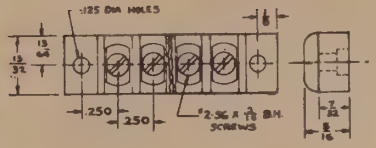
© United Technical Publications

CINCH

BARRIER TERMINAL BLOCKS (Cont'd.)

SERIES 171

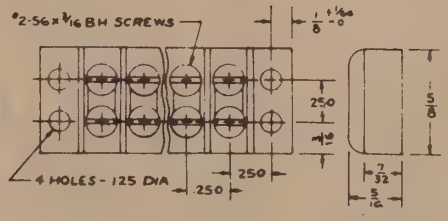




No. of Terminals	Std.
2	2-171
3	3-171
4	4-171
5	5-171
6	6-171
7	7-171
8	8-171

SERIES 172

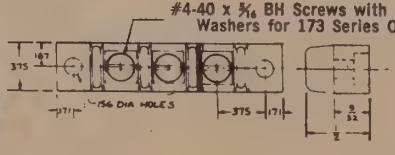




No. of Terminals	Std.	W	¾W	Y
2	2-172	2-172-W	2-172-¾W	2-172-Y
3	3-172	3-172-W	3-172-¾W	3-172-Y
4	4-172	4-172-W	4-172-¾W	4-172-Y
5	5-172	5-172-W	5-172-¾W	5-172-Y
6	6-172	6-172-W	6-172-¾W	6-172-Y
7	7-172	7-172-W	7-172-¾W	7-172-Y
8	8-172	8-172-W	8-172-¾W	8-172-Y
9	9-172	9-172-W	9-172-¾W	9-172-Y
10	10-172	10-172-W	10-172-¾W	10-172-Y
11	11-172	11-172-W	11-172-¾W	11-172-Y
12	12-172	12-172-W	12-172-¾W	12-172-Y
13	13-172	13-172-W	13-172-¾W	13-172-Y
14	14-172	14-172-W	14-172-¾W	14-172-Y

SERIES 173-174





No. of Terminals	173 SERIES w. Lock Washer	174 SERIES w.o. Lock Washer
2	2-173	2-174
3	3-173	3-174
4	4-173	4-174
5	5-173	5-174
6	6-173	6-174
7	7-173	7-174
8	8-173	8-174
9	9-173	9-174
10	10-173	10-174

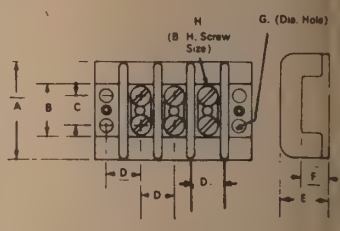
SERIES 500



The new 500 series Jones Barrier Terminal Blocks are designed for applications where electrical and mechanical performance requirements are especially critical. Bottoms are closed so that insulating strips are not required. Knockouts are molded into the base so that Y terminals can be accommodated if desired. A top-mounted marker strip can be furnished as described on page 16.

SERIES DIMENSIONS

	540	541	542
A	1⅛"	1⅜"	1⅝"
B	19/32"	¾"	⅞"
C	5/16"	27/64"	½"
D	⅜"	7/16"	9/16"
E	39/64"	11/16"	⅞"
F	21/64"	⅜"	½"
G	.160"	.175/.185"	.209"
H	5/40 x 3/16	6/32 x ¼	8/32 x 3/16



SERIES 540

Creepage Distance: ½ inch. **Max. Voltage:** 2300 volts r.m.s. **Max. Current:** 15 amps.

No. of Terminals	Part No.	No. of Terminals	Part No.	No. of Terminals	Part No.
2	2-540	12	12-540	22	22-540
3	3-540	13	13-540	23	23-540
4	4-540	14	14-540	24	24-540
5	5-540	15	15-540	25	25-540
6	6-540	16	16-540	26	26-540
7	7-540	17	17-540	27	27-540
8	8-540	18	18-540	28	28-540
9	9-540	19	19-540	29	29-540
10	10-540	20	20-540	30	30-540
11	11-540	21	21-540	31	31-540

SERIES 541

Creepage Distance: ⅝ inch. **Max. Voltage:** 2800 volts r.m.s. **Max. Current:** 20 amps.

No. of Terminals	Part No.	No. of Terminals	Part No.	No. of Terminals	Part No.
2	2-541	12	12-541	22	22-541
3	3-541	13	13-541	23	23-541
4	4-541	14	14-541	24	24-541
5	5-541	15	15-541	25	25-541
6	6-541	16	16-541	26	26-541
7	7-541	17	17-541	27	27-541
8	8-541	18	18-541	28	28-541
9	9-541	19	19-541	29	29-541
10	10-541	20	20-541	30	30-541
11	11-541	21	21-541		

SERIES 542

Creepage Distance: ¾ inch. **Max. Voltage:** 4000 volts r.m.s. **Max. Current:** 30 amps.

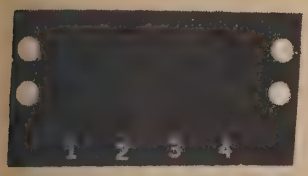
No. of Terminals	Part No.	No. of Terminals	Part No.	No. of Terminals	Part No.
2	2-542	11	11-542	20	20-542
3	3-542	12	12-542	21	21-542
4	4-542	13	13-542	22	22-542
5	5-542	14	14-542	23	23-542
6	6-542	15	15-542	24	24-542
7	7-542	16	16-542	25	25-542
8	8-542	17	17-542	26	26-542
9	9-542	18	18-542		
10	10-542	19	19-542		

© United Technical Publications

CINCH

BARRIER BLOCK ACCESSORIES

MARKER STRIPS



FOR STANDARD "W" OR "¾W" TERMINAL BLOCKS



FOR "Y" TERMINAL BLOCKS

Marker strips identify terminal positions on barrier terminal blocks and insulate exposed portions of terminals from a conductive mounting surface. Marker strips for Series 140 thru 152 are 1/32 inch thick vulcanized fibre and mount under the terminal strip.

One-eighth inch white numerals standard. Also available unmarked for insulating purposes only.

NO. 140 / NO. 140-Y

No. of Terminals	No. 140	No. of Terminals	No. 140-Y
2	MS- 2-140	2	MS- 2-140-Y
3	MS- 3-140	3	MS- 3-140-Y
4	MS- 4-140	4	MS- 4-140-Y
5	MS- 5-140	5	MS- 5-140-Y
6	MS- 6-140	6	MS- 6-140-Y
7	MS- 7-140	7	MS- 7-140-Y
8	MS- 8-140	8	MS- 8-140-Y
9	MS- 9-140	9	MS- 9-140-Y
10	MS-10-140	10	MS-10-140-Y
11	MS-11-140	11	MS-11-140-Y
12	MS-12-140	12	MS-12-140-Y
13	MS-13-140	13	MS-13-140-Y
14	MS-14-140	14	MS-14-140-Y
15	MS-15-140	15	MS-15-140-Y
16	MS-16-140	16	MS-16-140-Y
17	MS-17-140	17	MS-17-140-Y
18	MS-18-140	18	MS-18-140-Y
19	MS-19-140	19	MS-19-140-Y
20	MS-20-140	20	MS-20-140-Y
21	MS-21-140	21	MS-21-140-Y
22	MS-22-140	22	MS-22-140-Y
23	MS-23-140	23	MS-23-140-Y
24	MS-24-140	24	MS-24-140-Y
25	MS-25-140	25	MS-25-140-Y

NO. 141 / NO. 141-Y

No. of Terminals	No. 141	No. of Terminals	No. 141-Y
2	MS- 2-141	2	MS- 2-141-Y
3	MS- 3-141	3	MS- 3-141-Y
4	MS- 4-141	4	MS- 4-141-Y
5	MS- 5-141	5	MS- 5-141-Y
6	MS- 6-141	6	MS- 6-141-Y
7	MS- 7-141	7	MS- 7-141-Y
8	MS- 8-141	8	MS- 8-141-Y
9	MS- 9-141	9	MS- 9-141-Y
10	MS-10-141	10	MS-10-141-Y
11	MS-11-141	11	MS-11-141-Y
12	MS-12-141	12	MS-12-141-Y
13	MS-13-141	13	MS-13-141-Y
14	MS-14-141	14	MS-14-141-Y
15	MS-15-141	15	MS-15-141-Y
16	MS-16-141	16	MS-16-141-Y
17	MS-17-141	17	MS-17-141-Y
18	MS-18-141	18	MS-18-141-Y
19	MS-19-141	19	MS-19-141-Y
20	MS-20-141	20	MS-20-141-Y

NO. 142 / NO. 142-Y

No. of Terminals	No. 142	No. of Terminals	No. 142-Y
2	MS- 2-142	2	MS- 2-142-Y
3	MS- 3-142	3	MS- 3-142-Y
4	MS- 4-142	4	MS- 4-142-Y
5	MS- 5-142	5	MS- 5-142-Y
6	MS- 6-142	6	MS -6-142-Y
7	MS- 7-142	7	MS- 7-142-Y
8	MS- 8-142	8	MS- 8-142-Y
9	MS- 9-142	9	MS- 9-142-Y
10	MS-10-142	10	MS-10-142-Y
11	MS-11-142	11	MS-11-142-Y
12	MS-12-142	12	MS-12-142-Y
13	MS-13-142	13	MS-13-142-Y
14	MS-14-142	14	MS-14-142-Y
15	MS-15-142	15	MS-15-142-Y
16	MS-16-142	16	MS-16-142-Y
17	MS-17-142	17	MS-17-142-Y

NO. 150 / NO. 150-Y

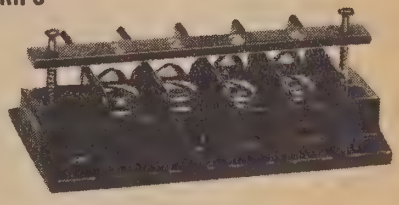
No. of Terminals	No. 150	No. of Terminals	No. 150-Y
2	MS- 2-150	2	MS- 2-150-Y
3	MS- 3-150	3	MS- 3-150-Y
4	MS- 4-150	4	MS- 4-150-Y
5	MS- 5-150	5	MS- 5-150-Y
6	MS- 6-150	6	MS- 6-150-Y
7	MS- 7-150	7	MS- 7-150-Y
8	MS- 8-150	8	MS- 8-150-Y
9	MS- 9-150	9	MS- 9-150-Y
10	MS-10-150	10	MS-10-150-Y

NO. 151 / NO. 152

No. of Terminals	No. 151	No. of Terminals	No. 152
2	MS-2-151	2	MS-2-152
3	MS-3-151	3	MS-3-152
4	MS-4-151	4	MS-4-152
5	MS-5-151	5	MS-5-152
6	MS-6-151	6	MS-6-152
7	MS-7-151		
8	MS-8-151		

500 SERIES MARKER STRIPS

Marker strips for 500 Series blocks are made of Bakelite 1/16 inch thick and mount on top with drive screws that are provided.



NO. 540

No. of Terminals	Part No.	No. of Terminals	Part No.	No. of Terminals	Part No.
2	MSX- 2-540	12	MSX-12-540	22	MSX-22-540
3	MSX- 3-540	13	MSX-13-540	23	MSX-23-540
4	MSX- 4-540	14	MSX-14-540	24	MSX-24-540
5	MSX- 5-540	15	MSX-15-540	25	MSX-25-540
6	MSX- 6-540	16	MSX-16-540	26	MSX-26-540
7	MSX- 7-540	17	MSX-17-540	27	MSX-27-540
8	MSX- 8-540	18	MSX-18-540	28	MSX-28-540
9	MSX- 9-540	19	MSX-19-540	29	MSX-29-540
10	MSX-10-540	20	MSX-20-540	30	MSX-30-540
11	MSX-11-540	21	MSX-21-540	31	MSX-31-540

NO. 541

No. of Terminals	Part No.	No. of Terminals	Part No.	No. of Terminals	Part No.
2	MSX- 2-541	12	MSX-12-541	22	MSX-22-541
3	MSX- 3-541	13	MSX-13-541	23	MSX-23-541
4	MSX- 4-541	14	MSX-14-541	24	MSX-24-541
5	MSX- 5-541	15	MSX-15-541	25	MSX-25-541
6	MSX- 6-541	16	MSX-16-541	26	MSX-26-541
7	MSX- 7-541	17	MSX-17-541	27	MSX-27-541
8	MSX- 8-541	18	MSX-18-541	28	MSX-28-541
9	MSX- 9-541	19	MSX-19-541	29	MSX-29-541
10	MSX-10-541	20	MSX-20-541	30	MSX-30-541
11	MSX-11-541	21	MSX-21-541		

NO. 542

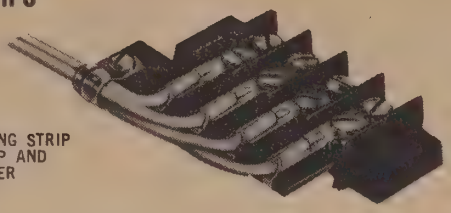
No. of Terminals	Part No.	No. of Terminals	Part No.	No. of Terminals	Part No.
2	MSX- 2-542	11	MSX-11-542	19	MSX-19-542
3	MSX- 3-542	12	MSX-12-542	20	MSX-20-542
4	MSX- 4-542	13	MSX-13-542	21	MSX-21-542
5	MSX- 5-542	14	MSX-14-542	22	MSX-22-542
6	MSX- 6-542	15	MSX-15-542	23	MSX-23-542
7	MSX- 7-542	16	MSX-16-542	24	MSX-24-542
8	MSX- 8-542	17	MSX-17-542	25	MSX-25-542
9	MSX- 9-542	18	MSX-18-542	26	MSX-26-542
10	MSX-10-542				

© United Technical Publications

CINCH

BARRIER BLOCK ACCESSORIES (Cont'd.)

FANNING STRIPS



161 SERIES FANNING STRIP WITH CABLE CLAMP AND 141 SERIES BARRIER TERMINAL BLOCK

Fanning strips facilitate cable or harness wiring and minimize the possibility of subsequent wiring errors. Both straight and angle type fanning strips are available. Terminals are made of .032" brass, cadmium-plated. XP black phenolic mounts are 3/32" thick, 1/2" wide furnished with a hole, in either the right or left side, for securing the cable with lacing twine. A cable clamp as shown on page 16 is recommended for larger sizes.

STRAIGHT TYPE 160 SERIES



2-160-L
Fits 140 Series
Barrier Blocks
3/8" Terminal Centers

No. of Terminals	C.C. Hole on Left	C.C. Hole on Right
2	2-160-L	2-160-R
3	3-160-L	3-160-R
4	4-160-L	4-160-R
5	5-160-L	5-160-R
6	6-160-L	6-160-R
7	7-160-L	7-160-R
8	8-160-L	8-160-R
9	9-160-L	9-160-R
10	10-160-L	10-160-R
11	11-160-L	11-160-R
12	12-160-L	12-160-R
13	13-160-L	13-160-R
14	14-160-L	14-160-R
15	15-160-L	15-160-R
16	16-160-L	16-160-R
17	17-160-L	17-160-R
18	18-160-L	18-160-R
19	19-160-L	19-160-R
20	20-160-L	20-160-R
21	21-160-L	21-160-R

160B SERIES



2-160B-R
Fits 140 Series
Barrier Blocks
3/8" Terminal Centers

2	2-160B-L	2-160B-R
3	3-160B-L	3-160B-R
4	4-160B-L	4-160B-R
5	5-160B-L	5-160B-R
6	6-160B-L	6-160B-R
7	7-160B-L	7-160B-R
8	8-160B-L	8-160B-R
9	9-160B-L	9-160B-R
10	10-160B-L	10-160B-R
11	11-160B-L	11-160B-R
12	12-160B-L	12-160B-R
13	13-160B-L	13-160B-R
14	14-160B-L	14-160B-R
15	15-160B-L	15-160B-R
16	16-160B-L	16-160B-R
17	17-160B-L	17-160B-R
18	18-160B-L	18-160B-R
19	19-160B-L	19-160B-R
20	20-160B-L	20-160B-R
21	21-160B-L	21-160B-R

161 SERIES



2-161-L
Fits 141 Series
Barrier Blocks
3/16" Terminal Centers

2	2-161-L	2-161-R
3	3-161-L	3-161-R
4	4-161-L	4-161-R
5	5-161-L	5-161-R
6	6-161-L	6-161-R
7	7-161-L	7-161-R
8	8-161-L	8-161-R
9	9-161-L	9-161-R
10	10-161-L	10-161-R
11	11-161-L	11-161-R
12	12-161-L	12-161-R
13	13-161-L	13-161-R
14	14-161-L	14-161-R
15	15-161-L	15-161-R
16	16-161-L	16-161-R
17	17-161-L	17-161-R
18	18-161-L	18-161-R
19	19-161-L	19-161-R
20	20-161-L	20-161-R

162 SERIES



2-162-R
Fits 142 Series
Barrier Blocks
3/16" Terminal Centers

2	2-162-L	2-162-R
3	3-162-L	3-162-R
4	4-162-L	4-162-R
5	5-162-L	5-162-R
6	6-162-L	6-162-R
7	7-162-L	7-162-R
8	8-162-L	8-162-R
9	9-162-L	9-162-R
10	10-162-L	10-162-R
11	11-162-L	11-162-R
12	12-162-L	12-162-R
13	13-162-L	13-162-R
14	14-162-L	14-162-R
15	15-162-L	15-162-R
16	16-162-L	16-162-R
17	17-162-L	17-162-R

ANGLE TYPE 160A SERIES



2-160-AR
Fits 140 Series
Barrier Blocks
3/8" Terminal Centers

No. of Terminals	C.C. Hole on Left	C.C. Hole on Right
2	2-160-AL	2-160-AR
3	3-160-AL	3-160-AR
4	4-160-AL	4-160-AR
5	5-160-AL	5-160-AR
6	6-160-AL	6-160-AR
7	7-160-AL	7-160-AR
8	8-160-AL	8-160-AR
9	9-160-AL	9-160-AR
10	10-160-AL	10-160-AR
11	11-160-AL	11-160-AR
12	12-160-AL	12-160-AR
13	13-160-AL	13-160-AR
14	14-160-AL	14-160-AR
15	15-160-AL	15-160-AR
16	16-160-AL	16-160-AR
17	17-160-AL	17-160-AR
18	18-160-AL	18-160-AR
19	19-160-AL	19-160-AR
20	20-160-AL	20-160-AR
21	21-160-AL	21-160-AR

160BA SERIES



2-160B-AL
Fits 140 Series
Barrier Blocks
3/8" Terminal Centers

2	2-160B-AL	2-160B-AR
3	3-160B-AL	3-160B-AR
4	4-160B-AL	4-160B-AR
5	5-160B-AL	5-160B-AR
6	6-160B-AL	6-160B-AR
7	7-160B-AL	7-160B-AR
8	8-160B-AL	8-160B-AR
9	9-160B-AL	9-160B-AR
10	10-160B-AL	10-160B-AR
11	11-160B-AL	11-160B-AR
12	12-160B-AL	12-160B-AR
13	13-160B-AL	13-160B-AR
14	14-160B-AL	14-160B-AR
15	15-160B-AL	15-160B-AR
16	16-160B-AL	16-160B-AR
17	17-160B-AL	17-160B-AR
18	18-160B-AL	18-160B-AR
19	19-160B-AL	19-160B-AR
20	20-160B-AL	20-160B-AR
21	21-160B-AL	21-160B-AR

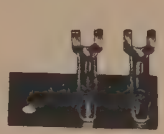
161A SERIES



2-161A-R
Fits 141 Series
Barrier Blocks
3/16" Terminal Centers

2	2-161-AL	2-161-AR
3	3-161-AL	3-161-AR
4	4-161-AL	4-161-AR
5	5-161-AL	5-161-AR
6	6-161-AL	6-161-AR
7	7-161-AL	7-161-AR
8	8-161-AL	8-161-AR
9	9-161-AL	9-161-AR
10	10-161-AL	10-161-AR
11	11-161-AL	11-161-AR
12	12-161-AL	12-161-AR
13	13-161-AL	13-161-AR
14	14-161-AL	14-161-AR
15	15-161-AL	15-161-AR
16	16-161-AL	16-161-AR
17	17-161-AL	17-161-AR
18	18-161-AL	18-161-AR
19	19-161-AL	19-161-AR
20	20-161-AL	20-161-AR

162A SERIES



2-162A-L
Fits 142 Series
Barrier Blocks
3/16" Terminal Centers

2	2-162-AL	2-162-AR
3	3-162-AL	3-162-AR
4	4-162-AL	4-162-AR
5	5-162-AL	5-162-AR
6	6-162-AL	6-162-AR
7	7-162-AL	7-162-AR
8	8-162-AL	8-162-AR
9	9-162-AL	9-162-AR
10	10-162-AL	10-162-AR
11	11-162-AL	11-162-AR
12	12-162-AL	12-162-AR
13	13-162-AL	13-162AR
14	14-162-AL	14-162-AR
15	15-162-AL	15-162-AR
16	16-162-AL	16-162-AR
17	17-162-AL	17-162-AR

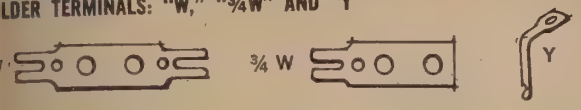
© United Technical Publications

CINCH

MISCELLANEOUS TERMINAL STRIPS and HARDWARE

TERMINALS, JUMPERS, CABLE CLAMPS

SOLDER TERMINALS: "W," "¾W" AND "Y"



Optional terminals for use with 140, 141 and 142 series barrier blocks as indicated in the chart below. "W" terminals are also available for use with 150, 151 and 152 series barrier blocks. Part numbers for ordering separate terminals are listed in the chart.

	W-Type	¾W-Type	Y-Type
For 140 series	W-140	¾W-140	Y-140
For 141 series	W-141	¾W-141	Y-141
For 142 series	W-142	¾W-142	Y-142
For 150 series	W-150	—	—
For 151 series	W-151	—	—
For 152 series	W-152	—	—

CABLE CLAMPS



Inner Diameter	Part No.
¼"	CC-161-4
⅜"	CC-161-6
½"	CC-161-8
⅝"	CC-161-10
¾"	CC-161-12
⅞"	CC-161-14

MISCELLANEOUS TERMINAL STRIPS

SCREW-TYPE



Terminals are cadmium plated brass on 7/16" centers. Mounting holes are 0.136" dia. Screws are cadmium plated brass, captivated.

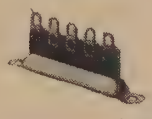
Part No.	No. of Terminals	Mounting Centers
17-1	1	⅞"
17-2	2	1 5/16"
17-3	3	1¾"
17-4	4	2 3/16"
17-5	5	2 5/8"

Part No.	No. of Terminals	Mounting Centers
17-6	6	3 1/16"
17-7	7	3½"
17-8	8	3 15/16"
17-9	9	4 3/8"
17-10	10	4 13/16"

NO. 170 (SOLDER TYPE)



NO. 2000



Terminals are 0.019" brass, pre-tinned, mounted on a phenolic insulator. 5/16" spacing. Mounting holes are 0.140" dia.

Part No.	No. of Terminals	Mounting Centers
1-170	1	¾"
2-170	2	1 1/16"
3-170	3	1½"
4-170	4	1 15/16"
5-170	5	2 5/16"
6-170	6	2 5/8"
7-170	7	3"
8-170	8	3 3/8"
9-170	9	3¾"
10-170	10	4 1/8"

Part No.	No. of Terminals	Mounting Centers
2002	2	1"
2003	3	1 5/16"
2004	4	1 5/8"
2005	5	1 15/16"
2006	6	2 1/4"
2007	7	2 9/16"
2008	8	2 7/8"
2009	9	3 3/16"
2010	10	3½"
2011	11	3 13/16"
2012	12	4 1/8"
2013	13	4 7/16"

QUICK-CLAMP* TERMINALS



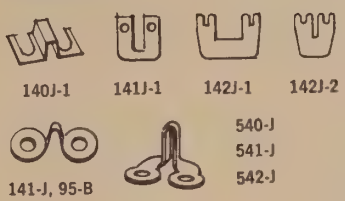
Simplifies engaging of wires to barrier blocks. Set includes two mating clamps and one screw.

Barries Block Series	Part No.	Wire Gauge Accommodated	Screw Size
141, 541	QC-1	14 thru 22	6-32x 3/16"
142, 542	QC-2	8 thru 16	8-32x 3/8"

*Patent pending.

JUMPERS

For permanent connections. 142J-1 connects two alternate terminals.

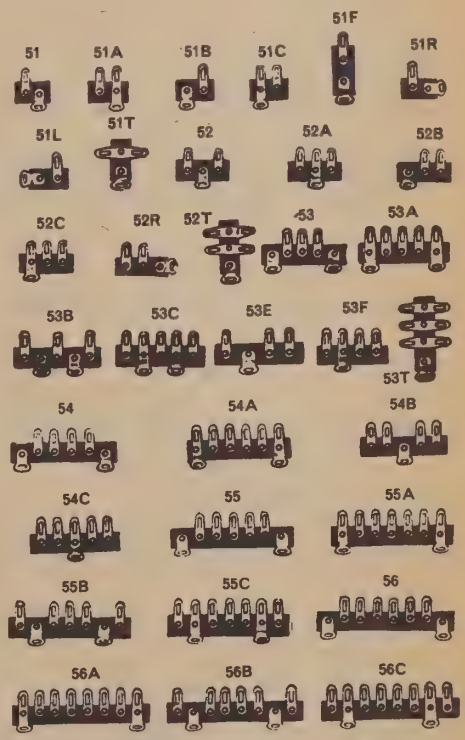


Barrier Block Series	Part No.
140, 141	141-J
142	95-B
140	140J-1
141	141J-1
142, 542	142J-1
142, 542	142J-2
540	540-J
541	541-J
542	542-J

LUG TYPE

Cadmium-plated steel lugs are spaced on ⅜" centers with .140 diameter mounting holes. Dark brown strips are 1/16" thick and ⅜" wide.

Part No.	Mtg. Centers
51	
51A	
51B	
51C	
51F	
51L	
51R	
51T	
52	
52A	
52B	
52C	
52R	
52T	
53	1½"
53A	1½"
53B	¾"
53C	"¾
53E	
53F	
53T	
54	1⅞"
54A	1⅛"
54B	
54C	
55	2¼"
55A	2¼"
55B	1½"
55C	1½"
56	2⅝"
56A	2⅝"
56B	1¾"
56C	1⅞"



TO-5, or TO-18*, LOW PROFILE TRANSISTOR SOCKETS



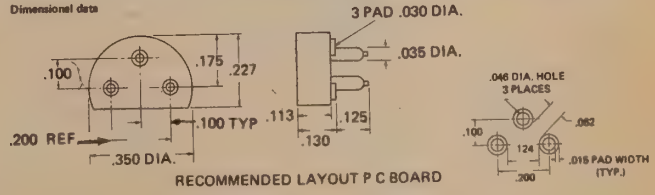
Mount directly to the PC board with a snug fit to prevent bleeding of solder and flux to the opposite board surface. Chamfered socket holes minimize lead bending during insertion. Contact ends are formed and watertight, so that solder and fluxes cannot enter the barrelled contact to obstruct lead entry.

*Directly accept TO-5; accept TO-18 with full length or formed heads.

MATERIALS INSULATOR: 20% glass filled nylon in black, natural, or green; **CONTACTS:** beryllium copper with gold plating over copper base.

MECHANICAL SPECIFICATIONS MAXIMUM PIN DIAMETER: 0.019"; MAXIMUM PIN DEPTH: 0.200 ± 0.010", MAXIMUM INSERTION FORCE: 5 ounces; WITHDRAWAL FORCE: ¼ ounce at 3 and 100 cycles.

ELECTRICAL SPECIFICATIONS VOLTAGE RATINGS: at sea level (adj. terminals)—1500 AC RMS, 2000 VDG; at 50,000 ft. (adj. terminals)—500 AC RMS, 700 VDC; CURRENT RATING: 2.5 amperes; CONTACT RESISTANCE: 0.005 ohms; INSULATION RESISTANCE: 100,000 megohms.



COLOR	CINCH PART NO.	FACTORY NO.
Black	3-LPS-B	133-23-92-041
Natural	3-LPS-N	133-23-92-039
Green	3-LPS-G	133-23-92-040

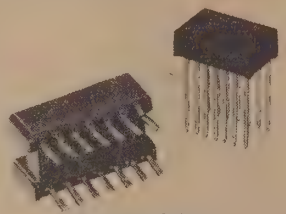
© United Technical Publications

CINCH

INTEGRATED CIRCUIT SOCKETS

Cinch IC sockets are ideal for testing and prototype purposes as well as production applications. Convenient and dependable, these sockets reduc the possibility of damage to leads and hermetic seals. Cinch IC sockets provide positive electrical contact and low contact resistance. They offe excellent resistance to corrosive atmosphere and to extremes in temperature and humidity.

PRECISION DIP SOCKETS — DIP SOLDER TAILS



Part No.	Contacts	Materials
14-DIP	14	GP Black Phenolic
16-DIP	16	Insulator with Electro-tin
24-DIP	24	Plated Leads
14-DIP-1	14	Diallyl Phthalate
16-DIP-1	16	Insulator with gold
24-DIP-1	24	Plated Leads

These sockets combine high contact retention with low contact resistance and high environmental stability. They accept standard 14, 16 and 24-pin dual-inline packages having round or flat leads. (Standard spacing is .300" between lead rows and .100" between lead centers.) Socket leads are on the same centers as the D.I.P. itself. This feature allows easy installation of the socket in PC boards designed for direct insertion of the D.I.P. Choose between diallyl phthalate insulators with gold plated beryllium copper contacts or GP black phenolic insulators with electro-tin plated beryllium copper contacts.

MATERIALS

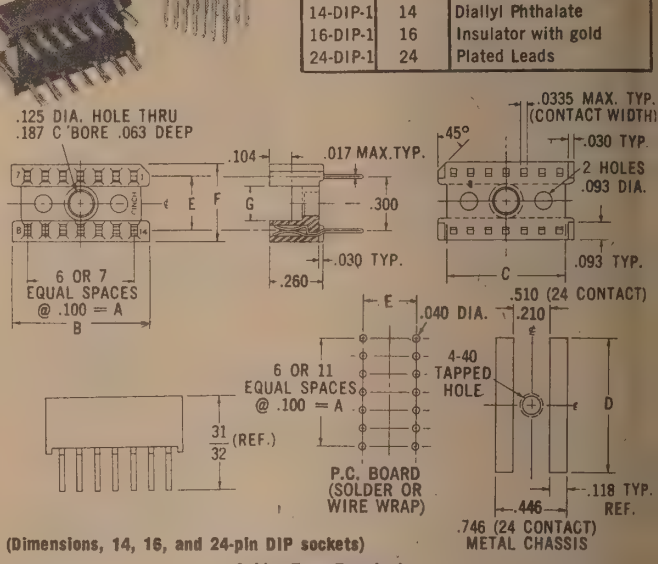
INSULATORS: GP Black Phenolic per MIL-M-14, type CFG Diallyl Phthalate per MIL-M-14, type SDG; CONTACTS: Beryllium copper with gold or electro-tin plating. **RECOMMENDED MOUNTING METHODS:** CHASSIS: 4-40 x ¼" Fillister head screw; P. C. BOARD: Solder in.

ELECTRICAL SPECIFICATIONS

CURRENT RATING: 1.0 ampere; CONTACT RESISTANCE: 6 milliohms (at 1 ampere); CAPACITANCE PER MIL-STD-202: Method 305 at 100 KHz between adjacent contacts: 0.33 pfd average (phenolic), 0.28 pfd average (diallyl phthalate), between opposing contacts: 0.12 pfd average (phenolic), 0.10 pfd average (diallyl phthalate); WITHSTANDING VOLTAGE BETWEEN ADJACENT CONTACTS: 1800 VRMS; INSULATION RESISTANCE: 1.0 x 10^5 megohms minimum (phenolic); 2.0 x 10^5 megohms minimum (diallyl phthalate).

MECHANICAL SPECIFICATIONS

VIBRATION: Per MIL-STD-202C, Condition D, Method 204A, 10-2000 C.P.S. at 20 G's or .060" double amplitude. No continuity interruptions of 1 microsecond or longer. No damage to contact or insulator. No disengagement of DIP module from the socket; SHOCK: Per MIL-STD-202C, Method 202B/3 blows in each of 3 mutually perpendicular planes. Shock level of 150 G's. No continuity interruptions of 1 microsecond or longer. No damage to contact or insulator. No disengagement of DIP module from the socket; TEMPERATURE RANGE: Phenolic: −65° to 150°C.



(Dimensions, 14, 16, and 24-pin DIP sockets)

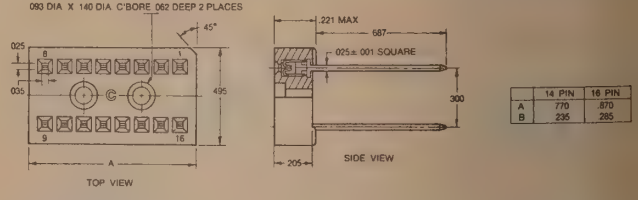
Solder Type Terminals

No. of Contacts	A	B	C	D	E	F	G	H ±.015	J
14	.600	.770	.690	.796	.300	.424	.187	.300	.043
16	.700	.870	.790	.896	.300	.424	.187	.300	.093
24	1.100	1.270	1.190	1.296	.600	.724	.488	.600	.125

Wire Wrap Terminals

16	.600	.770	—	—	.300	.495	—	.300	—
24	.700	.890	—	—	.300	.495	—	.300	—

PRECISION DIP SOCKETS — WIRE WRAP TAILS



MATERIALS

INSULATORS: Glass Nylon −65° to 125°C; CONTACTS: Solid .025 phosphor bronze wire wrap post with sharp (.003 max. radius) corners. (Gold or electro-tin plated).

ELECTRICAL SPECIFICATIONS

CURRENT RATING: 1 ampere; CONTACT RESISTANCE: 6 milliohms; INSULATION RESISTANCE: 1 x 10^5 Megohms; WITHSTANDING VOLTAGE: 1000 volts A.C. rms; INTERLEAD CAPACITANCE: 0.40 pf at 1 mhz.

MECHANICAL SPECIFICATIONS

CONTACT SEPARATION FORCE: Min. 4 oz., Max. 1 oz.; MIN. CONTACT SEPARATION FORCE AFTER 100 CYCLES: 1 oz.

WIRE WRAP TYPE

Distributor Part No.	Factory Part No.	Number of Contacts	Insulator	Contacts
14-W-DIP	133-59-91-055	14	Black Glass Nylon	Electro-Tin
14-W-DIP-1	133-59-91-056	14	White Glass Nylon	Electro-Tin
14-W-DIP-2	133-59-91-051	14	Black Glass Nylon	Gold Plated
14-W-DIP-3	133-59-91-052	14	White Glass Nylon	Gold Plated
16-W-DIP	133-59-91-058	16	Black Glass Nylon	Electro-Tin
16-W-DIP-1	133-59-91-057	16	White Glass Nylon	Electro-Tin
16-W-DIP-2	133-59-91-054	16	Black Glass Nylon	Gold Plated
16-W-DIP-3	133-59-91-053	16	White Glass Nylon	Gold Plated

TO-5 CASE SOCKETS



Part No.	No. of Leads
6-ICS	6
8-ICS	8
10-ICS	10

These miniature sockets mount directly to the printed circuit board and are especially convenient for in-circuit testing and maintenance. Models are available for 6, 8 and 10-lead ICs which can be inserted without lead bending or other undue strain.

MATERIALS

INSULATOR: Diallyl Phthalate type SDG per MIL-M-18794; CONTACTS: Beryllium copper, copper flash plus .00003 gold plate.

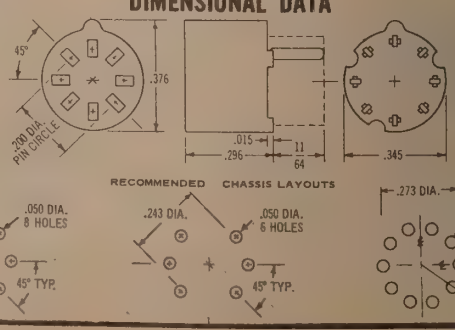
MECHANICAL SPECIFICATIONS

INSERTION FORCE: 16 lbs. maximum; WITHDRAWAL FORCE: 3 lbs. minimum.

ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS: (a) At sea level (adj. terminals), (b) At an altitude of 50,000 ft. (adj. terminals): VOLTS: AC RMS 1020, 350, DC 1560, 465; CURRENT RATING: 1 ampere; CONTACT RESISTANCE: .050 ohms maximum; INSULATION RESISTANCE (as received): 50,000 megohms minimum.

DIMENSIONAL DATA



© United Technical Publicatio

TUBE SOCKETS

STANDARD TYPE

Part Nos.	Fig.	Number of Contacts and Tube Group	Type	Insulator Material[1]	Contact Material[2]	Top or Bottom Mount	Mounting Centers	Chassis Hole Diameter	MIL-S-12883A Number
7W2A	A	7 miniature	wafer	A	A	B	7/8"	5/8"	—
7WL2	A	7 miniature	wafer	A	A	B	1 "	5/8"	—
7WL4	A	7 miniature	wafer	A	A	T, B	15/16"	5/8"	—
7EB	B	7 miniature	saddle	B	A	B	7/8"	5/8"	—
7EC	B	7 miniature	saddle	D	A	B	7/8"	5/8"	—
7EM	B	7 miniature	saddle	C	A	B	7/8"	5/8"	—
7AB1	B	7 miniature	saddle	B	A	T	7/8"	5/8"	—
7AM1	B	7 miniature	saddle	C	A	T	7/8"	5/8"	—
7JM-3	B	7 miniature	saddle	C	B	B	7/8"	5/8"	TS102P03
7C-3	B	7 miniature	saddle	D	B	B	7/8"	5/8"	TS102C03
7JMN-1	B	7 miniature	saddle	C	B	T	7/8"	5/8"	TS102P02
7JMN-2	B	7 miniature	saddle	C	B	T	7/8"	5/8"	TS102P02
7JCN-1	B	7 miniature	saddle	D	B	T	7/8"	5/8"	TS102C02
7JCN-2	B	7 miniature	saddle	D	B	T	7/8"	5/8"	TS102C02
7JM-2	C	7 miniature	shield base	C	B	T	7/8"	5/8"	TS102P01
7XB1	C	7 miniature	shield base	B	A	T	7/8"	5/8"	—
7XM1	C	7 miniature	shield base	C	A	T	7/8"	5/8"	—
7XC	C	7 miniature	shield base	D	A	T	7/8"	5/8"	—
7JC-2	C	7 miniature	shield base	D	B	T	7/8"	5/8"	TS102C01
8AB	D	8 octal	saddle	F	A	B	15/16"	1 "	—
8AM	D	8 octal	saddle	C	A	B	15/16"	1 "	—
8EB	E	8 octal	saddle	E	A	B	1 1/2"	1 1/8"	—
8EM	E	8 octal	saddle	C	A	B	1 1/2"	1 1/8"	—
8XM	F	8 octal	all-molded	C	A	T, B	15/16"	1 1/8"	—
8XB	F	8 octal	all-molded	B	A	T, B	15/16"	1 1/8"	—
8R1	G	8 octal	ring mount*	E	A	T	1/16"	1 11/64"	—
8R2	G	8 octal	ring mount*	E	A	T	1/16"	1 11/64"	—
8R3	G	8 octal	ring mount*	C	A	T	1/16"	1 11/64"	—
8R4	G	8 octal	ring mount*	E	A	T	3/32"	1 11/64"	—
8R5	G	8 octal	ring mount*	C	A	T	3/32"	1 11/64"	—
8R6	G	8 octal	ring mount*	C	A	T	1/16"	1 11/64"	—
8CS-B	H	8 compactron	all-molded	E	A	T, B	15/16"	1 1/8"	—
8CS-M	H	8 compactron	all-molded	C	A	T, B	15/16"	1 1/8"	—
9NS-B	I	9 novar	saddle	E	A	B	1 1/2"	1 1/8"	—
9NS-B1	I	9 novar	saddle	E	A	T	1 1/2"	1 1/8"	—
9NS-M	I	9 novar	saddle	C	A	B	1 1/2"	1 1/8"	—
9NS-M1	I	9 novar	saddle	C	A	T	1 1/2"	1 1/8"	—
9W1	A	9 noval	wafer	A	A	B	1 1/8"	3/4"	—
9W2	A	9 noval	wafer	A	A	T, B	13/16"	3/4"	—
9AB	B	9 noval	saddle	B	A	T	1 1/8"	3/4"	—
9AM	B	9 noval	saddle	C	A	T	1 1/8"	3/4"	—
9EB	B	9 noval	saddle	B	A	B	1 1/8"	3/4"	—
9EM	B	9 noval	saddle	C	A	B	1 1/8"	3/4"	—
9JM-3	B	9 noval	saddle	C	B	B	1 1/8"	3/4"	TS103P03
9JM-4	B	9 noval	saddle	C	B	B	1 1/8"	3/4"	TS103P03
9JC-3	B	9 noval	saddle	D	B	B	1 1/8"	3/4"	TS103C03
9JCN-1	B	9 noval	saddle	D	B	T	1 1/8"	3/4"	TS103C02
9JMN-1	B	9 noval	saddle	C	B	T	1 1/8"	3/4"	TS103P02
9JMN-2	B	9 noval	saddle	C	B	T	1 1/8"	3/4"	TS103P02
9XB	C	9 noval	shield base	B	A	T	1 1/8"	3/4"	—
9XM	C	9 noval	shield base	C	A	T	1 1/8"	3/4"	—
9XC	C	9 noval	shield base	D	A	T	1 1/8"	3/4"	—
9JM-2	C	9 noval	shield base	C	B	T	1 1/8"	3/4"	TS103P01
9JC-2	C	9 noval	shield base	D	B	T	1 1/8"	3/4"	TS103C01
12CS-B	H	12 compactron	all-molded	E	A	T, B	15/16"	1 1/8"	—
12CS-M	H	12 compactron	all-molded	C	A	T, B	15/16"	1 1/8"	—

1. A—Chocolate phenolic B—Black phenolic C—MFE plastic D—Ceramic E—High Dielectric black phenolic (CFG) F—MAI-60 Alkyd Glass Fiber
2. A—Cadmium plated brass B—Silver plated phosphor bronze C—Silver plated beryllium copper

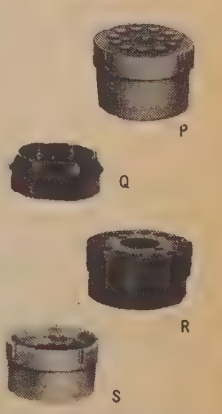
*Crimped retainer ring furnished; mounting centers dimensions column lists chassis thickness accommodated.



SPECIAL PURPOSE TYPE

Part Nos.	Fig.	Number of Contacts and Tube Group	Type	Insulator Material[1]	Contact Material[2]
2B2**	J	2 cetron	for CE701, CE702	B	A
5NS	K	5 nuvistor	crimp tab mount	C	A
5NS-1	L	5 nuvistor	saddle	C	A
5NS-2	M	5 nuvistor	P.C. standoff	C	A
5NS-3	N	5 nuvistor	heat dissipating	C	A
7 VT	O	7 vidicon	for RCA vidicon	C	B
8-VT	O	8 vidicon	for RCA vidicon	C	B
3M11**	P	11 magnal	for 5BP1, etc.	C	C
3B12	Q	12 duodecal	for 10BP4, etc.	B	C
3M12	Q	12 duodecal	same as 3B12	C	C
3B14**	R	14 diheptal	CRT	B	C
3M14**	R	14 diheptal	CRT	C	C
20-PM	S	20 photomult	for RCA 6810, etc.	F	A

**Mounting ring required.



© United Technical Publications

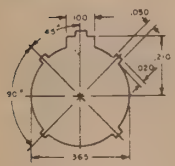
CINCH

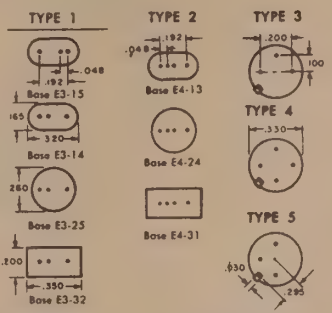
RELAY, TRANSISTOR SOCKETS and ACCESSORIES

UNIVERSAL TRANSISTOR SOCKETS

Universal transistor sockets for all transistor base types described. Use with either one or two-sided 1/16" printed circuit boards.







Part No.	Base Types	Tabs Used (See Diag.)	Cont. Pos. Used
7UTS	All	A, B, C. D, E	1, 3, 4, 7
7UTS-1	1 & 3	C, D, E	1, 3, 4, 7
7UTS-3	3	C, D, E	1, 4, 7
7UTS-4	4	A, B, C, D, E	1, 4, 5, 6, 7
7UTS-5	5	B, D, E	1, 6, 7
7UTS-6	1 & 3	C, D, E	1, 3, 4, 7

POWER TRANSITOR SOCKETS

To Fit TO-3 Outline Transistors


2TS-1


2TS-2


2TS3

Laminated Type. Plates of natural XP phenolic, vacuum wax impregnated. Formed thread for 6-20 screw provides easy attachment to a heat sink. Mounting holes. .136 diameter. **Part No. 2TS-1**

Identical to 2TS-1 except equipped with integral eyelets for assembly to chassis. **Part No. 2TS-2**

Molded Type. GP phenolic. Contacts are phosphor bronze, cadmium-plated. Mounting holes .098" dia.; mounting centers .425/.435". **Part No. 2TS-3**

POWER TRANSISTOR WAFERS


2W-1


2W-2


2W-3

These hard anodized aluminum insulator wafers have high thermal conductivity, high dielectric resistance, high abrasion resistance and high corrosion resistance.

Part No.	Description
2W-1	For Motorola transistor 2N-179, 2N-176 and 2N-554
2W-2	For Delco Transistor 2N-174
2W-3	For Texas Instrument transistor 2N-389

GENERAL PURPOSE TRANSISTOR SOCKET


2TS-4

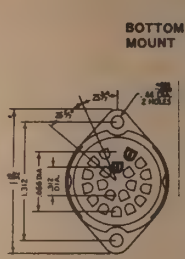
For triangular base layout .2"x.1" (JETEC-30) contact centers, and three-contact in-line (.048"x.192" contact centers). For television, industrial, communications, test equipment, bread-board circuits, etc. GP phenolic; contacts are phosphor bronze, cadmium-plated. Used with EIA base designations: E3-14, E3-15, E3-25, E3-32, E3-38, E3-39, E3-42, E3-43, E3-44, E3-51, E3-53, E4-13, E4-24, E4-31, E4-43, E4-52, ET 103-D.

Part No. 2TS-4

ROUND RELAY SOCKETS


14RS


14RS-2




16RS-1


14RS-1


20RS-1


20RS

14-Pin Bottom-Mounted Socket: Steel saddle, cadmium-plated.
Part No. 14RS

14-Pin Top-Mounted Socket: Same as above except top mount.
Part No. 14RS-2

20-Pin Bottom-Mounted Socket: Casting is mica-filled low loss phenolic. Contacts are of beryllium copper, silver-plated with hot tinned tails.
Part No. 20RS-1

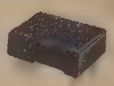
20-Pin Top-Mounted Socket: 20-contact socket. Same as above except top mount. **Part No. 20RS**

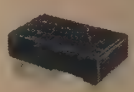
14-Pin Bottom-Mounted Socket: Same as above except only contacts 15 to 20 omitted. **Part No. 14RS-1**

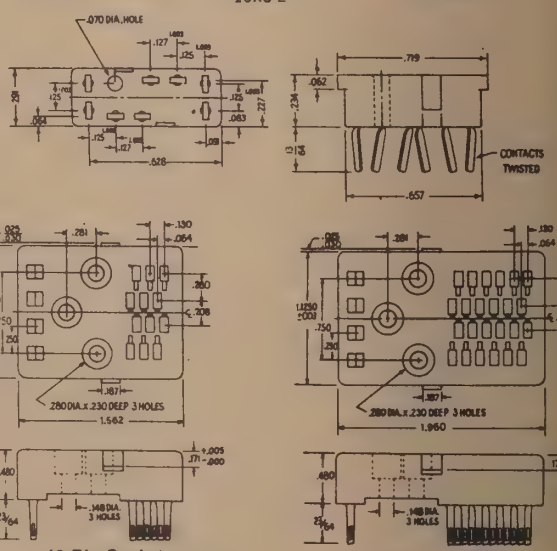
16-Pin Bottom-Mounted Socket: Same as above, except contacts 15, 17, 18 and 20 are omitted. **Part No. 16RS-1**

RECTANGULAR RELAY SOCKETS


8RS


16RS-2


28RS



8-Pin Socket: Contacts are beryllium copper, silver-plated. Mounting clip furnished with each socket. This socket fits Advance MV-2C, AEMCO 95-3274, Brubaker K110A, Filtors P.26.A1.P. 6A, G.E. D200A & G-203A, Potter & Brumfield SL and Ace Relay No. 50-6A (single contact type).
Part No. 8RS

16 and 28 Pin Sockets: Molded of high dielectric black phenolic. Mate with Automatic Electric EIN type relays and C.P. Clare J type relays.

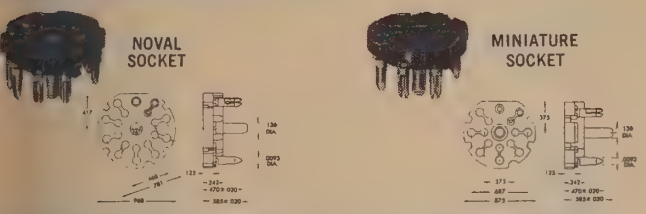
No. of Contacts	Contact Plating	Part No.
16	Cadmium	16RS-2
16	Gold	16RS-3
28	Cadmium	28RS
28	Gold	28RS-1

© United Technical Publications

CINCH

MISCELLANEOUS SOCKETS and ACCESSORIES

PRINTED CIRCUIT TUBE SOCKETS



Stand-Off Type Printed Circuit Sockets with Press-In Contact Tails
Provides mechanical retention prior to dip soldering in 1/16" printed circuit board. Available with or without center shield. Center shield and contacts are brass, hot tin dipped.

Miniature Part No.	Noval Part No.	Insulator Material*	Center Shield
7PC-B4	9PC-B4	Black	No
7PC-M4	9PC-M4	Mica-Filled	No
7PC-B5	9PC-B5	Black	Yes
7PC-M5	9PC-M5	Mica-Filled	Yes

*Phenolic

CONVENTIONAL STAND-OFF TYPE PRINTED CIRCUIT SOCKETS



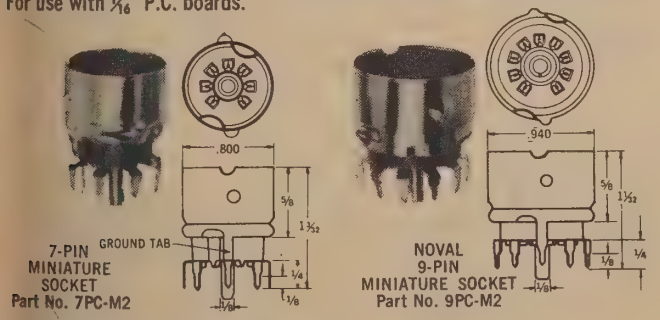
Part No. 7PC-B1. Part No. 9PC-B1.

Sockets rest on the shoulder of the contact tail, providing an air gap for cooling and eliminating the possibility of a moisture trap. For 1/16" printed circuit boards with bottom circuitry.

7-Pin Socket ..... **Part No. 7 PC-B**
7-Pin Socket similar to 7PC-B without center shield and tab. (Not shown) **Part No. 7PC-B1**
Noval Socket ..... **Part No. 9PC-B**
Noval Socket similar to 9PC-B without center shield and tab (not shown). **Part No. 9PC-B1**

PRINTED CIRCUIT SOCKETS WITH SHIELD BASES

Stand-off sockets with attached bayonet-type shield base with ground tab. For use with 1/16" P.C. boards.



SUB-MINIATURE TUBE SOCKETS



2H3 2H5 8SM 8SM-P

For test equipment, instruments, radios and other electronic apparatus. Molded mica-filled low loss Phenolic; silver-plated beryllium copper contacts. No. 2H5 can be used as a transistor socket or for 4-prong tubes.

Part No.	No. of Prongs	Mtg. Ring No.
*2H3	3	18516
*2H5	5	12446
*2H6	6	12447
*2H7	7	12448
*8SM	8	2MR
8SM-P	8	—

*Mtg. Ring Included.

CAPACITOR SOCKETS



2C5 2C7

For Mallory and Magnavox 1" FP type capacitors. Molded from high dielectric black phenolic. Steel saddle, with 4 ground lugs, hot-solder-coated. 1 1/2" mounting centers. Has 3 recessed center contacts for extended prongs of capacitor and two outer contacts flush with surface for short prongs of capacitor. All contacts are cadmium-plated. **Part No. 2C5**

Same as above, but for Mallory and Magnavox 1 3/8" FP type capacitors. 1 27/32" mounting centers. **Part No. 2C7**

CRYSTAL SOCKETS



2KB 2K4 2K2C

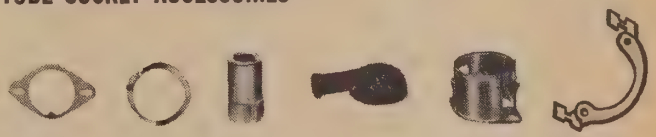
2-Prong 31/64" Centers: Molded from high dielectric black bakelite or mica-filled low loss phenolic. Silver-plated beryllium copper contacts on 31/64" centers. .120" diameter recessed mounting hole. Socket body is 25/32" long, 5/16" thick, and 35/64" high. For use with FT243 type crystal.

PART NO.	MATERIAL
2KB	Black
2KM	Mica-Filled

4-Prong: Same as above, but for two No. FT243 type crystals. **Part No. 2K4**

2-Prong .486" Centers: Ceramic material. Silver-plated beryllium copper contacts with hot tinned tails, mounted on .486" center. 1/8" mounting hole, 7/8" .long, 3/8" wide and 5/8" high overall. For No. CR-7 and BH-6 crystals. **Part No. 2K2C**

TUBE SOCKET ACCESSORIES



8AP 8RO 7S2 3A1 7SB1 7SN

Retainer Ring—A crimped retaining ring to anchor octal sockets. Standard finish is cadmium. **Part No. 8RO**

Adaptor Plate—Used when the chassis hole is too large to use the 8RO retainer ring alone. **Part No. 8AP**

J-Slot Tube Shields—For 7X and 9X series sockets and 7SB and 9SB-1 type shield bases.

Part No.	Description	Part No.	Description
7S2	1 3/8" Length	9S1	1 1/2" Length
7S3	1 3/4" Length	9S2	1 15/16" Length
7S4	2 1/4" Length	9S3	2 3/8" Length

Shield Bases—For J-Slot type shields.

Part No.	Mtg. Ctrs.	Material
7SB1	7/8"	Steel
7SB2	7/8"	Brass
9SB1	1 1/2"	Steel

Strap Nuts—For mounting sockets with saddles or shield bases in place of two conventional type nuts.
For 7-contact sockets—**Part No. 7SN** For 9-contact sockets—**Part No. 9SN**
Second Anode Connector **Part No. 3A1**

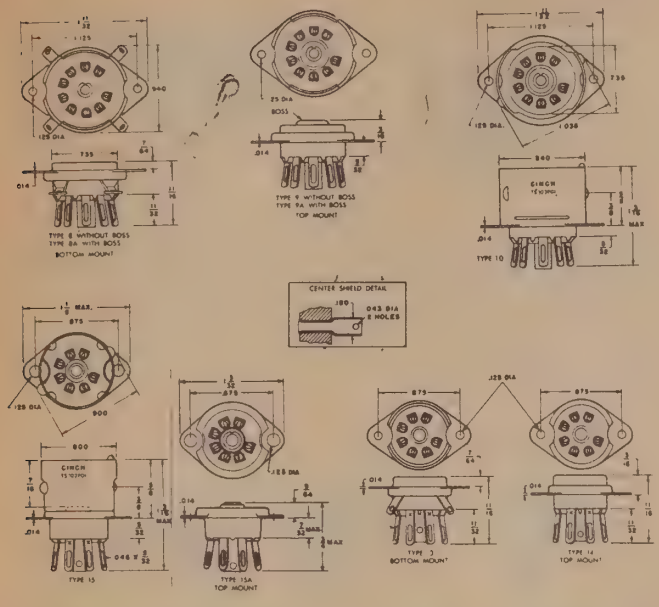
Tube Socket Mounting Rings—(Not illustrated). Fit Cinch sockets:

Socket Part No.	Ring Part No.
2B2, 2M2, 3M11, 3B14, 3M14	2MR, 3R11, 3R14

© United Technical Publications

CINCH

MILITARY-TYPE TUBE SOCKETS



Part No.	Type, Per MIL-S-12883A	Casting Material	Type (See Diag.)
	7-PIN		
TS102P01	7JM-2	MFE	15
TS102C01	7JC-2	Ceramic	15
TS102P02	7JMN-1	MFE	14
TS102P02	7JMN-2	MFE	15A
TS102C02	7JCN-2	Ceramic	14
TS102C02	7JCN-1	Ceramic	15A
TS102P03	7JM-3	MFE	13
TS102C03	7JC-3	Ceramic	13
	9-PIN		
TS103P01	9JM-2	MFE	10
TS103C01	9JC-2	Ceramic	10
TS103P02	9JMN-2	MFE	9
TS103P02	9JMN-1	MFE	9A
TS103C02	9JCN-1	Ceramic	9A
TS103P03	9JM-4	MFE	8
TS103P03	9JM-3	MFE	8A
TS103C03	9JC-3	Ceramic	8A

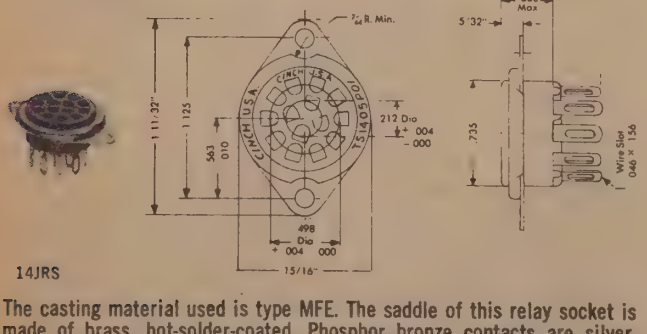
ELECTRICAL SPECIFICATIONS

VOLTAGE RATING (absolute maximum): Sea Level and 50,000 ft. 500 V. AC r.m.s.; CURRENT: 1 ampere; OPERATING TEMPERATURE: 100°C; CHASSIS OPENING: 5/8" dia., 7-pin, 3/4" 9-pin; INSULATION RESISTANCE: 1,000 megohms, minimum; WITHSTANDING VOLTAGE: 2,000 V. AC minimum without breakdown of insulation or flashover; INDIVIDUAL CONTACT RETENTION: 3 ounces minimum; AVERAGE INITIAL INSERTION FORCE: 12 lbs. max. 7-pin, 15 lbs. max. 9-pin; INDIVIDUAL INITIAL INSERTION FORCE: 15 lbs. max. 7-pin, 20 lbs. 9-pin; INDIVIDUAL INITIAL WITHDRAWAL FORCE: 4 lbs. to 12 lbs. 7-pin, 4 lbs. to 15 lbs. 9-pin.

MECHANICAL SPECIFICATIONS

INSULATORS: Mica filled Phenolic—MIL-M-14F, Type MFE; Steatite Ceramic—MIL-I-10, Grade 14; CONTACTS: Phosphor bronze—QQP-330, Beryllium copper—QQ-G-523; SADDLES, BASES, STRAP NUTS, CENTER SHIELDS, TUBE SHIELDS Brass—QQ-B-626 or QQ-B-613; TUBE SHIELD SPRINGS: Stainless steel—QQ-W-423; FINISHES: Cadmium—QQ-P-416a, Silver—QQ-S-365, Nickel—QQ-N-290, Passivation—MIL-STD-171.

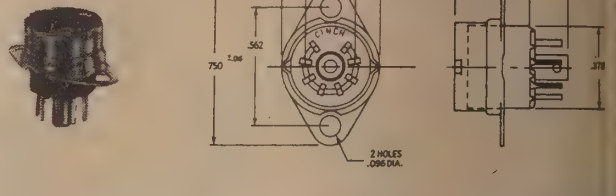
RELAY SOCKET



14JRS

The casting material used is type MFE. The saddle of this relay socket is made of brass, hot-solder-coated. Phosphor bronze contacts are silver-plated and tails are hot tin dipped. Type TS1405P01 per MIL-S-12883A.
Part No. 14JRS

SUB-MINIATURE SOCKETS

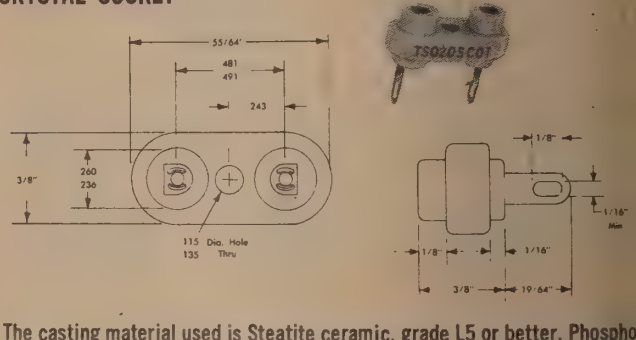


For use in equipment subject to high temperature, humidity or vibration conditions. Shield bases are brass, nickel plated. Contacts are heat-treated beryllium copper and silver-plated; tails are hot tin dipped.

Mil No.	Part No.	Casting Material	Type
MS-35407-2	8SM-1*	MFE	1

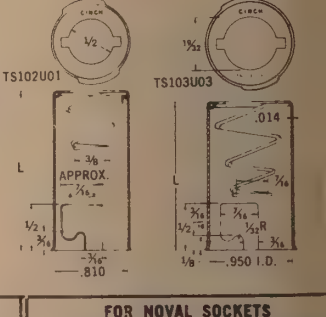
*A U.S. Government contract number is required when ordering.

CRYSTAL SOCKET



The casting material used is Steatite ceramic, grade L5 or better. Phosphor bronze contacts are silver-plated and tails are hot tin dipped. Type TS0205C01 per MIL-S-12833A.
Part No. 2JKC

SHIELDS



Cinch MIL shields are made of brass, nickel-plated. Springs are non-magnetic stainless steel.

FOR MINIATURE SOCKETS			FOR NOVAL SOCKETS		
Type, Per JAN-S-28A	Part No.	Dimension L In Inches	Type, Per JAN-S-28A	Part No.	Dimension L In Inches
TS102U01	7SJ2-1	1 3/8	TS103U01	9SJ1-1	1 1/2
TS102U02	7SJ3-1	1 3/4	TS103U02	9SJ2-1	1 15/16
TS102U03	7SJ4-1	2 1/4	TS103U03	9SJ3-1	2 3/8

STRAP NUTS



Cinch strap nuts are brass, cadmium-plated with a chromate treatment. Mounting holes have a No. 4-40 NC-2B tap after plating. Ground lugs are hot-solder-dipped.

Type, Per MIL-S-12883A	Part No.	Dimensions In Inches			
		A	B	C	D
TS102N01	7JSN	1 3/32	.875	7/16	23/64
TS103N01	9JSN	1 11/32	1.125	17/32	13/32
TS102N02	7JSN-1	1 1/4	.875	15/32	11/32

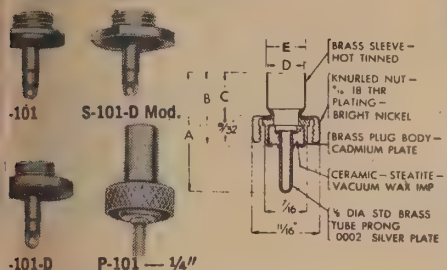
© United Technical Publicatio

CINCH

AUDIO, RADIO, TV and MISCELLANEOUS HARDWARE

AUDIO AMPLIFIERS

101 SERIES PLUGS & SOCKETS



-101 S-101-D Mod. -101-D P-101 — ¼"

rovide low-loss connections, even at high frequenies. Units are identical except for diameter of able ferrule. One-piece cadmium plated body and errule. All metal parts are brass.

Part No.	Dimensions In Inches				
	A	B	C	D	E
P-101-¼"	1¼	¾	7/16	¼	9/32
P-101-.290	1¼	¾	7/16	.290	.319

he No. 101 series sockets are furnished in three ypes as shown below. Base is of brass, bright ickel finish. Brass contact is silver-plated. Insulaion is of low-loss natural color XXX phenolic. The -101-D has recessed base. S-101-D Mod. is milled s shown.

Part No.	Mounting Centers	Drill Size For Mounting Holes
S-101	11/16	41
S-101-D	13/16	30
S-101-D Mod.	13/16	30

202 SERIES PLUGS & SOCKETS

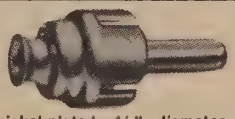


P-202-CCT S-202-B S-202-CCT-THR

Metal parts are brass with bright nickel finish. Insulation is molded phenolic. Phosphor bronze "knife switch" type socket contacts engage both sides of flat brass plug contacts. Formed fibre linings in caps. Knurled nut has ¾"-27 thread. S-202-CCT-THR and P-202-CCT make ideal microphone cable connectors.

Part No.	Type
P-202-CCT (as shown above)	Plug with Cable Clamps.
S-202-CCT	Socket with Cable Clamps.
S-202-B (as shown above)	Socket with Mounting Base.
P-202-B	Plug with Mounting Base.
S-202-CCT-THR (as shown above)	Socket with Cable Clamps and threaded body, for attaching to a P-202-CCT.

PHONO PLUGS



Standard Type nickel-plated. ⅛" diameter brass tube pin.

Part No.	Pin Length	For Jack Type
13A	5/16"	81A, 81B
13E	11/16"	81E

PHONO JACKS



SINGLE

Mounted on 1/16" dark brown phenolic disc with 1/16" mounting centers. Contacts are cadmium-plated brass. Ceramic bushing. Shield is cadmium-plated steel. Mounting holes are .136" diameter. Use Cinch No. 13A phono plug. **Part No. 81A**

Similar to No. 81A, but center conductor is grounded to shield except when a plug is inserted. **Part No. 81G**

DOUBLE

Two positive grip phono jacks mounted on 1/16" phenolic panel with 13/16" mounting centers. Mounting holes are .140" diameter. Jacks are spaced on 5/16" centers. Panel is 1½"x1". Contacts are cadmium-plated brass. Ceramic bushings. Use Cinch No. 13A phono plug. **Part No. 81B**

RADIO & TELEVISION CONNECTORS

FLAT MOUNTING CONNECTOR PLUG



Two cadmium-plated brass pins mounted on a piece of phenolic. Mounting plate is of 1/16" natural XP phenolic 1⅝"x¾". The .135/.140 mounting holes are 1¼" centers. **Part No. 2FP**

RECESSED PLUG



Nominal rating is for 125 volts, 7 amperes. Designed as input voltage connector for television sets. 1¼" mounting centers. Overall length 1⅝". Width ⅝. Body depth 5/16". Mounting holes are .140/.145. Recognized under the Component Program of Underwriters' Laboratories, Inc., reference No. 15M13056. **Part No. 2RP**

Same as above with one-piece contact. **Part No. 2RP-1**

ANTENNA PLUG



Standard Type. Nickel-plated brass ⅛" tube pin extends 7/32" from cadmium-plated split brass shell. Use with Cinch No. 81C or 81F connector. **Part No. 13B**

110-250 VOLT 2 PRONG SOCKET



Rated at 15 Amp., 110 V. Molded from high dielectric black phenolic. Cadmium-plated brass contacts on ½" centers accept any 2 prong standard electric plug. Mounts in 25/64"x25/32" hole. Has .144 diameter mounting holes on 1⅛" centers. Ideal for chassis connections and many other applications. Recognized under the Component Program of Underwriters' Laboratories, Inc., reference No. 54A12844. **Part No. 2R2**

ANTENNA CONNECTORS

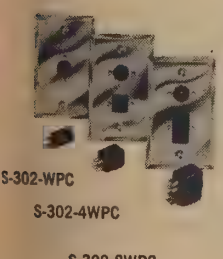


Flanged. Motorola-type shielded jack. Steel flange with 15/16" mtg. centers with .136 dia. mtg. holes. Mounts with screws or rivets. Use Cinch No. 13B antenna plug. **Part No. 81F**

Shell Type: Same as above except without flange. Solder into position. Accepts No. 13B plug. **Part No. 81C**

MISCELLANEOUS PLUGS, SOCKETS, CAPS, SHELLS & HARDWARE

TELEVISION WALL PLATES



S-302-WPC S-302-4WPC S-302-8WPC

302 SERIES wall plates are made of steel with heavy chrome plate and provide a convenient junction between the antenna lead-in and the television set. They all fit a standard outlet box. Mounting screws are furnished. The S-302-2-8WPC has two antenna sockets side by side.

Part Number	Application	Antenna Socket*	Rotor Socket*
S-302-WPC	Antenna lead-in	P-302-CCT	—
S-302-4WPC	Antenna lead-in plus 4 contact rotar	P-302-CCT	P-304-CCT
S-302-8WPC	Antenna lead-in plus 8 contact rotor	P-302-CCT	P-308-CCT
S-302-2-8WPC	2-antenna lead-in plus 8 contact rotor	P-302-CCT(2)	P-308-CCT

*Sockets not included, must be ordered separately.

8-CONTACT PLUG — High dielectric black Phenolic. Pins are nickel-plated. Mounts on 1/16" chassis using No. 8RO retaining ring, or can be used with No. 16F cap. Will fit any standard octal socket. **Part No. 8PB**

11-CONTACT PLUG — Molded from high dielectric black Phenolic. Pins are nickel-plated. Mounts on 1/16" chassis using No. 8RO retaining ring or can be used with No. 16F cap. Will fit No. 11RB socket shown below. **Part No. 11PB**

11-CONTACT SOCKET — Molded from high dielectric black Phenolic Solder coated brass contacts. Mounts 1/16" chassis using No. 8RO retaining ring. Can be used with No. 16F cap. Used with No. 11PB plug **Part No. 11RB**

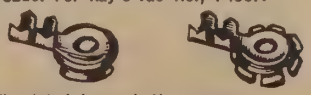
CAP — Made of cadmium-plated steel to snap on 8 and 11 prong sockets which are grooved for a 1/16" chassis. Also fits 8PB, 11PB and 11RB plugs. Rubber grommet has a 25/64" dia. hole. **Part No. 16F**



BATTERY PLUGS

Part No.; 5M. Voltage; 67½ "B." For Burgess No.; P6, D5, P6M, M6, XX30, XX45, XX50. For Eveready No.; 455, 467. For R.C.A. No.; VS016, VS300A, VS322, VS315. For Ray-O-Vac No.; P4367.

Part No.; 5F. Voltage; 67½ "B." For Burgess No.; K45, P45, D6, 4D4, P45M, P60, N60X, C62. For Eveready No.; 455, 467. For R.C.A. No.; VS306, VS316, VS055, VSH7, VS082, VS218, VS215, VS219. For Ray-O-Vac No.; P4367.



Tin-plated brass battery snaps.

PLUG BUTTONS



A E

Nickel plated steel. Spring tension prongs.

For Hole Diameter	Part No.	Cup Diameter
¼"	41A	13/32"
⅜"	41B	½"
½"	41C	21/32"
⅝"	41D	51/64"
¾"	41E	15/16"
⅞"	41F	1 1/16"
1"	41G	1 5/32"
1¼"	41H	1 7/16"

SCREEN-TYPE PLUG BUTTON

Provides ventilation wherever required; snaps in 1" diam. hole. Bright zinc plated steel button. **Part No. 41V**

CABLE CLAMPS

Cadmium-plated sturdy steel cable clamps for cables 1/16" to ⅝" in dia.



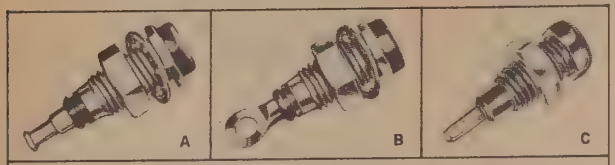
E

Part No.	Dia. of Arc	Hole Dia.	Over-all Width	Over-all Length	Hole Str. To Arc Center
85A	⅛"	.149	11/32"	15/32"	¼"
85B	5/16"	.140	5/16"	23/32"	⅜"
85C	5/16"	.144	⅜"	21/32"	⅜"
85D	5/16"	.136	5/16"	27/32"	½"
85E	½"	.147	½"	13/16"	7/16"
85F	⅝"	.171	⅜"	1"	½"

© United Technical Publications

CINCH

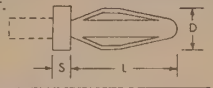
UCINITE TEST JACKS



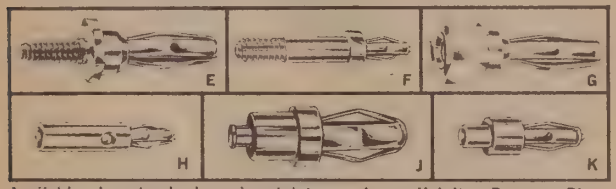
THREADED PANEL TEST JACKS. For 0.080" diam. probes. Metal or nylon mounting shells with beryllium copper contacts. All units are 15/16" long and require 7/64" diam. mounting hole. Will fit panels up to 1/4" thick. Brass shells are nickel plated and have 1/4-32 threads; nylon shells have 1/4-28 threads. Nickel plated mounting hardware included. *Meets Military spec MS16108 (Rev F). †Extended life construction.

Part No.	Fig. No.	Maximum Flashover	Current Rating	Mounting Shell	Terminal Style	Terminal Plating	Colors** (See Chart)
118930	A	2500 volts	5 amps.	Brass	Turret	Silver	A - L
119052	B	2500 volts	5 amps.	Brass	Spade	Silver	A - L
119165	A	2500 volts	5 amps.	Brass	Turret	Gold	A,B,C,G
*119588	A	3000 volts	15 amps.	Brass	Turret	Gold	A - L
*119589	B	3000 volts	15 amps.	Brass	Spade	Gold	A - L
119466	A	2500 volts	5 amps.	Brass	Turret	Silver	A - H,K
119513	B	2500 volts	5 amps.	Brass	Spade	Silver	A,B,C,E,H
119193	A	9000 volts	5 amps.	Nylon	Turret	Silver	B,C,G,L
†119605	C	10,000 volts	5 amps.	Nylon	Spade	Silver	A-C, E-G

** Add color code as suffix to desired part number.



UCINITE BANANA PLUGS



Available in standard and miniature sizes, Ucinite Banana Plugs consist of a one piece beryllium copper spring securely fastened to a nickel plated brass pin for optimum mechanical and electrical characteristics. Rated for 18 amp loads, the plugs are available in a variety of platings and mounting styles to meet specific requirements.

BANANA PLUGS WITH SCREW TYPE MOUNTINGS

Type	Fig.	D (Max.)	L (Max.)	Max. Panel Th'kness	Thread Size (UNC)	Part Number	Finish† Code	Hardware Number*
Std.	E	0.190	0.562	0.237	6-32	152016	UF47	155422UF47
Min.	F	0.120	0.275	0.487	6-32	155296	UF4	155422UF47
Min.	F	0.120	0.275	0.487	6-32	155296	UF419	155422UF47
Spec.	G	0.190	0.547	—	6-32 Fem.	152239	UF47	None
Spec.	H	0.120	0.297	—	0.109 hole	154850	UF4	None
Spec.	H	0.120	0.297	—	0.109 hole	154850	UF47	None

* Mounting hardware consists of nut and solder lug.

BANANA PLUGS WITH RIVET TYPE MOUNTINGS

Type	Fig.	D (Max.)	L (Max.)	S	Rivet Diam.	Max. Panel Th'kness	Solder Terminal	Part Number	Finish† Code
Std.	J	0.190	0.375	0.219	0.187	0.067	Turret	152006	UF6
Min.	J	0.120	0.275	0.094	0.156	0.068	Turret	152008	UF4
Min.	J	0.120	0.275	0.094	0.156	0.068	Turret	152008	UF6
Min.	J	0.120	0.275	0.094	0.156	0.068	Turret	152008	UF362
Min.	J	0.120	0.275	0.187	0.156	0.068	Turret	152109	UF47
Min.	J	0.120	0.275	0.094	0.156	0.099	Turret	154570	UF6
Min.	J	0.120	0.275	0.094	0.156	0.130	Turret	154569	UF6
Min.	J	0.120	0.275	0.125	0.156	0.130	Turret	153264	UF47
Min.	K	0.120	0.275	0.094	0.156	0.010	Cup	155060	UF6
Min.	K	0.120	0.275	0.094	0.094	0.053	Cup	152005	UF4
Min.	K	0.120	0.275	0.140	0.094	0.068	Cup	152004	UF4
Min.	K	0.120	0.275	0.140	0.094	0.068	Cup	152004	UF6

† Add finish code as suffix to desired part number.

FINISH SPECIFICATIONS

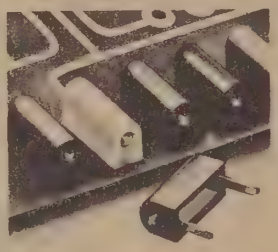
Code	Type	Code	Type
UF4	0.0001 minimum thick Silver	UF47	0.0002 minimum thick Nickel
UF6	0.0005 minimum thick Silver	UF419	0.00002 Gold over Silver
UF362	0.0005 minimum thick Silver plus water dip lacquer		



Part Number	Terminal Plating	Colors* (See Chart)
119620S	Silver	C
119620G	Gold	A, B, C, E
119620T	Electro Tin	A-C, E-G

* Add color code as suffix to desired part number.

PRESS-IN TEST JACKS. For 0.080" diam. probes. Fast installation, no mounting hardware required! Needs only 0.176" diam. countersunk hole. Nylon body withstands flashover test to 9000 volts. Plated beryllium copper contacts are rated for 5 amps and have spade type terminals. Overall dimensions: 0.280" diam. by 7/8" long.



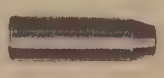
PRINTED CIRCUIT TEST JACKS

For 0.080" diam. probes. Terminals solder assemble to standard PC holes 0.055" diam. on 0.400" centers. All nylon body tested to 3000 volts flashover. Beryllium copper contacts are plated gold over silver and are rated for 5 amps. Cat. No. 119437. Specify colors suffix A thru L from table below.

TEST JACK COLOR CODE CHART

Code	Color	Code	Color	Code	Color
A	White	E	Green	J	Grey
B	Red	F	Orange	K	Purple
C	Black	G	Blue	L	Natural
D	Brown	H	Yellow		

TELERITE JACKS AND PLUGS



PART NO. 119160 PHONE JACK. U-92A/U per MIL-T-9919. Standard size 4-conductor unit with one piece molded nylon outer shell and nickel plated beryllium copper contacts. 2½" long by ¾" diam. Accepts plugs U-93A/U, listed below, or U-174/U.



PART NO. 119392 PHONE JACK. Panel mounted version of 119160 above, with nickel plated brass mounting plate. 1" sq by 1¼" long.



PART NO. 119346 PHONE PLUG. U-93A/U per MIL-T-9177. Standard size 4-conductor unit with molded nylon outer shell, nylon insulators and nickel plated brass conacts. Mates with 119160 and 119392, listed above.



PART NO. 119552 JACK AND SWITCH ASSEMBLY. U-94A/U per MIL-P-9222B. 4-conductor unit with molded nylon shell and nickel plated beryllium copper contacts. Switch has momentary contact snap action, double break construction and meets spec MIL-S-6743 and drawing MS-24318-1. Contacts are heavy duty coin silver. Equipped with broad jawed stainless steel alligator clip.



PART NO. 119547 2-CONDUCTOR ASSEMBLY JACK. U-172/U, meets MIL-J-641B for JJ-055 which it replaces. Has molded nylon shell and nickel plated beryllium copper contacts. Accepts plug U-173/U, listed below.



PART NO. 119563 2-CONDUCTOR ASSEMBLY PLUG. U-173/U, meets MIL-P-642 for PJ-292 which it replaces. Has molded nylon shell and nickel plated brass contacts. Mates with jack U-172/U, listed above.

© United Technical Publication

CURTIS TERMINAL BLOCKS

FEED-THRU BLOCKS



"GFT" SERIES
300 VOLTS
20 AMPS

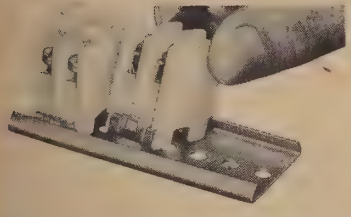
The GFT Series offer fully insulated feed through. Black thermosetting phenolic moldings. Terminals: Bright tin plated external #6-32 or #8-32 screws or ¼ and 3/16 tab terminals. Internal choice of screw, solder turret, taper pin receptacle, or PC pin. One to 26 poles per block. Terminal spacing 3/16" C. to C.

TRACK-MOUNTED BLOCKS



"W" SERIES
600 VOLTS

Prepunched steel track accepts vertical snap-in 2 or 3 pole modules. Terminals are screw bar 25 amps and tubular connectors, with or without traveling pressure pads, 50 amps, and high current 75 amps single pole tubular. Also single pole 13/32 x 1½ ferrule-type cartridge fuse holders and 15 amps pivoting disconnect switch. Six foot lengths available. Terminal spacing 3/16" C. to C.



"SW" SERIES
600 VOLTS

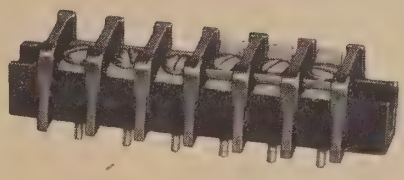
Fit same track as "W" Series. Two or three pole units of white molded polypropylene. Terminals are screw bar 25 amps and tubular connectors, with or without traveling pressure pads, 50 amps. Six foot lengths available. Terminal spacing 3/8" C. to C.

PRINTED CIRCUIT BLOCKS



TYPE GBP
300 VOLTS
20 AMPS

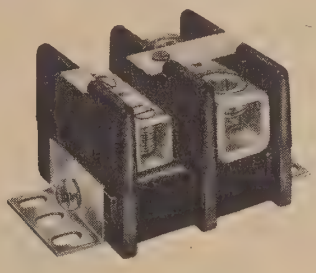
Identical to GFT with internal .062 dia. printed circuit pins and without feed-thru insulation sleeve.



TYPE SEP
300 VOLTS
5 AMPS

The SE printed circuit block has black thermosetting phenolic moldings. Terminals: External surface screws, with or without surface clamps, or combination 2, 4 or 6 .110" quick-disconnect tabs. Internal PC pins are .047" dia. One to 26 poles per block. Terminal spacing ¼" C. to C.

HIGH CURRENT BLOCKS



TYPES "T" & "U"
600 VOLTS

Sectional design with aluminum mounting brackets. Terminals are high pressure tubular of electrolytically pure copper. Black thermosetting phenolic moldings.

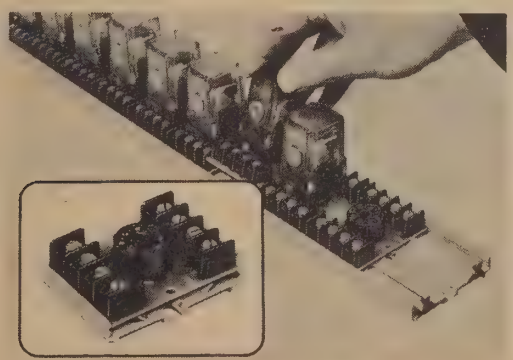
"T" rated 125 amps — takes AWG No. 6 to No. 1/0 wire. One to six poles per block.

"U" rated 250 amps — takes No. 6 to 250 MCM wire AWG. One to four poles per block.

Terminal spacing 1 5/32" C. to C.

CURTIS RELAY SOCKET ASSEMBLIES

All Curtis Relay Socket Assemblies are of printed circuit construction with either Curtis GB or SE Terminal Block Connections. (Wire clamps optional.) They pop-in or out vertically into prepunched vinyl track to 48" lengths, requiring only two or three mounting screws. Patent pending. CSA approved. Special configurations upon request.

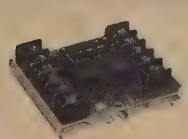


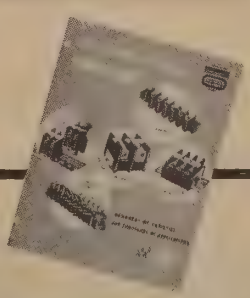
RS8

Octal socket for 2 P.D.T. relays. Rated 10 amps, 250 volts.

RS10

11 pin receptacle for 3 P.D.T. relays. Rated 10 amps, 250 volts.





RS11 11 pin round receptacle for 3 P.D.T. relays. Rated 10 amps, 250 volts.

RS12 11 pin receptacle for 3 P.D.T. relays. Rated 10 amps, 250 volts.

RS14 14 pin receptacle for miniature 4 P.D.T. relays. Rated 5 amps, 125 volts

RS15 15 pin receptacle for miniature 4 P.D.T. relays. Rated 5 amps, 125 volts.

RS16 8 pin receptacle for 2 P.D.T. relays. Rated 10 amps, 250 volts.



FREE Send today for your 24-page Terminal Block Catalog and Relay Socket Assemblies literature.

CURTIS DEVELOPMENT & MFG. CO.

NEMA MEMBER

© United Technical Publications

AVAILABLE FROM STOCK

OUR COMPLETE LINE OF

STANDARD SOLDER-TYPE & INSULATED TERMINALS & HARDWARE

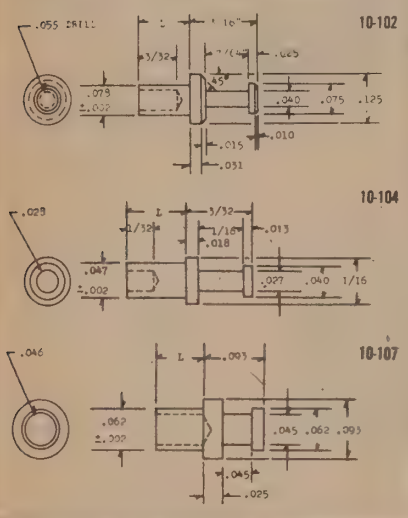
WE MAINTAIN THE MOST PRECISE, UP-TO-DATE HIGH SPEED SWISS AUTOMATIC SCREW MACHINERY AVAILABLE

MIL Spec. Platings Available: Silver: MIL-F-14072, QQ-S-365 • Electro-Tin: MIL-T-10727, Type 1 • Electro-Tin-Lead (Electro-Solder): MIL-F-14072 • Hot-Solder-Dip: MIL-F-14072, Type 221 • Hot-Tin-Dip: MIL-T-10727 • Gold: MIL-G-45204, Type II • Nickel: QQ-N-290, Type VI • Cadmium: QQ-P-416A, Type II, Class B, Clear Chromate • Bright Alloy: MIL Spec. • Copper: MIL Spec.

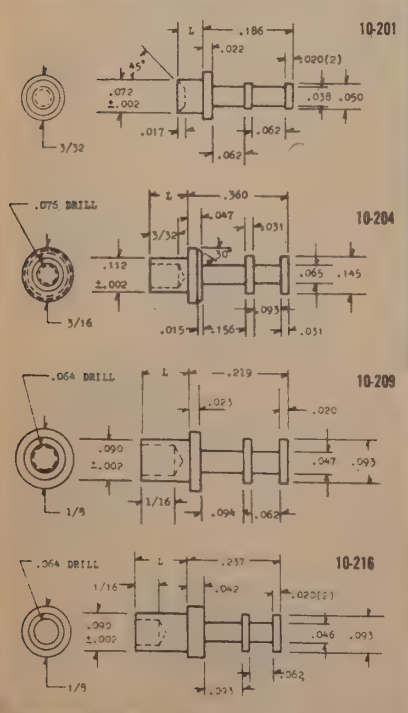
ALL STANDARD PANEL AND CHASSIS HARDWARE AVAILABLE

THESE ARE ONLY 36 OF THE HUNDREDS OF STYLES OF TERMINALS WE PRODUCE

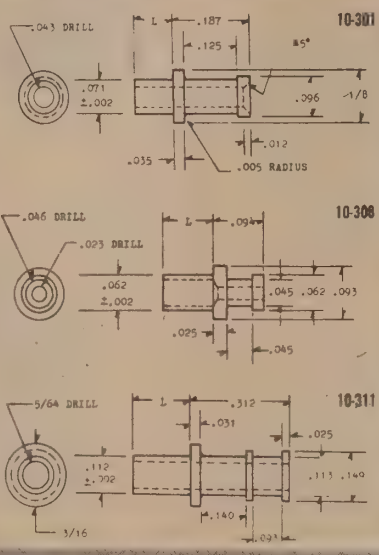
SINGLE TURRET TERMINALS, SERIES 10-100



DOUBLE TURRET TERMINALS, SERIES 10-200



TUBULAR TERMINALS, SERIES 10-300

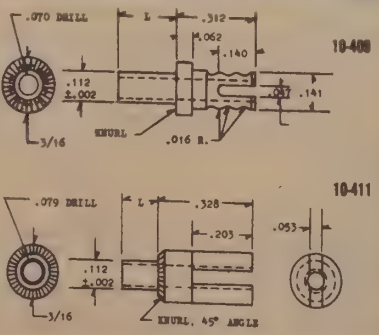


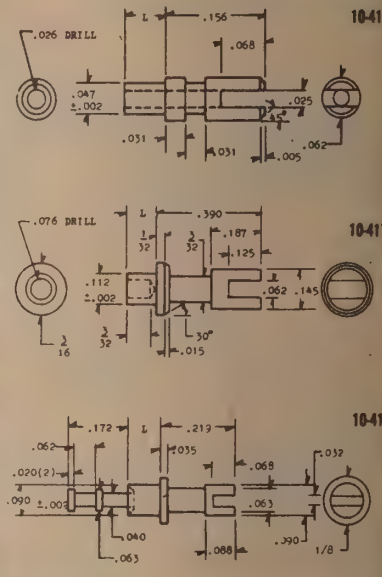
PRECISION MADE

MODULE PINS
CONNECTOR PINS
PRINTED CIRCUIT PINS

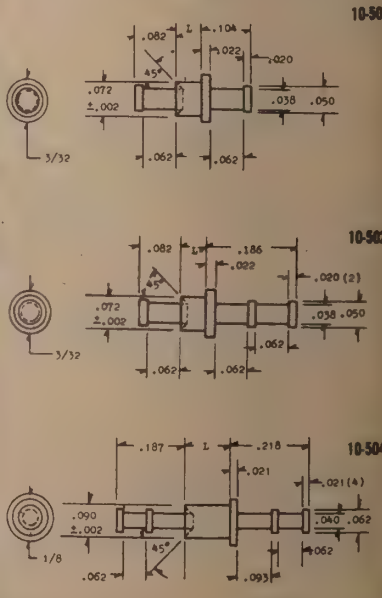
ANY & ALL SIZES TO YOUR SPEC

SEND DRAWINGS FOR PROMPT QUOTATION





DOUBLE END TERMINALS, SERIES 10-500



CALL OR WRITE FOR FREE CATALOG • BE SURE TO SPECIFY SHANK LENGTH & BOARD THICKNESS

CONCORD ELECTRONICS CORPORATION

© United Technical Publications

AVAILABLE FROM STOCK

OUR COMPLETE LINE OF

STANDARD SOLDER-TYPE & INSULATED TERMINALS & HARDWARE

WE MAINTAIN THE MOST PRECISE, UP-TO-DATE HIGH SPEED SWISS AUTOMATIC SCREW MACHINERY AVAILABLE

QUOTATIONS GIVEN ON CUSTOM DESIGNS

TERMINAL MATERIALS:

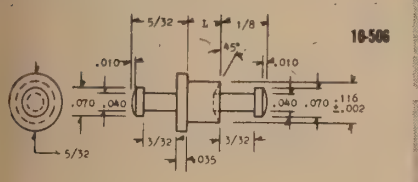
- **BRASS** QQ-B-626, Comp. 22, ½ hard. Brass tubing for hollow terminals is ASTM-B 135 grade.
- **BRONZE** to ASTM-B 140-58, Alloy B (leaded commercial bronze).

TERMINALS TO THE FOLLOWING SPECIFICATIONS:

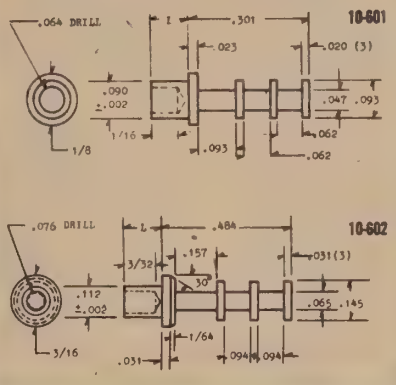
- NASA
- NATIONAL AEROSPACE
- MIL-T-55155
- FEDERAL SPEC. NUMBERS
- MS MILITARY STANDARDS

THESE ARE ONLY 36 OF THE HUNDREDS OF STYLES OF TERMINALS WE PRODUCE

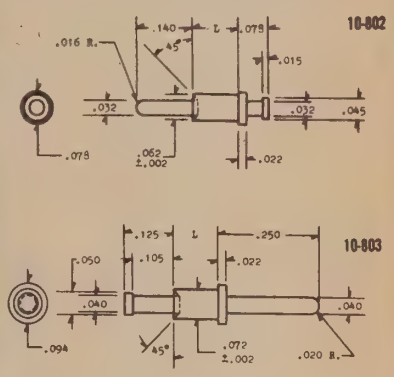
DOUBLE END TERMINALS, SERIES 10-500



TRIPLE TURRET TERMINALS, SERIES 10-600



PIN TYPE TERMINALS, SERIES 10-800



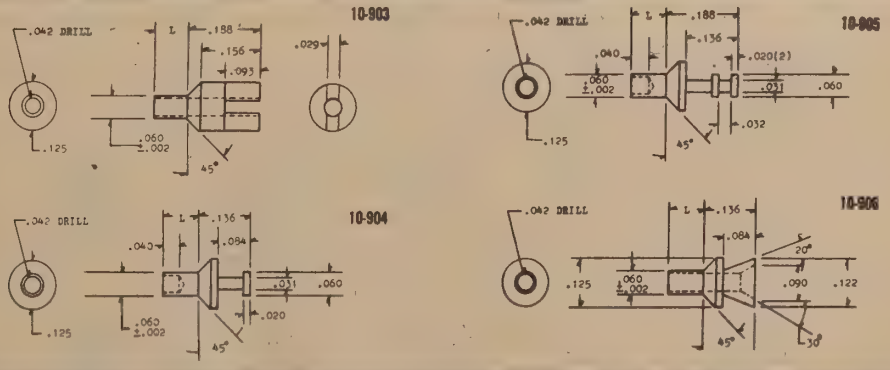
PRECISION-MADE

MODULE PINS
CONNECTOR PINS
PRINTED CIRCUIT PINS

ANY & ALL SIZES TO YOUR SPECS

SEND DRAWINGS FOR PROMPT QUOTATION

PRINTED CIRCUIT TERMINALS SERIES 10-900



CALL OR WRITE FOR FREE CATALOG • BE SURE TO SPECIFY SHANK LENGTH & BOARD THICKNESS

CONCORD ELECTRONICS CORPORATION

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

DABURN SOLDERLESS TERMINALS

Material is pure electrolytic copper with heavy cadmium plating, chromate finish resists corrosion and assures long shelf life — one piece design for maximum conductivity and strength. Beveled edges to facilitate wire insertion, barrels are full ¼" length, "V" grooves for wire protection.

NON INSULATED • QUICK DISCONNECT TERMINALS

COLOR CODE: For matching to wire sizes.
RED: For 22-16 wire, .160" I.D. **BLUE:** For 16-14 wire, .185" I.D.
YELLOW: For 12-10 wire, .260" I.D.

Female disconnect terminals are .020" brass, cadmium plated. Male disconnect terminals are .032" copper, cadmium plated. Beveled mouth and "V" grooves plus full ¼" length barrels for all.

INSULATED TERMINALS • QUICK DISCONNECT TERMINALS

The insulated terminals have strong, permanently attached rigid vinyl insulating sleeves for increased vibration resistance.

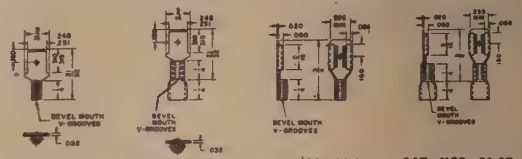
QUICK DISCONNECT TERMINALS

NON-INSULATED

Wire Size Range	Male Catalog No.	Female Catalog No.	Standard Package
22-16	21-12	21-22	100
16-14	21-13	21-23	100
12-10	21-14	21-24	100

INSULATED

Wire Size Range	Male Catalog No.	Female Catalog No.	Standard Package
22-16	21-17	21-27	100
16-14	21-18	21-28	100
12-10	21-19	21-29	100



CAT. NOS. 21-12, 21-13, 21-14 | CAT. NOS. 21-17, 21-18, 21-19 | CAT. NOS. 21-22, 21-23, 21-24 | CAT. NOS. 21-27, 21-28, 21-29

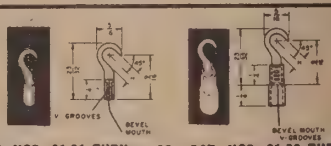
SOLDERLESS TERMINALS

NON-INSULATED — HOOK TONGUE

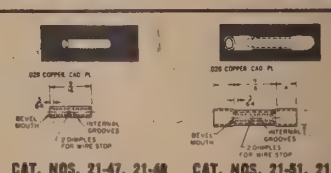
Wire Size Range	Stud Size	Catalog No.	Standard Package
22-16	6	21-31	100
	8	21-32	100
16-14	6	21-34	100
	8	21-35	100
	10	21-36	100

INSULATED

Wire Size Range	Stud Size	Catalog No.	Standard Package
22-16	6	21-38	100
	8	21-39	100
16-14	6	21-41	100
	8	21-42	100
	10	21-43	100



CAT. NOS. 21-31 THRU — 36 | CAT. NOS. 21-38 THRU — 43



CAT. NOS. 21-47, 21-48 | CAT. NOS. 21-51, 21-52

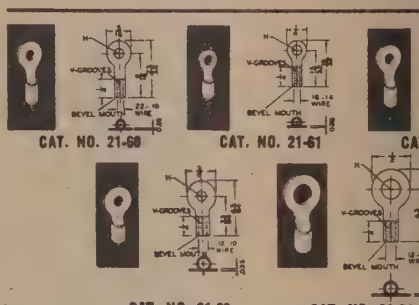
BUTT CONNECTORS

NON-INSULATED

Wire Size Range	Catalog No.	I.D.	Stub Clearance	Standard Package
22-16	21-47	.140"	37/64	100
16-14	21-48	.170"	37/64	100

INSULATED

22-16	21-51	.140"	37/64	100
16-14	21-52	.170"	37/64	100



CAT. NO. 21-60 | CAT. NO. 21-61 | CAT. NO. 21-62 | CAT. NO. 21-63 | CAT. NO. 21-64

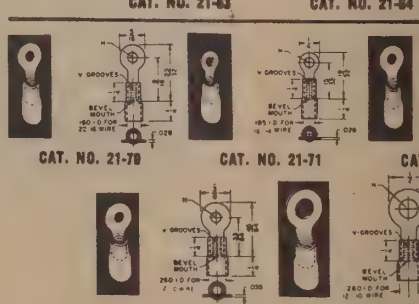
RING TONGUE

NON-INSULATED

Wire Size Range	Specify Stud Sizes	Catalog No.	Standard Package
22-16	4, 6, 8, 10	21-60	100
16-14	4, 6	21-61	100
16-14	6, 8, 10	21-62	100
12-10	6, 8, 10	21-63	100
12-10	¼	21-64	100

INSULATED

22-16	4, 6, 8, 10	21-70	100
16-14	4, 6	21-71	100
16-14	6, 8, 10	21-72	100
12-10	6, 8, 10	21-73	100
12-10	¼	21-74	100



CAT. NO. 21-70 | CAT. NO. 21-71 | CAT. NO. 21-72 | CAT. NO. 21-73 | CAT. NO. 21-74

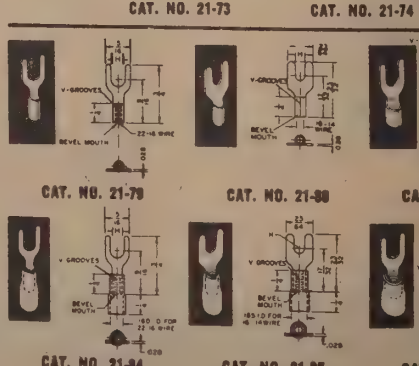
SPADE TONGUE

NON-INSULATED

Wire Size Range	"H" Stud Sizes Specify	Catalog No.	Standard Package
22-16	4, 6, 8, 10	21-79	100
16-14	4, 6, 8, 10	21-80	100
12-10	6, 8, 10	21-81	100

INSULATED

22-16	4, 6, 8, 10	21-84	100
16-14	4, 6, 8, 10	21-85	100
12-10	6, 8, 10	21-86	100



CAT. NO. 21-79 | CAT. NO. 21-80 | CAT. NO. 21-81 | CAT. NO. 21-84 | CAT. NO. 21-85 | CAT. NO. 21-86

Net

© United Technical Publications

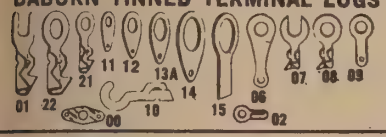
DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

LUGS — TERMINAL BOARDS, STRIPS BEARINGS • BUSHINGS • SPACERS

DABURN TINNED TERMINAL LUGS



Daburn No.	Hole Size	Material	L'gth	Thick-ness
101-11	6	Tinned Copper	17/32"	.015"
101-12	10	Tinned Copper	5/8"	.016"
101-13	.252	Tinned Copper	17/32"	.015"
101-13A	1/4	Tinned Copper	13/16"	.015"
101-14	3/8	Tinned Copper	7/8"	.016"
101-15	1/2	Hot Tin. Copper	13/4"	.024"
101-21	10	Hot Tin. Copper	3/16"	.020"
101-22	1/4	Hot Tin. Copper	1 1/16"	.025"
101-00	8	Brass Hot Tin.	"7/8	.015"
101-01	10	Brass Hot Tin.	25/32"	.020"
101-02	6	Brass Hot Tin.	5/8"	.020"
101-06	4-6-8-10	Brass Hot Tin.	7/8"	.020"
101-07	8	Tinned Copper	5/8"	.016"
101-08	4-6-8-10	Brass Hot Tin.	11/16"	.020"
101-09	4-6-8-10	Brass Hot Tin.	11/16"	.020"
101-10	10	Brass Hot Tin.	7/8"	.020"

Std. Pkg. 1000

TERMINAL LUGS



LOCKWASHER - BRASS - HOT TINNED

Daburn No.	Hole	Thickness	Length
101-40-4	4	.018"	7/8"
101-40-6	6	.018"	7/8"
101-40-8	8	.018"	7/8"
101-40-10	10	.018"	57/64"
101-40-14	1/4"	.018"	13/16"
101-41-4	4	.018"	47/64"
101-41-6	6	.018"	47/64"
101-41-8	8	.018"	47/64"
101-42-4	4	.018"	5/8"
101-42-6	6	.018"	5/8"
101-42-8	8	.018"	5/8"
101-43-4	4	.018"	23/32"
101-43-6	6	.018"	23/32"
101-43-8	8	.018"	23/32"
101-44-4	4	.018"	13/16"
101-44-6	6	.018"	13/16"
101-44-8	8	.018"	13/16"
101-44-10	10	.018"	53/64"
101-45-4	4	.018"	23/32"
101-45-6	6	.018"	23/32"
101-45-8	8	.018"	23/32"
101-46-4	4	.018"	41/64"
101-46-6	6	.018"	41/64"
101-46-8	8	.018"	41/64"

Std. Pkg. 1000

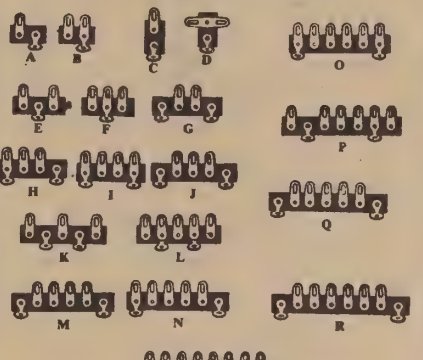
PANEL BEARINGS



Brass nickel plated. Same as used on the above bearing assemblies.

Daburn No.	Description	Std. Pkg.
14-370	3/16" Threaded Length	50
14-370A	13/32" Threaded Length	50
14-370B	3/8-32 Thread, 7/16" Threaded Length, 21/32" O.L.	50
14-370C	Miniature — 1/4-32 Thd., Threaded L'gth. 3/16", 3/8" O.L., .125" 11/32" Hex.	50

LUG TERMINAL STRIPS



STANDARD TYPE

Lugs are 3/8" centers with .140 diam. mounting holes. Lugs are 1/16" (.062") thick XP bakelite by 3/8" wide lugs. Special combinations available. Mount: .140 I.D. for no.6 screw.

MINIATURE TYPE

Lugs are 1/4" centers. Lugs are .062" thick XP bakelite x 5/16" wide. Steel cadmium plated. Mount: .096 I.D. for 3/32" rivet or No. 3 screw.

Std. Pkg. 100

Daburn No.	Illustration	Daburn No.
15-82	A	15-52
15-82A	B	15-52A
15-82B	C	15-52B
15-82C	D	15-52C
15-83	E	15-53
15-83A	F	15-53A
15-84	G	15-54
15-84A	H	15-54A
15-84B	I	15-54B
15-85	J	15-55
15-85A	K	15-55A
15-85B	L	15-55B
15-86	M	15-56
15-86A	N	15-56A
15-86B	O	15-56B
15-87	P	15-57
15-88	Q	15-58
15-89	R	15-59
15-90	S	15-60

BAKELITE TERMINAL BOARD
Screw Type

Terminals made of brass hot tinnned, mounted on X.P. Bakelite 5/8" wide x 1/16" thick, spaced 1/4" centers. Screws are 6-32 x 3/8" steel, cadmium plated.



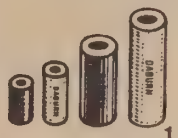
Daburn No.	Terminals	Mtg. Center	Std. Pkg.
15-72	2	1 1/16"	50
15-73	3	1 3/4"	50
15-74	4	2 5/16"	50
15-75	5	2 5/8"	50
15-76	6	3 1/16"	50
15-77	7	3 1/2"	50
15-81	SHORTING LINK		100

DABURN TERMINAL BOARD
Heavy Duty

Terminals made of brass, cadmium plated .042" thick, spaced 1/2" centers. Mounted on XP bakelite 7/8" wide x 3/32" thick. Screws are 8-32 x 3/16" brass, nickel plated.

Daburn No.	Terminals	Mtg. Center	Std. Pkg.
15-61A	2	1 1/2"	25
15-61	3	2"	25
15-62	4	2 1/2"	25
15-63	5	3"	25
15-64	6	3 1/2"	25
15-65	7	4"	25
15-66	8	4 1/2"	25
15-67	9	5"	25
15-68	10	5 1/2"	25
15-69	11	6"	25
15-70	12	6 1/2"	25

DABURN BRASS BUSHINGS AND SPACERS



Suitable for raising sub panels, condensers, transformers, chassis, etc. Bushing hole accommodates a No. 4, No. 6 or No. 8 screw.

1/4" O.D.

Length	For No. 8 Screw Cat. No.	For No. 6 Screw Cat. No.	For No. 4 Screw Cat. No.
1/4"	14-320	14-315	14-310
3/8"	14-321	14-316	14-311
1/2"	14-322	14-317	14-312
3/4"	14-323	14-318	14-313
1"	14-324	14-319	14-314

Std. Pkg. 100

3/8" O.D.

1/4"	14-330	14-325	14-305
3/8"	14-331	14-326	14-306
1/2"	14-332	14-327	14-307
3/4"	14-333	14-328	14-308
1"	14-334	14-329	14-309

Std. Pkg. 100

THREADED BRASS SPACERS

Threaded spacers for 4-40, 6-32 and 8-32 application.

1/4" O.D.

Length	For 8-32 Cat. No.	For 6-32 Cat. No.	For 4-40 Cat. No.
1/4"	14-340	14-335	14-300
3/8"	14-341	14-336	14-301
1/2"	14-342	14-337	14-302
3/4"	14-343	14-338	14-303
1"	14-344	14-339	14-304

Std. Pkg. 100

DABURN FIBRE SPACERS

Fibre material per MIL-F-1148A, Grade CH.

1/4" O.D.

Length	For No. 8 Screw Cat. No.	For No. 6 Screw Cat. No.	For No. 4 Screw Cat. No.
1/4"	14-365	14-360	14-355
3/8"	14-366	14-361	14-356
1/2"	14-367	14-362	14-357
3/4"	14-368	14-363	14-358
1"	14-369	14-364	14-359

Std. Pkg. 100

DABURN HEX SPACERS
Brass Cadmium Plated



1/4" Hex

Length	For No. 8 Screw Cat. No.	For No. 6 Screw Cat. No.	For No. 4 Screw Cat. No.
1/4"	14-410	14-405	14-400
3/8"	14-411	14-406	14-401
1/2"	14-412	14-407	14-402
3/4"	14-413	14-408	14-403
1"	14-414	14-409	14-404

Std. Pkg. 100

3/8" Hex

1/4"	14-430	14-425	14-420
3/8"	14-431	14-426	14-421
1/2"	14-432	14-427	14-422
3/4"	14-433	14-428	14-423
1"	14-434	14-429	14-424

Std. Pkg. 100

THREADED BRASS HEX SPACERS
1/4" Hex

Length	Thread For 8-32 Cat. No.	Thread For 6-32 Cat. No.	Thread For 4-40 Cat. No.
1/4"	14-450	14-445	14-440
3/8"	14-451	14-446	14-441
1/2"	14-452	14-447	14-442
3/4"	14-453	14-448	14-443
1"	14-454	14-449	14-444

Std. Pkg. 100

© United Technical Publications

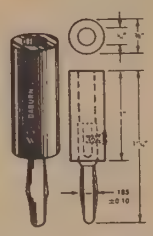
DABURN **DABURN ELECTRONICS & CABLE CORP.**
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

BANANA, PHONE PLUGS & TIPS

INSULATED BANANA PLUG
SOLDERLESS

Fits standard banana jacks. Plug is brass nickel plated. Spring is four leaf phosphor bronze, nickel plated. Side set screw holds wire without soldering. Molded plastic handle.

COLORS
Red, Black, Yellow, Green, Blue (Specify)

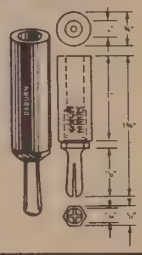


DABURN No.	SPRING	Std. Pkg.
19-46	Phosphor Bronze N.P.	50
19-46A	Beryllium Copper N.P.	50

INSULATED BANANA PLUG
SOLDERLESS

This split plug, brass N. PL., has internal brass N. PL., stud for solderless connection. Fits standard banana jacks. Molded plastic handle.

COLORS
Red, Black, Yellow, Green, Blue. (Specify)

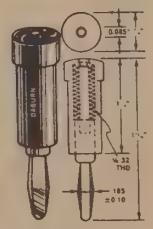


DABURN No.	Std. Pkg.
19-47 BANANA PLUG	50

ADAPTER
TIP PLUG TO BANANA PLUG

Fits standard banana jacks, accepts standard phone tips. Plug is brass nickel plated. Spring is four leaf phosphor bronze, nickel plated. Phone tip jack is phosphor bronze molded plastic handle and cap.

COLORS
Red, Black (Specify)

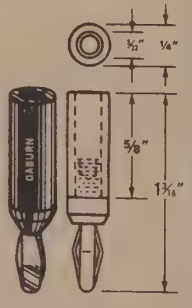


DABURN No.	Std. Pkg.
19-67 ADAPTER	50

INSULATED MIDGET BANANA PLUG
SOLDERLESS

Spring is four leaf phosphphor bronze, or beryllium copper, nickel plated. Wire can be soldered directly into plug. Molded plastic handle. Fits standard banana jacks.

COLORS
Red, Black. (Specify)

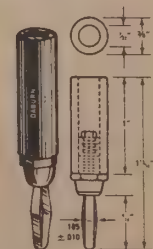


SPRING DABURN No.	Std. Pkg.
19-55 Phosphor Bronze N.P.	50
19-55B Beryllium Copper S.P.	50

INSULATED BANANA PLUG
SOLDERLESS

Fits standard banana jacks. Plug is hex brass, Nickel plated. Spring is four leaf phosphor bronze nickel plated. Molded plastic handle.
For solderless connection: wire can be passed thru hex brass N.P. stud and spread, which locks wire to plug. Wire can also be soldered directly to plug.

COLORS
Red, Black, Yellow, Green, Blue. (Specify)

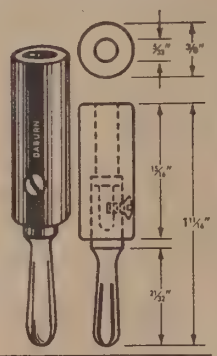


DABURN No.	SPRING	Std. Pkg.
19-04	Phosphor Bronze N.P.	50
19-04B	Beryllium Copper S.P.	50

INSULATED BANANA PLUG
SOLDERLESS

Split plug, brass N. PL., with side screw fits standard banana jacks. Plug is slotted, set screw holds wire without soldering. Molded plastic handles.

COLORS
Red, Black, Yellow, Green, Blue. (Specify)

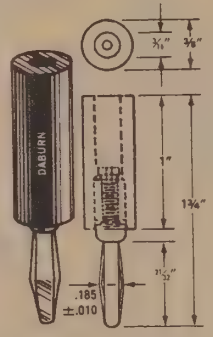


DABURN No.	Std. Pkg.
19-44 BANANA PLUG	50

INSULATED BANANA PLUG
SOLDERLESS

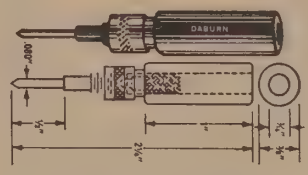
Fits standard banana jacks. Plug is brass nickel plated. Spring is four leaf phosphor bronze nickel plated. Molded plastic handle.

COLORS
Red, Black, Yellow, Green, Blue. (Specify)
For solderless connection same as our No. 19-04.



SPRING DABURN No.	Std. Pkg.
19-65 Phos. Bronze N.P.	50
19-65B Beryllium Copper S.P.	50

INSULATED PHONE TIP
SOLDERLESS — SENIOR

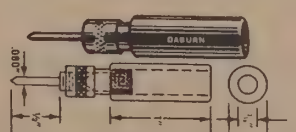


Fits standard phone tip jacks. Brass nickel plated. Solderless connection for wire which fits thru body of tip and fastens under knurled nut. Molded plastic handle.

COLORS: Red, Black, Yellow, Green, Blue. (Specify)

Daburn No.		Std. Pkg.
19-09	Senior	50

INSULATED PHONE TIP
SOLDERLESS — JUNIOR



Fits standard phone tip jacks. Brass nickel plated. Solderless connection for wire which fits thru body of tip and fastens under knurled nut. Molded plastic handle.

COLORS: Red, Black, Yellow, Green, Blue. (Specify)

Daburn No.		Std. Pkg.
19-15	Junior	50

BANANA PLUG — No. 17-40

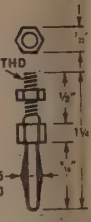


Fits all standard banana jacks. Hex brass, nickel plated. Comes thru with hex N. PL. nut and tinned copper lug. Spring is four leaf phosphor bronze, nickel plated.

RATED: 15 Amps. AC.

DABURN No.	Spring	Dim. A	Std. Pkg.
17-40	Phosphor Bronze	½"	100
17-40A	Phosphor Bronze	⅜"	100
17-40B	Beryllium Copper	½"	100

BANANA PLUG — No. 17-14

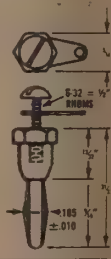


Nickel plated hex brass; spring is four leaf phosphor bronze, nickel plated Comes thru with hex nut, nickel plated. Fits all standard banana jacks.

RATED: 15 Amps. AC.

DABURN No.	Spring	Std. Pkg.
17-14	Phosphor Bronze	100

BANANA PLUG — No. 17-41



Body is hex brass, nickel plated, comes thru complete with N. PL. screw and tinned copper lug; spring is four leaf phosphor bronze or beryllium copper, nickel plated. Fits all standard banana jacks.

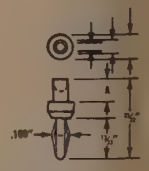
RATED: 15 Amps. AC.

DABURN No.	Spring	Std. Pkg.
17-41	Phosphor Bronze	100
17-41B	Beryllium Copper	100

MIDGET BANANA PLUG
RIVET TYPE

Brass silver plated body. Spring is four leaf phosphor bronze, silver plated.

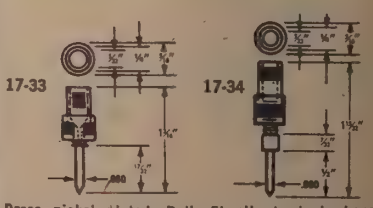
RATED: 10 Amps. AC.



DABURN No.	Std. Pkg.
17-26 Rivet Type Midget Plug	100

Additional Midget Plugs & Jacks Available.
Also Sub-Miniature Plugs & Jacks.

SOLDERLESS PHONE TIP PLUG



Brass nickel plated. Both fit all standard phone tip jacks. Slipping the wire thru body of tip, then wrapping same around screw, is tightened by knurled collar.

DABURN No.	Description Type	Std. Pkg.
17-33	Junior	100
17-34	Senior	100

© United Technical Publicatio

DABURN

DABURN ELECTRONICS & CABLE CORP.

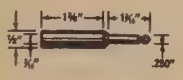
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

TELEPHONE PLUGS • JACKS • PRINTED CIRCUIT JACK

TELEPHONE TYPE PLUGS

its all standard phone jacks. Body tip, sleeve is rass, nickel plated. 5 amp. AC rating, continuous uty. 750V. 60 cycle AC. Specify red or black akelite barrel.

ABURN Cat. No.	Circuit	Terminals	Std. Pkg.
19-81	2	Solder	100
19-81A	2	Screw	100
19-83	3	Solder	100
19-83A	3	Screw	100

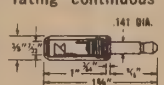


Additional types available.

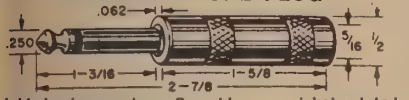
MINIATURE PHONE PLUGS

nsulated, molded plastic handle; brass nickel plated ody; solder terminals; 5 amp. rating continuous uty.

ABURN Cat. No.		Standard Package
19-130	Solder Term.	50
19-131	Shielded	50



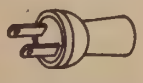
SHIELDED PHONE PLUG



hielded phone plug. Barrel-brass, nickel plated ith tubular insulator.

DABURN Cat. No.	Circuit	Terminals	Standard Package
19-82	2	Solder	100
19-82A	2	Screw	100
19-84	3	Solder	100
19-84A	3	Screw	100

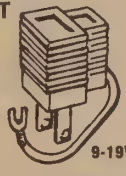
RUBBER MALE PLUG



DABURN Cat. No.		Standard Package
9-30	2 Prong Male Plug — Brass	100

Rated: 15 Amps, 125V.

ADAPTER FOR 3 PRONG PLUG FOR STANDARD OUTLET



9-19V

DABURN Cat. No.		Standard Package
9-19	Bakelite	50
9-19V	Vinyl	50

3 PRONG MALE PLUG



9-19

DABURN Cat. No.		Standard Package
9-17	3 Parallel Blades and Ground Pin	50

FEMALE CONNECTOR

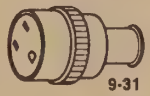


9-17

DABURN Cat. No.		Standard Package
9-31	Mate to 9-17	50

PHONO PLUGS

STANDARD PHONO PLUGS



9-31

RCA Type — useful with record players, recording equipment. Extra large hole in cap .175" for coaxial cable.

DABURN Cat. No.		Standard Package
9-148	Long Pin 1" Overall	100
9-148S	Short Pin 13/16" Overall	100



9-148

NEW RCA TYPE PHONO PLUG



DABURN Cat. No.		Standard Package
9-147	Long Pin 1" Overall	100
9-147S	Short Pin 13/16" Overall	100

MOTOROLA TYPE PLUGS

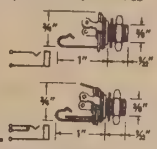
Nickel plated 1/8" tube pin extends from split brass shell cadmium plated.



DABURN Cat. No.		Standard Package
9-146		100
9-146S	For Smaller Cable	100

TELEPHONE TYPE JACK

Body is brass nickel plated. Designed for long life. Nickel Silver alloy spring. Rated 10 amp. AC continuous duty. Mounts in 3/8" hole in panels up to 5/32" thick.



DABURN Cat. No.		Standard Package
19-157	2 Cond., Open	50
19-158	2 Cond., Closed	50
19-159	3 Cond., Open	50
19-160	3 Cond., Closed	50

MINIATURE TELEPHONE JACKS

Brass, nickel plated, mounts in 1/4" hole in panels up to 1/8" thick.



DABURN Cat. No.		Standard Package
19-132	2 Cond., Open	50
19-133	2 Cond., Closed	50

PHONO JACKS

Female for our Nos. 9-148, 9-147. Positive grip, single prong 1/16" bakelite, 11/16" mounting center.



9-149

DABURN Cat. No.		Standard Package
9-149		100
9-149-1	Insulating Washer	100



9-149A

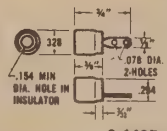
Miniature Phono Jack

Small, compact 11/16" mounting centers.

9-149A	100

Phono Input Jack

Where space is at a premium. Mounts in 13/64" hole. Rivets and grounds to chassis.

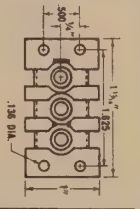


9-149B	100

9-149B

PHONO JACKS

Used on recording equipment, phonographs, etc.

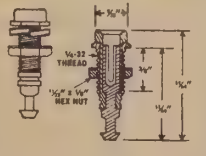


DABURN Cat. No.		Standard Package
9-150	Double Phono Jack	50
9-150A	Triple Phono Jack	50
9-150B	Quadruple Phono Jack	50
9-150-1	Insulating Washer for 9-150	50

NYLON TIP JACK WITH METAL SHELL

MADE TO MEET MS-16108 Spec — WRAP AROUND

Molded nylon tip jack with metal shell eliminates possibility of threads stripping during assembly. Made to meet the requirements of MS-16108 specification. Contact recessed in head for safety. Nylon, grade FM 10001, brass N.P. Shell and nut per Spec. 72-53. Tough and rugged. Fits all standard phone tip plugs.



CENTER CONTACT: Heat treated beryllium copper, silver plated.

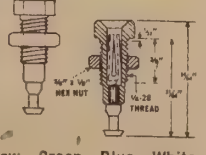
COLORS: Red, Black, Yellow, Green, Blue, White. (Specify Color)

Daburn No.		Std. Pkg.
19-90	Wrap Around	25

ALL NYLON TIP JACK

WRAP AROUND

All nylon molded tip jack. Takes all standard phone tip plugs. Contact recessed in head for safety. Hex head for ease in tightening. Mounts in 1/4" hole in panels up to 1/4". Body is nylon, grade FM 10001. Tough and rugged. Complete with brass nickel plated hex nut. Center contact. Heat treated beryllium copper, silver plated.

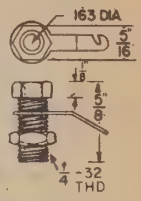


COLORS: Red, Black, Yellow, Green, Blue, White. (Specify Color)

Daburn No.		Std. Pkg.
19-80	Wrap Around	25

BANANA JACK

Hexed brass, nickel plated hex nut and tinned copper lug. Has recessed head. Mounts in 1/4" hole in panels up to 3/16" thick. Fits all standard banana plugs.

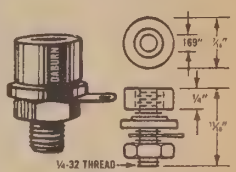


Rated: 15 amps AC.

Daburn No.		Std. Pkg.
17-03	Banana Jack	100

INSULATED BANANA JACK

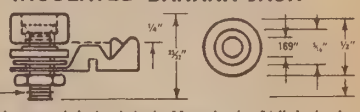
Body is brass nickel plated, mounts in 5/16" hole in panels up to 3/8" thick. Comes thru with hex nut, tinned copper lug and fibre washer. Takes all standard banana plugs. Molded plastic head.



COLORS
Red, Black, Yellow, Green, Blue, (Specify)

DABURN No.	Description	Std. Pkg.
19-06	Insulated Jack	50

INSULATED BANANA JACK



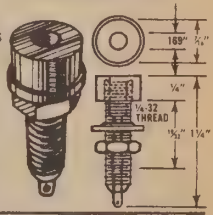
Body is brass nickel plated. Mounts in 5/16" hole in panels up to 3/8" thick. Comes thru with hex nut, tinned copper lug, lockwasher, fibre washer. Takes all standard banana plugs. Jack body is recessed for tight contact. Molded plastic head.

COLORS: Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Description	Std. Pkg.
19-91	Insulated Jack	50

INSULATED JACK COMBINATION

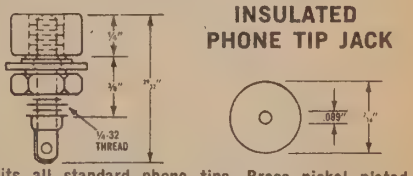
Will take senior phone tips or standard banana plugs Body is brass, nickel plated. Mounts in 5/16" hole in panels up to 1/2" thick. Springs are phosphor bronze. Comes thru with hex nut and fibre washer.



COLORS:
Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Description	Std. Pkg.
19-33	Insulated Combination Jack	50

INSULATED PHONE TIP JACK



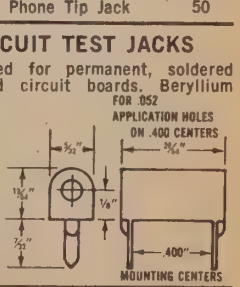
Fits all standard phone tips. Brass nickel plated body. Phosphor bronze spring provides positive contact. Comes thru complete with hex nut and fibre washer. Molded plastic head.

COLORS: Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.		Std. Pkg.
19-07	Insulated Phone Tip Jack	50

PRINTED CIRCUIT TEST JACKS

Nylon bodies, designed for permanent, soldered connection to printed circuit boards. Beryllium copper contacts have gold over silver plate. Accepts .080" diameter per MIL F-14072, M301 test probes. For .052 application holes on .400 centers.



COLORS: Red, Black, Green, Yellow, Blue. Additional colors available.

DABURN No.		Std. Pkg.
19-77	Printed Circuit Jacket	25

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

POSTS • PRODS • CAPTIVE HARDWARE

COMBINATION POST — BANANA PLUG



Molded fluted nylon captive head rated at 15 amps AC. Body is brass nickel plated: spring — N.P.L. phosphor bronze. Converts a standard banana jack into a five way binding post.

Cat. No.		Std. Pkg.
18-40	Combination plug	100

COLORS: Red, Black.

COMBINATION POST — BANANA PLUG



Molded hex head nylon captive head. Rated at 15 amps AC. Body is brass nickel plated; spring — N.P.L. Phosphor bronze. Converts a standard banana jack into a five way binding post.

Cat. No.		Std. Pkg.
18-42	Combination plug	100

COLORS: Red, Black.

COMBINATION TERMINAL METAL BINDING POST



Brass nickel plated turret terminal screw head. Knurled shank. Knurled end. For ¾" thick panel. 10-32 x ¼" long BHM screw.

Cat. No.		Std. Pkg.
18-30	Combination terminal	100

COMBINATION TERMINAL METAL BINDING POST



Brass nickel plated turret terminal screw head. Knurled shank. Knurled end. 8-32 x ¼" long BHM screw. For ⅛" thick panel.

Cat. No.		Std. Pkg.
18-32	Combination terminal	100

METAL BINDING POST — 5 WAY

Hex brass, nickel plated. Wrap around terminal. Captive head.

Cat. No.		Std. Pkg.
18-34	Binding post	100



BINDING POST — 5 WAY

Hex head molded nylon with spade lug. Brass nickel plated.

COLORS: Red, Black.

Cat. No.		Std. Pkg.
18-77	Binding post	100



STANDARD DUTY BINDING POST

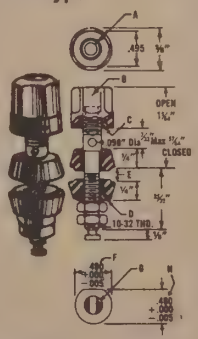


Colors: Red, black.

Molded-in brass bushings similar as above. Rated at 15 Amps. AC, capacitance 3.0 MMFD. Body is brass nickel plated. Mounts in ⅜" hole for locking. Has milled slot complete with two hex nuts.

DABURN No.	Description	Std. Pkg.
18-78	All Insulated Type	100
18-79	Grounding Type	100

BINDING POSTS — MULTI-PURPOSE Wrap Around Type



Molded nylon body. Accepts tip plug, spade lug, banana plug, wire alligator clip and direct solder connection. Has molded-in brass insetrs in head and washer. Rated at 30 amps. AC. capacitance 5.0 MMFD. Banana plug receptacle .161" I.D. head non-removable from stud and washer completely insulates post from panel. For panels ⅛" to ¼" thick; drill ½" hole for mounting washers. Wire hole is at right angle to flat on insulated washer.

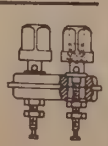
COLORS: Red Black, (Specify)

DABURN No.	Description	Std. Pkg.
18-72	Nylon Fluted Head Post	100
18-75	Nylon Binding Post	100

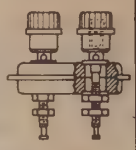
DUAL BINDING POSTS NYLON — 5 WAYS

Hex nylon captive head. Brass nickel plated. Turret terminals wrap around 15 amp rating AC. Mounts in ¾" centers. Available in red or black combinations. Specify.

Cat. No.		Std. Pkg.
18-50	Dual Binding Post	100



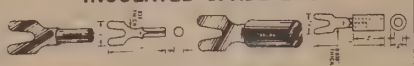
DUAL BINDING POSTS NYLON — 5 WAYS



Fluted nylon captive head. Brass nickel plated. Turret terminals — wrap around. 15 amp rating AC. Mounts in ¾" centers. Available in red or black combinations. Specify

Cat. No.		Std. Pkg.
18-52	Dual Binding Post	100

INSULATED SPADE LUG

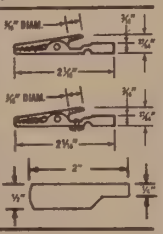


Molded plastic handle lug is steel hot tinned. Rated at 25 amps. AC. Rear barrel accommodates all standard banana plugs.

COLORS — Insulated Spade: Red, Black.

DABURN No.		Std. Pkg.
19-32	Insulated Spade Lug	50
19-32A	Spade Lug Only	50

ALLIGATOR CLIPS



Steel, cadmium plated. 5 amp continuous duty. ½" jaw opening. Jaws match accurately, grips securely. Accepts standard banana plugs.

DABURN Cat. No.		Std. Pkg.
20-3	Clip (no screw)	50
20-3S	Clip (with Screw)	50
20-1	Insulator boot for above (Red or Black)	50

ALLIGATOR CLIP ALL INSULATED

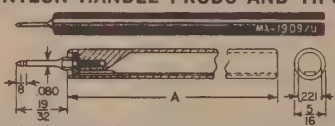


Fully insulated. Cadmium plated sharp steel jaw. Accepts banana plug in rear.

COLORS: Red, Black.

Cat. No.		Std. Pkg.
20-25	Insulated Clip	100

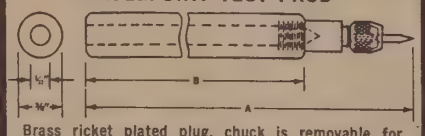
NYLON HANDLE PRODS AND TIPS



Handle is molded nylon per MIL-P-20693A with brass, silver plated tip. Solderless prods made to meet Signal Corps Drawing SC-C-82761.
Rated at 10 amps AC for 10° temperature rise, continuous duty.

DABURN Cat. No.	Sig. Corps. Drawing & Part No.	Size "A"	Color	Std. Pkg.
19-57	MX-1906/U	1"	Red	25
19-58	MX-1907/U	1"	Black	25
19-59	MX-1909/U	4"	Red	25
19-60	MX-1910/U	4"	Black	25

NEEDLEPOINT TEST PROD

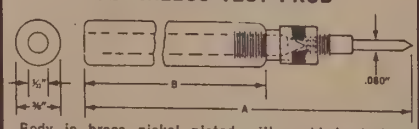


Brass ricket plated plug, chuck is removable for replacement of broken needles. Sharp needle pierces insulation or corrosion for testing purposes. Molded plastic handle.

COLORS: Red, Black. (Specify)

DABURN No.	Handle (B)	Overall L'gth (A)	Std. Pkg.
19-20	4"	4⅞"	50
19-21	5"	6⅜"	50

SOLDERLESS TEST PROD



Body is brass nickel plated with molded plastic handle. Solderless connection, for wire fits thru handle and plug body and wraps under knurled nut.

COLORS: Red, Black. (Specify)

DABURN No.	Handle (B)	Overall L'gth (A)	Std. Pkg.
19-10	4"	5⅜"	50
19-43	5"	6½"	50

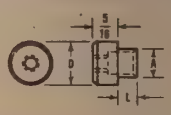
CAPTIVE SCREW



Cat. No.	A	B	D	T	Material
14-555	¾	5/16	7/16	6-32	Brass
14-555SS	¾	5/16	7/16	6-32	St. St.
14-556	¾	⅜	7/16	8-32	Brass
14-556SS	¾	⅜	7/16	8-32	St. St.
14-557	⅞	⅜	⅝	10-32	Brass
14-557SS	⅞	⅜	7/16	10-32	St. St.
14-558	⅞	⅜	⅝	¼-20	Brass
14-558SS	⅞	⅜	½	¼-20	St. St.

MATERIAL: Brass per QQB-626A, Comp. 22, ½ Hard.
FINISH: Nickel Plate and Polish per MIL-QQN-290, Type VI.
Stainless Steel per QQS-763, Class 7, Type A available
Standard Package 100

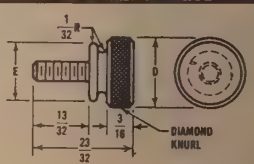
CAPTIVE BUSHING



Cat. No.	D	A	E	T	Panel Thickness
14-560	⅜	5/16	5/32	6-32	⅛
14-561	⅜	5/16	5/32	8-32	⅛
14-562	5/16	13/32	5/32	10-32	⅛
14-563	5/16	13/32	5/32	¼-20	⅛
14-564	⅜	5/16	7/32	6-32	¾
14-565	⅜	5/16	7/32	8-32	¾
14-566	5/16	13/32	7/32	10-32	¾
14-567	5/16	13/32	7/32	¼-20	¾
14-568	⅜	5/16	9/32	6-32	¼
14-569	⅜	5/16	9/32	8-32	¼
14-570	5/16	13/32	9/32	10-32	¼
14-571	5/16	13/32	9/32	¼-20	¼

MATERIAL: Brass per QQB-626A, Comp. 22, ½ Hard.
FINISH: Nickel Plate per MIL-QQN-290, Type VI.
Available in Stainless Steel, add suffix -S to part number.
Special Sizes Also Available. **Standard Package 100**

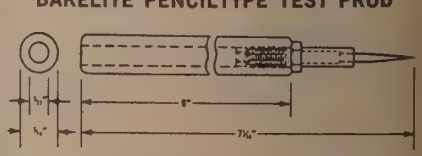
THUMB SCREW



Cat. No.	D	E	Thread
14-501	⅜	5/16	6-32
14-502	⅜	5/16	8-32
14-503	⅜	5/16	10-32
14-504	7/16	⅜	6-32
14-505	7/16	⅜	8-32
14-506	7/16	⅜	10-32
14-507	½	7/16	6-32
14-508	½	7/16	8-32
14-509	½	7/16	10-32

MATERIAL: Brass per QQB-626A, Comp. 22, ½ Hard.
FINISH: Nickel Plate per MIL-QQN-290, Type VI.
Standard Package 100

BAKELITE PENCILTYPE TEST PROD



Body is brass nickel plated with heavy steel phono needle in tip. Handle is XX bakelite per MIL-P-79 Spec. Wire threaded thru stud and tightened allows for solderless connection.

COLOR: Red, Black. (Specify)

DABURN No.		Std. Pkg.
19-11	Bakelite Pencil Type Prod	25

© United Technical Publication

DALE® for Optimum Value in Connectors

SERIES EBT 156



PHYSICAL and ELECTRICAL

Number of Contacts: 8, 10, 12, 15, 18 or 22
Contact Spacing: .156"
Board Thickness: .054" to .070"
Board Slot Depth: .330"
Current Rating: 5 amps
Test Voltage between Contacts: At Sea Level: 1800 VRMS
At 70,000 feet: 450 VRMS
Insulation Resistance: 5000 meg. min.
Contact Resistance: 30 millivolts max. at rated current

COMPONENT MATERIAL

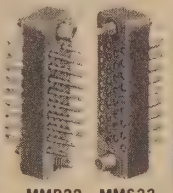
Body: Glass-filled phenolic per MIL-M-14, Type MFH, black
Contacts: Nickel silver per QQ-C-585, alloy 770, spring temper. Gold flash optional.
Polarizing Key: Glass-filled nylon
Optional Threaded Mounting Insert: Nickel plated brass. (Type Y)
Optional Floating Mounting Bushing: Cadmium plated brass. (Type Z)

APPLICATION For use with 1/16" printed circuit boards requiring an edgeboard type connector on .156" centers.

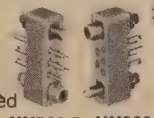
SERIES MM22 and MM24

PHYSICAL and ELECTRICAL

Number of Contacts: 5, 7, 9, 11, 14, 20, 26, 29, 34 and 44
Contact Spacing: 3/32"
Contact Gauge: MM22 Series = 22 gauge. • MM24 = 24 gauge
Minimum Creepage Path between contacts: 5/64"
Minimum Air Space between contacts: 3/64"
Current Rating: MM22 Series = 5 amps
MM24 Series = 3 amps
Breakdown Voltage: At Sea Level: 2000 VRMS
At 70,000 feet: 500 VRMS



MMP22 -34SL MMS22 -34SL



MMP22-5 MMS22-5

COMPONENT MATERIAL

Contact Pin: Phosphor Bronze
Contact Socket: Phosphor Bronze
Contact Plating: Gold over silver
Screwlocks: Stainless steel, passivated
Guides: Brass, gold plated
Standard Body: Glass-filled diallyl phthalate per MIL-P-19833, Type GDI-30, green. Other body material supplied upon request.

APPLICATIONS Especially suited for use in airborne, instrumentation and portable equipment applications or wherever the following requirements must be met: Minimum space and weight without sacrifice of performance, high quality materials, long service life, high vibration and shock resistance, and positive locking.

SERIES EBTL 050

PHYSICAL and ELECTRICAL

Number of Contacts: 8, 16, 20, 25, 32, 50 or 64 per side
Contact Spacing: .050"
Board Thickness: Size 1 = .027"-.035"
Size 2 = .056"-.068"



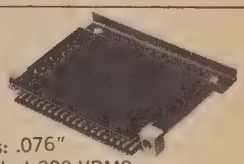
Board Slot Depth: .200"
Current Rating: 0.5 amp
Test Voltage between Contacts: At Sea Level: 1200 VRMS
At 50,000 feet: 675 VRMS
Insulation Resistance: 5000 meg. min.
Contact Resistance: 10 millivolts max. at rated current

COMPONENT MATERIAL

Body: Glass-filled phenolic per MIL-M-14, Type MFH, black
Contact Backer Strips: Epoxy glass laminate per MIL-P-18177, Type GEE, black
Contacts: Beryllium copper per QQ-C-533, alloy 172. Gold plate per MIL-G-45204.
Polarizing Key: Polycarbonate

APPLICATION For use with 1/32" and 1/16" printed circuit boards in integrated thin film, and semiconductor circuitry with .050" contact spacing.

SHP 40



PHYSICAL and ELECTRICAL

Number of Contacts: 40
Contact Spacing, center to center: .100"
Minimum Air Space between contacts: .043"
Minimum Air Space between rows of contacts: .076"
Current Rating: 3 amps minimum per contact at 300 VRMS
Breakdown Voltage: At Sea Level: 1500 VRMS
At 60,000 feet: 450 VRMS
Resistance between contact ends: 10 milliohms max.
Minimum Insulation Resistance: 100,000 megohms from contact to contact and from contact to heatsink.

COMPONENT MATERIAL

Body: Diallyl phthalate per MIL-P-19833, Type GDI-30F, green
Heatsink: Aluminum alloy 5052-H32, QQ-A-250/8; anodize MIL-A-8625, Type II, Class 2, black
Contacts: One-piece construction of brass, 1/2 hard, QQ-B-613, Composition 2; copper plate per MIL-C-14550; gold plate per MIL-G-45204. Mating surfaces have a 32 microinch finish.
Contact Shield: Aluminum alloy 5052-H32, QQ-A-250/8; anodize MIL-A-8625, Type II, Class 2, black.

APPLICATION For use in the various Navy standard hardware programs and commercial modular designs.

DALE® for Optimum Value in Electromechanical Products

REVERSIBLE AC HYSTERESIS SYNCHRONOUS MOTORS



SPECIFICATIONS

Operating Voltage: 6, 12, 24, 117 VAC
Power Input: 5.5 volt amps. Capacitor size dependent on input voltage (not supplied)
Output: Approximately 1800 RPM
Torque: 0.1 in./oz. min.
Shaft: .187 diameter
Motor Size: 1.25 diameter, 1.87 L
Bearings: Self-lubricating
Applications: For use in timers, fans, scanning devices, stirrers and other low power drives

REVERSIBLE AC GEARHEAD MOTORS

Driven by motor shown above—same inputs apply

OUTPUT RPM	OUTPUT TORQUE in./oz.	
	Magnetic Clutch	Direct Drive
2	30	65
5.3	17	28
7.5	14	23
10	11	18
19	5	12



Magnetic clutch eliminates coasting.

Applications: Ideal for light industrial and consumer product controls and drives

AC & DC STEPPING RELAYS UNI-DIRECTIONAL OR BI-DIRECTIONAL

SPECIFICATIONS SP SERIES



H = 2.25, W = 2.75, D = 2.0

Operating Voltage: 6, 12, 24, 117 (AC or DC)
Stepping Rate: 10 steps per second. 50 millisecond pulse
Contact Resistance: .025Ω maximum dry circuit
Contact Rating: 1 amp at 24 VAC, .1 amp at 117 VAC
Duty: Continuous
Power Requirements: AC models 2.2 VA—.6 watts
DC models 2.5 watts
Steps: 4, 5, 6, 10, 12, 13 continuous rotation or selectable stops
Available with SPST snap-action power switch, rated 5 amp at 117 VAC

SPECIFICATIONS SW SERIES



H = 2.25, W = 1.9, D = 2.0

Operating Voltage: 6, 12, 24, 117 (AC or DC)
Stepping Rate: 10 steps per second. 50 millisecond pulse
Contact Resistance: .010Ω maximum dry circuit
Contact Rating: 1 amp at 24 VAC, .5 amp at 117 VAC
Duty: Continuous
Power Requirements: AC models 6.5 VA—1.8 watts
DC models 5 watts
Steps: 2, 3, 4, 6 and 12 (Single Pole) Up to 6 Double Pole
Application: Excellent for control circuits
Available with one or two "A" form switches or one "C" form switch with 5 amp rating at 117 VAC

© United Technical Publications

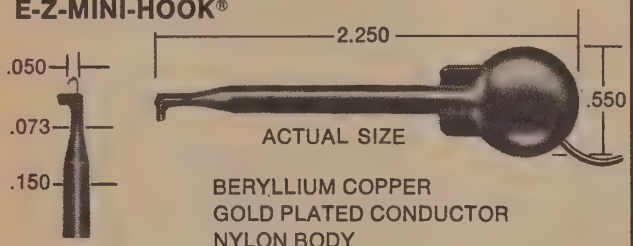
E-Z-HOOK® TEST AND PRODUCTION CONNECTORS



connect anywhere /
instantly /
won't cut or nick /
won't short /
won't jump off /
leaves hands free /
save time and money

Miniature reliable clip with "Hypo-Action" gives small size positive control to make miniature connections — short free, easier, efficient and profitable. Beryllium copper, gold plated conductor — insulated with durable Nylon body to point of contact.

E-Z-MINI-HOOK®



BERYLLIUM COPPER
GOLD PLATED CONDUCTOR
NYLON BODY

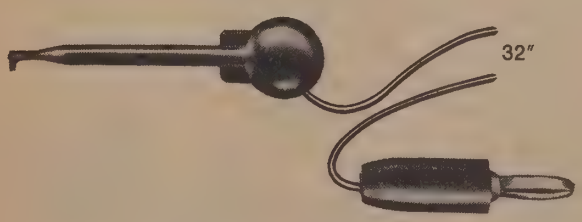
RED, BLACK, BLUE, GREEN, ORANGE, YELLOW

E-Z-MINI-HOOK®



AVAILABLE WITHOUT LEAD
COLORS: All (Specify)
No. X-100 **$ .59** ea.

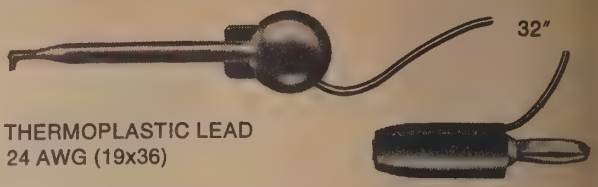
E-Z-MINI-HOOK® TO BANANA PLUG



THERMOPLASTIC LEAD 24 AWG (19x36)

COLORS: All (Specify)
No. BX-1 **$ .99** ea.

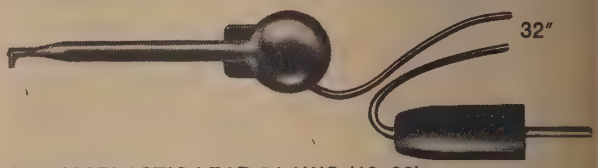
E-Z-MINI HOOK® TO STACKING BANANA PLUG



THERMOPLASTIC LEAD
24 AWG (19x36)

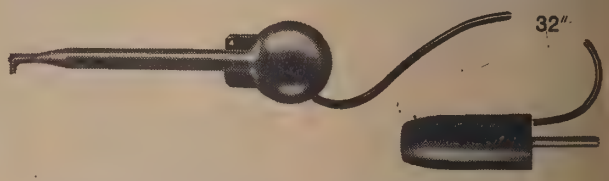
COLORS: All (Specify)
No. 201 **$1.09** ea.

E-Z-MINI-HOOK® TO TIP PLUG (.080)



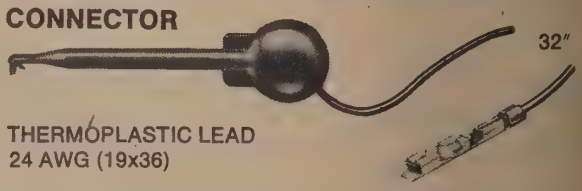
THERMOPLASTIC LEAD 24 AWG (19x36)
COLORS: All (Specify)
No. AX-1 **$ .99** ea.

E-Z-MINI HOOK® TO STACKING TIP PLUG (.080)



THERMOPLASTIC LEAD 24 AWG (19x36)
COLORS: All (Specify)
No. 202 **$1.09** ea.

E-Z-MINI-HOOK® TO SQUARE WIREWRAP®* CONNECTOR



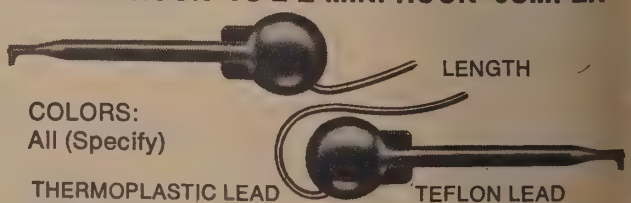
THERMOPLASTIC LEAD
24 AWG (19x36)

CONNECTOR SLIPS OVER .025 SQUARE WIREWRAP®* TERMINATION

*Registered Trademark of Gardner-Denver

COLORS: All (Specify)
No. 203 **$ .99** ea.

E-Z-MINI-HOOK® TO E-Z-MINI-HOOK® JUMPER



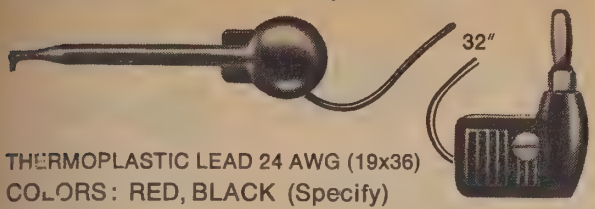
COLORS:
All (Specify)

THERMOPLASTIC LEAD		TEFLON LEAD	
No. / Length	Net ea.	No. / Length	Net ea.
204 — 6	$1.35	304 — 6	$1.45
204 — 12	1.35	304 — 12	1.45
204 — 18	1.35	304 — 18	1.45
204 — 24	1.35	304 — 24	1.45
204 — 36	1.35	304 — 36	1.55
204 — 48	1.35	304 — 48	1.65
204 — 60	1.35	304 — 60	1.75

Net

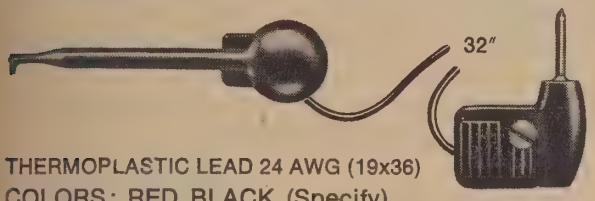
© United Technical Publicatio

E-Z-MINI-HOOK® TO METER BANANA PLUG



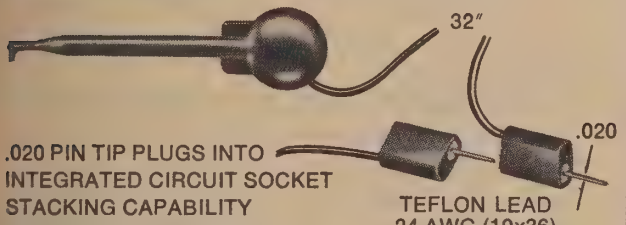
THERMOPLASTIC LEAD 24 AWG (19x36)
COLORS: RED, BLACK (Specify)
No. 205 **$1.19** ea.

E-Z-MINI-HOOK® TO METER PIN PLUG (.080)



THERMOPLASTIC LEAD 24 AWG (19x36)
COLORS: RED, BLACK (Specify)
No. 206 **$1.19** ea.

E-Z-MINI-HOOK® TO .020 STACKING PIN



.020 PIN TIP PLUGS INTO INTEGRATED CIRCUIT SOCKET
STACKING CAPABILITY
TEFLON LEAD 24 AWG (19x36)
COLORS: All (Specify)
No. 307 **$1.65** ea.

E-Z-MINI-HOOK® TO INSULATED SPADE LUG



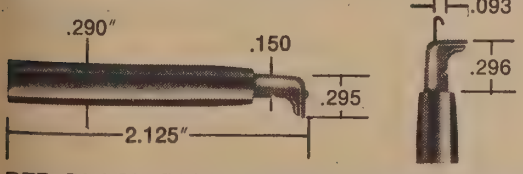
LUG FITS STANDARD BINDING POST
COLORS: RED, BLACK (Specify)
No. 208 **$ .89** ea.

E-Z-MINI-HOOK® TO INSULATED SPADE LUG



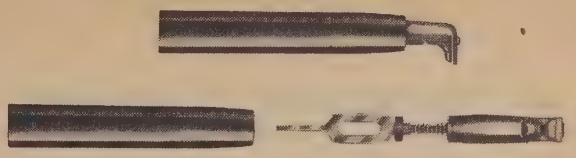
LUG FITS NO. 4 AND NO. 6 SCREW
COLORS: RED, BLACK (Specify)
No. 209 **$ .89** ea.

TIP DIMENSIONS
JUMPER METER CLIP, TEST PROD TIPS AND SCOPE METER PROBE TIP



RED, BLACK, BLUE, GREEN, ORANGE, YELLOW

JUMPER METER CLIPS



Easy slip-on design saves in assembly—safe solder connection with strain relief assures trouble free lead life.
Durable Nylon in colors for identification
Tough stainless conductor
COLORS: All (Specify)

No. 61-1 E-Z-HOOK® CLIP (STANDARD) $ .49 ea.
No. 61-2 E-Z-HOOK® CLIP (GOLD PLATED) .69 ea.

TEST PROD TIP ADAPTERS

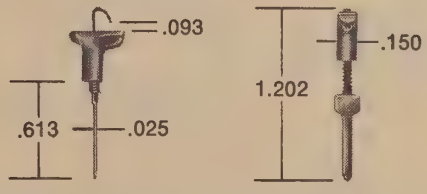


TOUGH STAINLESS CONDUCTOR, DURABLE NYLON INSULATION

Wobble free fit on prod doubles test prod utility
Remote connections made easily—safe from shock
COLORS: All (Specify)

No. 55-0 E-Z-HOOK® TIP (NEEDLE .060) $ .79 ea.
No. 56-1 E-Z-HOOK® TIP (STANDARD .080) .79 ea.
No. 59-4 E-Z-HOOK® TIP (BANANA-STANDARD) .79 ea.

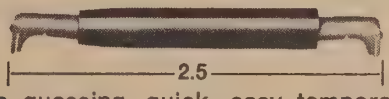
HARNESS BOARD CLIPS



Save up to 30% in board construction time E-Z-HOOK® "NAIL" CLIP® drives into wood like a nail and pulls out as easily. Smooth, tough stainless E-Z-HOOK® holds firmly against durable nylon—Won't cut, nick or damage wire ends.
Easy finger tip operation speeds wire placing.
COLOR: RED

No. 81-1 E-Z-HOOK® "NAIL" CLIP® $ .25 ea.
No. 81-4 For #14 Wire .25 ea.
No. K8150T (50 Clips, Tool & Instr.) 9.95 ea.
No. T-20 Nail Driving Tool .35 ea.

PART SUBSTITUTION CLIPS

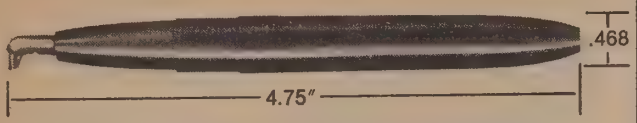


Eliminate guessing—quick, easy temporary connections in seconds—No lead twisting or solder tacking to damage parts or wiring.

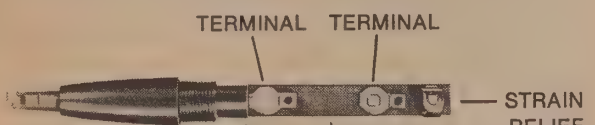
SPEEDS TROUBLE SHOOTING—
SAVES TIME AND MONEY
COLORS: All (Specify)
No. 71-1 **$ .69** ea.

SCOPE METER PROBE

CUSTOM Probes assembled in minutes
Featherweight construction ⅓ oz.



Screw on cover for ready access and repair
Special terminals speed assembly

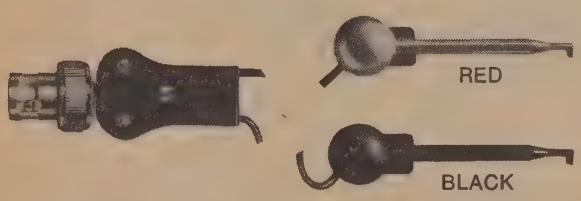


DURABLE NYLON SLIDE —
TENITE BODY —
TOUGH STAINLESS HOOK

RED, BLACK, BLUE, GREEN, ORANGE AND SILVER

No. 54-1 E-Z-HOOK® CUSTOM PROBE $ .99 ea.
No. 54-2 E-Z-HOOK® CUSTOM PROBE (GOLD PLATED) 1.19 ea.

BNC FEMALE TO E-Z-MINI-HOOKS®



Connector: BNC Female, Bright Finish
Wire: 24 AWG (19 x 36) Thermoplastic—Flexible
Clips: E-Z-MINI-HOOK®, Gold plated, Beryllium Copper Conductor, Nylon Body

Overall Length: 7″

No. 1001 **$3.95 ea.**

BNC MALE TO E-Z-MINI-HOOKS®



Connector: BNC Plug, Bright Finish
Wire: 24 AWG (19 x 36) Thermoplastic—Flexible
Clips: E-Z-MINI-HOOK®, Gold plated, Beryllium Copper Conductor, Nylon Body

Overall Length: 7″

No. 1010 **$4.95 ea.**

BNC MALE TO E-Z-MINI-HOOK®



Connector: BNC Plug, Bright Finish
Cable: RG58C/U or MIC
Clips: E-Z-MINI-HOOKS®, Gold plated, Beryllium Copper Conductor, Nylon Body

NO. / LENGTH	NO. / LENGTH	NO. / LENGTH	
1020 — 18	**1020 — 30**	**1020 — 48**	
1020 — 24	**1020 — 36**	**1020 — 60**	**$6.25 ea.**

Note: For MIC Cable, use prefix 2020

UHF MALE TO E-Z-MINI-HOOK®



Connector: UHF Plug, Bright Finish
Cable: RG58C/U
Clips: E-Z-MINI-HOOKS®, Gold plated, Beryllium Copper Conductor, Nylon Body

NO. / LENGTH	NO. / LENGTH	NO. / LENGTH	
1030 — 18	**1030 — 30**	**1030 — 48**	
1030 — 24	**1030 — 36**	**1030 — 60**	**$6.25 ea**

E-Z-MINI-HOOK® BOTH ENDS



Clips: E-Z-MINI-HOOKS® both ends, Gold plated, Beryllium Copper Conductors, Nylon Bodies.
Cable: RG58C/U, MIC or Twisted Pair

NO. / LENGTH	NO. / LENGTH	NO. / LENGTH	
1040 — 24	**1040 — 36**	**1040 — 60**	
1040 — 30	**1040 — 48**		**$6.25 ea**

Note: For MIC Cable, use prefix 2040, for Twisted Pair, use prefix 3040

DOUBLE BANANA TO E-Z-MINI-HOOKS®



Connector: Double Banana Plug
Cable: RG58C/U, MIC or Twisted Pair
Clips: E-Z-MINI-HOOKS®, Gold plated, Beryllium Copper Conductor, Nylon Body

NO. / LENGTH	NO. / LENGTH	NO. / LENGTH	
1050 — 18	**1050 — 30**	**1050 — 48**	
1050 — 24	**1050 — 36**	**1050 — 60**	**$6.25 ea**

Note: For MIC Cable, use prefix 2050, for Twisted Pair, use prefix 3050

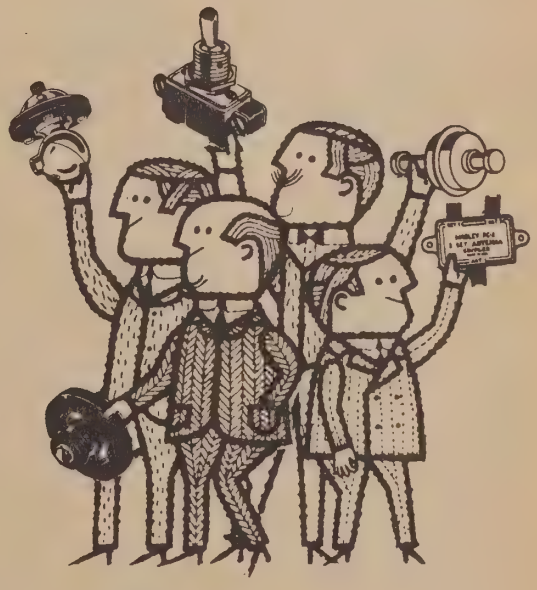
Net
© United Technical Publicatio

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

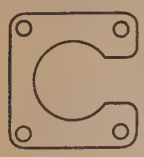
- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*

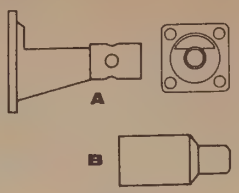


- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

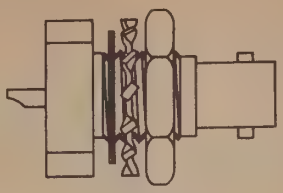
ecco connector

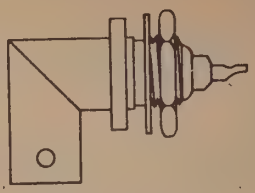
DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

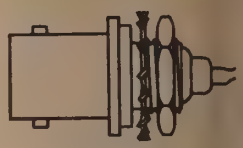

MOUNTING PLATE

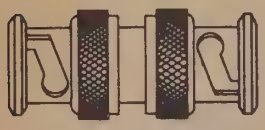


HOODS

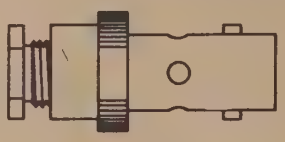

RECEPTACLE-A

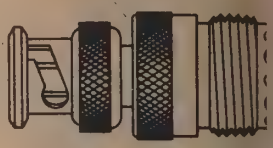

RECEPTACLE ANGLE-K

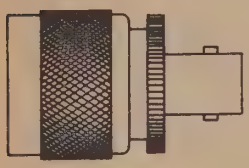

RECEPTACLE-C

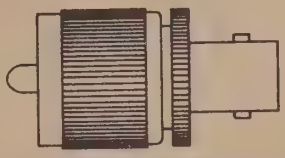

ADAPTER — 2 FEMALE ENDS

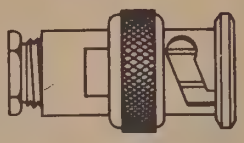

ADAPTER-F — BNC to N

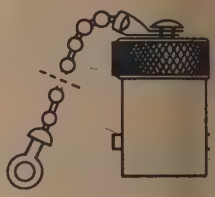

JACK-I

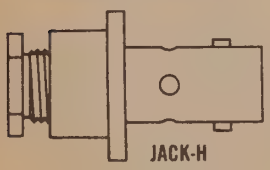

ADAPTER-D — BNC to UHF

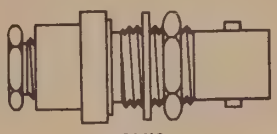

ADAPTER-G — BNC to N

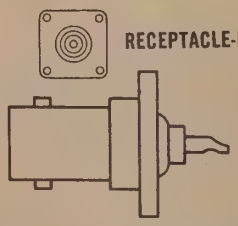

ADAPTER-E — BNC to UHF

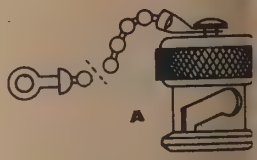

PLUG

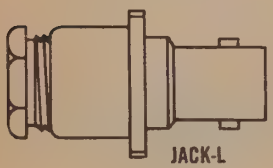


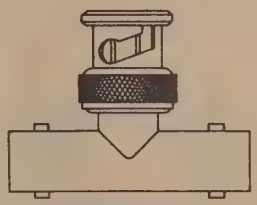

JACK-H

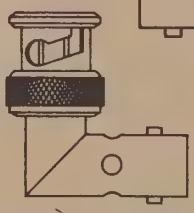

PLUG

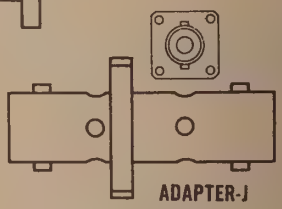

RECEPTACLE-B




JACK-L


ADAPTER, TEE


ADAPTER — RIGHT ANGLE


ADAPTER-J



Military Type	Description	Cable Size	Dielectric Material
MT-412/U	Mounting Plate		
MX-195/U	Hoods	RG-55, 58/U	
MX-367/U	Hoods	RG-59, 62, 71/U	
MX-195A/U	Hoods	RG-55, 58/U	
UG-911/U	Receptacle-A		Teflon
UG-912/U	Receptacle-A		
UG-911A/U	Receptacle-A		
UG-254A/U	Receptacle-A		Rexolite
UG-657/U	Receptacle-A		
UG-201/U	Adapter-G BNC to N		Rexolite
			Teflon
UG-201A/U	Adapter-G BNC to N		Teflon
UG-414/U	Adapter-J		Rexolite
UG-414A/U	Adapter-J		Teflon
UG-914/U (less plate)	Adapter-J		Teflon
UG-89/U	Jack-I	RG-55, 58/U	Teflon
UG-89A/U	Jack-I		
UG-89B/U	Jack-I		
UG-89C/U	Jack-I		
UG-261/U	Jack-I	RG-59, 62, 71/U	Rexolite
UG-261A/U	Jack-I		
UG-261B/U	Jack-I	RG-59, 62, 71/U	Teflon
UG-261C/U	Jack-I		
UG-1098/U	Receptacle Angle-K		Teflon
UG-535/U (with plate)	Receptacle Angle-K		
UG-535A/U (same as UG-1098/U	Receptacle Angle-K		
UG-491A/U	Adapter 2 Female Ends		Teflon
UG-491B/U	Adapter 2 Female Ends		
UG-349/U	Adapter-F BNC to N		Rexolite
			Teflon
UG-349A/U	Adapter-F BNC to N		Teflon
UG-274/U	Adapter-Tee		Rexolite
UG-274A/U	Adapter-Tee		Teflon
UG-274B/U	Adapter-Tee		
UG-306/U	Adapter Right Angle		Teflon
UG-306A/U	Adapter Right Angle		
UG-273/U	Adapter-E BNC to UHF		Rexolite

Military Type	Description	Cable Size	Dielectric Material
UG-88/U	Plug	RG-55, 58/U	Teflon
UG-88B/U	Plug		
UG-88C/U	Plug		
UG-88D/U	Plug		
UG-260/U	Plug	RG-59, 62, 71/U	Rexolite
UG-260A/U	Plug		
UG-260B/U	Plug	RG-59, 62, 71/U	Teflon
UG-260C/U	Plug		
UG-89/U	Plug	wire W-142	Rexolite
A CW-123/U	Cap & Chain Assembly		
A CW-123A/U	Cap & Chain Assembly		
B CW-155A/U	Cap Assembly		
CW-282/U	Cap & Chain Assembly		
UG-185/U	Receptacle-B		Rexolite
UG-290/U	Receptacle-B		
UG-365/U	Receptacle-B		
UG-447/U	Receptacle-B		
UG-928/U	Receptacle-B		
UG-290A/U	Receptacle-B		Teflon
UG-255/U	Adapter-D BNC to UHF		Rexolite
UG-625/U	Receptacle-C		Rexolite
UG-604/U	Receptacle-C		
UG-625B/U	Receptacle-C		Teflon
UG-1094/U	Receptacle-C		
UG-625A/U (same as UG-1094/U)	Receptacle-C		
UG-262/U	Panel Jack-L	RG-59, 62, 71/U	Rexolite
UG-262A/U	Panel Jack-L		
UG-262B/U	Panel Jack-L	RG-59, 62, 71/U	Teflon
UG-262C/U	Panel Jack-L		
UG-909/U	Jack-Bulkhead-H	RG-55, 58/U	Teflon
UG-909A/U	Jack-Bulkhead-H		
UG-910/U	Jack-Bulkhead-H	RG-59, 62, 71/U	Teflon
UG-910A/U	Jack-Bulkhead-H		
UG-253/U	Jack-Bulkhead-H	RG-55, 58/U	Rexolite
UG-253A/U	Jack-Bulkhead-H		
UG-291/U	Jack-Panel-H	RG-55, 58/U	Teflon
UG-291A/U	Jack-Panel-H		
UG-291B/U	Jack-Panel-H		
UG-291C/U	Jack-Panel-H		
UG-90/U	Jack-Panel-H	RG-58/U	Teflon
UG-90A/U	Jack-Panel-H		Teflon

© United Technical Publicatio

ecco connector DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

NC CONNECTORS

Military Type	Description	Cable Size	Dielectric Material
UG-88/U	Plug	RG-55, 58/U	Teflon
UG-88B/U	Plug	RG-55, 58/U	Teflon
UG-88C/U	Plug	RG-55, 58/U	Teflon
UG-88D/U	Plug	RG-55, 58/U	Teflon
UG-88E/U	Plug	RG-55, 58/U	Teflon
UG-89/U	Jack	RG-55, 58/U	Teflon
UG-89A/U	Jack	RG-55, 58/U	Teflon
UG-89B/U	Jack	RG-55, 58/U	Teflon
UG-89C/U	Jack	RG-55, 58/U	Teflon
UG-90/U	Panel Jack	RG-58/U	Teflon
UG-90A/U	Panel Jack		Teflon
CW-123/U	Cap & Chain Assembly		
CW-123A/U	Cap & Chain Assembly		
CW-155A/U	Cap Assembly		
JG-185/U	Receptacle		Rexolite
MX-195/U	Hood	RG-55, 58/U	
MX-195A/U	Hood	RG-55, 58/U	
JG-253/U	Jack, Bulkhead	RG-55, 58/U	Rexolite
JG-253A/U	Jack, Bulkhead	RG-55, 58/U	Rexolite
JG-254A/U	Receptacle		Rexolite
JG-260/U	Plug	RG-59, 62, 71/U	Rexolite
JG-260A/U	Plug	RG-59, 62, 71/U	Rexolite
JG-260B/U	Plug	RG-59, 62, 71/U	Teflon
JG-260C/U	Plug	RG-59, 62, 71/U	Teflon
JG-260D/U	Plug	RG-59, 62, 71/U	Rexolite
JG-261/U	Jack	RG-59, 62, 71/U	Rexolite
JG-261A/U	Jack	RG-59, 62, 71/U	Rexolite
JG-261B/U	Jack	RG-59, 62, 71/U	Teflon
JG-261C/U	Jack	RG-59, 62, 71/U	Teflon
JG-262/U	Panel, Jack	RG-59, 62, 71/U	Rexolite
JG-262A/U	Panel, Jack	RG-59, 62, 71/U	Rexolite
JG-262B/U	Panel, Jack	RG-59, 62, 71/U	Teflon
JG-262C/U	Panel, Jack	RG-59, 62, 71/U	Teflon
JG-274/U	Adapter, Tee	RG-59, 62, 71/U	Rexolite
JG-274A/U	Adapter, Tee		Teflon
JG-274B/U	Adapter, Tee		Teflon
CW-282/U	Cap & Chain		
JG-282/U	Adapter Binding Post		Rexolite
UG-290/U	Receptacle		Rexolite
JG-290A/U	Receptacle		Teflon
UG-291/U	Panel, Jack	RG-55, 58/U	Teflon
UG-291A/U	Panel, Jack	RG-55, 58/U	Teflon
UG-291B/U	Panel, Jack	RG-55, 58/U	Teflon
UG-291C/U	Panel, Jack	RG-55, 58/U	Teflon

Military Type	Description	Cable Size	Dielectric Material
UG-306/U	Adapter, Angle		Teflon
UG-306A/U	Adapter, Angle		Teflon
UG-365/U	Receptacle		Rexolite
MX-367/U	Hood	RG-59, 62, 71/U	
MT-412	Mounting Plate		
UG-414/U	Adapter		Rexolite
UG-414A/U	Adapter		Teflon
UG-447/U	Receptacle		Rexolite
UG-491/U	Adapter	2 Male Ends	Teflon
UG-491A/U	Adapter	2 Female Ends	Teflon
UG-491B/U	Adapter	2 Female Ends	Teflon
UG-492/U	Adapter, Bulkhead		Teflon
UG-492A/U	Adapter, Bulkhead		Teflon
UG-492B/U	Adapter, Bulkhead		Teflon
UG-492C/U	Adapter, Bulkhead		Teflon
UG-492D/U	Adapter, Bulkhead		Teflon
UG-535/U	Receptacle, Angle		Teflon
UG-535A/U	See UG-1098/U		
UG-589/U	Plug	Wire W-142	Rexolite
UG-604/U	Receptacle		Rexolite
UG-625/U	Receptacle		Rexolite
UG-625A/U	See UG-1094/U		
UG-625B/U	Receptacle		Teflon
UG-657/U	Receptacle		Rexolite
UG-909/U	Jack, Bulkhead	RG-55, 58/U	Teflon
UG-909A/U	Jack, Bulkhead	RG-55, 58/U	Teflon
UG-910/U	Jack, Bulkhead	RG-59, 62, 71/U	Teflon
UG-910A/U	Jack, Bulkhead	RG-59, 62, 71/U	Teflon
UG-910B/U	Jack, Bulkhead	RG-59, 71/U	Teflon
UG-911/U	Receptacle		Teflon
UG-911A/U	Receptacle		
UG-912/U	Receptacle		Teflon
UG-913/U	Plug, Angle	RG-55, 58/U	Teflon
UG-914/U	Adapter		Teflon
UG-928/U	Receptacle		Rexolite
UG-978/U	Adapter	RG-63/U	Rexolite
UG-1094/U	Receptacle		Teflon
UG-1094A/U	Receptacle		Teflon
UG-1098/U	Receptacle, Angle		Teflon

NC ADAPTERS TO OTHER SERIES

Military Type	Series	Contacts	Dielectric Material
UG-201/U	BNC to N	F-M	Rexolite & Teflon
UG-201A/U	BNC to N	F-M	Teflon
UG-255/U	BNC to UHF	M-F	Rexolite
UG-273/U	BNC to UHF	F-M	Rexolite
UG-309/U	BNC to HN	F-M	Rexolite & Teflon
UG-335/U	BNC to N	M-F	Rexolite & Teflon
UG-349/U	BNC to N	M-F	Rexolite & Teflon
UG-349A/U	BNC to N	M-F	Teflon
UG-635/U	BNC to C	M-F	Teflon
UG-636/U	BNC to C	F-M	Teflon
UG-636A/U	BNC to C	F-M	Teflon
UG-690/U	BNC to SM	F-F	Rexolite & Teflon
UG-691/U	BNC to SM	F-M	Teflon

All ECCO CONNECTORS with a UG/U designation are manufactured in full compliance with applicable Gov't. Specifications. "Special-purpose" coaxial connectors and accessories, to customer design, can also be supplied on relatively short notice. Each ECCO CONNECTOR is individually bagged in a heat sealed polyethylene container. Special materials or plated finishes can also be supplied.

ecco connector DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

UHF CONNECTORS

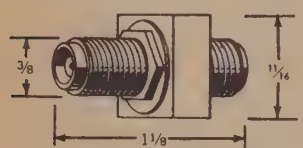
UHF CONNECTORS are general purpose connectors for small and medium sized cables. Illustrated connectors are for frequencies up to 200 meg. . . . limited application up to 200 meg. — 500 meg.; peak voltages up to 500 volts. For higher voltage and temperature applications available with Teflon Insulation. Non weatherproof and non constant impedance design.



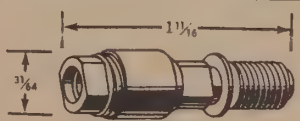
Military Type	Description	Cable Size	Dielectric Material
UG-363/U PL-274 491049	Adapter, Bulkhead Adapter, Bulkhead Adapter, Bulkhead		Polystyrene Polystyrene Polystyrene
PL-258 49191	Adapter Adapter		Rexolite Rexolite
M-358	Adapter, Tee		Polystyrene
M-359	Adapters, Angle		Polystyrene
E-400	Double Male		Polystyrene

C CONNECTORS

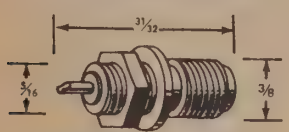
Military Type	Description	Cable Size	Dielectric Material
566 A/U 567 A/U	Adapter Tee Adapter Tee		Teflon Teflon
568/U	Receptacle		Teflon
569/U	Receptacle Bulkhead		Teflon
569 A/U	Receptacle		Teflon
570/U	Jack Bulkhead	RG 8, 9/U	Teflon
570 A/U 571/U 571 A/U	Panel Jack Panel Jack Panel Jack	RG 8, 213, 214/U RG 8, 9/U RG 8, 9, 213, 214/U	Teflon Teflon Teflon
572/U 572 A/U	Jack Jack	RG 8, 9/U RG 8, 9, 213, 214/U	Teflon Teflon
573 A/U 573 B/U 626 A/U 626 B/U 627 A/U 627 B/U	Plug Plug Plug Plug Plug Plug	RG 8, 9/U RG 8, 9, 213, 214/U RG 5, 6/U RG 5, 6, 212/U RG 59, 62, 71/U RG 59, 62, 71/U	Teflon Teflon Teflon Teflon Teflon Teflon



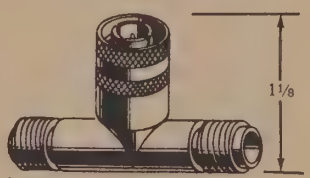
ADAPTER BULKHEAD — UG-244/U



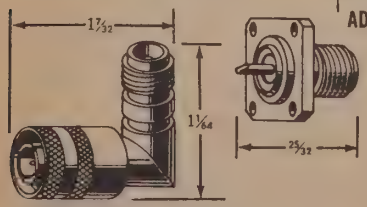
JACK — UG-115/U



RECEPTACLE — UG-206/U

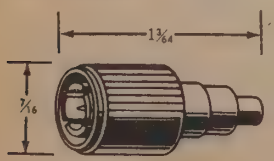


ADAPTER, TEE — UG-242/U

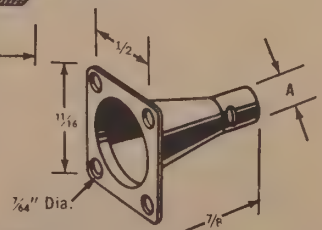


ADAPTER, ANGLE — UG-243/U

RECEPTACLE — UG-87/U



PLUG — UG-245/U



HOODS	A
*MX-195/U	7/32
MX-367/U	17/64



Military Type	Description	Cable Size	Dielectric Material
SO-239	Receptacle	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Phenolic
49194	Receptacle	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Phenolic
SO-239/T	Receptacle	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Teflon
UG-173/U	Adapter, Reducing	RG 38, 39	
UG-175/U	Adapter, Reducing	RG 58	
UG-176/U	Adapter, Reducing	RG 59, 62, 71	
UG-111/U	Plug	RG 59, 62, 71	Phenolic
PL-259	Plug	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Phenolic
PL-259-T	Plug	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Teflon
49190	Plug	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Phenolic
PL-259/A	Plug	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Phenolic
PL-259/A-T	Plug	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Teflon
49195	Plug	RG 8, 9, 10, 11, 12, 13, 63, 65/U	Phenolic
UG-203/U	Plug	RG 55, 59, 62, 71/U	Phenolic

Military Type	Description	Cable Size	Dielectric Material
628 A/U	Plug	RG 8, 9/U	Teflon
629 A/U 630/U 630 A/U 631/U 631 A/U 632/U 632 A/U	Panel Jack Panel Jack Panel Jack Panel Jack Panel Jack Panel Jack Panel Jack	RG 5, 6, 212/U RG 5, 6/U RG 5, 6, 212/U RG 59, 62, 71/U RG 5, 6/U RG 8, 9/U RG 8, 9, 213, 214/U	Teflon Teflon Teflon Teflon Teflon Teflon
633 633 A/U	Jack Jack	RG 5, 6/U RG 5, 6, 212/U	Teflon Teflon
634	Receptacle		Teflon
642 A/U 643/U	Adapter Adapter		Teflon Teflon
701/U	Adapter Bulkhead		Teflon
704 A/U	Jack Bulkhead		Teflon
705/U 706/U	Receptacle Bulkhead Receptacle Bulkhead		Teflon Teflon

BN TYPE

Military Type	Description	Cable Size	Dielectric Material
UG 85/U	Plug	RG 55, 58, 59, 621, 71/U	Rexolite
UG 86/U UG 87/U	Receptacle Receptacle		Rexolite Phenolic-Rub Rexolite
UG 114/U	Panel Jack	RG 55, 58, 59, 62, 71/U	Rexolite
UG 115/U	Jack	RG 55, 58, 59, 62, 71/U	Rexolite
MX 195/U	Hood	RG 55 & 58/U	
UG 206/U	Receptacle		Rexolite
UG 242/U	Adapter Tee		Rexolite
UG 243/U	Adapter Angle		Rexolite
UG 244/U	Adapter Bulkhead		Rexolite
UG 245/U	Plug	RG 55 — 58/U	Rexolite
UG 246/U	Panel Jack	RG 55 — 58/U	Rexolite
MX 367/U	Hood	RG 59, 62, 71/U	Phenolic

BN ADAPTER TO OTHER SERIES

Series	Contacts	Type	Dielectric Material
BN to N BN to N	M-F M-F	UG 241/U UG 605/U	Rexolite Teflon

All ECCO CONNECTORS are made to meet or exceed Military Specifications.

© United Technical Publicatio

ecco connector DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

LC-LT SERIES

Military Type	Description	Cable Size	Dielectric Material
UG 154/U UG 154 A/U	Plug Plug	RG 17, 18, 218, 219/U RG 17, 18, 218, 219/U	
UG 155/U	Adapter		Polyethylene
UG 156 A/U	Plug	RG 19, 20, 220, 221/U	
UG 157/U	Adapter		Polyethylene
UG 208 B/U	Adapter Angle		Polyethylene
UG 215/U	Adapter		Polyethylene
UG 216/U UG 216 B/U UG 219/U UG 219 B/U	Adapter Angle Adapter Angle Adapter Angle Adapter Angle		Polyethylene Polyethylene Polyethylene Polyethylene
UG 220/U UG 240/U	Adapter Adapter		Polyethylene Polyethylene
UG 286/U	Jack	RG 82/U	Teflon
UG 287/U UG 287 B/U	Adapter Adapter		Polyethylene Polyethylene
UG 352/U UG 352 A/U UG 352 B/U	Receptacle Receptacle Receptacle		Teflon Teflon Rexolite
UG 1189/U UG 1258/U	Plug Plug	RG 17, 218/U	Rexolite Polyethylene

These LC CONNECTORS are weatherproof and are of fifty (50) Ohm impedance. With proper preparation they can be used as a low or high voltage assembly. On UG 154/U used as a low voltage assembly the cable dielectric is butted flush against dielectric of mating connector.

LT SERIES

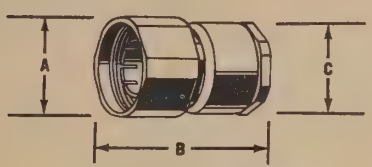
Military Type	Description	Cable Size	Dielectric Material
UG 532/U UG 532 A/U	Plug Plug	RG 117, 118, 211, 228/U RG 117, 118, 211, 228/U	Teflon
UG 533/U UG 533 B/U	Adapter Adapter		Teflon Teflon

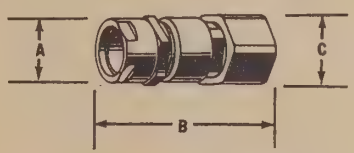
These connectors are similar to LC Series but are not interchangeable. These are fifty (50) Ohm weatherproof designed for use with high temperature cables RG 117/U and RG 118/U.

LC ADAPTERS TO OTHER SERIES

Series	Contacts	Military Type	Dielectric Material
LC to C LC to C	F-F F-F	UG 1287/U UG 1288/U	Teflon Teflon
LC to HN LC to HN LC to HN LC to HN LC to HN LC to HN LC to HN LC to HN	F-F F-F F-F F-F M-F M-F M-F M-F	UG 217/U UG 217 A/U UG 259/U UG 259 A/U UG 218/U UG 218 A/U UG 497/U UG 497 A/U	Polyethylene Polyethylene Polyethylene Polyethylene Polyethylene Polyethylene Polyethylene Polyethylene
LC to LT LC to LT	F-F F-F	UG 586/U UG 587/U	Teflon Teflon
LC to N LC to N LC to N LC to N LC to N	F-F F-F F-F F-F M-F	UG 270/U UG 270 A/U UG 271/U UG 271 A/U UG 999 A/U	Polyethylene Polyethylene Polyethylene Polyethylene Teflon

LC-LT SERIES





PLUGS - LC

	A	B	C	Tech. Data
UG-1189/U UG-1258/U	1⅝ D. 1⅝ D.	2 1/32 2 3/16	1 5/16 1 5/16	NOTE 1

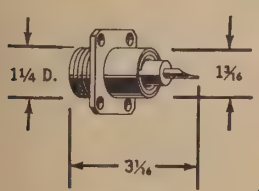
NOTE 1: Includes insulator and center contact.

PLUGS - LC

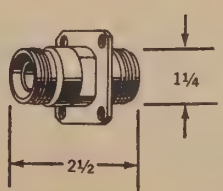
	A	B	C
UG-154/U	1⅝ D.	3 13/64	1⅝ D.
UG-154 A/U	1⅝ D.	3 13/32	1⅝ D.
*UG-156/U	2 D.	3 11/64	2 3/32 D.
UG-156 A/U	2 D.	3 11/64	2 3/32 D.

PLUGS - LT

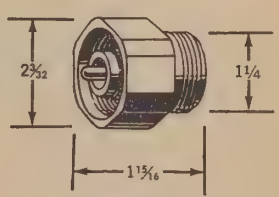
	A	B	C
*UG-532/U	1⅝ D.	3 13/32	1⅝
UG-532 A/U	1⅝ D.	3 13/32	1⅝



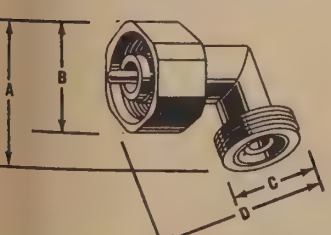
RECEPTACLE - LC
*UG-352 A/U
UG-352 B/U
See Mounting Diagram #1



ADAPTER - LC
*UG-287/U
UG-287 B/U
See Mounting Diagram #1

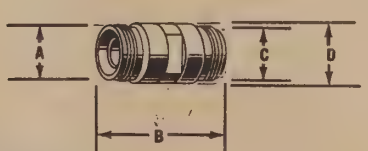


ADAPTER - LC
UG-220/U



ADAPTERS, ANGLE - LC

	A	B	C	D
UG-208/U	2 1/32	1⅝ D.	1¼ D.	2 15/64
UG-216/U	2 1/32	1⅝ D.	1¼ D.	2 11/32
UG-216 B/U	2 1/32	1⅝ D.	1¼ D.	2 15/64
*UG-219/U	2 5/64	2 3/32 D.	1¾ D.	3 31/64
UG-219 B/U	2 5/64	2 3/32 D.	1¾ D.	3½

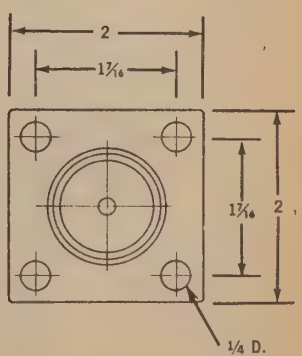


ADAPTERS - LC

	A	B	C	D
UG-155/U	1¼ D.	2¼	1¼ D.	1⅝ D.
UG-157/U	1¾ D.	2½	1¾ D.	2 D.
*UG-215/U	1¼ D.	2½	1¼ D.	1 3/32 D.
UG-240/U	1¼ D.	2¼	1¾ D.	

ADAPTERS - LT

UG-533/U	1¼ D.	2½	1¼ D.	1 3/32 D.
UG-533 B/U	1¼ D.	2½	1¼ D.	1¼ D.



MOUNTING DIAGRAM #1

© United Technical Publications

ecco connector DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

HN SERIES

Military Type	Description	Cable Size	Engineering Data	Dielectric Material	Military Type
UG-59A/U	Plug	RG-8, 9/U	See notes 1 and 2	Rexolite	UG-1215/U
UG-59B/U	Plug	RG-8, 9/U		Teflon	UG-333/U
UG-59C/U	Plug	RG-8, 9/U		Teflon	UG-61A/U
UG-59D/U	Plug	RG-8, 9/U		Teflon	UG-333A/U
UG-60A/U	Jack	RG-8, 9/U	See note 2	Rexolite	UG-925A/U
UG-60B/U	Jack	RG-8, 9/U		Teflon	UG-61D/U
UG-60C/U	Jack	RG-8, 9/U		Teflon	UG-61B/U
UG-60D/U	Jack	RG-8, 9/U		Teflon	UG-334B/U
UG-61A/U	Panel Jack	RG-8, 9/U	See note 2	Rexolite	UG-61C/U
UG-61B/U	Panel Jack	RG-8, 9/U		Teflon	UG-1214/U
UG-61C/U	Panel Jack	RG-8, 9/U		Teflon	UG-334/U
UG-61D/U	Panel Jack	RG-8, 9/U		Teflon	UG-60A/U
UG-212A/U	Adapter, Angle		M-F	Polyethylene	UG-334A/U
UG-212C/U	Adapter, Angle		M-F — See note 5	Teflon	UG-60D/U
UG-333/U	Jack	RG-17/U		Rexolite	UG-60B/U
UG-333A/U	Jack	RG-17/U		Rexolite	UG-333B/U
UG-333B/U	Jack	RG-17/U		Teflon	UG-60C/U
UG-334/U	Panel Jack	RG-17/U		Rexolite	UG-1213/U
UG-334A/U	Panel Jack	RG-17/U		Rexolite	UG-494/U
UG-334B/U	Panel Jack	RG-17/U		Teflon	UG-495/U
UG-413/U	Adapter Tee		F-F-F	Rexolite	UG-1021/U

HN ADAPTERS TO OTHER SERIES

Series	Military Type	Engineering Data	Dielectric Material	Military Type
HN to BNC	UG-309/U		Rex. & Tef.	UG-702/U
HN to C	UG-702/U		Teflon	UG-703/U
HN to C	UG-703/U		Teflon	UG-703A/U
	UG-703A/U		Teflon	UG-252/U
HN to LC (3)	UG-217/U		Polyethylene	UG-217/U
HN to LC (3)	UG-259/U	Panel Mfg.	Polyethylene	UG-309/U
	UG-259A/U	Panel Mfg.	Polyethylene	UG-497/U
HN to LC (3)	UG-327A/U	Tee	Polyethylene	UG-497A/U
HN to LC (4)	UG-218/U	Angle	Polyethylene	UG-218/U
	UG-218A/U	Angle	Polyethylene	UG-259/U
	UG-252/U		Polyethylene	UG-218A/U
HN to LC (4)	UG-497/U		Polyethylene	UG-327A/U
	UG-497A/U		Polyethylene	UG-259A/U

NOTE 1: Use armor clamp MX-564A/U with cable RG-10/U.

NOTE 2: Teflon insert for operation up to 200°C. Assembly to cable does not require tapering tool.

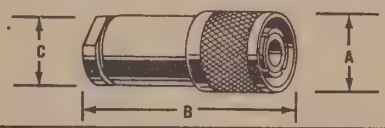
NOTE 3: Mates with type LC UG-154/U or equivalent.

NOTE 4: Mates with type LC UG-215/U or equivalent.

NOTE 5: Similar to UG-212B/U except mechanically and electrically improved.

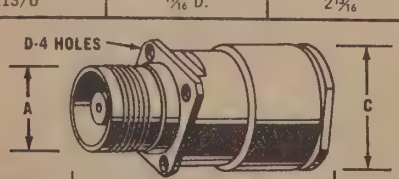
SEX OF CONTACTS IS INDICATED BY LETTERS "F" AND "M".

ASTERISKS (*) ON FOLLOWING PAGES INDICATE ILLUSTRATED CONNECTORS.



PLUGS

	A	B	C
UG-59A/U	11/16 D.	2 15/32	27/32 D.
UG-59B/U	11/16 D.	2 13/32	7/8 D.
UG-59C/U	3/4 D.	2 5/32	27/32 D.
*UG-59D/U	3/4 D.	2 1/32	7/8 D.
UG-494/U	1 D.	1 47/64	27/32 D.
UG-494A/U	3/4 D.	2 3/8	27/32 D.
UG-495/U	1 5/16 D.	2 9/16	27/32 D.
UG-495B/U	2 1/16 D.	2 5/8	27/32 D.
UG-1148/U	1 5/16 D.	2 9/16	27/32 D.
UG-1213/U	11/16 D.	2 13/16	3/4 D.

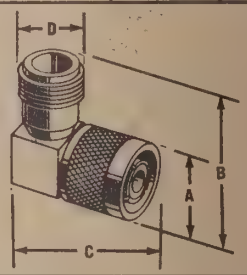


PANEL JACKS

See Mounting Diagram #1

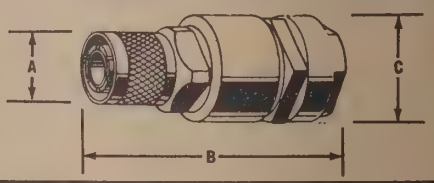
	A	B	C	D
UG-61A/U		2 39/64	11/16 D.	1/8 D.
UG-61B/U		2 39/64	11/16 D.	1/8 D.
UG-61C/U		2 1/32	3/4 D.	1/8 D.
UG-61D/U		1 63/64	3/4 D.	1/8 D.
UG-334/U		2 7/16	1 5/16 D.	#6-32 NC-2 Thd.
*UG-334A/U		2 17/32	1 5/16 D.	#6-32 NC-2 Thd.
UG-334B/U		2 1/2	1 5/16 D.	#6-32 NC-2 Thd.
UG-1215/U		2 13/16	11/16 D.	1/8 D.

Military Type	Description	Cable Size	Engineering Data	Dielectric Material	Military Type
UG-494/U	Plug	RG-14/U		Rexolite	UG-59A/U
UG-494A/U	Plug	RG-14/U		Teflon	UG-494A/
UG-495/U	Plug	RG-17/U		Rexolite	UG-926A/
UG-495B/U	Plug	RG-17/U		Teflon	UG-59D/U
UG-496/U	Receptacle			Rexolite	UG-59B/U
MX-564/U	Armor Clamp	RG-10, 12/U			UG-495B/
MX-564A/U	Armor Clamp	RG-10, 12/U			UG-59C/U
UG-925A/U	Plug	RG-8, 9, 10, 12, 116/U	Includes Armor Clamp	Teflon	UG-1148/
UG-926A/U	Plug	RG-117, 118/U		Teflon	UG-496/U
UG-1021/U	Plug	RG-14, 74/U		Teflon	UG-413/U
UG-1148/U	Plug	RG-17, 18/U	Part of cable assembly CG-1336/U; mates with UG-600/U	Teflon	UG-212A/
UG-1213/U	Plug	RG-8, 9, 87A/U	Captivated contact	Teflon	UG-212C/
UG-1214/U	Jack	RG-8, 9, 87A/U	Captivated contact	Teflon	MX-564/U
UG-1215/U	Panel Jack	RG-8, 9, 87A/U	Captivated contact	Teflon	MX-564/U



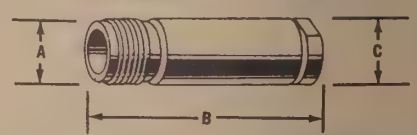
ADAPTERS, ANGLE

	A	B	C	D
UG-212A/U	27/32 D.	1 49/64	1 17/32	3/4
UG-212C/H	27/32 D.	1 33/64	1 9/16	3/4



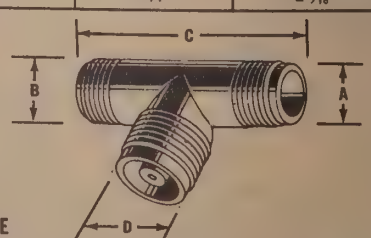
PLUGS

	A	B	C
UG-925A/U	7/8 D.	2 31/32	3/4 D.
*UG-926A/U	27/32 D.	3 5/32	1 5/16 D.
UG-1021/U	27/32 D.	3 13/64	7/8 D.



JACKS

	A	B	C
UG-60A/U	3/4	2 39/64	11/16 D.
UG-60B/U	3/4	2 35/64	11/16 D.
UG-60C/U	3/4	2 9/32	3/4 D.
*UG-60D/U	3/4	1 63/64	3/4 D.
UG-333/U	3/4	2 7/16	1 5/16 D.
UG-333A/U	3/4	2 17/32	1 5/16 D.
UG-333B/U	3/4	2 1/2	1 5/16 D.
UG-1214/U	3/4	2 15/16	11/16 D.



ADAPTER, TEE

	A	B	C	D
UG-413/U	3/4	1 1/32	1 13/16	3/4

© United Technical Publication

ecco connector DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

LN SERIES

Military Type	Description	Cable Size	Dielectric Material
UG- 97A/U	Adapter Angle		Teflon
UG- 98A/U	Receptacle		Teflon
UG-100A/U UG-100B/U	Plug Plug	RG-14/U RG-14/U	Teflon Teflon
UG-101A/U UG-101B/U	Panel Jack Panel Jack	RG-14/U RG-14/U	Teflon Teflon
UG-109A/U	Adapter		Teflon
UG-279A/U UG-279B/U	Jack Jack	RG-14/U RG-14/U	Teflon Teflon
UG-1022/U	Plug	RG-74/U	Teflon
MX-1462/U*	Armor Clamp	RG-74/U	Teflon

*On MX-1462/U Armor Clamp Replaces Clamp Nut, Otherwise Is Similar To UG-107B/U.

TWIN CONNECTORS

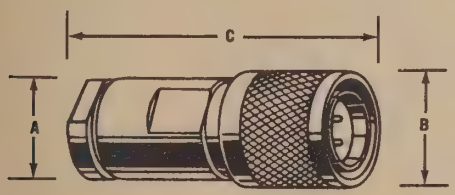
Military Type	Description	Cable Size	Dielectric Material
UG-102/U	Plug	RG-22/U	Phenolic
UG-103A/U	Receptacle	RG-22/U	Teflon
UG-106/U	Hood		
UG-421/U UG-421B/U	Plug Plug	RG-22/U RG-22/U	Rexolite Rexolite
UG-422/U	Receptacle	RG-22/U	Rexolite
UG-423/U	Panel Jack	RG-22/U	Rexolite
UG-493/U	Adapter	RG-22/U	Rexolite

LN ADAPTERS TO OTHER SERIES

Series	Contacts	Dielectric Material
UG-108A/U	LN to N	Teflon
UG-213A/U	LN to N	Teflon
UG-516A/U	LN to N	Teflon

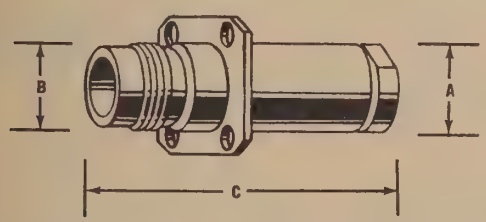
TWIN ADAPTERS TO OTHER SERIES

Series	Contacts	Dielectric Material
Twin to C	M-F	Rexolite
Twin to UHF	M-F	Rexolite



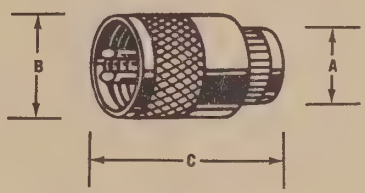
PLUGS

	A	B	C
UG-421/U	11/16 D.	2 9/64	27/32 D.
*UG-421B/U	3/4 D.	1 29/32	7/8 D.



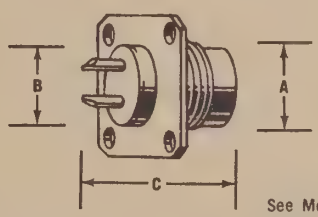
JACK

	A	B	C
UG-423/U	11/16	3/4	1 3/4



PLUG

	A	B	C
UG-102/U	7/16	23/32	1 1/2

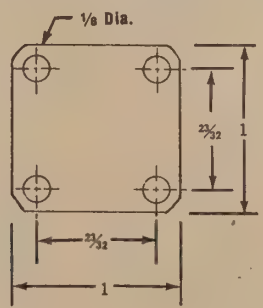


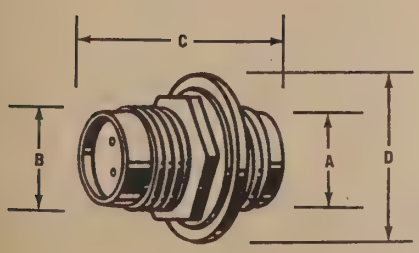
RECEPTACLES

See Mounting Diagram #1

	A	B	C
UG-103A/U	5/8	5/8	1 3/64
*UG-422/U	3/4	5/8	1 3/16

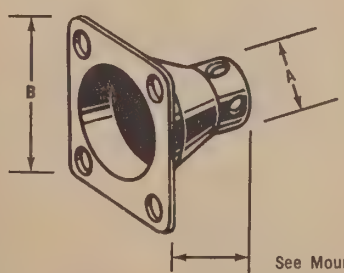
MOUNTING DIAGRAM #1





ADAPTER

	A	B	C	D
UG-493/U	3/4	3/4	1 43/64	1 1/4



HOOD

See Mounting Diagram #1

	A	B	C
UG-106/U (49193)	11/32 I.D.	1	3/4

© United Technical Publications

ecco connector DIVISION OF PHAOSTRON INSTRUMENT AND ELECTRONIC CO.

TYPE N SERIES

Military Type	Description	Cable Size	Engineering Data	Dielectric Material
UG-18A/U	Plug	RG-5, 21/U		Rexolite
UG-18B/U	Plug	RG-5, 6, 21/U		Teflon
UG-18C/U	Plug	RG-5, 6, 21/U		Teflon
UG-18D/U	Plug	RG-5, 6, 21, 212/U		Teflon
UG-19B/U	Panel Jack	RG-5, 6, 21/U		Teflon
UG-19C/U	Panel Jack	RG-5, 6, 21/U		Teflon
UG-19D/U	Panel Jack	RG-5, 6, 21, 212/U		Teflon
UG-20B/U	Jack	RG-5, 6, 21/U		Teflon
UG-20C/U	Jack	RG-5, 6, 21/U		Teflon
UG-20D/U	Jack	RG-5, 6, 21, 212/U		Teflon
UG-21B/U	Plug	RG-8, 9/U		Teflon
UG-21C/U	Plug	RG-8, 9/U		Teflon
UG-21D/U	Plug	RG-8, 9/U		Teflon
UG-21E/U	Plug	RG-8, 9, 213, 215/C		Teflon
UG-22B/U	Panel Jack	RG-8, 9/U		Teflon
UG-22C/U	Panel Jack	RG-8, 9/U		Teflon
UG-22D/U	Panel Jack	RG-8, 9/U		Teflon
UG-22E/U	Panel Jack	RG-8, 9, 213, 215/U		Teflon
UG-23B/U	Jack	RG-8, 9/U		Teflon
UG-23C/U	Jack	RG-8, 9/U		Teflon
UG-23D/U	Jack	RG-8, 9/U		Teflon
UG-23E/U	Jack	RG-8, 9, 213, 215/U		Teflon
UG-27A/U	Adapter, Angle		M-F	Rexolite
UG-27B/U	Adapter, Angle		M-F	Teflon
UG-27C/U	Adapter, Angle		M-F	Teflon
UG-28A/U	Adapter, Tee		F-F-F	Teflon
UG-29B/U	Adapter		F-F	Teflon
UG-30C/U	Adapter, Bulkhead		F-F Pressurized	Glass
UG-30D/U	Adapter, Bulkhead		F-F Pressurized	Glass
UG-57B/U	Adapter		M-M	Teflon
UG-58/U	Receptacle			Rexolite
UG-58A/U	Receptacle			Teflon
UG-91A/U	Plug	RG-6/U	70 ohm	Teflon
UG-92A/U	Jack	RG-6/U	70 ohm	Teflon
UG-93A/U	Panel Jack	RG-6/U	70 ohm	Teflon
UG-94A/U	Plug	RG-11, 13/U	70 ohm	Teflon
UG-95A/U	Jack	RG-11, 13/U	70 ohm	Teflon
UG-96A/U	Panel Jack	RG-11, 13/U	70 ohm	Teflon
UG-107A/U	Adapter, Tee		F-M-F	Teflon
UG-107B/U	Adapter, Tee		F-M-F	Teflon
UG-146A/U	Adapter N/UHF		M-F	Teflon
UG-159A/U	Jack, Bulkhead	RG-5, 21/U		Teflon
UG-159B/U	Jack, Bulkhead	RG-5, 21/U		Teflon
UG-160A/U	Jack, Bulkhead	RG-8, 9/U		Teflon
UG-160B/U	Jack, Bulkhead	RG-8, 9/U		Teflon
UG-160C/U	Jack, Bulkhead	RG-8, 9/U		Teflon
UG-160D/U	Jack, Bulkhead	RG-8, 9, 213, 214/U		Teflon
UG-167A/U	Plug	RG-17/U		Teflon
UG-167D/U	Plug	RG-17/U		Teflon
UG-167C/U	Plug	RG-17/U		Teflon
UG-167E/U	Plug	RG-17, 218/U		Teflon
UG-188/U	Plug	RG-29, 55, 58/U		Rexolite
UG-202A/U	Adapter, Angle		F-F	Teflon
UG-204B/U	Plug	RG-17/U		Teflon
UG-204C/U	Plug	RG-14/U		Teflon

Military Type	Description	Cable Size	Engineering Data	Dielectric Material
UG-231/U	Receptacle			Rexolit
UG-281/U	Panel Jack	RG-55, 58/U		Rexolit
UG-483/U	Jack	RG-81/U		Teflon
UG-484/U	Jack	RG-82/U		Teflon
UG-486/U	Plug	RG-81/U		Teflon
UG-487/U	Plug	RG-82/U		Teflon
UG-536/U	Plug	RG-55, 58/U		Rexolit
UG-536A/U	Plug	RG-55, 58/U		Teflon
UG-536B/U	Plug	RG-55, 58, 223/U		Teflon
UG-556B/U	Jack, Bulkhead	RG-55, 58, 223/U		Teflon
UG-557A/U	Plug	RG-117, 118/U	Includes Armor Clamp	Teflon
MX-564A/U	Armor Clamp	RG-10, 12/U		
UG-593/U	Panel Jack	RG-59, 62, 71/U		Rexolit
UG-602/U	Panel Jack	RG-59, 62, 71/U		Rexolit
UG-603A/U	Plug	RG-59, 62, 71/U		Teflon
MX-913/U	Cap & Chain			
UG-935/U	Jack, Panel	RG-10, 12/U		Teflon
UG-935A/U	Panel Jack	RG-10, 12/U		Teflon
UG-935B/U	Panel Jack	RG-10, 12, 215/U	Includes Armor Clamp	Teflon
UG-936A/U	Jack, Bulkhead	RG-10, 12/U		Teflon
UG-936B/U	Jack, Bulkhead	RG-10, 12/U		Teflon
UG-940/U	Jack	RG-10, 12/U		Teflon
UG-940A/U	Jack	RG-10, 12/U		Teflon
UG-940B/U	Jack	RG-8, 9, 10, 213, 214, 215/U	Includes Armor Clamp	Teflon
UG-941/U	Plug	RG-10, 12/U		Teflon
UG-941A/U	Plug	RG-10, 12/U		Teflon
UG-941B/U	Plug	RG-8, 9, 10, 213, 214, 215/U	Includes Armor Clamp	Teflon
UG-982/U	Plug	RG-18/U RG-219/U	Similar to UG-167D/U except uses Armor Clamp	Teflon
UG-1003/U	Plug	RG-63, 114/U		Teflon
UG-1095A/U	Panel Jack	RG-55, 58, 223/U		Teflon
UG-1095B/U	Panel Jack	RG-55, 58, 223/U		Teflon
UG-1185/U	Plug	RG-8, 9/U	Similar to UG-21D/U except center contact is captivated	Teflon
UG-1185A/U	Plug	RG-8, 9, 213, 214/U		Teflon
UG-1186/U	Jack	RG-8, 9/U	Similar to UG-23D/U except center contact is captivated	Teflon
UG-1186A/U	Jack	RG-8, 9, 213, 214/U		Teflon
UG-1187/U	Panel Jack	RG-8, 9/U	Similar to UG-22D/U except center contact is captivated	Teflon
UG-1187A/U	Panel Jack	RG-8, 9, 213, 214/U		Teflon
MX-1286/U	Armor Clamp	RG-10, 12, 215/U		
MX-1441/U	Armor Clamp	RG-18, 219/U	Clamps Armor to Type N Connector	
MX-1462/U	Armor Clamp	RG-74/U	Clamps Armor to Type N Connector	

N ADAPTERS TO OTHER SERIES

Series	Contacts	Type	Engineering Data	Dielectric Material
BN to N	F-M	UG-605/U		Teflon
N to BNC	M-F	UG-201/U		Rexolite & Teflon
		UG-201A/U		Teflon
N to BNC	F-M	UG-349/U		Rexolite & Teflon
		UG-349A/U		Teflon
N to C	M-F	UG-564/U		Teflon
N to C	F-M	UG-565/U		Teflon
		UG-565A/U		Teflon
N to Holmdel	M-M			Rexolite
N to Holmdel	F-F			Rexolite

Series	Contacts	Type	Engineering Data	Dielectric Material
N to LC (1)	F-F	UG-270A/U		Polyethylene
N to LC (1)	F-F	UG-271A/U		Polyethylene
N to LC (1)	F-M	UG-999A/U		Teflon
N to LN	F-F	UG-108A/U		Teflon
N to LN	M-M	UG-213A/U		Teflon
N to UHF	F-M	UG-83/U		Rexolite & Phenolic
		UG-83A/U		Rexolite
		UG-83B/U		Teflon

1. Mates with Type LC UG-154/U or Equivalent

Sex of Contacts is Indicated by Letters "F" and "M".

© United Technical Publications

EMC
Interconnection Specialists

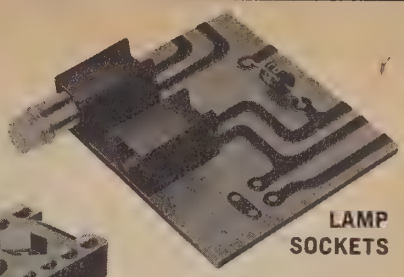


Nurl-Loc® HIGH DENSITY I.C. PACKAGING PANELS

New high density packaging panels that include non-twisting Nurl-Loc® terminals are summarized in Bulletin FS-14, available on request. Used with 14 and 16 pin dual-in-line I. C.'s, the panels include power and ground shields for I. C. high frequency applications, as well as other desirable features. Two designs are standard, for 60 and 30 pattern boards, with other layouts available on special order.



TEST JACKS



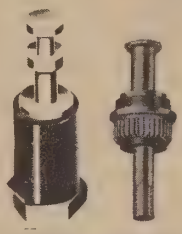
LAMP SOCKETS



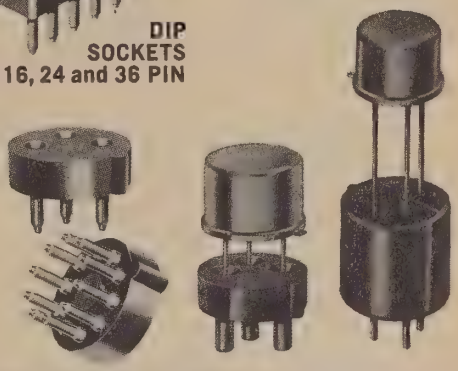
BINDING POSTS



DIP SOCKETS
14, 16, 24 and 36 PIN

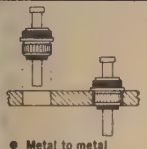


STANDOFF FEED-THRU TERMINALS



TRANSISTOR AND IC SOCKETS for TO-5 and TO-18

TERMINALS



- Metal to metal press-in design
- Solid molded construction
- Highest radial and axial pull-out resistance

Nurl-Loc® TERMINALS AND TEST JACKS

Electronic Molding offers the largest variety of molded insulated terminals and test jacks available anywhere. The metal inserts are molded into high-temperature Diallyl Phthalate, (500°F) forming a strong integral unit that will not crack while soldering. The metal-to-metal Nurl-Loc press-in feature (shown left) assures highest radial and axial pullout resistance of any terminal of this type. Ten colors and mounting tools are available.

STANDOFF TERMINALS



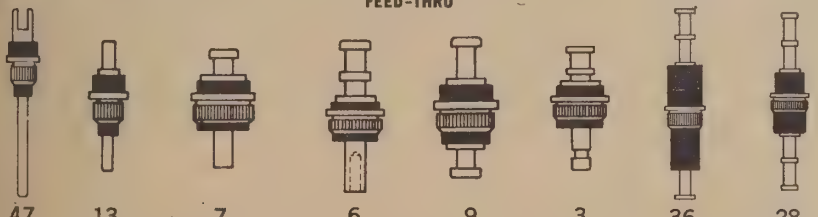
11 1 12

FEED-THRU THRU HOLE



10 2 49

FEED-THRU



47 13 7 6 9 3 36 28

THREADED NURL-LOC FEED-THRU



37

THREADED FEED-THRU



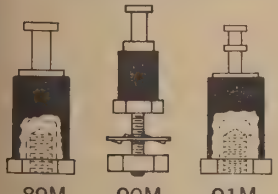
33

INSULATED SPACER



84

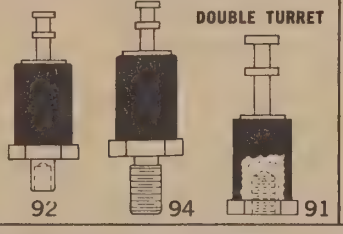
MIL-T-55155 TERMINALS



89M 90M 91M

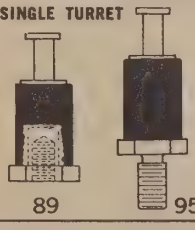
STANDOFF TERMINALS

DOUBLE TURRET



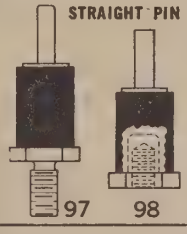
92 94 91

SINGLE TURRET



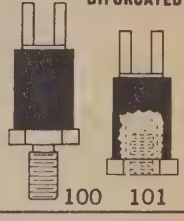
89 95

STRAIGHT PIN



97 98

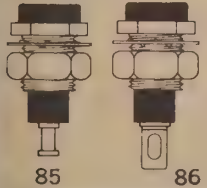
BIFURCATED



100 101

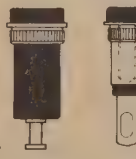
TEST JACKS

MS-16108 & MIL-C-39024 TEST JACKS



85 86

MIL-C-39024 NURL-LOC TEST JACKS



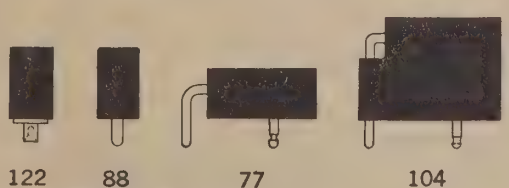
78 42

PUSH-ON TEST JACKS



65

MIL-C-39024 PRINTED CIRCUIT TEST JACKS



122 88 77 104

NURL-LOC PROBE

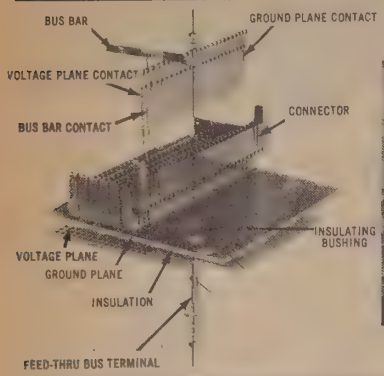


60

ELECTRONIC MOLDING CORPORATION

© United Technical Publications

Total Connector Capability from the Innovator:

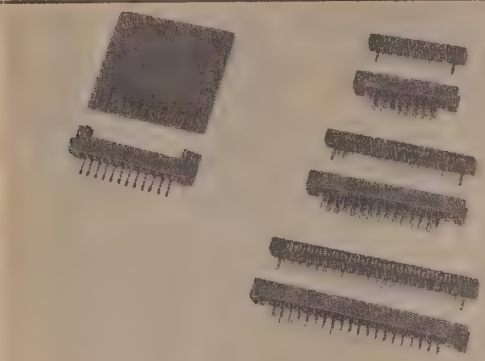




METAL PLATE BACK PANEL CONNECTORS AND WIRING SERVICE

The metal plate connecting system is the modern day method for mounting and interconnecting electronic components. Most dramatically used in the computer equipment field, this packaging system provides a high density system compatible with automatic wiring methods. The metal plate system is modular in concept and Elco has a wide assortment of standard parts we'll assemble and wire to your particular needs.

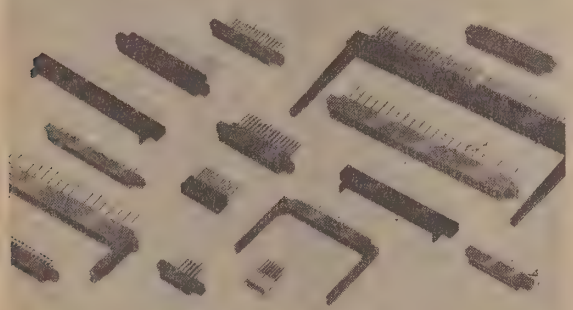
Request Catalogue MPR



METAL-TO-METAL PRINTED CIRCUIT CONNECTORS MINIATURE AND SUBMINIATURE

Three specifications (MIL-E-5400, MIL-E-8189, and MIL-T-21200) require two-piece metal-to-metal printed circuit connectors in airborne equipment. VARICON™ connectors are metal-to-metal and provide a multitude of options: contact spacings of .050″, .075″, .100″, .156″ and .200″; terminals for wire wrap, crimp, solder, and taper tab; connector sizes from 2 to 152 contacts.

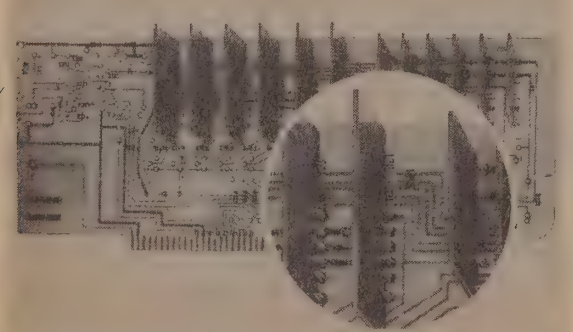
Request Catalogue PCR



CARD-EDGE PRINTED CIRCUIT CONNECTORS

Card-edge connectors mate directly with the printed circuit card and are available in a wide range of sizes (4 to 100 contacts), configurations, and contact spacings (.100″, .125″, .150″, .156″, and .200″). Optional means for terminating include wire wrap, solder, and taper tab. Other options include: connectors with or without card guides; various mounting provisions — threaded inserts, floating eyelets, force fit hubs, and standard mounting holes.

Request Catalogue CER



BOARD-TO-BOARD PRINTED CIRCUIT CONNECTORS

Make your connections with a total system (the Elco system). Whether your p.c. boards are perpendicular, parallel, or even tandem to each other, we have the right type, connector size, and contact spacing (.100″, .125″, .150″, .156″, and .200″). Each and every type uses, exclusively, the VARICON™ contact, a two-piece (metal-to-metal) contact complying fully with the latest revision of MIL-E-5400, MIL-E-8189, and MIL-T-21200.

Request Catalogue BBR



PRINTED CIRCUIT CARD ENCLOSURES

The Elco VARIPAK® II enclosure is a highly versatile device for packaging printed circuit cards and connectors. Made of rugged aluminum, the Varipak can be used in storage cabinets, pull-out drawers, and even as the framework for small instrument panels. The Varipak's construction allows air flow throughout the unit, aiding in longer component life. There are 32 standard sizes available with basic parts stocked at all authorized Elco distributors.

Request Catalogue VER

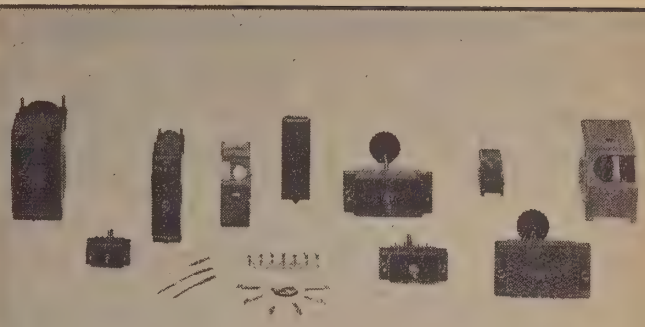
© United Technical Publication

Elco Corporation

RECTANGULAR RACK AND PANEL CONNECTORS

Elco's full line of rack-and-panel and I/O (input/output) connectors come in a wide choice of styles. With standard, miniature, and even modular styles you can have from 2 up to 140 VARICON™ contacts, or practically any size in between. We've just created a family of high-density connectors (.100" and .125" spacing) engineered for high reliability (including military) as well as controlled-environment applications.

Request Catalogue RPR



MIL-C-26482 MIL-C-26500 CIRCULAR CONNECTORS

Elco supplies both MIL-C-26482 (Navy) and MIL-C-26500 (USAF) circular connectors. MIL-C-26482 environment-resisting, quick-disconnect connectors are equipped with solder or crimp contacts; available in a choice of nine shell sizes with 3 to 61 contacts. MIL-C-26500 connectors are designed to be essentially voidless in order to withstand environmental extremes encountered by missiles and space vehicles. Equipped with crimp contacts, the connectors are available in nine shell sizes with 2 to 61 contacts.

Request Catalogue CCR



MILITARY SPECIFICATION CONNECTORS

Elco manufactures a full line of connectors designed to and meeting strict military system specifications. Connector types are: MIL-C-21097 and MIL-C-55302 printed circuit connectors; MIL-C-12520, MIL-C-26482, MIL-C-26500, MIL-C-55181, MIL-C-55243, and U-344/345 power connectors; MIL-C-10544, MIL-C-55074, and MIL-C-55116 communications connectors; MIL-C-23216 and MIL-C-26636 contacts.

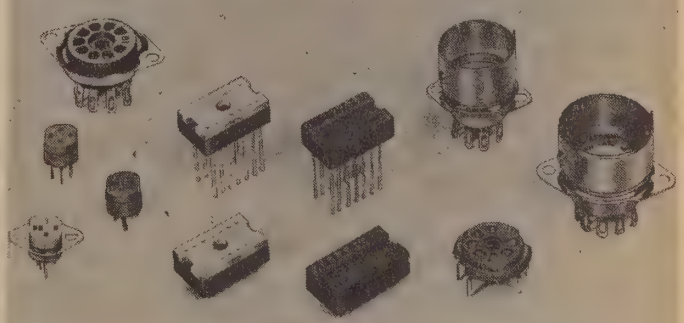
Request Catalogue MSR



DIP TRANSISTOR AND TUBE SOCKETS

DIP, transistor, and tube sockets; all manufactured by Elco and all exhibiting the high quality expected of an Elco product. State-of-the-art design, stringent raw material control, and advanced manufacturing techniques all contribute to the exceptional performance of Elco high-reliability sockets. See our catalogue for 14- and 16-pin DIP sockets, 7- and 9-pin tube sockets, transistor sockets, relay sockets, and crystal sockets.

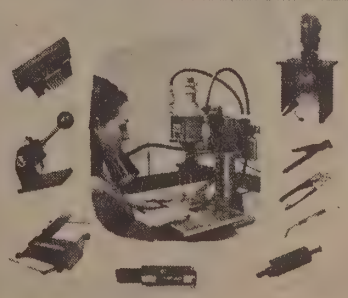
Request Catalogue CSR



CONNECTOR INSTALLATION TOOLS

Elco provides all of the necessary equipment to install their connectors. Our automatic and manual contact staking tools firmly affix the contact to the printed circuit card, producing exceptional electrical as well as mechanical contact. Our automatic and manual crimping tools join contact to wire by mechanically deforming the contact around both the conductor and the insulation of the wire. All installation tools are engineered to provide long, efficient service.

Request Catalogue ITR



© United Technical Publications

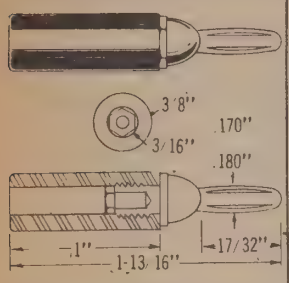
GC ELECTRONICS

ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA PLUGS

ILLUSTRATIONS | DESCRIPTION

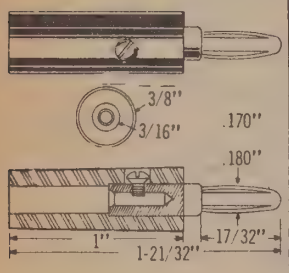
BANANA PLUG



DESC: Hex brass body, separate internal brass stud for solderless or soldered connection.
RATING: 15 amps AC for 10 degrees C Temp. rise continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, phosphor bronze nickel plated spring.

		Net per C 25.00	
No.	Color	No.	Color
33-000	Red	33-002	Blk

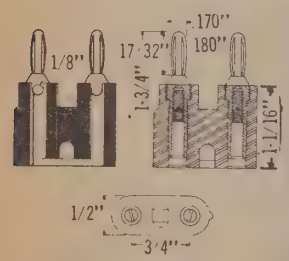
BANANA PLUG



DESC: Lead wire connection with set screw through plastic handle.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, phosphor bronze nickel plated spring.

		Net per C 20.00	
No.	Color	No.	Color
33-006	Red	33-008	Blk

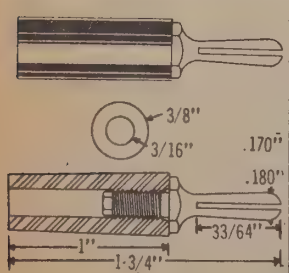
DUAL BANANA PLUG



DESC: Brass, nickel plated plug. Mates with standard dual binding posts.
RATING: 15 amps AC for 10 degrees C Temp. rise, continuous duty.
BODY: Molded cycoloc plastic, per MIL-M-22544, type 4.
TIPS: Four leaved, phosphor bronze nickel plated springs.

		Net per C 72.00	
No.			
33-010			

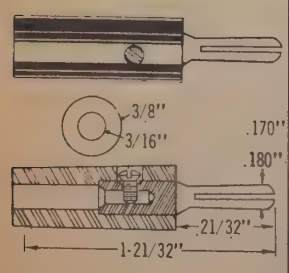
BANANA PLUG



DESC: Separate internal brass stud for solderless or soldered connection.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Cross slotted, nickel plated brass.

		Net per C 22.00	
No.	Color	No.	Color
33-012	Red	33-014	Blk

BANANA PLUG

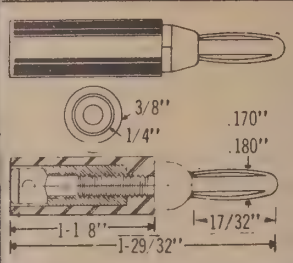


DESC: Lead wire connection with set screw through plastic handle.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Cross slotted, nickel plated brass..

		Net per C 18.00	
No.	Color	No.	Color
33-018	Red	33-020-BU	Blk

ILLUSTRATIONS | DESCRIPTION

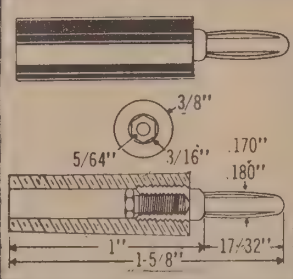
BANANA PLUG



DESC: Lead wire connection with set screw through plastic handle.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, nickel plated phosphor bronze spring.

		Net per C 40.00	
No.	Color	No.	Color
33-028-1	Red	33-028-2	Blk

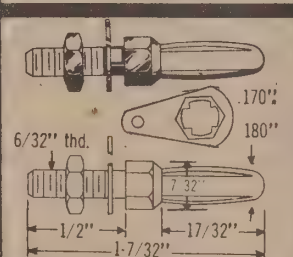
BANANA PLUG



DESC: Wire solders to stud; or brass stud locks wire in place for solderless connection.
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, nickel plated, phosphor bronze spring.

		Net per C 22.00	
No.	Color	No.	Color
33-032-1	Red	33-032-2	Blk

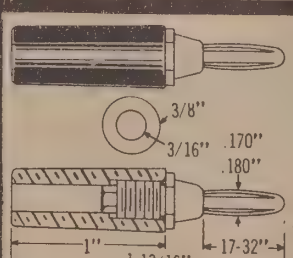
BANANA PLUG



DESC: Threaded shank type, supplied with terminal lug and hex nut.
BODY: Brass, nickel plated.
TIP: Four leaved, phosphor bronze nickel plated spring.

		Net per C 20.00	
No.			
33-034-			

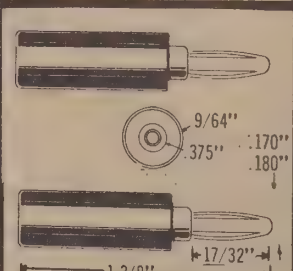
INSULATED BANANA PLUG



DESC: Nickel plated brass plug, fits standard Banana Jack.
HANDLE: Molded Butyrate, per MIL-LP-349- and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved beryllium copper, nickel plate spring.

		Net per C 30.00	
No.	Color	No.	Color
33-036-1	Red	33-036-2	Blk

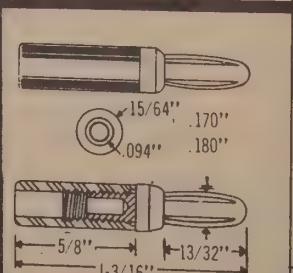
INSULATED BANANA PLUG



DESC: Solderless connection, nickel plated brass plug. Fits standard Banana Jack.
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HANDLE: Molded Nylon, per MIL-P-20693A.
TIP: Four leaved beryllium copper nickel plated spring.

		Net per C 29.00	
No.	Color	No.	Color
33-037-1	Red	33-037-2	Blk

BANANA PLUG



DESC: Midget type; lead wire connection solders to drilled body.
RATING: 10 amps AC for 10 degree C Temp. rise continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, phosphor bronze, nickel plated spring.

		Net per C 20.00	
No.	Color	No.	Color
33-024	Red	33-026	Blk

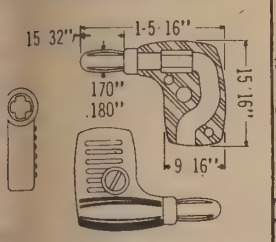
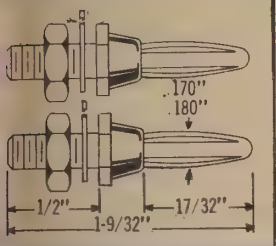
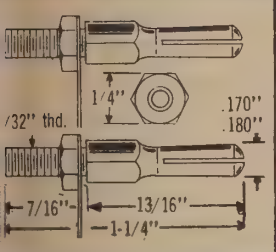
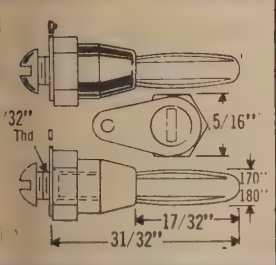
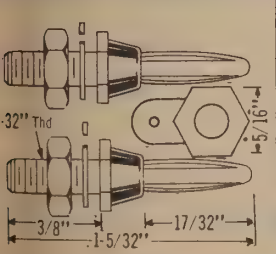
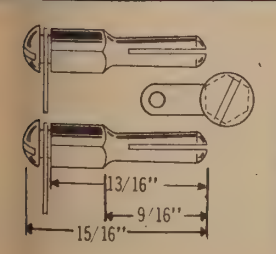
WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

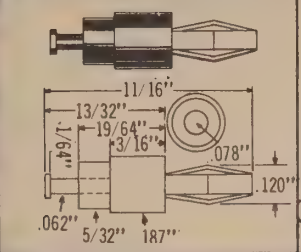
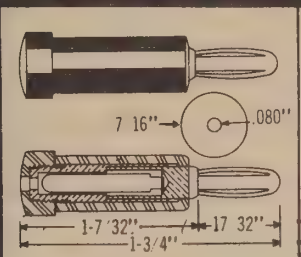
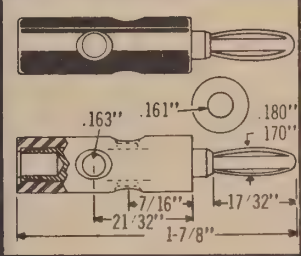
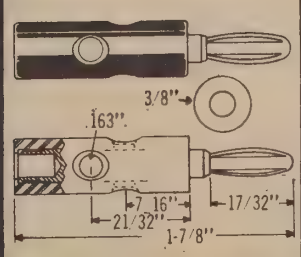
Net

© United Technical Publications

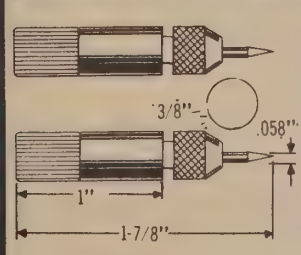
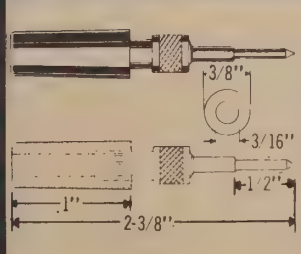
ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA PLUGS

ILLUSTRATIONS	DESCRIPTION
	**BANANA PLUG** DESC: Right angle "Gun" Tip (meter plug), lead wire solders to body. RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded plastic, per MIL-P-14 CFG. TIP: Four leaved, phosphor bronze, nickel plated springs. Net per C 40.00 No. 33-046 Color Red; No. 33-048 Color Blk
	**BANANA PLUG** DESC: All metal, threaded shank type, with terminal lug and hex nut. BODY: Brass, nickel plated. TIP: Four leaved, nickel plated phosphor bronze spring. Net per C 20.00 No. 33-058
	**BANANA PLUG** DESC: Threaded shank type, supplied with terminal lug and hex nut. BODY: Brass, nickel plated. TIP: Cross slotted, brass nickel plated. Net per C 17.00 No. 33-060
	**BANANA PLUG** DESC: Panel mounting type, number 6-32 tapped body, with screw and terminal lug. BODY: Brass, nickel plated. TIP: Four leaved, phosphor bronze, nickel plated spring. Net per C 20.00 No. 33-062
	**BANANA PLUG** DESC: Threaded shank type, with terminal lug and hex nut. BODY: Brass, nickel plated. TIP: Four leaved, phosphor bronze, nickel plated spring. Net per C 20.00 No. 33-064
	**BANANA PLUG** DESC: Panel mounting type, tapped number 6-32, with screw and terminal lug. BODY: Brass, nickel plated. TIP: Cross slotted, brass, nickel plated. Net per C 15.00 No. 33-066

ILLUSTRATIONS	DESCRIPTION
	**BANANA PLUG** DESC: Printed circuit, sub-miniature rivet type, solder connection, fits jacks with .104 I.D. TIP: Four leaved, beryllium copper, silver plated spring. Net per C 15.00 No. 33-068
	**BANANA PLUG ADAPTOR** DESC: Adapts tip plug to banana plug, ends are standard tip jack and banana plug. RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Standard tip jack one end; other end four leaved banana plug. Net per C 35.00 No. 33-072 Color Red; No. 33-074 Color Blk
	**STACK BANANA PLUG** DESC: Stack type, fits standard banana plugs in top and side. RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Four leaved phosphor bronze, nickel plated spring. Net per C 35.00 No. 33-084-1 Color Red; No. 33-084-2 Color Blk
	**STACK BANANA PLUG** DESC: Stack type, fits standard banana plugs in top and side. RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Four leaved beryllium copper, nickel plated spring. Net per C 36.00 No. 33-086-1 Color Red; No. 33-086-2 Color Blk

TIP PLUGS

	**PHONO NEEDLE TIP PLUG** DESC: Nickel plated brass body, chuck design to hold .058 replaceable phono needle. Wire solders to body. RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Phono needle, brass alloy. Net per C 20.00 No. 33-100 Color Red; No. 33-102 Color Blk
	**INSULATED TIP PLUG** DESC: Solderless type, wire tightens under knurled collar; machined brass body, nickel plated. RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Phono needle, brass alloy. Net per C 17.00 No. 33-106 Color Red; No. 33-108 Color Blk

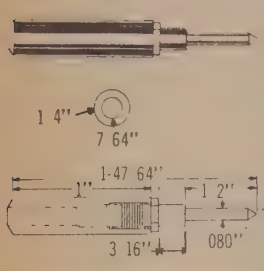
WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

GC ELECTRONICS

ELECTROCRAFT ELECTRONIC COMPONENTS

TIP PLUGS

ILLUSTRATIONS	DESCRIPTION

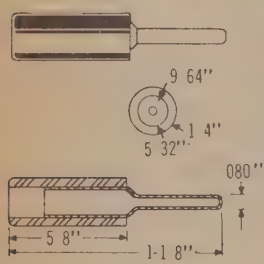


SUBMINIATURE PHONE TIP PLUG

DESC: Standard tip, extra-small diameter, nickel plated, brass body. Solder-type.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Fibre, Per MIL-F-1148-A type BH.
TIP: Brass, nickel plated

Net per C 20.00

No.	Color	No.	Color
33-112	Red	33-114	Blk

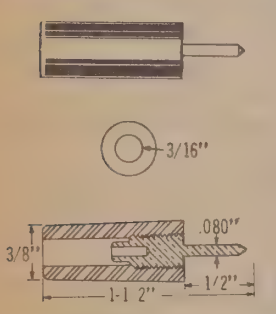


INSULATED HOLLOW PHONETIP

DESC: Drawn brass, nickel plated, solder type.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Hollow, brass, nickel plated.

Net per C 12.00

No.	Color	No.	Color
33-116-1	Red	33-116-2	Blk

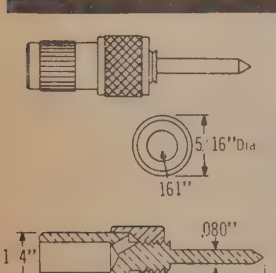


INSULATED SHORT TIP PLUG

DESC: Specially designed where minimum amount of metal can be exposed. Solder type..
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

Net per C 13.20

No.	Color	No.	Color
33-118	Red	33-120	Blk

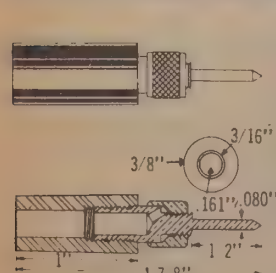


"JR." SOLDERLESS PHONE TIP

DESC: Press fit, nickel plated brass body; wire fastens under knurled collar.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
TIP: Brass, nickel plated..

Net per C 15.00

No.			
33-142			



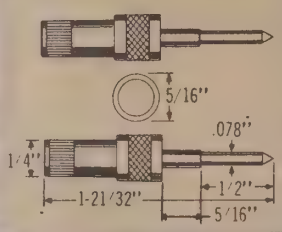
"JR." SOLDERLESS PHONE TIP

DESC: Threaded nickel plated brass body. Wire fastens under knurled collar.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

Net per C 17.00

No.	Color	No.	Color
33-144-1	Red	33-144-2	Blk

ILLUSTRATIONS	DESCRIPTION

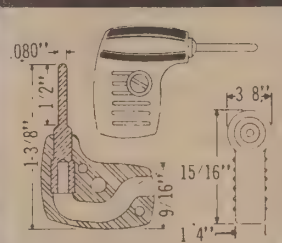


SOLDERLESS TIP PLUG

DESC: All metal;wire fastens under knurled collar
BODY: Precision machined brass, nickel plated
TIP: Brass, nickel plated.

Net per C 15.00

No.			
33-146			

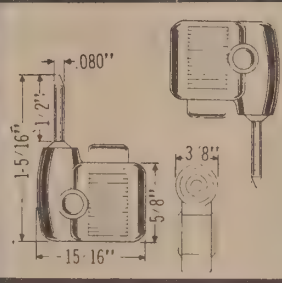


RIGHT ANGLE TIP PLUG

DESC: Right angle "gun" tip (meter plug). Lead wire solders to body.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Plastic, per MIL-P-14 CFG.
TIP: Brass, nickel plated.

Net per C 30.0

No.	Color	No.	Color
33-128	Red	33-130	Blk

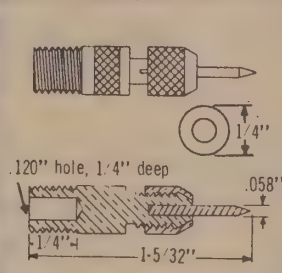


"TRIGGER-QUIK" TIP PLUG

DESC: Right angle plug, spring loaded solderless wire connection.
RATING: 12 amps AC for 10 degree C Temp. rise continuous duty.
HANDLE: Molded Plastic, per MIL-P-14 CFG.
TIP: Brass, nickel plated

Net per C 39.0

No.	Color	No.	Color
33-132	Red	33-134	Blk

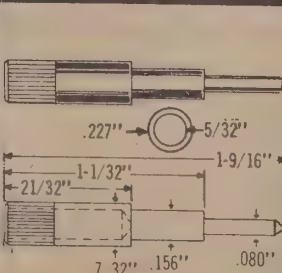


NEEDLE TIP AND CHUCK

DESC: Threaded shank type..Tip is removable fo quick replacement.
BODY: Brass, nickel plated
TIP: Steel, nickel plated phono needle.

Net per C 19.0

No.			
33-149			

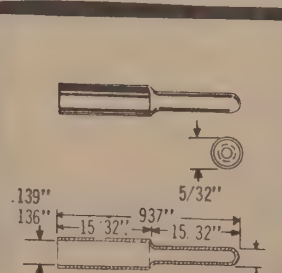


HEAVY DUTY PHONE TIP PLUG

DESC: Knurled shank for press fit into Test Prod handles, drilled with 7/32" hole; extra large well for lead wires up to No. 10 gauge; solder connection.
BODY: Brass, nickel plated.
TIP: Brass, nickel plated phone tip.

Net per C 13.0

No.			
33-152			



STANDARD HOLLOW PHONE TIP

DESC: Solder type, hollow design.
BODY: Drawn brass, nickel plated.
TIP: Hollow, brass, nickel plated.

Net per C 1.70

No.			
33-154			

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

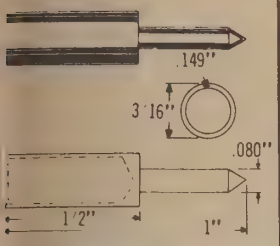
Net

© United Technical Publication

ELECTROCRAFT ELECTRONIC COMPONENTS

TIP PLUGS

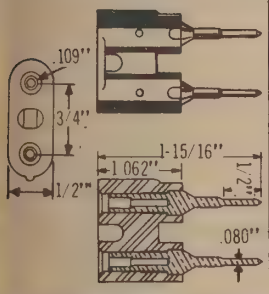
ILLUSTRATIONS | DESCRIPTION



HEAVY DUTY PHONE TIP PLUG

DESC: Solder type. Solid metal tip for heavy duty applications.
BODY: Brass, nickel plated.
TIP: Solid, brass, nickel plated.

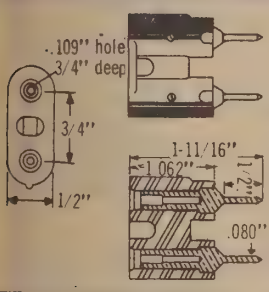
	Net per C 3.50
No.	
33-158	



DUAL STANDARD TIP PLUG

DESC: Solderless type; brass, nickel plated body Designed mates with No. 33-206.
BODY: Molded Cycolac plastic, per MIL-M-22544, type 4.
TIPS: 2 brass, nickel plated tips on ¾" centers.

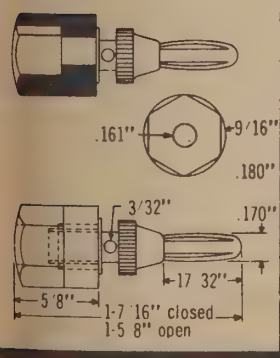
	Net per C 74.00
No.	
33-174	



DUAL SHORT TIP PLUG SOLDERLESS TYPE

DESC: Brass, nickel plated body. Mates with No. 33-206.
BODY: Molded Cycolac plastic, per MIL-M-22544, type 4.
TIPS: 2 brass, nickel plated tips on ¾" centers.

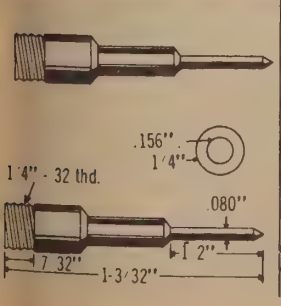
	Net per C 72.00
No.	
33-176	



COMBINATION POST-PLUG

DESC: Captive head, type; for converting panel-mounted banana jack to 5-way binding post termination. Accepts solid or standard wire, spade lug, phone tip, banana plug or alligator clip. Brass, nickel plated body.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon, per MIL-M-20693A.
TIP: Four leaved, phosphor bronze, nickel plated spring.

			Net per C 30.00
No.	Color	No.	Color
33-166-1	Red	33-166-2	Blk

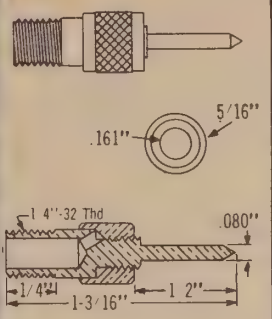


HEAVY DUTY PHONE TIP PLUG

DESC: All metal, nickel plated brass body is large enough to accept standard banana plug. Body is threaded to fit into plastic handle.

	Net per C 15.00
No.	
33-170	

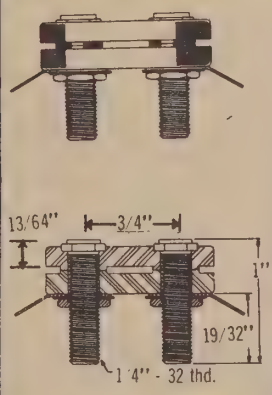
ILLUSTRATIONS | DESCRIPTION



"JR" SOLDERLESS PHONE TIP "THREADED"

DESC: Threaded shank type. Wire fastens under knurled collar.
BODY: Brass, nickel plated.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
TIP: Brass, nickel plated phone tip.

	Net per C 15.00
No.	
33-172	

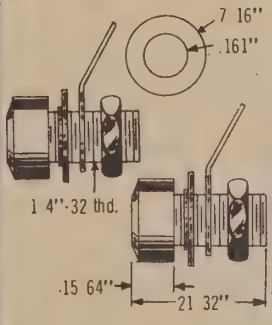


DUAL BANANA JACK

DESC: Mounts in 2 - 3/8" holes on 3/4" centers in panel up 1/4" thick. Accepts standard and dual banana plugs. Solder connection.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. Capacitance 2.0 mmfd. between conductors, 4.0 mmfd. to panel.
HEAD: Insulated, molded black styrene, per MIL-L-P416, type 1.
BODY: Brass, nickel plated.

	Net per C 50.00
No.	
33-179	

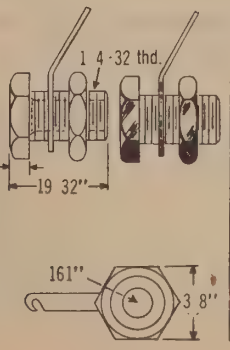
BANANA & TIP PLUG JACKS



BANANA JACK

DESC: Mounts in 5/16" hole. Fits panel up to 3/8" thick. Accepts Standard Banana Plug.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Melamine MIL-14F, type CMC.
BODY: Brass, nickel plated; with tinned solder lug.

			Net per C 15.00
No.	Color	No.	Color
33-180	Red	33-182	Blk



BANANA JACK

DESC: Mounts in 1/4" hole and fits panel up to 3/8" thick Accepts standard banana plugs.
BODY: Brass, nickel plated; with tinned solder lug.

	Net per C 13.00
No.	
33-184	

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

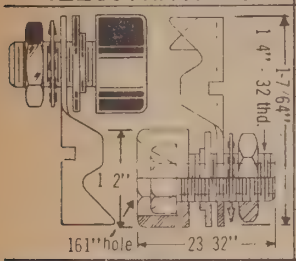
© United Technical Publications

GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA & TIP PLUG JACKS

ILLUSTRATIONS | DESCRIPTION

HEAVY DUTY BANANA JACK

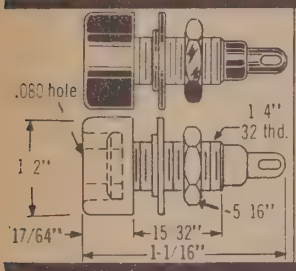


DESC: Exclusive hex design prevents turning in assembly; with fibre insulating washer.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic per MIL-P-14 CFG.
BODY: Brass, nickel plated; with heavy duty solder lug.

Net per C 18.00

No.	Color	No.	Color
33-186	Red	33-188 BU	Blk

TIP JACK

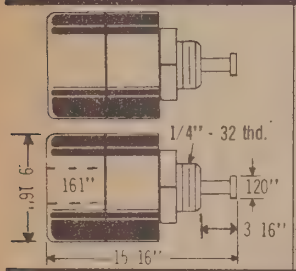


DESC: Positive-hold hex lock between molded head and jack body. Exclusive hex design prevents turning in assembly. Insulated.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic, per MIL-P-14 CFG.
BODY: Brass, nickel plated.

Net per C 23.00

No.	Color	No.	Color
33-190-1	Red	33-190-2	Blk

HIGH VOLTAGE NYLON BANANA JACK

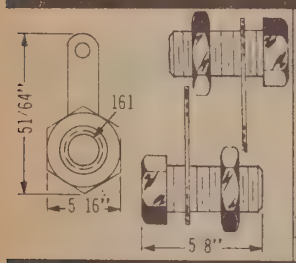


DESC: High voltage flashover to panel prevented by heavy molded nylon body and cup washer.
HANDLE: Molded nylon per MIL-P-20693A.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 5KV 60 cycle continuous working voltage. Millivolt drop per MIL-J-6751.
BODY: Brass, bright nickel plated per QQ-N-290, type V (FC).

Net per C 45.00

No.	Color	No.	Color
33-191-1	Red	33-191-2	Blk

BANANA JACK

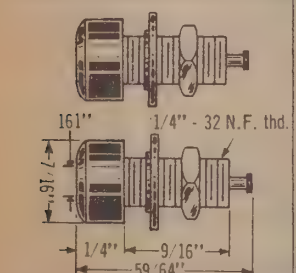


DESC: All metal body, with hex mounting nut. Mounts in 1/4" hole; fits panel up to 3/8".
BODY: Brass, nickel plated with tinned solder lug.

Net per C 13.00

No.			
33-192			

INSULATED BANANA JACK

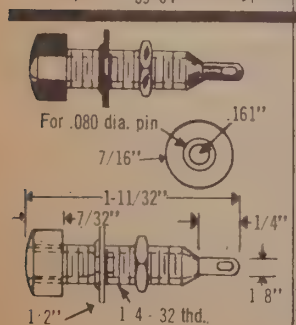


DESC: Mounts in 5/16" hole in panels up to 3/8" thick, solder direct to turret terminal. Supplied with hex nut and fibre washer. Accepts standard banana plugs.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: TB-30 Melamine-MIL-14F type CMG - red and black. Urea - LU-671 type 1 - colors.
BODY: Brass, nickel plated.

Net per C 17.00

No.	Color	No.	Color
33-193-1	Red	33-193-2	Blk

BANANA-TIP JACK COMBINATION



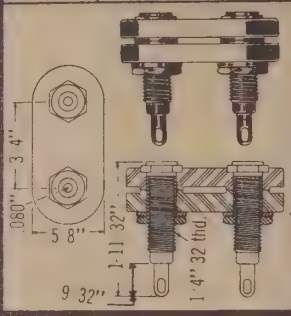
DESC: Accepts both Banana Plug and Standard Tip Plug; with extruded fibre washer and mounting nut. Mounts in 5/16" hole; fits panel up to 5/8" thick.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: TB-30 Melamine-MIL-14F type CMG - red and black. Urea - LU-671 type 1 - colors.
BODY: Brass, nickel plated; phosphor bronze contact.

Net per C 20.00

No.	Color	No.	Color
33-194-	Red	33-196	Blk

ILLUSTRATIONS | DESCRIPTION

DUAL BANANA AND STANDARD TIP PLUG

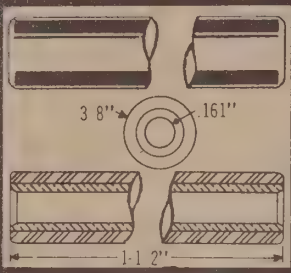


DESC: Mounts in two 3/8" holes on 3/4" centers on panels up to 5/16" thick. Mates with dual banana plug No. 33-010 and dual tip plug 33-174 with two hex nuts and washers.
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HEAD: Molded black styrene body, per MIL-L-F 416, type 1.
BODY: Brass, nickel plated; phosphor bronz contacts.

Net per C 73.0

No.			
33-197			

BANANA PLUG SPLICE

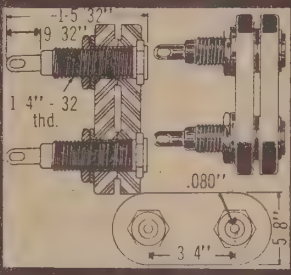


DESC: For coupling 2 standard Banana Plugs. Fo extending test leads, etc.
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A an ASESA letter QUD4-59-4820 type 3.
BODY: Brass

Net per C 25.0

No.	Color	No.	Color
33-200	Red	33-202	Blk

DUAL TIP JACK ASSEMBLY

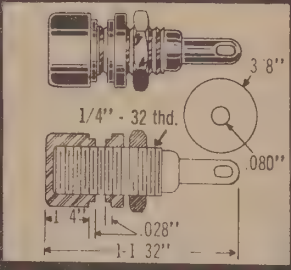


DESC: Mounts in two 3 8" holes on 3 4" centers in panels up to 1 4" thick. Accepts phone tip plugs; with two hex nuts..
RATING: 15 amps AC for 10 degree C Temp. rise. continuous duty.
HEAD AND WASHER: Molded black styrene body per MIL-L-P416, type 1..

Net per C 55.0

No.			
33-206			

INSULATED TIP JACK

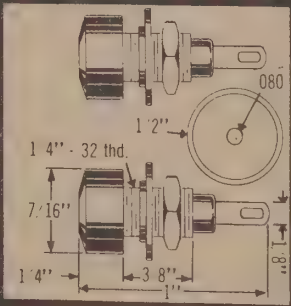


DESC: Requires 5/16" hole; fits panels up to 1/4" thick; with hex nut.
HEAD: Dupont Nylon, per MIL-M-20693A.
BODY: Brass, nickel plated.

Net per C 27.0

No.	Color	No.	Color
33-208-1	Red	33-208-2	Blk

STANDARD TIP JACK

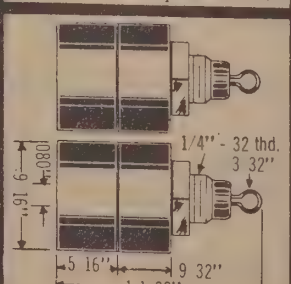


DESC: Requires 5/16" mounting hole; fits panels up to 1/4" thick with insulating washer & hex nut
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HEAD: Molded plastic, red and black per MIL-M 14F type CMG. Yellow, green and blue per LU-67 type 1.
BODY: Brass, nickel plated; phosphor bronze contact.

Net per C 15.0

No.	Color	No.	Color
33-210	Red	33-212	Blk

HIGH VOLTAGE NYLON PHONE TIP JACK



DESC: High voltage flashover to panel prevented by heavy molded nylon body and cup washer. Colors conform to Federal Standard 595. Hex nuts and insert shell are nickel plated brass per QQ-N 290 type V (FC). Phosphor bronze contact, silver plated per QQ-S-365, overall gold plated. Withstands 100 hours salt spray test.
HANDLE: Molded nylon body per MIL-P-20693A

Net per C 45.0

No.	Color	No.	Color
33-214-1	Red	33-214-2	Blk

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

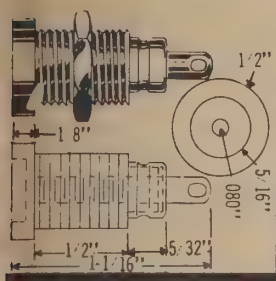
Net

© United Technical Publication

GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA & TIP PLUG JACKS

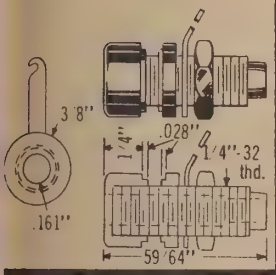
ILLUSTRATIONS	DESCRIPTION



TIP JACK, ALL-INSULATED

DESC: Mounts in 3/8" hole; fits panel up to 5/16" thick; with mounting nut.
RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 5K Volts 60 cycle AC continuous working voltage. Capacitance 3.0 mmfd.
BODY: Molded of nylon per MIL-M-20693A.
CONTACT: Phosphor bronze.

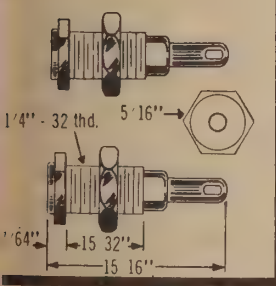
		Net per C 20.00	
No.	Color	No.	Color
33-216	Red	33-218	Blk



MINIATURE BANANA JACK

DESC: Insulating washer provides isolation from panel. Fits 5/16" mounting hole; for panels up to 1/4" thick.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.
BODY: Brass, nickel plated body; tinned solder lug.

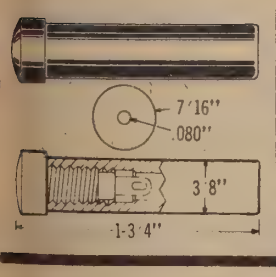
		Net per C 25.00	
No.	Color	No.	Color
33-220-1	Red	33-220-2	Blk



TIP JACK, ALL-METAL

DESC: Brass nickel plated body; mounts in 1/4" hole; fits panels up to 3/8" thick.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
TIP: Phosphor bronze contact.

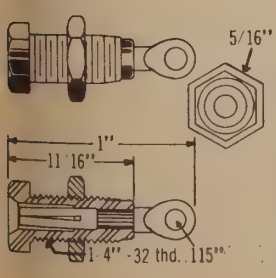
		Net per C 15.00	
No.			
33-226			



TIP JACK, IN-LINE STYLE

DESC: Brass nickel plated body; mounts on end of cords. For test lead extensions, etc.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter, QUD4-59-4820 type 3.
CONTACT: Phosphor bronze.

		Net per C 21.00	
No.	Color	No.	Color
33-228	Red	33-230	Blk

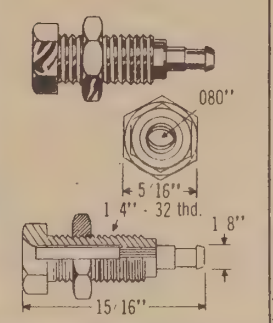


NYLON TIP JACK WITH SPADE TERMINAL

DESC: Fits phone tip plugs. Mounts in 1/4" hole in panel up to 1/4" thick with hex nut.
BODY: Insulated molded nylon per MIL-M-20693A.
CONTACT: Spade terminal..

		Net per C 30.00	
No.	Color	No.	Color
33-245-1	Red	33-245-2	Blk

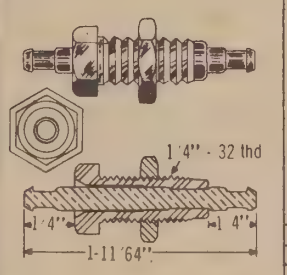
ILLUSTRATIONS	DESCRIPTION



NYLON TIP JACK (WRAP AROUND TYPE)

DESC: Hex head for sure grip tightening. Mounts in 1/4" hole in panels up to 1/4" thickness.
SALT SPRAY TEST: 100 hours.
INSULATION RESISTANCE: 5000 Meg. Resistance Ohms.
RATED VOLTAGE & CURRENT: 1000 volts peak at 5 amp max.
OPERATING TEMPERATURE: -55 degree to + 150C
NOMINAL CAPACITY: -2.0 mmf
TEST VOLTAGE: 9000 volts DC peak.
BODY: Nylon per MIL-M-20693A.

		Net per C 21.00	
No.	Color	No.	Color
33-240	Red	33-242	Blk

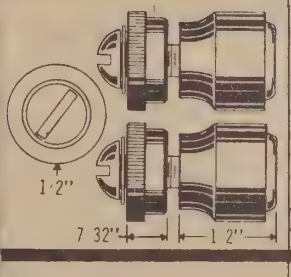


NYLON FEED-THRU JACK

DESC: Feed-thru type. Fits all standard phone tip plugs. Mounts in 1/4" hole in panel up to 1/4" thick with hex nut.
BODY: Insulated nylon per MIL-M-20693A.
CONTACT: Brass, silver plated.

		Net per C 28.20	
No.	Color	No.	Color
33-247-1	Red	33-247-2	Blk

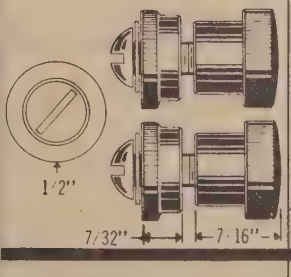
BINDING POSTS



BINDING POST

DESC: Brass nickel plated body, supplied with 8-32 mounting screw and lock washer.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic.

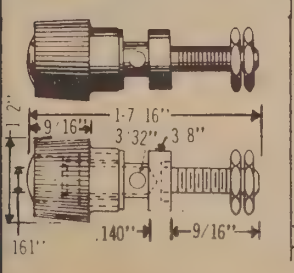
		Net per C 24.00	
No.	Color	No.	Color
33-250	Red	33-252	Blk



BINDING POST

DESC: Brass, nickel plated body, comes complete with 8-32 threaded screw- 1/2" long, nickel plated, brass lockwasher. Head diameter 1/2"
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded bakelite.

		Net per C 24.00	
No.	Color	No.	Color
33-254	Red	33-255	Blk



BINDING POST COMBINATION TYPE

DESC: Brass nickel plated body. Accepts banana plug, tip plug, bare wire, or spade lug. Threaded No. 8-32 mounting stud 1/2" long; supplied with 2 hex nuts.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 22.00	
No.	Color	No.	Color
33-256	Red	33-258	Blk

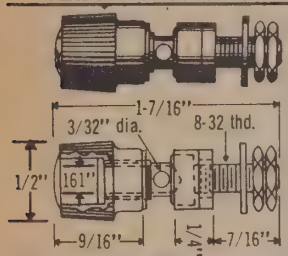
WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

GC ELECTRONICS

ELECTROCRAFT ELECTRONIC COMPONENTS

BINDING POSTS

ILLUSTRATIONS | DESCRIPTION

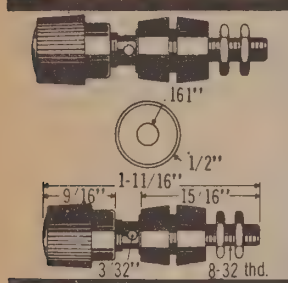


BINDING POST COMBINATION TYPE

DESC: Similar in design and construction as 33-256/8, except, supplied with molded shoulder-type plastic washers to insulate post from chassis.
RATING: 15 amps AC for 10 degree C Temp..rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

Net per C 25.00

No.	Color	No.	Color
33-260	Red	33-262	Blk

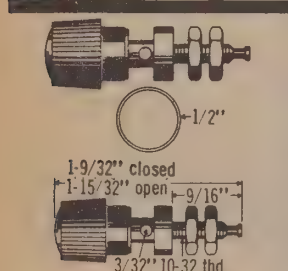


BINDING POST INSULATED UNIVERSAL TYPE

DESC: Brass, nickel-plated body with threaded No.8-32 mounting stud; accepts banana plug, tip plug, needle tip, spade lug, alligator clip or bare wire. Heavy duty spacers insulate post from chassis. Mounts in 5/16" hole.
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

Net per C 45.00

No.	Color	No.	Color
33-264	Red	33-266	Blk

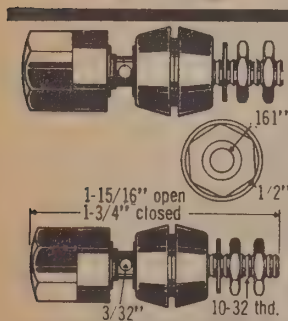


BINDING POST

DESC: Brass, nickel plated body with insulating washer and two hex nuts. 8-32 threaded stud. Accepts phone tip plug, spade lug, alligator clip, banana plug or stranded wire.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 30.00

No.	Color	No.	Color
33-265	Red	33-267	Blk

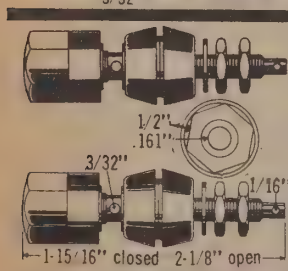


HEAVY DUTY BINDING POST

DESC: Brass, nickel plated body; accepts standard banana or tip plug, spade lug alligator clip or bare wire; supplied with a thick molded insulating spacer; punched, keyed slot for mounting washers; spacer has "D" shaped shoulder; shoulder keys into chassis mounting hole and prevents post from turning; supplied with two hex nuts.
RATING: (Maximum) 30 amps...2000 RMS Volt.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 42.00

No.	Color	No.	Color
33-268	Red	33-270	Blk

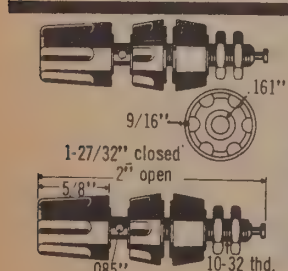


HEAVY DUTY BINDING POST

DESC: Identical in design to binding post No. 33-268/270, except, that end of stud is milled flat and drilled for solder connection.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 42.00

No.	Color	No.	Color
33-272	Red	33-274	Blk



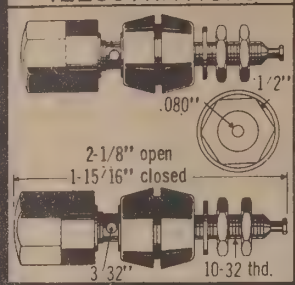
BINDING POST

DESC: 5-way, nylon. Fluted style, insulated, Banana adapter type. Wrap around tips, brass nickel plated.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 8.00

No.	Color	No.	Color
33-279-1	Red	33-279-2	Blk

ILLUSTRATIONS | DESCRIPTION

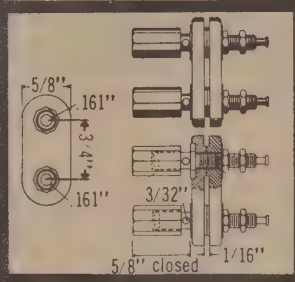


NYLON BINDING POST

DESC: Tip plug receptacle .080" I.D. Wire hole at right angle to flat on insulated washers. Punched keyed slot for mounting washers. Mounts in 3/8" hole in panels up to 1/4" thick. Solder connection to stud. Body and inserts are brass, bright nickel plated.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 42.00

No.	Color	No.	Color
33-275-1	Red	33-275-2	Blk

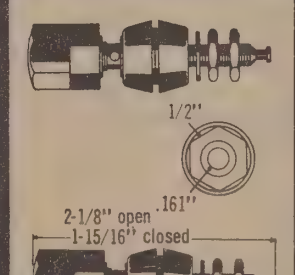


DUAL BINDING POST

DESC: Accepts standard dual banana plug and wire, etc. Mounts in two 3/8" holes on 3/4" centers in 1/16" to 1/4" panels. With wrap-around solder studs.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
BODY: Black plastic.

Net per C 75.00

No.		
33-276		

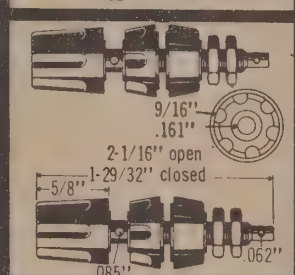


HEAVY DUTY BINDING POST

DESC: Brass nickel plated body; accepts banana or tip plug, spade lug, alligator clip or bare wire; supplied with a thick molded insulating spacer with "D" shaped shoulder; shoulder keys into chassis mounting hole and prevents post from turning; maximum rating 30 amps...2000 RMS volts; with 2 hex nuts.
RATING: 30 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 36.00

No.	Color	No.	Color
33-278	Red	33-280	Blk

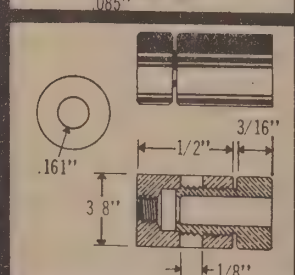


BINDING POST

DESC: 5-way, nylon. Fluted style, insulated, banana adapter type. Spade type tip...brass nickel plated.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

Net per C 30.00

No.	Color	No.	Color
33-281-1	Red	33-281-2	Blk

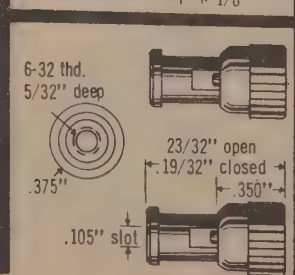


BINDING POST, ALL METAL

DESC: Knurled cap; accepts banana plug, phone tip or wire. Mounts to panel with No. 6-32 screw (not supplied).
BODY: Brass, nickel plated..

Net per C 23.00

No.		
33-282		



BINDING POST

DESC: Compression type, captive brass, nickel plated knurled head. Screw head down to tighten wire between body and sliding contact. Threaded internally for No.6-32 mounting screw.
BODY: Brass, nickel plated.

Net per C 15.00

No.		
33-283		

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

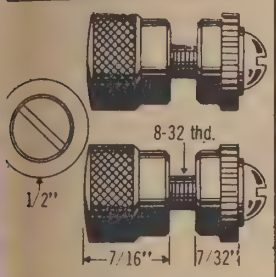
Net

© United Technical Publications

ELECTROCRAFT ELECTRONIC COMPONENTS

BINDING POSTS

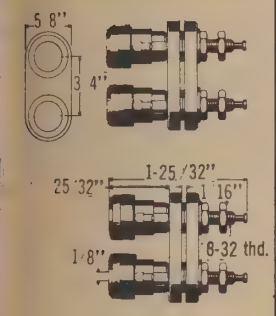
BINDING POST, ALL METAL



DESC: Knurled cap; designed for connection of bare wires or spade lugs; No.8-32 x 1/2" mounting screw and lock washer supplied.
BODY: Heavy brass, nickel plated.

	Net per C 70.00
No.	
33-284	

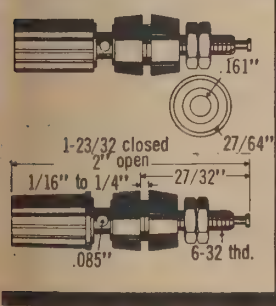
DUAL SPRING LOADED BINDING POST



DESC: Cross-slotted to accept standard phone tips or wire either forward or sideways. Molded black styrene cap; nickel plated brass body. Requires 2-3/8" holes on 3/4" centers for mounting on panels up to 1/4" thick. Accommodates phone tips or wires in side holes and secures them when pressure on cap is released. With hex nuts and flat washers.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.

	Net per C 20.00
No.	
33-298	

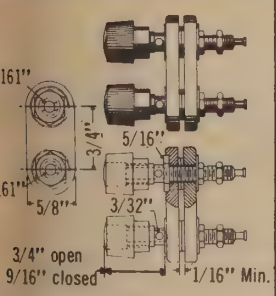
METAL BINDING POST



DESC: Gold plated, fluted brass, captive head, molded black nylon washer with gold plated brass insert. Use where internal ground circuit is isolated from chassis or panel. Accepts phone tip plug, spade lug, banana plug, alligator clip or wire strand.

	Net per C 55.00
No.	
33-287	

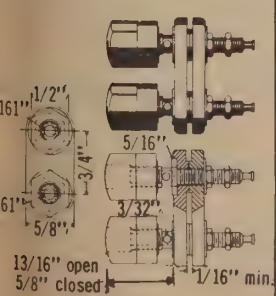
DUAL BINDING POST INSULATED



DESC: 5-way binding post with fluted heads. Accepts Dual Banana Plug. Mounts in two 3/8" holes, on 3/4" centers in panels from 1/16" to 1/4". Has soldered studs. With four hex nuts, black styrene washers.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

	Net per C 70.00
No.	
33-288	

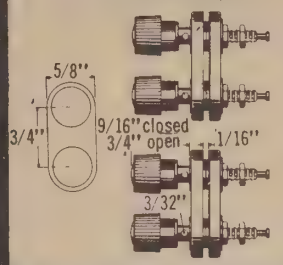
DUAL BINDING POST



DESC: Accepts standard phone tips, forward or sideways. Brass, nickel plated body. Mounts in two 3/8" holes on 3/4" centers in panels up to 1/4" thick. Accommodates single or dual banana plugs.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 75.00	
No.	Color	No.	Color
33-290	Blk	33-299	Red

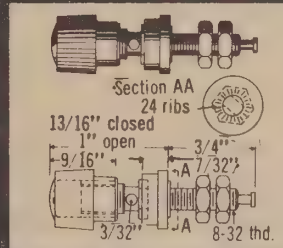
DUAL BINDING POST



DESC: Brass, nickel plated body. Molded styrene washer; cross slot accommodates phone tip forward, back or sideways. With hex nuts and washers. Mounts in two 3/8" holes on 3/4" centers on panels up to 1/4" thick.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Nylon heads per MIL-M-20693A.

		Net per C 70.00	
No.	Color	No.	Color
33-291	Blk	33-293	Red

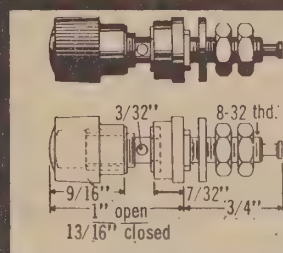
NYLON BINDING POST



DESC: Grounding type, with molded nylon, non-removable head takes direct dolder connection to stud.
RATING: 15 amps AC for 10 desgree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 35.00	
No.	Color	No.	Color
33-294-1	Red	33-294-2	Blk

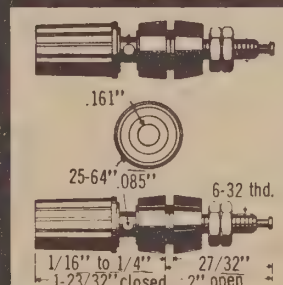
NYLON BINDING POST



DESC: Brass, nickel plated body. Takes direct solder connection to stud.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 35.00	
No.	Color	No.	Color
33-296-1	Red	33-296-2	Blk

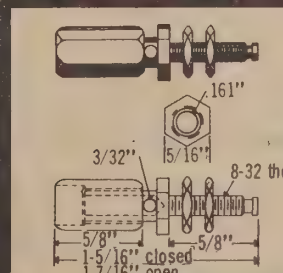
NYLON BINDING POST



DESC: Gold plated body. Miniature washers and narrow head require minimum mounting space.. Requires 5/16" round or "D" hole in panel. Wrap around solder terminal. Accepts phone tip plug, banana plug, spade lug, alligator clip or stranded wire.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 40.00	
No.	Color	No.	Color
33-297-1	Red	33-297-2	Blk

BINDING POST

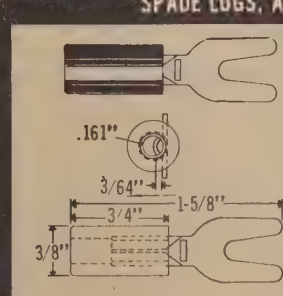


DESC: 5-way metal binding post. Can accept banana plug. Mounts in .171" hole in 1/16" to 3/8" panels. Has wrap-around solder stud 8-32 thread.

	Net per C 33.00
No.	
33-286	

SPADE LUGS, ALLIGATOR & BATTERY CLIPS

SPADE LUG, INSULATED



DESC: Tapered "fork" fits binding posts and terminal screws up to No. 10 size. Accepts soldered wire or banana plug.
RATING: 25 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
LUG: Brass, nickel plated.

		Net per C 11.00	
No.	Color	No.	Color
33-300	Red	33-302	Blk

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

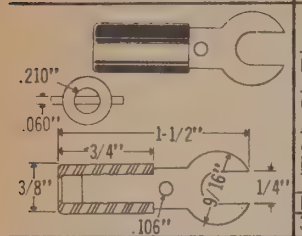
© United Technical Publications

GC ELECTRONICS ELECTROCRAFT ELECTRONIC COMPONENTS

SPADE LUGS, ALLIGATOR & BATTERY CLIPS

ILLUSTRATIONS | DESCRIPTION

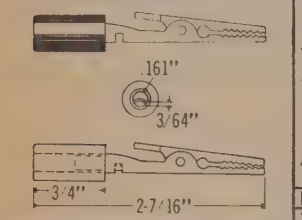
INSULATED SPADE LUG



DESC: Fits all standard multi-purpose binding posts. Wire up to No. 10 solders in front hole.
RATING: 30 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
LUG: Brass, nickel plated.

Net per C 13.00

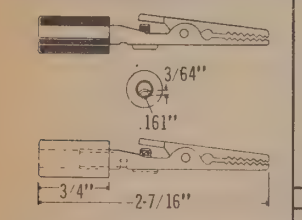
No.	Color	No.	Color
33-304-1	Red	33-304-2	Blk



DESC: 3/8" jaw opening; made of cadmium plated steel, accepts banana plug or wires. May be soldered to clip.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 8.50

No.	Color	No.	Color
33-310	Red	33-312	Blk

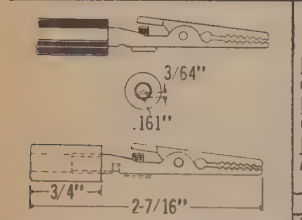


DESC: Molded plastic handle; cadmium plated steel jaws with 3/8" opening. Wire fastens with screw or soldered to clip.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 9.50

No.	Color	No.	Color
33-314	Red	33-316	Blk

ALLIGATOR CLIP SOLID COPPER

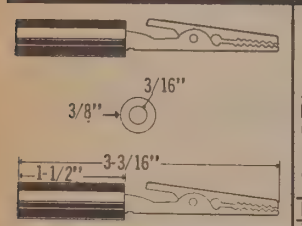


DESC: Identical to No. 33-314/16, except, made of solid copper for higher current carrying capacity.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 13.67

No.	Color	No.	Color
33-318	Red	33-320	Blk

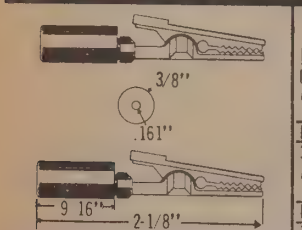
ALLIGATOR CLIP



DESC: With extra long insulated handle; cadmium plated steel jaws; 3/8" opening, wire solders to clip.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 12.50

No.	Color	No.	Color
33-322	Red	33-324	Blk



DESC: Completely insulated with black molded plastic to insure against shock or grounding. Accepts banana plug in receptacle end.

Net per C 24.00

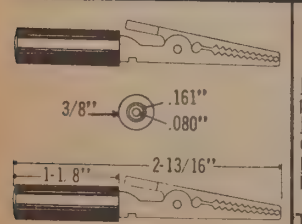
No.	Color	No.	Color
33-326-1	Red	33-326	Blk

Accepts tip plug in receptacle end.

Net per C 36.00

No.	Color	No.	Color
33-328-1	Red	33-328	Blk

ALLIGATOR CLIP ADAPTOR



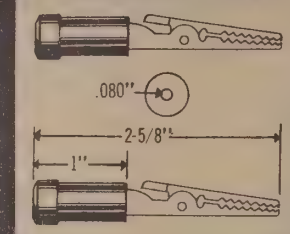
DESC: Accommodates standard tip plug, or banana plug; steel cadmium plated jaws.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty..
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 39.00

No.	Color	No.	Color
33-330	Red	33-332	Blk

ILLUSTRATIONS | DESCRIPTION

ALLIGATOR CLIP ADAPTOR

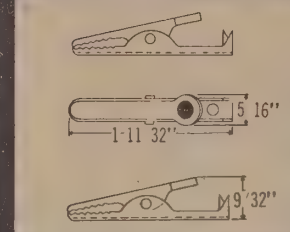


DESC: Adapts standard tip plug to alligator clips; steel cadmium plated jaws.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 33.00

No.	Color	No.	Color
33-334	Red	33-336	Blk

MINI-GATOR CLIP (MUELLER)



DESC: Miniature alligator clip. For use where space is a factor; wires solder to clip.

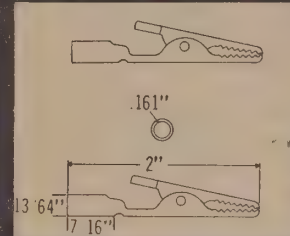
Net per C 5.16

No.	
33-342	Steel

Net per C 6.80

No.	
33-344	Copper

ALLIGATOR CLIP ALL METAL

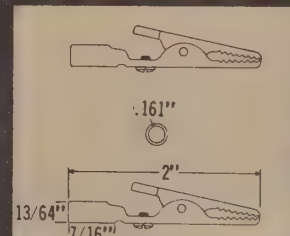


DESC: Cadmium plated jaws with 3/8" opening accepts standard banana plug or wires may be soldered directly onto clip.

Net per C 5.50

No.	
33-346	

ALLIGATOR CLIP-ALL METAL



DESC: For solderless connection of wire by means of a No. 6-32 binding head screw; also accepts banana plug.

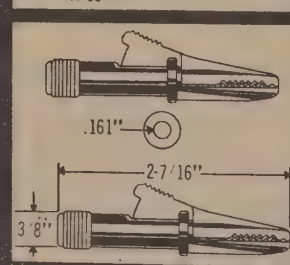
Net per C 7.00

No.	
33-348	Steel

Net per C 11.00

No.	
33-350	Copper

ALLIGATOR CLIP

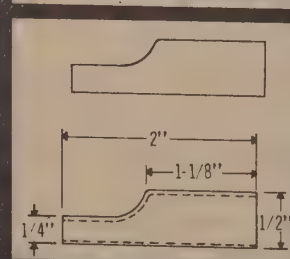


DESC: All insulated with standard Banana Plug adaptor. Molded plastic over steel jaws and clips.

Net per C 41.00

No.	Color	No.	Color
33-352-1	Red	33-352-2	Blk

ALLIGATOR CLIP INSULATOR

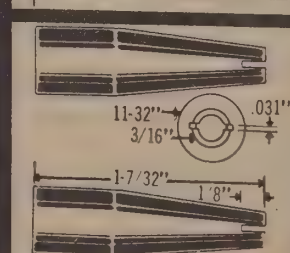


DESC: Flexible molded vinyl insulator which fits over most standard alligator clips. It completely insulates. Permits maximum jaw opening.

Net per C 4.80

No.	Color	No.	Color
33-360	Red	33-362	Blk

MINIATURE ALLIGATOR CLIP BOOTS



DESC: Molded vinyl plastic; allow maximum jaw opening of clip while still insulating clip. Miniature size.

Net per C 4.00

No.	Color	No.	Color
33-363-1	Red	33-363-2	Blk.

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

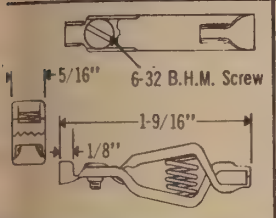
Net

© United Technical Publications

ELECTROCRAFT ELECTRONIC COMPONENTS

SPADE LUGS, ALLIGATOR & BATTERY CLIPS

ILLUSTRATIONS	DESCRIPTION

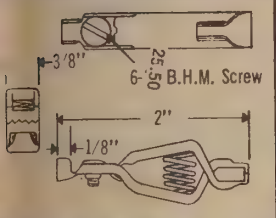


BATTERY CONNECTING & TESTING CLIP

DESC: Steel cadmium plated jaws with 1/2" spread.
RATING: 5 amps

Net per C 8.50

No.	
33-370	



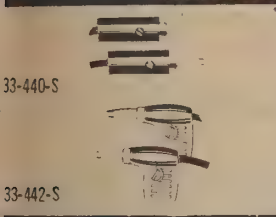
BATTERY CONNECTING & TESTING CLIP

DESC: Steel cadmium plated jaws with 9/16" spread.
RATING: 10 amps

Net per C 9.50

No.	
33-372	

TEST PRODS, LEADS & ADAPTORS



HEAVY DUTY TEST LEAD SETS

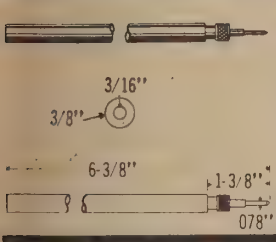
DESC: 2 New heavy duty Test Lead sets. Both sets have 5" long solderless Phone Tip Test Prods - other ends have right angle or straight Banana Plugs.

Net per pair 1.74

No. 33-440-S Straight Banana Plugs

Net per pair 2.27

No. 33-442-S Right Angle Banana Plugs

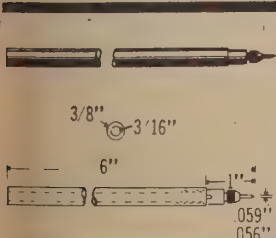


DELUXE TEST PROD

DESC: Solderless design; wire fits through handle and is fastened to tip with knurled collar. 6-3/8" long.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

Net per C 30.00

No.	Color	No.	Color
33-380	Red	33-382	Blk

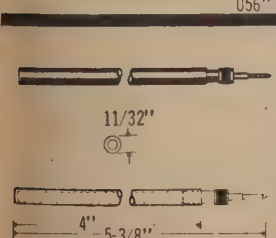


NEEDLE POINT TEST PROD

DESC: Extra safe, long handle; wire solders to nickel plated brass chuck.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 2.
TIP: Replaceable Phono Needle.

Net per C 33.00

No.	Color	No.	Color
33-384	Red	33-386	Blk

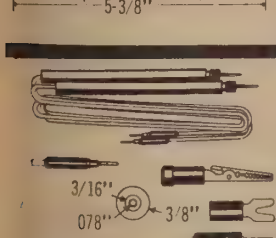


THIN HANDLE TEST PROD

DESC: Solderless wire connection; slim type for hard-to-reach places. Ideal for portable testers.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

Net per C 30.00

No.	Color	No.	Color
33-392	Red	33-394	Blk



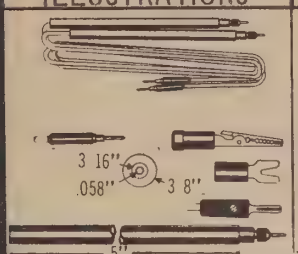
UNIVERSAL TEST LEADS

DESC: Interchangeable tips; one end solderless tip plug; other end banana plug; includes alligator clips, spade lugs and phono tip plugs, which fit on banana plug end.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.88

No.	
33-450-S	One pair, red and black

ILLUSTRATIONS	DESCRIPTION

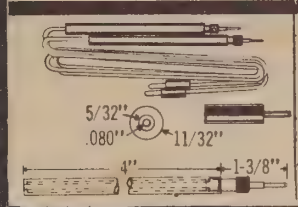


UNIVERSAL "NEEDLEPOINT" TEST LEADS

DESC: Interchangeable tips, one end interchangeable Phono needle type test prod,other end banana plug; includes spade lugs, alligator clips and phono tip plugs, which fit on banana plug end.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.88

No.	
33-452-S	One pair, red and black



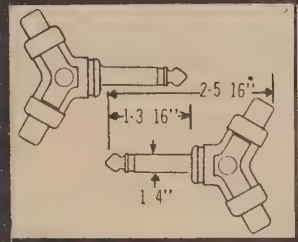
"THRIFTY" TEST LEADS

DESC: One end 4" test prods, other end terminated in standard phone tip.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair .85

No.	
33-454-S	One pair, red and black

SPECIAL CONNECTORS & ADAPTORS

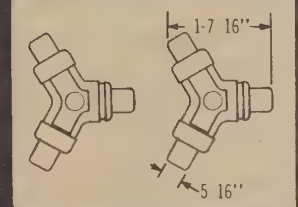


"Y" ADAPTOR

DESC: Input - 2 phono jacks (in parallel); output phone plug.

Net per C 33.11

No.	
33-880	

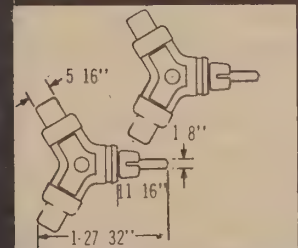


"Y" ADAPTOR

DESC: Input - 2 phono jacks (in parallel); output - single phono jack.

Net per C 3.96

No.	
33-882	

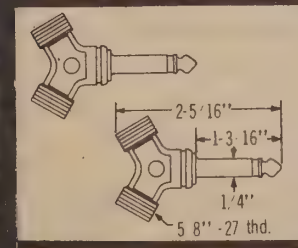


"Y" ADAPTOR

DESC: Input - 2 phono jacks (in parallel); output - standard phono pin plug.

Net per C 16.12

No.	
33-884	

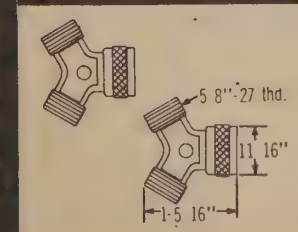


"Y" ADAPTOR

DESC: Input - 2 male microphone connectors (in parallel); output standard phone plug.

Net per C 13.11

No.	
33-886	



"Y" ADAPTOR

DESC: Input - 2 male microphone connectors (in parallel); output - female microphone connector.

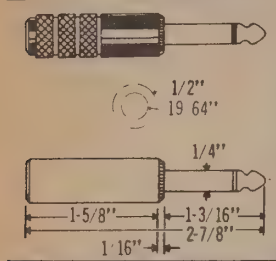
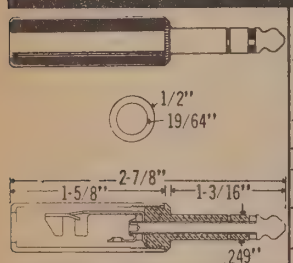
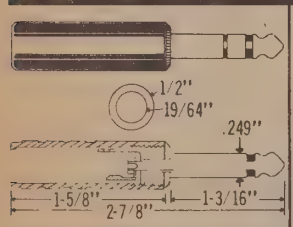
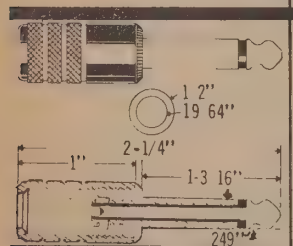
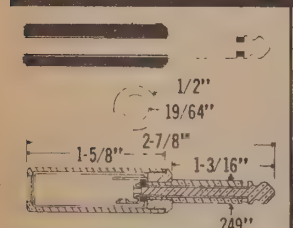
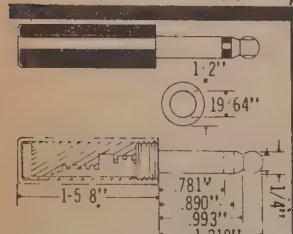
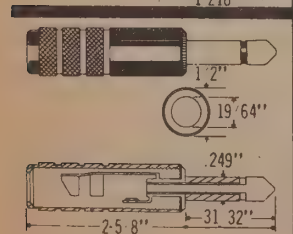
Net per C 30.28

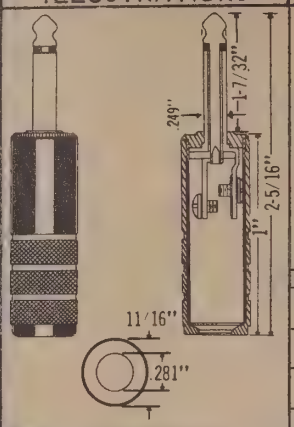
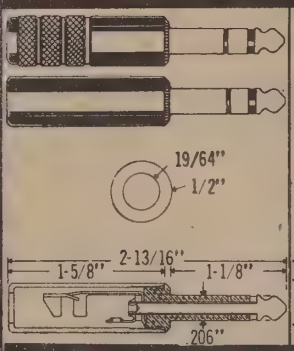
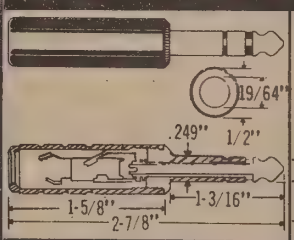
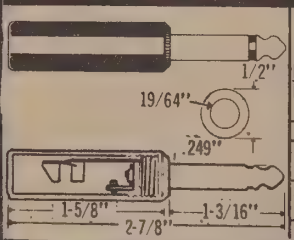
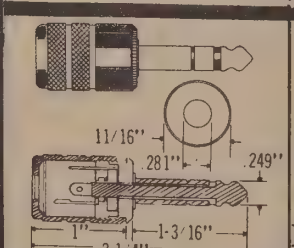
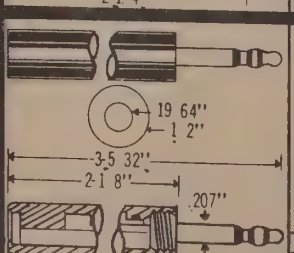
No.	
33-888	

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

PHONE PLUGS

ILLUSTRATIONS	DESCRIPTION
	**2-COND., SCREW TERMINALS** RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. 750 volts 60 cycle AC continuous working voltage. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 50.98 No. 33-600 | with black plastic handle. Net per C 50.98 33-602 | with red plastic handle. Net per C 70.81 33-604 | with metal (shielded) handle.
	**2-COND., CLAMP OR SOLDER** DESC: Standard size plug, with large "grounding" terminals which clamps around cable insulation or shield, and acts as strain relief. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 48.15 No. 33-606 | With black plastic handle. Net per C 48.15 33-608 | with red plastic handle. Net per C 67.97 33-610 | with metal (shielded) handle.
	**TWO-CONDUCTOR PHONE PLUG, PLAIN SOLDER LUGS** DESC: Standard size plug. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 42.48 No. 33-612-1 | Color Red | No. 33-612-2 | Color Black
	**"STUBBY" SHIELDED TWO-CONDUCTOR PHONE PLUG** DESC: Standard phone plug with special, short metal handle; plain solder lugs. Net per C 53.81 No. 33-614
	**STANDARD SHIELD TWO-CONDUCTOR PHONE PLUG** DESC: Regular plug with metal (shielded) handle, plain solder lugs. Net per C 84.97 No. 33-616
	**TWO-CONDUCTOR PHONE PLUG TYPE PJ-055B** DESC: Solder terminal and screw connection; supplied with black, break-resistant molded shell. Net per C 84.97 No. 33-618
	**SHORT FINGER, 2-COND. PHONE PLUG** DESC: Special short finger (barrel) type plug to connect microphone or telephone pickup to Revere Wollensack tape recorders. Combination clamp and solder lug connection; metal shielded handle. Net per C 87.80 No. 33-620

ILLUSTRATIONS	DESCRIPTION
	**LARGE HANDLE 2-COND. PHONE PLUG** DESC: Standard size plugs with sturdy large handles where space is no factor; all supplied with screw type terminals. RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. 750 volts 60 cycles AC working voltage. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 53.81 No. 33-622 | with black plastic handle, 1-1/2" long Net per C 53.81 33-624 | with red plastic handle, 1-1/2" long. Net per C 67.97 33-626 | with metal (shielded) handle, 1" long Net per C 84.97 33-628 | with metal (shielded) handle, 2-1/16"
	**"THIN-FINGER" 2-COND. PHONE PLUGS** DESC: Special plugs, with undersize barrel diameter of .206", for applications where polarized input is desired to distinguish between different connections. Plugs have combination clamp and solder lug connection and mate with jacks No. 33-700/2. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 50.98 No. 33-630-1 | Color Red | No. 33-630-2BU | Color Blk Net per C 67.97 33-632 | with metal (shielded) handle.
	**3-CONDUCTOR PHONE PLUG: COMB. CLAMP AND SOLDER LUG TERMINALS** HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 70.81 No. 33-640-1 | Color Red | No. 33-640-2BU | Color Blk Net per C 87.80 33-642 | Metal
	**SCREW TERMINALS 3-CONDUCTOR PHONE PLUG** HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 79.30 No. 33-644 | with black plastic handle Net per C 79.30 33-646 | with red plastic handle Net per C 93.46 33-648 | with metal (shielded) handle
	**LARGE HANDLE 3-CONDUCTOR PHONE PLUG** DESC: For heavy duty applicator; can accommodate large diameter cables, with room in handle for wired-in resistors or capacitors; with 1" long metal (shielded) handle. Net per C 90.63 No. 33-650
	**3-CONDUCTOR PHONE PLUG, TYPE PJ-068B** DESC: With solder terminal and screw connection; made in accordance with military specifications. Net per C 203.25 No. 33-654

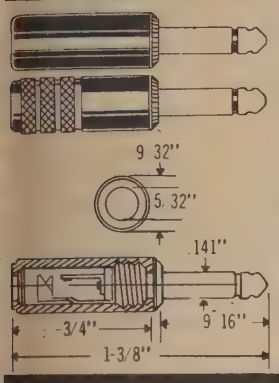
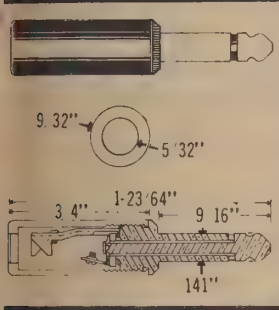
WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

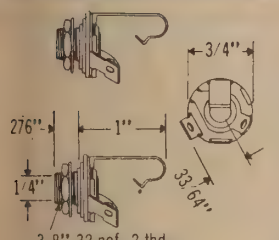
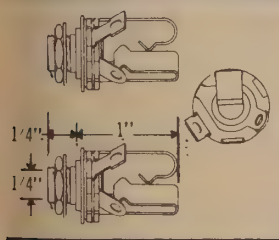
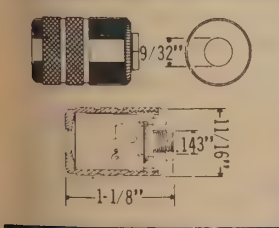
© United Technical Publications

GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

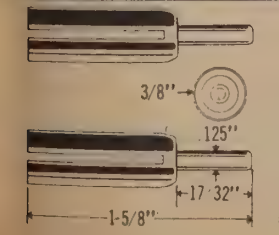
PHONE PLUGS

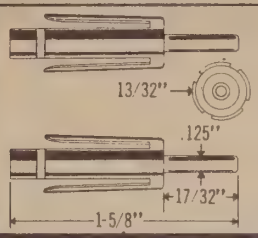
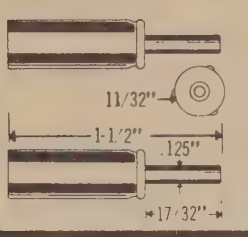
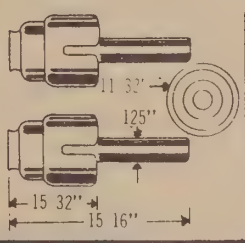
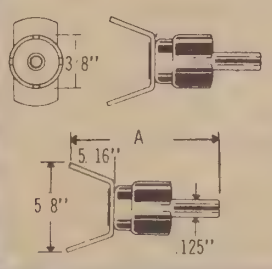
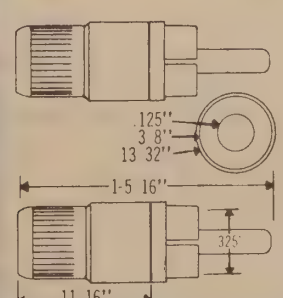
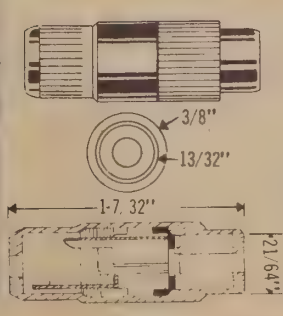
ILLUSTRATIONS	DESCRIPTION
	**MIN. PHONE PLUGS COMB. CLAMP & SOLDER TER.** DESC: These small plugs are designed for use with hearing aids, pocket radios, portable recorders, etc. Two-conductor style; tested for 500 V breakdown. RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 65.14 No. 33-660 — with metal (shielded) handle Net per C 48.15 No. 33-662 — with black plastic handle Net per C 48.15 No. 33-664 — with red plastic handle
	**MIN. PHONE PLUGS COMB. CLAMP & SOLDER TER.** DESC: Same plug as 33-660 except for different style terminals. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 67.97 No. 33-666 — with metal (shielded) handle. Net per C 50.98 No. 33-668 — with black plastic handle. Net per C 50.98 No. 33-670 — with red plastic handle.

PHONE JACKS

	**PANEL MOUNTING TWO-CONDUCTOR PHONE JACKS** DESC: Open circuit, 2-conductor. RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage. WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1. Net per C 28.32 No. 33-690
	**PANEL MOUNTING TWO- CONDUCTOR PHONE JACKS** DESC: Panel mounting - two conductor Phone Jack. Use with Revere/Wollensach type. Will accommodate 33-620 phone plug. Net per C 31.51 No. 33-691
	**MINIATURE CORD MOUNTED JACKS** DESC: Miniature type, mates with plugs No. 33-660 through 33-670, with solder lugs and metal (shielded) handle. Net per C 79.30 No. 33-746

PHONO PIN PLUGS & JACKS

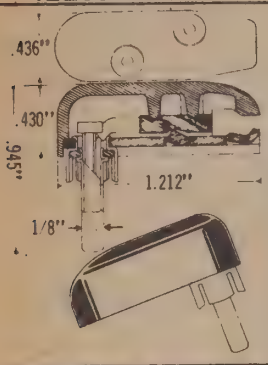
	**PHONO PLUGS** DESC: Motorola type, tube pin nickel plated-1/8". Pin extends from split brass, cadmium plated shell. Provides positive ground connection when inserted into connector. Net per C 10.35 No. 33-765

ILLUSTRATIONS	DESCRIPTION
	**PHONO PLUG** DESC: Motorola type, tube pin nickel plated-1/8". Pin extends from split brass shell, designed for use with small dismeter cable. Shell is cadmium plated. Net per C 10.35 No. 33-766
	**PHONO PLUG** DESC: Motorola type 1/8" tube pin extends from solid brase, cadmium plated shell, small ribbed. Net per C 10.35 No. 33-767
	**PHONO PLUG** DESC: Solder type. Net per C 5.83 No. 33-768 — 15/16" overall Net per C 5.66 No. 33-770 — 13 16" overall
	**PHONO PLUG** DESC: New RCA type, 1/8" tube pin, nickel plated, brass, cadmium plated shell. Eliminates damaging shielded cable when connecting. Short Pin (13/16" overall) Long Pin (1" overall) Net per C 7.50 No. 33-769 — A: short 1-1/16"
	**PHONO PLUG** DESC: Combination clamp, solder type, with removable metal (shielded) handle. Much easier to attach than the standard phono plug, and provides "finished" appearance. Mates with 33-774. Net per C 28.32 No. 33-772
	**PHONO JACK, CORD MOUNTED** DESC: Also known as "extension" or "inline" jacks. Combination clamp and solder terminal; removable metal (shielded) handle. Mates with 33-772. Net per C 36.82 No. 33-774

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

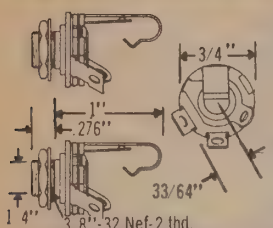
GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

PHONO PIN PLUGS & JACKS

ILLUSTRATIONS	DESCRIPTION
	**SOLDERLESS PHONO PLUGS** DESC: Completely new design, requires only stripping of cable, inserting in plastic shell, and tightening of assembly with 2 screws. Positive, noise-free pressure connection without soldering. Right angle style, designed for regular shielded cable with approximately 3/16" OD. Net per C 23.32

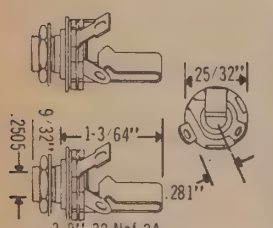
No.	
33-776	grey plastic shell
33-778	black plastic shell
33-780	red plastic shell
33-782	yellow plastic shell
33-784	blue plastic shell

PHONE JACKS



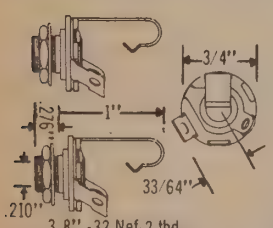
PANEL MOUNTING 2-CONDUCTOR PHONE JACKS
DESC: Closed circuit, 2-conductor.
RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage.
WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1.
Net per C 31.15

No.	
33-692	



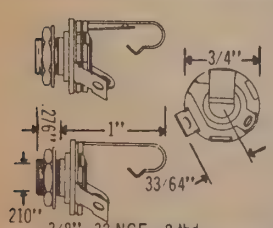
PANEL MOUNTING TWO-CONDUCTOR PHONE JACKS
DESC: Open circuit, 2-conductor.
WASHER: Per MIL type, JJ-034.
Net per C42.48

No.	
33-694	



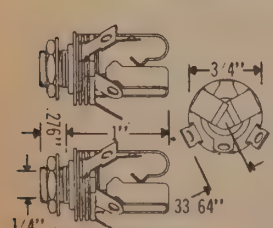
PANEL MOUNTING TWO-CONDUCTOR PHONE JACKS
DESC: Open circuit, 2-conductor .210" I.D. sleeve fit plugs No. 33-630/2.
WASHER: Phenolic, per MIL-LL-31 and ASTMD-709, Washers type 1.
Net per C 31.15

No..	
33-700	



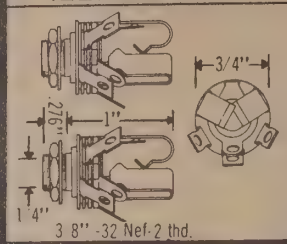
PANEL MOUNTING TWO-CONDUCTOR PHONE JACKS
DESC: Closed circuit, 2-conductor .210" I.D. sleeve...fits plugs No. 33-630/2.
WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1.
Net per C 36.82

No.	
33-702	

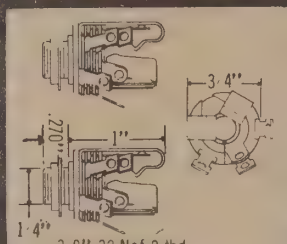


PANEL MOUNTING 3-COND. PHONE JACKS
DESC: Open circuit, 3-conductor..
RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage.
WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1.
Net per C 36.82

No.	
33-708	

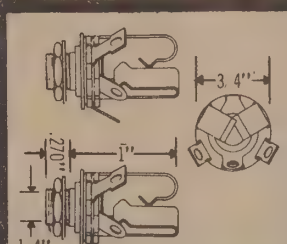
ILLUSTRATIONS	DESCRIPTION
	**PANEL MOUNTING 3-COND. PHONE JACKS** DESC: Single closed circuit, 3-conductor. RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage. WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1. Net per C 48.15

No.	
33-710	



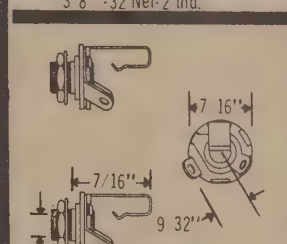
STEREO TELEPHONE JACK
DESC: New Jack designed for switching out speakers when connecting stereo headphones and for switching three stereo input circuits. Normally closed dual switch contacts open both stereo circuits separately when three circuit plug is inserted.
WASHER: Phenolic per MIL-LL-31 and ASTMD-709 type 1.
Net per C 54.00

No.	
33-711	



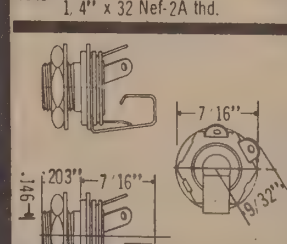
STEREO TELEPHONE JACK
DESC: New jack designed for switching out speakers when connecting stereo headphones and for switching three wire stereo input circuits. Open circuit, 3-conductor, MIL-type JJ-033.
WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1.
Net per C 59.14

No.	
33-712	



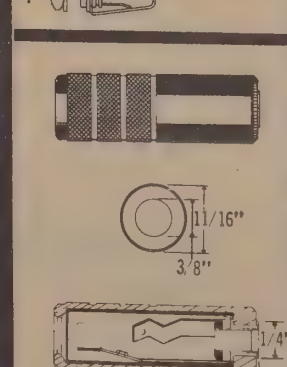
MINIATURE PANEL MOUNTING JACKS
DESC: These jacks mate with plugs No. 33-660 through 33-670. Open circuit, 2-conductor.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. 500 Volts 60 cycle AC continuous working voltage.
WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1.
Net per C 28.32

No.	
33-720	



MINIATURE PANEL MOUNTING JACKS
DESC: These jacks mate with plugs No. 33-660 through 33-670- Closed circuit, 2-conductor.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.500 Volts 60 cycle AC continuous working voltage.
WASHER: Phenolic per MIL-LL-31 and ASTMD-709 type 1.
Net per C 31.15

No.	
33-722	



CORD MOUNTED JACKS
DESC: Often referred to as "extension jacks" or "inline jacks"; available in 2 or 3 conductor types.

No.		Net per C
2-conductor, open circuit style, with solder lug terminals.		
33-730	metal	93.46
33-732	plastic	67.97
2-conductor, open circuit style, with screw type terminals.		
33-734	metal	101.96
33-736	plastic	76.47
3-conductor, open circuit style, with screw or solder type terminals, and metal (shielded) handle.		
33-740	solder	118.95
33-742	screw	130.29

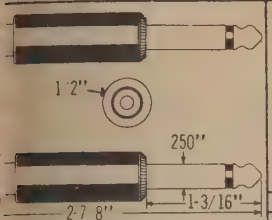
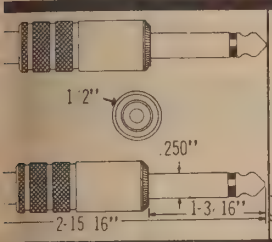
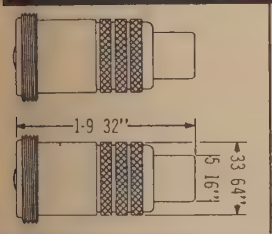
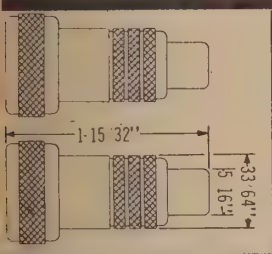
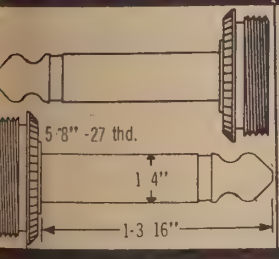
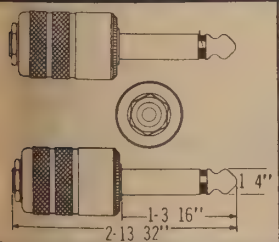
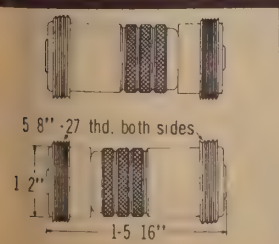
WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

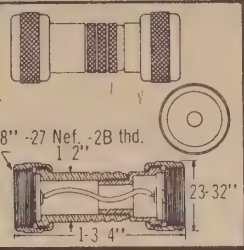
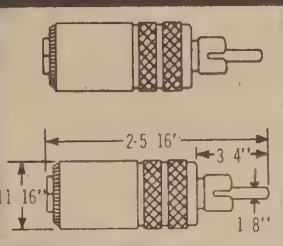
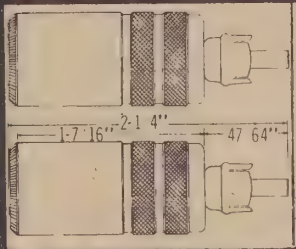
Net

© United Technical Publications

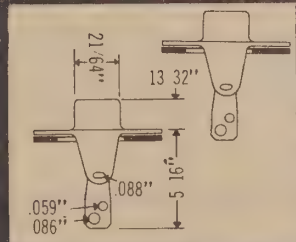
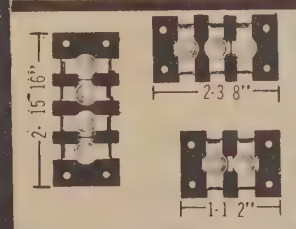
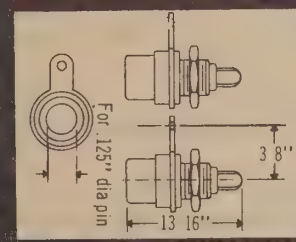
ELECTROCRAFT ELECTRONIC COMPONENTS

SPECIAL CONNECTORS & ADAPTORS

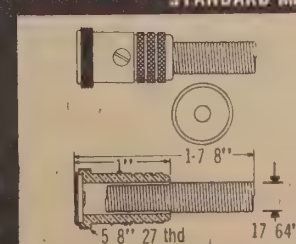
ILLUSTRATIONS	DESCRIPTION
	**ADAPTOR** DESC: Phono jack input, standard phone plug output. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 82.13 No. 33-850
	**ADAPTOR** DESC: Phono jack input, standard phone plug output, heavy duty metal shielded type. Net per C 89.13 No. 33-852
	**MALE ADAPTOR** DESC: Phone jack input, microphone connector output. Net per C 84.97 No. 33-854
	**FEMALE ADAPTOR** DESC: Phono jack input, microphone connector output. Net per C 93.46 No. 33-856
	**MALE ADAPTOR** DESC: Microphone connector input, standard phone plug output. Net per C 33.99 No. 33-858
	**ADAPTOR** DESC: Miniature phone jack input, standard phone plug output. Net per C 99.13 No. 33-860
	**MALE CONNECTOR** DESC: Connects 2 female microphone connectors. Net per C 84.97 No. 33-862

ILLUSTRATIONS	DESCRIPTION
	**FEMALE CONNECTOR** DESC: Connects 2 male microphone connectors. Net per C 84.97 No. 33-864
	**ADAPTOR** DESC: Miniature phone jack input, standard phono plug output. Net per C 78.30 No. 33-865
	**ADAPTOR** DESC: Standard phone jack input, phono plug output. Net per C 113.29 No. 33-866

PHONO PIN PLUGS & JACKS

	**PHONO JACKS** DESC: Fastens to chassis with 2 rivets or 2 screws. Net per C 7.33 No. 33-792 W/ oval, space saving metal mounting plate. Net per C 8.50 No. 33-796 W/ regular, round mounting plate.
	**PHONO PIN JACKS** No. 33-798 single phono pin jack 7.50 No. 33-800 double phono pin jack 12.00 No. 33-802 triple phono pin jack 15.00 No. 33-803 quadruple phono pin jack 24.00
	**SINGLE HOLE PANEL PHONO JACK** DESC: Mounts in 9 32" hole, requires only one hole drilled. Comes equipped with nut, washer and solder lug for ground. Net per C 19.83 No. 33-804

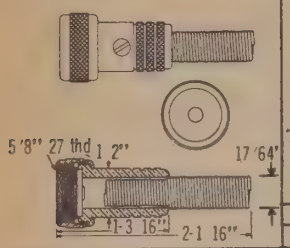
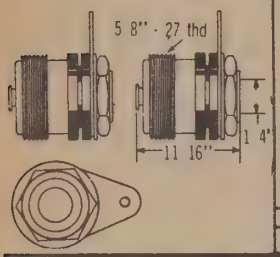
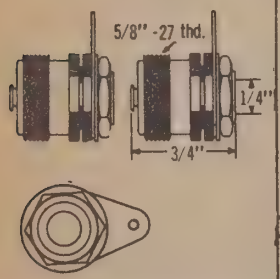
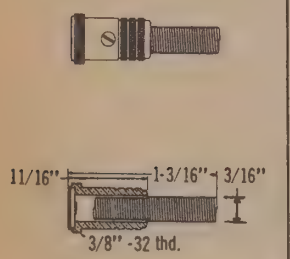
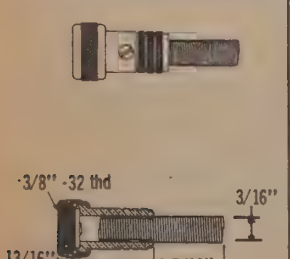
STANDARD MICROPHONE CONNECTORS

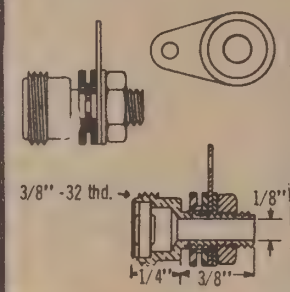
	**CORD MOUNTED MALE MICROPHONE CONNECTOR** DESC: With flexible spring to protect cable; center conductor solders to contact; braid is clamped securely by set screw. Net per C 33.99 No. 33-810

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

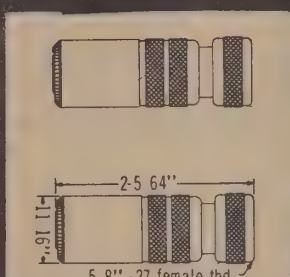
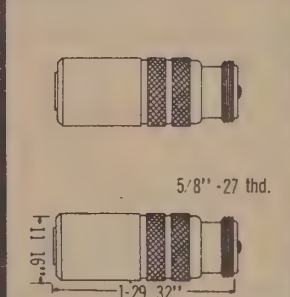
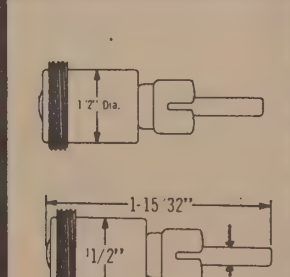
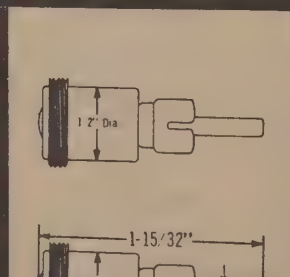
ELECTROCRAFT ELECTRONIC COMPONENTS

STANDARD MICROPHONE CONNECTORS

ILLUSTRATIONS	DESCRIPTION
	**CORD MOUNTED FEMALE MICROPHONE CONNECTOR** DESC: With flexible spring to protect cable; center conductor solders to contact; braid is clamped securely by set screw. Net per C 42.48 No. 33-812
	**PANEL MOUNTED MICROPHONE CONNECTOR** DESC: Requires 3/8" hole when grounded to chassis; or 7 16" hole if insulated with fibre washers; mates with No. 33-812 connector. Single contact connector. Net per C 39.69 No. 33-814
	**MICROPHONE AND CHASSIS CONNECTOR** DESC: Closed circuit type which grounds center contact when cable connector removed, thus eliminating noise. Net per C 31.15 No. 33-816
	**MINIATURE MALE MICROPHONE CONNECTOR** DESC: These connectors are only about one-half the size of the standard microphone connectors. Particularly useful for portable equipment, lapel microphone, musical instruments, recorders, etc. Made to the same specifications and of same materials as standard size connectors. Net per C 33.99 No. 33-826
	**MINIATURE FEMALE MICROPHONE CONNECTOR** DESC: These connectors are only about one-half the size of the standard microphone connectors. Particularly useful for portable equipment, lapel microphone, musical instruments, recorders, etc. Made to the same specifications and of same materials as standard size connectors. Net per C 42.48 No. 33-828

ILLUSTRATIONS	DESCRIPTION
	**MINIATURE MIKE CONNECTOR** DESC: These connectors are only about one-hal the size of the standard microphone connectors Particularly useful for portable equipment, lape microphones, musical instruments, recorders, etc Made to the same specifications and of same materials as standard size connectors. Pane mounted connector. Net per C 31.15 No. 33-830

SPECIAL CONNECTORS & ADAPTORS

	**FEMALE ADAPTOR** DESC: Standard phone jack input, microphone cor nector output. Net per C 113.2 No. 33-868
	**MALE ADAPTOR** DESC: Standard phone jack input, microphone cor nector output. Net per C 97.9 No. 33-870
	**MALE ADAPTOR** DESC: Microphone connector input, phono plu output. Net per C 70.8 No. 33-872
	**FEMALE ADAPTOR** DESC: Microphone connector input, phono plug output. Net per C 99.17 No. 33-872-1

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

© United Technical Publications

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*



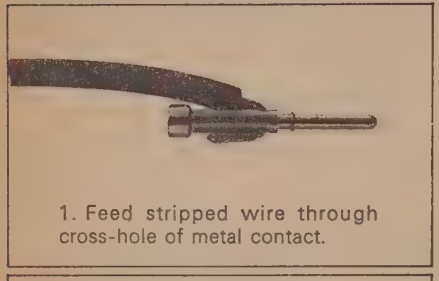
- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

E. F. JOHNSON COMPANY

Patchcord Stacking Plugs

Developed for custom patchcord assembly and replacement of damaged molded patchcord plugs. Allows assembly of patchcords with any length and color. Used with standard 0.144" diameter rubber or extra-flexible polyvinyl insulated wire. For changes in color coding, simply reassemble with a different color Nylon housing.

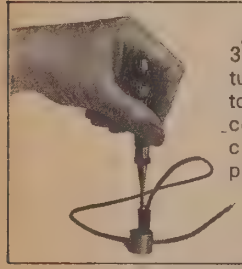
ASSEMBLY PROCEDURE



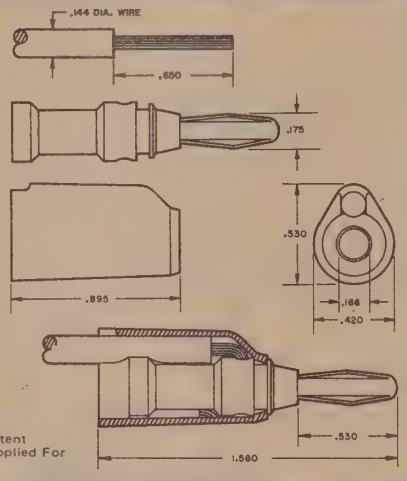
1. Feed stripped wire through cross-hole of metal contact.



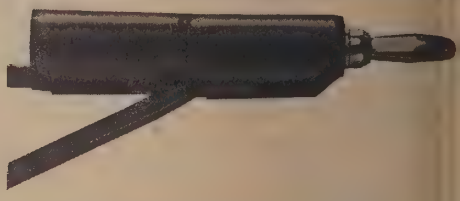
2. Insert contact and wire into housing.



3. Place into fixture. Place tip of tool into rear of contact. Snap contact into place.



Patent Applied For

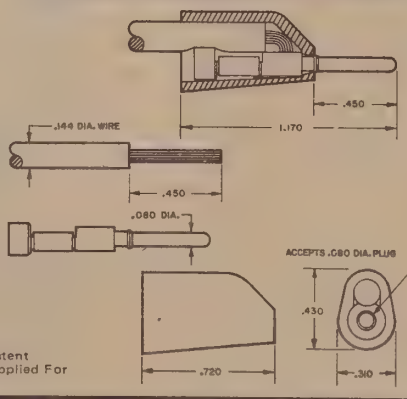


Stacking Standard Banana Plugs

Plug body is precision machined brass with 0.0002" nickel plating. Spring is one-piece nickel-silver . . . highly resistant to corrosion. Current rating: 15 amps. Plastic housing is polyamide with operating temperature range of −55°C to +105°C. Assembly with impact punch and fixture is recommended. 6 colors.

Cat. No. 108-1080-001 . . . . . Net $0.35

(See color chart under Tip Jacks)



Patent Applied For



Stacking .080 Standard Tip Plugs

Precision machined brass plug body with 0.0002" nickel plating. Internal jack spring is beryllium copper with 0.0002" nickel plating. Current rating: 10 amps. Polyamide housing in 6 colors per Federal Standard 595.

Cat. No. 105-1200-001 . . . . . Net $0.40

(See color chart under Tip Jacks)



Assembly Fixture

For standard banana plugs.

Cat. No. 251-0111-003 . . . . . Net $1.00

For .080 tip plugs

Cat. No. 251-0111-001 . . . . . Net $1.00



Impact Punch with Special Tip

For standard banana plugs

Cat. No. 251-0113-003 . . . . . Net $12.50

For .080 tip plugs

Cat. No. 251-0113-001 . . . . . Net $12.50



Special Impact Tip Only

For standard banana plugs

Cat. No. 251-0112-003 . . . . . Net $1.00

For .080 tip plugs

Cat. No. 251-0112-001 . . . . . Net $1.00

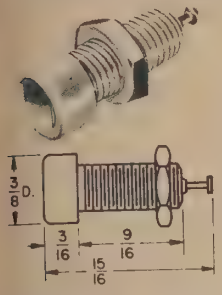
(Fits STARRETT 18A punch.)

Net

© United Technical Publications

E. F. JOHNSON COMPANY

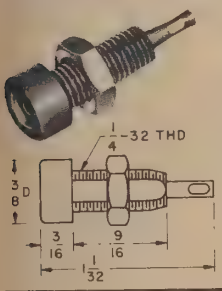
Tip jacks



DELUXE TIP JACK
(U.S. Patent No. 2,704,357)

Molded body with recessed closed entry design contact. Silver-plated beryllium copper contact spring. Brass solder terminal is hot tin dipped. Current rating: 10 amps. Voltage breakdown: 11,000 VDC. Capacity to ⅛" panel: 2.0 pf. ¼-32 nut furnished.

Cat. No. 105-0600-001 Net Price $0.18
(See color chart below)



STANDARD TIP JACK

Molded body with recessed, cadmium-plated formed phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 9,000 volts DC. Capacity to ⅛" panels: 2.0 mmf. ¼"-32 nut furnished.

Cat. No.105-0800-001 . . Net Price $0.13
(See color chart below)

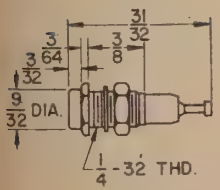


METAL-CLAD TIP JACKS—MILITARY

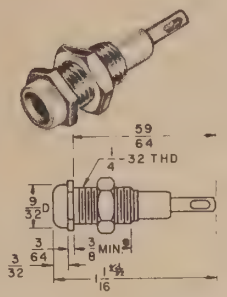
High reliability tip jack for military use or demanding industrial applications. Highest quality materials — withstand severe environmental temperature, vibration and salt spray conditions. Complies with MS-16108, Rev. F of MIL-STD-242A. Closed entry contact design prohibits entry of tip plug .085" or larger—prevents accidental contact damage by careless probe insertion. Heavy nickel-plated brass jacket. Gold-plated beryllium copper contact spring greatly exceeds minimum insertion/withdrawal cycle requirements of MS-16108. Current rating: 5 amps. Voltage breakdown: 8,000 volts DC. Capacity to ⅛" panel: 3.8 pf. ¼"-32 nut and lock washer furnished. Terminal Style: "A". (Terminal Style "C" per MS-16108 available on special order in production quantities.) Brass solder terminal is gold-plated.

Cat. No. 105-0200-200 Net Price $0.35





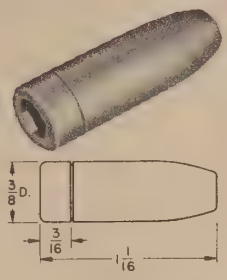
Mil. Std. Number	Color	E. F. Johnson Number
MS16108-1A	White	105-0201-200
MS16108-2A	Red	105-0202-200
MS16108-3A	Black	105-0203-200
MS16108-4A	Brown	105-0208-200
MS16108-5A	Green	105-0204-200
MS16108-6A	Orange	105-0206-200
MS16108-7A	Blue	105-0210-200
MS16108-8A	Yellow	105-0207-200
MS16108-9A	Gray	105-0213-200
MS16108-10A	Violet	105-0212-200



METAL-CLAD TIP JACKS—STANDARD

Molded body, nickel-plated machined brass jacket. Formed, silver-plated phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 7,000 volts DC. Capacity to ⅛" panel: 3.8 pf. ¼"-32 nut furnished.

Cat. No.105-0250-001 . Net Price $0.18.
(See color chart below)



JACK AND SLEEVE ASSEMBLY
(U.S. Pat. No. 2,704,357)

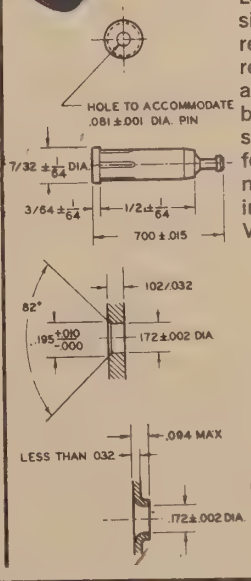
Includes Deluxe Tip Jack (105-0601-001 to 105-0613-001), less mounting nut, with inside threaded molded sleeve. Ideal for patch cords, or insulated rear connection of panel mounted tip jack.

Cat. No. 105-0700-001 Net Price $0.24
(See color chart below)



RIB-LOC™ PRESS-IN TIP JACKS

Johnson Rib-Loc design permits substantial production line savings—no mounting hardware to handle and assemble. Rib-Loc tip jacks install by pressing into proper size chassis hole. Accept .080" tip plug in recessed, closed-entry type contact that rejects plugs .085" or larger to prevent accidental contact damage. Silver-plated beryllium copper contact spring. Brass solder terminal silver-plated and Iridited for good solderability. Insulating body molded of low-loss polyamide. Current rating: 10 amps. Voltage breakdown: 5,000 VDC. Capacity to ⅛" panel: 1.4 pf nominal.



Cat. No. 105-1040-001 Net Price $0.15
(See color chart below)

COLOR CHART

NOTE: Connectors, unless otherwise specified, are available in 6 molded colors to Federal Standard 595. Other colors listed are available as specials. Catalog number for color desired is determined by adding color numbers on chart below to 6th and 7th digits of catalog number listed for series. EXAMPLE: 105-0800-001 in Violet, add color number for Violet (12) to 6th and 7th digits of series number, and order 105-0812-001. To order 105-1040-001 in Violet, add 12 to 6th and 7th digits of series number and order 105-1052-001.

Color	No.	Color	No.	Color	No.
White*	01	Orange	06	Violet	12
Red*	02	Yellow*	07	Grey	13
Black*	03	Brown	08		
Green*	04	Blue*	10		

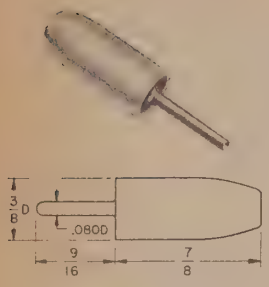
*Indicates colors available from stock. Other colors listed are, for some items, available as specials.

© United Technical Publications

E. F. JOHNSON COMPANY

Tip plugs and Printed circuit connectors

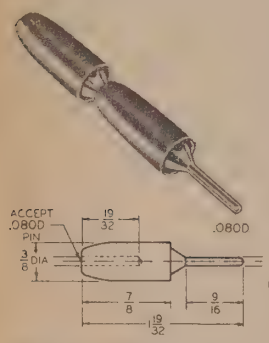
Tip plugs



SOLDERLESS TIP PLUG

Completely insulated, molded sleeve. Recessed metal head prevents exposure of metal surfaces when engaged in any standard tip jack. All metal parts are nickel-plated brass. Designed for solderless connection of up to 16 gauge stranded wire. Fits all standard tip jacks. Current rating: 10 amps.

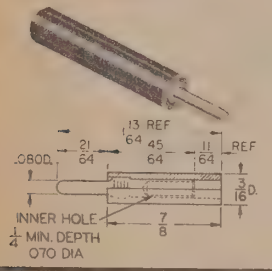
Cat. No. 105-0300-001 Net $0.17
(See color chart under Tip Jacks)



STACKING TYPE TIP PLUG

Stacking feature provides flexibility by permitting several tip plugs to be terminated in the same .080" diameter jack. Designed for solderless connection of up to 16 gauge stranded wire. Body containing both jack and plug machined from solid brass, nickel plated. Insulating sleeve. Current rating: 10 amps.

Cat. No. 105-0900-001 Net $0.30
(See color chart under Tip Jacks)



SUB-MINIATURE TIP PLUG

For use with miniature jack, .080" dia. tip. Nickel-plated machined brass body, solder type lead connection.

Cat. No. 105-0770-001 Net $0.21
(See color chart under Tip Jacks)



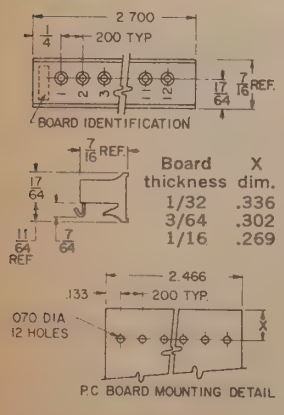
PRINTED CIRCUIT BOARD TEST POINT STRIP HANDLE

This unique component offers ready access to desired portions of the circuit, without the use of jumper cables, for fast, efficient testing and trouble shooting. Rapid mounting accomplished by manual positioning; secured permanently in the wave solder operation.

Low-loss polyamide body provides insulation resistance greater than 200 megohms after MIL-T-5422B humidity test. Individual test points rated at 5 amperes maximum current capacity. Operating voltage 1500 volts RMS at sea level and 350 volts RMS at 50,000 feet. Contact resistance less than 2 milliohms. Capacitance between two adjacent jacks less than 1 pF. at 1 MHz.

Standard model has 12 contacts. Available as specials in production quantities with up to 24 contacts.

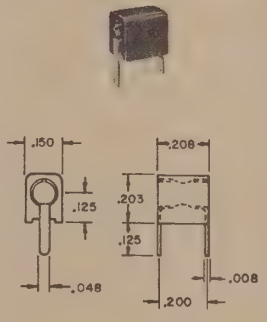
Cat. No. 266-0402-001 Net $1.35
(Red)



Printed circuit connectors

These tiny sub-miniature Tip Jacks and Tip Plugs described below are ideally suited for use in printed circuit or limited space applications! Extremely compact, tip jacks are available in horizontal or vertical contact types—all occupy a minimum amount of board area, yet provide easy access and positive electrical contact. Rated at 5 amperes maximum current capacity. Operating voltage is 1500 volts RMS at sea level and 350 volts RMS at 50,000 feet. Contact resistance is less than 2 milliohms; capacitance between two adjacent jacks less than one pF. at 1 MHz. Body material is made of tough, low-loss polyamide per MIL-M-20693A; able to stand extremely hard usage. Tip Plugs have a one-piece machined contact which provides maximum reliability and achieves minimum contact resistance—jacks equipped with beryllium copper contacts, designed for firm, positive contact as well as fast, easy insertion and withdrawal. Jack contacts and terminals are silver-plated.

NEW!

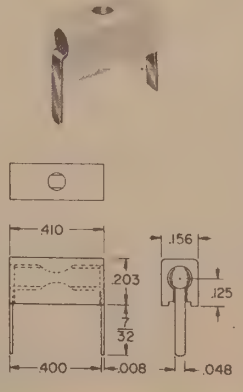


NEW HORIZONTAL JACK

New design accepts 0.080" diameter tip plug in either end. Silver-plated and irridited beryllium-copper formed contact. Two terminals. Approximately one-half size of standard Tip Jack.

Cat. No. 105-1100-001 Net $0.06

(See color chart under Tip Jacks)



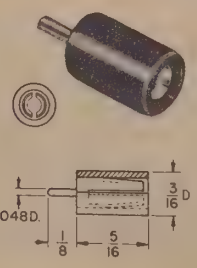
HORIZONTAL JACK
(U.S. Patent No. 3,208,027)

Unique design accepts .080" dia. tip plug in either end, or from top or bottom! Silver-plated beryllium copper formed contact. Two terminals.

Note: Available as a special in production quantities without cross hole.

Cat. No. 105-0750-001 Net $0.07

(See color chart under Tip Jacks)



VERTICAL JACK

Mounts through single .052" hole, requires minimum mounting area. Silver-plated, machined beryllium copper contact.

Cat. No. 105-0850-001 Net $0.12

(See color chart under Tip Jacks)

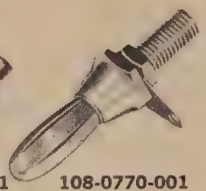
Net

© United Technical Publications

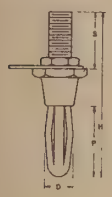
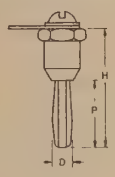
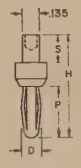
E. F. JOHNSON COMPANY

Banana jacks and plugs



108-0750-001 108-0753-001 108-0754-001 108-0770-001


A B C 108-0771-001

STANDARD BANANA PLUGS

This group of standard banana plugs has accurately machined brass studs which extend the full length of the plugs, providing extra strength. Springs are nickel-silver—highly resistant to corrosion. Bodies and hardware .0001 nickel-plated. All banana plugs listed below are available with beryllium copper springs and nickel, cadmium, or silver plating, when desired. A wide selection of miniature solder-type plugs is also available on special order—however, quantities in special platings or plugs should be sufficiently large for economical production runs. Solder terminal and nut or screw furnished.

Cat. No.	Dwg.	S	P	D	H	Thread	Net Price
108-0750-001	A	3/8"	17/32"	.175"	1 1/8"	6-32	$0.18
108-0750-002	A	3/4"	17/32"	.175"	1 1/2"	6-32	.20
108-0753-001	B	—	17/32"	.175"	15/16"	6-32	.18

This banana plug is similar to the standard types listed above, except that it is designed for riveting. Springs are beryllium copper, cadmium-plated.

108-0754-001	C	7/32"	13/32"	.155"	13/16"	—	$0.15

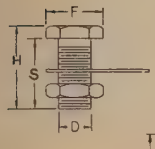
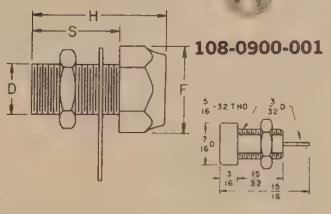
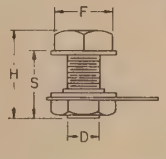
Jumbo type banana plugs with accurately machined brass studs extending full length of the pins. Nickel-silver springs. Bodies and hardware .0001 nickel-plated. With solder lug and nut or screw.

108-0770-001	A	5/8"	3/4"	.300"	1 25/32"	1/4"-28	$0.40
108-0771-001	B	—	3/4"	.300"	1 1/8"	10-32	.65






108-0740-001 108-0760-001 108-0745-001

108-0900-001

STANDARD BANANA JACKS

High quality, machined brass banana jack. Nickel-plated. Furnished complete with solder terminal and nut.

Cat. No.	F	D	S	H	Hole Dia.	Thread	Net Price
108-0740-001	3/8"	1/4"	17/32"	5/8"	.166"	1/4"-28	$0.16

High quality machined brass banana jacks with plastic head molded to body. Nickel-plated. Furnished complete with solder terminal and nut. The 108-0745-001 is equipped with red plastic head—the 108-0745-002 is equipped with black plastic head.

108-0745-001	7/16"	1/4"	32/64"	21/32"	.166"	1/4"-28	$0.35
108-0745-002	7/16"	1/4"	32/64"	21/32"	.166"	1/4"-28	.35

This jumbo banana jack will accommodate plugs such as the 108-0770-001 and the 108-0771-001 listed above. Machined brass, nickel-plated. Furnished complete with solder terminal and nut.

108-0760-001	9/16"	3/8"	21/32"	1"	.277"	3/8"-32	$0.50

BANANA JACK

Completely insulated molded body with cadmium-plated insert. Accommodates banana plugs of nominal .175" diameter. Voltage breakdown: 10,000 volts DC. Capacity to 1/16" panel: 2.4 mmf. nominal. Mounts in 21/64" diameter circular, "D", or double flat hole (1/4" across flats). Single nut furnished for mounting—no other mounting hardware needed.

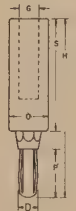
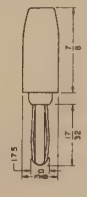
Cat. No. 108-0900-001 ..... **Net Price $0.11**

(See Color Chart under tip jacks)





108-0752-001 108-0772-001 108-0300-001

STANDARD INSULATED BANANA PLUGS

These standard insulated banana plugs are equipped with plastic handles, brass nickel-plated bodies, and nickel-silver springs. The 108-0752-001 has a black plastic handle—the 108-0752-002, red.

Cat. No.	S	P	D	H	G	O	Net Price
108-0752-001	1 3/8"	17/32"	.175"	2 1/8"	7/32"	7/16"	$0.30
108-0752-002	1 3/8"	17/32"	.175"	2 1/8"	7/32"	7/16"	.30

JUMBO INSULATED BANANA PLUGS

These jumbo size insulated banana plugs are similar in design to the standard types listed above, but are somewhat larger in size. With brass nickel-plated bodies, and nickel-silver springs. The 108-0772-001 has a black plastic handle—the 108-0772-002 has a red plastic handle.

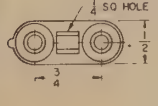
Cat. No.	S	P	D	H	G	O	Net Price
108-0772-001	1 3/4"	3/4"	.300"	2 25/32"	3/8"	5/8"	$0.80
108-0772-002	1 3/4"	3/4"	.300"	2 25/32"	3/8"	5/8"	.80

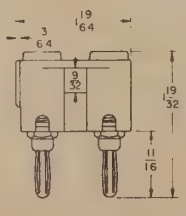
SOLDERLESS BANANA PLUGS

Compact, high voltage insulated plug for a wide variety of applications. Designed for fast, solderless connection of up to 16 gauge stranded wire. Body and pin are constructed of one-piece, nickel-plated brass with high grade nickel-silver springs. Sleeve is molded. Current rating: 15 amps.

Cat. No. 108-0300-001 ..... **Net Price $0.21**

(See Color Chart under tip jacks)



108-0200-001

DUAL BANANA PLUGS

Extremely versatile dual banana plug available for either solderless or set screw connection. Molded body incorporates polarity indication and strain relief hole for wire leads. Springs are high quality nickel-silver—bodies are nickel plated. Accurately machined brass studs extend full length of pins for extra strength. Voltage breakdown: 10,000 VDC. Capacity plug to plug: 1.3 pf. Current rating: 15 amps.

Cat. No. 108-0200-001 (solderless) ..... **Net Price $0.75**

Cat. No. 108-0250-001 (with set screws) ..... **Net Price .80**

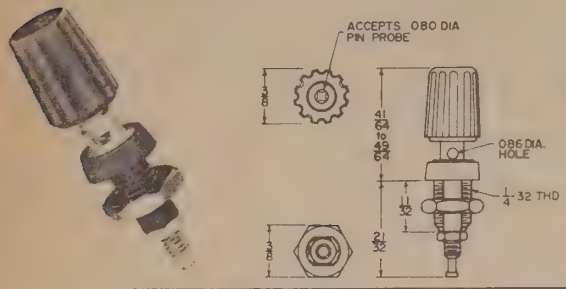
(See Color Chart under tip jacks)

© United Technical Publications

E. F. JOHNSON COMPANY

Binding posts

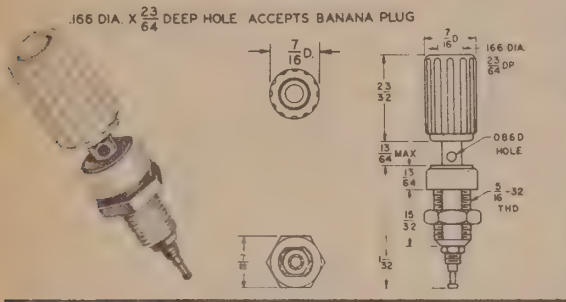
Compact, insulated, pre-assembled binding posts with molded body and silver-plated shank. Fluted thumb nut self-captivated. Connection made at solder stud, or lug may be slipped over threaded portion and secured with a nut. Single tip plug fits hole in top of miniature binding post; banana plug accepted by two larger binding posts. Insulation resistance greater than 200 meg. after MIL-T-5422B humidity test. (U.S. Pat. No. 2,806,999.)



New miniature binding post designed for compact test equipment applications. Rated at 15 amps. thumb nut to terminal, 5 amps. tip jack to terminal. Voltage breakdown: 5,000 volts DC. Capacitance to 1/8" panel; 3 pf. Mounts in 17/64" diameter circular hole; "D" or double flat hole—.219" across flats. Equipped with single 1/4"-32 nut for fast mounting—no time-consuming spacers or mounting hardware required.

Available in 6 colors: white, red, black, green, yellow, and blue.

Cat. No. 111-0200-001 ..... **Net Price $0.45**

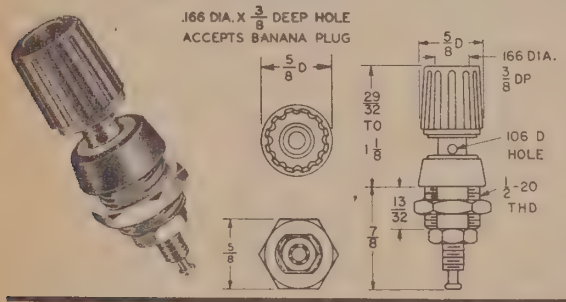


Rated at 15 amps. Current carrying capacity. Voltage breakdown: 8,000 volts DC. Capacitance to 1/8 panel: 3.3 pf. Mounts in 21/64" diameter circular hole; "D" or double flat hole—1/4" across flats. Single 5/16-32 mounting nut furnished—no other hardware required.

Cat. No. 111-0100-001 ..... **Net Price $0.31**
(10 colors available—see color chart)

Mounting plate—Pre-punched, etched aluminum mounting plate for accurate mounting of two 111-0100-001 binding posts, or 108-0900-001 banana jacks 21/64" diameter holes on exact 3/4" centers.

Cat. No. 111-0020-001 ..... **Net Price $0.03**

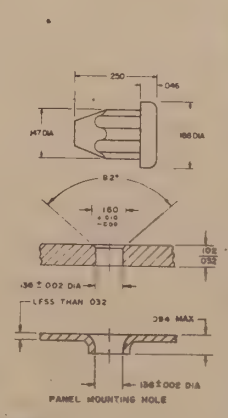


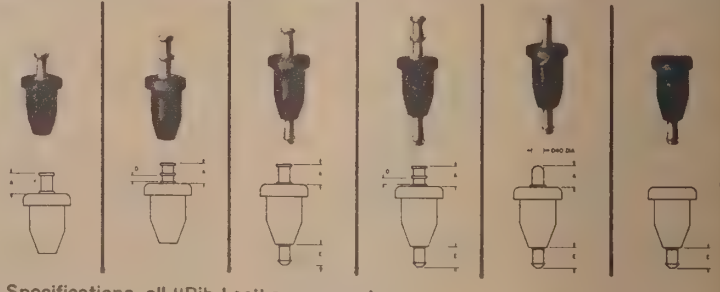
Rated at 40 amps. current carrying capacity. Voltage breakdown: 7,000 volts DC. Capacitance to 1/8" panel: 3.5 pf. Mounts in 1/2" diameter circular hole; "D" or double flat hole—.422 across flats. Single 1/2-20 mounting nut furnished—no other hardware needed. Available in six colors: white, red, black, green, yellow, and blue.

Cat No. 111-0300-001 ..... **Net Price $0.50**

Rib-Loc™ terminals and jacks

With Johnson Rib-Loc insulated components, commercial equipment designs can reflect size reductions formerly limited to military equipment applications because of high cost. "Rib-Loc" design offers excellent retention—considerably better than the most widely used TFE insulated types. Terminals are brass, silver-plated and iridited for good solderability.





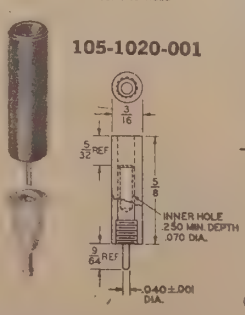
Specifications, all "Rib-Loc" components:

Pullout force 21 lbs.; turning torque 18 oz. in.; capacitance, .050" thick panel at 1 mc., 1.00 pf.; flashover voltage (DC) 5300; max. service temperature 250° F.; leakage current at 3500 VDC, .01 ua. These are typical test measurements, not necessarily limit values.

Series Number	Description	A	D	E	Net Price
260-0000-001	Single turret stand-off	0.125			$0.06
260-0100-001	Double turret stand-off	0.187	0.068		.06
260-0200-001	Single turret feed-thru	0.125		0.140	.07
260-0300-001	Double turret feed-thru	0.187	0.068	0.140	.07
260-0400-001	Tip plug, 0.040" dia.	0.140		0.140	.07
264-0000-001	Tip jack for 0.040" dia. plug			0.140	.09

Color	No.	Color	No.
White	01	Green	04
Red	02	Yellow	07
Black	03	Blue	10

Note: Part number for color desired is determined by adding color number to 6th and 7th digits of part number listed for each item above.



TIP PLUG FOR .040" RIB-LOC TIP JACK

Cat. No. 105-1020-001 ..... **Net Price $0.23**

Net

© United Technical Publications

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

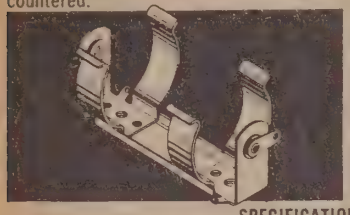
Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

KEYSTONE ALL STEEL BATTERY HOLDERS

STANDARDIZED ALL STEEL BATTERY HOLDERS

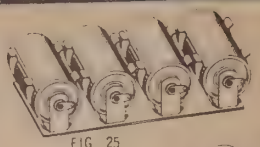
An important advance in design that has gained wide acceptance for military and commercial usage. Battery when installed is held under spring tension at a constant pressure assuring low resistance contact will hold up to 4 cells in series in sturdy insulating tube. Retainer clips available to lock battery securely. This prevents shifting or loosening of battery in holder. Recommended for use where shock or severe vibration is encountered.



- CORROSION RESISTANT NICKEL PLATED
- STAINLESS STEEL CONTACTS
- MOISTURE PROOF INSULATING WASHERS
- IDEAL FOR NI-CAD AND ALKALINE CELLS

SPECIFICATIONS

Made of SAE 1065 Carbon Steel to MIL Spec. 17919, heat treated to spring temper and nickel plated .0002 thick. Contact assembly consists of a stainless steel eyelet, moisture proof vulcoid washers and a coated copper solder lug. Ribbed carbon steel base for added support is nickel plated and has 2 mounting holes for ease in mounting.


FIG. 25

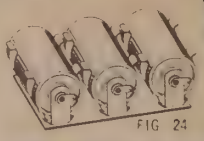
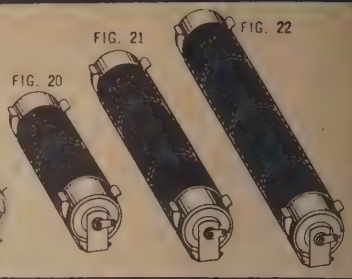

FIG. 24


FIG. 23


FIG. 19



SPACE SAVER BATTERY CLIPS

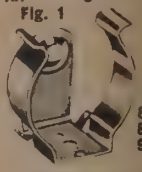
Available with insulated contact or dimple. Positive contact grips battery securely. They will accommodate the "AA" — "C" — "D" — Mercury and NI-CAD batteries.

- CORROSION RESISTANT NICKEL PLATED
- STAINLESS STEEL CONTACTS

Clips — Carbon Steel, SAE 1065 per Mil-S-17919-#4, Heated Treated to Spring Temper, Nickel Plate Finish.
Contact Eyelets — Stainless Steel per Mil-S-18170 Comp 304.
Insulating Washers — Resin Impregnated Fibre.
Terminal Lugs — Copper Per QQ-C-576A, Cad. Plated per QQ-P-416.

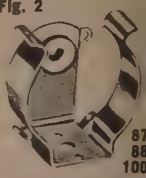
Cat. No.	Fig.	A Dia. Min. - Max.	Steel Thickness	For Cells
86	1	.875 to 1.125	.020	C
87	2	.875 to 1.125	.020	C
88	2	1.187 to 1.350	.020	D
89	1	1.187 to 1.350	.020	D
99	1	.531 to .650	.015	AA
100	2	.531 to .650	.015	AA

Fig. 1



DIMPLE CONTACT

Fig. 2

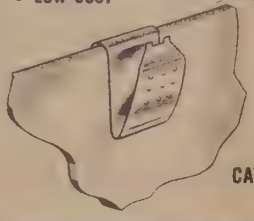


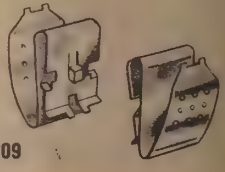
INSULATED CONTACT

PENCELL SNAP-ON BATTERY HOLDER CLIPS

Clips over panels from .060 to .070 thick and is anchored by sharp barbs. Made of spring tempered steel, nickel plated.

- IDEAL FOR MOLDED CASES
- SELF ANCHORING
- LOW COST
- SNAG-FREE BATTERY INSERTION


CAT. No. 209



ECONOMY CLIPS for "AA" Pencells — "C" and "D" Cells

A low cost clip used with non-metallic bases. **Features:** Single eyelet mount — non-rotating tab. **Material:** Spring Temper Steel and Nickel Plated.

Cat. No.	B	C	H	M Mtg. Hole	For Cells
206	.609	.468	.500	.128	AA
207	.687	.547	.875	.128	C
208	.765	.562	1.290	.128	D
67	.765	.562	1.290	.156	D

67 does not have Non-Rotation Tab



1100 SERIES — DIMPLE CONTACT / INSULATED CONTACT

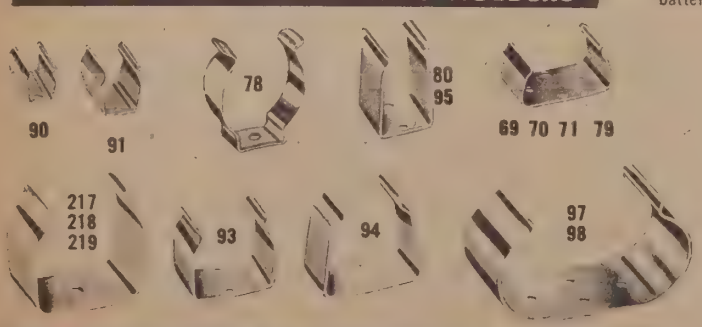
2100 SERIES — INSULATED CONTACTS

One Insulated Contact	All Contacts Insulated	Fig. No.	Holds No. of Cells	All Batteries in the Group are of Similar Size and Fit Holders Listed Burgess	Eveready	RCA
PENCELL HOLDERS						
Cat. No.	Cat. No.					
1139	2139	19	1	Z, HG9	E9, E12	VS034A
	2140*	23	2	CD6, 9R	E91, E133	VS144
	2171*	24	3	HG12R	E502, N46	VS149
	2182*	25	4	H133	515, 915	VS313A
1189	2189	20	2	HG502R	1015	VS334
1191	2191	21	3	920		
1194	2194	22	4	930		
"C" CELL HOLDERS						
1173	2173	19	1	1		VS035A
	2174*	23	2	P6	E233	VS300
	2187*	24	3	120	635	VS335
	2188*	25	4	130	935	VS400
1185	2185	20	2	H233		
1195	2195	21	3	302599		
1198	2198	22	4			
"D" CELL HOLDERS						
1175	2175	19	1	2	E42	VS036
	2176*	23	2	2R	N56	VS036A
	2190*	24	3	CD7	E95	VS336
	2192*	25	4	210	D99	
1186	2186	20	2	230	A100	
1199	2199	21	3		950	
1162	2162	22	4		1050	
1179	2179	19	1		E94	

*Clips mounted on phenolic 1/16" thick Mil-Spec 3115B

BATTERY AND COMPONENT HOLDERS

A complete line of clips suitable for secure mounting of round or square battery cells or electronic components.



Cat. No.	A Min.-Max. Dia. or Size	Material	For Cells*
69	.562 (2)	.015 Steel	(2) AA
70	.656 (2)	.025 Alum.	(2) RM12
71	.593 x 1.031	.015 Steel	2U6
78	1.187 to 1.350	.020 Steel	D
79	.650 x 1.280	.015 Steel	T 146 X
80	.650 x 1.280	.020 Steel	T 146 X
90	.375 to .468	.016 Alum.	AAA
91	.531 to .656	.020 Alum.	AA
93	.875 to 1.1250	.025 Alum.	C
94	1.187 to 1.375	.032 Alum.	D
95	.625 x 1.000	.025 Alum.	U-15
97	1.031 (2)	.025 Alum.	(2) C
98	1.312 (2)	.032 Alum.	(2) D
217	1.375 to 1.500	.025 Steel	NI-CAD
218	1.437 to 1.687	.025 Steel	NI-CAD
219	2.000 to 2.500	.025 Steel	NI-CAD

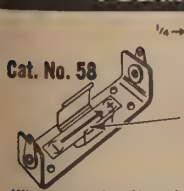
KEYSTONE ELECTRONICS CORP.

© United Technical Publications

KEYSTONE BATTERY HOLDERS

Cat. No.	Holds No. of Cells	Fig. No.	ALL BATTERIES LISTED WITHIN BOXES ARE IN THE SAME SIZE GROUP BATTERY CROSS REFERENCE Burgess	Eveready	RCA
MINIATURE CELL HOLDERS					
137	1	1	7	912	VS074
138	2	2			
169	3	3			
170	4	4			
PENCELL HOLDERS					
139	1	1	CD6	E9, E12	VS034A
140	2	2	9R, Z	E91	VS144
171	3	3	HC9	E133	VS149
182	4	4	HG12R	333	VS313A
189	2	5	H133	E502	VS334
191	3	6	HG502R	515	
192	4	7	920	915, 1015	
193	6	8	930	N46	
"C" CELL HOLDERS					
173	1	1	1	226	VS035A
174	2	2	P6	E233	VS300
187	3	3	120	635	VS335
185	2	5	130	935	VS400
195	3	6	H233		
196	4	7	302599		
197	6	8			
"D" CELL HOLDERS					
175	1	1	2	E42	VS036A
176	2	2	2R	N56	VS036
190	3	3	CD7	E95	VS336
186	2	5	210	D99	
199	3	6	230	A100	
200	4	7		950	
201	6	8		1050	
205	6	12			
1½ VOLT CELL HOLDERS					
154	1	1	N	E340	VS073
155	2	2		E400	
156	3	3		E401	
160	1	1	21R	964	VS236
179	1	1		E94	
4½ VOLT CELL HOLDERS					
139	1	1		333	VS1149
9 VOLT CELL HOLDERS					
139A	1	1		206	VS327
203P	1	14	2U6	216	VS323
173P	1	1	P6M	226	VS300A
15 VOLT CELL HOLDERS					
163	1	11	K10	417	
161	1	11	U10	411	VS083
166	1	9			
167	2	10			
225	1	1	Y10	504	
226	2	2			
22½ VOLT CELL HOLDERS					
164	1	11	K15		
168	1	11		420	
177	1	9	U15	412	VS084
178	2	10			
139A	1	1	Y15	505	
140A	2	2			
171A	3	3			
182A	4	4			
30 VOLT CELL HOLDERS					
157	1	14	Y20	506	
165	1	11	K20	430	
183	1	9	U20	413	VS085
184	2	10			
134	1	1	Y20S	507	

POLARITY LABELS



- PRESSURE SENSITIVE
- WILL ADHERE TO ANY SURFACE
- NO GLUE OR DAMPING REQUIRED
- ECONOMICAL

Wherever circuit polarity is to be shown labels colored Blue and Red.

A standard line of battery holders available for immediate shipment from stock. Low cost, lightweight and sturdily constructed of quality materials. Good electrical contact, low leakage current and snap-fit clips are the outstanding features.

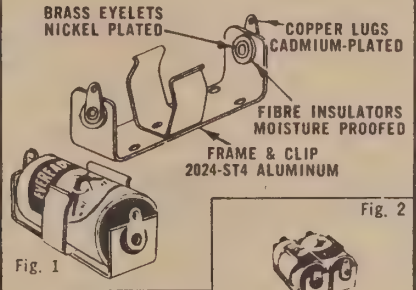


Fig. 1

Fig. 2


Fig. 3


Fig. 4


Fig. 5


Fig. 6


Fig. 7


Fig. 8


Fig. 9


Fig. 10


Fig. 11

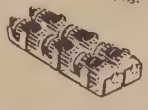

Fig. 12


Fig. 14

MERCURY BATTERY HOLDERS


FIG. 13


FIG. 15


FIG. 16


FIG 17


FIG 18



FIG. 19

Mallory Mercury Battery Listing	Aluminum and Phenolic Base Holders Cat. No.	Fig. No.	All Steel Holders One Insulated Contact Cat. No.	Fig. No.	All Steel Holders All Contacts Insulated Cat. No.	Fig. No.
RM1R	101*	13	1101	15	2101	16
RM3R	103*	13	1103	15	2103	16
RM4R	104*	13	1104	15	2104	16
ZM9	139	1	1139	19	2139	19
RM12R	139	1	1139	19	2139	19
RM42	175	1	1175	19	2175	19
TR113			1113	15	2113	16
TR114			1114	15	2114	16
TR115	132	1	1132	15	2132	16
TR132	132	1	1132	15	2132	16
TR133	139	1	1139	19	2139	19
TR134	134	1	1134	19	2134	19
TR135	135	5	1135	19	2135	19
TR136	189	5	1189	19	2189	19
TR137			1125	19	2125	19
TR145			1145	15	2145	16
TR152	124**	1				
TR153	106**	1				
TR162			1113	15	2113	16
TR163	132	1	1132	15	2132	16
TR164	109	1	1109	19	2109	19
TR165	110	1	1110	19	2110	19
TR169	189	5	1189	19	2189	19
TR175	124**	1				
TR177			1142	19	2142	19
TR233	173	1	1173	19	2173	19
TR234			1144	19	2144	19
RM400	111*	18				
RM401	124**	1				
RM411	166**	9				
RM412	177**	9				
RM413	183**	9				
RM450	112*	17				
RM502	139	1	1139	19	2139	19
RM601			1116	15	2116	16
RM625	117*	17				
RM630	126*	18				
RM640	118*	13				
RM675	127*	18				
302351	119	1	1119	19	2119	19
302478	120	5	1120	19	2120	19
302642	121	1	1121	19	2121	19
302435	122**	1				
302437	139	1	1139	19	2139	19
302599	173	1	1173	19	2173	19

BATTERY STRAPS

Made for batteries requiring a snap-on connection. Contacts are mounted securely to fibre and wire leads attached.

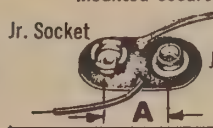


FIG. 1

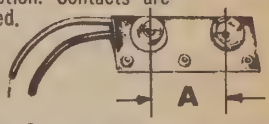


FIG. 2 Sr. Stud and Sr. Socket

Cat. No.	Fig. No.	A	EVEREADY	BURGESS	R.C.A.
72	1	½"	216 246 416	2U6 2N6 UX-5	VS-312 305 318
73	2	¾"	266	M-6	
74	2	15/16"	495 479 437 477	N60X P60 XX50 P45	VS-316 216 217 218
75	2	1⅜"	276	D6	VS-306
76	2	1½"	455 457 467	XX-30 K45 XX-45	VS-055 082 016
77	2	2½"	490	N-60	VS-090

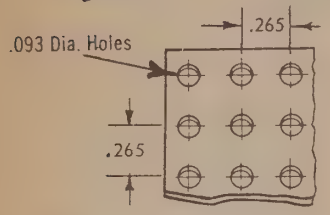
KEYSTONE ELECTRONICS CORP.

KEYSTONE ELECTRONICS CORP. DESIGNERS MANUFACTURERS

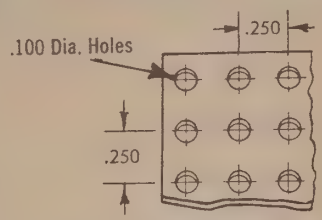
PRE-PUNCHED TERMINAL BOARDS

KEYBOARDS

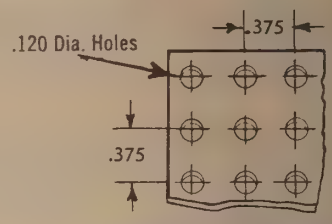
- COMPLETE RANGE OF SIZES AND SUITABLE HARDWARE
- "DO IT YOURSELF" STAKING TOOLS
- COPPER CLAD FOR PRINTED CIRCUITS
- UNCLAD TYPE FOR WIRED CIRCUITS
- STANDARD AND CUSTOM-MADE



"A" PATTERN .093 DIA. HOLES



"E" PATTERN .100 DIA. HOLES



"H" PATTERN .120 DIA. HOLES

"A" PATTERN .093 DIA. HOLES .265 x .265 C to C

Size Width & Length	No. of Holes W & L	XXXP Natural	Glass Epoxy	Paper Base Epoxy
		1/16" THICK		
		Cat. No.	Cat. No.	Cat. No.
.82 x 8.50	3 x 32	1731	1790	1796EP
1.88 x 8.50	7 x 32	1737	1791	1797EP
2.44 x 8.50	9 x 32	1738	1788	1798EP
3.25 x 8.50	13 x 32	1785	1789	1801EP
3.25 x 17.00	13 x 64	1786	1787	1802EP
4.88 x 4.88	18 x 18	1806	1807	1803EP
4.88 x 8.50	18 x 32	1784	1792	1804EP
4.88 x 17.00	18 x 64	1739	1793	1805EP
8.50 x 8.50	32 x 32	1732	1794	1808EP
8.50 x 17.00	32 x 64	1733	1795	1809EP
		3/32" THICK		
1.38 x 1.88	5 x 7	1758	—	1758EP
1.38 x 4.00	5 x 15	1760	—	1760EP
1.38 x 8.50	5 x 32	1749	—	1749EP
1.88 x 2.94	7 x 11	1759	—	1759EP
1.88 x 8.50	7 x 32	1740	—	1740EP
2.44 x 8.50	9 x 32	1741	—	1741EP
3.25 x 8.50	13 x 32	1814	—	1814EP
3.25 x 17.00	13 x 64	1816	—	1816EP
4.88 x 8.50	18 x 32	1756	—	1756EP
4.88 x 17.00	18 x 64	1742	—	1742EP
8.50 x 8.50	32 x 32	1817	—	1817EP
8.50 x 17.00	32 x 64	1757	—	1757EP

"E" PATTERN .100 DIA. HOLES .250 x .250 C to C

Size Width & Length	No. of Holes W & L	XXXP Natural
	1/16" THICK	
		Cat. No.
2.13 x 4.00	8 x 16	1750
2.13 x 8.50	8 x 34	1765
3.63 x 8.50	14 x 34	1766
8.50 x 8.50	34 x 34	1767
8.50 x 17.00	34 x 68	1768
	3/32" THICK	
2.13 x 8.50	8 x 34	1770
8.50 x 8.50	34 x 34	1771
8.50 x 17.00	34 x 68	1772

"H" PATTERN .120 DIA. HOLES .375 x .375 C to C

Size Width & Length	No. of Holes W & L	XXXP Natural	Paper Base Epoxy
	1/16" THICK		
		Cat. No.	Cat. No.
1.88 x 8.25	5 x 22	1743	—
2.25 x 8.25	6 x 22	1744	—
4.13 x 8.25	11 x 22	1782	—
4.13 x 16.50	11 x 44	1745	—
	3/32" THICK		
1.88 x 8.25	5 x 22	1746	1746EP
2.25 x 8.25	6 x 22	1747	1747EP
4.13 x 8.25	11 x 22	1783	1783EP
4.13 x 16.50	11 x 44	1748	1748EP
6.00 x 8.25	16 x 22	1941	1941EP
6.00 x 16.50	16 x 44	1942	1942EP
8.25 x 8.25	22 x 22	1943	1943EP
8.25 x 16.50	22 x 44	1939	1939EP

TERMINALS AND EYELETS For Boards with .093-.100 dia. Holes

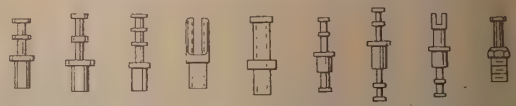
TERMINALS

Brass (Mil Spec QQ626) and Silver Plated.

NOTE: When ordering Turret Terminals **BE SURE TO SPECIFY Cat No. of Terminal** and add **—2 for 1/16" thick Board** and **—3 for 3/32" thick Board**.

I.E. **1598-2** for 1/16" thick Board and **1598-3** for 3/32" thick Board

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



1502 1514 1598 1511 1540 1530 1512 1634 1595

PUSH-IN TERMINAL

SOLDERLESS

Made of Beryllium Copper.

Cat. No. 1498-CP (cadmium plate)

Cat. No. 1498-SP (silver plate)



PRECISION MADE EYELETS

Made of Brass and Hot Tinned for easy solderability

Specify **Cat. No. 33** for 1/16" thick Board
Cat. No. 34 for 3/32" thick Board

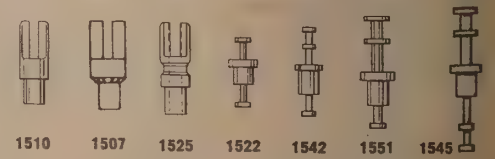
TERMINALS AND EYELETS For Boards with .120 dia. Holes

TERMINALS

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



1532 1504 1505 1503 1553 1509 1541



1510 1507 1525 1522 1542 1551 1545

PRECISION MADE EYELETS

Specify **Cat. No. 43** eyelet for 1/16" thick Board
Cat. No. 44 eyelet for 3/32" thick Board

KEYSTONE ELECTRONICS CORP.

© United Technical Publication

KEYBOARDS

PRE-PUNCHED TERMINAL BOARDS

KEYSTONE ELECTRONICS CORP. DESIGNERS MANUFACTURERS

THE PRACTICAL APPROACH TO SIMPLE OR COMPLEX CIRCUITRY

LOW COST — IMMEDIATE DELIVERY — CHOICE OF SIX POPULAR PATTERNS AND MATERIALS

STANDARDIZED KEYBOARDS: Permits time saving, low cost, assembly of components. Used extensively in development of prototype breadboarding, test design or production runs. A large selection of sizes and materials offers the designer the flexibility and convenience needed to create special circuitry on short notice.

ELECTRONIC HARDWARE: A large selection of turret, push-in and stamped terminals, brackets, eyelets, etc. available from stock.

STAKING TOOLS: Inexpensive tooling supplied for staking eyelets, bushings, turret terminals, etc. You can do an entire assembly at your bench with ease, using our impact tool. Other tools for arbor, kickpress, drill press. See Staking Tool page

SPECIAL SERVICES: We will install eyelets or terminals to suit your application. We invite inquiries for special sizes or additional holes drilled. Prompt quotations rendered at no cost to you.

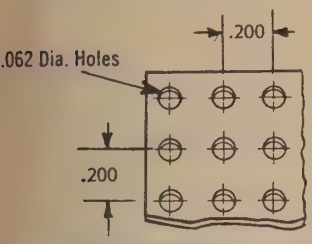
MATERIAL SPECIFICATIONS & TOLERANCES

XXXP Type PBE (Paper Base Elect.) Mil-P-3115C Temp. 250° F Max.
XXXPC Type PP Copper Clad Mil-P-13949 Temp. 250° F Max.
PAPER BASE EPOXY Mil-P-22324 (Type PEE) Temp. 250° F Max.
GLASS EPOXY UNCLAD Mil-P-18177 G-10 (GEE) Temp. 300° F. Max.
GLASS EPOXY Copper Clad Mil-P-13949B (GE) Temp. 300° F Max.

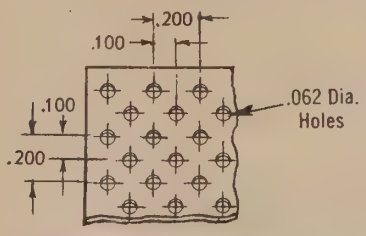
TOLERANCE: Length and width overall dimension after fabrication Plus or Minus .015.

HOLE SIZE: Plus or Minus .003.

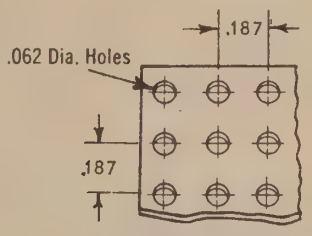
Thickness of standard sheet varies Plus or Minus .008 for 1/16 or .010 for 3/32" thick.



"F" PATTERN .062 DIA. HOLES



"G" PATTERN .062 DIA. HOLES



"B" PATTERN .062 DIA. HOLES

"F" PATTERN .062 DIA. HOLES .200 x .200 C to C

Size Width & Length	No. of Holes W & L	XXXP Natural	Glass Epoxy	Paper Base Epoxy	Glass Epoxy Cop. Clad (1 Side)	Glass Epoxy Cop. Clad (2 Sides)	XXXP Cop. Clad (1 Side)	XXXP Cop. Clad (2 Sides)
		1/16" THICK						
		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
1.25 x 8.50	8 x 42	1730	1844	1730EP	1846	1847	1848	1853
3.00 x 4.50	14 x 20	1835	1845	1835EP	1836	1837	1838	1839
3.63 x 8.50	18 x 42	1773	1854	1773EP	1855	1856	1857	1858
3.63 x 17.00	18 x 85	1775	1859	1775EP	1864	1865	1866	1867
4.50 x 6.50	22 x 30	1868	1870	1868EP	1876	1877	1878	1879
4.50 x 8.50	22 x 42	1869	1871	1869EP	1881	1886	1887	1888
4.88 x 8.50	24 x 42	1774	1872	1774EP	1882	1889	1894	1899
4.88 x 17.00	24 x 85	1776	1873	1776EP	1883	1891	1895	1902
8.50 x 8.50	42 x 42	1777	1874	1777EP	1884	1892	1896	1903
8.50 x 17.00	42 x 85	1778	1875	1778EP	1885	1893	1897	1904

"G" PATTERN .062 DIA. HOLES .100 GRID ALTERNATES

Size Width & Length	No. of Holes W & L	XXXP Natural	Glass Epoxy	Paper Base Epoxy	Glass Epoxy Copper Clad (1 Side)	Glass Epoxy Copper Clad (2 Sides)
		1/16" THICK				
		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
1.75 x 4.00	(8 x 19) x 2	1752	1909	1752EP	1919	1920
2.25 x 8.50	(11 x 42) x 2	1754	1910	1754EP	1921	1922
3.50 x 4.00	(17 x 19) x 2	1753	1911	1753EP	1923	1924
3.50 x 8.50	(17 x 42) x 2	1905	1912	1905EP	1925	1926
3.50 x 17.00	(17 x 85) x 2	1906	1913	1906EP	1927	1928
3.88 x 8.50	(19 x 42) x 2	1907	1914	1907EP	1929	1930
4.88 x 8.50	(24 x 42) x 2	1908	1915	1908EP	1931	1932
4.88 x 17.00	(24 x 85) x 2	1779	1916	1779EP	1933	1934
8.50 x 8.50	(42 x 42) x 2	1780	1917	1780EP	1935	1936
8.50 x 17.00	(42 x 85) x 2	1781	1918	1781EP	1937	1938

"B" PATTERN .062 DIA. HOLES .187 x .187 C to C

Size Width & Length	No. of Holes W & L	XXXP Natural	XXXP Copper Clad (1 Side)
	1/16" THICK		
		Cat. No.	Cat. No.
1.38 x 8.50	6 x 45	1761	1818
1.88 x 8.50	8 x 45	1734	1819
2.44 x 3.38	12 x 17	1812	1813
2.84 x 8.50	15 x 45	1735	1820
3.66 x 6.75	19 x 35	1824	1825
5.69 x 8.50	30 x 45	1762	1834
5.69 x 17.00	30 x 90	1736	1831
6.75 x 7.31	19 x 35	1826	1827
7.31 x 10.50	38 x 56	1828	1829
7.31 x 18.00	38 x 95	1832	1830
8.50 x 17.00	45 x 90	1763	1833

TERMINALS AND EYELETS
For Boards with .062 dia. Holes

TERMINALS

Brass, (Mil Spec QQ626) and Silver Plated.

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



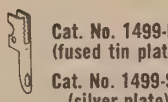
1508-2 1593-2 1584-2 1562-2 1633-2



1613-2 1592-2 1526-2 1631-2 1632-2

PUSH-IN TERMINALS

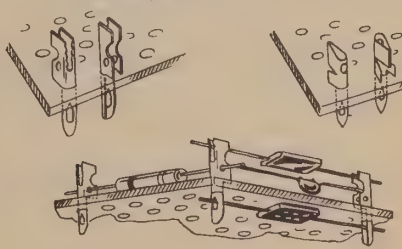
Made of Beryllium Copper.



Cat. No. 1499-FT (fused tin plate)
Cat. No. 1499-SP (silver plate)



Cat. No. 1500 (silver plate)



PRECISION MADE EYELETS

Made of Brass and Hot Tinned for easy solderability.

Cat. No. 23 For 1/16" thick Board

We welcome your inquiries for special boards and assemblies.

KEYSTONE ELECTRONICS CORP.

STANDARDIZED TERMINAL BOARDS

STANDARDIZED TURRET TERMINAL BOARDS

Cut your production cost by eliminating the tooling and setup charge usually applied to nonstandardized boards. Terminals are securely riveted and hot tinned for easy soldering.

TERMINALS: Your choice of most popular types.
Made of Brass: QQ-626, comp. 22, ½ hard.
Hot Dip Solder finish: Mil-F-14072 Type 221.

Material: Your choice of either PBE or GEE Phenolic.

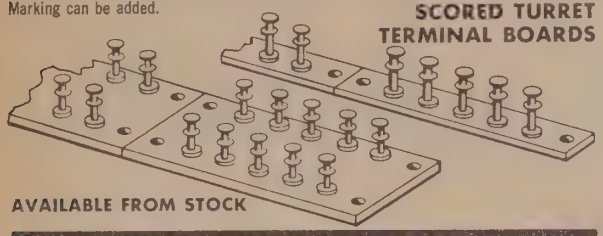
PBE: Paper base electrical, Mil-P-3115C, Temp. 250° F max. Type XXXP.

GEE: Glass Epoxy, Mil-P-18177, Temp. 300° F max. Type G-10.

Five sections **SCORED** for easy **separation** M'tg. holes in each section.

These boards **CAN BE MODIFIED** with terminals staked in all holes, scoring eliminated. Marking can be added.

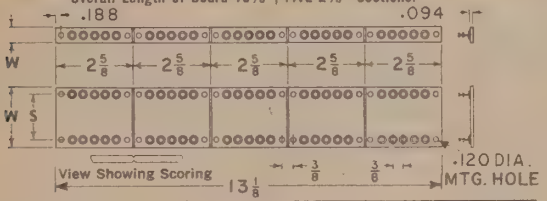
SCORED TURRET TERMINAL BOARDS



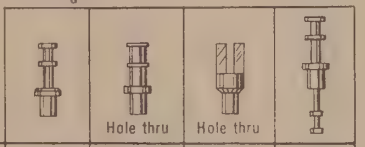
AVAILABLE FROM STOCK

3/8" SPACING AND SCORED

3/32" THICK PHENOLIC — Choice of 4 Types of Terminals
Overall Length of Board 13⅛", FIVE 2⅝" Sections.



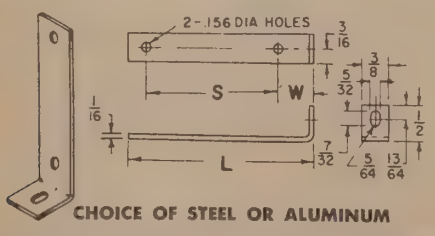
Five sections **SCORED** for easy operation.
M'tg. holes in each section.
CHOICE OF TERMINALS



W	S	No. of Terms.	Material	With 1503 Term. Cat. No.	With 1509 Term. Cat. No.	With 1507 Term. Cat. No.	With 1545 Term. Cat. No.
½	Single Row	25	PBE	15031	15091	15071	15041
			GEE	15231	15291	15271	15241
1½	1	50	PBE	15032	15092	15072	15042
			GEE	15232	15292	15272	15242
1½	1 3/16	50	PBE	15036	15096	15076	15046
			GEE	15236	15296	15276	15246
2	1½	50	PBE	15033	15093	15073	15043
			GEE	15233	15293	15273	15243
2½	2	50	PBE	15034	15094	15074	15044
			GEE	15234	15294	15274	15244
3	2½	50	PBE	15035	15095	15075	15045
			GEE	15235	15295	15275	15245

BRACKETS FOR STANDARDIZED BOARDS

Originally designed for our line of standardized terminal boards; these brackets will find many uses for a variety of applications. Available in both steel with cadmium plate finish or aluminum.

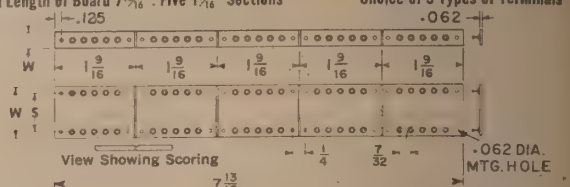


CHOICE OF STEEL OR ALUMINUM

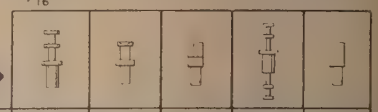
Cat. No. Steel	Cat. No. Alum.	W	L	S	FOR BOARDS Cat. Nos.		
1556	622	⅜	1⅝	1	15032	15072	15092
1567	623	⅜	2⅛	1½	15033	15073	15093
1568	624	⅜	2⅝	2	15034	15074	15094
1569	625	⅜	3⅛	2½	15035	15075	15095
1570	626	9/32	1 3/16	¾	15022	15024	15030
1571	627	9/32	1⅝	1 3/16	15036	15076	15096

MINIATURE TURRET TERMINAL BOARDS

7/32" SPACING AND SCORED — 1/16" THICK PHENOLIC
Overall Length of Board 7 3/16". Five 1 3/16" Sections
Choice of 5 Types of Terminals

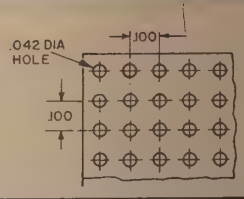


Five sections **SCORED** for easy operation.
M'tg. holes in each section
CHOICE OF TERMINALS



W	S	No. of Terms.	Material	With 1502 Term. Cat. No.	With 1562 Term. Cat. No.	With 1526 Term. Cat. No.	With 1512 Term. Cat. No.	With 1533 Term Cat. No.
5/16	Single Row	25	PBE	15021	15023	15025	15063	15053
			GEE	15221	15223	15225	15263	15253
3/4	½	50	PBE	15028	15029	15026	15064	15054
			GEE	15228	15229	15226	15264	15254
1	3/4	50	PBE	15022	15024	15030	15065	15056
			GEE	15222	15224	15230	15265	15256

MICRO-MINIATURE KEYBOARDS



WITH .042 DIA. HOLES

- PERMITS HIGHER COMPONENT DENSITY FOR SUBMINIATURE CIRCUITRY
- FOR MODULE STACKS
- SMALLER PLUG-IN CARDS POSSIBLE

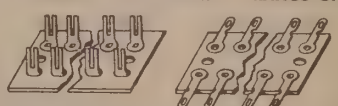
Material:
GLASS EPOXY UNCLAD Mil-P-18177 G-10 (GEE) Temp. 300°F. Max.
GLASS EPOXY Copper Clad Mil-P-13949B (GE) Temp. 300°F. Max.

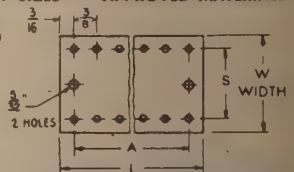
Tolerance: Length and width overall dimension after fabrication Plus or Minus .015

"P" PATTERN .042 HOLES .100 x .100			
Width & Length	No. Holes W & L	Glass Epoxy	Glass Epoxy Cop. Clad (1 Side)
1/32" Thick Material		Cat. No.	Cat. No.
2x4½	19x44	4225	4234
2x6	19x59	4226	4235
4½x6	44x59	4227	4236
6x17	59x169	4228	4237
3/64" Thick Material		Cat. No.	Cat. No.
2x4½	19x44	4229	4238
2x6	19x59	4230	4239
4½x6	44x59	4231	4240
6x17	59x169	4232	4241

READI-MADE TERMINAL BOARDS

- ECONOMICAL
- SAVE TOOLING COST
- DELIVERY FROM STOCK
- RANGE OF SIZES
- APPROVED MATERIALS





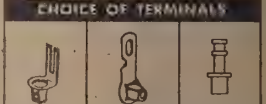
Readi-Made Terminal Boards are ideal for General Use. Excellent for mounting resistors, condensers, etc. Choice of Terminals

MATERIAL: 1/16" thick Bakelite (Mil Spec 3115C-Pbe-P grade).

TERMINALS: 1204 and 1268 are stamped from .023 thick brass. 1539 is turned from 3/16" dia. brass rod.

PLATING: 1204 is Cadmium plated. 1268 and 1539 are Hot Tinned for easy soldering.

CHOICE OF TERMINALS



W	L	S	A	Terminals Each Side	With 1268 Term. Cat. No.	With 1204 Term. Cat. No.	With 1539 Term. Cat. No.
1	1⅛	1/16	1½	5	1268-10	1204-10	1239-10
1	2¼	1/16	1⅞	6	1268-12	1204-12	1239-12
1	5¼	1/16	4¾	14	1268-28	1204-28	1239-28
1¾	3¾	1⅛	3¼	10	1268-20	1204-20	1239-20
1¾	4⅛	1⅛	3¾	11	1268-22	1204-22	1239-22
1¾	7⅛	1⅛	6¾	19	1268-38	1204-38	1239-38
1/2	7⅛	Single Row	6¾	19	1268-19	1204-19	1239-19

KEYSTONE ELECTRONICS CORP.

© United Technical Publications

STANDARDIZED PLUG-IN HOUSINGS

PLUG IN HOUSINGS

Enhance the appearance and give that professional look to your products using these molded housings. Ideally suited for packaging relays, logic packages, networks and miniature circuitry. Durable, lightweight covers that will withstand vibrations and rough usage. A most popular size metal cover is included in this listing of stock items.

HEADERS: Molded of G.P. black phenolic and fit standard sockets.

Pins are Brass, Nickel Plated. Guide hole tapped 8-32 for terminal board mounting stud.

- VARIETY OF MOLDED MATERIALS
- GOOD CHEMICAL RESISTANCE
- LOW WATER ABSORPTION



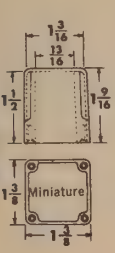


FIG. 1

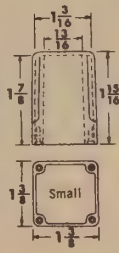


FIG. 2

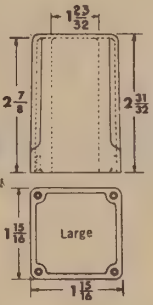


FIG. 3

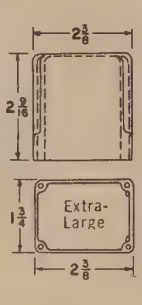


FIG. 4

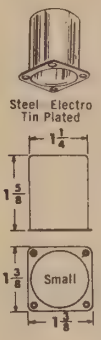


FIG. 5

MATERIAL CHARACTERISTICS:

POLYSTYRENE: For general purpose use where high impact strength is not required and temperature would not exceed 170°F.

BUTYRATE: 3 times the impact strength of Polystyrene and excellent electrical properties, use wherever temperatures of 210°F exist.

NYLON: Impact strength slightly less than Butyrate but recommended for use where temperatures are as high as 300°F.

Housing with Octal Header & 4 Screws CAT. NO.	Housing Only CAT. NO.	Fig. No.	Type	Material	Color
660	670	1	Mini	Butyrate	Clear
661	671	1	Mini	Nylon	White
662	672	1	Mini	Polystyrene	Clear
641	645	1	Mini	Polystyrene	Opaque Black
642	646	1	Mini	Polystyrene	Transp. Red
663	673	2	Small	Butyrate	Clear
664	674	2	Small	Nylon	White
665	676	2	Small	Polystyrene	Clear
643	647	2	Small	Polystyrene	Opaque Black
644	648	2	Small	Polystyrene	Transp. Red
650	649	3	Large	Butyrate	Clear
668	679	3	Large	Polystyrene	Clear
677	666	3	Large	Polystyrene	Opaque Black
678	667	3	Large	Polystyrene	Transp. Red
639	640	4	Extra-Large	Polystyrene	Clear
669	680	5	Small	Steel	Electro Tin Plate

HEADERS

HEADERS: Headers are available in two sizes and a variety of pin configurations that fit standard sockets. Molded of general purpose phenolic with brass nickel plated pins sturdily staked. Guide hole tapped 8-32 for terminal board mounting stud.

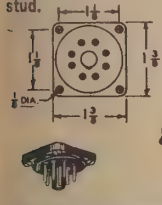


FIG. 1

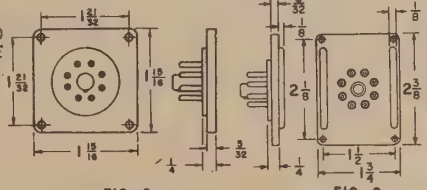

FIG. 2

FIG. 3

1⅜ Sq. Headers for Mini & Small Housing (FIG. 1) CAT. NO.	Pin Configuration	1 15/16 Sq. Headers for Large Housing (FIG. 2) CAT. NO.	1¾ x 2⅜ Headers for Extra Large Housing (FIG. 3) CAT. NO.
681	Octal	685	690
682	Nine Pin	Not Available	Not Available
683	Eleven Pin	688	Not Available
684	Twenty Pin	687	691

SELF-TAPPING SCREWS

CAT. NO. 688 — For miniature & small covers #4 x ⅜"

CAT. NO. 689 — For large covers #4 x ½"

TERMINAL BOARDS

(FOR USE WITH ABOVE HOUSINGS)

THESE BOARDS ARE STOCKED IN XXXP PAPERBASE AND GLASS EPOXY MATERIAL. SPACING OF HOLES IS .100 and .200 ALTERNATES. AN 8-32 THREADED STUD IS FIRMLY EYELETTED TO THE BOARD AND IS EASILY ASSEMBLED INTO THE TAPPED HOLE OF THE HEADERS.

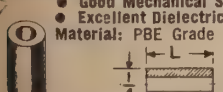


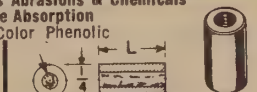
XXX PBE MIL-P-3115C Bakelite Cat. No.	Glass Epoxy G-10, GEE MIL-P-18177B Cat. No.	Size of Board with Stud	For Covers Listed Above
692	696	1 x 1 5/16	Miniature
693	697	1⅛ x 1¾	Small
694	698	1½ x 2¾	Large
695	699	1⅛ x 1 7/16	Metal Case
637	638	1 5/16 x 2⅜	Xtra Large

PHENOLIC SPACERS

- Good Mechanical Strength
- Resists Abrasions & Chemicals
- Excellent Dielectric
- Low Moisture Absorption

Material: PBE Grade MIL-P-79A Natural Color Phenolic





SPACERS — DRILLED HOLE ONLY

Length Inches	For #4 Screw .120 Hole Cat. No.	For #6 Screw .140 Hole Cat. No.	For #8 Screw .171 Hole Cat. No.
¼ (.250)	360	367	1490
⅜ (.375)	361	368	1491
½ (.500)	362	369	1492
¾ (.750)	363	370	1493
1 (1.000)	364	371	1494
1½ (1.500)	365	372	374
2 (2.000)	366	373	375

SPACERS — WITH TAPPED HOLE

4-40 Thread Cat. No.	6-32 Thread Cat. No.	8-32 Thread Cat. No.
376	383	390
377	384	391
378	385	392
379	386	393
380	387	394
381	389	395
382	389	396

1.500 and 2" are tapped ⅜ deep each end

OCTAL TUBE BASE SHELLS

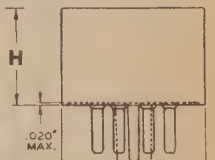


MATE WITH ALL STANDARD OCTAL SOCKETS

- ENCAPSULATE CIRCUITS—1001 USES
- CONSTRUCT TEST ADAPTERS
- LOW COST • COMPLETELY ASSEMBLED

Black Molded Shell of General Purpose Phenolic per MIL-M-14CFG. 8 Brass Nickel Plated Pins securely staked to shell.





Cat. No.	H	O.D.
4515	.850	1.250
4516	1.070	1.350

ALUMINUM ECONOMY SPACERS

FOR No. 4, 6 or 8 SCREWS

- Precision Formed
- No Burrs

Made of flat strip aluminum and rolled on precision equipment. Assures maximum bearing surface, square ends.


Tight Joint on Outside Diameter

Description and Tol.

Spacer For	I.D. ±.005	O.D. ±.007
#4	.125	.167
#6	.151	.193
#8	.178	.232



L Length Inches	For #4 Cat. No.	For #6 Cat. No.	For #8 Cat. No.
3/16	397	—	—
¼	398	405	412
5/16	399	406	413
⅜	400	407	414
7/16	401	408	415
½	402	409	416
⅝	403	410	417

L Length Inches	For #4 Cat. No.	For #6 Cat. No.	For #8 Cat. No.
¾	418	425	432
⅞	419	426	433
1	420	427	434
1¼	421	428	435
1½	422	429	436
1¾	—	430	437
2	—	—	438

KEYSTONE ELECTRONICS CORP.

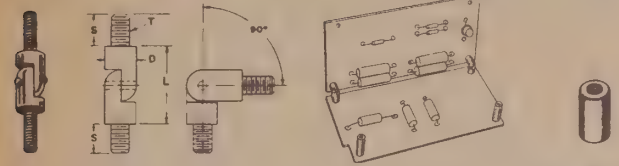
© United Technical Publications

STANDOFFS & SPACERS

HINGED STANDOFFS FOR TERMINAL BOARDS

- APPLICATIONS UNLIMITED
- TIME SAVING

Only 2 screws used to fasten board in place or open the hinged board.



Hinge Cat. No.	T Thread	L Length	D Diam.	S	P	Standoff Only For Front of Board Cat. No.
357	4-40	½	.187	¼	¼	1657
—	—	—	—	—	—	—
358	6-32	½	.250	5/16	¼	1548C
—	—	—	—	—	—	—
359	8-32	½	.250	5/16	¼	1692C
—	—	—	—	—	—	—

THREADED SPACERS

THREADED SPACERS ¼" O.D. THREADED 4-40, 6-32, 8-32 AVAILABLE EITHER IN ROUND OR HEX. ROUND TYPE IS NICKEL PLATED, HEX TYPE IS CADMIUM.



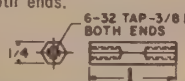
Cadmium plate per QQ-P-416 Type 2 Class B and clear chromate.

Nickel Plate Mil-F-14072 QQ-N-290 Type V

HEX Cadmium Plated Cat. No.	D	L	T Thread	ROUND Nickel Plated Cat. No.
1450	3/16	¼	4-40	1547
1656	3/16	½	4-40	1657
1656A	3/16	¾	4-40	1657A
1656B	3/16	1	4-40	1657B
1450A	¼	¼	4-40	1547A
1450B	¼	⅜	4-40	1547B
1450C	¼	½	4-40	1547C
1450D	¼	¾	4-40	1547D
1450E	¼	1	4-40	1547E
1451A	¼	¼	6-32	1548A
1451B	¼	⅜	6-32	1548B
1451C	¼	½	6-32	1548C
1451D	¼	5/8	6-32	1548D
1451E	¼	¾	6-32	1548E
1635	¼	1	6-32	1548F
1474A	¼	¼	8-32	1692A
1474B	¼	⅜	8-32	1692B
1474C	¼	½	8-32	1692C
1474D	¼	¾	8-32	1692D
1474E	¼	1	8-32	1692E
1452A	⅜	⅜	8-32	1549A
1452B	⅜	½	8-32	1549B
1452C	⅜	5/8	8-32	1549C
1452D	⅜	¾	8-32	1549D
1452E	⅜	1	8-32	1549E

HEX SPACERS 6-32 TAPPED BOTH ENDS

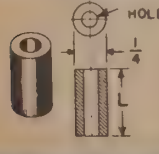
Extra long length spacers ideal as standoff legs for Keystone pre-punched boards or your special application. Brass cad. plated and chromate. ¼" O.D. with 6-32 x ⅜" deep tapped holes both ends.



Cat. No.	Length
1635	1
1636	1¼
1637	1½
1638	1¾
1639	2
1642	2¼
1643	2½

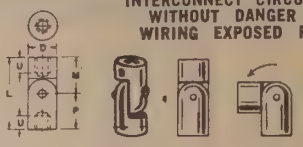
ROUND BRASS SPACERS

Made of Brass MIL Spec. QQ-2-626A Comb. 22 ½ Hard.
Finishes: Nickel Plate Mil-F-14072 QQ-N-233 Type V.



Length Inches	For #4 Sc'R .120 I.D. Cat. No.	For #6 Sc'R .140 I.D. Cat. No.	For #8 Sc'R .171 I.D. Cat. No.
¼	1454A	1457A	1480
⅜	1454B	1457B	1481
½	1454C	1457C	1482
¾	1457D	1457D	1483
1	1454E	1457E	1484

CUT COST OF SERVICING • SPACE SAVER
INTERCONNECT CIRCUITS OR SERVICES
WITHOUT DANGER OF SHORTING
WIRING EXPOSED FOR EASY TEST



Material: Made of Brass
Finish: Nickel Plate

These standoffs mount at front of the board.

Hinge Cat. No.	T Thread	D Diam.	L Length	U	M	P	Standoff Only Cat. No.
351	4-40	.187	¾	.172	.375	.375	1657A
352	4-40	.187	1	.250	.375	.625	1657B
353	6-32	.250	¾	.172	.375	.375	1548E
354	6-32	.250	1	.250	.375	.625	1548F
355	8-32	.250	¾	.172	.375	.375	1692D
356	8-32	.250	1	.250	.375	.625	1692E

SWAGE TYPE THREADED STANDOFFS

MATERIAL: ALL HARDWARE ON THIS PAGE IS MADE OF: BRASS MIL SPEC. QQ-B 626A COMP. 22—½ HARD.



Nickel Plate Mil-F-14072
QQ-N-290 Type V

Cadmium plate per QQ-P-416 Type 2 Class B and clear chromate.

ROUND Nickel Plated Cat. No.	H Height Above Panel	L	For Panel Thickness	LD	OD	T Thread	HEX Cadmium Plated Cat. No.
1589-2	⅛	.109	1/16	.125	5/32	2-56	—
1589-3	⅛	.140	3/32	.125	5/32	2-56	—
1590-2	3/16	.109	1/16	.125	5/32	2-56	—
1590-3	3/16	.140	3/32	.125	5/32	2-56	—
1591-2	¼	.109	1/16	.125	5/32	2-56	—
1591-3	¼	.140	3/32	.125	5/32	2-56	—
1596-2	⅜	.109	1/16	.125	5/32	2-56	—
1596-3	⅜	.140	3/32	.125	5/32	2-56	—
1560 A	⅛	.109	1/16	.187	¼	4-40	1653-2
1560 F	⅛	.140	3/32	.187	¼	4-40	1653-3
1650-2	¼	.109	1/16	.187	¼	4-40	1627-2
1650-3	¼	.140	3/32	.187	¼	4-40	1627-3
1651-2	⅜	.109	1/16	.187	¼	4-40	1628-2
1651-3	⅜	.140	3/32	.187	¼	4-40	1628-3
1623-2	½	.109	1/16	.187	¼	4-40	1629-2
1623-3	½	.140	3/32	.187	¼	4-40	1629-3
1624-2	5/8	.109	1/16	.187	¼	4-40	1654-2
1624-3	5/8	.140	3/32	.187	¼	4-40	1654-3
1625-2	¾	.109	1/16	.187	¼	4-40	1655-2
1625-3	¾	.140	3/32	.187	¼	4-40	1655-3
1652-2	1	.109	1/16	.187	¼	4-40	1630-2
1652-3	1	.140	3/32	.187	¼	4-40	1630-3
1560 B	⅛	.109	1/16	.187	¼	6-32	1620-2
1560 C	⅛	.140	3/32	.187	¼	6-32	1620-3
1560 D	⅛	.171	⅛	.187	¼	6-32	1620-4
1612-2	3/16	.109	1/16	.187	¼	6-32	—
1612-3	3/16	.140	3/32	.187	¼	6-32	—
1612-4	3/16	.171	⅛	.187	¼	6-32	—
1546	¼	.109	1/16	.187	¼	6-32	1621-2
1546 B	¼	.140	3/32	.187	¼	6-32	1621-3
1546 D	¼	.171	⅛	.187	¼	6-32	1621-4
1561 B	⅜	.109	1/16	.187	¼	6-32	1622-2
1561 C	⅜	.140	3/32	.187	¼	6-32	1622-3
1561 D	⅜	.171	⅛	.187	¼	6-32	1622-4
1604-2	½	.109	1/16	.187	¼	6-32	—
1604-3	½	.140	3/32	.187	¼	6-32	—
1604-4	½	.171	⅛	.187	¼	6-32	—
1605-2	5/8	.109	1/16	.187	¼	6-32	—
1605-3	5/8	.140	3/32	.187	¼	6-32	—
1605-4	5/8	.171	⅛	.187	¼	6-32	—
1608-2	¾	.109	1/16	.187	¼	6-32	—
1608-3	¾	.140	3/32	.187	¼	6-32	—
1608-4	¾	.171	⅛	.187	¼	6-32	—
1609-2	1	.109	1/16	.187	¼	6-32	—
1609-3	1	.140	3/32	.187	¼	6-32	—
1609-4	1	.171	⅛	.187	¼	6-32	—

STAKING TOOLS FOR ABOVE STAND-OFFS

Precision made tools—heat treated and plated. Will give your job the professional appearance. Set of tools consist of: Top Staking Tool and Anvil



Cat. No.	
TL-19	For Bushing 5/32 OD with 2-56 Thd.
TL-20	For Bushing ¼ OD with 4-40 Thd.
TL-21	For Bushing ¼ OD with 6-32 Thd.

© United Technical Publications

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

Kulka TERMINAL BOARDS

MOLDED MATERIALS:
General Purpose Phenolic (commercial grade) unless otherwise specified.

Military Code	Kulka Code	Description
—	—	Commercial Grade Phenolic
CFG	C	Cellulose Filled Phenolic
MFE	M	Mineral Filled Phenolic
MME	GMF	Mineral Filled Melamine
MDG	B	Mineral Filled Diallyl Phthalate
MAI-60	D	Glass Fibre Filled Alkyd
GDI-30F	JJ	Glass Fibre Filled Diallyl Phthalate, Flame Retardant

ORDERING CODE For convenience and accuracy in ordering, please specify catalog numbers as shown:

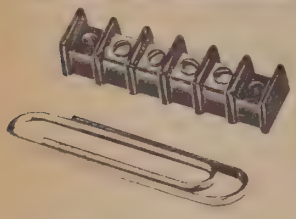
CODE EXAMPLE

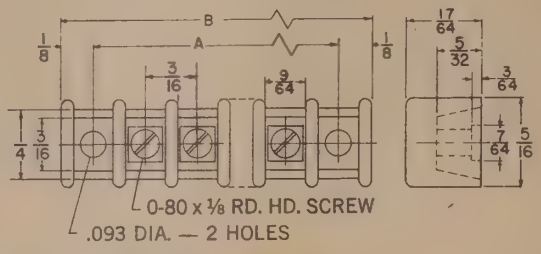
Series	Material Code*	Lug Type*	Number of Terminals	Special Hardware*	Service*
409	C	3/4ST	21	SS	F

409-C-3/4ST-21-SSF

*Omit if not applicable

409 SERIES





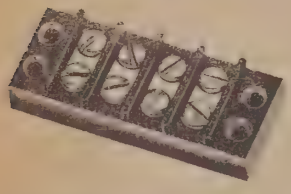
HARDWARE:
SCREWS & TERMINALS: Brass, with a silver and gold flash.
SOLDER TERMINALS: Brass, hot-tinned

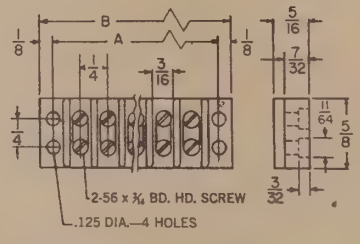
WIRE SIZES:
Will accommodate lugs for wire sizes: AWG #26 to 22.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 750 Volts RMS.
WITH Marker Strip: 1500 Volts RMS.
CURRENT RATING: 2 Amps.

Number of Terminals	Dimensions A	B
1	3/8	5/8
2	5/8	1 3/16
3	3/4	1
4	1 3/16	1 3/8
5	1 1/8	1 3/8
6	1 3/16	1 5/8
7	1 1/2	1 3/4
8	1 11/16	1 15/16
9	1 7/8	2 1/4
10	2 1/16	2 5/8
11	2 1/4	2 1/2
12	2 7/16	2 11/16
13	2 5/8	2 7/8
14	2 13/16	3 1/16
15	3	3 1/4
16	3 3/16	3 7/16
17	3 3/8	3 5/8
18	3 5/16	3 13/16
19	3 3/4	4
20	3 15/16	4 3/16
21	4 1/8	4 3/8

410 SERIES





HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

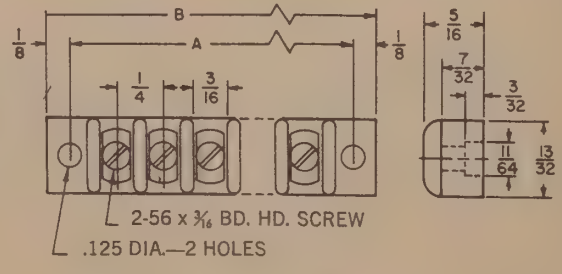
WIRE SIZES
Will accommodate lugs for wire sizes: AWG #20 to #18.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1000 Volts RMS.
WITH Marker Strip: 2000 Volts RMS.
CURRENT RATING: 5 Amps.

Number of Terminals	Dimensions A	B
1	1/2	3/4
2	3/4	1
3	1	1 1/4
4	1 1/4	1 1/2
5	1 1/2	1 3/4
6	1 3/4	2
7	2	2 1/4
8	2 1/4	2 1/2
9	2 1/2	2 3/4
10	2 3/4	3
11	3	3 1/4
12	3 1/4	3 1/2
13	3 1/2	3 3/4
14	3 3/4	4
15	4	4 1/4
16	4 1/4	4 1/2
17	4 1/2	4 3/4
18	4 3/4	5
19	5	5 1/4
20	5 1/4	5 1/2
21	5 1/2	5 3/4
22	5 3/4	6

411 SERIES





HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #20 to #18.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1000 Volts RMS.
WITH Marker Strip: 2000 Volts RMS.
CURRENT RATING: 5 Amps.

Number of Terminals	Dimensions A	B
1	1/2	3/4
2	3/4	1
3	1	1 1/4
4	1 1/4	1 1/2
5	1 1/2	1 3/4
6	1 3/4	2
7	2	2 1/4
8	2 1/4	2 1/2
9	2 1/2	2 3/4
10	2 3/4	3
11	3	3 1/4
12	3 1/4	3 1/2
13	3 1/2	3 3/4
14	3 3/4	4
15	4	4 1/4
16	4 1/4	4 1/2
17	4 1/2	4 3/4
18	4 3/4	5
19	5	5 1/4
20	5 1/4	5 1/2
21	5 1/2	5 3/4
22	5 3/4	6

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation

NORTH AMERICAN PHILIPS

KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

© United Technical Publicatio

Kulka TERMINAL BOARDS

MOLDED MATERIALS:
General Purpose Phenolic (commercial grade) unless otherwise specified.

Military Code	Kulka Code	Description
—	—	Commercial Grade Phenolic
CFG	C	Cellulose Filled Phenolic
MFE	M	Mineral Filled Phenolic
MME	GMF	Mineral Filled Melamine
MDG	B	Mineral Filled Diallyl Phthalate
MAI-60	D	Glass Fibre Filled Alkyd
GDI-30F	JJ	Glass Fibre Filled Diallyl Phthalate, Flame Retardant

ORDERING CODE For convenience and accuracy in ordering, please specify catalog numbers as shown:

CODE EXAMPLE

Series	Material Code*	Lug Type*	Number of Terminals	Special Hardware*	Service*
599	C	3/4ST	23	SI	F

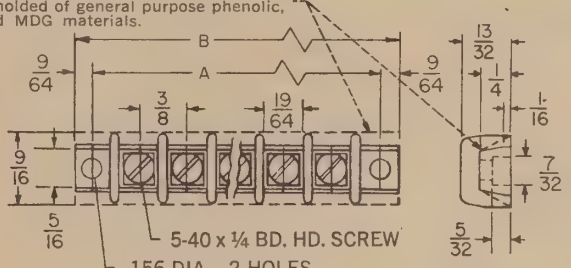
*Omit If not applicable

599-C-3/4ST-23SIF

599 SERIES



Dashed lines indicate new design (effective mid-1964) for terminal boards molded of general purpose phenolic, CFG, MFE, MME and MDG materials.



HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #22 to 16.

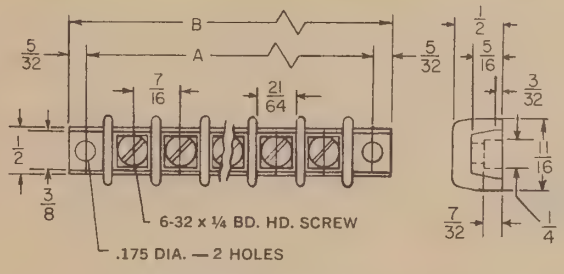
ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1100 Volts RMS.
WITH Marker Strip: 2500 Volts RMS.
CURRENT RATING: 15 Amps.

Number of Terminals†	Dimensions A	B
1	3/4	1 1/32
2	1 1/8	1 13/32
3	1 1/2	1 25/32
4	1 7/8	2 5/32
5	2 1/4	2 17/32
6	2 5/8	2 29/32
7	3	3 5/32
8	3 3/8	3 21/32
9	3 3/4	4 1/32
10	4 1/8	4 13/32
11	4 1/2	4 25/32
12	4 7/8	5 5/32
13	5 1/4	5 17/32
14	5 5/8	5 29/32
15	6	6 9/32
16	6 3/8	6 21/32
17	6 3/4	7 1/32
18	7 1/8	7 13/32
19	7 1/2	7 25/32
20	7 7/8	8 5/32
21	8 1/4	8 17/32
22	8 5/8	8 29/32

†New design will have up to thirty terminals in general purpose phenolic, CFG, MFE, MME and MDG materials.

699 SERIES





HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

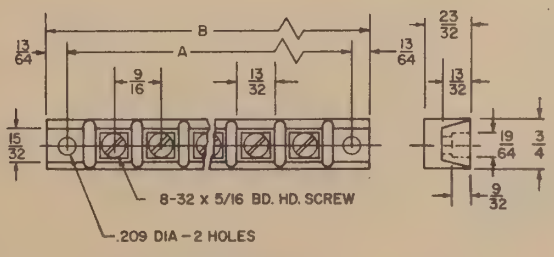
WIRE SIZES
Will accommodate lugs for wire sizes: AWG #16 to 14.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1100 Volts RMS.
WITH Marker Strip: 3000 Volts RMS.
CURRENT RATING: 20 Amps.

Number of Terminals	Dimensions A	B
1	7/8	1 3/16
2	1 5/16	1 5/8
3	1 3/4	2 1/16
4	2 3/16	2 1/2
5	2 5/8	2 15/16
6	3 1/16	3 3/8
7	3 1/2	3 13/16
8	3 15/16	4 1/4
9	4 3/8	4 11/16
10	4 13/16	5 1/8
11	5 1/4	5 9/16
12	5 11/16	6
13	6 1/8	6 7/16
14	6 9/16	6 7/8
15	7	7 5/16
16	7 7/16	7 3/4
17	7 7/8	8 3/16
18	8 5/16	8 5/8
19	8 3/4	9 1/16
20	9 3/16	9 1/2
21	9 5/8	9 15/16
22	10 1/16	10 3/8
23	10 1/2	10 13/16

812 SERIES





HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #14 to 12.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1600 Volts RMS.
WITH Marker Strip: 3300 Volts RMS.
CURRENT RATING: 30 Amps.

Number of Terminals	Dimensions A	B
1	1 1/8	1 17/32
2	1 11/16	2 3/32
3	2 1/4	2 21/32
4	2 13/16	3 7/32
5	3 3/8	3 25/32
6	3 15/16	4 11/32
7	4 1/2	4 29/32
8	5 1/16	5 15/32
9	5 5/8	6 1/32
10	6 3/16	6 17/32
11	6 3/4	7 5/32
12	7 5/16	7 23/32
13	7 7/8	8 9/32
14	8 7/16	8 27/32
15	9	9 13/32
16	9 9/16	9 31/32
17	10 1/8	10 15/32
18	10 11/16	11 3/32

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation

NORTH AMERICAN PHILIPS

KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

© United Technical Publications

Kulka TERMINAL BOARDS

MOLDED MATERIALS:
General Purpose Phenolic (commercial grade) unless otherwise specified.

Military Code	Kulka Code	Description
—	—	Commercial Grade Phenolic
CFG	C	Cellulose Filled Phenolic
MFE	M	Mineral Filled Phenolic
MME	GMF	Mineral Filled Melamine
MDG	B	Mineral Filled Diallyl Phthalate
MAI-60	D	Glass Fibre Filled Alkyd
GDI-30F	JJ	Glass Fibre Filled Diallyl Phthalate, Flame Retardant

ORDERING CODE For convenience and accuracy in ordering, please specify catalog numbers as shown:

CODE EXAMPLE

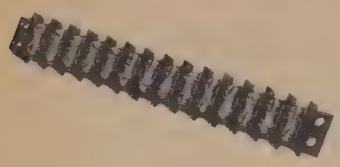
Series**	Material Code*	Lug Type*	Number of Terminals	Special Hardware*	Service*
600	C	¾ST	22	SI	F

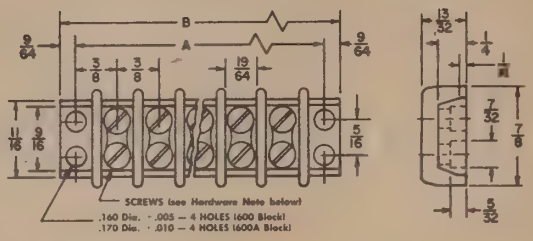
600C—¾ST—22SIF

*Omit if not applicable

**Specify 600A for blocks with .170 dia. mounting holes and 6-32 screws.

600 SERIES





HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

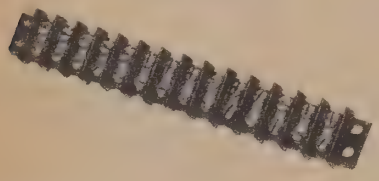
600 Series Screws: 5-40 x ¼"
600A Series Screws: 6-32 x ¼"

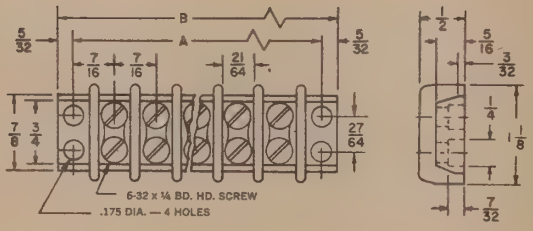
WIRE SIZES
Will accommodate lugs for wire sizes: AWG #22 to 16.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1100 Volts RMS.
WITH Marker Strip: 2500 Volts RMS.
CURRENT RATING: 15 Amps.

Number of Terminals	Dimensions A	B
1	¾	1 1/32
2	1 1/16	1 13/32
3	1 13/32	1 45/32
4	1 7/8	2 5/32
5	2 1/4	2 17/32
6	2 5/8	2 29/32
7	3	3 1/32
8	3 3/8	3 13/32
9	3 3/4	4 1/32
10	4 1/8	4 13/32
11	4 1/2	4 25/32
12	4 7/8	5 1/32
13	5 1/4	5 17/32
14	5 5/8	5 29/32
15	6	6 1/32
16	6 3/8	6 17/32
17	6 3/4	7 1/32
18	7 1/8	7 13/32
19	7 1/2	7 25/32
20	7 7/8	8 1/32
21	8 1/4	8 17/32
22	8 5/8	8 29/32

601 SERIES





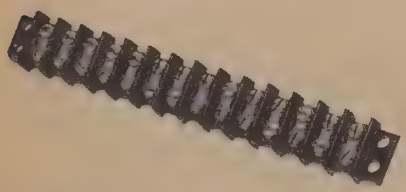
HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

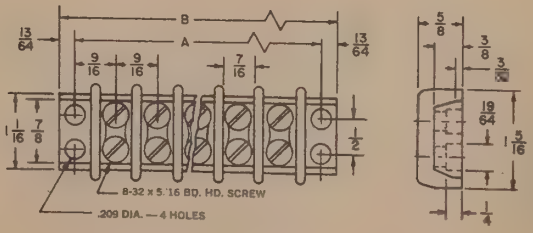
WIRE SIZES
Will accommodate lugs for wire sizes: AWG #16 to 14.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1100 Volts RMS.
WITH Marker Strip: 3000 Volts RMS.
CURRENT RATING: 20 Amps.

Number of Terminals	Dimensions A	B
1	7/8	1 3/16
2	1 3/16	1 5/8
3	1 3/4	2 1/16
4	2 3/16	2 1/2
5	2 5/8	2 15/16
6	3 1/16	3 3/8
7	3 1/2	3 13/16
8	3 15/16	4 1/4
9	4 3/8	4 11/16
10	4 13/16	5 1/8
11	5 1/4	5 5/8
12	5 11/16	6
13	6 1/8	6 1/4
14	6 5/16	6 7/16
15	7	7 3/4
16	7 7/16	7 3/4
17	7 7/8	8 1/16
18	8 5/16	8 3/8
19	8 3/4	9 1/16
20	9 1/16	9 1/2
21	9 5/8	9 15/16
22	10 1/16	10 3/4
23	10 1/2	10 15/16

602 SERIES





HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #14 to 12.

ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1600 Volts RMS.
WITH Marker Strip: 3300 Volts RMS.
CURRENT RATING: 30 Amps.

Number of Terminals	Dimensions A	B
1	1 1/8	1 17/32
2	1 15/16	2 3/32
3	2 1/4	2 21/32
4	2 13/16	3 7/32
5	3 3/4	3 25/32
6	3 15/16	4 1/32
7	4 1/2	4 25/32
8	5 1/16	5 1/32
9	5 5/8	6 1/32
10	6 3/16	6 13/32
11	6 3/4	7 1/32
12	7 5/16	7 13/32
13	7 7/8	8 1/32
14	8 7/16	8 27/32
15	9	9 1/32
16	9 1/16	9 11/32
17	10 1/8	10 17/32
18	10 11/16	11 3/32
19	11 1/4	11 21/32
20	11 13/16	12 7/32
21	12 3/8	12 25/32
22	12 15/16	13 11/32
23	13 1/2	13 25/32
24	14 1/16	14 13/32
25	14 5/8	15 1/32
26	15 3/16	15 15/32

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation

NORTH AMERICAN PHILIPS

KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

© United Technical Publications

Kulka TERMINAL BOARDS

MOLDED MATERIALS:
General Purpose Phenolic (commercial grade) unless otherwise specified.

Military Code	Kulka Code	Description
—	—	Commercial Grade Phenolic
CFG	C	Cellulose Filled Phenolic
MFE	M	Mineral Filled Phenolic
MME	GMF	Mineral Filled Melamine
MDG	B	Mineral Filled Diallyl Phthalate
MAI-60	D	Glass Fibre Filled Alkyd
GDI-30F	JJ	Glass Fibre Filled Diallyl Phthalate, Flame Retardant

ORDERING CODE For convenience and accuracy in ordering, please specify catalog numbers as shown:

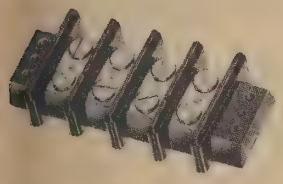
CODE EXAMPLE

Series	Material Code*	Lug Type*	Number of Terminals	Special Hardware*	Service*
603	C	¾ST	12	SI	F

603C-3/4ST-12SIF

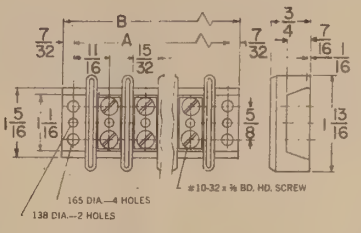
*Omit if not applicable

603 SERIES



HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #6.



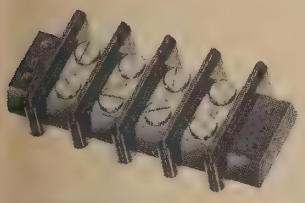
ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1700 Volts RMS.
WITH Marker Strip: 3000 Volts RMS.
CURRENT RATING: 50 Amps.

603 SERIES TERMINAL BLOCKS and MARKER STRIPS

Number of Terminals	Dimensions A	Dimensions B
1	1⅜	1 13/16
2	2 1/16	2½
3	2¾	3 3/16
4	3 7/16	3⅞
5	4⅛	4 9/16
6	4 13/16	5¼
7	5½	5 15/16
8	6 3/16	6⅝
9	6⅞	7 5/16
10	7 9/16	8
11**	8¼	8 11/16
12**	8 15/16	9⅜

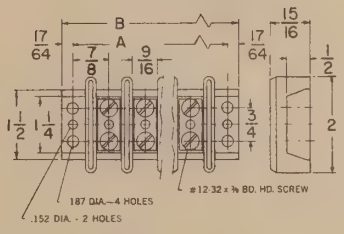
**Not available in MAI-60, GDI-30 and GDI-30F materials.

604 SERIES



HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #4.

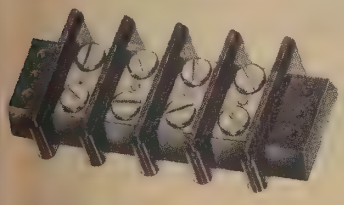


ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 1800 Volts RMS.
WITH Marker Strip: 3400 Volts RMS.
CURRENT RATING: 70 Amps.

604 SERIES TERMINAL BLOCKS and MARKER STRIPS

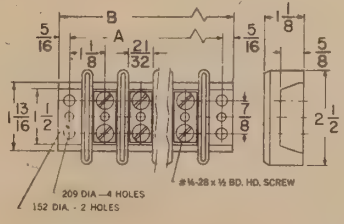
Number of Terminals	Dimensions A	Dimensions B
1	1¾	2 3/32
2	2 5/8	3 3/32
3	3½	4 1/32
4	4 3/8	4 29/32
5	5¼	5 25/32
6	6 1/8	6 21/32
7	7	7 17/32
8	7⅞	8 13/32

605 SERIES



HARDWARE:
SCREWS & TERMINALS: Brass, nickel plated.
SOLDER TERMINALS: Brass, hot-tinned

WIRE SIZES
Will accommodate lugs for wire sizes: AWG #2.



ELECTRICAL RATING
RATED VOLTAGE (⅓ breakdown voltage)
WITHOUT Marker Strip: 2100 Volts RMS.
WITH Marker Strip: 3800 Volts RMS.
CURRENT RATING: 90 Amps.

605 SERIES TERMINAL BLOCKS and MARKER STRIPS

Number of Terminals	Dimensions A	Dimensions B
1	2¼	2⅞
2	3 3/8	4
3	4½	5 1/8
4	5 5/8	6¼
5	6¾	7 3/8
6	7⅞	8½

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation

NORTH AMERICAN PHILIPS

KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

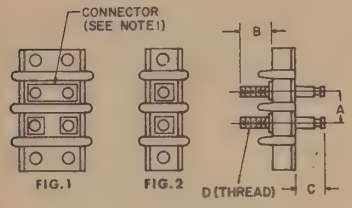
© United Technical Publications

Kulka TERMINAL BOARDS

STUD & TURRET TERMINAL BOARDS



THREADED STUD WITH FEED-THRU SOLDER TERMINAL



NUTS (See Note 1)

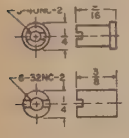
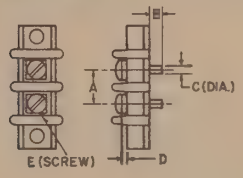


Fig.	Part	A	B	C	D
1	600-2000-*	3/8	5/16	5/8	5-40 NC
1	601-2100-*	1/4	7/16	3/8	6-32 NC
2	599-2000-*	3/8	5/16	5/8	5-40 NC
2	699-2100-*	1/4	7/16	3/8	6-32 NC

*Indicate Number of Terminals



SCREW TERMINAL WITH SOLDER PIN FOR PRINTED CIRCUIT BOARD CONNECTION

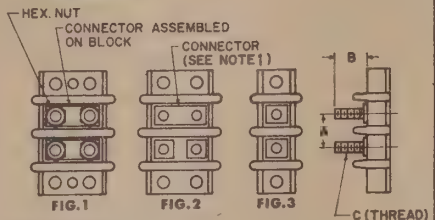


Part	A	B	C	D	E
599-2020-*	3/8	1/8	.093	.093	5-40 NC x 1/4
599-2021-*	3/8	1/8	.093	.031	5-40 NC x 3/16
699-2120-*	7/16	3/16	.093	.040	6-32 NC x 1/4

*Indicate number of terminals



THREADED STUD



NUTS (See Note 1)

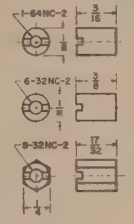
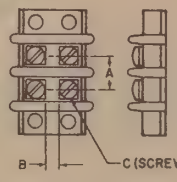


Fig.	Part	A	B	C
3	409-1802-*	3/16	3/16	1-64 NC
3	599-2002-*	3/8	3/8	6-32 NC
2	600-2002-*	3/8	3/8	6-32 NC
2	601-2102-*	1/4	7/16	6-32 NC
2	602-2202-*	3/16	1/2	8-32 NC
1	603-2302-*	11/16	13/32	10-32 NF
1	604-2402-*	7/8	9/16	10-32 NF
1	605-2502-*	1 1/8	3/4	1/4-28 NF
3	609-2902-*	3/4	11/32	6-32 NC
3	699-2102-*	1/4	7/16	6-32 NC
3	812-2202-*	3/16	1/2	8-32 NC

*Indicate Number of Terminals

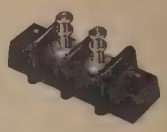


INDIVIDUAL SCREW TERMINALS



Part	A	B	C
601-2108-*	7/16	3/32	6-32 NC x 1/4

*Indicate Number of Terminals



SOLDER TURRET

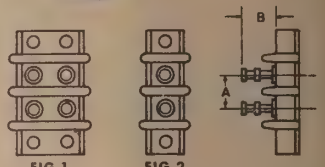


Fig.	Part	A	B
1	410-1903-*	1/2	1/4
1	600-2003-*	3/8	3/16
1	602-2203-*	3/16	3/16
2	409-1803-*	3/8	13/64
2	411-1903-*	1/2	1/4
2	599-2003-*	3/8	3/16
2	812-2203-*	3/16	3/16

*Indicate Number of Terminals



SCREW TERMINAL WITH FEED-THRU SOLDER TERMINAL

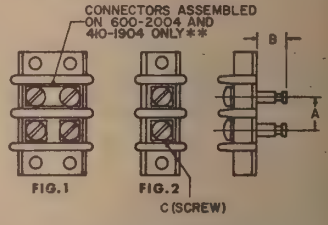


Fig.	Part	A	B	C
1	410-1904-*	1/2	3/32	2-56 NC x 3/16
2	411-1904-*	1/2	3/32	2-56 NC x 3/16
2	599-2004-*	3/8	3/16	5-40 NC x 3/16
1	600-2004-*	3/8	3/16	5-40 NC x 3/16
1	601-2104-*	7/16	3/16	6-32 NC x 1/4
2	699-2104/*	7/16	3/16	6-32 NC x 1/4

*Indicate Number of Terminals

**Connectors also available on special order with #601-2104.

NOTES: 1. Standard with block but packed separately.
2. Catalog Code Example:

Terminal Block Series	Terminal Style	No. of Terminals
599	2003	22

QUICK CONNECT—DISCONNECT TERMINAL BOARDS

"KLIPTITE"



- Just clip on wire terminal fast — for a tight connection.
- Disconnect just as fast.
- Available on KULKA'S full line of molded barrier terminal blocks, plus switches and convenience outlets.
- Up to six connections per stage.
- Vari-angled tabs.
- Available riveted to terminal hardware or with screw assembly.



MOLDED MATERIALS:
General Purpose Black Bakelite is supplied unless otherwise specified.

"Kliptite" terminals are supplied riveted unless screw assembly is specified. Where more than six common connections are required on a terminal block, Kulka Jumpers can be supplied.

HARDWARE:
Kliptite male tabs are brass, electro-tinned. Can be rigidly rivetted to terminal block or can be assembled under screws where replacement may be required or where a screw termination is also needed.

VARIATIONS:
- Flat, 45°, 90°
- Both Sides
- One Side
- Three tabs per stage (Flat, 45° and 90°)
- Screws one side, tab other side
- Stacked in combination with solder lugs Y, 3/4ST, ST, etc.

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation

NORTH AMERICAN PHILIPS COMPANY

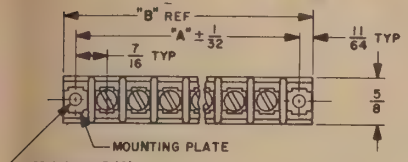
KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

© United Technical Publicatio

Kulka INSULATED FEEDTHRU TERMINAL BOARDS

1695/1696 SERIES





1696 SERIES: with Solder Terminals
1695 SERIES: with Klip-tite Terminals

CODE EXAMPLE

SERIES	MATERIAL CODE *	LUG TYPE	NO. OF TERM.	SPECIAL * HARDWARE	SERVICE *
1696		3/4ST	23	81	F

1696 - 3/4ST - 23 81F

NO. OF TERM.	DIMENSIONS "A"	"B"
1	7/8	1 7/32
2	1 3/16	1 21/32
3	1 3/4	2 3/32
4	2 3/16	2 17/32
5	2 5/8	2 31/32
6	3 1/16	3 13/32
7	3 1/2	3 27/32
8	3 15/16	4 9/32
9	4 3/8	4 23/32
10	4 13/16	5 5/32
11	5 1/4	5 19/32
12	5 11/16	6 1/32

NO. OF TERM.	DIMENSIONS "A"	"B"
13	6 1/8	6 15/32
14	6 9/16	6 29/32
15	7	7 11/32
16	7 7/16	7 25/32
17	7 7/8	8 7/32
18	8 5/16	8 21/32
19	8 3/4	9 3/32
20	9 3/16	9 17/32
21	9 5/8	9 31/32
22	10 1/16	10 13/32
23	10 1/2	10 27/32

MOLDED MATERIALS:
General Purpose Phenolic
HARDWARE:
Screws, Brass Nickel-plated.
Terminals, Brass, 60/40 Electro-tin Lead plated, mechanically fused.
WIRE SIZE:
AWG #16 to 14.
ELECTRICAL RATING:
Rated Voltage: 1100 Volts
Breakdown Voltage: 3000 Volts.
Current Rating: 20 Amps.

ORDERING CODE:
For convenience and accuracy in ordering, please specify Cat. No. as shown.

CODE EXAMPLE

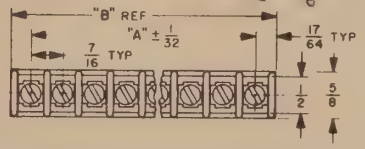
SERIES	MATERIAL CODE *	LUG TYPE	NO. OF TERM.	SPECIAL * HARDWARE	SERVICE *
1699 ⚠1		3/4ST	23	81	F

1699 - 3/4ST - 23 81F

DESIGNED FOR MOUNTING WITH SPEED NUTS

1698/1699 SERIES



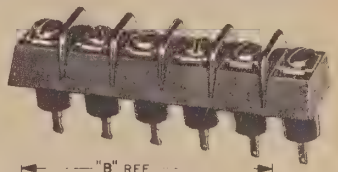


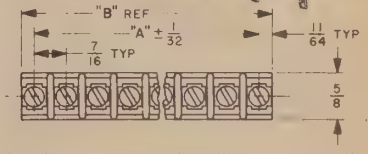
1699 SERIES: with Solder Terminals
1698 SERIES: with Klip-tite Terminals

NO. OF TERM.	DIMENSIONS "A"	"B"
⚠4 1	0	17/32
2	7/16	33/32
3	7/8	1 13/32
4	1 5/16	1 27/32
5	1 3/4	2 9/32
6	2 3/16	2 23/32
7	2 5/8	3 5/32
8	1/16	3 19/32
9	3 1/2	4 1/32
10	3 15/16	4 15/32
11	4 3/8	4 29/32
12	4 13/16	5 11/32

NO. OF TERM.	DIMENSIONS "A"	"B"
13	5 1/4	5 25/32
14	5 11/16	6 7/32
15	6 1/8	6 21/32
16	6 9/16	7 3/32
17	7	7 17/32
18	7 7/16	7 31/32
19	7 7/8	8 13/32
20	8 5/16	8 27/32
21	8 3/4	9 9/32
22	9 3/16	9 23/32
23	9 5/8	10 5/32

1692/1693 SERIES





1693 SERIES: with Solder Terminals
1692 SERIES: with Klip-tite Terminals

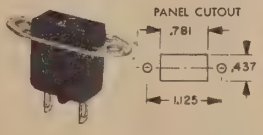
NO. OF TERM.	DIMENSIONS "A"	"B"
⚠4 1	0	11/32
2	7/16	25/32
3	7/8	1 7/32
4	1 5/16	1 21/32
5	1 3/4	2 3/32
6	2 3/16	2 17/32
7	2 5/8	2 31/32
8	3 1/16	3 13/32
9	3 1/2	3 27/32
10	3 15/16	4 9/32
11	4 3/8	4 23/32
12	4 13/16	5 5/32
13	5 1/4	5 19/32

NO. OF TERM.	DIMENSIONS "A"	"B"
14	5 1/16	6 1/32
15	6 1/8	6 15/32
16	6 9/16	6 29/32
17	7	7 11/32
18	7 7/16	7 25/32
19	7 7/8	8 7/32
20	8 5/16	8 21/32
21	8 3/4	9 3/32
22	9 3/16	9 17/32
23	9 5/8	9 31/32
24	10 1/16	10 3/32
25	10 1/2	10 27/32

KULKA CONVENIENCE OUTLETS



220



221



225



227



1221

BRACKET MOUNT
Can be dropped into opening and held in place by metal plated bracket and single central screw, supplied.

220 — Flat flange, leads.

WITH BRACKET FOR TOP OR BOTTOM MOUNTING
Flat steel bracket held rigidly to the block which mounts with 2 fastening screws.

221 — Solder terminals.

PUSH-IN SNAP-LOCK BRACKET TYPE
Has carbon steel spring clips which allow device to be snapped into opening.

225 — Flat top, leads
225ST — Flat top, solder connection
225KT — Flat top, Kliptite terminals

THREE WIRE CONVENIENCE OUTLET WITH GROUNDING LEAD
Can be snapped into opening, held fast by expanding steel spring clips.

227 — Three-wire outlet, black
227W — White Urea housing

BOTTOM MOUNTING BRACKET TYPE
For Hi-Fi Equipment, Instruments, Power Supplies, etc. New bracket contouring provides greatly increased rigidity and resistance to insertion and pull-out movement.

1221 — Solder terminals
1225 — Lead wires

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation

NORTH AMERICAN PHILIPS

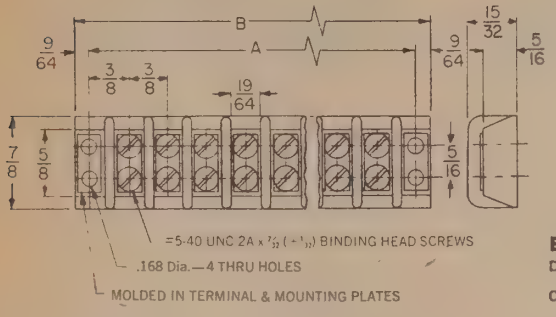
KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

Kulka MILITARY TERMINAL BOARDS MIL-T-55164

MOLDED MATERIAL:
PLASTIC: Diallyl Phthalate, Type GDI-30F per MIL-M-19833
SCREWS: Brass per QQ-W-321, Nickel Plate per QQ-N-290
TERMINAL PLATES: Brass per QQ-B-613. Plates are Nickel Plated per QQ-N-290

MARKER STRIPS AVAILABLE IN MILITARY-APPROVED LAMINATED MATERIALS

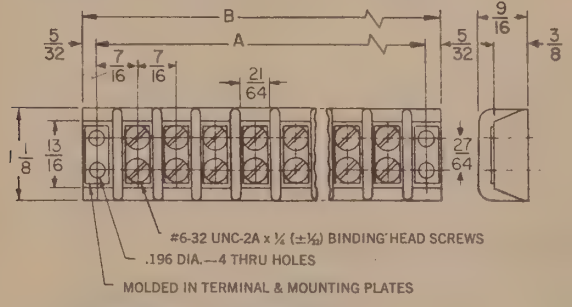
20000 SERIES
MILITARY CLASS — 37TB



ELECTRICAL RATING:
Dielectric Withstanding Voltage: 3000 V. RMS.
Current Rating: 15 Amps.

No. of Terminals	Kulka No.	Military Part No.	Dimensions "A"	Dimensions "B"
1	20001	—	3/4	1-3/64
2	20002	37TB-2	1-1/8	1-27/64
3	20003	37TB-3	1-1/2	1-51/64
4	20004	37TB-4	1-7/8	2-11/64
5	20005	37TB-5	2-1/4	2-9/16
6	20006	37TB-6	2-5/8	2-15/16
7	20007	37TB-7	3	3-5/16
8	20008	37TB-8	3-3/8	3-11/16
9	20009	37TB-9	3-49/64	4-1/16
10	20010	37TB-10	4-9/64	4-7/16
11	20011	37TB-11	4-33/64	4-13/16
12	20012	37TB-12	4-57/64	5-3/16
13	20013	37TB-13	5-17/64	5-9/16
14	20014	37TB-14	5-41/64	5-15/16
15	20015	37TB-15	6-1/64	6-5/16
16	20016	37TB-16	6-25/64	6-11/16
17	20017	37TB-17	6-49/64	7-1/16
18	20018	37TB-18	7-9/64	7-7/16
19	20019	37TB-19	7-33/64	7-53/64
20	20020	37TB-20	7-29/32	8-13/64
21	20021	37TB-21	8-9/32	8-37/64
22	20022	37TB-22	8-21/32	8-61/64
23	20023	37TB-23	9-1/32	9-21/64
24	20024	37TB-24	9-13/32	9-45/64
25	20025	37TB-25	9-25/32	10-5/64
26	20026	37TB-26	10-5/32	10-29/64
27	20027	37TB-27	10-17/32	10-53/64
28	20028	37TB-28	10-29/32	11-7/32
29	20029	37TB-29	11-9/32	11-19/32
30	20030	37TB-30	11-43/64	11-31/32
31	20031	37TB-31	12-1/32	12-23/64

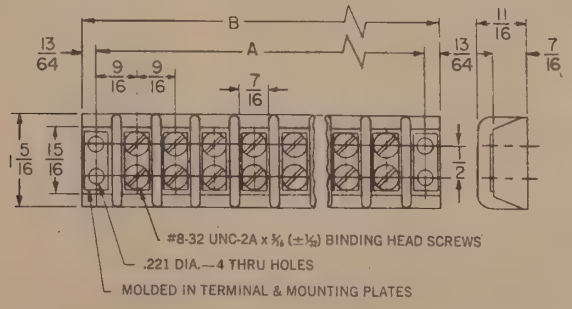
21000 SERIES
MILITARY CLASS — 38TB



ELECTRICAL RATING:
Dielectric Withstanding Voltage: 3400 V. RMS.
Current Rating: 20 Amps.

No. of Terminals	Kulka No.	Military Part No.	Dimensions "A"	Dimensions "B"
1	21001	—	7/8	1-13/64
2	21002	38TB-2	1-5/16	1-41/64
3	21003	38TB-3	1-3/4	2-5/64
4	21004	38TB-4	2-3/16	2-33/64
5	21005	38TB-5	2-5/8	2-61/64
6	21006	38TB-6	3-1/16	3-25/64
7	21007	38TB-7	3-1/2	3-53/64
8	21008	38TB-8	3-61/64	4-17/64
9	21009	38TB-9	4-25/64	4-45/64
10	21010	38TB-10	4-53/64	5-9/64
11	21011	38TB-11	5-17/64	5-19/32
12	21012	38TB-12	5-45/64	6-1/32
13	21013	38TB-13	6-9/64	6-15/32
14	21014	38TB-14	6-37/64	6-29/32
15	21015	38TB-15	7-1/64	7-11/32
16	21016	38TB-16	7-29/64	7-25/32
17	21017	38TB-17	7-57/64	8-7/32
18	21018	38TB-18	8-21/64	8-21/32
19	21019	38TB-19	8-25/32	9-7/64
20	21020	38TB-20	9-7/32	9-35/64
21	21021	38TB-21	9-21/32	9-63/64
22	21022	38TB-22	10-3/32	10-27/64
23	21023	38TB-23	10-17/32	10-55/64

22000 SERIES
MILITARY CLASS — 39TB



No. of Terminals	Kulka No.	Military Part No.	Dimensions "A"	Dimensions "B"
1	22001	—	1-1/8	1-35/64
2	22002	39TB-2	1-11/16	2-7/64
3	22003	39TB-3	2-1/4	2-11/16
4	22004	39TB-4	2-13/16	3-1/4
5	22005	39TB-5	3-3/8	3-13/16
6	22006	39TB-6	3-15/16	4-3/8
7	22007	39TB-7	4-1/2	4-15/16
8	22008	39TB-8	5-1/16	5-1/2
9	22009	39TB-9	5-41/64	6-1/16
10	22010	39TB-10	6-13/64	6-5/8
11	22011	39TB-11	6-3/4	7-3/16
12	22012	39TB-12	7-21/64	7-3/4
13	22014	39TB-13	7-57/64	8-5/16
14	22014	39TB-14	8-29/64	8-7/8
15	22015	39TB-15	9-1/64	9-7/16
16	22016	39TB-16	9-37/64	10
17	22017	39TB-17	10-9/64	10-9/16
18	22018	39TB-18	10-45/64	11-9/64

ELECTRICAL RATING:
Dielectric Withstanding Voltage: 4000 V. RMS.
Current Rating: 30 Amps.

Available thru Nationwide Network of Authorized Industrial Distributors

Kulka Electric Corporation
NORTH AMERICAN PHILIPS

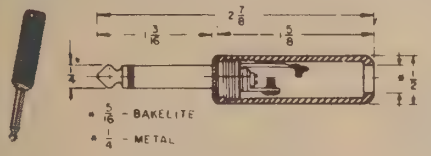
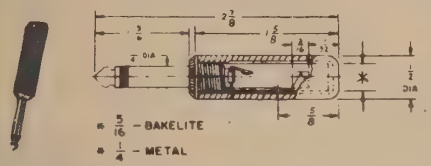
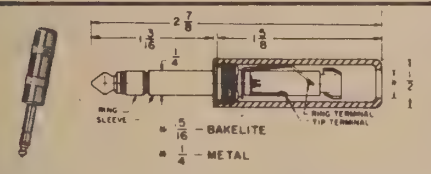
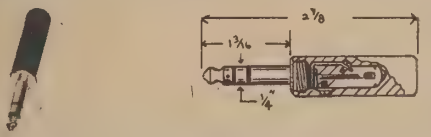
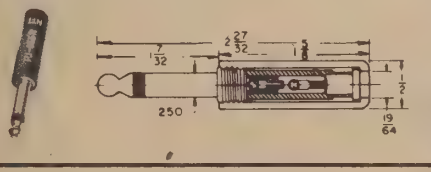
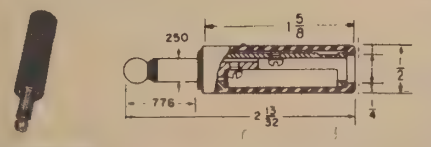
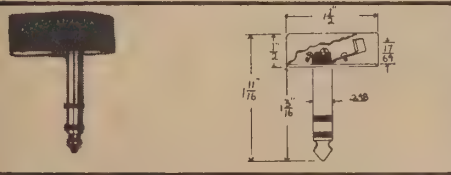
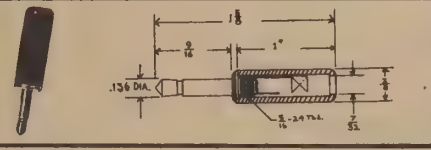
KULKA COMPLETE TERMINAL BOARD CATALOG 17B ON REQUEST

© United Technical Publication

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

PHONE PLUGS

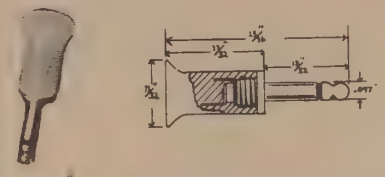
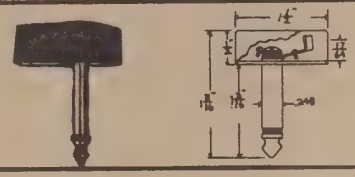
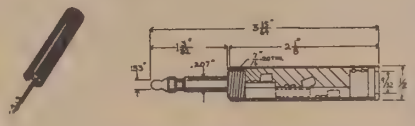
Widely used in hi-fi equipment, tape recorders, dictaphone machines, etc. Made to standard dimensions. Designed to highest standards and tolerances. Metal parts are brass, nickel plated. Solder type terminals are tinned for easy solderability. Exclusive NT·T Delrin insulator provides long trouble free performance. Molded plastic shells in red or black are supplied for numbers 300, 301, 302, 303, 304, 305, 306, 307, 308 and 309. Metal shells available for numbers 300, 301, 302, 303, 306, 307, and 309.

ILLUSTRATION / DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
	**TWO CONDUCTOR** Screw Type Two conductor screw type, accommodates two conductor jacks #336 and #337.	300B 300R 300M	Black Red Metal	.54 .54 .75
	**TWO CONDUCTOR** Solder Type Two conductor solder type, accommodates two conductor jacks #336 and #337.	301B 301R 301M	Black Red Metal	.51 .51 .72
	**THREE CONDUCTOR** Solder Type Three conductor solder type, accommodates three conductor jacks #338 and #339.	302B 302R 302M	Black Red Metal	.75 .75 .93
	**THREE CONDUCTOR** Screw Type **NEW** Three conductor screw terminal phone plug. Accommodates jacks #338 and #339.	303-B 303-R 303-M	Black Red Metal	.84 .84 .99
	**TWO CONDUCTOR** Type PJ055 Two conductor solder type, made to military specifications. Solder terminals are silver plated to facilitate soldering.	304B 304R	Black Red	1.00 1.00
	**TWO CONDUCTOR** Type PJ054 Two conductor solder type, made to military specifications. Solder terminals are silver plated to facilitate soldering.	305B 305R	Black Red	.90 .90
	**RIGHT ANGLE — THREE CONDUCTOR** Solderless **NEW** Right angle phone plug prevents protrusion, accommodates three conductor jacks 338 and 339.	306B 306R 306M	Black Red Metal	.96 .96 1.05
	**MINIATURE TWO CONDUCTOR** Solder Type Two conductor solder type, accommodates sub-miniature jacks #311 and #313.	307B 307R 307M	Black Red Metal	.51 .51 .69

Over the years original equipment manufacturers have looked to NT•T for the finest in all types of phone plugs. Now distributors, industrials, and consumers will be able to obtain the same high quality phone plugs as supplied to the equipment manufacturers.

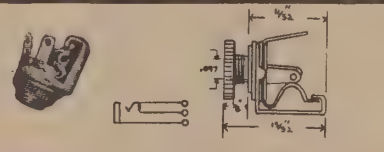
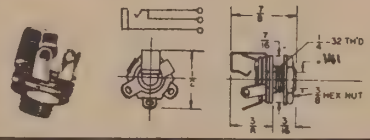
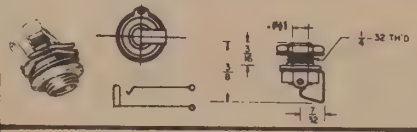
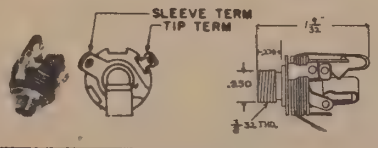
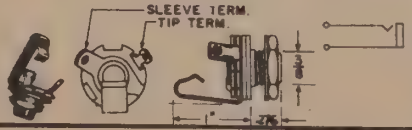
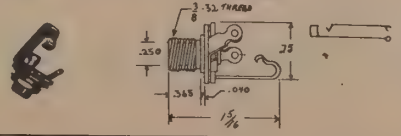
ntt sales / a division of NATIONAL TEL-TRONICS CORP.

PHONE PLUGS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**ULTRA-MINIATURE, TWO CONDUCTOR** Solder Type Two conductor solder type, accommodates ultra-miniature jack #310. Utilized on many tape recorders and transistor radios.	308B 308R 308T	Black Red Beige	.48 .48 .48
		**RIGHT ANGLE – TWO CONDUCTOR** Solderless **NEW** Right angle phone plug prevents protrusion, accommodates two conductor jacks 336 and 337.	309B 309R 309M	Black Red Metal	.78 .78 .87
		**THREE CONDUCTOR** Type PJ068 **NEW** Three conductor with screw connections and solder terminals, made to military specifications. Solder terminals are silver plated to facilitate soldering.	320B	Black	2.16

PHONE JACKS

Telephone jacks are of two basic types, open circuit and closed circuit and are available as two conductor and three conductor jacks. The special nickel plated, spring brass springs are designed to retain their tension throughout unlimited use. Standard jacks mount in 3/8" holes.

		**ULTRA-MINIATURE JACK** Two conductor closed circuit jack for miniaturized applications. Used on many transistor radios. Accommodates plug #308.	310	Metal	.36
		**SUB-MINIATURE JACKS** Subminiature phone jack, two conductor closed circuit will accommodate plug #307.	311	Metal	.33
		**SUB-MINIATURE JACKS** Subminiature jacks, two conductor open circuit will accommodate plug #307.	313	Metal	.30
		**STEREO PHONE JACK** **NEW** Ideal for use with stereo headphones. Automatically switches speakers out and headphones in. Use with plugs 302, 303, and 306.	335	Metal	.72
		**TWO CONDUCTOR** Open Circuit Two conductor, open circuit; will accommodate plugs #300, 301, 304, and 309.	336	Metal	.30
		**TWO CONDUCTOR** Open Circuit **NEW** Similar to 336 except with greater bushing length. Will accommodate plugs #300, 301, 304 and 309.	336L	Metal	.36

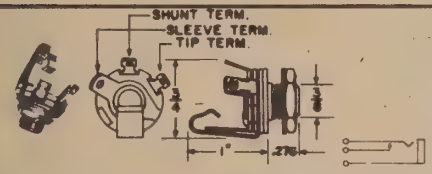
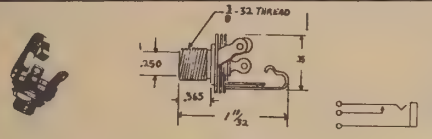
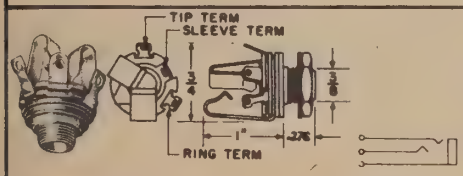
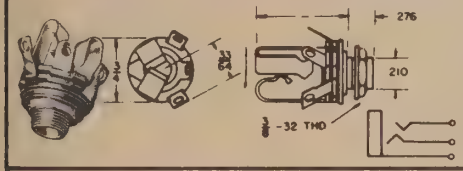
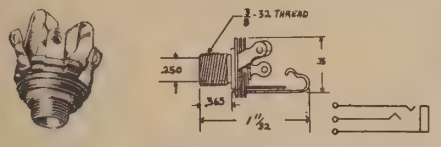
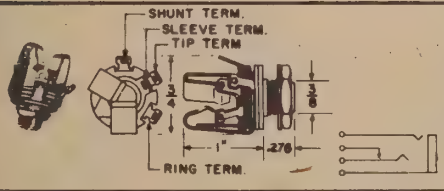
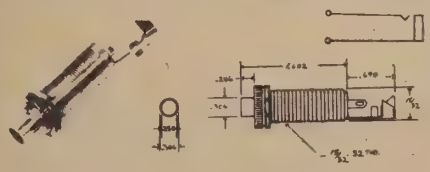
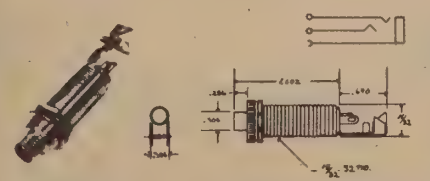
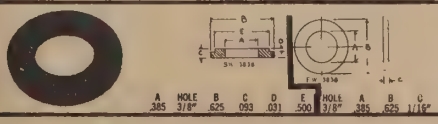
Net

© United Technical Publication

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

PHONE JACKS

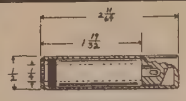
Telephone jacks are of two basic types, open circuit and closed circuit and are available as two conductor and three conductor jacks. The special nickel plated, spring brass springs are designed to retain their tension throughout unlimited use. Standard jacks mount in 3/8" holes.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**TWO CONDUCTOR** Closed Circuit Two conductor, closed circuit; will accommodate plugs #300, 301, 304, and 309.	337	Metal	.33
		**TWO CONDUCTOR** Closed Circuit **NEW** Similar to 337 except with greater bushing length. Will accommodate plugs #300, 301, 304 and 309.	337L	Metal	.39
		**THREE CONDUCTOR** Open Circuit Three conductor, open circuit; will accommodate plug #302, 303, and 306.	338	Metal	.39
		**THREE CONDUCTOR** Open Circuit Three conductor, open circuit with .210 I.D. Will accommodate plug #PJ068.	338-A	Metal	.51
		**THREE CONDUCTOR** Open Circuit **NEW** Similar to 338 except with greater bushing length. Will accommodate plugs # 302 303, and 306.	338L	Metal	.51
		**THREE CONDUCTOR** Closed Circuit Three conductor closed circuit; will accommodate plug #302, 303, and 306.	339	Metal	.57
		**NEW** **THICK PANEL JACK – TWO CONDUCTOR** Open Circuit For use on thick panels, walls, stage platforms, etc. Will accommodate plugs #300, 301, and 309.	345	Metal	.93
		**NEW** **THICK PANEL JACK THREE CONDUCTOR** Open Circuit For thick mounting surfaces like 345. Can accommodate stereo plugs. Will accommodate plugs #302, #303, and #306.	346	Metal	1.02
		**SHOULDER AND FLAT WASHERS** **NEW** Precisely formed of N.E.M.A. standard grade natural fiber.	SW-3838 FW-3838	Natural Fiber	Bulk Pack Bulk Pack

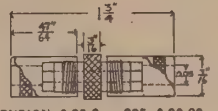
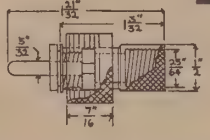
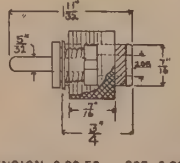
ntt sales / a division of NATIONAL TEL-TRONICS CORP.

EXTENSION JACKS

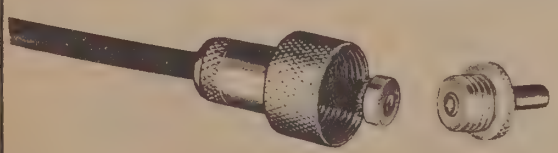
Extension jacks or in-line jacks are designed to accept all standard or miniature phone plugs. Available in two and three conductor types which can be ordered with plastic or shielded metal handles.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**TWO CONDUCTOR JACK** Accommodates plug types 300, 301, and 309. Has numerous audio applications.	6-100 6-101	Black Metal	.66 .90
		**THREE CONDUCTOR JACK** Accommodates plug type 302. Utilized in many audio and stereo applications.	6-102 6-103	Black Metal	.90 1.05
		**TWO CONDUCTOR JACK** Miniature Accommodates plug type 307. For use with radios, tape recorders, and numerous audio equipment.	6-104 6-105	Black Metal	.78 .84

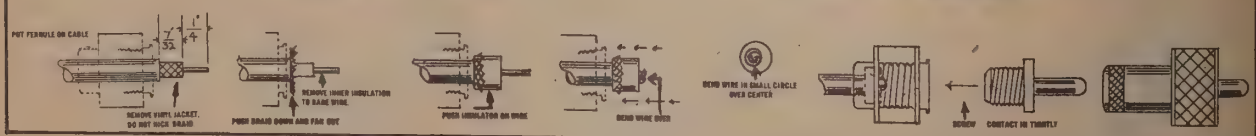
SOLDERLESS COAXIAL CONNECTORS

  A" DIMENSION: 6-80-2 = .205; 6-80-29 = 405	NEW	**SOLDERLESS INLINE SPLICER** Completely solderless PL-258 coaxial connector which requires no special tools for installation. Provides positive contact and maintains wire impedance. Bright nickel plated steel. Delrin insulator. Replaces the PL-258. Far superior: faster, cheaper and easier to use. 6-80-2 splices RG-58 cable. 6-80-29 splices RG-59 cable.	6-80-2 6-80-29	Metal Metal	1.20 1.20
 	NEW	**SOLDERLESS COAXIAL CONNECTOR** Completely solderless PL-259 coaxial connector which requires no special tools for installation. Provides positive contact and maintains wire impedance. Bright nickel plated steel. Delrin insulator. Accommodates RG-8 coaxial cable.	6-80-8	Metal	.72
  A" DIMENSION: 6-80-58 = .205; 6-80-59 = .242	NEW	**SOLDERLESS COAXIAL CONNECTOR** Completely solderless PL-259 coaxial connector which requires no special tools for installation. Provides positive contact and maintains wire impedance. Bright nickel plated steel. Delrin insulator. 6-80-58 Accommodates RG-58 cable. 6-80-59 Accommodates RG-59 cable.	6-80-58 6-80-59	Metal Metal	.72 .72

HERE'S HOW EASY IT IS TO ATTACH THESE COAXIAL CONNECTORS. Just a razor blade or wire stripper is all you need to attach these amazing new connectors. Just follow these few simple steps and you'll have a secure reliable connection.





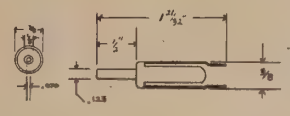
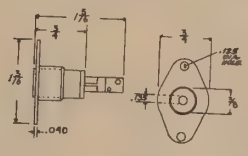


Net

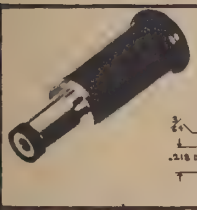
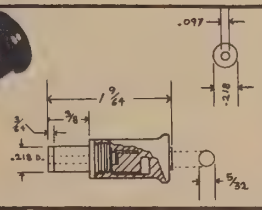
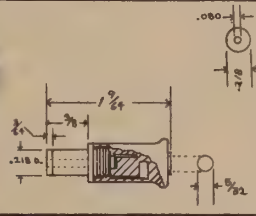
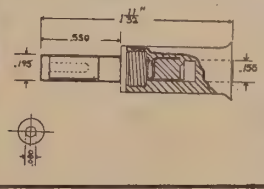
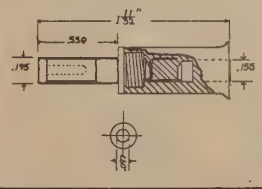
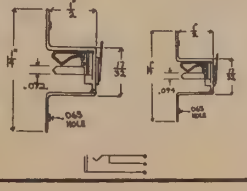
© United Technical Publication

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

COAXIAL ANTENNA PLUG & JACK

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		NEW **COAXIAL ANTENNA PLUG** Used extensively in automobile radios, and for CATV and MATV applications. Tinned brass with ceramic insulator.	6-70	Metal	.115
		NEW **COAXIAL ANTENNA JACK** Receptacle for 6-70 plug. Tinned to facilitate soldering.	6-71	Metal	.18

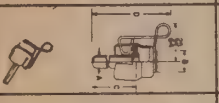
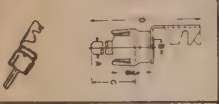
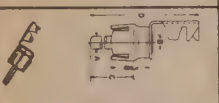
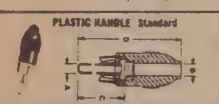
COAXIAL PLUGS & JACK

		NEW **COAXIAL JACK** .080 I.D. .218 O.D. Used extensively on AC adaptors, and battery chargers for transistorized tape recorders, television receivers, and radios.	6-200	Green	.39
		NEW **COAXIAL JACK** .097 I.D. .218 O.D. Used extensively on AC adaptors, and battery chargers for transistorized tape recorders, television receivers, and radios.	6-201	Red	.39
		NEW **COAXIAL JACK** .080 I.D. .195 O.D. Used extensively on AC adaptors, and battery chargers for transistorized equipment such as tape recorders, and radios.	6-202	Blue	.45
		NEW **COAXIAL JACK** .097 I.D. .195 O.D. Used extensively on AC adaptors, and battery chargers for transistorized equipment such as tape recorders, and radios.	6-203	Tan	.45
		NEW **COAXIAL SWITCHING PLUGS** Switching plugs used with 6-200, and 6-201 coaxial jacks. Used extensively on transistorized radios, tape recorders, television sets, etc. using external AC power source.	6-200P 6-201P	— —	.39 .39

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

PHONO PLUGS

Shells are .016 Brass or Steel, Cadmium Plated, designed to have a wiping action with mating part for good ground. Pins are drawn brass, bright nickel plated. Insulating washer is .062 thick fibre

	A	B	C	D	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
	1/8	.175	11/16	15/16	36A	Metal	.06
	1/8	.175	3/8	5/8	36B	Metal	.06
	1/8	.145	11/16	1- 3/32	42A	Metal	.21
	1/8	.145	3/8	25/32	42B	Metal	.21
	1/8	.145	11/16	1- 7/16	44A	Metal	.15
	1/8	.145	3/8	1- 1/8	44B	Metal	.15
 CRIMP TYPE Standard	1/8	.175	11/16	1- 7/32	46A	Metal	.108
 CRIMP TYPE Short Pin	1/8	.175	3/8	29/32	46B	Metal	.108
 PLASTIC HANDLE Standard	1/8 1/8 1/8 1/8	.175 .175 .175 .175	11/16 11/16 11/16 11/16	1-5/8 1-5/8 1-5/8 1-5/8	60A-R 60A-B 60A-G 60A-W	Red Black Gray White	.25 .25 .25 .25
 PLASTIC HANDLE Short Pin	1/8 1/8 1/8 1/8	.175 .175 .175 .175	3/8 3/8 3/8 3/8	1-5/16 1-5/16 1-5/16 1-5/16	60B-R 60B-B 60B-G 60B-W	Red Black Gray White	.25 .25 .25 .25
	SHIELDED HANDLE PLUG Extremely easy to solder. Has a neat appearance and provides finger grip for easy removal.				5-005	Metal	.30

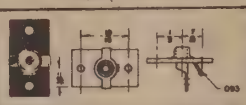
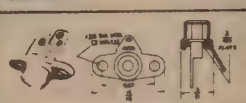
PHONO JACKS

Insulator discs are XP laminated phenolic with ceramic insulator bushings. Shells are steel cadmium plated, and the contacts are spring brass, cadmium plated. Excellent for replacement and new equipment.

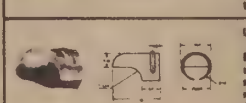
ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		NEW TRIPLE PHONO JACK Versatile jack for all audio applications such as tuner, amplifier, and multiplex inputs.	353	–	.18
		QUADRUPLE PHONO JACK Versatile jack for all audio applications such as tuner, amplifier, and multiplex inputs.	354	–	.21
		SWITCHING JACKS 317 is two conductor closed and 316 is a three conductor closed jack. Used as stereo, phonograph, or amplifier input.	316 317	– –	.33 .27
		INLINE PHONO JACK Combination clamp and solder type shielded handle jack. Mates with all phone pin plugs.	5-006	Metal	.39

Insulator discs are XP Laminated phenolic with ceramic insulator bushings except for 5-006 which is XP. Shells are steel cadmium plated, and the contacts are spring brass, cadmium plated, solder lugs brass, cadmium plated.

PHONO JACK

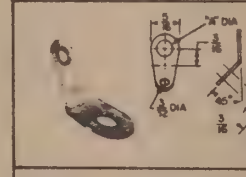
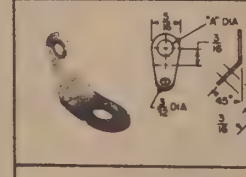
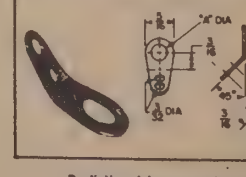
ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Ea
		ROUND TYPE JACK Single contact jack providing sure grip on all phone pin plugs.	318	–	.1
		RECTANGULAR JACK Single contact jack for replacement applications and use on new equipment.	319	–	.1
		OVAL TYPE JACK For smaller areas use this compact phone jack. .687 mounting centers.	326	–	.1
		SINGLE HOLE JACK Front Mount Mounts in 3/8" hole. Supplied with nut, washer, and solder lug. Mounts through front of panel.	340	Metal	.2
		SINGLE HOLE JACK Rear Mount Mounts in 3/8" hole. Supplied with nut, washer, and solder lug. Mounts through rear of panel.	342	Metal	.2
		DUAL PHONO JACK Ideal for stereo applications; replacement and new projects.	352	–	.1

PILOT LIGHT SHIELD

	LIGHT SHIELD Brass, cadmium plated shield intended for use in television, radio receivers, meters, and all electronics equipment. Prevents glare and directs the light to the desired position.	3110	Metal	.0
	LIGHT SHIELD Bright brass dip shield intended for use in televisions, radio receivers, meters, and all electronic equipment. Prevents glare and directs the light to the desired position.	3111	Metal	.0

SOLDERING LU

Brass soldering lugs are utilized extensively for grounding or combining wires at one spot. All are tinned-brass for more efficient soldering. Available in bulk only.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Ea
			4501	Metal	
			4502	Metal	
			4504	Metal	

Realistic pricing, extensive packaging, rapid turnover, and product reliability are only a few of the reasons why customers are continually asking for NT-T products. NT-T is specified on drawings by original equipment manufacturers throughout the country. Be sure and specify NT-T.

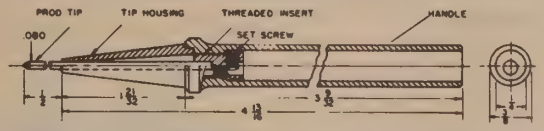
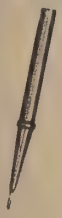
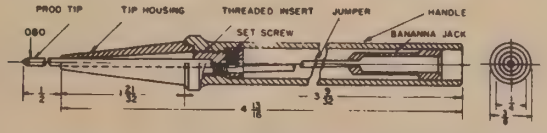
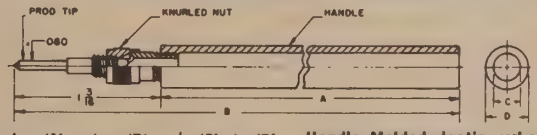
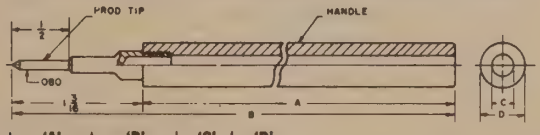
Net

© United Technical Publicati

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

NT•T Prods have been engineered and manufactured to provide the most comprehensive and complete line, and which at the same time embodies design features which afford ease of handling and give years of service.

TEST PRODS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**TEST PROD No. 891** Shouldered insulated handle made of Bakelite. Tip made of nickel-plated brass has set screw in side for securing conductor and thus making a solderless connection. Tip screw into handle. Available in red and black. Indicate color.	891-B 891-R	Black Red	.60 .60
		**TEST PROD** ***With Banana Plug Adaptor*** Same as No. 891 except with a banana plug adaptor in back of handle.	892-B 892-R	Black Red	.66 .66
		**TEST PROD; SOLDERLESS THREADED TYPE** Handle: Molded plastic, red or black #805 solderless tip; nickel plated brass solderless tip plug. Wire fits through body and is then wrapped around threaded portion and knurled collar tightened. Fits standard phone tip jacks and is threaded for easier assembly into handle.	894-B 894-R 895-B 895-R 991-B 991-R 992-B 992-R	Black Red Black Red Black Red Black Red	.30 .30 .30 .30 .33 .33 .33 .33
		**SOLDERLESS TEST PROD — *Force Fit Type*** Handle: Molded plastic, red or black #806 solderless tip; force fit nickel plated brass tip plug. Fits standard phone tip jacks. Solderless wire fits through tip body and then wraps around screw portion. Knurled collar for tightening.	896-B 896-R 904-B 904-R 993-B 993-R 994-B 994-R	Black Red Black Red Black Red Black Red	.30 .30 .30 .30 .33 .33 .33 .33
		**TEST PROD — HEAVY DUTY SOLDER TYPE** Handle: Molded plastic, red or black #802 solder tip; heavy duty nickel plated brass with exceptionally large well for soldering, threaded for easy assembly in handle. Fits standard phone tip jack.	897-B 897-R 898-B 898-R 995-B 995-R 996-B 996-R	Black Red Black Red Black Red Black Red	.30 .30 .30 .30 .33 .33 .33 .33

PART NO.	'A' HANDLE	'B' OVERALL	'C' I.D.	'D' O.D.
894	4	5¼	3/16	⅜
895	4	5¼	¼	⅜
991	5½	6⅞	3/16	⅜
992	5½	6⅞	¼	⅜

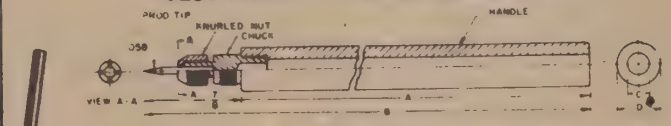
PART NO.	'A' HANDLE	'B' OVERALL	'C' I.D.	'D' O.D.
896	4	5¼	3/16	⅜
904	4	5¼	¼	⅜
993	5½	6⅞	3/16	⅜
994	5½	6⅞	¼	⅜

PART NO.	'A' HANDLE	'B' OVERALL	'C' I.D.	'D' O.D.
897	4	5 3/16	3/16	⅜
898	4	5 3/16	¼	⅜
995	5½	6 11/16	3/16	⅜
996	5½	6 11/16	¼	⅜

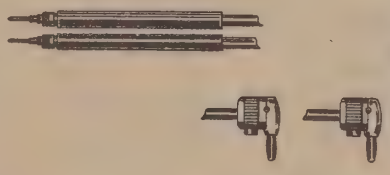
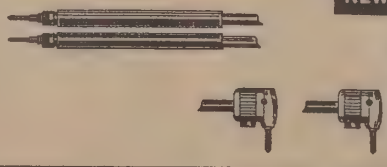
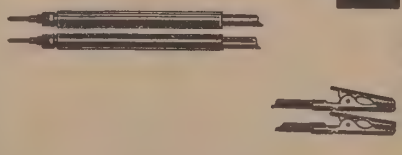
ntt sales / a division of NATIONAL TEL-TRONICS CORP.

TEST PRODS

NT•T Test Prods have been engineered and manufactured to provide the most comprehensive and complete line. A line which offers designs which afford ease of handling and at the same time give years of service.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
TEST PROD — PHONO NEEDLE TYPE					
	PART NO. / 'A' HANDLE / 'B' OVERALL / 'C' I.D. / 'D' O.D. 901 — 4 — 4⅞ — 3/16 — ⅜ 902 — 4 — 4⅞ — ¼ — ⅜ 997 — 5½ — 6⅜ — 3/16 — ⅜ 998 — 5½ — 6⅜ — ¼ — ⅜	Handle: Molded plastic, red or black #866 tip; phono needle type with nickel plated steel needle. Chuck is removable for easy replacement. Needle pierces plating or corrosion for positive reading.	901-B 901-R 902-B 902-R 997-B 997-R 998-B 998-R	Black Red Black Red Black Red Black Red	.33 .33 .33 .33 .38 .38 .38 .38

TEST LEAD SETS

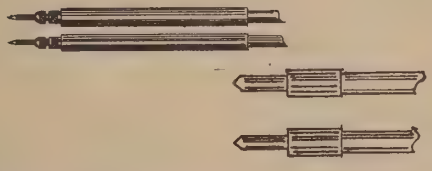
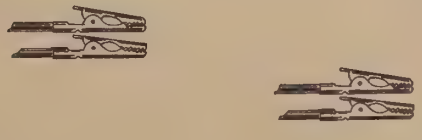
		Catalog Number	Color	USA Net Each
	**NEW** **TIP PLUG TYPE** Solderless test prod #894 with #801 tip plug. 50" rubber covered, 5000 volt, kinkless wire. Tip plug, and prod body are brass, nickel plated.	8401	Red/ Black	1.05
	**NEW** **SOLDERLESS RIGHT ANGLE BANANA PLUG TYPE** Solderless test prod #894 with #836 solderless right angle banana plug. 50" rubber covered, 5000 volt, kinkless wire. Test prod body is nickel plated brass. Banana plug is nickel plated brass with four leaved phosphor bronze slotted spring.	8436	Red/ Black	1.70
	**NEW** **SOLDERLESS RIGHT ANGLE TIP PLUG TYPE** Solderless test prod #894 with #837 solderless right angle banana plug. 50" rubber covered, 5000 volt, kinkless wire. Prod body and tip are nickel plated brass.	8437	Red/ Black	1.50
	**NEW** **ALLIGATOR CLIP TYPE** Solderlese test prod #894 with #740 alligator clip. 50" rubber covered, 5000 volt kinkless wire. Alligator clip is cadmium plated steel. Prod body and tip are brass, nickel-plated.	8440	Red/ Black	1.10
	**NEW** **BANANA PLUG TYPE** Solderless test prod #894 with #851 banana plug. 50" rubber covered, 5000 volt, kinkless wire. Spring is four-leaved phosphor bronze. Prod body and tip are brass, nickel-plated.	8451	Red/ Black	1.50

Net

© United Technical Publication

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

TEST LEAD SETS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**TIP PLUG TYPE** NEW Solderless test prod #894 with #855 tip plug. 50" rubber covered, 5000 volt, kinkless wire. Nickel plated brass body.	8455	Red/ Black	1.35
		NEW **SPADE LUG TYPE** Solderless test prod #894 with #870 spade lug. 50" rubber covered, 5000 volt kinkless wire. Spade lug is hot tinned steel. Prod body and tip are brass, nickel-plated.	8470	Red/ Black	1.05
		**TIP PLUG TYPE** NEW Phono needle test prod #901 with #801 tip plug. 50" rubber covered, 5000 volt, kinkless wire. Tip plug, and prod body are brass, nickel plated.	9101	Red/ Black	1.05
		**ALLIGATOR CLIP TYPE** NEW Phono needle test prod #901 with #740 alligator clip. 50" rubber covered, 5000 volt kinkless wire. Alligator clip is cadmium plated steel.	9140	Red/ Black	1.10
		**SPADE TYPE LUG** NEW Phono needle test prod #901 with #870 spade lug. 50" rubber covered, 5000 volt kinkless wire. Spade lug is hot tinned steel. Prod body and tip are brass, nickel plated.	9170	Red/ Black	1.05
		**ALLIGATOR CLIP TYPE** NEW One #740 Alligator clip on each end. Alligator clip is cadmium plated steel. 50" rubber covered, 5000 volt, kinkless wire.	7474	Red/ Black	.81

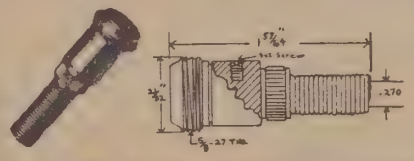
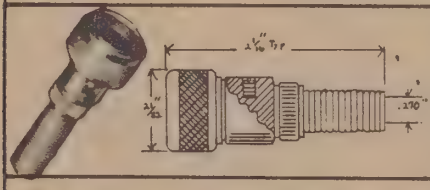
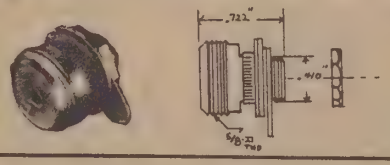
ntt sales / a division of NATIONAL TEL-TRONICS CORP.

ALIGNMENT TOOLS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		NEW Double ended alignment tool for use in adjusting coil slugs. .075" hex on both ends 5" long. Molded of Deldrin. One end undercut so that hex head can pass through and not disturb a top slug in order to adjust a second, lower slug.	AL7572-5		.45
		NEW Double ended alignment tool for use in adjusting coil slugs. .075" hex on both ends 5" long. Molded of Deldrin. Not undercut.	AL7575-5		.45
		NEW Double ended alignment tool for use in adjusting hex and slot type controls. .099 hex on one end. Screwdriver tip on other end. 7" long. Molded of Deldrin.	AL9908-7		.70
		NEW Double ended alignment tool for use in adjusting Admiral, Zenith, and other television sets. .099 hex on both ends. 5" long. Molded of Deldrin. One end undercut so that hex head can pass through and not disturb a top slug in order to adjust a second, lower slug.	AL9999-5		.45
		NEW Double ended alignment tool for use in adjusting Admiral, Zenith, and other television sets. .099 hex on both ends. 11" long. Molded of Deldrin. One end undercut so that hex head can pass through and not disturb a top slug in order to adjust a second, lower slug.	AL9999-11		.60

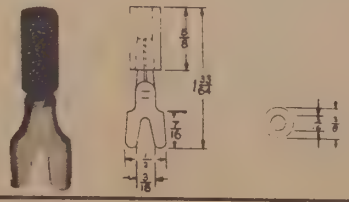
MICROPHONE CONNECTORS

Use with single conductor, shielded microphone cable. Bodies are brass, nickel plated with phenolic insulators.

		Catalog Number		
	CORD MOUNTED Male Flexible spring gives strain relief to cable. Shield is held securely by set screw. Used extensively for microphone, apmplifier applications.	101	Metal	.36
	CORD MOUNTED Female Flexible spring gives strain relief to cable. Collar secures connector firmly to jack. Used extensively for microphone, amplifier applications.	102	Metal	.45
	PANEL MOUNT Single Conductor Mates with #102 connector. Mounts in 3/8" hole and may be isolated from chassis by insulation washer.	103	Metal	.33

SPADE LUGS

Because of the Spade Lug's wide and constant usage, NT•T has engineered it to provide reliability and versatility and to meet the requirements of the industry, repair shops, consumers, and hobbyists.

		Catalog Number		
	INSULATED SPADE LUG Red or Black case in handle. Indicate color desired. Hot-tinned steel lug is .030 thick. Banana plug can be inserted in spade lug through back of handle	870-B 870-R	Black Red	.11 .11

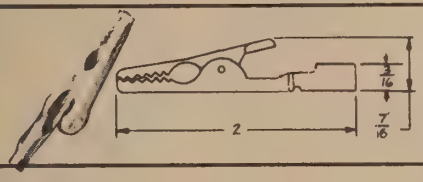
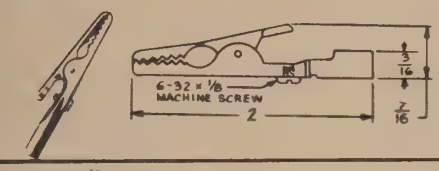
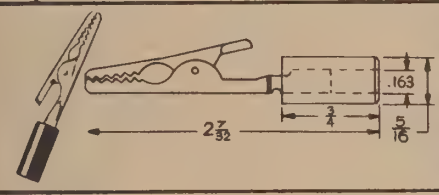
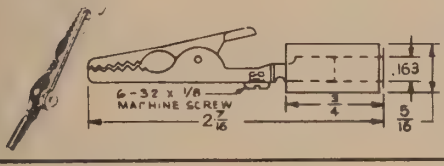
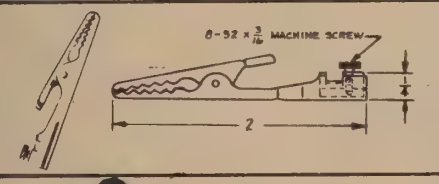
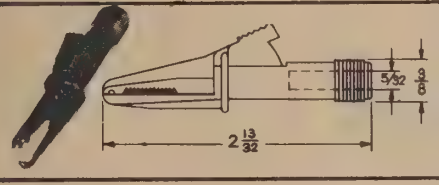
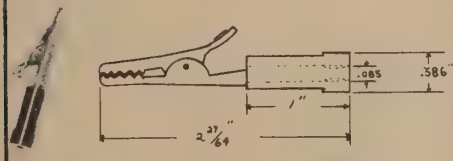
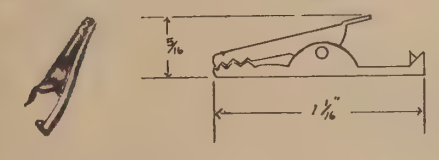
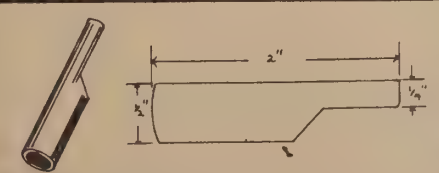
Net

© United Technical Publication

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

ALLIGATOR CLIPS

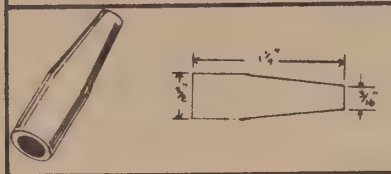
The extensive use of alligator clips in the electronic industry requires that they must withstand constant use without a breakdown in their spring action and at the same time must provide positive jaw clamping action. All NT•T clips are manufactured of high grade cadmium plated steel or copper.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**ALLIGATOR CLIP** Solder Type **NEW** Cadmium-plated steel with 3/8" jaw opening. Accurately matched jaws grip securely. Cadmium-plated steel or copper.	740 740C	Steel Copper	.08 .16
		**ALLIGATOR CLIP** Screw Type **NEW** Screw supplied for solderless connection. Accurately matched, cadmium-plated steel jaws with 3/8" opening provide secure grip. Cadmium plated steel or copper.	741 741C	Steel Copper	.09 .18
		**INSULATED ALLIGATOR CLIP** Solder Type Accurately matched, cadmium-plated steel jaws, with 3/8" opening provide secure grip. Red and black molded plastic handles. Accepts standard banana plug in back.	742B 742R	Black Red	.12 .12
		**INSULATED ALLIGATOR CLIP** Screw Type Supplied with screw for solderless connection. All other features the same as clip #742.	743B 743R	Black Red	.15 .15
		**ALLIGATOR CLIP** Special Screw Type Jaws of cadmium-plated steel open to 3/8" and grip securely. Supplied with screw for solderless connection.	744	Steel	.144
		**ALLIGATOR CLIP** Fully Insulated Type Cadmium-plated steel jaws open to 3/8" and grips securely. Accepts standard banana plug in back. Can be supplied in red or black.	745B 745B	Black Red	.48 .48
		**TIP PLUG ADAPTOR.** **NEW** Rear of handle accepts tip plug. Can be had in steel cadmium plated or copper. Suffix "C" indicates copper.	746B 746R 746B-C 746R-C	Black Red Black Red	.33 .33 .36 .36
		**MINIATURE CLIP** **NEW** Solder type clip where space is a factor. Excellent for all labs, shops, and hobbyists. Suffix "C" indicates copper.	748 748C	Steel Copper	.06 .08
		**STANDARD INSULATORS** Insulators for clips #740 and #741. Made of flexible polyvinyl and allows for full jaw opening. Completely insulates clips.	749B 749R	Black Red	.05 .05

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

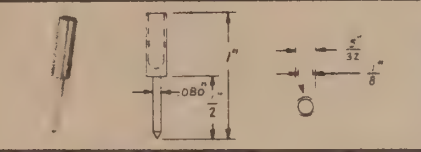
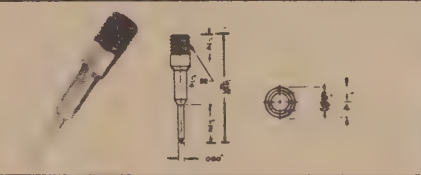
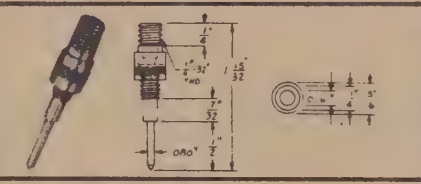
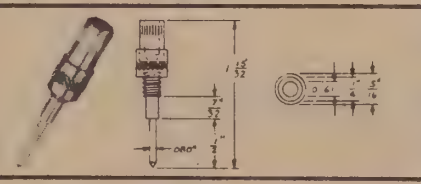
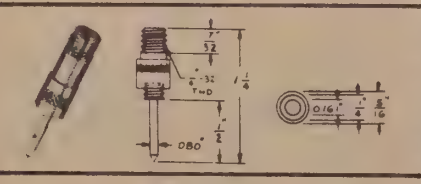
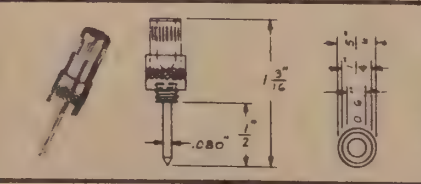
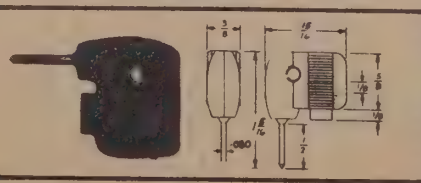
ALLIGATOR CLIPS

The extensive use of alligator clips in the electronic industry requires that they must withstand constant use without a breakdown in their spring action and at the same time must provide positive jaw clamping action. All NT•T clips are manufactured of high grade cadmium plated steel or copper.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**MINATURE INSULATORS** Insulators for clips #748. Made of flexible polyvinyl which allow for full jaw opening. Completely insulates clips.	750B 750R	Black Red	.05 .05

TIP PLUGS

The engineering and manufacturing of all NT•T tip plugs are based upon the highest standards and specifications of the industry. Close adherence is maintained on all tolerances and only the finest quality materials are used to provide years of service.

	**PHONE TIPS** Solder Type A nickel-plated brass solder type phone tip 1" long.	801	Metal	.028
	**TIP PLUG** Threaded, Heavy Duty Nickel-plated brass with exceptionally large well for soldering. Threaded for easy assembly in plastic handle. Accepts standard phone tip jacks. Rear of plug accepts standard banana plugs.	802	Metal	.15
	**SOLDERLESS TIP PLUG** Large, Threaded A nickel-plated brass solderless tip plug. Wire fits through body of tip and is then wrapped around threaded portion and knurled collar tightened. Fits standard phone tip jacks and is threaded for easier assembly in plastic handle.	805	Metal	.15
	**SOLDERLESS TIP PLUG** Large, Knurled A force-fit type nickel-plated brass tip plug. Fits standard phone tip jacks. Solderless, wire fits through tip body and then wrapped around screw portion. Knurled collar for tightening.	806	Metal	.15
	**SOLDERLESS TIP PLUG** Small, Threaded Manufactured exactly like No. 805 Solderless Tip Plug except shorter, nickel-plated brass with wire going through tip, then wrapped around screw portion and held firmly by tightening knurled collar.	807	Metal	.15
	**SOLDERLESS TIP PLUG** Small, Knurled A solderless, nickel-plated brass Tip Plug which fits standard phone tip jacks. Made exactly like No. 806 except shorter length. Wire fits through body tip, raps around screw portion and then tightened with knurled collar.	808	Metal	.15
	**INSULATED TIP PLUG** Meter Type, Push Button Solderless Tip is brass, nickel-plated, with Molded Bakelite in Red or Black. (Indicate color desired.) Push button, then feed conductor through hole. Release button, conductor is held firmly in position. Fits standard phone tip jacks.	837B 837R	Black Red	.30 .30

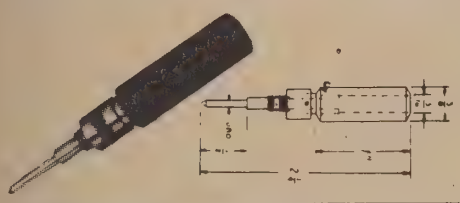
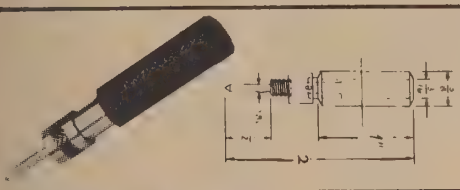
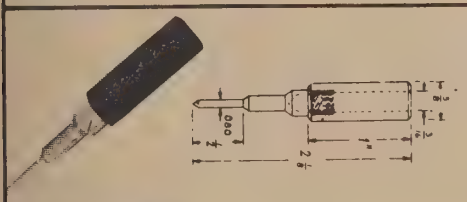
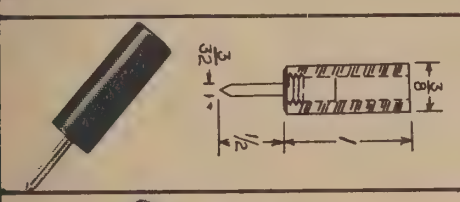
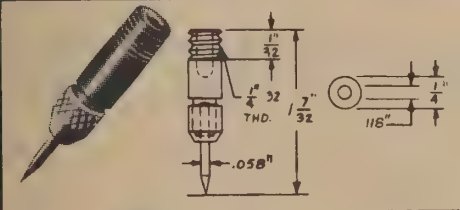
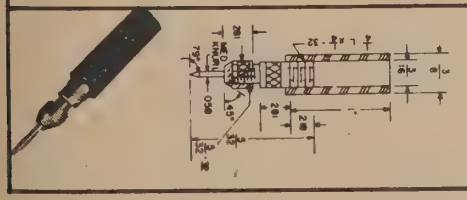
Net

© United Technical Publications

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

The engineering and manufacturing of all NT•T Tip Plugs are based upon standards and specifications of the industry. Close adherence is maintained on all tolerances and only the finest quality materials are used to provide years of service.

TIP PLUGS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**SOLDERLESS TIP PLUG** **Large Type** Handles of Molded Bakelite in choice of Red, Black, Yellow, White, Green, Blue. Indicate color desired. Nickel-plated brass body. Wire fits through body tip, wraps around screw portion and tightened with knurled collar. Fits standard phone tip jacks	855B 855BL 855GR 855Y 855R 855W	Black Blue Green Yellow Red White	.17 .17 .17 .17 .17 .17
		**SOLDERLESS TIP PLUG** **Small Type** Molded Bakelite handles Indicate desired color. Nickel-plated brass body Knurled collar when tightened holds wire which has been passed through body tip and wrapped around screw portion Fits standard phone tip jacks	856B 856BL 856GR 856Y 856W	Black Blue Green Yellow White	.17 .17 .17 .17 .17 .17
		**TIP PLUG** **Heavy Duty, Insulated** Nickel-plated brass plug with molded Bakelite handles. Large diameter well permits soldering of heavy duty wire directly into plug. Accepts standard phone tip jacks. Choice of Blue, Black, Red, Green, Yellow and White handle. Indicate color	857B 857BL 857GR 857R 857Y 857W	Black Blue Green Red Yellow White	.17 .17 .17 .17 .17 .17
		**INSULATED TIP PLUG** Plastic handle. Available in red or black. Nickel plated brass body	858B 858R	Black Red	.132 .132
		**NEEDLE TIP AND CHUCK** Nickel-plated brass body, nickel-plated steel needle. Chuck is removable for easy replacement. Needle pierces plating or corrosion for positive reading.	866	Metal	.22
		**INSULATED NEEDLE TIP PLUG** Molded Bakelite handles in Red, Black, Yellow, White, Green and Blue. Indicate color desired. Nickel-plated brass, body, nickel-plated steel needle. Chuck is removable for easy replacement. Needle pierces plating or corrosion for positive reading.	868B 868BL 868GR 868R 868Y 868W	Black Blue Green Red Yellow White	.25 .25 .25 .25 .25 .25

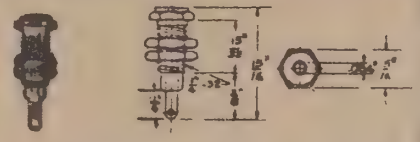
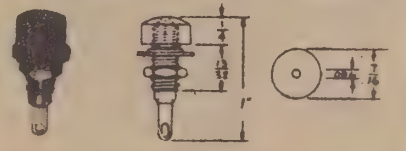
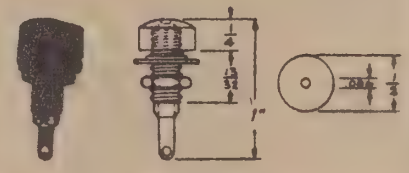
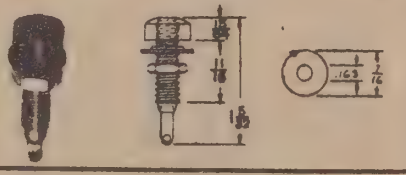
Small parts—large headaches. This is often the plight of the distributor, manufacturer, engineer, repairman, and hobbyist. NT•T now offers a one-stop source for the majority of these small items which, no matter how small, are often needed. Relieve your purchasing problems by ordering from NT•T.

© United Technical Publications

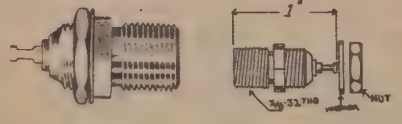
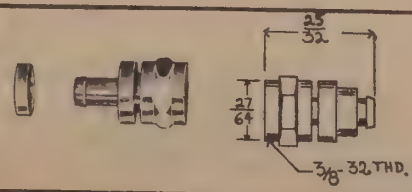
ntt sales / a division of NATIONAL TEL-TRONICS CORP.

TIP JACKS

As with all NT•T products, NT•T Tip Jacks are engineered and manufactured to the most exacting standards and specifications of the industry. All use the finest molds and spring contacts to provide years of service.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**PHONE TIP JACK** **Non-Insulated Type** A nickel-plated brass body with a phosphor bronze spring, this phone tip jack provides positive contact with standard phone tip plug. Mounts in 1/4" hole in any panel, up to 3/8" thick. Supplied with hex nut.	810	Metal	.15
		**PHONE TIP JACK** **Insulated Type** Nickel-plated brass body jack has Molded Bakelite head in choice of colors. Spring of phosphor bronze assures good contact. Mounts in 5/16" hole in panels up to 3/8" thickness. Supplied with hex nut and fibre washer. 7/16" diameter head.	842B 842BL 842GR 842R 842Y 842W	Black Blue Green Red Yellow White	.15 .15 .15 .15 .15 .15
		**1/2" DIAMETER HEAD** This nickel-plated brass body Phone Tip Jack has Molded Bakelite head in choice of colors: Black or Red. (Indicate color desired.) Spring of phosphor bronze. Positive contact with end accepts standard phone tip plugs. Mounts in 5/16" hole in any panel up to 3/8" thick. Supplied complete with hex nut and fibre washer.	843B 843R	Black Red	.23 .23
		**INSULATED JACK** **Combination Type** Accepts standard phone tip plugs or standard banana plugs. Molded Bakelite head in Red, Blue, Black, Yellow, Green, White. Indicate color desired. Nickel-plated brass body, with phosphor bronze spring. Supplied with hex nut and fibre washer.	848B 848BL 848GR 848R 848Y 848W	Black Blue Green Red Yellow White	.20 .20 .20 .20 .20 .20

"F" TYPE COAXIAL ANTENNA CONNECTORS

	**SOLDERLESS, MALE "F" TYPE** NEW Female. Chassis or panel mount. For RG-59/U cable. Spring contacts. Silver plated brass. Low resistance. Low signal loss due to low pressure polyethelene insulation	6-72-F	Metal	.54
	NEW **SOLDERLESS, MALE, "F" TYPE** Male. For use on RG-59/U cable. Silver plated brass. Ferrule is built on.	6-72A-M	Metal	.36
	NEW **SOLDERLESS, MALE, "F" TYPE** Male. For use on RG-59/U cable. Silver plated brass. External type ferrule for clamping ground wire	6-72-M	Metal	.36

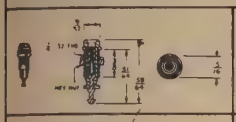
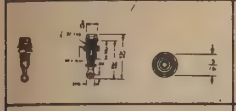
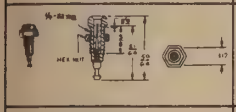
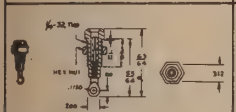
Net

© United Technical Publications

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

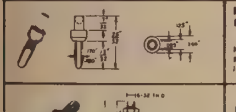
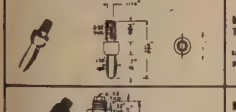
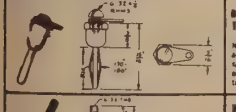
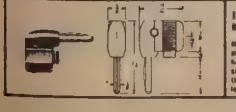
NYLON TIP JACKS

The NT+T Nylon Tip Jacks which are used throughout the electronic industry provide a very rugged, compact, and neat receptacle for all tip plugs. Note the wide assortment of types and colors.

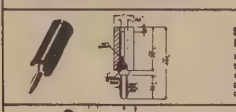
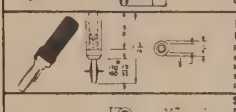
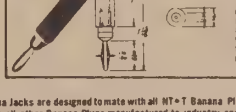
ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**NYLON TIP JACK** **Wrap-Around Type with Metal Shell** Molded nylon tip jack with metal shell eliminates the possibility of threads stripping during assembly. Indicate color desired.	883B 883BL 883GR 883OR 883Y 883R 883W	Black Blue Green Orange Yellow Red White	.30 .30 .30 .30 .30 .30 .30
		**NYLON TIP JACK** **Spade Terminal Type with Metal Shell** Metal shell eliminates the possibility of threads stripping during assembly. Indicate color desired.	884B 884BL 884GR 884OR 884Y 884R 884W	Black Blue Green Orange Yellow Red White	.42 .42 .42 .42 .42 .42 .42
		**NYLON TIP JACK** **Feed-Through Type with Metal Shell** Thread stripping during assembly is eliminated with metal shell. Indicate color desired.	885B 885BL 885GR 885OR 885Y 885R 885W	Black Blue Green Orange Yellow Red White	.39 .39 .39 .39 .39 .39 .39
		**ALL NYLON TIP JACK** **Wrap-Around Type** Completely molded. Accepts all standard phone tip plugs. Contact recessed in hexagon head for safe contact and for grip in tightening. Mounts in panels up to 1/4" thick in 1/4" hole. Nylon Grade FM 10001 is used for body. Nickel plated brass hex nut indicate color desired.	886B 886BL 886GR 886OR 886Y 886R 886W	Black Blue Green Orange Yellow Red White	.21 .21 .21 .21 .21 .21 .21
		**ALL NYLON TIP JACK** **Spade Termmal Type** Completely molded. Accepts all standard phone tip plugs. Contact recessed in hexagon head for safe contact and for grip in tightening. Mounts in panels up to 1/4" thick in 1/4" hole. Nylon Grade FM 10001 is used for body. Center contact is heat treated silver-plated phosphor bronze. Nickel plated brass hex nut.	887B 887BL 887GR 887OR 887Y 887R 887W	Black Blue Green Orange Yellow Red White	.30 .30 .30 .30 .30 .30 .30
		**ALL NYLON TIP JACK** **Feed-Through Type** Completely molded. Contact recessed in hexagon head for both safe contact and grip in tightening. Mounts in panels up to 1/4" thick, in 1/2" hole. Nylon Grade FM 10001 for body. Center contact is tin-plated brass. Nickel plated brass hex nut.	888B 888BL 888GR 888OR 888Y 888R 888W	Black Blue Green Orange Yellow Red White	.282 .282 .282 .282 .282 .282 .282
 NEW		**NYLON TIP JACK** **Spool Clip Type** Completely molded. Accepts all standard phone tip plugs. For use in rapid assembly applications. Mounts in 9/16" hole in panels up to 3/16" thick. Available in black or red.	889R 889B	Red Black	.08 .08

BANANA PLUGS

Standard, miniature, or dual, NT+T can provide you with the widest selection of Banana Plugs. All are designed, engineered, and manufactured to specifications of the industry. Only the finest molds and closest tolerances are used to provide for trouble free usage.

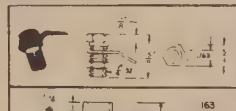
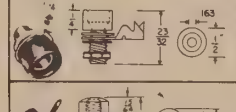
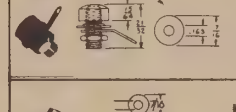
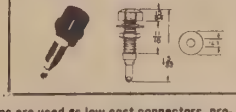
ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**MIDGET BANANA PLUG** **Rivet Type** Nickel or silver-plated brass body with phosphor bronze spring. Fits all standard banana jacks.	809	Metal	.18
		**BANANA PLUGS** Nickel plated hex brass body with phosphor bronze spring supplied with or without soldering lug and nut.	811	Metal	.20
		**BANANA PLUG** **Solderless** Nickel-plated phosphor bronze spring. Side screw holds wire eliminating soldering. Accepts standard banana jacks. Threaded shank to fit plastic handle.	812	Metal	.20
		**MIDGET BANANA PLUG** **Threaded Type** Silver plated brass body with phosphor bronze spring.	814	Metal	.18
		**BANANA PLUG** **Phosphor Bronze** Nickel-plated hex brass body with phosphor bronze spring. Wire can be directly soldered to brass stud or directly to plug. Solderless connection is made possible because stud locks wire to plug.	815	Metal	.25
		**BANANA PLUG** Nickel plated hex brass body with phosphor bronze spring. Wire can be fed through side hole or can be soldered to brass stud. Thread ed to facilitate the use of an insulated	816	Metal	.20
		**BANANA PLUG** **Threaded Side** Nickel plated brass banana plug fitting standard banana jacks. Four leaf phosphor bronze spring. Threaded side enables it to be used on all size panels. Supplied with screw and tinned brass lug.	819	Metal	.20
		**BANANA PLUG** **6-32 Thread, Lug, Nut** Nickel-plated brass banana plug which fits standard banana jack. Four leaf nickel plated phosphor bronze spring. A hex nut and phosphor bronze lug are supplied. Stud is threaded for panel mounting.	821	Metal	.20
		**INSULATED BANANA PLUG** **Meter-Type, Push Button** Nickel plated brass body with nickel phosphor bronze slotted spring. Molded Bakelite handle in Red or Black - indicate color desired. Push button then feed conductor through hole. Release button conductor is locked in position. Fits standard banana jacks.	836B 836R	Black Red	.36 .36

BANANA PLUGS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		NEW **STACKING** **INSULATED BANANA PLUG** Molded polystyrene handle. Colors red or black. Spring is phosphor bronze, nickel plated. Body and set screw are brass, nickel plated. The set screw is for phone tip or wire connections. Plug can be stacked.	839B 839R	Black Red	.48 .48
		**INSULATED BANANA PLUG** **Miniature Type** Fits standard banana jacks with Wire solder ed directly into stud. Machined Plastic handle in Red or Black. Indicate color desired. Nickel plated brass plug with nickel plated phosphor bronze spring.	840-B 840-R	Black Red	.20 .20
		**STACKING** **DUAL BANANA PLUGS** Molded polystyrene. Nickel plated brass 4-leaf phosphor bronze springs. Mates with standard dual banking posts with ¾" centers and with NT+T banking post 4-676 and 3-678. Polarity indicated on top and side. Can be stacked for multiple connections. 15 Amps A.C. Available in red or black.	841B 841R	Black Red	.72 .72
		**INSULATED BANANA PLUG** Fits all standard banana jacks. Molded bakelite handle can be furnished in Red, Black and Blue. Four-leveled spring is made of phosphor bronze and is nickel plated.	851-B 851-BL 851-R	Black Blue Red	.20 .20 .20
		**INSULATED BANANA PLUG** **With Side Screw** Fitting standard banana jacks, set screw holds wire without soldering. This Banana Plug has Molded Bakelite handle in Red, White, Black, Blue, Yellow or Green. Indicate color desired. Plug is nickel-plated brass with four-leaved phosphor bronze spring.	852-B 852-BL 852-GR 852-Y 852-R 852-W	Black Blue Green Yellow Red White	.20 .20 .20 .20 .20 .20
		**INSULATED BANANA PLUG** Molded Bakelite handles in Red, White, Blue, Black, Yellow, Green. Indicate desired color. Nickel plated brass body. Knurled collar when tightened holds wire which has been passed through body top and wrapped around screw portion. Fits standard phone tip jacks.	853-B 853-BL 853-GR 853-Y 853-R 853-W	Black Blue Green Yellow Red White	.25 .25 .25 .25 .25 .25

BANANA JACKS

NT+T Banana Jacks are designed to mate with all NT+T Banana Plugs and also are engineered to match all other Banana Plugs manufactured to industry specifications and standards. NT+T Jacks are available in a number of color choices as noted.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Color	USA Net Each
		**BANANA JACK** **Non-Insulated Type** Mounting in 1/4" hole in any panel up to 3/8" thick. It will accept standard banana plug. Its body is HEX. Brass, nickel-plated and is supplied with hex nut and tinned brass lug.	813	Metal	.13
		**BANANA JACK** **Insulated Type** Nickel plated brass body. Accepts standard banana plug. Mounts in any panel up to 3/8" thick in 5/16" hole. Supplied with hex nut, fibre washer, lock washer and tinned brass lug.	844-B 844-BL 844-R	Black Blue Red	.18 .18 .18
		**BANANA JACK** **Insulated Type** Molded Bakelite head. Nickel plated brass body. Accepts standard banana plugs. Mounts in any panel up to 3/8" thick in 5/16" hole. Supplied with hex nut, fibre washer and tinned brass lug.	845-B 845-BL 845-GR 845-R 845-Y 845-W	Black Blue Green Red Yellow White	.15 .15 .15 .15 .15 .15
		**BANANA JACK** **Insulated Type** With wrap around terminal. Molded bakelite. Available in red, white, blue, green, yellow, black. Brass, nickel plated.	846-B 846-BL 846-GR 846-R 846-Y 846-W	Black Blue Green Red Yellow White	.17 .17 .17 .17 .17 .17
		**INSULATED JACK** **Combination Type** Accepts standard phone tip plugs or standard banana plugs. Molded Bakelite head in Red, Blue, Black, Yellow, Green, White. Indicate color desired. Nickel-plated brass body with phosphor bronze spring. Supplied with hex nut and fibre washer.	848-B 848-BL 848-GR 848-R 848-Y 848-W	Black Blue Green Red Yellow White	.20 .20 .20 .20 .20 .20

CONTACT CONNECTORS

Contact strips are used as low cost connectors, provides 1/2" spacing. Contacts will accommodate 1/8" pins.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**TWO CONTACT STRIP** Used on many television receivers for speaker hook-up or on the tuners to connect such circuits as AGC, pilotlights, or other voltage sources.	002-5	—	.066

MAGNETIC MICROPHONE HOLDER

ILLUSTRATION	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
	[illegible] mobile communication. Memory fumbling to find the microphone holder. NT+T's Magnetic Microphone surfaces such as dash boards, and the sides of set. This holder was designed not only for standard CB type applications, but also for heavy two-way radio work such as cabs, ambulances, and industrial communication. This convenience allows the driver to keep his on the road and avoid accidents. Fits most microphones.	3-006	Metal	.99

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

BINDING POSTS

NT•T offers the most extensive line of binding posts designed with precision molds and engineered to provide complete versatility. For use on test equipment, meters, breadboards, and experimental situations.

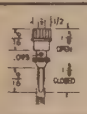
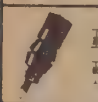
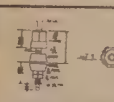
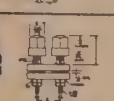
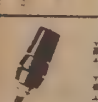
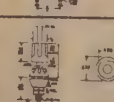
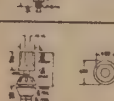
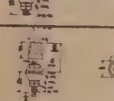
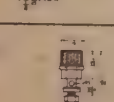
ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**COMBINATION BINDING POST AND BANANA PLUG** Converts any standard jack into 5-way binding post. Molded fluted captive nylon head. Phosphor Bronze, nickel plated spring. Available in red or black.	863-B 863-R	Black Red	.30 .30
		**COMBINATION BINDING POST AND BANANA PLUG** Molded captive nylon hex head. Converts any standard jack into 5-way binding post. Phosphor Bronze, nickel plated spring. Available in red or black.	864-B 864-R	Black Red	.30 .30
		**METAL BINDING POST** Combination Terminal Stake-In Binding Post Similar to 1-872 but smaller in size. Screw-head barrel terminal. Knurled shank. Lockwasher. Brass nickel plated. Knurled end 8-32 x 1/4" BHS. For 1/8 thick panel.	872	Metal	.114
		**METAL BINDING POST** Combination Terminal Stake-In Binding Post Screw head, brass, nickel plated barrel terminal. Knurled shank. Knurled end 10-32 x 1/4" long BHS. For 5/16 thick panel.	1-872	Metal	.114
		**METAL BINDING POST** Captive head. Wrap-around terminal. Hex shape. Brass, nickel plated. Accepts phone tip, spade lug, banana plug, alligator clip, or wire.	873	Metal	.33
		**METAL BINDING POST** Gold plated. Fluted brass. Molded black nylon insulator. 5-way will accept phone tip, spade lug, banana plug, alligator clip, or wire.	1-873	Metal	.50
		**METAL BINDING POST** Brass nickel plated. Accepts standard phone tips or banana plugs.	874	Metal	.21
		**METAL BINDING POST** Brass nickel plated. Supplied complete with screw and lockwasher.	875	Metal	.24
		**5-WAY BINDING POST** Accepts tip and banana plugs, spade lugs, alligator clips, and wire strands. Direct solder connection. Molded nylon head and washer completely insulates post from panel. Mounts in 1/2" or keyed hole for panels 1/16" to 1/4" thick. Nickel plated brass metal parts. Molded in brass bushings in head and washer. Available in choice of six colors.	876B 876R 876BL 876GR 876Y 876W	Black Red Blue Green Yellow White	.35 .35 .35 .35 .35 .35
		**5-WAY BINDING POST** Molded nylon hexagonal head. Screw-end. Accepts phone, tip, spade, lug, banana plug alligator clip, or wire connections. Available in red or black.	1-876-B 1-876-R	Black Red	.40 .40
		**5-WAY BINDING POST** Molded nylon. Hexagonal head. Spade lug. Accepts phone tip, spade lug, banana plug, alligator clip, or wire connections. Available in red or black.	2-876-B 2-876-R	Black Red	.42 .42
		**5-WAY BINDING POST** Accepts tip and banana plugs, spade lugs, alligator clips, and wire. Wrap around terminal. Molded nylon head and washer completely insulates post from panel. Mounts in 1/2" or keyed hole for panels 1/16" to 1/4" thick. Gold plated brass, metal parts. Molded-in-place brass bushings in head and washer. Available in choice of six colors.	3-876B 3-876R 3-876BL 3-876GR 3-876Y 3-876W	Black Red Blue Green Yellow White	.45 .45 .45 .45 .45 .45
		**DUAL 5-WAY BINDING POST** Nylon hexagonal captive head. Brass, nickel plated. Wrap-around type. Accepts phone, spade, banana, or wire connections. Available in red or black combination.	4-876-B 4-876-R 4-876-BR	Black Red Black/Red	.75 .75 .75
		**5-WAY BINDING POST** Molded nylon. Fluted head. Wrap around end. Accepts phone tip, spade lug, banana plug, alligator clip, or wire connections. Available in red or black.	877-B 877-R	Black Red	.49 .49
		**5-WAY BINDING POST** Molded nylon. Fluted head. Screw end. Accepts phone tips, spade lug, banana plug, alligator clip, or wire connections. Available in red or black.	1-877-B 1-877-R	Black Red	.45 .45
		**5-WAY BINDING POST** Molded nylon. Fluted head. Spade end. Accepts phone tip, spade lug, banana plug, alligator clip, or a wire connection. Available in red or black.	2-877B 2-877R	Black Red	.52 .52
		**5-WAY GROUNDING TYPE** Designed to accept phone tip plug, banana plug, spade lug, alligator clip, wire strand. Molded plastic, captive head, indicate color desired. Red, black. 8-32 threaded stud. Nickel-plated brass body and insert in head.	878-B 878-R	Black Red	.22 .22

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		**DUAL 5-WAY BINDING POST** Nylon fluted, captive head. Brass, nickel plated. Wrap-around type. Accepts phone tip, spade lug, banana plug, alligator clip, or wire connections. Available in red or black combinations.	2-878-B 2-878-R 2-878B/R	Black Red Black/Red	.80 .80 .80
		**FULLY INSULATED TYPE** Designed to accept phone tip plugs, spade lugs, banana plugs, alligator clips or wires. Mounts in 1/4" hole in panel. Molded plastic head and washer, with nickel plated brass body. Available in red and black.	879-B 879-R	Black Red	.25 .25
		**BINDING POST** Molded Bakelite with molded-in brass threaded insert. Available in red or black. Brass, nickel plated. Supplied complete with screw and lockwasher.	880-B 880-R	Black Red	.24 .24
		BINDING POST Molded Bakelite with molded-in brass threaded insert. Available in red or black. Brass, nickel plated. Supplied complete with screw and lockwasher.	881-B 881-R	Black Red	.24 .24
		4 WAY BINDING POST Self-locking. Molded nylon. Fluted head. Screw end. Accepts phone, spade, banana alligator or wire connection. Available in red and black.	882-B 882-R	Black Red	.27 .27

ANODE CONNECTORS

NT•T now offers this extensive line of Anode Connectors for conventional CRT applications and color. The large rubber mushroom caps on the connectors help alleviate the problem of corona. Insist on NT•T.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		STANDARD CONNECTOR NEW	212-18"	— —	.45
		COLOR CONNECTOR For use on color cathode ray tubes.	239-18"	— —	.42
		STANDARD CONNECTOR	242-18"	— —	.33
		STANDARD CONNECTOR	246-18"	— —	.37
		COLOR CONNECTOR Large rubber cup for color tubes.	250-27"	— —	.57

HIGH VOLTAGE PLATE CAP

		HIGH VOLTAGE PLATE CAP NEW Used extensively on high voltage regulator tubes in color television receivers. Made of high dielectric material consisting of Alkyd #20 18" wire.	260-10"	— —	1.20

CHEMICALS

ILLUSTRATION	DESCRIPTION	Catalog Number	Standard Pack	USA Net Each
	LECTRO-KLEEN Tuner-Contact Cleaner There is no longer a need to stock a special contact cleaner for controls and another type for tuners. LECTRO-KLEEN will do all of your electronic cleaning jobs. LECTRO-KLEEN cleans, lubricates, and protects at the same time. Due to the low viscosity, UHF and VHF tuners will not drift. One swish shows the difference. Most important, LECTRO-KLEEN will not harm plastic . . . and it's non-toxic . . . safe for you, too. Insist on LECTRO-KLEEN.	7-001	24-6 oz. Cans	1.17
			SPECIALLY FORMULATED FOR COLOR TELEVISION	

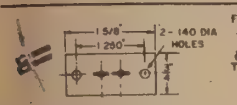
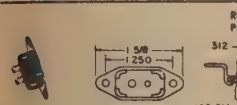
Net

© United Technical Publications

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

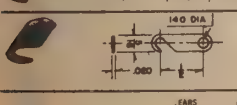
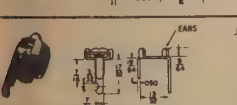
NTERLOCK RECEPTACLES

Pins are made from 1/4" hard-brass wire cadmium plated. Polarized interlocks are made in both flush and bath tub styles.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		FLUSH RECEPTACLE Standard	714	—	.07
		RECESSED RECEPTACLE Standard	718	—	.09
		FLUSH RECEPTACLE Polarized	731	—	.09
		RECESSED RECEPTACLE Polarized	733	—	.11

BINDING POST TERMINALS

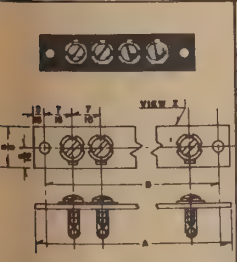
Lugs are tapped, with screws inserted ready for use, as replacement or in design of your own strips. All hot-tinned brass for ease in soldering

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		"A" .032 BRASS 6-32x5/16 SCREW	4403	Metal	.05
		SHORTING LINK 7/16" Centers	4515	Metal	.018
		SHORTING LINK 1/2" Centers	4516	Metal	.018
		EARS .050 BRASS 6-32x3/8 SCREW	4418	Metal	.07

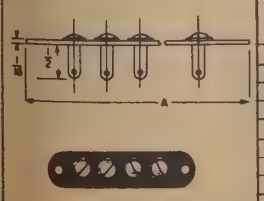
BINDING POST BOARDS

Boards are 1/16" thick XP Laminated Phenolic. Terminals are 1/32" thick, brass, cadmium plated. Screws are Steel nickel-plated.

2400 SERIES
- The last one or two digits in the catalog number indicate the number of screw terminals. For example: 2402 means a 2400 Series Binding Post with 2 screw terminals.

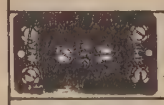
ILLUSTRATION	DIMENSIONS A	DIMENSIONS B	LUG POSITIONS (As Per View "Z") 1 2 3 4 5 6 7 8 9 10 11 12	Cat. #	Std. 10 Pack USA Net Each
	1-1/4"	7/8"	● ● ●	2401	.065
	1-11/16"	1-5/16"	● ● ●	2402	.08
	2-1/8"	1-3/4"	● ● ●	2403	.115
	2-9/16"	2-3/16"	● ● ● ●	2404	.14
	3"	2-5/8"	● ● ● ● ●	2405	.175
	3-7/16"	3-1/16"	● ● ● ● ● ●	2406	.20
	3-7/8"	3-1/2"	● ● ● ● ● ● ●	2407	.23
	4-5/16"	3-15/16"	● ● ● ● ● ● ● ●	2408	.26
	4-3/4"	4-3/8"	● ● ● ● ● ● ● ● ●	2409	.29
	5-3/16"	4-13/16"	● ● ● ● ● ● ● ● ● ●	2410	.33
	5-5/8"	5-1/4"	● ● ● ● ● ● ● ● ● ● ●	2411	.36
	6-1/16"	5-11/16"	● ● ● ● ● ● ● ● ● ● ● ●	2412	.39

2551 SERIES
- The last digit in the catalog number indicates the number of screw terminals. For example: 2502 means a 2500 series Binding Post with 2 screw terminals.

ILLUSTRATION	DIMENSIONS A	DIMENSIONS B	TERMINAL POSITIONS 1 2 3 4 5 6 7 8 9 10 11	Cat. #	Std. 10 Pk USA Net Each
	1-1/2"	1"	● ● ●	2551	.07
	2"	1-1/2"	● ● ●	2552	.09
	2-1/2"	2"	● ● ● ●	2553	.12
	3"	2-1/2"	● ● ● ● ●	2554	.15
	3-1/2"	3"	● ● ● ● ● ●	2555	.18
	4"	3-1/2"	● ● ● ● ● ● ●	2556	.20
	4-1/2"	4"	● ● ● ● ● ● ● ●	2557	.23
	5"	4-1/2"	● ● ● ● ● ● ● ● ●	2558	.27
	5-1/2"	5"	● ● ● ● ● ● ● ● ● ●	2559	.30
	6"	5-1/2"	● ● ● ● ● ● ● ● ● ● ●	2560	.33

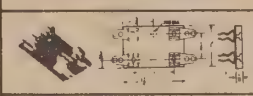
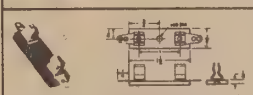
Exact, or in most cases suitable replacement for antenna strips on the majority of television receivers.

ANTENNA BINDING POSTS

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		UHF CONVERTER STRIP Replacement on many UHF converters on the market today.	001-3	—	.36
		STANDARD STRIP Used on many receivers providing only VHF reception. Tuner antenna wire plugs into strip allowing fast disconnect.	001-4	—	.18
		UHF-VHF STRIP Used on many of the new receivers with combination UHF-VHF tuners.	001-12	—	.28

FUSE MOUNTING BASES

3AG fuse mounting assemblies as used throughout industry. Fuse blocks available in one, two, and three pole assemblies.

ILLUSTRATION	DIMENSIONS	DESCRIPTION	Catalog Number	Std. 10 Pack Color	Std. 10 Pack USA Net Each
		Bases are manufactured from XP laminated phenolic, clips are made from .020 spring brass, cadmium or silver plated. Two .140 diameter mounting holes.	403	Black	.35
		Bases are manufactured from XP laminated phenolic, clips are made from .020 spring brass, cadmium or silver plated. Three pole unit with mounting holes for #8 screws.	405	Black	.48
		Bases are manufactured from XP laminated phenolic, clips are made from .020 spring brass, cadmium or silver plated. Two pole unit with mounting holes for #6 screws.	406	Black	.36
		Bases are manufactured from XP laminated phenolic, clips are made from .020 spring brass, cadmium or silver plated. Single pole with .140 diameter mounting holes.	408	Black	.18
		Bases are manufactured from XP laminated phenolic, clips are made from .020 spring brass, cadmium or silver plated. Single pole with solder connector below base.	410	Black	.13
		NYLON NEW	449	White	.35
		PANEL MOUNTED HOLDERS 3AG Type Fuses Molded from black, general purpose phenolic powder. All metal parts are plated to resist corrosion and solder lugs are plated to facilitate soldering. Rated at 15 amps., 250 volts and is Underwriter Laboratories approved.	450	Black	.35
		PANEL MOUNTED HOLDERS 3AB Type Fuses Short Type NEW Molded from black, general purpose phenolic powder. All metal parts are plated to resist corrosion and solder lugs are plated to facilitate soldering. Rated at 15 amps., 250 volts and is Underwriter Laboratories approved.	451	Black	.45

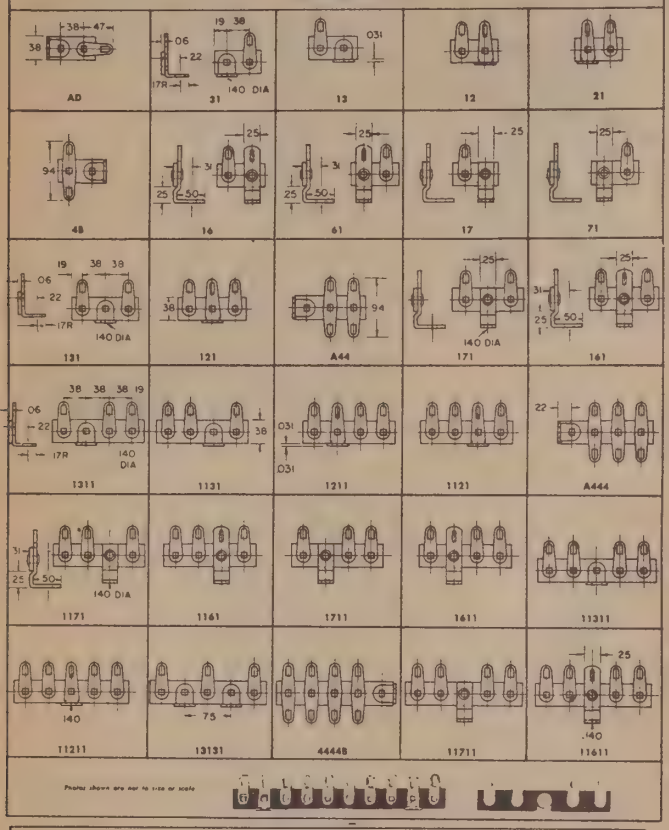
Utilized as replacements for antenna terminals on the rear of many television receivers, and as speaker terminals on many amplifiers. Makes an excellent replacement and is ideal for the engineer or hobbyist in the construction of new equipment.

ntt sales / a division of NATIONAL TEL-TRONICS CORP.

TERMINAL STRIPS

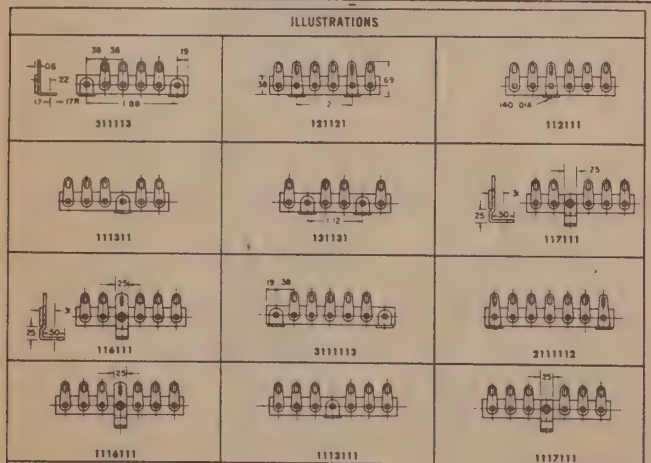
Strips are 1/16" by 3/8" NEMA grade XP laminated phenolic with brass or steel lugs. All are securely eyeletted in position. Lug spacing is .38". NT-T's vast assortment of strips allows for the most complete coverage and applications.

ILLUSTRATIONS

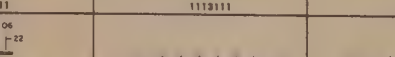


Photos shown are not to size or scale

ILLUSTRATIONS



COLOR TV TERMINAL STRIPS

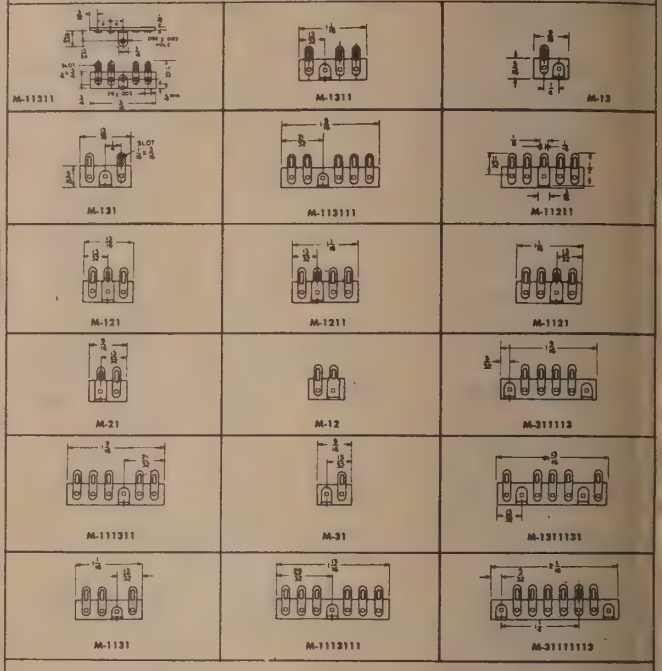


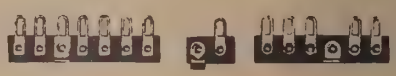
Strips are 1.16" by 5.16" NEMA grade XP laminated phenolic with brass or steel lugs. All are securely eyeletted in position. Lug spacing is 1/4". NT-T's vast assortment of strips allows for the most complete coverage and applications

MINIATURE

TERMINAL STRIPS

ILLUSTRATIONS





TERMINAL STRIPS PRICE LIST

Catalog Number	Std. 10 Pack USA Net Each
AD	.03
4B	.05
12	.031
13	.03
16	.038
17	.038
21	.031
31	.03
A44	.065
61	.038
71	.038
121	.033
131	.032
161	.04
171	.04
A444	.075
1121	.042
1131	.041
1161	.051
1171	.051
1211	.042
1311	.041
1611	.051
1711	.051
4444B	.10
11211	.046
11311	.045
11611	.056
11711	.056
13131	.05
111311	.06
112111	.062
116111	.074
117111	.074
121121	.064

Catalog Number	Std. 10 Pack USA Net Each
131131	.06
311113	.06
1113111	.064
1116111	.078
1117111	.078
2111112	.068
3111113	.065
12111121	.075
13111131	.07
31111113	.07
M-12	.041
M-13	.04
M-21	.041
M-31	.04
M-121	.043
M-131	.045
M-1121	.055
M-1131	.055
M-1211	.055
M-1311	.055
M-11211	.06
M-11311	.06
M-111311	.065
M-113111	.065
M-311113	.07
M-1113111	.09
M-1311131	.095
M-31111113	.095
R1	.032
1R1	.037
1R11	.042
11R11	.048
11C111	.051
111R11	.051

Net

© United Technical Publications

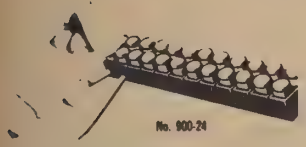
ntt sales / a division of NATIONAL TEL-TRONICS CORP.

MOLDED TERMINAL BLOCKS

900 SERIES PUSH BUTTON

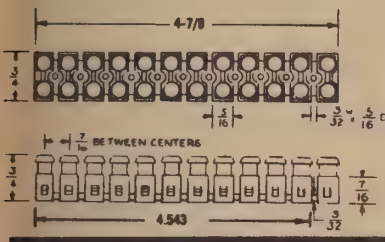


No. 900-10



No. 900-24

Catalog Number	Color	Std. 10 Pack Each	Qty.
900-4	Black	.498	100
900-6	Black	.66	100
900-8	Black	.846	100
900-10	Black	1.02	100
900-12	Black	1.23	100
900-14	Black	1.44	100
900-16	Black	1.59	100
900-18	Black	1.77	100
900-20	Black	1.95	100
900-24	Black	2.31	100



Like Type No. 905, the No. 900 terminal block is solderless, and is molded of hard black polyvinylchloride. Push buttons are molded of red polyvinylchloride.

These terminal blocks have extremely high dielectric properties and are approved to resist 440 volts or 500 volts when mounted on insulated surface. Maximum current 27 amperes, maximum heat capacity 70° C. Maximum wire size applicable AWG #12. Maximum contact pressure: 13.22 lbs. Connection of conductor is extremely fast. Press the red button and insert the wire. Release pressure for locking. The beryllium copper contacts are molded into the block. Type 900 is available for 24 connectors. It may be cut to smaller size if required.

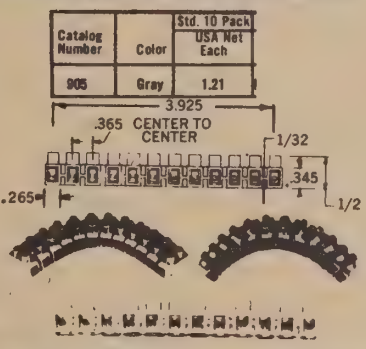
905 SERIES • FLEXIBLE

Type No. 905 Solderless Terminal Blocks are specially designed for applications where space and weight conservation are important factors. Because they are molded of flexible polyvinylchloride material they may be bent in any direction to fit contours and sharp angles. Typical applications for these terminal blocks include missile guidance systems, computers, aircraft communications, underwater detecting equipment, etc.

The shortest distance between the live parts of Type No. 905 Terminal Block is 3/8". Its brass terminals will accommodate a #10 wire as a maximum. The polyester material of which the blocks are made is rated at max. of 30 amps, 380 volts, or 440 volts if mounted on insulated surface. Maximum heat capacity: 60° C. Insert conductor in block and tighten the set screw.

Flexible Terminal Block No. 905 measures 3-$^{29}/_{64}$" long, 5/8" wide, 1/2" high and 11/32" between terminal centers. It may be cut to smaller sizes as required.

Catalog Number	Color	Std. 10 Pack USA Net Each
905	Gray	1.21



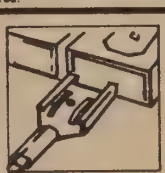


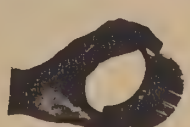


Catalog Number	Color	Std. 10 Pack USA Net Each
910-4	Clear	.444
910-6	Clear	.594
910-8	Clear	.762
910-10	Clear	.924
910-12	Clear	1.08
910-14	Clear	1.26
910-16	Clear	1.44
910-18	Clear	1.56
910-20	Clear	1.74
910-24	Clear	2.07

Solderless, flexible, Thermoplastic Terminal Block. Accepts stranded tinned or solid wire to 13 AWG. Just press wire into opening. No wrapping, no soldering. Place small blade screw driver in top slot and press to release wire. Contacts are Copper nickel-plated. Maximum operating temperature 212° F. Transit resistance 0.7 Ohms. Units are rated at 380-440 Volts D.C. Ideal for labs, schools, and hobbyists. Type 910 is available up to 24 connectors and may be cut down as desired.

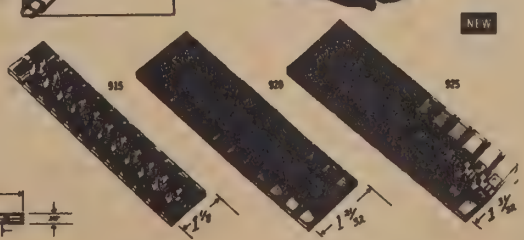
No. 910-4 —Four-connector terminal block
No. 910-6 —Six-connector terminal block
No. 910-8 —Eight-connector terminal block
No. 910-10—Ten-connector terminal block
No. 910-12—Twelve-connector terminal block
No. 910-14—Fourteen-connector terminal block
No. 910-16—Sixteen-connector terminal block
No. 910-18—Eighteen-connector terminal block
No. 910-20—Twenty-connector terminal block
No. 910-24—Twenty-four-connector terminal block

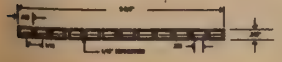




Unique terminal block for use with quick-disconnect 1/4" width terminals. Ideal for breadboarding, test strips, and simplifying installations. Solderless, exceptionally flexible. Available in 6 and 12 cell (12 and 24 connectors) that may be easily cut to fit, and in three widths. Molded from transparent Polyvinyl chloride. Rated at 250 VDC, 20A, 80° C.

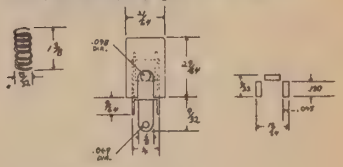
Catalog Number	Color	Std. 10 Pack USA Net Each
915-12	Clear	.52
915-24	Clear	1.00
920-12	Clear	.52
920-24	Clear	1.00
925-12	Clear	.56
925-24	Clear	1.11

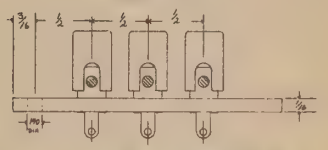




COMPRESSION TYPE TERMINAL BLOCKS

Series 927 push button terminal blocks are unique. They firmly grasp stripped wire in a spring loaded grip. Top of panel button is pressed down and wire is inserted into hole. Releasing push button permits top to rise and clamps wire securely. Push buttons are available singly or in strips to your order in single or multiple rows. The buttons are cadmium plated steel. Springs are phosphor bronze. Button is molded of styrene plastic in red, yellow, blue, black, white, or green.









NEW

HOW TO ORDER COLOR CODE

A four terminal strip consisting of a black, yellow, white, and blue button would be identified by the part number followed by the letters B-Y-W-B-L-G. Color Code: Red—Red, Y—Yellow, BL—Blue, B—Black, W—White, G-Green.

TERMINAL NUMBER											
927-2	O	X	X	O							
927-3	O	X	X	X	O						
927-4	O	X	X	X	X	O					
927-6	O	X	X	X	O	X	X	X	O		
927-8	O	X	X	X	X	O	X	X	X	X	O

X — TERMINALS O — MOUNTING HOLES

Catalog Number	Color	Std. 10 Pack USA Net Each
927-2	B-R	.80
927-4	B-R-Y-BL	1.14
927-6	B-R-Y-BL-W-G	1.70
927-8	B-R-Y-R-BL-B-W-G	2.25

SPACERS



BRASS HEX HEAD SPACERS

Cadmium Plated

1/4" HEX

Length "L"	Thd 4-40	Thd 6-32	Thd 8-32	NET Per C
.250	H2525-440	H2525-632	H2525-832	4.40
.375	H2537-440	H2537-632	H2537-832	5.25
.500	H2550-440	H2550-632	H2550-832	6.30
.750	H2575-440	H2575-632	H2575-832	9.20
1.000	H2510-440	H2510-632	H2510-832	11.20

BRASS SPACERS

Cadmium Plated

1/4" O.D.

Length "L"	for #4 Screw	for #6 Screw	for #8 Screw	NET Per C
.250	R2525-4	R2525-6	R2525-8	3.30
.375	R2537-4	R2537-6	R2537-8	4.35
.500	R2550-4	R2550-6	R2550-8	5.28
.750	R2575-4	R2575-6	R2575-8	6.30
1.000	R2510-4	R2510-6		
R2510-8	7.20			
3/8" O.D.				
.500			R3750-8	8.00
.750			R3775-8	10.90

BRASS THREADED SPACERS

Cadmium Plated

1/4" O.D.

Length "L"	Thd 4-40	Thd 6-32	Thd 8-32	NET Per C
.250	R2525-440	R2525-632	R2525-832	3.90
.375	R2537-440	R2537-632	R2537-832	4.95
.500	R2550-440	R2550-632	R2550-832	6.00
.750	R2575-440	R2575-632	R2575-832	8.40
1.000	R2510-440	R2510-632	R2510-832	10.40

mueller clips

a complete line of

ALLIGATOR TEST & BATTERY CLIPS

Mueller Electric Co.

"60 SERIES" ALLIGATOR CLIPS

U.S. Patent No. 3,321,736

No. 60—CONVENTIONAL TYPE



New slim design with full-meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2" long.

EACH NET.....$0.10 LOTS OF 10.....$0.07

No. 60-S—SCREW CONNECTION



Eliminates necessity for soldering. Otherwise same as No. 60.

EACH NET....$0.12 LOTS OF 10....$0.082

No. 60-NS—ALLIGATOR NEEDLE CLIP

Like No. 60-S, but with insulation piercing needle in one jaw. Screw connection. 2" long. 10 per box.

EACH NET.....$0.23 LOTS OF 10.....$0.158

No. 60-CS—COPPER ALLIGATOR CLIP

Solid copper version of No. 60-S. Screw connection. 2" long. 10 per box.

EACH NET.....$0.18 LOTS OF 10.....$0.126

No. 60PR-2—SPECIAL BARREL FOR TEST PROD OR PHONE TIP



Barrel crimped to provide friction fit on standard test prod or phone tip. Holds prod on test, frees hand for other work.

EACH NET.....$0.15 LOTS OF 10.....$0.102

No. 62 FLEXIBLE VINYL INSULATOR



Red and black insulators for Alligator Clips 60, 60-S, 60-CS, 60PR-2.

EACH NET.....$0.06 LOTS OF 10.....$0.041

No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE



Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2 1/32" long. Shipped half red, half black.

EACH NET.....$0.16 LOTS OF 10.....$0.115

No. 60-CHS—COPPER ALLIGATOR CLIP, INSULATED HANDLE

Solid copper version of No. 60-HS. Screw connection. Shipped with half red, half black insulating sleeves. 10 per box.

EACH NET.....$0.22 LOTS OF 10.....$0.156

"70 SERIES" ALLIGATOR CLIPS

U.S. Patent No. 2,762,028

Features simplified design, fast connection of wire with cord strain relief ears, patented hinge construction and lower cost.

No. 70—FOR SOLDERED CONNECTION



Steel, cadmium plated. 1 1/8" long.

EACH NET.....$0.08 LOTS OF 10.....$0.057

No. 70-S—SCREW CONNECTION



Otherwise same as No. 70.

EACH NET.....$0.10 LOTS OF 10.....$0.067

No. 70-CS—COPPER SCREW CONNECTION

Solid copper version of No. 70-S.

EACH NET.....$0.16 LOTS OF 10.....$0.10

No. 72— SKIN-TIGHT INSULATOR FOR 70 SERIES ALLIGATOR CLIPS!



For the first time complete, skin-tight, one-piece insulation for a standard size Alligator Clip! Covers entire clip right down to nose. Special tip slot permits full jaw opening without exposing teeth.

EACH NET.....$0.06 LOTS OF 10.....$0.041

MICRO-GATOR CLIP

(Smallest Insulated Clip Ever Made)

U.S. Patent No. 2,762,028 Trademark Reg.



Micro-Gator



Micro-Gator with Insulator

The alligator clip with the microscopic tip! This is the alligator clip you now can use where no other clip will do . . . on printed circuits, in tight spots and on tiny terminals too crowded for anything but its microscopic tip. Including separate skin-tight insulator the tip is no bigger than the head of a pin! Yet the Micro-gator has ample thumb grip, and plenty of bite to stand up straight on the smallest terminals. Ample 1/32" jaw spread. 1 3/32" long. Solder connection. Skin-tight flexible vinyl insulator (sold separately) has "lip-action" tip slot so that jaws stay covered whether open or closed.

No. 34 (Steel, cadmium plated)

EACH NET.....$0.07 LOTS OF 10.....$0.047

No. 34-C (Solid Copper)

EACH NET.....$0.09 LOTS OF 10.....$0.062

No. 36 (Insulator for Nos. 34 and 34-C)

EACH NET.....$0.05 LOTS OF 10.....$0.033

MINI-GATOR CLIP

U.S. Patent No. 3,321,736

Trademark Reg.



Mini-gator



Mini-gator with Insulator

Indispensable for testing or incorporation into miniaturized equipment. New design features rivet hinge for greater strength, full-meshing teeth to grip finest wires. Skin-tight flexible Vinyl insulator (sold separately) covers completely — has slotted "lip action" tip. Clip weighs 1/20th oz., has tiny 1/64" O.D. nose, but ample 3/4" jaw spread 1 3/32" long. Crimping ears. Solder connection. Surprisingly strong bite penetrates corrosion and coatings.

No. 30 (Steel, cadmium plated)

EACH NET.....$0.09 LOTS OF 10.....$0.062

No. 30-C (Solid Copper)

EACH NET.....$0.11 LOTS OF 10.....$0.076

No. 32 (Insulator for Nos. 30 and 30-C)

EACH NET.....$0.05 LOTS OF 10.....$0.033

COMPLETELY INSULATED ALLIGATOR CLIPS



Patent Pending

No. 63 or 63-C Clip

Sold only as a unit, with factory-applied insulators.

Completely insulated right down to the nose. Flexible 2-piece skin-type vinyl insulator of high dielectric strength, with "lip action" slotted tip that permits opening of clip without exposing metal. Insulator nose is only 13/64" O.D. The tight fitting sheath preserves all the slimness of the Alligator Clip, still giving complete protection against shorts in even the tightest spots. Screw connection easily made by slipping insulator forward. 2 1/8" long.

No. 63—INSULATED ALLIGATOR CLIP (STEEL)

Composed of Mueller No. 60-S Alligator Clip steel, cadmium plated, screw connection, complete with 2-piece vinyl insulator. Shipped half with red insulators, half black. 10 per box.

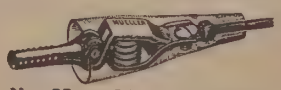
EACH NET.....$0.23 LOTS OF 10.....$0.158

No. 63-C—INSULATED ALLIGATOR CLIP (COPPER)

Composed of Mueller No. 60-CS Alligator Clip, solid copper, screw connection. Shipped half with red insulators, half black. 10 per box.

EACH NET.....$0.27 LOTS OF 10.....$0.19

CROCODILE CLIPS



No. 85 or 85-C Clip with No. 87 Insulator



No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. 2 1/8" long.

EACH NET.....$0.12 LOTS OF 10.....$0.084

No. 85-C—Same as No. 85,, except solid copper with phosphor bronze spring, brass screw. A radio frequency, entirely non-ferrous test clip. 10 per box.

EACH NET.....$0.24 LOTS OF 10.....$0.165

No. 85-T—Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removale heads. 2 5/8" long. 10 per box.

EACH NET.....$0.31 LOTS OF 10.....$0.215

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protect against short and shock. Help to distinguish leads.

Net

© United Technical Publications

mueller clips

a complete line of

ALLIGATOR TEST & BATTERY CLIPS

Mueller Electric Co.

TEST CLIPS



No. 45 PEE WEE

A very small test clip for radio, ignition, meter and similar work. 1½" long. Jaw spread ⅛". Steel, cadmium plated.

EACH NET.....$0.10 LOTS OF 10.....$0.068



No. 45-C Clip
No. 47 Insulator

No. 45-C Solid Copper R.F. Test Clip

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1½" long. 10 per box.

EACH NET.....$0.17 LOTS OF 10.....$0.12

Use No. 47 Insulator for clips 45 and 45-C.



No. 48-B

A small test and battery clip for radio use and general testing purposes. 2" long. Jaw spread ½". Steel, cadmium plated. 10 per box.

EACH NET.....$0.15 LOTS OF 10.....$0.103

No. 48C—Solid Copper. Same size as 48-B.

EACH NET.....$0.22 LOTS OF 10.....$0.15



No. 50-C Needle Clip

Solid bronze. Needle pierces insulation of wire for quick test contact. 2¼" long. 10 per box.

EACH NET....$0.36 LOTS OF 10....$0.25

No. 51-C—Large crocodile clip. Same as 50-C but without needle. 10 per box.

EACH NET....$0.25 LOTS OF 10....$0.177

Use No. 49 insulator for Clips 48-B, 48-C, 50-C and 51-C.



No. 27

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work 2⅞" long. Jaw spread ⅝". Steel, cadmium plated. 10 per box.

EACH NET.....$0.18 LOTS OF 10.....$0.12

No. 27-C—Solid copper. Same size as No. 27. 10 per box.

EACH NET.....$0.31 LOTS OF 10.....$0.218

Use No. 29 Insulator for clips 27 and 27-C.

LARGER SIZES OF CLIPS



No. 21-C No. 25-C

All packed 10 per box.

		Each Net	Lots of 10
No. 24-A	— 25 Amp. Steel, lead plated, 2⅜" long	$0.29	$0.20
No. 25	— 40 Amp. Steel, cadmium plated, 3" long	.24	.185
No. 25-C	— 75 Amp. Solid Copper, 3" long	.51	.36
No. 21-A	— 50 Amp. Steel, lead plated, 4" long	.52	.36
No. 21-C*	—100 Amp. Solid Copper, 4½" long	1.34	.94
No. 11-A*	—100 Amp. Steel, lead plated, 6" long	1.44	1.01
No. 11-C*	—200 Amp. Solid Copper, 6" long	2.65	1.85
No. 33-C*	—300 Amp. Solid Copper, 7¾" long	4.80	3.36

(*Furnished with detachable lug connection for easy securing to large cables.)

GROUND CLAMP

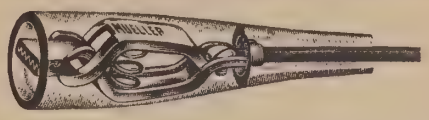


CLAMPIPE
No. 58

The ClamPipe will not spread, bend or lop over when applied. Point of large screw bites through corrosion into clean metal to insure good contact. Applicable to pipe ⅜" to 1⅝" O.D. The best ground clamp on the market!

EACH NET.....$0.28 LOTS OF 10.....$0.194

FLEXIBLE INSULATORS FOR CLIPS



A convenient protection against short circuit and electric shock. Colors help to distinguish leads. Packed half red and half black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly. NOW AVAILABLE also in blue, white, yellow and green at 10% above regular price are insulators marked * below.

Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13*	11-A, 11-C	$0.86	$0.60
23*	21-A, 21-C	.47	.33
26*	24-A, 25, 25-C	.29	.20
29*	27, 27-C	.19	.134
32*	30, 30-C	.05	.033
35	33-C	3.48	2.43
36*	34, 34-C	.05	.033
47*	45, 45-C	.08	.052
49*	48-B, 48-C, 50-C, 51-C	.12	.085
62*	60, 60-S, 60-CS, 60PR-2, 60-NS (also 70 Series)	.06	.041
72*	70, 70-S, 70-CS	.06	.041
87*	85, 85-C, 85-T	.08	.052

*Also available in blue, white, yellow and green.

MUELLER *QUALITY* BATTERY BOOSTER CABLES

Highest quality cables, equipped with famous Hippo-Clips, for boosting "dead" 6 or 12-volt vehicle batteries with an external battery. Cables are pure copper, finely stranded for high flexibility and covered with rubber insulation which stays flexible in the coldest weather and resists oil, grease and acid. 413 strands of No. 30 wire in the 4-gauge cable and 259 strands of No. 30 wire in the 6-gauge cable. The many fine features of the Hippo-Clips alone are listed elsewhere on this page. The clips are both soldered to the cable and clinched around the cable insulation by means of clinching ears.

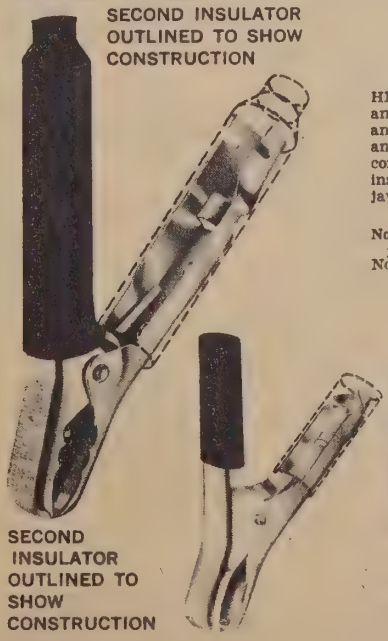
Packaged: pair of cables with clips in a bright, attractive display carton. Standard shipping container 10 cartons.

No. 8A6—8 ft., 6-gauge, with No. 41A Hippo-Clips (Steel, bright copper plated)
NET PRICE PER PAIR.....$7.80

No. 12A6—12 ft., 6-gauge, with No. 41A Hippo-Clips (Steel, bright copper plated)
NET PRICE PER PAIR.....$9.90



No. 12C4—12 ft., 4-gauge, with No. 41C Hippo-Clips (Solid Copper)
NET PRICE PER PAIR.....$15.60



HIPPO-CLIP

HIPPO-CLIP—For battery booster cables and fast chargers. Proved higher quality and superior design. Built-in solder strap and clinching ears for fast, sure cable connection. Supplied with vinyl handle insulators in red or black. Full 1-9/16" jaw spread. 6" long.

	Net price ea.
No. 41-A Steel, bright copper plated, 100 amp.	$ .60
No. 41-C Solid Copper, 200 amp.	1.68

PIGMY HIPPO-CLIP

PIGMY HIPPO-CLIP—A new small plier clip for battery operated equipment and automotive test. Flat, wide handle allows positive grip. Won't "squirt away". Built-in solder strap and wire clinching ears. Supplied with vinyl handle insulators in red or black. Ample 1⅛" jaw spread. 3" long.

	Net price ea.
No. 46-A Steel, bright copper plated, 50 amp.	.18
No. 46-C Solid Copper, 75 amp.	.32

mueller clips

a complete line of

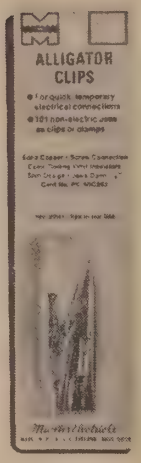
ALLIGATOR TEST & BATTERY CLIPS

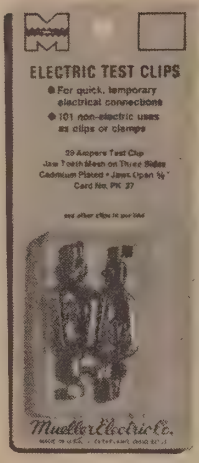
Mueller Electric Co.

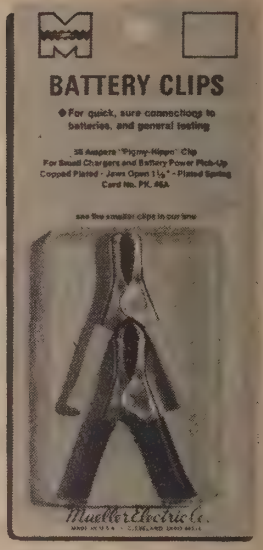
BUBBLE PACKED CLIPS AND INSULATORS

The most popular Mueller clips and insulators attractively packaged on display cards. Clean design and concise copy invite attention. Bright pumpkin colored background makes these cards an eye-catching standout on pegboard or similar display panels.

Only three card sizes. Most items packaged on smallest card (2″ x 7″). Where included, insulators are half red, half black. Standard package ten cards.







Card No.	Description and Quantity of Merchandise on Each Card (See Preceding Pages for Additional Information)	Length of Clip	Clip Jaws Open	Amp. Capacity	Clips Made Of	CARD PRICE Suggested USA List
ALLIGATOR CLIPS						
PK60S	4 No. 60-S Clips, Screw Connection	2″	5/16″	5	Steel	$ .79
PK60S62	2 No. 60-S Clips and 2 No. 62 Insulators	2″	5/16″	5	Steel	.65
PK60CS	4 No. 60-CS Clips, Screw Connection	2″	5/16″	5	Copper	.99
PK60CS62	2 No. 60-CS Clips and 2 No. 62 Insulators	2″	5/16″	5	Copper	.75
PK60HS	4 No. 60-HS Clips with Insulated Handles 2 Red, 2 Black. Screw Connection	2-11/32″	5/16″	5	Steel	.99
PK60CHS	4 No. 60-CHS Clips with Insulated Handles 2 Red, 2 Black. Screw Connection	2-11/32″	5/16″	5	Copper	1.19
PK63	2 No. 63 Completely Insulated Clips, 1 Red, 1 Black. Screw Connection	2-1/8″	5/16″	5	Steel	.69
MINI-GATOR CLIPS (Very Small Alligators)						
PK30	4 No. 30 Clips	1-3/32″	3/16″	5	Steel	.68
PK3032	2 No. 30 Clips and 2 No. 32 Insulators	1-3/32″	3/16″	5	Steel	.58
PK30C	4 No. 30-C Clips	1-3/32″	3/16″	5	Copper	.75
PK30C32	2 No. 30-C Clips and 2 No. 32 Insulators	1-3/32″	3/16″	5	Copper	.61
MICRO-GATOR CLIPS (Very Small Alligators with Tiny, Flat Jaws)						
PK34	4 No. 34 Clips	1-3/32″	7/32″	5	Steel	.59
PK3436	2 No. 34 Clips and 2 No. 36 Insulators	1-3/32″	7/32″	5	Steel	.53
PK34C	4 No. 34-C Clips	1-3/32″	7/32″	5	Copper	.68
PK34C36	2 No. 34-C Clips and 2 No. 36 Insulators	1-3/32″	7/32″	5	Copper	.58
CROCODILE CLIPS (Long Jaws With Nesting Teeth)						
PK85	4 No. 85 Clips	2-1/8″	5/16″	5	Steel	.81
PK8587	2 No. 85 Clips and 2 No. 87 Insulators	2-1/8″	5/16″	5	Steel	.70
GENERAL PURPOSE TEST CLIPS						
PK45	4 No. 45 Clips	1-1/2″	5/16″	5	Steel	.71
PK4547	2 No. 45 Clips and 2 No. 47 Insulators	1-1/2″	5/16″	5	Steel	.65
PK48B	4 No. 48-B Clips	2″	1/2″	10	Steel	.89
PK27	2 No. 27 Clips	2-7/16″	5/8″	20	Steel	.63
NEEDLE CLIP (Piercing Contact Thru Wire Insulation)						
PK50C49	2 No. 50-C Clips and 2 No. 49 Insulators	2-1/4″	1/2″	20	Copper	1.28
BATTERY CLIPS						
PK24A	2 No. 24-A Clips, Lead Plated	2-7/8″	3/4″	25	Steel	.88
PK21A	2 No. 21-A Clips, Lead Plated	4″	1-1/16″	50	Steel	1.49
PK46A	2 No. 46-A Plier-Type Clips, Bright Copper Plated, 1 Red, 1 Black.	3″	1-1/8″	50	Steel	.92
BATTERY BOOSTER CLIPS (In Poly Bags)						
PK41A	2 No. 41-A Plier-Type Clips, Bright Copper Plated, 1 Red, 1 Black.	6″	1-9/16″	100	Steel	2.30
PK41C	2 No. 41-C Plier-Type Clips, Solid Copper, 1 Red, 1 Black.	6″	1-9/16″	200	Copper	5.90

SEE FULL LINE ON PRECEDING PAGES.

Trade Discount Applies To List Prices Only

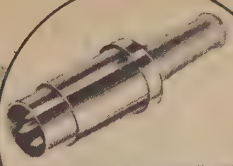
© United Technical Publication



MULTIPOLE PLUGS SOCKETS & CONNECTORS UP TO 36 POLES

MULTIPOLE CONNECTORS UNSHIELDED





MULTIPOLE CONNECTORS DOUBLE-SHIELDED SHIELDED, UNSHIELDED



MINIATURE SOCKETS SHIELDED AND UNSHIELDED



TEST PRODS THIRD HAND PROBES

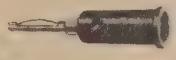


PHONO PLUGS, SOCKETS AND ADAPTERS



BANANA PLUGS & JACKS

More than a hundred configurations. Bunch pin, transverse slot, leaf spring, rigid handles, unbreakable handles, quick-acting, with or without strain-relief. Available in over 20 colors.





BANANA PLUGS & JACKS

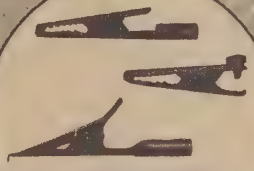




I.E.C. CONNECTORS



MULTI-WAY BINDING POSTS AND TERMINALS



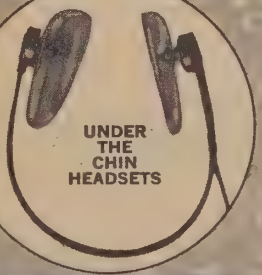
ALLIGATOR CLIPS STAINLESS OR PLATED



ULTRA-MINIATURE AND MICRO-MESH ALLIGATOR CLIPS



ALLIGATOR CLIPS INSULATED, QUICK-ACTING



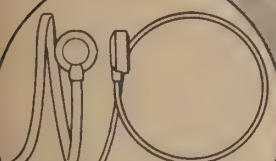
UNDER THE CHIN HEADSETS



MINIATURE SWITCHES
Ball bearing detent.

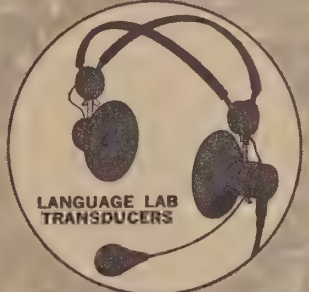


HIGH PERFORMANCE MINIATURE EARPHONES



THROAT AND HEARTBEAT MICROPHONES

rye INDUSTRIES



LANGUAGE LAB TRANSDUCERS



COMMUNICATION MICROPHONES



PROFESSIONAL MICROPHONES

Request:
☐ Plug, socket connector, test prod catalog. ☐ General catalog, including miniature switches. ☐ Professional and consumer microphones, headsets, transformers.



ACOUSTIC CONTROL BOX

Sound control boxes. Complete with volume control and driver units. With acoustical headset. As engineered and manufactured for a major American airline.

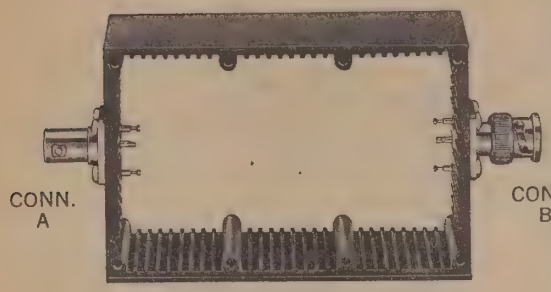
RYE INDUSTRIES INC. • Coroplast-Danavox-Hirschmann-Schneider

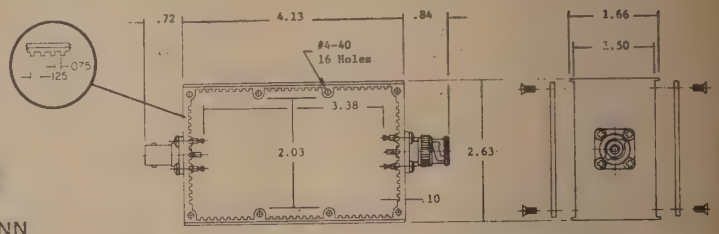
© United Technical Publications

SELECTED TEST ACCESSORIES FROM POMONA ELECTRONICS 1970 CATALOG

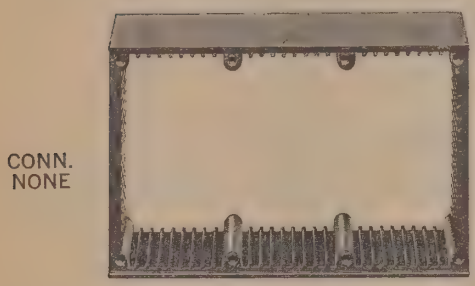
SHIELDED "BLACK BOXES" WITH CARD GUIDES

Aluminum boxes, slotted to accept 1/16" circuit boards and shielding dividers. Excellent for packaging electronic circuitry. Boxes have removable top and bottom covers. Useable inside space: 4"x2"x1½".





MODEL	CONNECTION A	CONNECTION B	NET
3302	BNC Receptacle Jack, UG290A/U.	BNC Receptacle Jack, UG290A/U.	10.85
3303	BNC Receptacle Jack, UG290A/U.	BNC Receptacle Plug, UG1104A/U.	11.85



MODEL 3301
FINISH: Blue Baked Enamel. Includes top and bottom covers with part number on one and 16 cover screws.

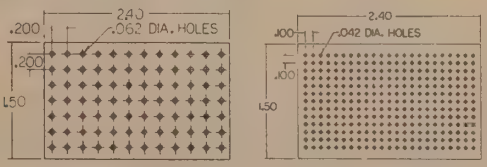
MODEL 3306
FINISH: None. Includes unmarked top and bottom covers with 16 cover screws.

DIMENSIONS SAME AS DRAWING ABOVE

QUANTITY DISC. CODE (A) **NET 6.85**

CIRCUIT MOUNTING BOARDS

Various Types of punched and blank Circuit boards for rapid assembly of components. Pre-cut to the proper size. Boards slide easily into the box card guides. All boards are 1/16" thick.

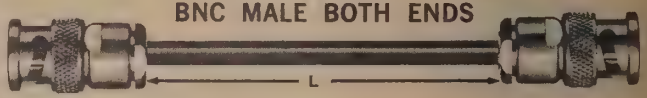


QUANTITY DISC. CODE (A)

BOARD A BOARD B

BOARD	MODEL	NO. OF HOLES	MATERIAL	NET EA.
A	3321	12 x 7	Paper-Epoxy (PEE)	.50
A	3322	NONE	Paper-Epoxy (PEE)	.35
A	3323	12 x 7	Glass-Epoxy (GEE)	.65
A	3324	NONE	Glass-Epoxy (GEE)	.45
A	3325	12 x 7	Glass-Epoxy (GEE) COP. CLAD 1 Side	.75
B	3326	23 x 13	Glass-Epoxy (GEE)	.85

BNC MALE BOTH ENDS



CONN: 1st END } UG88E/U Male BNC — CABLE: Shielded Coax., RG58C/U — CONN: 2nd END } UG88E/U Male BNC

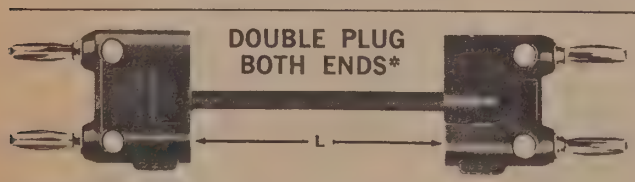
CONN: 1st END } UG260B/U Male BNC — CABLE: Shielded Coax., RG59B/U or RG62A/U — CONN: 2nd END } UG260B/U Male BNC

CABLE TYPES

SHIELDED MIC. CABLE	RG58C/U	RG59B/U	NET	RG62A/U	NET	LENGTH
BNC-B-18	BNC-C-18	BNC-E-18	5.95	BNC-M-18	6.95	18"
BNC-B-24	BNC-C-24	BNC-E-24	5.95	BNC-M-24	6.95	24"
BNC-B-30	BNC-C-30	BNC-E-30	5.95	BNC-M-30	6.95	30"
BNC-B-36	BNC-C-36	BNC-E-36	5.95	BNC-M-36	6.95	36"
BNC-B-48	BNC-C-48	BNC-E-48	5.95	BNC-M-48	6.95	48"
BNC-B-60	BNC-C-60	BNC-E-60	5.95	BNC-M-60	6.95	60"

★QUANTITY DISC. CODE (B)

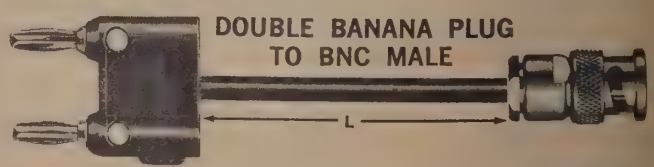
DOUBLE PLUG BOTH ENDS*



TWO COND. TWISTED PR.	SHIELDED MIC. CABLE	RG58C/U	RG59B/U	LENGTH	NET
2BA-18	2BB-18	2BC-18	2BE-18	18"	4.95
2BA-24	2BB-24	2BC-24	2BE-24	24"	4.95
2BA-30	2BB-30	2BC-30	2BE-30	30"	4.95
2BA-36	2BB-36	2BC-36	2BE-36	36"	4.95
2BA-48	2BB-48	2BC-48	2BE-48	48"	4.95
2BA-60	2BB-60	2BC-60	2BE-60	60"	4.95

★ QUANTITY DISC. CODE (B)

DOUBLE BANANA PLUG TO BNC MALE



CONN.: 1ST END } Double Banana Plug, on ¾" Centers. — CABLE: Shielded coax., RG58C/U — CONN.: 2ND END } UG88E/U, Male BNC

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
2BB-BNC-18	2BC-BNC-18	18"	5.95
2BB-BNC-24	2BC-BNC-24	24"	5.95
2BB-BNC-30	2BC-BNC-30	30"	5.95
2BB-BNC-36	2BC-BNC-36	36"	5.95
2BB-BNC-48	2BC-BNC-48	48"	5.95
2BB-BNC-60	2BC-BNC-60	60"	5.95

★QUANTITY DISC. CODE (B)

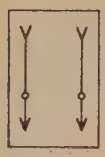
Net

© United Technical Publications

SELECTED TEST ACCESSORIES FROM POMONA ELECTRONICS 1970 CATALOG

DOUBLE BANANA PLUG



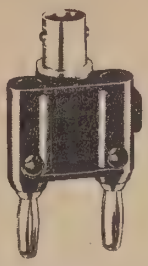


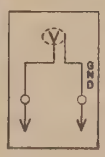
Double banana plug on ¾" centers; set screws secure leads; simplifies cable construction or component mounting; banana jacks permit top Stack-Up for multiple connections.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL MDP (Specify Color) QUANTITY DISC. CODE (A) **NET .75**

ADAPTER — BNC RECEPTACLE TO DOUBLE BANANA PLUG





Permits BNC plug to be used with equipment having banana jacks. Excellent for adapting laboratory VTVM, oscilloscopes and signal generator inputs to readily available coaxial cables.

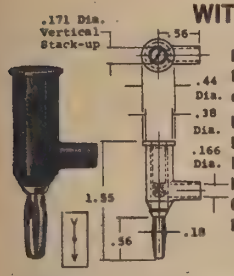
UPPER: BNC receptacle.

LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.

COLOR: Black.

MODEL 1269 QUANTITY DISC. CODE (A) **NET 2.95**

SOLDERLESS BANANA PLUG WITH SAFETY COLLAR — STACK-UP



Features: Integral safety collar insulates exposed wire leads. Wire firmly held in place with internal set screw, eliminating soldering. Assembly of test leads simplified.

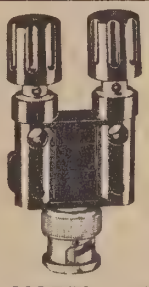
UPPER: Banana jack, .166 dia.; Brass, nickel plated.

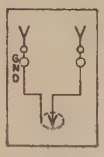
LOWER: Banana plug, one piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jack.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1825 (Specify Color) QUANTITY DISC. CODE (A) **NET .50**

ADAPTER — BINDING POSTS TO BNC PLUG





Permits single or double banana plugs to be used with equipment having BNC receptacle. Excellent for use with laboratory oscilloscopes.

UPPER: Insulated binding posts, on ¾" centers with .166 dia. banana jacks. Cross holes (.166 dia.) in body provide side Stack-Up connections.

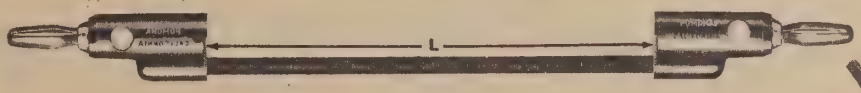
LOWER: BNC plug.

COLOR: Body, Black. Binding Posts: Black/Red.

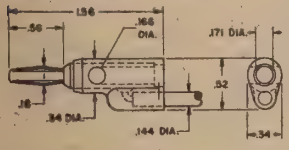
MODEL 1296 QUANTITY DISC. CODE (A) **NET 4.95**

STACK-UP BANANA PLUG PATCH CORD

MODEL	LENGTH	NET
B-4	4"	1.50
B-8	8"	1.50
B-12	12"	1.50
B-18	18"	1.50
B-24	24"	1.50
B-36	36"	1.50
B-48	48"	1.55
B-60	60"	1.60







Multiple stacking feature accommodates the most complex stacking; keeps circuitry neater. Greatly simplifies circuit connections and changes. Reliable solder-bonded connections withstand pull test in excess of 50 lbs. Banana plugs both ends.

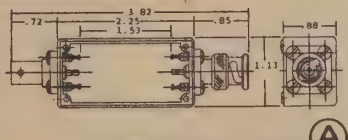
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL B (Specify Color) QUANTITY DISC. CODE (A) ★

COMPONENT MOUNTING — SHIELDED "BLACK BOXES"



Die cast Aluminum Housings with blue baked enamel finish. Supplied with Aluminum cover and cover screws. Solder turret terminals for connection.



QUANTITY DISC. CODE (A)

MODEL	CONNECTION A	CONNECTION B	NET
2390	BNC Receptacle Jack, UG290A/U.	BNC Receptacle Jack UG290A/U	6.85
2391	BNC Receptacle Jack UG290A/U	BNC Receptacle Plug, UG1104A/U.	7.85

EMPTY — SHIELDED "BLACK BOX"

Two sizes of die cast Aluminum Housings supplied either painted or unpainted. Anodized Aluminum covers supplied on all units.



MODEL 2397, 2417

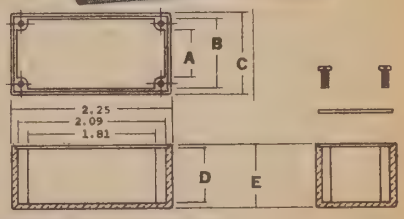
FINISH: Blue Baked Enamel.

Includes cover with part number on cover and four cover screws.

MODEL 2400, 2428

FINISH: None

Includes unmarked cover and four cover screws.



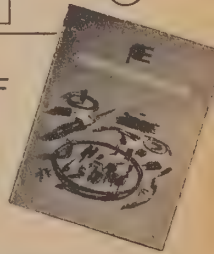
MODEL	DIMENSIONS					NET
	A	B	C	D	E	
2397, 2400	.69	.97	1.13	.76	.88	1.50
2417, 2428	.94	1.22	1.38	1.00	1.13	1.50

QUANTITY DISC. CODE (A)

POMONA ELECTRONICS

WRITE FOR FREE 56 PAGE 1970 GENERAL CATALOG OF ELECTRONIC TEST ACCESSORIES.

SEE COMPLETE LISTING IN SECTION 2100 OF EEM



SEALECTRO PRESS-FIT® TEFLON* TERMINALS

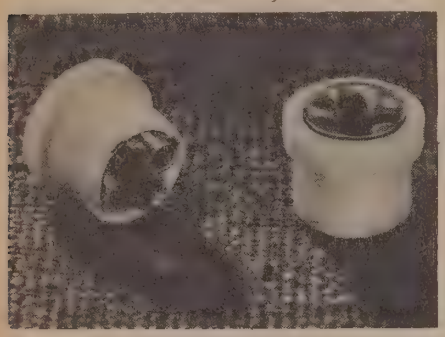
*Reg. Trademark, E. I. Du Pont de Nemours & Co

PRESS-FIT® TEFLON* CLOVERLEAF® RECEPTACLES

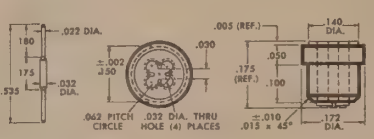
. . . providing the economies of dip-soldering with the inherent reliability of wired chassis construction

The "Press-Fit" Cloverleaf Receptacle provides economical yet uniformly perfect solder joints by means of dip soldering on a metal chassis. The unique Cloverleaf configuration permits insertion of four or more wire leads, plus an optional center post for mounting additional components after the dip-soldering operation. This design provides an encompassing hold on the leads, while providing for excellent capillary flow of solder. The Cloverleaf receptacle is a Sealectro "Press-Fit" design. Virgin Teflon insulation, precisely machined to "Press-Fit" into the chassis provides fast, positive and economical installation.

The reliability of dip solder joints made with the Cloverleaf receptacle, combined with the inherent dependability and repairability of metal chassis construction makes it ideal for use in high density, complex electronic instrumentation packaging, while the low cost of the terminal and its simple installation provides a new and outstanding assembly technique for premium quality radio and television manufacturing.



*FT-E-12



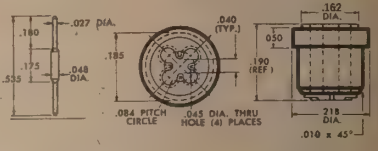
INSTALLATION DATA:

Break Installation Edge .136 ±.002 Dia. Hole with +.010 −.000 Dia. in .040 or Thicker Chassis. Use 82° C'Sink Under .040 Chassis. Teflon Should Protrude a Min. of .040 Beneath Chassis.

60° C'Sink to a .160

Insertion Tool: B-9-4

*FT-E-15



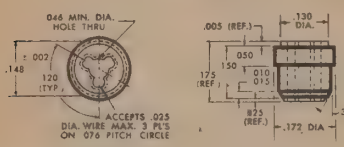
INSTALLATION DATA:

Break Installation Edge .172 ±.002 Dia. Hole with +.010 −.000 Dia. in .040 or Thicker Chassis. Use 82° C'Sink Under .040 Chassis. Teflon Should Protrude a Min. of .040 Beneath Chassis.

60° C'Sink to a .195

Insertion Tool: B-9-5

*FT-E-16



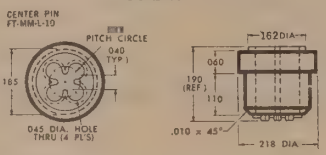
INSTALLATION DATA:

Break Installation Edge .136 ±.002 Dia. Hole with +.010 −.000 Dia. in .040 or Thicker Chassis. Use 82° C'Sink Under .040 Chassis. Teflon Should Protrude a Min. of .040 Beneath Chassis.

60° C'Sink to a .160

Insertion Tool: T-8800020 and B-8X-1

*FT-E-17



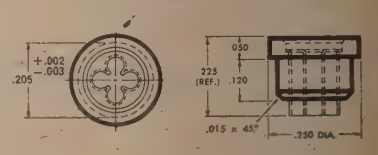
INSTALLATION DATA:

Break Installation Edge .172 ±.002 Dia. Hole with +.010 −.000 Dia. in .040 or Thicker Chassis. Use 82° C'Sink Under .040 Chassis. Teflon Should Protrude a Min. of .040 Beneath Chassis.

60° C'Sink to a .195

Insertion Tool: B-18-X3

*FT-E-19



INSTALLATION DATA:

Break Installation Edge .197 ±.002 Dia. Hole with +.010 −.000 Dia. in .040 or Thicker Chassis. Use 82° C'Sink Under .040 Chassis. Teflon Should Protrude a Min. of .040 Beneath Chassis.

60° C'Sink to a .230

Insertion Tool: B-22-X1

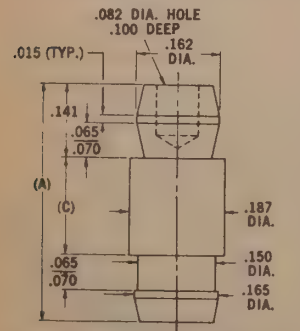
PRESS-FIT® TEFLON** SPACER/BUSHINGS

The Newest and Best Way to Mount P.C. Boards to Metal Panels and Chassis

Mount and insulate P.C. boards on metal chassis or panels without nuts, bolts, or lock washers. The new Press-Fit Teflon* Spacer/Bushings save assembly time while providing an economical and mechanically secure mounting device.

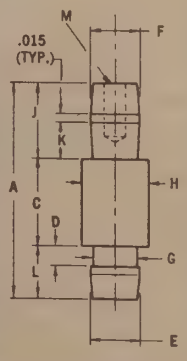
Machined from pure Teflon*, these new units are designed for various thickness P.C. boards and chassis or panels. Insertion in the chassis is a simple, one-step operation. The grommet end of each Spacer/Bushing is simply snapped in pre-drilled or punched metal chassis holes with entrance edge broken. Once inserted, they're in for good. P.C. boards require only mating holes for the opposite end of the Spacer/Bushing and may be snapped on and off of the mother board at will.





NOTE: Mtg. Hole .152 ±.002 Dia. in .062 ±.006 thick chassis.

*Part No.	A	C
227298	1.021	.750
227294	.958	.687
227290	.896	.625
227286	.833	.562
227282	.771	.500
227278	.708	.437
227274	.646	.375
227270	.583	.312
227266	.521	.250
227262	.458	.187
227258	.396	.125



*Part No.	A	C	D	E	F	G	H	J	K	L	M
228004	.782	.500	.045	.151	.151	.136	.187	.175	.098	.107	.082 Dia. x .130 deep
228006	.674	.375	.093	.165	.162	.150	.187	.141	.065	.050	.082 Dia. x .100 deep
228005	.657	.375	.045	.151	.151	.136	.187	.175	.098	.107	.082 Dia. x .100 deep
228007	.544	.250	.055	.165	.162	.150	.187	.177	.098	.047	.082 Dia. x .100 deep
228002	.490	.250	.030	.098	.100	.084	.125	.140	.068	.100	.041 Dia. x .100 deep
228000	.400	.160	.036	.092	.092	.084	.125	.140	.068	.100	.041 Dia. x .100 deep
228009	.400	.093	.065	.165	.162	.150	.187	.177	.098	.040	.082 Dia. x .100 deep
228001	.392	.160	.028	.092	.092	.084	.125	.140	.068	.100	.082 Dia. x .100 deep

* Available off-the-shelf from Authorized Local Sealectro Distributors (white only).

** Registered Trademark, E. I. DuPont deNemours & Co

© United Technical Publication

SEALECTRO PRESS-FIT® TEFLON* TERMINALS

*Reg. Trademark, E. I. Du Pont de Nemours & Co.

PRESS-FIT® Performance, whether measured in function, reliability, life or costs, cannot exceed the performance parameters of the components involved in the equipment. This basic fact was recognized by Sealectro in 1952 and led to the design, development, and introduction of the Teflon insulated "Press-Fit" terminal as a superior performance component, providing greater reliability, better electrical connections, and improved cost factors on the production line. These outstanding features have established Sealectro as the leading supplier of Teflon insulated terminals throughout the world.

The units described in this catalog are available for the off-the-shelf delivery from your local authorized Sealectro distributor to provide you with the fastest possible delivery and shortest lead time requiremen.s. If additional information or terminal configurations other than those listed are required, Sealectro's distributor, field representative, and factory personnel are at your service.

STAND-OFFS Subminiature

(Standard Plating P-47: .0003 Solder over .0001 Copper)

Fig.	Part No.	Part Number Description	Tool No.	Cap. mmf	V, RMS Nom. Rating	60 CPS Flash-over Sea Level	A	B	B_1	B_2	C	D	E Dia.	E_1	F Dia.	G Dia. +.002 −.000
1	003-1009	ST-SM-16	B3-1	0.60	1000	3000	.350	.210			.040	.100	.040		.125	.093
1	003-1000	ST-SM-1	B-8	0.45	1000	3000	.350	.210			.040	.160	.040		.172	.148
1	013-1001	ST-SM-1C2	B-8	0.50	1000	3000	.410	.210			.040	.160	.040		.172	.148
3	003-2000	ST-MM-10-TUR	B3-2C	0.40	1000	3000	.310	.170	.020	.060	.040	.100	.030	.060	.125	.093
3	003-2003	ST-SM-16-TUR	B3-2B	0.60	1000	3000	.350	.210	.020	.100	.040	.100	.040	.080	.125	.093
3	013-2001	ST-SM-1-TUR	B-8	0.40	1000	3000	.350	.210	.020	.100	.040	.100	.040	.080	.172	.148
3	013-2003	ST-SM-1-TUR-C2	B-8	0.50	1000	3000	.375	.210	.020	.100	.040	.125	.040	.080	.172	.148
3	013-2004	ST-SM-1-TUR-C4	B-8	0.40	1000	3000	.360	.210	.020	.100	.040	.110	.040	.080	.172	.148
3	013-2007	ST-SM-19-TUR-C2	B-8	0.55	1000	3000	.500	.210	.020	.100	.040	.250	.040	.080	.172	.148
3	013-2011	ST-SM-22-TUR	B-8	0.50	1700	4500	.428	.210	.020	.100	.093	.125	.040	.080	.172	.148
3	013-2016	ST-SM-25-TUR	B8-A	0.50	1000	3000	.334	.154	.020	.046	.040	.140	.046	.093	.172	.148
3	013-2019	ST-SM-29-TUR	B8-A	0.50	1000	3000	.455	.250	.020	.093	.040	.165	.040	.093	.172	.148
3	013-2020	ST-SM-29-TUR-C2	B8-A	0.60	1000	3000	.540	.250	.020	.093	.040	.250	.040	.093	.172	.148
3	013-2009	ST-SM-21-TUR	B-18	0.40	1000	3000	.375	.210	.020	.100	.040	.125	.040	.080	.218	185
6	013-2028	ST-SM-47-TUR-C2	B-8	0.40	1000	3000	.350	.210	.020	.120	.040	.100	.040	.080	.172	.148

51	004-1007	RST-SM-16	B3-2X	0.40	1000	3000	.350	.210			.040	.100	.040		.125	.093
51	014-1000	RST-SM-1	B8-X-1	0.40	1200	3500	.350	.210			.040	.100	.040		.172	.148
51	014-1001	RST-SM-1B2	B8-G	0.40	1200	3500	.330	.210			.020	.100	.040		.172	.148
54	004-2000	RST-MM-10-TUR	B1-2	0.40	500	2000	.310	.170	.020	.060	.040	.100	.030	.060	.125	.093
54	014-2001	RST-SM-1-TUR	B8-X-1	0.40	1200	3500	.350	.210	.020	.100	.040	.100	.040	.080	.172	.148
54	014-2009	RST-SM-25-TUR-C4	B8-X-1	0.40	1500	4000	.295	.156	.020	.046	.040	.100	.046	.093	.172	.148
54	014-2015	RST-SM-38-TUR	B10	0.40	1500	4000	.405	.210	.020	.100	.040	.155	.040	.080	.188	.171
54	014-2007	RST-SM-21-TUR	B18	0.30	1700	4500	.375	.210	.020	.100	.040	.125	.040	.080	.218	.185
55	014-2011	RST-SM-31-TUR	B8-X-1	0.50	1700	4500	.455	.227	.020	.187	.040	.187	.040	.080	.172	.148

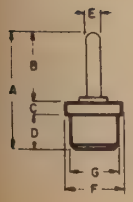


Fig. 1

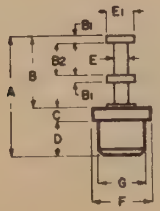


Fig. 3

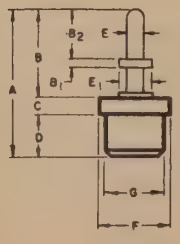


Fig. 6

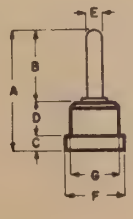


Fig. 51

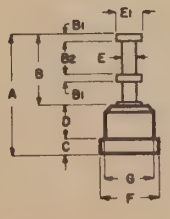


Fig. 54

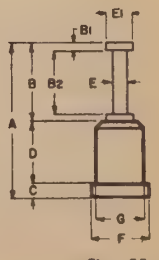


Fig. 55

© United Technical Publications

SEALECTRO PRESS-FIT® TEFLON*TERMINALS

*Reg. Trademark, E. I. Du Pont de Nemours & Co.

STAND-OFFS Miniature

(Standard Plating P-60: .0003 Silver over Copper Flash)

Fig.	Part No.	Part Number Description	Tool No.	Cap. mmf	V, RMS Nom. Rating	60 CPS Flash-over Sea Level	A	B	B_1	B_2	C	D	E Dia.	E_1	F Dia.	G Dia. +.002 −.000	J Dia.	K	K_1
101	013-2046	ST-250	B12	0.30	2500	6000	.431	.156	.020	.046	.125	.150	.046	.093	.187	.165			
101	013-2058	ST-1000	B13	0.20	2800	6700	.493	.156	.020	.046	.187	.150	.046	.093	.187	.165			
101	013-2060	ST-1000L2	B13	0.30	2800	6700	.584	.250	.020	.093	.187	.150	.040	.093	.187	.165			
101	013-2051	ST-250L4	B12-2	0.60	2000	5000	.556	.281	.031	.093	.125	.150	.062	.125	.187	.171			
105	013-3005	ST-250SL	B11	0.70	2000	5000	.478	.203			.125	.150	.148		.187	.171	.078		.156
105	013-2058	ST-1000SL	B11	0.70	2300	5600	.540	.203			.187	.150	.148		.187	.171	.078		.156
105	013-3013	ST-1500SL	B11	0.45	2700	6500	.603	.203			.250	.150	.148		.187	.171	.078		.156
105	013-3016	ST-2000SL	B11	0.30	4200	9500	.753	.203			.400	.150	.148		.187	.171	.078		.156
151	014-2020	RST-1	B18-1B	0.40	3000	7000	.487	.154	.020	.046	.046	.287	.046	.093	.218	.185			
151	014-2021	RST-1L2	B18-1B	0.20	3000	7000	.583	.250	.020	.093	.046	.287	.046	.093	.218	.185			
203	015-2002	DST-1000	B13	0.20	2500	6000	.819	.210	.020	.100	.187	.212	.040	.080	.187	.171			
203	025-2003	DST-1015	B20	0.20	2700	6500	.819	.210	.020	.100	.187	.212	.040	.080	.218	.187			

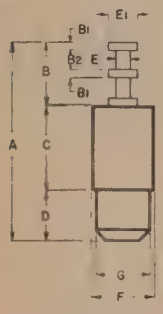


Fig. 101

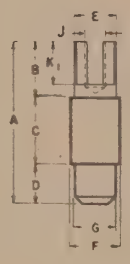


Fig. 105

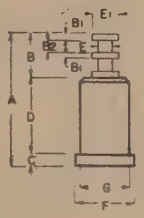


Fig. 151

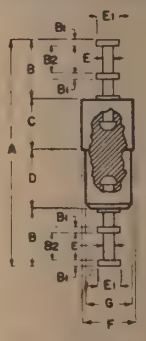


Fig. 203

FEED-THRUS Subminiature

(Standard Plating P-47: .0003 Solder over .0001 Copper)

Fig.	Part No.	Part Number Description	Tool No.	Cap. mmf	V, RMS Nom. Rating	60 CPS Flash-over Sea Level	A	B	B_1	B_2	C	D	E	E_1	F Dia.	G Dia. +.002 −.000	J Dia.	K	K_1
302	001-2013	FT-MM-5-TUR	B0	0.70	400	1800	.510	.100	.020	.060	.040	.100	.040	.060	.093	.075			
304	001-6021	FT-MM-7	B0-1	0.70	400	1800	.588	.125			.040	.100	.030	.060	.093	.075	.040		.080
351	001-1007	FT-SM-16	B3-1	0.75	500	2000	.515	.210			.040	.100	.040		.125	.093			
351	011-1001	FT-SM-022	B8-A	0.65	1000	3000	.630	.210			.040	.170	.040		.172	.148			
351	011-1004	FT-SM-1	B8-16	0.50	1000	3000	.515	.210			.040	.100	.040		.172	.148			
351	011-1008	FT-SM-1L2	B8-16	0.50	1000	3000	.443	.210			.040	.100	.040		.172	.148			
351	011-4021	FT-SM-14	B8-16	0.50	1000	3000	.375	.125			.040	.100	.040		.172	.148			
351	011-1038	FT-SM-19	B8-16	0.60	1000	3000	.535	.210			.040	.160	.040		.172	.148			
360	001-2004	FT-SM-16-TUR	B-3-2B	0.70	500	2000	.500	.210	.020	.100	.040	.100	.040	.080	.125	.093			
360	011-2004	FT-SM-1-TUR	B8	0.50	1000	3000	.500	.210	.020	.100	.040	.100	.040	.080	.172	.148			
360	011-2007	FT-SM-1-TUR-C4	B8	0.50	1000	3000	.500	.210	.020	.100	.040	.165	.040	.080	.172	.148			
360	011-2010	FT-SM-1-TUR-L2	B8	0.50	1000	3000	.438	.210	.020	.100	.040	.100	.040	.080	.172	.148			
361	011-2000	FT-SM-025-TUR	B8	0.65	1000	3000	.609	.210	.020	.100	.040	.165	.040	.080	.172	.148			
361	011-2013	FT-SM-2-TUR	B8	0.70	1000	3000	.531	.210	.020	.100	.040	.100	.040	.080	.172	.148			
361	011-2014	FT-SM-2-TUR-C2	B8	0.70	1000	3000	.531	.210	.020	.100	.040	.125	.040	.080	.172	.148			
361	011-2023	FT-SM-22-TUR	B9	0.65	1200	3500	.609	.210	.020	.100	.093	.125	.040	.080	.172	.148			
361	011-2024	FT-SM-22-TUR-C2	B9	0.65	1200	3500	.609	.210	.020	.100	.093	.125	.040	.080	.172	.148			
361	011-2022	FT-SM-21-TUR	B18	0.65	1200	3500	.531	.210	.020	.100	.040	.125	.040	.080	.218	.185			

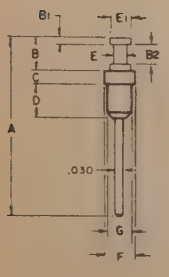


Fig. 302

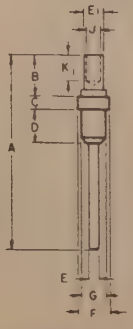


Fig. 304

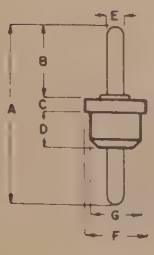


Fig. 351

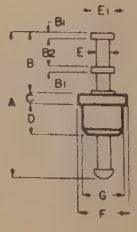


Fig. 360

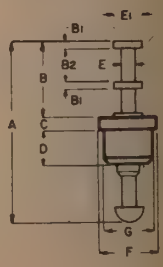


Fig. 361

© United Technical Publication

SEALECTRO PRESS-FIT® TEFLON* TERMINALS

*Reg. Trademark, E. I. Du Pont de Nemours & Co.

FEED-THRUS Subminiature (Cont.)

(Standard Plating P-47: .0003 Solder over .0001 Copper)

Fig.	Part No.	Part Number Description	Tool No.	Cap. mmf	V, RMS Nom. Rating	60 CPS Flash-over Sea Level	A	B	B_1	B_2	C	D	E	E_1	F Dia.	G Dia. +.002 −.000	J
364	011-2025	FT-SM-32-TUR	B8	0.50	1000	3000	.350	.125	.020	.095	.040	.100	.040	.080	.172	.148	
501	001-6033	FT-SM-59	B3-1	0.40	500	2000	.225	.125			.040	.060	.040		.125	.093	
510	011-6033	FT-SM-74	B9-1	0.75	1000	3000	.351	.133	.020	.093	.093	.125	.082	.125	.172	.148	.062
511	011-6022	FT-SM-71	B8-A	0.50	1000	3000	.303	.133	.020	.093	.040	.100	.060	.090	.172	.148	.030
452	012-1000	RFT-SM-1	B8	0.50	1000	3000	.515	.210			.040	.100	.040		.172	.148	
454	012-2000	RFT-SM-1-TUR		0.50	1000	3000	.500	.210	.020	.100	.040	.100	.040	.080	.172	.148	

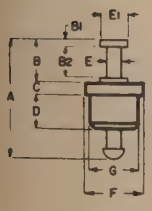


Fig. 364

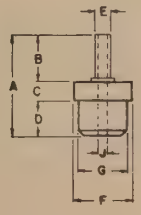


Fig. 501

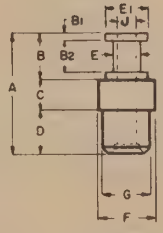


Fig. 510

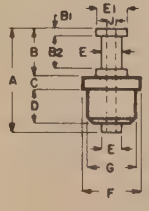


Fig. 511

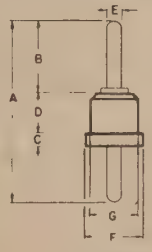


Fig. 452

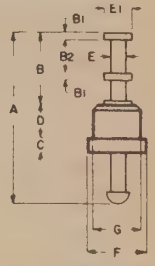


Fig. 454

FEED-THRUS Miniature

(Standard Plating P-60: .0003 Silver over Copper Flash)

Fig.	Part No.	Part Number Description	Tool No.	Cap. mmf	V, RMS Nom. Rating	60 CPS Flash-over Sea Level	A	B	B_1	B_2	C	D	E	E_1	F Dia.	G Dia. +.002 −.000	J	K	K_1
607	011-2062	FT-1000	B13	0.70	2200	5500	.740	.125	.031	.062	.187	.212	.050	.093	.187	.171			
607	011-2067	FT-1100	B12-3	0.70	2500	6000	.740	.125	.031	.062	.250	.150	.050	.093	.187	.171			
607	011-2072	FT-1500	B12-3	0.70	3000	7000	.865	.125	.031	.062	.250	.275	.050	.093	.187	.171			
608	011-2061	FT-995-DTUR	B9-3	0.85	1500	4000	.836	.250	.020	.093	.125	.230	.050	.093	.172	.148			
608	011-2064	FT-1000-DTUR	B13-3B	0.80	2000	5000	.836	.250	.020	.093	.187	.212	.050	.093	.187	.171			
609	011-2057	FT-950-DTUR	B12	1.00	1500	4000	.828	.281	.031	.093	.125	.200	.062	.125	.187	.171			
610	021-2010	FT-1550-DTUR	B24-A	1.25	3000	7000	1.187	.281	.031	.093	.250	.375	.062	.125	.250	.218			
615	011-3014	FT-1000SL	B11	0.80	2000	5000	.821	.203			.187	.212	.148		.187	.171	.078		
615	011-2072	FT-1500SL	B13-X-3	0.90	2500	6000	.947	.203			.250	.275	.148		.187	.171	.078		
616	011-3028	FT-900SL	B11	0.90	1000	3000	.593	.203			.150	.100	.148		.187	.171	.078		.156



Fig. 607

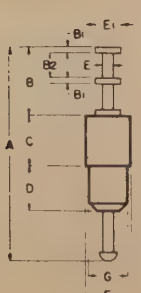


Fig. 608

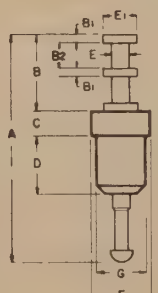


Fig. 609

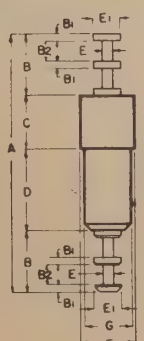


Fig. 610

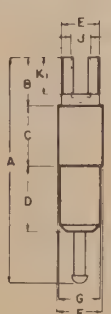


Fig. 615

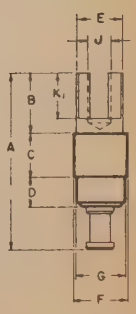


Fig. 616

© United Technical Publications

SEALECTRO PRESS-FIT® TEFLON* TERMINALS

*Reg. Trademark, E. I. Du Pont de Nemours & Co

TEST POINT JACKS

(Standard Plating P-20: .000005 Gold over .0003 Silver)

Fig.	Part No.	Part Number Desc.	Tool No.	Cap. mmf	V,RMS Nom. Rating	60 CPS Flash-over Sea Level	Ref. A	B	B_1	B_2	C	D	E Dia.	E_1 Dia.	F Dia.	G +.002 −.000	J Probe Dia.	J_1 Probe Lngth.	K	K_1
701	016-2008	SKT-14	S5	0.35	1000	3000	.345	.120	.023	.077	.046	.179	.040	.060	.172	.148	.040	.140		
701	016-2004	SKT-12	S7	0.70	1000	3000	.375	.060	.010	.040	.046	.269	.046	.078	.218	.170	.090	.250		
701	016-2025	SKT-2BC	S2	0.70	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.218	.185	.090	.195		
701	016-2000	SKT-5BC	S2	0.60	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.218	.185	.080	.195		
701	016-2003	SKT-10	S1	0.70	1200	3500	.640	.187	.037	.104	.050	.400	.054	.074	.218	.185	.080	.287		
701	016-2015	SKT-37C1	S12	0.55	1000	3000	.340	.120	.023	.077	.046	.174	.054	.074	.218	.185	.090	.140		
701	016-2016	SKT-41	S2	0.55	1200	3500	.467	.120	.035	.047	.046	.301	.054	.074	.218	.185	.080	.225		
701	026-2000	SKT-3BC	S2	0.60	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.250	.204	.080	.195		
703	016-8000	SKT-1	S31	0.55	1200	3500	.687	.354			.046	.287	.115		.218	.185	.050	.250	.140	.042
713	016-6600	SKT-400	S17	0.50	1000	3000	.359	.140			.065	.154			.187	.148	.040	.125		
732	026-4005	SKT-103PC		0.50	1200	3500	.400	.140	.125			.378	.050	.080	.218	.187	.080	.250		
715	016-8010	SKT-0804	S38				.637	.412			.050	.175	.075		.218	.185	.080	.312	.116	.055

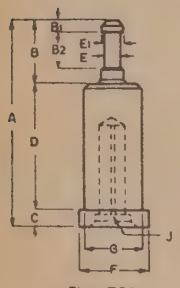


Fig. 701

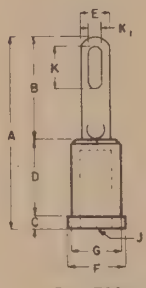


Fig. 703

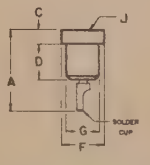


Fig. 713

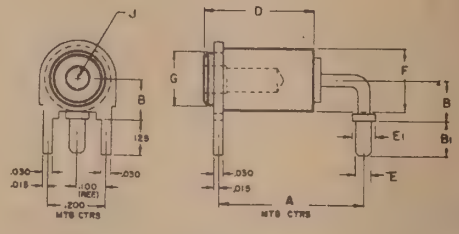


Fig. 732

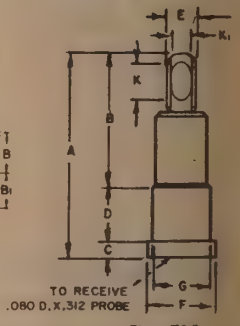


Fig. 715

PROBES

(Standard Plating P-20: .000005 Gold over .0003 Silver)

Fig.	Part No.	Part Number Desc.	Tool No.	Cap. mmf	V,RMS Nom. Rating	60 CPS Flash-over Sea Level	Ref. A	B	B_1	B_2	C	D	E Dia.	E_1 Dia.	F Dia.	G +.002 −.000	J Probe Dia.	J_1 Probe Lngth.	K	K_1
801	011-4034	FT-M-9	B18-1B	1.0	1000	3000	1.937	.250			.046	.165	.050		.172	.148				
804	011-4029	FT-M-7	B18-1B	0.80	1000	3000	.739	.281			.046	.287	.081		.218	.185				
804	011-4031	FT-M-8	B18-1B	0.90	1000	3000	.562	.250			.046	.141	.050		.218	.185				
808	011-4013	PR-800	B-23A	0.70	1200	3500	.559	.187			.065	.169	080		.250	.185				
809	021-4002	PR-300					.645	.270			.375		.080		.218		.062	.218		

*Plating P-90: .0003 Nickel over Copper Flash.

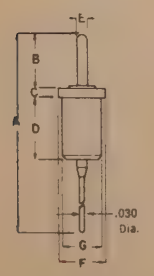


Fig. 801

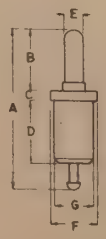


Fig. 804

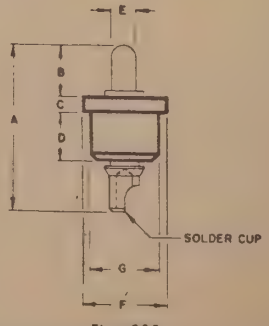


Fig. 808

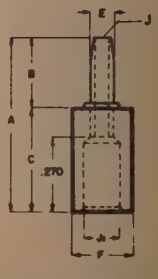


Fig. 809

© United Technical Publications

SEALECTRO PRESS-FIT® TEFLON* TERMINALS

*Reg. Trademark, E. I. Du Pont de Nemours & Co.

NEW! For chamfered or non-chamfered holes

Rivet-Loc™ patented

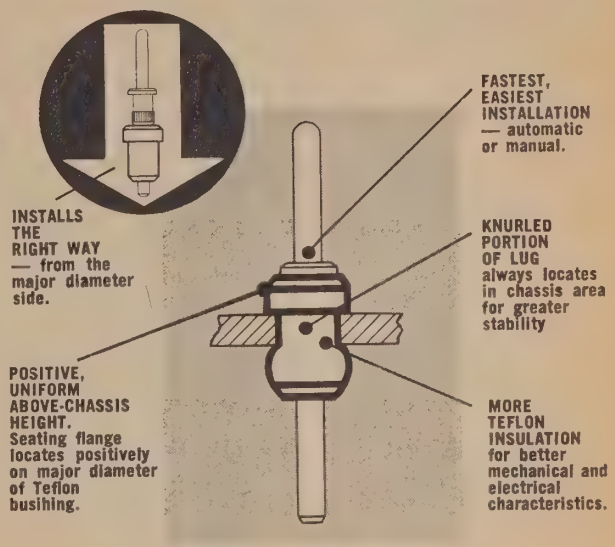
TEFLON INSULATED TERMINALS

Rivet-Loc terminals overcome all the inherent shortcomings of the older semi-assembled design which assembles by pushing the metal lug into the minor diameter of the Teflon bushing. Whereas the original semi-assembled design depended upon the mass of the metal lug displacing the Teflon, the Rivet-Loc employs a simple **Riveting** and **Locking** of the Teflon bushing assuring a better finished installation.

Rivet-Loc is installed in one simple, smooth operation with all insertion forces working together, instead of against each other as in the case of the previous semi-assembled design. Thus, the final seating and locking of the terminal in the chassis is uniform, even with wide parameters of tool settings.

Proved in millions of installations, Rivet-Loc not only offers far superior mechanical characteristics, it also has proved more dependable electrically. The smaller metal lug mass in proportion to the Teflon bushing provides far better dielectric strength. This extra protection of pure virgin Teflon enhances the dependability and performance of your equipment.

The numbers listed here are currently considered standard. However, new numbers are being added constantly. Virtually any terminal configuration or requirement can be met with the Rivet-Loc concept. Submit your requirements to Sealectro.



FEED-THRUS Rivet-Loc™ patented

Fig.	Part No.	Insertion Tool Number	A	B	C	D	E Dia.	F Dia.	±.002 G Dia.	±.015 R	Insertion Hole ±.002
1	007-6000	2R-36	.387	.140	.040	.125	.040	.130	.107	.045	.109
1	007-6010	2R-36	.434	.140	.040	.172	.040	.130	.107	.075	.109
2	007-6011	2R-38	.515	.210	.040	.125	.040	.125	.084	.045	.086
2	007-6050	2R-39	.656	.235	.040	.125	.030	.135	.113	.040	.117
2	007-6005	2R-40	.687	.265	.075	.160	.050	.172	.134	.045	.136
2	007-6006	2R-41	.887	.465	.075	.160	.050	.172	.134	.045	.136
2	007-6007	2R-41	.730	.465	.075	.160	.050	.172	.134	.045	.136
2	007-6016	2R-42	.570	.210	.040	.150	.040	.172	.134	.045	.136
2	007-6017	2R-42	.515	.210	.040	.180	.040	.172	.134	.075	.136
3	007-6012	2R-43	.500	.210	.040	.150	.040	.172	.134	.045	.136
3	007-6013	2R-43	.530	.210	.040	.180	.040	.172	.134	.075	.136
3	007-6014	2R-43	.458	.210	.040	.150	.040	.172	.134	.045	.136

Plating: Bright electro-tin a smooth finish featuring extraordinary soldering characteristics and shelf life is standard. Other finishes including all MIL-Spec numbers, are available upon special order.

*T. M., E. I. Dupont DeNemours & Co.

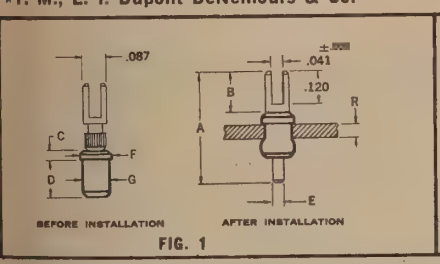


FIG. 1

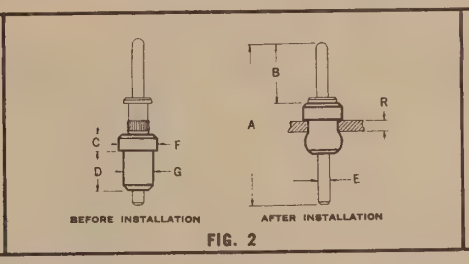


FIG. 2

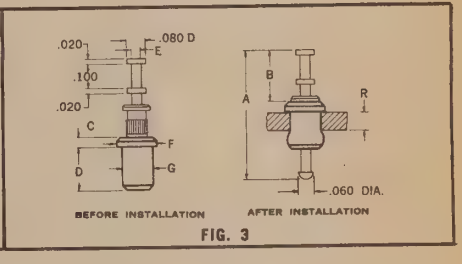


FIG. 3

STAND-OFFS Rivet-Loc™

Fig.	Part No.	Insertion Tool Number	A	B	C	D	E Dia.	F Dia.	±.002 G Dia.	±.015 R	Insertion Hole ±.002
4	003-6000	2R-45	.275	.140	.040	.125	.087	.130	.107	.075	.109
4	003-6010	2R-45	.322	.140	.040	.172	.087	.130	.107	.075	.109
5	003-6011	2R-47	.345	.210	.040	.125	.040	.125	.084	.045	.086
5	003-6016	2R-46	.370	.210	.040	.150	.040	.172	.134	.045	.136
5	003-6017	2R-46	.405	.210	.040	.180	.040	.172	.134	.075	.136
6	003-6012	2R-48	.370	.210	.040	.150	.040	.172	.134	.045	.136
6	003-6013	2R-48	.400	.210	.040	.180	.040	.172	.134	.075	.136

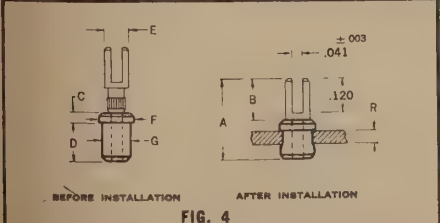


FIG. 4

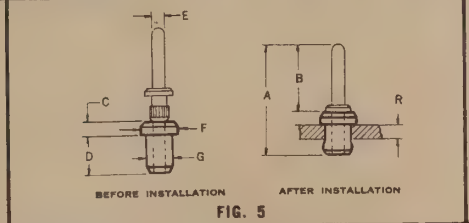


FIG. 5

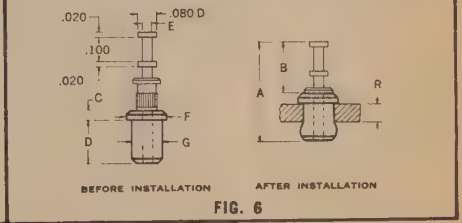


FIG. 6

© United Technical Publications

SEALECTRO PRESS-FIT® TEFLON* TERMINALS

*Reg. Trademark, E. 1. Du Pont de Nemours & Co.

TEFLON BUSHINGS

SINGLE SHOULDER

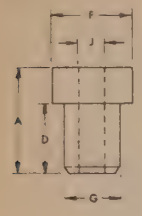


FIGURE A

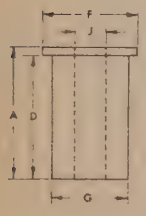


FIGURE B

Fig.	Description	Part No.	G	A	D	J	F	Fig.	Description	Part No.	G	A	D	J	F
A	B-1555	019-0157	.045	.106	.075	.025	.080	A	B-1514	019-0116	.172	.200	.125	.071	.200
A	B-1519	019-0121	.067	.120	.080	.031	.093	A	B-1487	019-0089	.175	.312	.250	.093	.210
A	B-1516	019-0118	.075	.140	.100	.042	.093	A	B-1445	019-0133	.179	.140	.100	.085	.200
A	B-1520	019-0122	.075	.140	.100	.025	.095	A	B-1423	019-0023	.185	.333	.287	.041	.218
A	B-1440	019-0040	.093	.140	.100	.040	.125	A	B-1434	019-0033	.185	.380	.287	.050	.218
A	B-1440-1	019-0041	.093	.140	.100	.035	.125	A	B-1447	019-0046	.185	.225	.185	.120	.218
A	B-1441	019-0042	.093	.100	.060	.037	.125	A	B-1447-1	019-0047	.185	.130	.090	.120	.218
A	B-1464	019-0066	.093	.100	.080	.038	.125	A	B-1451-1	019-0053	.185	.327	.140	.128	.218
A	B-1553	019-0155	.093	.100	.080	.048	.125	A	B-1469	019-0072	.185	.303	.210	.046	.215
A	B-1576	019-0178	.095	.060	.040	.038	.125	A	B-1473	019-0076	.185	.450	.400	.150	.218
A	B-1461	019-0063	.109	.085	.059	.032	.128	A	B-1486	019-0088	.185	.333	.287	.093	.218
A	B-1422	019-0022	.120	.103	.053	.040	.130	A	B-1490	019-0092	.185	.330	.250	.074	.218
A	B-1410	019-0009	.125	.060	.040	.030	.150	A	B-1598	019-0227	.188	.170	.130	.080	.218
A	B-1448	019-0049	.125	.120	.095	.080	.145	A	B-1590	019-0192	.188	.130	.100	.080	.218
A	B-1477	019-0080	.136	.140	.100	.060	.169	A	B-1442	019-0043	.200	.195	.155	.125	.250
A	B-1460	019-0062	.140	.100	.080	.089	.160	A	B-1479	019-0228	.203	.140	.100	.060	.226
A	B-1414	019-0014	.148	.140	.100	.060	.172	A	B-1428	019-0028	.214	.437	.375	.090	.250
A	B-1435	019-0034	.148	.140	.100	.040	.172	A	B-1412	019-0012	.241	.150	.110	.187	.281
A	B-1439	019-0039	.148	.160	.120	.073	.172	A	B-1512	019-0114	.245	.250	.157	.156	.308
A	B-1455	019-0057	.148	.165	.125	.084	.172	A	B-1480	019-0082	.250	.140	.100	.060	.273
A	B-1465-1	019-0067	.148	.140	.100	.060	.220	A	B-1552	019-0154	.265	.312	.250	.136	.312
A	B-1465-2	019-0068	.148	.140	.100	.090	.220	A	B-1483	019-0085	.287	.140	.100	.060	.310
A	B-1475	019-0078	.148	.140	.100	.073	.172	A	B-1549	019-0151	.395	.170	.130	.312	.437
A	B-1485	019-0087	.148	.140	.100	.065	.172	B	B-1563	019-0165	.120	.120	.060	.060	.180
A	B-1498	019-0100	.148	.140	.100	.030	.172	B	B-1578	019-0180	.120	.118	.058	.050	.180
A	B-1508	019-0110	.148	.150	.125	.024	.172	B	B-1575	019-0177	.123	.124	.093	.088	.281
A	B-1543	019-0145	.148	.140	.100	.052	.172	B	B-1567	019-0169	.150	.221	.175	.118	.250
A	B-1539	019-0141	.148	.220	.125	.052	.172	B	B-1597	019-0226	.150	.091	.045	.118	.250
A	B-1573	019-0175	.148	.170	.100	.059	.172	B	B-1606	019-0231	.184	.045	.025	.150	.194
A	B-1404	019-0003	.157	.093	.078	.089	.172	B	B-1585	019-0187	.203	.062	.031	.144	.320
A	B-1405	019-0004	.157	.074	.059	.089	.172	B	B-1506	019-0108	.242	.093	.046	.157	.375
A	B-1478	019-0081	.165	.140	.100	.060	.186	B	B-1556	019-0158	.247	.178	.128	.140	.500
A	B-1456	019-0058	.171	.160	.110	.063	.218	B	B-1429	019-0029	.296	.500	.469	.120	.375
A	B-1474	019-0077	.172	.200	.125	.089	.200	B	B-1430	019-0030	.296	.500	.469	.210	.375
A	B-1489	019-0091	.172	.140	.100	.051	.195	B	B-1568	019-0170	.304	.045	.015	.204	.375

GROMMET TYPE

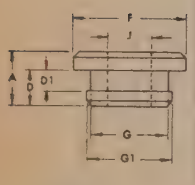


FIGURE C

Fig.	Description	Part No.	G	A	D	D1	G1	F	J
C	B-1453	019-0055	.103	.080	.040	.017	.115	.145	.067
C	B-1449	019-0050	.123	.070	.040	.020	.143	.187	.052
C	B-1401	019-0000	.154	.104	.054	.025	.164	.218	.085
C	B-1403	019-0002	.154	.104	.069	.040	.164	.218	.120
C	B-1406	019-0005	.154	.094	.044	.015	.164	.218	.099
C	B-1407	019-0006	.154	.104	.069	.040	.164	.218	.085
C	B-1408	019-0007	.154	.094	.044	.015	.164	.218	.085
C	B-1413	019-0013	.154	.094	.044	.015	.164	.218	.120
C	B-1416	019-0016	.154	.104	.069	.040	.164	.218	.099
C	B-1418	019-0018	.154	.085	.035	.015	.164	.195	.085
C	B-1419	019-0019	.154	.134	.099	.070	.164	.218	.120
C	B-1420	019-0020	.154	.104	.054	.025	.164	.218	.099
C	B-1421	019-0021	.154	.104	.069	.040	.164	.218	.120
C	B-1424	019-0024	.154	.094	.044	.025	.164	.195	.085
C	B-1432	019-0032	.154	.104	.054	.025	.164	.218	.120
C	B-1437	019-0036	.154	.125	.075	.060	.164	.218	.120
C	B-1463	019-0065	.154	.104	.054	.035	.164	.218	.099
C	B-1466	019-0069	.154	.140	.105	.075	.164	.218	.120
C	B-1472	019-0075	.154	.135	.085	.060	.164	.218	.085
C	B-1482	019-0084	.154	.104	.054	.035	.164	.218	.128
C	B-1462	019-0064	.168	.156	.106	.076	.178	.218	.089
C	B-1431	019-0031	.184	.104	.069	.040	.194	.248	.150
C	B-1467	019-0070	.190	.104	.054	.035	.200	.250	.157
C	B-1467-1	019-0140	.190	.104	.054	.035	.200	.250	.120
C	B-1436	019-0035	.199	.104	.069	.040	.210	.260	.128
C	B-1450	019-0051	.199	.190	.140	.120	.210	.230	.128
C	B-1459	019-0060	.204	.104	.069	.040	.214	.268	.170
C	B-1459-1	019-0061	.204	.104	.069	.040	.214	.268	.125
C	B-1545	019-0147	.204	.124	.089	.060	.214	.268	.099
C	B-1558	019-0160	.204	.124	.089	.060	.214	.268	.170

WASHER

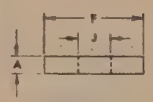


FIGURE J

Description	Part No.	F	A	J
B-1481	019-0083	.132	.031	.045
B-1515	019-0117	.132	.031	.045
B-1493	019-0095	.170	.125	.109
B-1497	019-0099	.187	.031	.062
B-1588	019-0190	.280	.125	.195
B-1600	019-0229	.280	.090	.195
B-1587	019-0189	.281	.062	.187
B-1594	019-0196	.437	.062	.250

SINGLE SHOULDER, NO HOLE

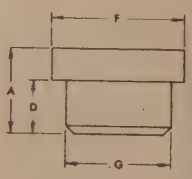


FIGURE E

Description	Part No.	G	A	D	F
B-1452	019-0054	.148	.125	.075	.172
B-1484	019-0086	.148	.193	.100	.172
B-1604	019-0230	.148	.190	.150	.172
B-1457	019-0059	.165	.275	.150	.197
B-1446	019-0045	.185	.330	.250	.218
B-1451	019-0052	.185	.327	.140	.218
B-1541	019-0143	.185	.672	.626	.218
B-1491	019-0093	.200	.160	.100	.250
B-1443	019-0044	.218	.140	.075	.250
B-1454	019-0056	.218	.240	.200	.250
B-1415	019-0015	.204	.317	.271	.250
B-1592	019-0194	.264	.140	.100	.312
B-1513	019-0115	.290	.155	.115	.323

SINGLE SHOULDER, COUNTER-SUNK HOLE

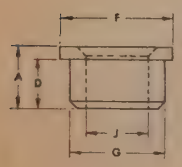


FIGURE D

Fig.	Description	Part No.	G	A	D	J	F
D	B-1409	019-0008	.148	.080	.060	.030	.172
D	B-1402	019-0001	.183	.250	.204	.140	.250
D	B-1447-2	019-0048	.185	.130	.090	.120	.218
D	B-1507	019-0109	.185	.116	.094	.120	.218
D	B-1522	019-0124	.185	.250	.204	.140	.250
D	B-1582	019-0184	.185	.053	.031	.120	.218
D	B-1565	019-0167	.185	.108	.083	.120	.218
D	B-1411	019-0010	.232	.265	.140	.088	.260
D	B-1433	019-0135	.232	.188	.093	.088	.260
D	B-1433-1	019-0142	.232	.188	.093	.117	.260
D	B-1560	019-0162	.232	.188	.120	.098	.262
D	B-1411-1	019-0011	.234	.265	.125	.093	.260

SINGLE SHOULDER, TAPERED HOLE

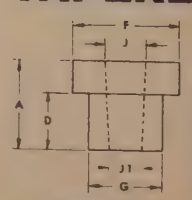


FIGURE F

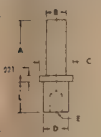
Description	Part No.	G	A	D	F	J	J1
B-1528	019-0130	.141	.167	.105	.203	.078	.062
B-1529	019-0131	.141	.200	.138	.203	.078	.062
B-1505	019-0107	.156	.153	.108	.200	.102	.064

© United Technical Publications

SEALECTRO PRESS-FIT® TEFLON* TERMINALS

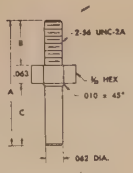
*Reg. Trademark, E. I. Du Pont de Nemours & Co.

SWAGE TYPE METAL LUGS SCREW TYPE



Part No.	L	A	B Dia.	C Dia.	±.002 D Dia.	E Dia. Deep
029-1003	.165	.173	.040	.093	.072	.046 x 1/16
029-1025	.135	.173	.040	.093	.072	.046 x 1/16
029-1002	.105	.173	.040	.093	.072	.046 x 1/16
029-1001	.075	.173	.040	.093	.072	.046 x 1/16
029-6019	.135	.173	.040	.125	.090	.063 x 1/16
029-6018	.105	.173	.040	.125	.090	.063 x 1/16
029-6017	.075	.173	.040	.125	.090	.063 x 1/16
029-6004	.165	.173	.040	.125	.090	.063 x 1/16
029-6016	.105	.218	.072	.125	.090	.063 x 1/16

Shown are but two typical types of metal lugs from Sealectro's standard line which includes hundreds of other screw, swedge, and knurled types. Write for complete listing.



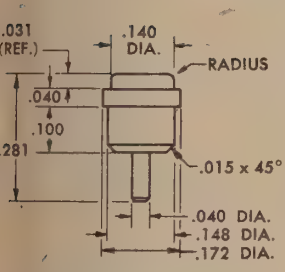
Part No.	A	B	C
029-5005	.375	.156	.156
029-5006	.437	.156	.218
029-5011	.437	.218	.156

MIL-T-55155 CROSS-REFERENCE

MIL Part No.	Sealectro Part No.	MIL Part No.	Sealectro Part No.	MIL Part No.	Sealectro Part No.
SE-12 x C01A	029-2018	SE-13 x C06A	029-2035	SE-15 x C07A	029-2048
SE-12 x C02A	029-2019			SE-15 x C08A	029-2049
SE-12 x C03A	029-2020	SE-14 x C01A	029-2036	SE-15 x C09A	029-2050
SE-12 x C04A	029-2021	SE-14 x C02A	029-2037	SE-16 x C01A	029-6006
SE-12 x C05A	029-2022	SE-14 x C03A	029-2038	SE-16 x C02A	029-6010
SE-12 x C06A	029-2023	SE-14 x C04A	029-2039	SE-16 x C03A	029-6011
SE-12 x C07A	029-2024	SE-14 x C05A	029-2040		
		SE-14 x C06A	029-2041		

MIL Part No.	Sealectro Part No.	MIL Part No.	Sealectro Part No.	MIL Part No.	Sealectro Part No.
SE-12 x C08A	029-2025	SE-15 x C01A	209-2042	SE-17 x C01A	029-6012
SE-12 x C09A	029-2026	SE-15 x C02A	029-2043	SE-17 x C02A	029-6013
SE-13 x C01A	029-2030	SE-15 x C03A	029-2044	SE-17 x C03A	029-6014
SE-13 x C02A	029-2031	SE-15 x C04A	029-2045	SE-23 x C01	029-2027
SE-13 x C03A	029-2032	SE-15 x C05A	029-2046	SE-23 x C02	029-2014
SE-13 x C04A	029-2033	SE-15 x C06A	029-2047	SE-23 x C03	029-2028
SE-13 x C05A	029-2034			SE-23 x C04	029-2029

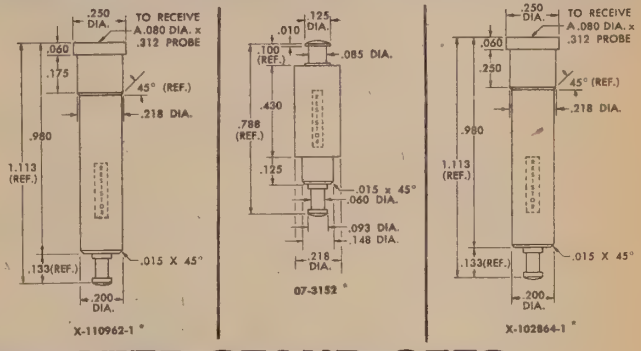
TEFLON*-INSULATED CONTACTS



In many electro-mechanical assemblies, reliable switch contactors are required as an integral part of the unit. Sealectro manufactures a wide assortment of Press-Fit terminal designs specifically for these applications. They are designed for fast, Press-Fit installation and provide an extremely reliable electrical contact assembly while offering all of the advantages of Teflon* insulation.

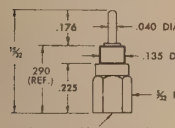
RESISTIVE-TYPE TERMINALS

AVAILABLE WITH ALL STANDARD E.I.A. ¼ WATT ±5% RESISTOR VALUES



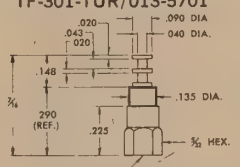
METAL BASE TEFLON* INSULATED STAND-OFFS

TF-300/013-5700



2–56 NC-2B THD. .125 DP. MIN WITH 82° C'SINK TO .125 D. AT ENTRANCE

TF-301-TUR/013-5701



#2–56NC-2B THD. .125 DP. MIN. WITH 82° C'SINK

TECHNICAL SPECIFICATIONS

MATERIAL:
Insulation: Teflon
Lug: Brass
Plating: Lug — Solder Finish, (40 to 70% Tin Content) Electroplated.
Base: Brass Cadmium with Chromate Coating.

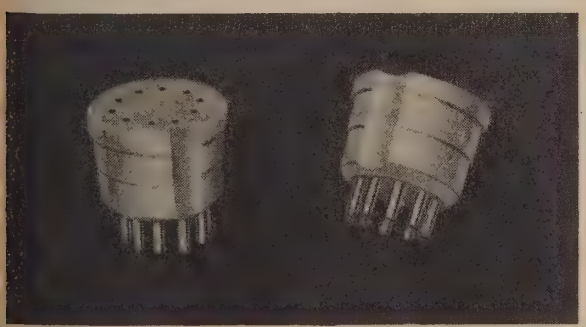
CURRENT RATING:
5.5 Amps. Continuous Duty.

TEMPERATURE RANGE:
—65°C to 200°C

COLOR CODING:
Available in Red, Blue, Yellow, Green, Brown, Orange, Gray, Violet, Black and White.

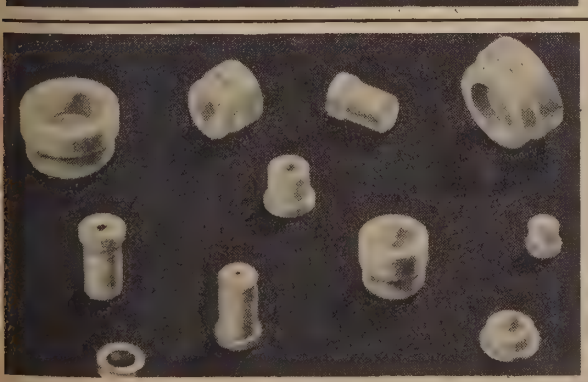
Sealectro maintains a complete line of metal based Teflon-insulated stand-offs to meet every application requirement. Two typical units are illustrated. Write for details on the complete Sealectro line.

TRANSISTORS AND IC HARDWARE



SOCKETS AND HOLDERS

Low cost, high precision sockets and holders for transistors and integrated circuit packages are now available with virgin Teflon bodies that Press-Fit into chassis. The Sealectro Series 60 Sockets permit you to plug-in and remove various TO-18, TO-5 can and I.C. packages at will. The precise contact design provides a positive mechanical grip while making electrical contact with minimum resistance. Sealectro offers a complete off-the-shelf line. Write for catalog.



BUSHINGS AND PADS

Included in the Press-Fit line of Transistor and I.C. Hardware is a complete selection of Teflon bushings and pads to fit virtually every transistor and I.C. package. Press-Fit or grommet style bushings which provide support for transistor can or thru chassis hole for leads are offered. Pads to relieve strain on glass seals are also available. They are designed for use where semiconductor units are wired directly into the circuit and to insulate it from the mounting surface. Write for complete catalogs.

© United Technical Publications

SEALECTRO CON-HEX®

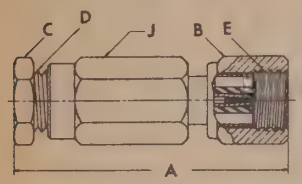
SUB-MINIATURE R. F. CONNECTORS

PLATING: 0.0001 Gold ove
0.0001 Copper.

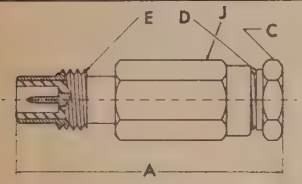
MATING CONNECTORS: All Screw On (Snap-On) plugs will mat with all Screw-On (Snap-On jacks & receptacles of the sam resistance rating.

U. S. Pat. No. 2,937,360

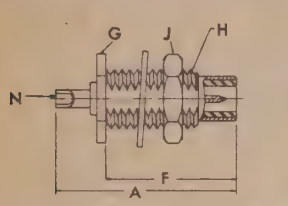
See listing on following page for typical cables.



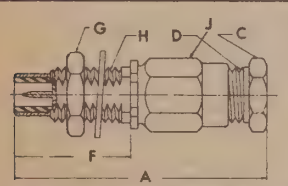
	50 OHM	75 OHM
	50-007-0000	50-107-0000
A	7/8 approx.	13/16 approx.
B	15/64 HEX	11/32 HEX
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40 UNS-2A
E	#10-32, UNF-2B	#5/16-32, UNEF-2B
J	15/64 HEX	5/16 HEX



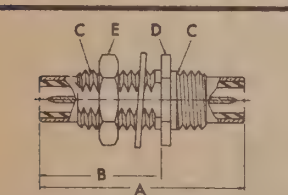
	50 OHM	75 OHM
	50-008-0000	50-108-0000
A	27/32 approx.	51/64 approx.
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	15/64 HEX	5/16 HEX



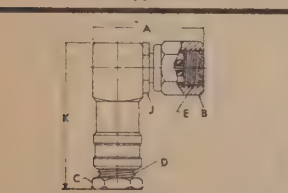
	50 OHM	75 OHM
	50-043-0000	50-143-0000
A	19/32	19/32
F	.426	.426
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	1/4 HEX	3/8 HEX
N	.060 O.D. x .040 I.D. x .078 Deep	.060 O.D. x .040 I.D. x .078 Deep



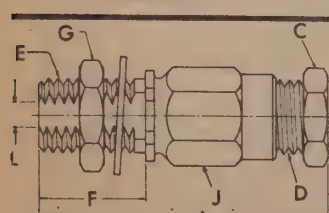
	50 OHM	75 OHM
	50-010-0000	50-110-0000
A	7/8 approx.	7/8 approx.
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
F	.425	.425
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	15/64 HEX	11/32 HEX



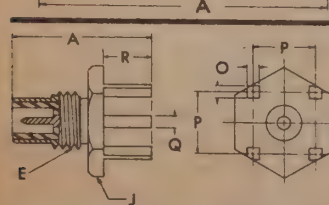
	50 OHM	75 OHM
	50-075-0000	50-175-0000
A	.671	.671
B	.397	.397
C	#10-32, UNF-2A	#5/16-32, UNEF-2A
D	1/4 HEX	3/8 HEX
E	1/4 HEX	3/8 HEX



	50 OHM	75 OHM
	50-011-0000	50-111-0000
A	39/64 approx.	23/32 approx.
B	15/64 HEX	11/32 HEX
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
E	#10-32, UNF-2B	#5/16-32, UNEF-2B
J	15/64 HEX	11/32 HEX
K	3/4 approx.	27/32 approx.

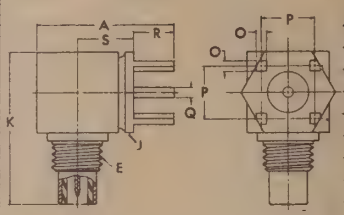


	50 OHM	75 OHM
	55-013-0000	50-113-0000
A	49/64 approx.	3/4 approx.
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
F	.277	.277
G	1/4 HEX	3/8 HEX
J	15/64 HEX	11/32 HEX
L	.067D.	.111D.

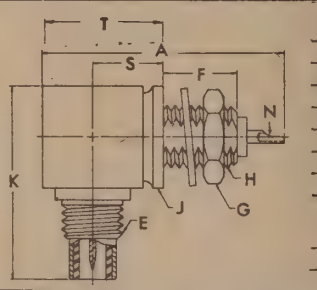


	50 OHM	75 OHM
	50-051-0000	50-151-0000
A	.448	.448
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	5/16 HEX	3/8 HEX
O	.040 (Typ.)	.040 (Typ.)
P	.200	.200
Q	.038D.	.038D.
R	.155	.155

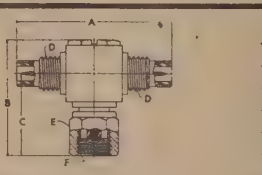
See listing on following page for typical cables.



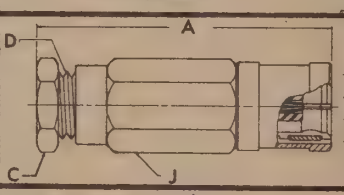
	50 OHM	75 OHM
	50-053-0000	50-153-0000
A	17/32 approx.	19/32 approx.
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	5/16 HEX	3/8 HEX
K	19/32	21/32
O	.040 (Typ.)	.040 (Typ.)
P	.200	.200
Q	.038D	.038D
R	.155	.155
S	3/8	13/32



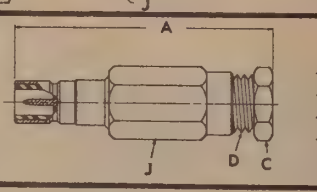
	50 OHM	75 OHM
	50-047-0000	50-147-0000
A	3/4 approx.	13/16 approx.
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
F	.228	.228
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	5/16 HEX	3/8 HEX
K	19/32	21/32
N	.038 O.D. x .025 I.D. x .078 Deep	.038 O.D. x .025 I.D. x .078 Deep
S	.215	.247
T	3/8	.435



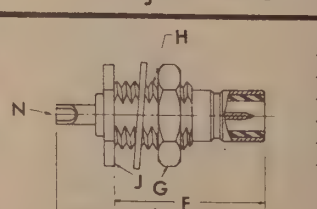
	50 OHM	75 OHM
	50-085-0000	50-185-0000
A	.860	.923
B	21/32 approx.	23/32 approx.
C	15/32 approx.	1/2 approx.
D	#10-32, UNF-2A	#5/16-32, UNEF-2A
E	15/64 HEX	11/32 HEX
F	#10-32, UNF-2B	#5/16-32, UNEF-2B



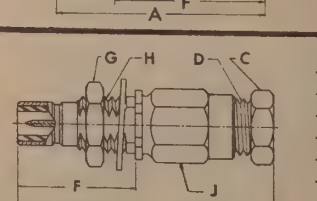
	50 OHM	75 OHM
	51-007-0000	51-107-0000
A	7/8 approx.	27/32 approx.
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
J	15/64 HEX	11/32 HEX



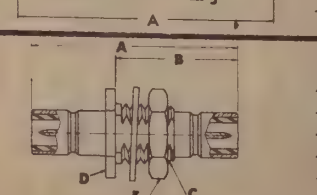
	50 OHM	75 OHM
	51-008-0000	51-108-0000
A	7/8 approx.	51/64 approx.
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
J	15/64 HEX	5/16 HEX



	50 OHM	75 OHM
	51-043-0000	51-143-0000
A	19/32	19/32
F	.426	.426
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	1/4 HEX	3/8 HEX
N	.060 O.D. x .040 I.D. x .078 Deep	.060 O.D. x .040 I.D. x .078 Deep



	50 OHM	75 OHM
	51-010-0000	51-110-0000
A	7/8 approx.	7/8 approx.
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9-32-40, UNS-2A
F	.425	.425
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	15/64 HEX	11/32 HEX



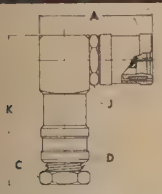
	50 OHM	75 OHM
	51-075-0000	51-175-0000
A	.671	.671
B	.430	.430
C	#10-32, UNF-2A	#5/16-32, UNEF-2A
D	1/4 HEX	3/8 HEX
E	1/4 HEX	3/8 HEX

© United Technical Publications

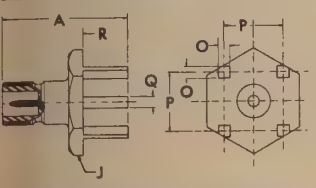
SEALECTRO CONHEX®

SUB-MINIATURE R. F. CONNECTORS

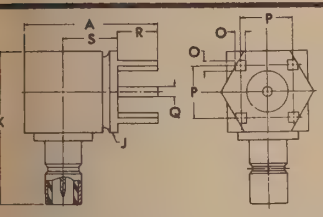
See listing below for typical cables.	50 OHM	75 OHM



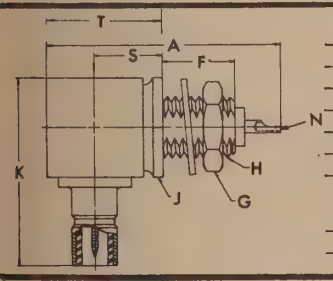
	51-011-0000	51-111-0000
A	19/32	11/16
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
J	15/64 HEX	11/32 HEX
K	3/4 approx.	27/32 approx.



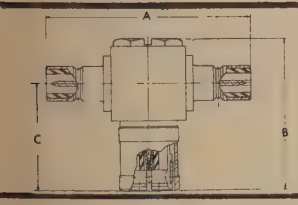
	51-051-0000	51-151-0000
A	.448	.448
J	5/16 HEX	3/8 HEX
O	.040 (Typ.)	.040 (Typ.)
P	.200	.200
Q	.038D	.038D
R	.155	.155



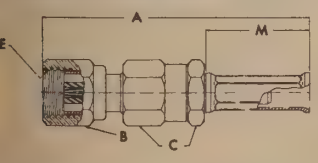
	51-053-0000	51-153-0000
A	17/32 approx.	19/32 approx.
J	5/16 HEX	3/8 HEX
K	19/32	21/32
O	.040 (Typ.)	.040 (Typ.)
P	.200	.200
Q	.038D	.038D
R	.155	.155
S	.215	.247



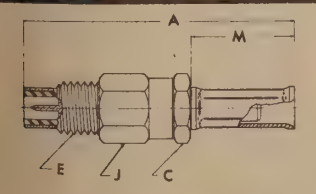
	51-047-0000	51-147-0000
A	3/4 approx.	13/16 approx.
F	.228	.228
G	1/4 HEX	3/8 HEX
H	#10-32, UNEF-2A	#5/16-32, UNEF-2A
J	5/16 HEX	3/8 HEX
K	19/32	21/32
N	.038 O.D. x .025 I.D. x .078 Deep	.038 O.D. x .025 I.D. x .078 Deep
S	.215	.247
T	.372	.435



	51-085-0000	51-185-0000
A	.860	.923
B	41/64	45/64
C	.456	.488

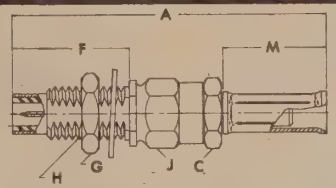


	50-024-0000	50-124-0000
A	1-1/32 approx.	1-1/16 approx.
B	15/64 HEX	11/32 HEX
C	7/32 HEX	5/16 HEX
E	#10-32, UNF-2B	#5/16-32, UNEF-2B
M	3/8	13/32

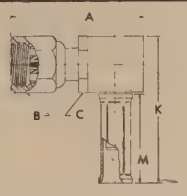


	50-025-0000	50-125-0000
A	63/64 approx.	1-1/64 approx.
C	7/32 HEX	5/16 HEX
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 HEX	5/16 HEX
M	3/8	13/32

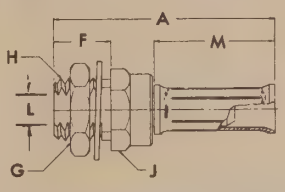
See listing below for typical cables.	50 OHM	75 OHM



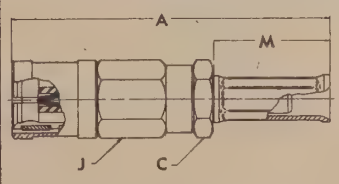
	50-027-0000	50-127-0000
A	1-1/8 approx.	1-5/32 approx.
C	7/32 HEX	5/16 HEX
F	.425	.425
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 approx.	11/32 HEX
M	3/8	13/32



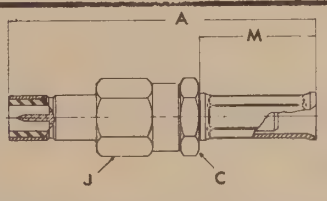
	50-028-0000	50-128-0000
A	39/64 approx.	21/32 approx.
B	15/64 HEX	11/32 HEX
C	15/64 HEX	11/32 HEX
E	#10-32, UNF-2B	#5/16-32, UNEF-2B
K	5/8 approx.	23/32 approx.
M	3/8	13/32



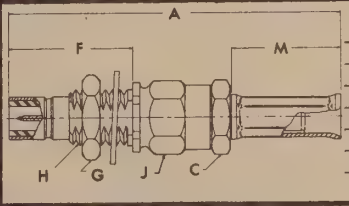
	55-031-0000	55-131-0000
A	47/64 approx	51/64 approx.
F	.228	.228
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 HEX	11/32 HEX
L	.067D	.111D
M	3/8	13/32



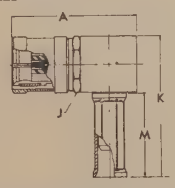
	51-024-0000	50-124-0000
A	1-1/64 approx.	1-3/64 approx.
C	7/32 HEX	5/16 HEX
J	7/32 HEX	11/32 HEX
M	3/8	13/32



	51-025-0000	51-125-0000
A	63/64 approx.	1-1/64 approx.
C	7/32 HEX	5/16 HEX
J	7/32 HEX	5/16 HEX
M	3/8	13/32



	51-027-0000	51-127-0000
A	1-1/8 approx.	1-5/32 approx.
C	7/32 HEX	5/16 HEX
F	.425	.425
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 HEX	11/32 HEX
M	3/8	13/32



	51-028-0*	51-128-0000
A	19/32	41/64
J	15/64 HEX	11/32 HEX
K	5/8 approx.	23/32 approx.
M	3/8	13/32

CRIMP-ON ASSEMBLY TOOL— Part No. CT-6

TYPICAL SPEC CABLES FOR USE WITH "CONHEX" CONNECTORS

Standard 50 ohm **clamp-type** connectors accept: RG-161/U, 174/U, 179/U, 188/U and 316/U cables.

Standard 50 ohm **crimp-type** connectors accept: RG-161/U, 174/U, 179/U, 187/U, 188/U and 316/U cables.

Standard 75 ohm **clamp-type** connectors accept: RG-180/U and 195/U cables.

Standard 75 ohm **crimp-type** connectors accept: RG-180/U and 195/U cables.

Other cables having the same component diameters as those listed can also be used in the same series of connectors.

© United Technical Publications

SEALECTRO SRM

MINIATURE R.F. CONNECTORS

MIL-C-39012

• GOLD PLATED STAINLESS STEEL

The Sealectro SRM Series of miniature R.F. connectors has been specifically designed to meet the most stringent requirements of sophisticated Space, Aviation, Military, and Industrial systems. From DC to 18 GHz, they combine high performance with assembly ease. All of the cable connectors illustrated feature captivated gold-plated contacts. They are also completely compatible with all similar types of miniature connectors which conform to MIL-C-39012.

• LOW V.S.W.R. ... BROADBAND

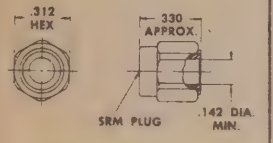
In addition to the distributor-stocked connectors shown, Sealectro offers many additional units including:

- Removable contacts
- Captivated contacts
- Tapped mounting holes
- Plating variations
- Slotted or milled contacts
- Intraseries Adaptors
- Interseries Adaptors
  - Conhex-MIL-C-22557
  - N, TNC, BNC
  - APC-7, GR-874, GR900

• HIGH PERFORMANCE

Sealectro also offers a complete custo cable assembly facility to service yo needs. All assemblies are tested 100% f continuity and mateability. This enabl the user to realize a 100% yield witho having to consider shrinkage, instructio of personnel, or in-house testing and r working. To assure the fastest possib delivery on prototype connectors, Seale tro maintains a complete staff of app cation and design engineers as well a an extensive prototype developme facility.

STRAIGHT CABLE PLUG
.141D SEMI-RIGID
SOLDER-TYPE



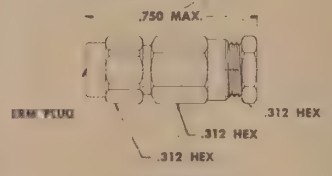
55-607-3703-31

STRAIGHT CABLE JACK
.141D SEMI-RIGID
SOLDER-TYPE



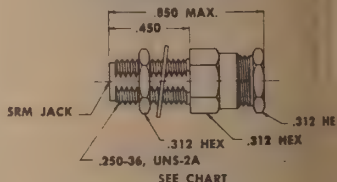
55-608-3703-31

STRAIGHT CABLE PLUG
CLAMP-TYPE



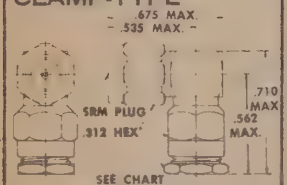
50-607-XXXX-31

STRAIGHT BULKHEAD
CABLE JACK
CLAMP-TYPE



50-610-XXXX-31

RIGHT ANGLE
CABLE PLUG
CLAMP-TYPE

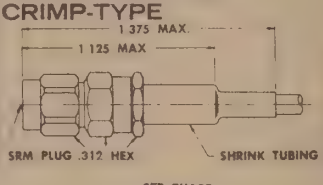


50-611-XXXX-31

CABLE SELECTION CHART
CLAMP-TYPE

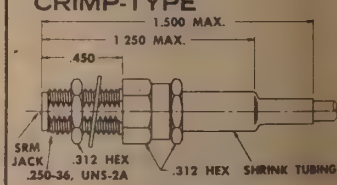
PART NO.	CABLE
-3188-	RG-174/U, -179/U, -187/U, -188/U, & -316/U
-3141-	RG-55/U, -58/U, -141/U, -142/U, -223/U
-3703-	.141 DIA. SEMI-RIGID CABLE

STRAIGHT CABLE PLUG
CRIMP-TYPE



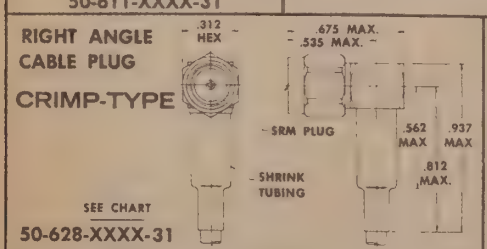
50-624-XXXX-31

STRAIGHT BULKHEAD
CABLE JACK
CRIMP-TYPE



50-627-XXXX-31

RIGHT ANGLE
CABLE PLUG
CRIMP-TYPE

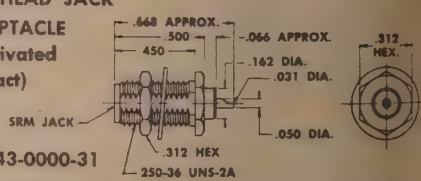


50-628-XXXX-31

CABLE SELECTION CHART
CRIMP-TYPE

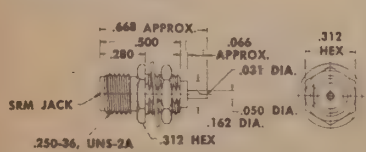
PART NO.	CABLE
-3188-	RG-174/U, -179/U, 187/U, -188/U, & -316/U
-3141-	RG-58/U, & -141/U,
-3142-	RG-55/U, -142/U, & -223/U

BULKHEAD JACK
RECEPTACLE
(Captivated Contact)



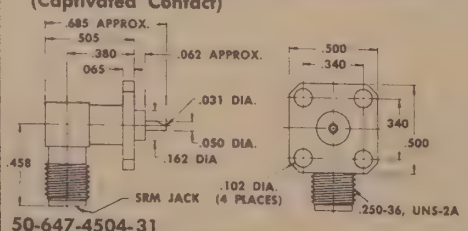
50-643-0000-31

BULKHEAD JACK
RECEPTACLE
(Captivated Contact)



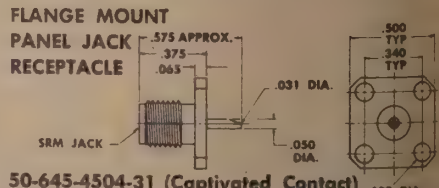
50-645-0000-31

RIGHT ANGLE PANEL JACK RECEPTACLE
(Captivated Contact)



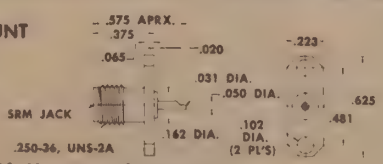
50-647-4504-31

FLANGE MOUNT
PANEL JACK
RECEPTACLE



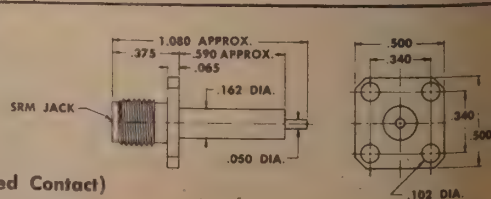
50-645-4504-31 (Captivated Contact)
50-645-4505-31 (Removable Contact)

FLANGE MOUNT
PANEL JACK
RECEPTACLE



50-645-4524-31 (Captivated Contact)
50-645-4525-31 (Removable Contact)

FLANGE MOUNT PANEL
JACK RECEPTACLE



50-645-4520-31 (Captivated Contact)
50-645-4521-31 (Removable Contact)

© United Technical Publication

SEALECTRO PROGRAMMING DEVICES

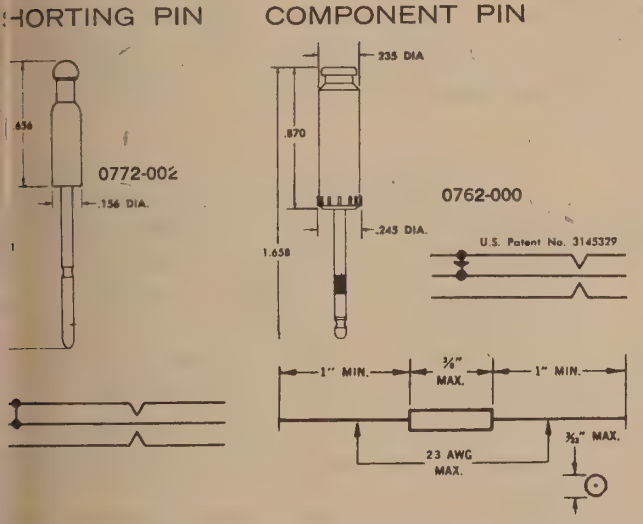
SEALECTRO PROGRAM SWITCHING

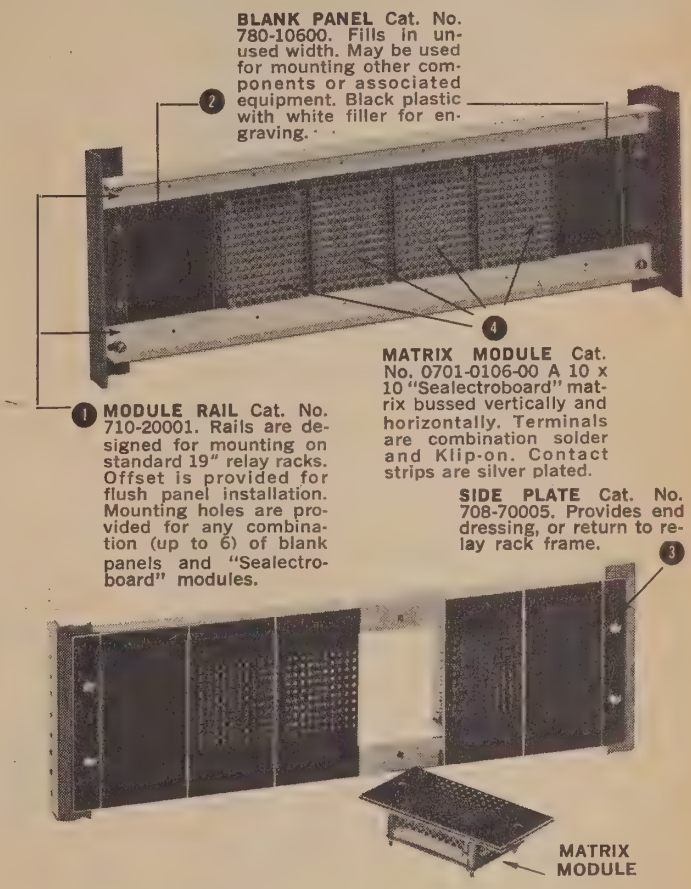
SEALECTROBOARD® MODULAR CORDLESS PROGRAM BOARDS *

ealectroboard" programming and switching provides com-ite ease and simplicity of operation with drastic reduc-ns in hardware and space. The units consist of two cks of bussed contacts running at right angles to each ier in the X and Y directions, forming an electrical trix. A single shorting or component holding pin is used complete the program circuit . . . move the pin to a new ation and a new program function is generated.

e "Modular Sealectroboard" provides an extremely flex-e means of program system expansion with a built-in pearance. The system consists of only four standard mponent assemblies, designed such that when installed a standard E.I.A. 19" relay rack, or bench cabinet, they ult in a very attractive unit.

e "Modular Sealectroboard" can be expanded from a x 10 hole matrix to a 10 x 60 hole matrix in one stan-rd 5¼" x 19" rack panel. Additional panels can be ded and interwired to expand program capacity as sys-m requirements dictate.



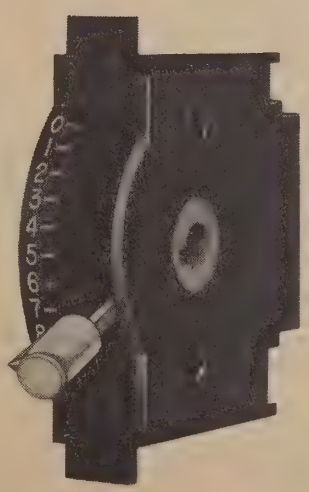


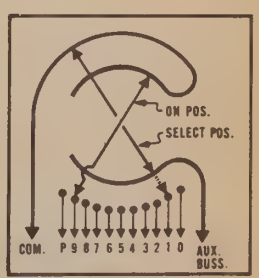
* Available off-the-shelf from Authorized Local Sealectro Distributors.

SLIDE 'N SWITCH™

RANDOM ACCESS PROGRAMMING CIRCUIT SELECTOR

- Exclusive random access to any circuit from any circuit.
- Up to 10 times as fast as thumbwheel switches.
- Modular expandable design.
- Compact. 2⅜" high. Each switch module 11/32" wide.
- Economical. Costs far less than average thumbwheel switch.
- Guaranteed for 250,000 operations per contact minimum.**
- Terminates in standard PC card connector, or hard wire.





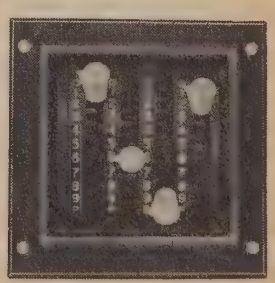
An entirely new and different switching concept with maximum versatility built-in, Slide 'n Switch provides **direct choice** of output circuit without switching electrically through intermediate points. While in transit, the common side is connected through a termination on the rear of the unit to indicate the "in transit" situation or can be used as an electrical interlock.

This precision switch can be set in a fraction of the time required for thumbwheel units, as the handle is simply pulled out and swung in a single movement to the desired circuit.

Terminations on the rear of the switch module are printed circuit, spaced .125" center to center, and will mate with standard edge-mount pc card connectors. Terminal holes are also provided for hard-wiring with solder joints.

Completely modular, the switch modules are mounted on a threaded rod in any number desired. End caps complete the bezel for front panel mounting.

*Pat. Pend.
**At 250 MA Switching.



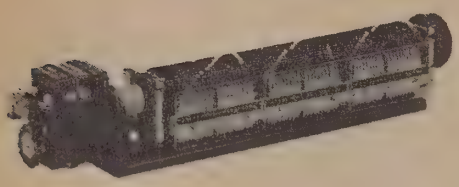
© United Technical Publications

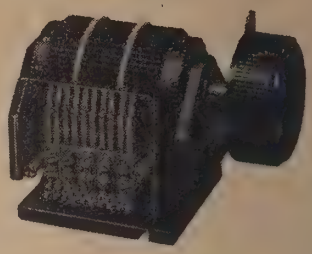
SEALECTRO PROGRAMMING DEVICES

SEALECTRO PROGRAM SWITCHING

SEALECTROSWITCH®

SERIES S-500 FIELD ADJUSTABLE PROGRAM SWITCHES

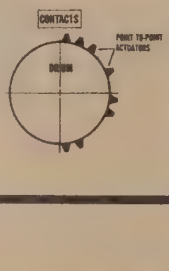




- 1, 7, and 15 Ampere Contacts
- Accurate Actuator Alignment Lines for Ease of Program Set-Up and Changes
- Manual, Stepping Motor and Timing Motor Drives
- Removable Drums
- Extremely Strong Extruded Frame for Durability
- Modular Contact Construction for Easy Field Replacemen
- Both Camming and Point-to-Point Actuators
- High Visibility Drum Position Indicator
- Precisely Extruded Drum for 100% Program Repeatabilit

Sealectroswitch is a precision electro-mechanical timing and programming device featuring sliding actuators which may be positioned to select the operation of any, all or no contacts at any single drum position in the field and without special tools. A rigid frame, combined with a precisely extruded aluminum programming drum assures timing accuracy and program repeatability. A variety of options on contact ratings, drum drives, actuators, number of drum positions, and number of contacts assure the maximum in programming and timing flexibility for every conceivable application.





Both camming and point-to-point actuators are of fered with standard model Sealectroswitches. The camming actuators, when mounted in adjacen program drum positions, do not allow the contacts to "break" between program steps. The point-to-point actuators allow the contacts to open between program steps. A three-in-one insertion tool is available for camming type actuators only and is pre-loaded with 100 actuators in black, red, blue o white for easy program set-up and identifications.

"LCT*" SEALECTROTIMER

. . . FIELD ADJUSTABLE, MULTIPLE FUNCTION, LOW COST PROGRAMMING SWITCH

- Economical, precise programming
- Sets up in seconds with 100% repeatability
- Up to 60 ON/OFF functions per revolution
- 15 Amp contact rating

Here's the answer to those many timer and programming problems. A unique combination of complete field adjustability, 100% repeatable, and multiple ON/OFF functions. No loose parts. No changing of cams. Everything required for complete flexibility in a single, compact, economical unit designed for extra-long life.

60 drum positions, precisely fabricated in at factory, permit up to 60 ON/OFF functions in a single 360° operation on a single contact. The drum is indexed, eliminating guesswork in set-ups, and also guaranteeing 100% repeatability when re-setting to a former program.

Actuators are merely slid by hand, to or out of operational position. In seconds, set up a complex timing program with varying time dwells for ON/OFF functions. In seconds, set up a pulse generator capable for supplying precisely timed pulses in various groups.

And all this costs no more than ordinary overlap type cam timers that provide a single ON/OFF function.

*Low Cost Timer

NUMERICAL INDEX SPEEDS SET UP OR CHANGES IN FIELD

BUILT-IN PRECISION POSITIONS ON DRUM ASSURE COMPLETE SET UP ACCURACY

MERELY SLIDE ACTUATORS IN OR OUT OF CONTACT ACTUATION AREA. EVERYTHING STORES RIGHT ON DRUM



SINGLE CONTACT



DOUBLE CONTACT

© United Technical Publications

5-way® BINDING POSTS

5 WAYS TO CONNECT ● GOLD-PLATED BRASS PARTS ● RANGE OF COLORS



FLUTED NUT TYPES

Plastic parts of standard (not miniature) size types molded of Lexan polycarbonate resin; brass parts are gold-plated. Rated for 30 amperes, 1000 volts working. Nickel-plated brass types available on special order.



HEX NUT TYPES

Rated for 30 amperes, 1000 volts working. Brass parts are gold-plated; plastic parts are of nylon compounded to meet military specifications MIL-P-20693A, Type IV. Nickel-plated brass types available on order.



GROUNDING TYPE

For making rapid connections to ground. Made of finely machined brass nickel-plated and polished. Panel grounding collar frozen to shaft has "D" type shoulder for locking in keyed panel hole.



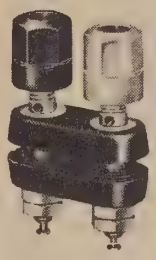
MINIATURE TYPES

Fluted nut design only. Rated for 15 amperes, 1000 volts working. Gold-plated brass parts; nylon plastic parts compounded to meet military specification MIL-P-20693A, Type IV. Types with nickel-plated brass available also.



DUAL ADAPTER TYPE

Designed to facilitate line voltage connections from output receptacles to binding posts. Has integral parallel-blade plug. Rating is 15 amperes, 125 volts. Body is black; captive black and white thumbnuts are mounted on ¾" centers. Brass parts are gold-plated. Ideal for safe, rigid connections to equipment lacking a parallel-blade plug and cord assembly.



DOUBLE ASSEMBLY TYPES

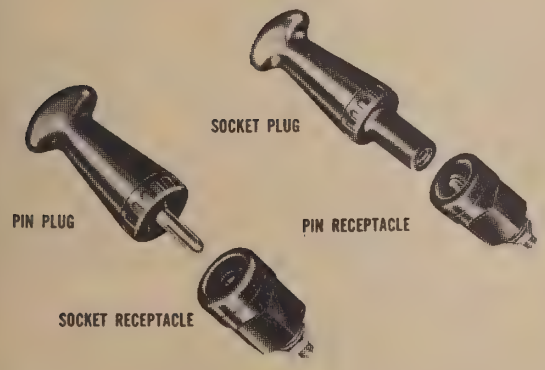
For instrument and equipment panels requiring binding posts mounted on ¾" centers. Rated for a current capacity of 30 amperes and a working voltage of 1000 volts. Brass parts are gold-plated; panel insulators in black only. Rugged, self-contained assembly makes mounting more accurate, faster and easier than two individual binding posts and gives maximum strength where connections are frequently made.

STYLE	TYPE
5-WAY® BINDING POSTS	
FLUTED NUT — STANDARD	DF31*
HEX NUT — STANDARD	DF30*
GROUNDING — ALL METAL	GP30NC
FLUTED NUT — MINIATURE	DF21*

STYLE	TYPE
DUAL ADAPTER TYPE	
BLACK & WHITE FLUTED NUTS	DAP15BWC
DOUBLE ASSEMBLY TYPES	
BLACK & WHITE HEX NUTS	DF30-2-BWTC
TWO BLACK HEX NUTS	DF30-2-BBC
BLACK & RED HEX NUTS	DF30-2-BRC

*Add desired color suffix to series designation number: BC (black), BLC (blue), RC (red), WTC (white), YC (yellow), GNC (green). For example: DF21BLC.

SUPERCON®
ELECTRICAL CONNECTORS



Nylon plastic parts; gold-plated brass current-carrying parts. Wiring connections to the same plug can be either soldered or solderless. Plug cable-fastening screws permit a wide range of cable sizes. Plug grips are of a simple, two-piece threaded construction for quick assembly. All receptacle plastic parts are molded of the same color to permit more rapid and accurate circuit identification front and back of panel when installed. The 25, 50 and 100 ampere types are listed by Underwriters' Laboratories, Inc.

AMPERES	PIN PLUGS TYPE†	SOCKET RECEPTACLES TYPE†	SOCKET PLUGS TYPE†	PIN RECEPTACLES TYPE†
25	PP25G	RS25G	PS25G	RP25G
50	PP50G	RS50G	PS50G	RP50G
100	PP100G	RS100G	PS100G	RP100G
250	PP250G	RS250G	PS250G	RP250G

†Add desired color suffix to series designation number: B (black), BL (blue), R (red), WT (white), Y (yellow), GN (green). For example: PS25GWT.

THE SUPERIOR ELECTRIC COMPANY

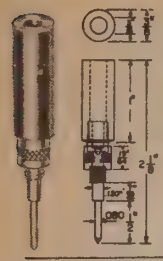
SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 3500, 4000, AND 5600

© United Technical Publications

specify* SMITH

HERMAN H. SMITH, INC.

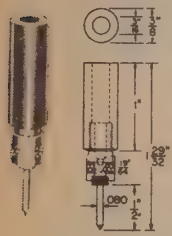
FOR INDUSTRIAL ELECTRONIC COMPONEN



INSULATED TIP PLUG
Solderless

HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks.
Std. Pkg. 100

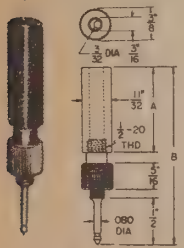
No.	Type	NET Per C
200	Senior	$17.00



INSULATED TIP PLUG
Solderless

HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks.
Std. Pkg. 100

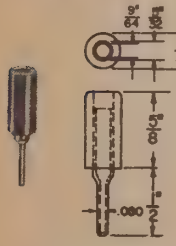
No.	Type	NET Per C
201	Junior	$17.00



INSULATED TIP PLUG
Made to Meet Signal Corps Spec.

HANDLE: ETHYL CELLULOSE, Red or Black. SPECIFY COLOR
PLUG: Steel, case hardened to Signal Corps specs.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Recess at end of prod tip holds plugs firmly in jack spring. Prevents tip from falling out when in an inverted position.

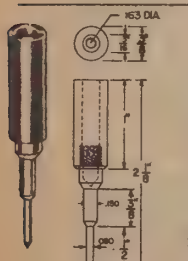
No.	Handle (A)	Overall (B)	Std. Pkg.	NET Per C
250	1 inch	2 1/16"	50	$60.00
358	3 inch	4 1/16"	25	90.00



INSULATED TIP PLUG
Solder Type

HANDLE: MOLDED BUTYRATE, per FED. SPEC. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated our No. 158.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Drawn hollow tip for easy soldering. Fits standard phone tip jack. Std. Pkg. 100

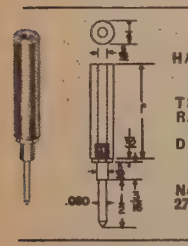
No.	NET Per C
237	$12.00



INSULATED TIP PLUG
Heavy Duty Type

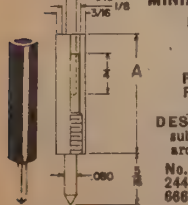
HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
229	$17.00



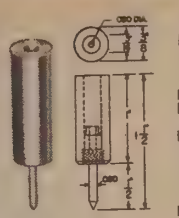
SUB-MINIATURE TIP PLUG
HANDLE: FIBRE, per MIL-F-1148A Grade CH. Red, Black. SPECIFY COLOR
TIP: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Ideally suited for checking sub-miniature equipment. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
270	$20.00



MINIATURE TIP PLUG AND TEST PROD
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 2 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Ideally suited for checking sub-miniature equipment. Fits standard phone tip jacks.

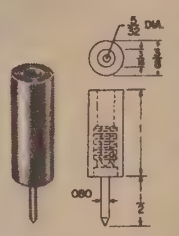
No.	Length (A)	Std. Pkg.	NET Per C
244	3/4"	100	$18.00
686	3"	25	30.00



INSULATED SHORT TIP PLUG

HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Inserts flush to insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone Std. Pkg. 100

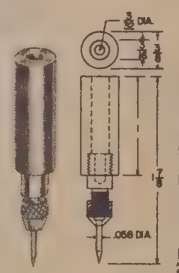
No.	NET Per C
203	$13.20



INSULATED SHORT TIP PLUG
Solderless

HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR: Solderless: wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to insulated handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. pkg. 100

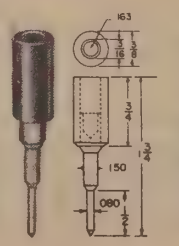
No.	NET Per C
283	$15.00



INSULATED TIP PLUG
Photo Needle

HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Removable chuck for easy replacement of broken needle. Needle pierces corrosion or plating for positive reading.
Std. Pkg. 100

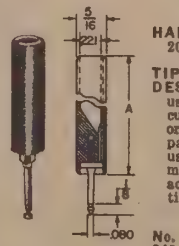
No.	NET Per C
216	$25.00



ADAPTER
Banana Plug to Tip Plug

HANDLE: MOLDED BUTYRATE, per FED. SPEC. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts standard banana plugs, adapts to standard tip plug. Std. Pkg. 100

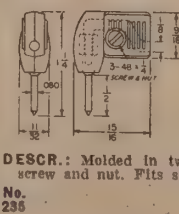
No.	NET Per C
215	$17.00



SUB-MINIATURE TIP PLUG AND TEST PROD

HANDLE: Molded Nylon, per MIL-P-20693A. Available in Red or Black. SPECIFY COLOR
TIP: Brass, Silver plated.
DESCR.: Solderless assembly. Ideal for use with sub-miniature printed-circuit tip jacks. Sharp tip breaks flux or oxide coating on printed-circuit pattern for positive contact when used as prod. Grooved head or prod makes positive contact when laid across wires Fits all standard .080" tip jacks.

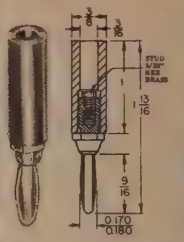
No.	Handle (A)	Overall (B)	Std. Pkg.	NET Per C
348	1 inch	1-5/16"	100	$35.00
349	4 inches	4-5/16"	25	$45.00



METER TIP PLUG

HANDLE: MOLDED PHENOLIC plastic, Red and Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Molded in two halves for easy assembly with screw and nut. Fits standard phone tip jacks.

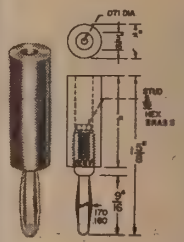
No.	NET Per C
235	$30.00



INSULATED BANANA PLU

HANDLE: MOLDED PHEN plastic, Red, Black, Ye Green, Blue, White. SPECIFY CO
PLUG: Hex brass, nickel or s plated.
SPRING: Four-leaved pho bronze or beryllium copper, n or silver plated.
RATING: 15 Amps AC for Temp. rise, continuous duty
DESCR.: Wire can be solder brass stud or directly into itself. Stud also locks wir plug for solderless connec Fits standard banana jacks.
Std. Pkg.

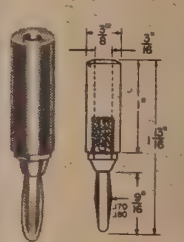
No.	Spring Material	Plating	Pe
212	Phosphor Bronze	Nickel	$30
232	Phosphor Bronze	Silver	33
242	Beryllium Copper	Nickel	35
262	Beryllium Copper	Silver	38



INSULATED BANANA PLU

HANDLE: MOLDED PHEN plastic, Red, Black, Yel Green, Blue, White. SPECIFY CO
PLUG: Brass, nickel or s
SPRING: Four-leaved phos bronze or beryllium copper, n or silver plated.
RATING: 15 Amps AC for Temp. rise, continuous duty
DESCR.: Wire can be solder brass stud or directly into itself. Stud also locks wir plug for solderless connect Fits standard banana jacks.
Std. Pkg.

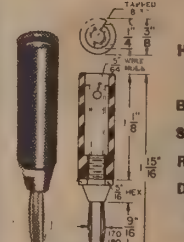
No.	Spring Material	Plating	NE Per
211	Phosphor Bronze	Nickel	$25.
261	Phosphor Bronze	Silver	28.
271	Beryllium Copper	Nickel	30.
281	Beryllium Copper	Silver	33.



INSULATED BANANA PLU
Solderless

HANDLE: MOLDED PHEN plastic, Red, Black, Yel Green, Blue, White. SPECIFY CO
PLUG: Hex brass, nickel or s plated.
SPRING: Four-leaved phos bronze or beryllium copper, n or silver plated.
RATING: 15 Amps AC for Temp. rise, continuous duty
DESCR.: Solderless: Wire through handle and body of then wrapped around screw tion. Fits standard banana j
Std. Pkg.

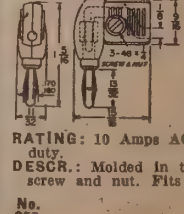
No.	Spring Material	Plating	NE Per
295	Phosphor Bronze	Nickel	$30.
296	Phosphor Bronze	Silver	33.
297	Beryllium Copper	Nickel	35.
298	Beryllium Copper	Silver	38.



INSULATED BANANA PLUG
Solderless

HANDLE: MACHINED BUTY ATE, per MIL-P-10408A, Ty I, Class II. Red, Black. SPECIFY COLO
BODY: Hex brass, nickel plat with mating brass spacer.
SPRING: Four-leaved phosph bronze, nickel plated.
RATING: 15 Amps AC for 10° Temp. rise, continuous duty.
DESCR.: Cross drilled hole spacer enables quick solderle connection of wire to plug. Fi standard banana jacks.
Std. Pkg. 1

No.	NET Per
236	$45.0



METER BANANA PLUG

HANDLE: MOLDED PHEN IC plastic, Red and Blac SPECIFY COL
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosp bronze, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continu duty.
DESCR.: Molded in two halves for easy assembly w screw and nut. Fits standard banana jacks.
Std. Pkg

No.	NET P
255	$4

© United Technical Pu

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENTS

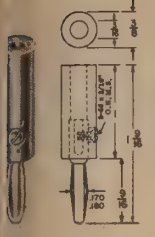
NYLON HANDLE TIP & BANANA PLUGS

COLOR CODE SUFFIX Add to Catalog Number as required

— 101 WHITE — 102 RED — 103 BLACK — 104 GREEN — 105 BLUE — 106 ORANGE — 107 YELLOW — 108 BROWN — 112 PURPLE — 113 GREY

BANANA PLUG TYPE

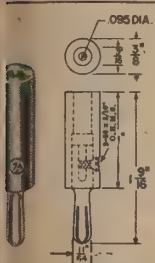
INSULATED BANANA PLUG With Side Screw



HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Set screw secures wire without soldering. Fits standard banana jacks. Std. Pkg. 100

No.	Spring	NET Per C
204	Phosphor Bronze	$25.00
254	Beryllium Copper	30.00

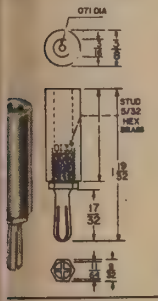
INSULATED BANANA PLUG Split Type With Side Screw



HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Set screw secures wire, without soldering. Fits standard banana jacks. Std. Pkg. 100

No.	NET Per C
213	$20.00

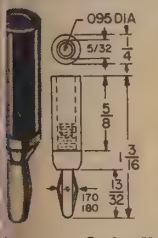
INSULATED BANANA PLUG Split Type With Internal Stud



HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100

No.	NET Per C
253	$22.00

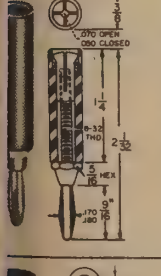
INSULATED BANANA PLUG Midget Type



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black. SPECIFY COLOR
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire soldered directly into stud. Fits standard banana jacks. Std. Pkg. 100

No.	Spring Material	Plating	NET Per C
91	Phosphor Bronze	Nickel	$25.00
92	Phosphor Bronze	Silver	28.00
93	Beryllium Copper	Nickel	30.00
94	Beryllium Copper	Silver	33.00

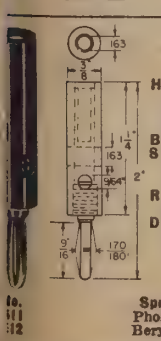
INSULATED BANANA PLUG With Internal Spring Collett



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red or Black. SPECIFY COLOR
BODY: Hex brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Spring collett provides quick connect and disconnect of wire. Tin wire for secure contact. Fits standard banana jack. Std. Pkg. 100

No.	NET Per C
239	$50.00

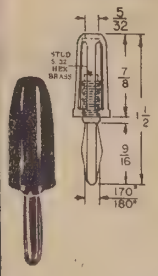
STACK BANANA PLUG Solderless



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red, Black, Yellow or Green. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless connection. Accepts standard banana plugs in top and side. Interconnects unlimited amount of multiple circuits. Std. Pkg. 50

No.	Spring Material	NET Per C
311	Phosphor Bronze	$35.00
312	Beryllium Copper	44.00

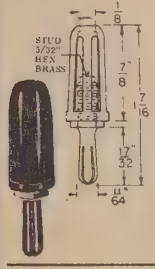
NYLON BANANA PLUG



HANDLE: MOLDED NYLON, per MIL-P-20693A.
COLORS: Available in 10 std. colors as coded above. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100

No.	Spring Material	Plating	NET Per C
476	Phosphor Bronze	Nickel	$28.00
477	Phosphor Bronze	Silver	31.00
478	Beryllium Copper	Nickel	33.00
479	Beryllium Copper	Silver	36.00

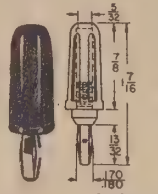
NYLON BANANA PLUG Split Type



HANDLE: MOLDED NYLON, per MIL-P-20693A.
COLORS: Available in 10 std. colors as coded above. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100

No.	NET Per C
494	$25.00

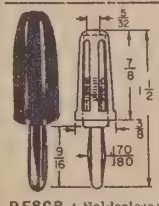
NYLON BANANA PLUG Short Spring



HANDLE: MOLDED NYLON, per MIL-P-20693A.
COLORS: Available in 10 std. colors as coded above. SPECIFY COLOR
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire soldered directly into stud. Fits standard banana jacks. Std. Pkg. 100

No.	Spring Material	Plating	NET Per C
426	Phosphor Bronze	Nickel	$23.00
427	Phosphor Bronze	Silver	26.00
428	Beryllium Copper	Nickel	28.00
429	Beryllium Copper	Silver	31.00

NYLON BANANA PLUG Solderless

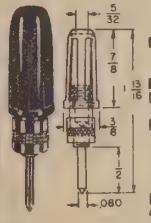


HANDLE: MOLDED NYLON, per MIL-P-20693A.
COLORS: Available in 10 std. colors as coded above. SPECIFY COLOR
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard banana jacks. Std. Pkg. 100

No.	Spring Material	Plating	NET Per C
455	Phosphor Bronze	Nickel	$25.00
456	Phosphor Bronze	Silver	28.00
457	Beryllium Copper	Nickel	30.00
458	Beryllium Copper	Silver	33.00

PIN TIP TYPE

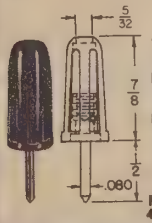
NYLON TIP PLUG Solderless



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portions and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
490	$20.00

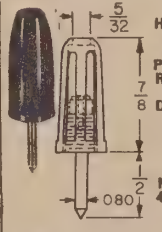
NYLON SHORT TIP PLUG Solderless



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
492	$20.00

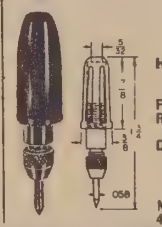
NYLON SHORT TIP PLUG



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Inserts flush to insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
491	$16.00

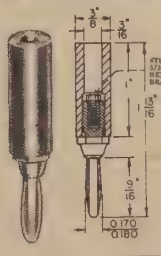
NYLON TIP PLUG Phono Needle



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Removable chuck for easy replacement of broken needles. Needle pierces corrosion or plating for positive reading. Std. Pkg. 100

No.	NET Per C
493	$28.00

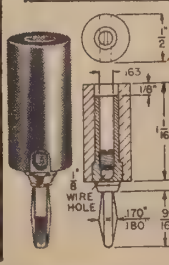
HIGH TEMPERATURE BANANA PLUG



HANDLE: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Hex brass, nickel plated.
SPRING: Four-leaved, INCONEL.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Withstands temperature to 1200 degrees F. Full resiliency—non-oxidizing. Excellent for thermo-couple connection on plastic extruding die heads. Std. Pkg. 10

No.	NET Per C
388	$90.00

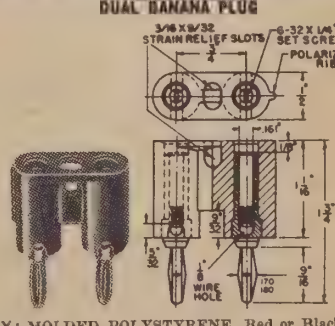
STACK BANANA PLUG



BODY: MOLDED POLYSTYRENE, Red or Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
SCREW: Steel, cadmium plated
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Internal set screw for wire or phone tip connection. Can be stacked for multiple connections. Std. Pkg. 50

No.	NET Per C
324	$48.00

DUAL BANANA PLUG



BODY: MOLDED POLYSTYRENE, Red or Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
SCREW: Steel, cadmium plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5K Volts 60 cycle AC continuous working voltage. CAPACITANCE 1.0 pf. between conductors.
DESCR.: Mates with standard dual binding post ¾" centers. Polarity indicated on top and side. Wire held with internal set screw. Can be stacked for multiple connections. Std. Pkg. 25

No.	NET Per C
210	$72.00

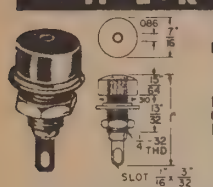
IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING!

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

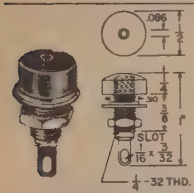
INSULATED PHONE TIP JACK



HEAD: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
BODY: Brass, nickel plated.
CONTACT: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Positive contact with standard phone tip plugs. Supplied complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to ⅜" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No.	NET Per C
202	$15.00

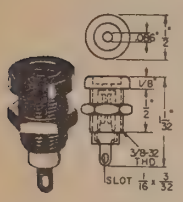
INSULATED PHONE TIP JACK



HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, class MH. Red, Black, Yellow, Green. SPECIFY COLOR
BODY: Brass, nickel plated.
CONTACT: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise continuous duty. 750 Volts 60 cycle AC Continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Complete with hex nut & fibre washer. Mounts in 5/16" hole in panels up to ⅜" thick. Accepts standard phone tip plugs. **Std. pkg. 100**

No.	NET Per C
223	$25.00

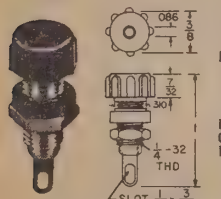
MOLDED NYLON TIP JACK



BODY: MOLDED NYLON, per MIL-P-20693A, Red, Black, Yellow, Green, Blue. SPECIFY COLOR
CONTACT: Phosphor bronze.
CAP: Brass, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty. 5 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 pf.
DESCR.: Mounts in ⅜" hole in panels up to ⅝" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No.	NET Per C
240	$20.00

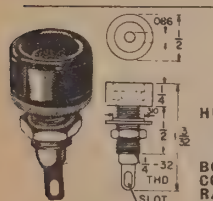
NYLON PHONE TIP JACK



HEAD: MOLDED NYLON, per MIL-P-20693A. With molded nylon washer. Red, Black, Yellow, Green, Blue. SPECIFY COLOR
BODY: Brass, nickel plated.
CONTACT: Phosphor bronze.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut. Mounts in 5/16" hole in panels up to ¼" thick. Accepts standard tip plugs. **Std. Pkg. 100**

No.	NET Per C
241	$27.00

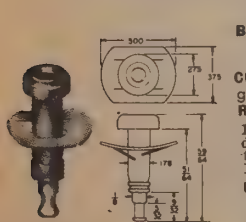
INSULATED TIP JACK Meter Type



HEAD: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
BODY: Brass, nickel plated.
CONTACT: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Supplied complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to ⅜" thick. Recessed jack body prevents possibility of shock or grounding. Accepts standard phone tip plugs. **Std. Pkg. 100**

No.	NET Per C
282	$23.00

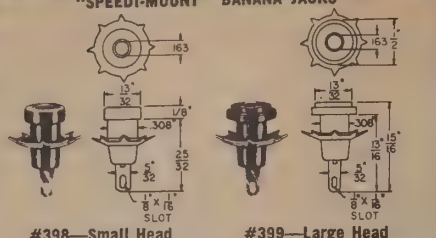
NYLON TEST TIP JACK



BODY: Nylon, Grade FM 10001. Specify color as coded above, 10 colors.
CONTACT: Phosphor bronze, gold plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 3 KV 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Mounts in ⅛" hole, with Tinnerman Speed Nut for fast permanent assembly. Teeth embed into jack body, preventing pulling out and turning. Accepts standard phone tip plugs. **Std. Pkg. 25**

No.	NET Per C
1598	$15.00

"SPEEDI-MOUNT" BANANA JACKS



#398—Small Head #399—Large Head

BODY: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
CONTACT: Brass, cadmium plated.
WASHER: Steel cadmium plated, internal and external tooth.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 3 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevent pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard banana plug.

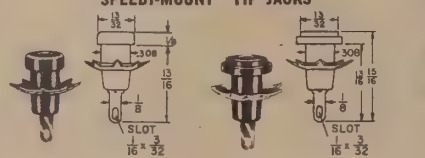
Small Head — **Std. Pkg. 100**

No.	Head Dia.	NET Per C
398	13/32"	$8.00

Large Head

No.	Head Dia.	Net Per C
399	½"	$8.00

"SPEEDI-MOUNT" TIP JACKS

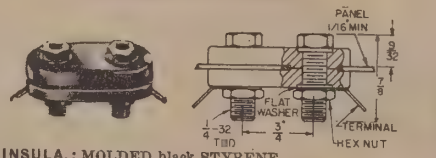


#279—Small Head #299—Large Head

BODY: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
CONTACT: Phosphor bronze.
WASHER: Steel cadmium plated, internal and external tooth.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 3 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 pf.
DESCR: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevents pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No.	Description	NET Per C
279	Small Head 13/32" Dia.	$8.00
299	Large Head ½" Dia.	8.00

DUAL BANANA JACK ASSEMBLY



INSULA.: MOLDED black STYRENE.
BODY: Brass,nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 4.0 pf. to panel.
DESCR.: Mounts in two ¼" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates standard and dual banana plugs. Supplied with two hex nuts, 4 flat washers and brass tinned lugs. **Std. Pkg. 10**

No.	NET Per C
489	$50.00

INSULATED BANANA JACK

HEAD: MOLDED PHENOL IC plastic, Red, Black, Ye low, Green, Blue, Whi SPECIFY COLO
BODY: Brass, nickel plate
RATING: 15 Amps AC f 10°C Temp. rise, continuo duty. 750 Volts 60 cycle A continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Supplied with hex nut, fibre washer, and bra tinned lug. Mounts in 5/16" hole in panels up to ¾ thick. Accepts standard banana plugs. **Std. Pkg. 1**

No.	NET Per
205	$15.

INSULATED BANANA JACK With Turret Terminal

HEAD: MOLDED PHENOL plastic, Red, Black, Yell Green, Blue, White. SPECIFY COL
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10 Temp. rise, continuous duty. 750 Volts 60 cycle continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Supplied with hex nut & fibre washer. Mou in 5/16" hole in panels up to ⅜" thick. Solder direct turret terminal. Accepts standard banana plugs. **Std. Pkg.**

No.	NET Per C
256	$17.

INSULATED BANANA JACK

HEAD: MOLDED PHENO IC plastic, Red, Black, Y low, Green, Blue. Whi SPECIFY COL
BODY: Brass, nickel plat
RATING: 15 Amps AC 10°C Temp. rise, continu duty. 750 Volts 60 cycle continuous working volta CAPACITANCE 4.0 pf.
DESCR.: Supplied with hex nut, fibre washer, lockwas and brass tinned lug. Mounts in 5/16" hole in pan up to ⅜" thick. Jack body recessed for snug conta Accepts standard banana plugs. **Std. Pkg.**

No.	NET Per
219	$18

NYLON BANANA JACK

HEAD: MOLDED NYLON, MIL-P-20693A. With mol nylon washer. Red, Bla Yellow, Green, Blue. SPECIFY COL
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10 Temp. rise, continuous du 1 K Volts 60 cycle AC cont uous working voltage. CAP CITANCE 4.0 pf.
DESCR.: Extruded portion of head and washer provi excellent insulation from panel. Suplied with hex n brass tinned lug. Mounts in 5/16" hole in panels up ¼" thick. Accepts standard banana plugs.

No.	NET Per C	Std. Pkg.
221	$25.00	

INSULATED JACK Combination Type

HEAD: MOLDED PHENOL plastic, Red, Black, Yell Green, Blue, White. SPECIFY COL
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
CONTACT: 12 Amps AC 10°C Temp. rise, continu duty. 750 Volts 60 cycle continuous working volta CAPACITANCE 4.0 mmfd.
DESCR.: Supplied with hex nut & fibre washer. Acce standard phone tip plugs or standard banana plu Mounts in 5/16" hole in panels up to ½" thick. **Std. Pkg.**

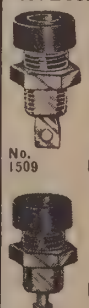
No.	NET Per C
205	$20.

NYLON BANANA JACKS

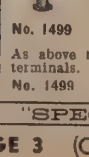
COLOR CODE SUFFIX — Add to Catalog Number as requi

— 101 WHITE — 104 GREEN
— 102 RED — 105 BLUE — 108 BROWN
— 103 BLACK — 106 ORANGE — 112 PURPLE
— 107 YELLOW — 113 GREY

"DOUBLE-D" BODY



No. 1509



No. 1499

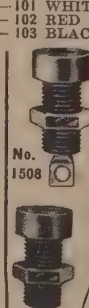
BODY: MOLDED NYLON, Per MIL-P-20693A.
COLORS: Available in 10 colors as coded above.
CONTACT: Brass, electro-tin plated.
RATING: 15 Amps. A.C. for 10° C. Temp. rise, continuous duty. 1 Kv 60 cycle A.C. continuous Working Voltage Capacitance 5.5 Pf.
DESCR.: Mounts in 5/16" round, single, or double "D" holes in panels up to 5/16" thick. Accepts standard banana plugs. One-piece turret terminal contact allows sealed panel entry hole. **Std. Pkg. 100**

No.	NET Per C
1509	$12.00

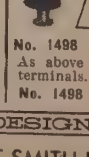
As above but completely enclosed jack with solder turret terminals.

No. 1499	NET Per C $15.00

Full Round Body



No. 1508



5/16-32 THD.

BODY: MOLDED NYLON. MIL-P-20693A.
COLORS: Available in 10 co as coded above. Specify c by adding color code suffix basic catalog number.
CONTACT: Brass, electro- plated.
RATING: 15 Amps AC for 1 Temp. rise, continuous du 1 Kv., 60 cycle A.C. cont uous Working Voltage. CAI CITANCE 5.0 Pf.
DESCR.: Mounts in 5/16" h in panels up to 5/16" thi Accepts standard banana plu One-piece turret terminal c tact allows sealed panel en hole.

No. 1508	NET Per C $12

As above but completely enclosed jack with solder turr terminals.

No. 1498	NET Per C $15.

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

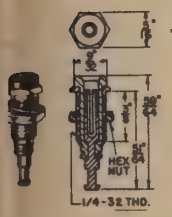
© United Technical Publicatio

NYLON TIP JACKS

With Metal Shell
Made to Meet MS-16108 Spec.

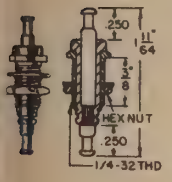
COLOR CODE SUFFIX
(Add to Catalog Number as Required)

-101 WHITE	— 105 BLUE	— 106 BROWN
-102 RED	— 106 ORANGE	— 112 PURPLE
-103 BLACK	— 107 YELLOW	— 113 GREY
-104 GREEN		



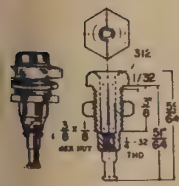
Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements:

1. **Salt Spray Test — Withstands 100 hours.**
2. **Rating — 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage.** CAPACITANCE 10.0 pf.
3. **Insulation Resistance — 5,000 megohms.**
4. **Operating Conditions —**
   - **A. Continuous: 23 hours on, 1 hour off.**
   - **B. Elevation: Up to 5,000 ft.**
   - **C. Temperature: —55 to + 85°C.**
   - **D. Humidity: Up to 95%.**
5. **Material Specifications —**
   - **A. Insulator: Molded Nylon, per MIL-P-20693A. Specify color as coded above.**
   - **B. Shell and Nut: Brass Nickel Plated per QQ-N-290, type V (FC).**
   - **C. Lockwasher: Phosphor Bronze Nickel Plated per Spec. QQ-N-290, type V (FC).**
   - **D. Center Contact: Heat Treated Bery. Copper, Silver plated per QQ-S-365, Gold plated overall.**
6. **Non-Operating Conditions —**
   - **A. Elevation: Up to 50,000 ft.**
   - **B. Temperature: Continuous exposure for 72 hours at +160°F and 240 hours at —80°F.**
   - **C. Humidity: Up to 100%.**



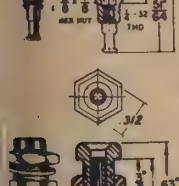
No.	Type	Std. Pkg.	NET Per C
1501	Wrap Around	25	$30.00
1502	Spade Terminal	25	42.00
1503	Feed Through	25	39.00

ALL NYLON TIP JACK



Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in ¼" hole in panels up to ¼" thick. Meets following requirements:

1. **Salt Spray Test — Withstands 100 hours.**
2. **Rating: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 K Volts 60 cycle AC continuous working voltage.** CAPACITANCE 3.0 pf.
3. **Insulation Resistance — 5,000 megohms.**
4. **Operating Temperature— —55 to +85°C.**
5. **Material Specifications —**
   - **A. Body: Molded Nylon, per MIL-P-20693A. Specify Color as coded above.**
   - **B. Center contact: Heat treated Phosphor Bronze, Silver plated per QQ-S-365, Gold plated overall. No. 1507 Brass, per QQ-B-626, Comp. 22, plated as above.**
   - **C. Hex Nut: Brass Nickel Plated.**

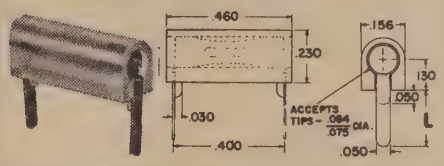


COLORS: Available in White, Red, Black, Green, Blue, Orange, Yellow, Brown, Purple and Grey. Specify color as coded above.

No.	Type	Pkg.	Per C
1505	Wrap Around	25	$21.00
1506	Spade Terminal	25	30.00
1507	Feed Through	25	28.20

RIGHT ANGLE PRINTED CIRCUIT TEST JACK

MILITARY TYPE
Made to Meet MIL-C-39024/11



BODY: MOLDED NYLON, Per MIL-P-17091. 10 Colors, specify color, as coded.
SPRING: Beryllium opper, Per QQ-C-533.
FINISH: Gold Plate, per MIL-G-45204, lass I. Type 2. Nickel underplate, per QQ-N-290, Class I Type 7, .0002" thick.
MOUNTING: Mounts in .052" dia. holes on .400" centers. Board thickness as specified below. Can be spaced side-by-side .160" on centers minimum.
MECHANICAL DATA: Thermal shock, vibration, humidity, insulation resistance, salt spray per MIL-STD-202B. All mechanical Tests per applicable section of MIL-C-39024. Insertion force 30 oz. max., withdrawal force 3 oz. min., with .080" (.001") probe.
RATINGS: Operating voltage 1500 volts, 60 cps RMS, sea level. 350 volts, 60 cps RMS at 50,000 feet. 5 amps. AC max. current rating. Contact resistance 20 millivolt drop max. At specified current, at 25°C.
DESCR: Double entry design, probe inserts from either end of jack. Closed entry construction will not accept probes larger than .084", will contact probes down to .074". Closed bottom design keeps jack from fouling with solder or flux. Locking ears keep jack firmly in board until soldered. Precise dimensions allow for automated assembly on boards. **Std. Pkg. 100**

"L" DIMENSION 0.156

For boards up to 1/16" thick, MIL-C-39024/11-01 thru -10.

No.	NET Per C
325	$11.00

"L" DIMENSION 0.219

For boards up to 1/8" thick, MIL-C-39024/11-21 thru -30.

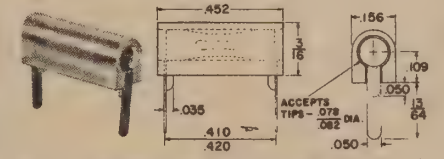
No.	NET Per C
321	$11.00

ECONOMY TYPE

"L" DIMENSION 0.156

No.	Spring Plating	NET Per C
306	Gold flash over .0002 Silver	$10.00
359	.0002 Silver	9.00
	"L" DIMENSION 0.219	
328	Gold flash .0002 Silver	$10.00
402	.0002 Silver	9.00

COMMERCIAL TYPE



BODY: MOLDED NPLON, Per MIL-P-20693A. 10 colors, specify color as coded.
SPRING: Beryllium Copper, per QQ-C-533.
FINISH: Silver underplate, .0002" min., per QQ-S-365. Type I, with .00003" Gold overplate; per MIL-F-14072, M-310.
RATINGS: 5 Amps AC for 10°C Temp. rise, continuous duty. 1.5 KV. 60 cycle AC continuous working voltage. Contact resistance 3 milliohms max. at rated current. Capacitance less than 5 MHz at 1 pf.
MOUNTING: Mounts in .052" dia. holes, on .400" centers, in boards up to 3/16" thick. Can be spaced side-by-side .160" on centers min.
MECHANICAL DATA: Thermal shock, vibration, humidity, insulation resistance, and salt spray tests per MIL-STD-202B. Solderability per MIL-S-6872. Insertion and withdrawal force: 8 oz. min., 5 lbs. max. with .080" (±.001") dia. probe.
DESCR.: Double-entry design, probe inserts from either end of jack. Closed entry construction will not accept probes larger than .084", will contact probes down to .074". Closed bottom construction keeps jack from fouling with solder or flux. Locking ears hold jack firmly in board until soldered. Precise dimensions allow for automated assembly on boards. **Std. Pkg. 100**

No.	NET Per C
430	$11.00

ECONOMY TYPE

499	Spring — Gold flash over .0002 Silver	$10.00
498	Spring — .0002 Silver.	9.00

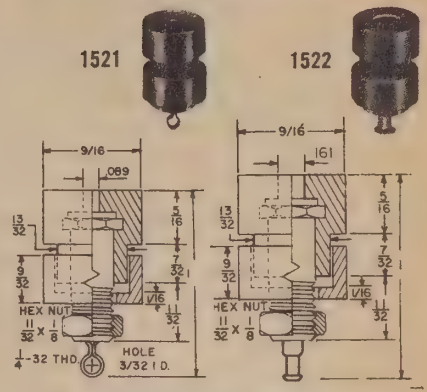
DUAL TIP JACK ASSEMBLY



WASHER: MOLDED black STYRENE,
BODY: Recessed, brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty, 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 pf. between conductors, 4.0 pf. to panel.
DESCR.: Mounts in two 1/8" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates standard phone tip plugs. Supplied with two hex nuts. **Std. Pkg. 10**

No.	NET Per C
488	$55.00

HIGH VOLTAGE NYLON JACKS



HIGH VOLTAGE NYLON JACKS
Made to meet MS-16107 Spec.

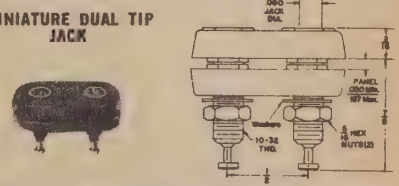
Heavy molded nylon body and cup washer prevent high-voltage flashover to panel. Meets following requirements:

1. Salt Spray Test—Withstands 100 hours.
2. Electrical Rating—15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage. Millivolt drop per MIL-J-6751. CAPACITANCE 2.0 pf.
3. Material Specifications.
   - A. Insulator and Washer: — Molded Nylon, per MIL-P-20693A. Colors to Fed. Std. 595. Specify color as coded above.
   - B. Insert Shell and Nut: Brass, Nickel plated per QQ-N-290, type V (FC).
   - C. Contact: Phosphor bronze, Silver plated .0002" per QQ-S-365, Gold plated overall.

Specify color as coded above, 10 colors.

No.		NET Per C
1522	BANANA	$45.00
1521	PHONE TIP	$45.00

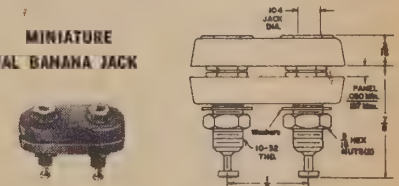
MINIATURE DUAL TIP JACK



INSULA.: MOLDED Black STYRENE, octagonal keyed to align cross holes at alternate 90° holes.
BODY: Recessed, brass, nickel plated.
CONTACT: Phosphor bronze.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 4.0 pf. to panel.
DESCR.: Mounts in two ¼" round single or double "D" holes on ½" mounting centers in panels up to ¼" thick. Accommodates miniature dual phone tip plugs and standard .080 phone tip plugs. Supplied with two hex nuts. **Std. Pkg. 10**

No.	NET Per C
3018	$60.00

MINIATURE DUAL BANANA JACK

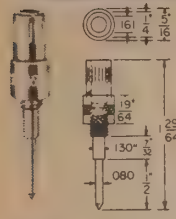


INSULA.: MOLDED Black STYRENE, octagonal keyed to align cross-holes at alternate 90° holes.
BODY: Brass, nickel plated
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 4.0 mmfd to panel.
DESCR.: Mounts in two ¼" round single or double "D" holes on ½" mounting centers in panels up to ¼" thick. Accommodates miniature and dual banana plugs. Supplied with two hex nuts. **Std. Pkg. 10**

No.	NET Per C
3019	$60.00

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENT

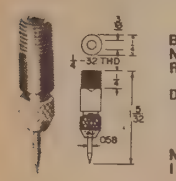
SOLDERLESS TIP PLUG



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wraps around screw portion and tightened with knurled collar. Force fit type. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	Type	NET Per C
105	Senior	$15.00

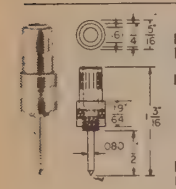
NEEDLE TIP AND CHUCK



BODY: Brass, nickel plated.
NEEDLE: Steel, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Removable chuck for easy replacement. Needle pierces plating or corrosion for positive reading. **Std. Pkg.100**

No.	NET Per C
128	$22.00

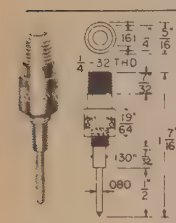
SOLDERLESS TIP PLUG



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip then wraps around screw portion and tightened with knurled collar. Force fit type. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	Type	NET Per C
106	Junior	$15.00

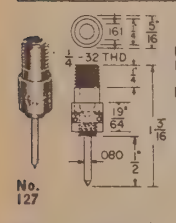
SOLDERLESS TIP PLUG Threaded Sr.



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip, then wrapped around screw portion and tightened with knurled collar. Threaded for easy assembly in plastic handle. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	Type	NET Per C
124	Senior	$15.00

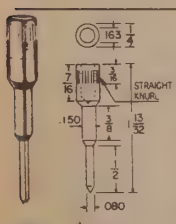
SOLDERLESS TIP PLUG Threaded Jr.



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip, then wrapped around screw portion and tightened with assembly in plastic handle. Fits knurled collar. Threaded for easy standard phone tip jacks. **Std. Pkg.100**

No.	Type	NET Per C
127	Junior	$15.00

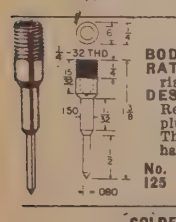
HEAVY DUTY TIP PLUG Force-Fit



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise continuous duty.
DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits all standard phone tip jacks. **Std. Pkg. 25**

No.	Type	NET Per C
156	Force Fit	$13.00

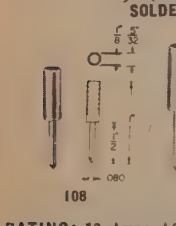
HEAVY DUTY TIP PLUG



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits standard phone tip jacks. Threaded for easy assembly in plastic handle. **Std. Pkg.100**

No.	Type	NET Per C
125	Threaded	$15.00

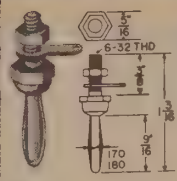
SOLDER TYPE PHONE TIPS



No.	Type	NET Per M
108	Standard	$30.00
123	Large I.D.	40.00
158	Drawn	17.00

RATING: 12 Amps AC for 10°C Temp. rise, continuous
MATERIAL: Brass, nickel plated.

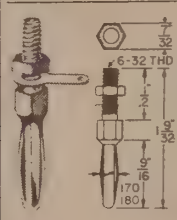
BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and phosphor bronze tinned lug. Threaded stud for panel mounting. Fits standard banana jacks. **Std. Pkg. 100**

No	NET Per C
102	$25.00

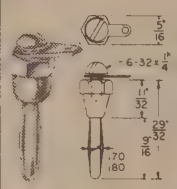
BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and phosphor bronze tinned lug. Threaded stud. for panel mounting. Fits standard banana jacks. **Std. Pkg. 100**

No.	NET Per C
103	$25.00

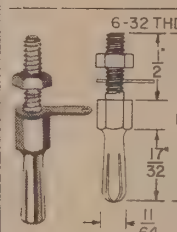
BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with screw and phosphor bronze tinned lug. Internal female permits use on all size panels. Fits standard banana jacks. **Std. Pkg. 100**

No.	Spring Material	NET Per C
100	Phosphor Bronze	$25.00
190	Beryllium Copper	30.00

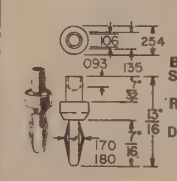
BANANA PLUG Split Type



BODY: HEX BRASS, nickel plated, cross-slotted.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Fits all standard banana jacks. Supplied with hex nut and phosphor bronze lug, threaded stud for panel mounting. Fits standard banana jacks. **Std. Pkg. 100**

No.	NET Per C
104	$17.00

MIDGET BANANA PLUG Rivet Type



BODY: BRASS, silver plated.
SPRING: Four-leaved phosphor bronze, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise. continuous duty.
DESCR.: Fits all standard banana jacks. Can be furnished in varying types to meet Jan specs. **Std. Pkg. 100**

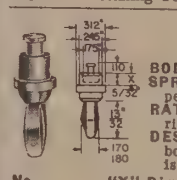
No.	NET Per C
121	$18.00
No. 3875 Staking Tool	Net Ea. $1.50

MIL-SPEC. TYPE

Same as above, made to meet Signal Corps Drawings SC-C2231. **Std. Pkg. 100**

No.	NET Per C
122	$20.00
No. 3875 Staking Tool	Net Ea. $1.50

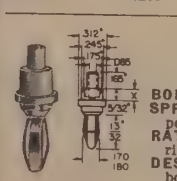
RIVET TYPE BANANA PLUG Wrap Around Type



BODY: BRASS, nickel plated.
SPRING: Four leaved, beryllium copper, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Rivets to panel or bakelite board. Wire wraps around stud and is then soldered. **Std. Pkg. 100**

No.	"X" Dim.	Panel	NET Per C
2082	.105	1/16"	$25.00
2083	.135	3/32"	25.00
2084	.165	1/8"	25.00

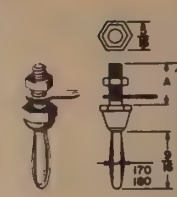
RIVET TYPE BANANA PLUG Solder Well Type



BODY: BRASS, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Rivets to panel or bakelite board. Wire solders to well in rear of plug. **Std. Pkg. 100**

No.	"X" Dim.	Panel	NET Per C
2067	.105	1/16"	$25.00
2068	.135	3/32"	25.00
2069	.165	1/8"	25.00

BANANA PLUG

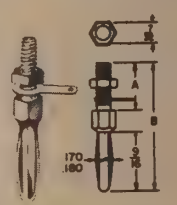


BODY: HEX BRASS, n or silver plated.
SPRING: Phosphor bronz beryllium copper, n or silver plated.
RATING: 15 Amps AC 10°C Temp. rise, contin duty.
DESCR.: Supplied with nut and tinned phos bronze lug threaded stu panel mounting. Fits st ard banana jacks. Std. Pk

PHOS. BR. SPRING Nickel Plated Overall				BERYL. COP. SPR Nickel Plated Ove	
No.	NET Per C	A	B	No.	P
431	$25.00	6-32x3/8"	1 7/32"	443	$3
432	25.00	6-32x1/2"	1 11/32"	444	3
433	25.00	6-32x3/4"	1 19/32"	445	3
434	25.00	8-32x3/8"	1 7/32"	446	3
435	25.00	8-32x1/2"	1 11/32"	447	3
436	25.00	8-32x3/4"	1 19/32"	448	3

PHOS. BR. SPRING Silver Plated Overall				BERYL. COP. SPR Silver Plated Over	
No.	NET Per C	A	B	No.	P
437	$28.00	6-32x3/8"	1 7/32"	449	$
438	28.00	6-32x1/2"	1 11/32"	450	
439	28.00	6-32x3/4"	1 19/32"	451	
440	28.00	8-32x3/8"	1 7/32"	452	
441	28.00	8-32x1/2"	1 11/32"	454	
442	28.00	8-32x3/4"	1 19/32"	455	

BANANA PLUG

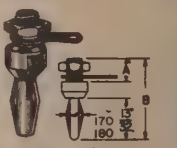


BODY: HEX BRASS, ni or silver plated.
SPRING: Phosphor bronz beryllium copper, ni or silver plated.
RATING: 15 Amps AC 10°C Temp. rise, contin duty.
DESCR.: Supplied with nut and tinned phos bronze lug threaded stud panel mounting. Fits st ard banana jacks. Std. Pkg

PHOS. BR. SPRING Nickel Plated Overall				BERYL. COP. SPRI Nickel Plated Over	
No.	NET Per C	A	B	No.	P
401	$25.00	6-32x3/8"	1 7/32"	414	$3
403	25.00	6-32x1/2"	1 11/32"	415	3
404	25.00	6-32x3/4"	1 19/32"	416	3
405	25.00	8-32x3/8"	1 7/32"	417	3
406	25.00	8-32x1/2"	1 11/32"	418	3
407	25.00	8-32x3/4"	1 19/32"	419	3

PHOS. BR. SPRING Silver Plated Overall				BERYL. COP. SPRI Silver Plated Overa	
No.	NET Per C	A	B	No.	P
408	$28.00	6-32x3/8"	1 7/32"	420	$3
409	28.00	6-32x1/2"	1 11/32"	421	3
410	28.00	6-32x3/4"	1 19/32"	422	3
411	28.00	8-32x3/8"	1 7/32"	423	3
412	28.00	8-32x1/2"	1 11/32"	424	3
413	28.00	8-32x3/4"	1 19/32"	425	3

MIDGET BANANA PLUG

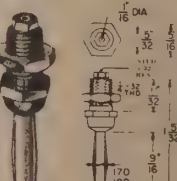


BODY: BRASS, nickel or si plated.
SPRING: Phosphor bronze beryllium copper. Nickel or ver plated.
RATING: 10 Amps AC for 1 Temp. rise, continuous duty
DESCR.: Supplied with hex and tinned phosphor bronze threaded stud for panel mounting. Fits standard ban jacks. Std. Pkg

PHOS. BR. SPRING Nickel Plated Overall				BERYL. COP. SPRI Nickel Plated Overa	
No.	NET Per C	A	B	No.	NE Per
460	$20.00	4-40x3/8"	15/16"	468	$25.
461	20.00	4-40x1/2"	1 1/16"	469	25.
462	20.00	6-32x3/8"	15/16"	470	25.
463	20.00	6-32x1/2"	1 1/16"	471	25.

PHOS. BR. SPRING Silver Plated Overall				BERYL. COP. SPRIN Silver Plated Overal	
No.	NET Per C	A	B	No.	NE Per
464	$23.00	4-40x3/8"	15/16"	472	$28.
465	23.00	4-40x1/2"	1 1/16"	473	28.
466	23.00	6-32x3/8"	15/16"	474	28.
467	23.00	6-32x1/2"	1 1/16"	475	28.

BANANA PLUG



BODY: HEX BRASS, nick plated.
SPRING: Phosphor bronze beryllium copper, nickel plate
RATING: 15 Amps AC for 10 Temp. rise, continuous duty.
DESCR.: Supplied with hex n Wire can be soldered to bra stud or directly into plug self. Stud also locks wire plug for solderless connectio Std. Pkg.

No.	Spring Material	NET Per
145	Phosphor Bronze	$25.
135	Beryllium Copper	30.

 © United Technical

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

SUBMINIATURE PLUGS & JACKS



MINIATURE BANANA PLUG
Rivet Type

BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: One piece beryllium copper spring insures positive and lasting contact. **Std. Pkg. 100**

No.	NET Per C
191	$17.00

No. 3876 Staking Tool Kit — Net Ea. $3.00



Rivet Type MINIATURE BANANA PLUG

BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: One piece beryllium copper spring insures positive and lasting contact. **Std. Pkg. 100**

No.	"X" Dim.	Panel	NET Per C
2073	.105	1/16"	$17.00
2074	.135	3/32"	17.00
2075	.165	1/8"	17.00

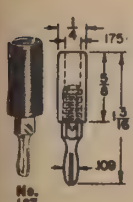
No. 3876 Staking Tool Kit — Net Ea. $3.00



MINIATURE BANANA PLUG

BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: One piece beryllium copper spring insures positive and lasting contact. **Std. Pkg. 100**

No.	NET Per C
192	$17.00



INSULATED BANANA PLUG
Sub Miniature

HANDLE: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, Class MH. Red or Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Wire solders directly into plug. Fits standard midget banana jacks. **Std. Pkg. 100**

No.	NET Per C
197	$20.00

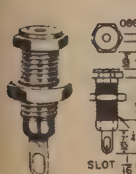


INSULATED BANANA JACK
Sub Miniature

HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, Class MH. Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 volts 60 cycle AC continuous working voltage. CAPACITANCE 6.0 pf.
DESCR.: Supplied with hex nut, fibre washer and tinned lug. Mounts in ¼" hole in panels up to ⅛" thick. Accepts standard midget banana plugs. **Std. Pkg. 100**

No.	NET Per C
196	$25.00

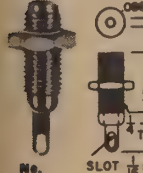
STANDARD TIP JACKS,



PHONE TIP JACK

BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Positive contact with standard phone tip plugs. Supplied with hex nut. Mounts in ¼" hole in panels up to ⅜" thick. **Std. Pkg. 100**

No.	NET Per C
107	$15.00



HEADLESS PHONE TIP JACK

BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut. Used with plastic molded instrument cases, where jack body is screwed into case. Accepts standard phone tip plugs. **Std. Pkg. 100**

No.	NET Per C
147	$12.00

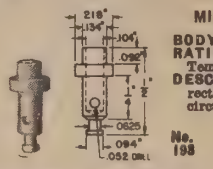


MINIATURE BANANA JACK

BODY: BRASS, silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: This jack is riveted directly to chassis or to printed circuit board for easy assembly. **Std. Pkg. 100**

No.	NET Per C
194	$1.30

No. 3875 Staking Tool — Net Ea. $1.50



MINIATURE BANANA JACK

BODY: BRASS, silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: This jack is riveted directly to chassis or to printed circuit board for easy assembly. **Std. Pkg. 100**

No.	NET Per C
198	$9.00

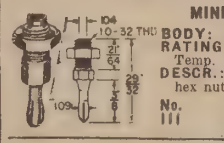
No. 2860 Staking Tool Kit — Net Ea. $3.00



MINIATURE BANANA JACK
Panel Mount

BODY: BRASS, silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: This jack is riveted directly chassis or to printed circuit board for easy assembly. **Std. Pkg. 100**

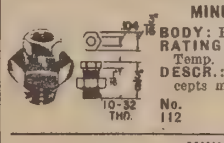
No.	"X" Dim.	Panel	NET Per C
2076	.105	1/16"	$9.00
2077	.135	3/32"	9.00
2078	.165	1/8"	9.00
3860	Staking Tool Kit		Net Ea. $3.00



MINIATURE BANANA PLUG

BODY: BRASS, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted, supplied with hex nut. Fits midget banana jacks.

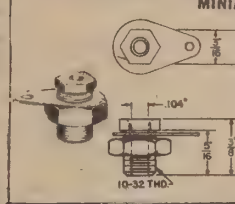
No.	NET Per C
111	$12.00



MINIATURE BANANA JACK

BODY: BRASS, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut. Accepts midget banana plugs.

No.	NET Per C
112	$9.00

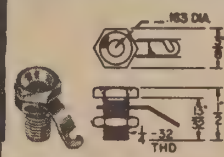


MINIATURE BANANA JACK

BODY: HEX BRASS, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and tinned lug Mounts in .196 (#10) hole in panels up to ⅛" thick. Accepts standard midget banana plugs. **Std. Pkg. 100**

No.	NET Per C
195	$9.00

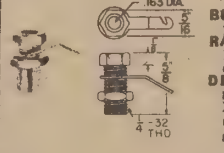
STANDARD BANANA JACKS



BANANA JACK

BODY: Hex brass nickel plated with recessed head.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug. Mounts in ¼" hole; fits panels up to ⅝" thick. Accepts standard banana plugs. **Std. Pkg. 100**

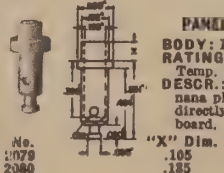
No.	NET Per C
101	$15.00



BANANA JACK

BODY: Hex brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug. Mounts in ¼" hole in panels up to ⅜" thick. Accepts standard banana plugs.

No.	Std. Pkg.	NET Per C
100	100	$15.00



PANEL MOUNT BANANA JACK

BODY: BRASS, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts all standard banana plugs. These jacks are riveted directly to chassis or bakelite board. **Std. Pkg. 100**

No.	"X" Dim.	Panel	NET Per C
2079	.105	1/16"	$11.00
2080	.135	3/32"	11.00
2081	.165	1/8"	11.00

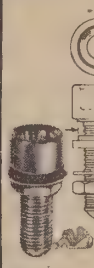
GIANT BANANA PLUGS & JACKS



INS. GIANT BANANA PLUG

HANDLE: MACHINED PHENOLIC plastic. Red or Black. SPECIFY COLOR
BODY: Hex brass, nickel plated.
SPRING: Six-leaved, phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Large deep internal well for soldering heavy duty wire. Recessed so that no metal portions are exposed when plugged into mating jack, in order to prevent shocks or grounding. **Std. Pkg. 50**

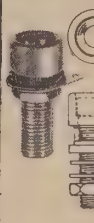
No. 285 — NET Per C $80.00



INS. GIANT BANANA JACK

HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, class MH. Red or Black. SPECIFY COLOR
BODY: Hex brass, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty, 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 7.0 pf.
DESCR.: Supplied with Hex nut, fibre washer, lock-washer, screw and tinned copper lug. Jack body recessed for snug contact. Mounts in ½" hole in panel up to ⅝" thick. **Std. Pkg. 50**

No. 286 — NET Per C $55.00



INS. GIANT BANANA JACK

HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, class MH, Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty, 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 7.0 pf.
DESCR.: Supplied with hex nut, fibre washer, lock-washer, and brass tinned lug. Jack body recessed for snug contact. Mounts in ½" hole in panel up to ⅝" thick. **Std. Pkg. 50**

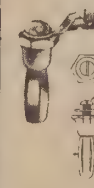
No. 287 — NET Per C $55.00



GIANT BANANA PLUG

BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug. Large deep internal well for soldering heavy duty wire. **Std. Pkg. 50**

No.	NET Per C
185	$55.00



GIANT BANANA PLUG

BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with screw and brass tinned lug. Internal female permits use on all size panels. **Std. Pkg. 50**

No.	NET Per C
186	$45.00



GIANT BANANA PLUG

BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with screw and brass tinned lug. Internal female thread permits use on all size panels. **Std. Pkg. 50**

No.	NET Per C
188	$45.00

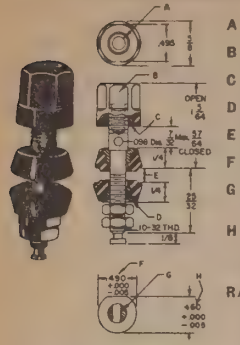


GIANT BANANA JACK

BODY: HEX BRASS, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug. **Std. Pkg. 50**

No.	Hex Head	Mtg. Hole	Panel	NET Per C
187	1/2"	3/8"	1/2"	$40.00
157	5/8"	1/2"	5/8"	40.00

NYLON BINDING POST HEX HEAD



NOTES:
- A Banana Plug Receptacle, .161 I. D.
- B Head non-removable from stud.
- C Molded-in Brass Bushing in Head.
- D Molded-in Brass Bushing in Washers.
- E For Panels 1/16" to 1/4" thick.
- F Drill ½" hole for mounting washers.
- G Wire Hole is at right angle to Flat on Insulated Washers.
- H Production Punch for keyed Slot for mounting Washers. (Sample Washer Sent on Request.)

RATING: 30 Amps AC for 10°C temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 5.0 pf.

ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR: MOLDED NYLON, per MIL-P-20693A, head and washer completely insulates post from panel. Mounts in ½" or keyed hole as indicated. Wrap around type—direct solder connection to stud. BODY & INSERTS: Brass, per QQ-B-626, Comp. 22, Gold Plated Overall.
COLORS: Red, Black, Yellow, Green, Blue, White. Specify color.

Std. Pkg. 100
No. 257 — NET Per C $45.00

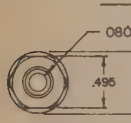
MIL-SPEC BINDING POST

Same as our #257 above, made to meet MIL-P-55149/1, Type PB01FA01 & PB01FA02. Std. Pkg. 50
No. 267 — NET Per C $55.00

ECONOMY TYPE
All Metal Parts Nickel Plated

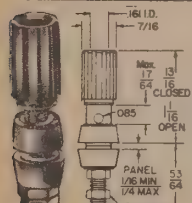
Same as No. 257 above except all metal parts NICKEL PLATED instead of gold plated. Supplied in Red and Black only. Std. Pkg. 100

No.	Color	Net Per C
899-102	Red	$35.00
899-103	Black	35.00



PIN JACK TYPE

Same as above, with Beryllium copper, gold plated pin tip receptacle replacing Note "A" above. All other specifications apply. Std. Pkg. 100
No. 258 — NET per C $50.00



NYLON BINDING POST Insulated

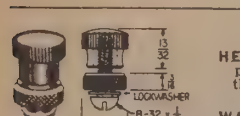
HEAD: CAPTIVE, MOLDED NYLON, per MIL-P-20693A, with brass Gold-Plated Insert.
BODY: Brass, Gold Plated
WASHERS: MOLDED NYLON, per MIL-P-20693A, with brass Gold-plated inserts.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 pf.
DESCR.: Molded washers completely insulate post from panel. Miniature washers and narrow fluted head require minimum panel space. Mounts in 3/8" round or "D" hole in panel as indicated. Wrap-around solder terminal on stud for direct connection.
COLORS: Red, Black, Yellow, Green, Blue, White.

SPECIFY COLOR — Std. Pkg. 100
No. 1517 — NET Per C $45.00

MIL-SPEC BINDING POST

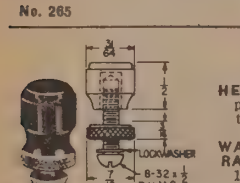
Same as our #1517 above, but made to meet MIL-P-55149/1, Type PB01FA01 & PB01FA02. Std. Pkg. 100

No.	Net Per C
1514	$55.00



BINDING POST

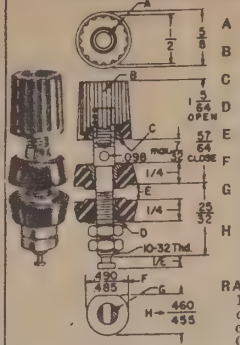
HEAD: MOLDED PHENOLIC plastic, with molded-in brass threaded insert, Red or Black. SPECIFY COLOR
WASHER: Brass, nickel plated
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied complete with screw and lockwasher. Std. Pkg. 100
No. 265 — NET Per C $25.00



BINDING POST

HEAD: MOLDED PHENOLIC plastic, with molded-in brass threaded insert, Red or Black. SPECIFY COLOR
WASHER: Brass, nickel plated
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied complete with screw and lockwasher. Std. Pkg. 100
No. 266 — NET Per C $25.00

NYLON BINDING POST FLUTED HEAD



NOTES:
- A Banana Plug Receptacle. .161 I.D.
- B Head non-removable from stud.
- C Molded-in Brass Bushing in Head.
- D Molded-in Brass Bushing in Washers.
- E For Panels 1/16" to ¼" thick.
- F Drill ½" hole for mounting washers.
- G Wire Hole is at right angle to Flat on Insulated Washers.
- H Production Punch for keyed Slot for mounting Washers. (Sample Washer Sent on Request.)

RATING: 30 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 5.0 pf.

ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR.: MOLDED NYLON, per MIL-P-20693A, head and washer completely insulates post from panel. Mounts in ½" or keyed hole as indicated. Wrap around type—direct solder connection to stud. BODY & INSERTS: Brass, per QQ-B-626, Comp. 22. Gold Plated Overall.
COLORS: Red, Black, Yellow, Green, Blue, White. Specify color.

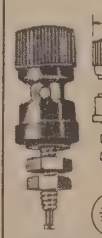
Std. Pkg. 100
No. 459 — NET Per C $45.00

MIL-SPEC BINDING POST

Same as our #459 above, made to meet MIL-P-55149/1; PB01FA03 & PB01FA04. Std. Pkg. 100
No. 495 — NET Per C $55.00

PIN JACK TYPE

Same as above, with Beryllium copper, gold plated pin tip receptacle replacing Note "A" above. All other specifications apply. Std. Pkg. 100
No. 497 — NET Per C $50.00



NYLON BINDING POST Grounded

HEAD: CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.
SPECIFY COLOR
WASHER: Molded nylon with brass nickel plated insert.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 6.0 pf.
DESCR.: Supplied with 2 hex nuts. Grounds to panel but supplied with nylon washer for uniformity of height with No. 378 when used on same panel. Can be insulated from panel by using our No. 2150 shoulder washer. Std. Pkg. 100
No. 377 — NET Per C $35.00



NYLON BINDING POST Insulated

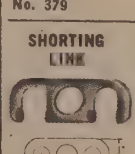
HEAD: CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.
SPECIFY COLOR
WASHER: Molded nylon with brass nickel plated insert.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf.
DESCR.: Supplied with two hex nuts. Boss washer insulates post from chassis when used with bakelite washer supplied. Min. Panel Std. Pkg. 100

No.	Thickness	Net Per C
378	1/16"	$35.00
198	1/32"	35.00



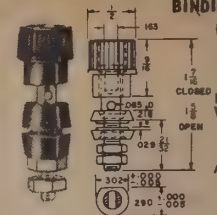
NYLON BINDING POST Grounded

HEAD: CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.
SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 7.0 pf.
DESCR.: Supplied with two hex nuts. Can be insulated from panel by using our No. 2150 shoulder washer and 2162 flat washer. Std. Pkg. 100
No. 379 — NET Per C $30.00



SHORTING LINK

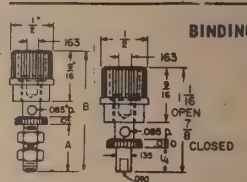
MATERIAL: Spring brass, nickel plated .033" thick.
RATING: 50 Amps AC continuous duty for 100 C Temp Rise.
DESCR.: Snaps over contact barrels of dual binding posts with standard 3/4" mounting centers for positive shorting. Snap-in feature allows use in any position without falling off. Rotates on either post for open circuit use, retaining snap-in feature. Center hole allows easy insertion or removal. Std. Pkg. 100
No. 327 — NET Per C $6.00



BINDING POST Insulated

HEAD: CAPTIVE: MOLDE BUTYRATE, per Fed. Sp L-P349A, Type 3, Class M Red or Black.
SPECIFY COL
BODY: Brass, nickel plated.
WASHERS: MOLDED B TYRATE, per MIL-P349A, Type 3, Class M With brass inserts.
ACCEPTS: Phone tip plu spade lug, banana plug, a ligator clip or wire stran
RATING: 15 Amps AC for 10°C Temp. rise, continuo duty. 1 K Volts 60 cycle AC continuous working volta CAPACITANCE 3.0 pf.
DESCR.: Mounts in 5/16" hole in panel with milled s for locking, supplied with two hex nuts. Std. Pkg.

No.	Description	Net Per
260	8-32 Stud	$45.
259	6-32 Stud	45.
	With brass nickel plated insert in head	
290	8-32 Stud	$50.
231	6-32 Stud	50.

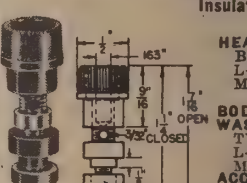


BINDING POST Grounded

HEAD: CAPTIV MOLDED BUTYRA per Fed. Spec. L-P34 Type 3, Class MS. or Black.
SPECIFY COL
BODY: Brass, nick plated.
ACCEPTS: Phone plug, spade lug, ban plug, alligator clip wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continu duty. 1 K Volts 60 cycle AC continuous working volta when insulated from panel as recommended. CAPACITANCE 5.0 pf.
DESCR: Can be completely insulated from panel by us our 2155 and 2163 fibre washers. Supplied with 2 nuts. Std. Pkg.

No.	Description	Net Pe
220	8-32 x ½ Stud	$22
230	6-32 x ⅜ Stud	22
391	Rivet Type	17
	With brass nickel plated insert in head	
280	8-32 Stud	$27
264	6-32 Stud	27
394	Rivet Type	22
3875	Staking Tool	Net Ea.

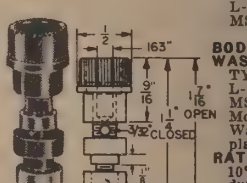
220 391



BINDING POST Insulated

HEAD: CAPTIVE: MOLDE BUTYRATE, per Fed Sp L-P349A, Type 3, Cl MS. Red or Black.
SPECIFY COL
BODY: Brass, nickel plate
WASHERS: MOLDED B TYRATE, per Fed Sp L-P349A, Type 3, Cl MS.
ACCEPTS: Phone tip pl spade lug, banana plug, a gator clip or wire strand.
RATING: 15 Amps AC 10°C Temp. rise, continuo duty. 1 K Volts 60 cycle AC continuous working voltag CAPACITANCE 5.0 pf.
DESCR.: Mounts in ¼" hole in panel. Supplied with hex nut. Std. Pkg.

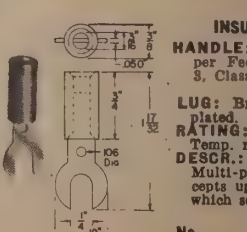
No.	Net Per
386	$25.



BINDING POST Grounded

HEAD: CAPTIVE: MOLDE BUTYRATE, per Fed Sp L-P349A, Type 3, Cla MS. Red or Black.
SPECIFY COLO
BODY: Brass, nickel plated.
WASHERS: MOLDED BU TYRATE, per Fed Spe L-P349A, Type 3, Cla MS. Mounting Washer Molded plastic. Back- Washer — Brass, nick plated.
RATING: 15 Amps AC f 10°C Temp. rise, continuo duty.
DESCR.: Mounts in ¼" ho in panel. Grounded to pan by back-up washer. Suppli with one hex nut. Std. Pkg. 1

No.	Net Per
387	$30.0



INSULATED SPADE LUG

HANDLE: MOLDED BUTYRATE per Fed. Spec. L-P349A, Ty 3, Class MS. Red or Black.
SPECIFY COLO
LUG: Brass, .050 thick, nick plated.
RATING: 30 Amps AC for 10° Temp. rise, continuous duty.
DESCR.: ⅛" I.D. fits all standar Multi-purpose binding posts. A cepts up to #10 insulated wir which solders in front hole. Std. Pkg. 1

No.	Net Per
400	$15.0

SEE BINDING POST KNOBS ON SMITH PAGE 22

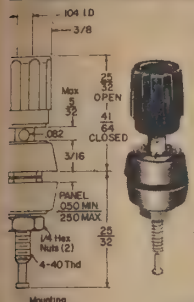
© United Technical Pul

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

MINIATURE BINDING POST

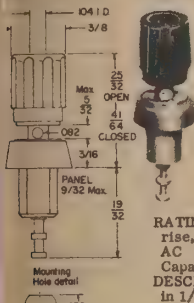


HEAD: Captive, Molded Nylon, per MIL-P-20693A, with Brass, Gold plated insert.
BODY: Brass, Gold Plated.
WASHERS: Molded Nylon, per MIL-P-20693A, with Brass Gold Plated inserts.
ACCEPTS: Standard .080" phone tip, #6 spade lug, miniature banana plug, alligator clip or wire.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC, continuous working voltage. Capacitance 2.5 pf.
DESCR.: Compact Binding post designed for use with miniaturized equipment. Molded washers completely insulate post from panel. Mounts in 1/4 round or "D" hole in panel as indicated. Wrap-around solder turret for direct wire connection.
COLORS: Available in Red, Black, Yellow, Green, Blue, and White. SPECIFY COLOR by adding Color Code suffix to basic Catalog No.

Std. Pkg. 100

No.	NET Per C
3015	$50.00

MINIATURE PRESS-FIT TEFLON* BINDING POST

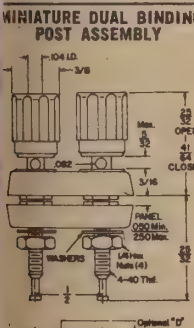


HEAD: Captive Molded Nylon, per MIL-P-20693A. with Brass, Gold plated insert.
BODY: Brass, Gold plated.
WASHER BODY: Virgin Teflon per MIL-P-19468.
ACCEPTS: Standard .080" phone tip, #6 spade lug, miniature Banana Plug, alligator clip or wire.
RATING: 5 Amps AC for 10°C. Temp. rise, continuous duty. 1 Kv, 60 cycle AC continuous working voltage. Capacitance 2.5 pf.
DESCR.: Unique binding post mounts in 1/4" "D" punched hole without any mounting hardware. Memory characteristic of Teflon locks unit hole after insertion and "D" flat prevents rotation. Compact binding post head for use with miniaturized equipment. Wrap-around solder turret for direct wire connection.
COLORS: Available in Red, Black, Yellow, Green, Blue, and White, SPECIFY COLOR by adding Color Code suffix to basic catalog No.

No.	NET Per C
3017	$60.00

*Reg. Trademark E. I. DuPont Co.

MINIATURE DUAL BINDING POST ASSEMBLY



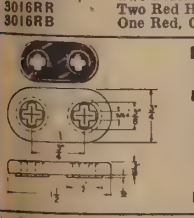


INSUL.: MOLDED Black STYRENE, octagonal-keyed to align cross-holes at alternate 90° positions.
BODIES: Brass, Gold plated.
HEADS: CAPTIVE, MOLDED NYLON, per MIL-P-20693A, with Brass plated inserts.
HARDWARE: Brass, Gold plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 2 Kv 60 cycle AC, continuous working voltage. Capacitance 3.5 pf between conductors, 3.0 pf to panel.
DESCR.: Compact Dual Binding Post designed for use with miniaturized equipment. Mounts in two ¼" round, single or double "D" holes on ½" centers, in panels up to ¼" thick. ½" center spacing designed for use with miniature dual connectors. Also accepts single miniature banana plugs, .080" phone tips, #6 spade lugs, alligator clips or wire. Wraparound solder turret for direct wire connections. Supplied with two hex nuts and flat washers.

Std. Pkg. 25

No.	Description	NET Per C
3016BR	Two Black Heads	$75.00
3016RR	Two Red Heads	75.00
3016RB	One Red, One Black Head	75.00

BLACK STYRENE INSULATOR



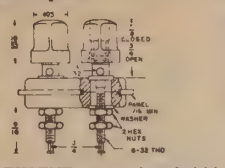
INSUL.: STYRENE, black. Spec. L-P416, Type I.
RATING: 2 K Volts 60 cycle AC continuous working voltage.
DESCR.: Mounts in two 1/2" holes on 3/4" mounting centers in panels up to 1/4" thic!

Std. Pkg. 100

No.	NET Per C
207	$3.00

DUAL ASSEMBLY Nylon





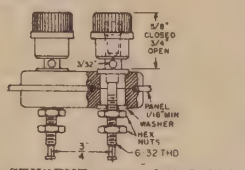
INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward, or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: MOLDED NYLON, per MIL-P-20693A, with molded in brass insert.
RATING: 15 Amps AC for 10°C Temp., rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 3.0 pf. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

No.	Description	NET PER C
269BB	Two Black Heads	$75.00
269RR	Two Red Heads	75.00
269RB	One Red, One Black Head	75.00

DUAL BINDING POST



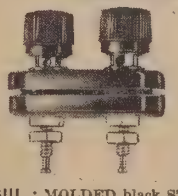


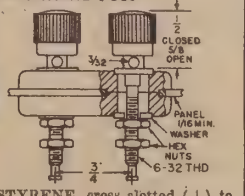
INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward, or sideways.
BODY: Brass, nickel plated.
HEAD: CAPTIVE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 3.0 pf. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

No.	Description	NET Per C
224BB	Two Black Heads	$70.00
224RR	Two Red Heads	70.00
224RB	One Red, One Black Head	70.00
	Same as above with brass nickel plated insert in head	
263BB	Two Black Heads	$80.00
263RR	Two Red Heads	80.00
263RB	One Red, One Black Head	80.00

DUAL NYLON BINDING POST



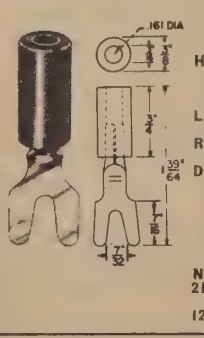


INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward, or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: MOLDED NYLON, per MIL-P-20693A, with molded in brass insert.
RATING: 15 Amps AC for 10°C Temp., rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 3.0 pf. to panel.
DESCR.: Mounts in two ¼" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

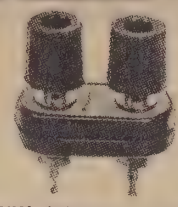
No.	Description	Net Per C
284BB	Two Black Heads	$70.00
284RR	Two Red Heads	70.00
284RB	One Red, One Black Head	70.00

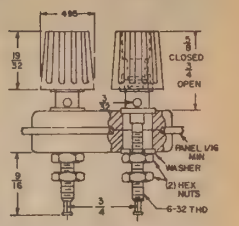
INSULATED SPADE LUG



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black. SPECIFY COLOR
LUG: Steel electro tinned, .020 thick.
RATING: 15 Amp AC for 10°C Temp. rise, continuous duty.
DESCR.: Tapered slot fits studs from ¼" dia. down to #6 dia. Fits all standard binding posts. Accepts standard banana plugs in rear. Solder bridge for wire connection up to No. 18 AWG.

No.	Description	Std. Pkg.	NET
218	Insulated Spade Lug	100	$18.00 per C
129	Lug Only	1000	25.00 per M



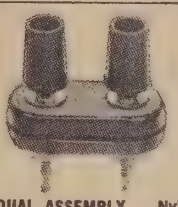


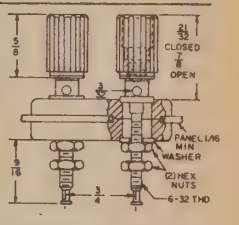
DUAL ASSEMBLY — Nylon

INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward. or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: MOLDED NYLON, per MIL-P-20693A, with molded in brass insert.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 3.0 pf. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

No.	Description	NET Per C
1813BB	Two Black Heads	$70.00
1813RR	Two Red Heads	70.00
1813RB	One Red, One Black Head	70.00





DUAL ASSEMBLY — Nylon

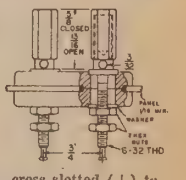
INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward. or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: MOLDED NYLON, per MIL-P-20693A, with molded in brass insert.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 3.0 pf. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

No.	Description	NET Per C
1814BB	Two Black Heads	$70.00
1814RR	Two Red Heads	70.00
1814RB	One Red, One Black Head	70.00



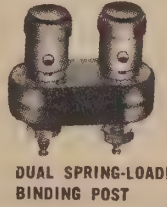
DUAL METAL BINDING POST



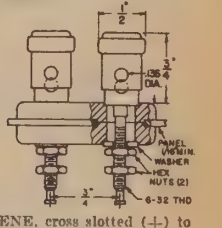
INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward, or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: Hex brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 pf. between conductors, 3.0 pf. to panel.
DESCR: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

No.	NET Per C
209	$85.00



DUAL SPRING-LOADED BINDING POST



INSUL.: MOLDED black STYRENE, cross slotted (+) to accept standard phone tips in post either forward, or sideways. Supplied in colors on special order.
HEAD: Captive, brass, nickel plated.
CAP: Moldel black styrene.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage. CAPACITANCE 4.0 pf. between conductors, 3.0 pf. to panel.
DESCR: Mounts in two ¼" holes on ⅜" mounting centers in panels up to ¼" thick. Accepts standard phone tips or wires in side holes, and locks them in place when pressure on cap is released. Supplied with 4 hex nuts, 2 flat washers.

Std. Pkg. 25

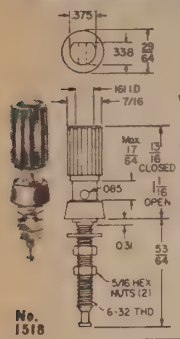
No.	NET Per C
2713	$120.00

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONEN

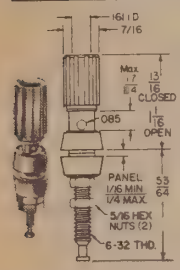
METAL BINDING POST Grounded



HEAD: CAPTIVE, Fluted Brass, Gold-plated.
BODY: Brass, Gold-plated.
WASHER: MOLDED BLACK NYLON, per MIL-P-20693A, with brass Gold-plated insert.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Fluted-head metal post to match our No. 1517. For use where direct ground connection is made to panel or chassis. Supplied with brass, gold-plated flat metal washer for grounding.
Std. Pkg. 100

No.	NET Per C
1518	$50.00

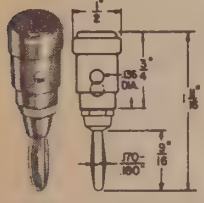
METAL BINDING POST Insulated



HEAD: CAPTIVE, Fluted Brass, Gold-plated.
BODY: Brass, Gold-plated.
WASHER: MOLDED BLACK NYLON, per MIL-P-20693A, with brass Gold-plated insert.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.
RATING: 15 Amps AC for 10°C temp. rise, continuous duty. 1 K Volts, 60 cycle AC continuous working voltage. CAPACITANCE 3.0 pf.
DESCR.: Fluted-head metal post to match our No. 1517. Mounts in ¾" round or "D" hole in panel. Molded washers insulate post from panel for use where internal ground circuit is isolated from chassis or panel. Std. Pkg. 100

No.	NET Per C
1519	$55.00

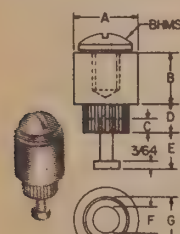
COMBINATION POST-PLUG



HEAD: Captive, brass nickel plated.
CAP: Molded Styrene, black.
BODY: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Converts any panel-mounted banana jack into a spring loaded push-post. Accepts standard phone tip, solid or stranded wire, and locks them in place on release of pressure on cap. Std. Pkg. 25

No.	NET Per C
2714	$75.00

COMBINATION TERMINALS



MATERIAL: BRASS, alloy
DESCR.: Combination Screw and Turret Terminal. Knurled shank prevents turning. Supplied complete with BHMS and Internal Tooth Lockwasher, unassembled. Std. Pkg. 100

No.	A	B	C	D	E	F	G	BHMS	Net Panel Thk	Per C
2045	5/16	1/4	1/16	3/64	1/64	1/8	.220	6-32	3/32	$11.40
2046	11/32	5/16	3/64	1/64	1/64	3/64	.250	8-32	1/8	11.40
2047	3/8	3/8	3/32	3/64	1/64	3/32	.257	10-32	1/16	11.40

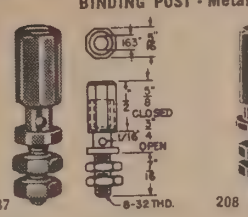
METAL BINDING POST



HEAD: BRASS, nickel plated.
WASHER: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied complete with screw and lockwasher.
Std. Pkg. 100

No.	NET Per C
110	$25.00

BINDING POST - Metal Five-Way



137 208

HEAD: CAPTIVE: octagonal brass, nickel plated.
BODY: Brass, nickel plated.
ACCEPTS: Phone tip, spade lug, banana plug, alligator clip or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 5.0 mmfd.
DESCR.: Can be completely insulated from panel by using our 2155 and 2163 fibre washers. Supplied with two hex nuts. Std. Pkg. 100

No.	Description	NET Per C
137	Standard	$30.00
208	Wrap-around	35.00

BINDING POST Spring Loaded



HEAD: Captive, Brass nickel plated.
CAP: STYRENE, black.
BODY: Brass, nickel plated.
PIN: Nickel Silver.
ACCEPTS: Standard phone tip or wire in side hole and locks them in place on release of pressure on cap.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Side dowel pin locates and prevents post from turning when mounted in panel.

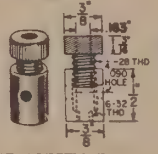
A	B	With Dowel Pin No.	With Dowel Pin NET Per C	Less Dowel Pin No.	Less Dowel Pin NET Per C
5/16"	1/8"	2701	$45.00	2801	$41.00
3/8"	1/8"	2702	47.00	2802	43.00
1/2"	1/4"	2703	49.00	2803	45.00
3/4"	1/4"	2704	50.00	2804	46.00
1"	3/8"	2705	52.00	2805	48.00
1 1/4"	3/8"	2706	55.00	2806	51.00
1 1/2"	1/2"	2707	58.00	2807	54.00
2"	3/4"	2708	60.00	2808	56.00



Same as above less threaded stud. Supplied with 6-32 internal mounting thread.

No.	Description	NET Per C
2709	With 1/8" lg. Dowel Pin	$40.00
2809	Without Dowel Pin	36.00

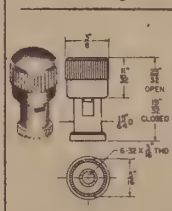
METAL BINDING POST



HEAD: BRASS, nickel plated.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts standard phone tips or banana plugs.
Std. Pkg. 100

No.	NET Per C
136	$23.00

BINDING POST Compression Type



HEAD: Captive, brass nickel plated. Straight knurled for finger grip.
BODY: Brass, nickel plated.
ACCEPTS: Phone tips or wire (up to #10 gauge).
DESCR.: Head screws down to compress wire between body and sliding contact. Internally threaded for 6-32 mounting screw. Base knurled for positive grip to panel.
Std. pkg. 100

No.	NET Per C
159	$23.00

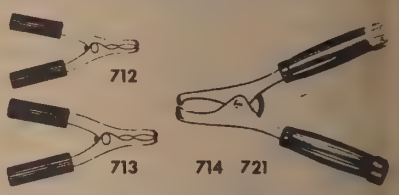
MORE THAN TEN THOUSAND ITEMS MANUFACTURED UNDER ONE ROOF

SMITH BATTERY CLIPS



No.	Current Capacity	Jaw Spread	Length	Spring	Std. Pkg.	NET Per C
STEEL, ELECTROPLATED						
365	5 Amp.	3/8"	1 5/8"	7 lbs.	100	$ 8.00
366	10 Amp.	9/16"	2"	10 lbs.	100	9.00
701	25 Amp.	1"	2 1/2"	17 lbs.	25	17.00
702	50 Amp.	1 1/2"	3 7/8"	33 lbs.	25	25.00
704	100 Amp.	1 3/8"	5"	40 lbs.	10	71.00
SOLID COPPER						
703	50 Amp.	1"	2 1/2"	17 lbs.	10	30.00
705	100 Amp.	1 1/4"	4 3/4"	33 lbs.	10	80.00
706	200 Amp.	1 3/8"	5 3/4"	40 lbs.	10	155.00

PLIER TYPE BATTERY CLIPS

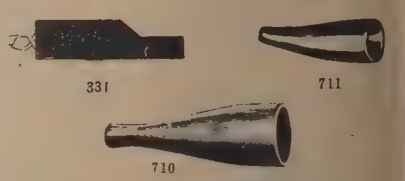


712 713 714 721

Insulated Vinylite Handles, Red or Black. SPECIFY COLOR

No.	Amps.	Material	Overall Size	Std. Pkg.	NET Per C
712	35	Steel, Cop. Pl.	3 1/4"	10	$25.00
713	75	Steel, Cop. Pl.	4 1/2"	10	29.00
714	100	Steel, Cop. Pl.	7 1/2"	10	58.00
721	300	Solid Copper	7 1/2"	5	137.00

BATTERY CLIP INSULATORS



331 711 710

"Red or Black. SPECIFY COLOR

No.	Made to fit Smith Clip #	Material	Std. Pkg.	NET Per
331	365	Vinyl	100	$ 3.50
710	704, 706	H.D. Rubber	10	75.00
711	366	Vinyl	100	8.00

MINIATURE ALLIGATOR CLIP ADAPTERS



HANDLE: MOLDED BUTYRATE, Per Fed. Spec. L-P-349-A, Type 3, Class MS, Red or Black. SPECIFY COLOR
CLIP: Steel Cadmium plated, or Copper.
BODY: Brass, Cadmium plated.
CONTACT: Beryllium Copper (Tip Jack only).
RATING: 1 Amp for 10°C Temp. rise, continuous duty.
DESCR.: Jack in rear adapts miniature alligator clip to phone tip plug, miniature banana plug or standard banana plug. Std. Pkg. 50

No.	Type	Jack Dia. "D"	NET Per C
STEEL, CADMIUM PLATED			
1320	Tip Plug	.080"	$35.00
1321	Min. Banana Plug	.104"	35.00
1322	Std. Banana Plug	.161"	35.00
COPPER			
1323	Tip Plug	.080"	40.00
1324	Min. Banana Plug	.104"	40.00
1325	Std. Banana Plug	.161"	40.00

"Your SPECIALS are STANDARD with SMITH!"

The Jacks, Plugs and Binding Posts shown on this and other pages are considered "standard" catalog items, and are available for immediate delivery in quantity.

For VARIATIONS of these standard parts to meet your SPECIAL requirements, or for entirely NEW parts made to your specifications, WE WELCOME YOUR INQUIRY!

© United Technical Pu

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

ALLIGATOR CLIPS
Solder Connection



RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ½" jaw opening. Jaws match accurately and grip securely, accepts standard banana plugs in rear. Std. Pkg. 100

No.	Type	NET Per C
00	Steel, Cad. Pl.	$6.10
40	Solid Copper	8.00
32	Brass N.P.	10.00

Screw Connection



RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ½" jaw opening. Supplied with screw for solderless connection when required. Jaws match accurately and grip securely. Accepts standard banana plugs in rear. Std. Pkg. 100

No.	Type	NET Per C
50	Steel, Cad. Pl.	$7.00
40	Solid Copper	10.80
30	Brass N.P.	12.00

JUMBO ALLIGATOR CLIP
Solder Connection



RATING: STEEL: 10 Amps AC for 10°C Temp. rise, continuous duty.
COPPER: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ¾" jaw opening. Jaws match accurately. For heavy terminal use. Std. Pkg. 100

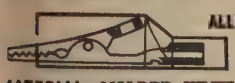
No.	Type	NET Per C
92	Steel, Cad. Pl.	$15.50
96	Solid Copper	19.80

Screw Connection

RATING: STEEL: 10 Amps AC for 10°C Temp. rise continuous duty.
COPPER: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ¾" jaw opening. Jaws match accurately. Supplied with screw for solderless connection. For heavy terminal use. Std. Pkg. 100

No.	Type	NET Per C
68	Steel, Cad. Pl.	$19.80
56	Solid Copper	23.10

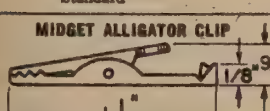
ALLIGATOR CLIP BOOTS



MATERIAL: MOLDED VINYL PLASTIC, Red, Black, Yellow, Green, Blue or White. SPECIFY COLOR
RATING: 1 K Volts 60 cycle AC continuous working voltage.
DESCR.: Fully insulated clip while allowing maximum jaw opening. No. 331 for use on standard size alligator clips such as our No. 300. No. 389 for use on miniature alligator clips, such as our No. 338. Std. Pkg. 100

No.	Description	NET Per C
389	Miniature	$2.90
331	Standard	3.50

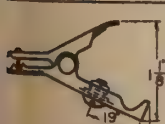
MIDGET ALLIGATOR CLIP



DESCR.: ¾6" jaw opening, jaws match accurately and grip securely. Unique SMITH spring construction. Solder connection and ears for crimping. Std. Pkg. 100

No.	Type	NET Per C
36	Steel, Cad. Pl.	$5.30
67	Copper	6.50

TL137 TEST CLIP
Signal Corps Approved



RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Steel, nickel plated, made in accordance with governme... ape s, ¾" jaw opening. Needle for piercing cor osion. Std. Pkg. 25

No.	NET Per C
815	$65.00

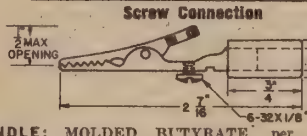
INSULATED ALLIGATOR CLIPS
Solder Connection



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ½" jaw opening. Jaws match accurately and grip securely, accepts standard banana plugs in rear. Std. Pkg. 100

No.	Type	NET Per C
301	Steel, Cad. Pl.	$9.00
381	Solid Copper	9.90
354	Brass N.P.	12.00

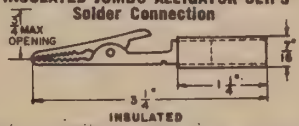
Screw Connection



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ½" jaw opening. Supplied with screw for solderless connection when required. Jaws match accurately and grip securely. Accepts standard banana plugs in rear. Std. Pkg. 100

No.	Type	NET Per C
351	Steel, Cad. Pl.	$9.80
361	Solid Copper	13.40
362	Brass N.P.	14.00

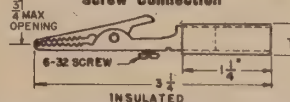
INSULATED JUMBO ALLIGATOR CLIPS
Solder Connection



INSULATED
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red or Black. SPECIFY COLOR
RATING: STEEL: 10 Amps AC for 10°C Temp. rise, continuous duty.
COPPER: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ¾" jaw opening. Jaws match accurately. For heavy terminal use. Std. Pkg. 100

No.	Type	NET Per C
393	Steel, Cad. Pl.	$23.10
397	Solid Copper	26.40

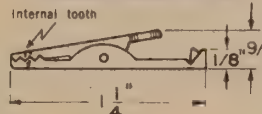
Screw Connection



INSULATED
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red or Black. SPECIFY COLOR
RATING: STEEL: 10 Amps AC for 10°C Temp. rise, continuous duty.
COPPER: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ¾" jaw opening. Jaws match accurately. Supplied with screw for solderless connection. For heavy terminal use. Std. Pkg. 100

No.	Type	NET Per C
369	Steel, Cad. Pl.	$26.40
357	Solid Copper	29.70

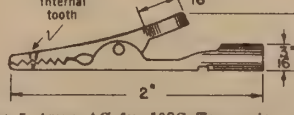
MINIATURE INSULATION PIERCING ALLIGATOR CLIP



RATING: 1 Amp AC for 10°C Temp. rise, continuous duty.
DESCR.: 3/16" jaw opening. Jaws match accurately and grip securely. Internal tooth for piercing wire insulation. Solder connection and ears for crimping. Std. Pkg. 100

No.	NET Per C
326	$8.70

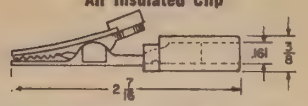
INSULATION PIERCING ALLIGATOR CLIP



RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR: 1/2" jaw opening. Jaws match accurately and grip securely. Internal tooth for piercing wire insulation. Accepts standard banana plug in rear. Std. Pkg. 100

No.	NET Per C
347	$13.60

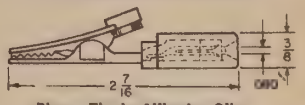
All Insulated Clip



INSULA.: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black.
CLIP: Steel cadmium plated. SPECIFY COLOR
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage.
DESCR.: All metal parts fully insulated with molded plastic. Insures against shock or grounding. Solder type connection. Std. Pkg. 50

No.	NET Per C
337	$26.40

ALL INSULATED ADAPTERS

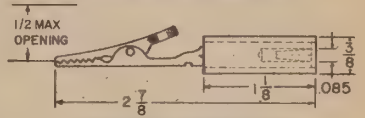


Phone Tip to Alligator Clip

INSULA.: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
CLIP: Steel, cadmium plated.
BODY: Brass.
CONTACT: Phosphor bronze.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: All metal parts fully insulated with molded plastic. Insures against shock or grounding. Jack in rear permits adapting standard phone tip plugs to alligator clips. Std. Pkg. 50

No.	NET Per C
336	$39.60

ALLIGATOR CLIP ADAPTERS



Phone Tip to Alligator Clip

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black. SPECIFY COLOR
CLIP: Steel, cadmium plated or solid copper.
BODY: Brass.
CONTACT: Phosphor bronze.
RATING: 5 Amps for 10°C Temp. rise, continuous duty.
DESCR.: Jack in rear permits adapting standard phone tip plug to alligator clips. Std. Pkg. 50

No.	Description	NET Per C
304	Steel Clip	$36.30
334	Copper Clip	$39.60

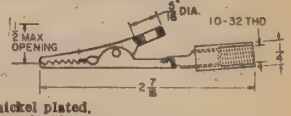
Phone Tip or Banana Plug to Alligator Clip



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
CLIP: Steel, cadmium plated or solid copper.
BODY: Brass.
CONTACT: Phosphor bronze.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Combination jack in rear, permits the adapting standard phone tip plug or banana plugs to alligator clip. Std. Pkg. 25

No.	Description	NET Per C
305	Steep Clip	$42.90
335	Copper Clip	46.20

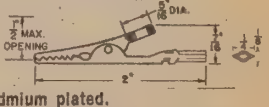
ALLIGATOR CLIP ADAPTER



BUSHING: Brass, nickel plated.
CLIP: Steel cadmium plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Adapts standard solderless tips to alligator clip. This novel quick-adapter is a must for all types of bench work. Std. Pkg. 50

No.	NET Per C
310	$14.50

ALLIGATOR CLIP ADAPTER

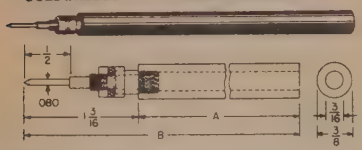


CLIP: Steel, cadmium plated.
RATING: 5 Amps AC for 10°C Temp. rise, Continuous duty.
DESCR.: ½" jaw opening. Jaws match accurately and grip securely. Accepts standard phone tip in rear. Crimped for spring tension. Std. pkg. 100

No.	NET Per C
333	$8.70

specify* SMITH
HERMAN H. SMITH INC.
FOR INDUSTRIAL ELECTRONIC COMPONEN

SOLDERLESS TEST PROD—Threaded Type



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

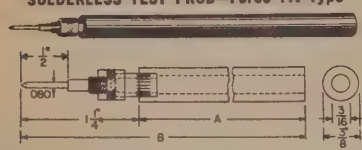
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
302	4"	5¼"	$30.00
303	5½"	6¾"	33.00

SOLDERLESS TEST PROD—Force Fit Type



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

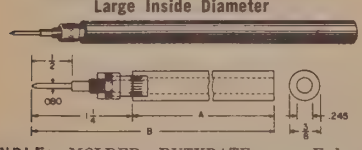
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
382	4"	5¼"	$30.00
383	5½"	6¾"	33.00

SOLDERLESS TEST PROD—Force Fit Type Large Inside Diameter



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

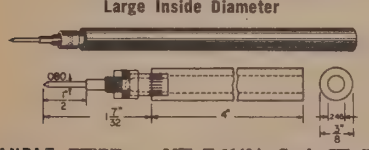
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Extra large I.D. for heavy duty wire. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
352	4"	5¼"	$30.00
353	5½"	6¾"	33.00

SOLDERLESS FIBRE TEST PROD Large Inside Diameter



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY CLOR

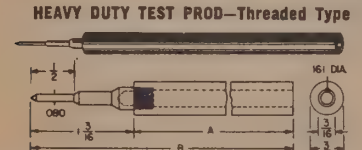
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Large I.D. permits use of heavy duty wire. Std. Pkg. 25

No.	NET Per C
323	$35.00

HEAVY DUTY TEST PROD—Threaded Type



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

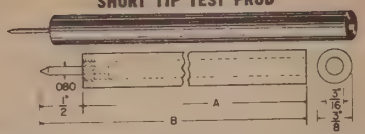
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
319	4"	5⅝"	$30.00
329	5½"	6 11/16"	33.00

SHORT TIP TEST PROD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

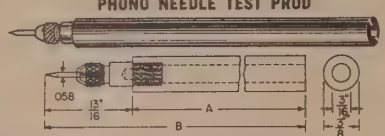
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Inserts flush with insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
363	4"	4⅛"	$25.00
364	5½"	6"	28.00

PHONO NEEDLE TEST PROD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, cont. duty.

DESCR.: Removable chuck for easy replacement or broken needles. Needle pierces corrosion or plating for positive reading. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
317	4"	4 13/16"	$30.00
318	5½"	6 13/16"	33.00

SOLDERLESS PHONO NEEDLE TEST PROD



HANDLE: XXXP Phenolic lacquered, per MIL-P-79, Form TR. Red or Black. SPECIFY COLOR

PLUG: Brass, nickel plated.

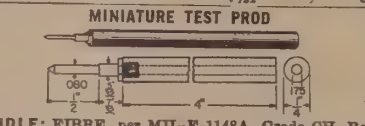
NEEDLE: Phono needle, steel.

RATING: 12 Amps AC for 10°C Temp. rise, cont. duty.

DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to pellet for solderless connections. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
314	4"	5 7/32"	$75.00
313	6"	7 7/32"	81.00

MINIATURE TEST PROD



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY CLOR

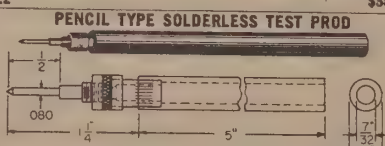
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, cont. duty.

DESCR.: Threaded for easy assembly. Ideally suited for checking all types sub-miniature equipment. Std. Pkg. 25

No.	NET Per C
322	$35.00

PENCIL TYPE SOLDERLESS TEST PROD



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class 2. Red or Black. SPECIFY COLOR

PLUG: Brass, nickel plated.

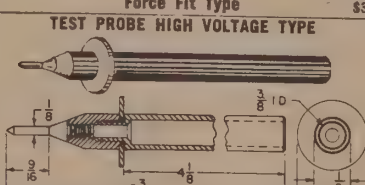
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug, then wraps around screw portion and is tightened with knurled collar. Std. Pkg. 25

No.	NET Per C
384	$30.00

Force Fit Type

TEST PROBE HIGH VOLTAGE TYPE



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY COLOR

PROBE: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 15 KV 60 cycle AC continuous working voltage.

DESCR.: Heavy insulated fibre probe with flash-over shield for high-voltage applications. Large internal I.D. accommodates shielded cable or R.F. networks. Heavy duty removal tip. Std. Pkg. 10

No.	NET Ea.
680	$.79

NYLON HANDLE PRODS AND TIPS



HANDLE: MOLDED NYLON, per MIL-P20693A. Sp ify color.

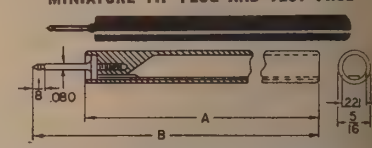
TIP: Brass, silver plated.

RATING: 10 Amps AC for 10°C Temp. rise, continu duty.

DESCR.: Solderless. Made to meet Signal Corps Draw SC-C-82761. Std. Pkg.

No.	Sig. Corps. Drawing and Part No.	Size ("A")	Color	N Pa
176	MX-1906/U	1"	Red	$80
177	MX-1907/U	1"	Black	60
178	MX-1909/U	4"	Red	70
179	MX-1910/U	4"	Black	70

MINIATURE TIP PLUG AND TEST PROD



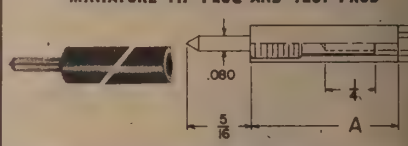
HANDLE: Molded Nylon, per MIL-P-20693A. Availa in Red or Black. SPECIFY COL

TIP: Brass, Silver plated.

DESCR.: Solderless assembly. Ideal for use with s miniature printed-circuit tip jacks. Sharp tip bre flux or oxide coating on printed-circuit pattern for po tive contact when used as prod. Grooved head of p makes positive contact when laid across wires. Fits standard .080" tip jacks. Std. Pkg.

No.	Handle (A)	Overall (B)	NET Pa
348	1"	1 5/16"	$35.
349	4"	4 5/16"	45.

MINIATURE TIP PLUG AND TEST PROD



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red or Black. SPECIFY COLOR

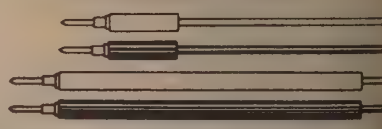
PLUG: Brass, nickel plated.

RATING: 2 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Ideally suited for checking sub-miniature equipment. Fits standard phone tip jacks. Std. Pkg. 100

No.	Std. Pkg.	Length (A)	NET Per C
244	100	¾"	$18.00
666	25	3"	30.00

MINIATURE TEST LEAD



HANDLE: MACHINED BUTYRATE, 3/16" O.D., 4" long, per MIL-P-10408A, Type I, Class II, Red and Black.

PLUG: MACHINED BUTYRATE, 3/16" O.D., ¾" long, per MIL-P-10408A, Type I, Class II.

TIPS: Brass, nickel plated. Std. Pkg. 6

No.	NET Per C
650	$1.26



LABORATORY INTERCHANGE KIT

DESCR.: All parts interchangeable, converts any standard test lead to an all purpose unit. Packaged in an electronically sealed vinyl kit.

Consists of one Red, one Black of the following
Phone tips No. 215 Spade lugs No. 218
Tip plug adapter No. 214
Alligator clip jack No. 305 Std. Pkg. 1

No. 640 **NET Ea. $2.25**

We are equipped to manufacture Patch Cords, Jumpers and Test Leads in every conceivable combination of terminal ends — plugs, jacks, clips and connectors — to be found in our entire line.

What are YOUR special requirements? We welcome your inquiry!

© United Technical Pub

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

SOLDERLESS TIP TEST LEAD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIP: Solderless: Brass, nickel plated. Std. Pkg.12

No.	Meter End	NET Per Pr.
600	Phone Tips	$1.05
601	Spade Lugs	1.05
602	Alligator Clips	1.10

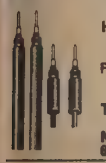
PHONO NEEDLE TEST LEAD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
BODY: Brass, nickel plated.
NEEDLE: Steel, nickel plated. Std. Pkg.12

No.	Meter End	NET Per. Pr.
613	Phone Tips	$1.05
614	Spade Lugs	1.05
615	Alligator Clips	1.10

ALL SOLDERLESS TEST LEAD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
TIP: Solderless: Brass, nickel plated. Std. Pkg.12

No.	NET Per Pr.
603	1.35

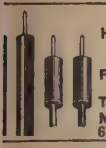
HIGH TENSION TEST LEAD



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.
PLUG: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.
TIP: Brass, nickel plated. Std. Pkg. 6

No.	Meter End	NET Per Pr.
620	Ins. Phone Tips	$2.20
621	Ins. Spade Lugs	2.20
622	Ins. Alligator Clips	2.40

SHORT TIP TEST LEAD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED PHENOLIC plastic, Red and Black.
TIP: Brass, nickel plated. Std. Pkg. 12

No.	NET Per Pr.
624	$1.10

SLIM HANDLE TEST LEAD



HANDLES: MACHINED BUTYRATE, per MIL-P-10408A, type 1, class 2. Red and Black 5/16" O.D.
TIPS: Prod: Brass, Nickel Plated. Meter End: Drawn Brass Nickel Plated. Std. Pkg. 12

No.	NET Per Pr.
670	$.85

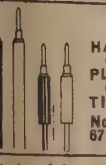
BANANA PLUG TEST LEAD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED PHENOLIC plastic, Red and Black.
TIP PLUG: Solderless: Brass, nickel plated.
BODY: Brass, nickel plated.
SPRING: Four leaved phosphor bronze, nickel plated. Std. Pkg.12

No.	NET Per Pr.
623	$1.50

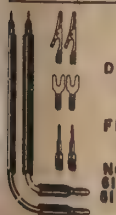
SLIM HANDLE TEST LEAD



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red, Black, ¼" O.D.
PLUG: FIBRE, per MIL-F-1148A, Grade CH. Red, Black. ¼" O.D.
TIPS: Brass, nickel plated Std. Pkg. 12

No.	NET Per Pr.
678	$1.26

TEST LEAD KIT



DESCR.: Each kit is supplied with one pair of test leads. One end test prods, other end ins. banana plugs.
FITTINGS: Two each: Phone tips, alligator clips, spade lugs. Std. Pkg. 6

No.	Type	NET Ea.
610	Solderless Prods	$1.90
611	Needle Tip Prods	1.90

SHIELDED TEST LEADS



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIP: Prod tip brass, nickel plated. Meter end, see type.
DESCR.: Plugs insert flush to insulated handle. Prods have retractable cover leaving no metal exposed. Eliminates possibility of shock or grounding. Supplied with either phone tip or banana plug meter ends. Other variations on special order. Std. Pkg. 6

o.	Type	NET Per Pr.
8	Phone Tip End	$1.90
7	Banana Plug End	2.00

ALLIGATOR CLIP TEST LEAD



HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIPS: Solderless: Brass, nickel plated.
CLIPS: Steel, cadmium plated.
BOOT: Vinyl Plastic, Red and Black Std. Pkg.12

No.	NET Per Pr.
672	$1.26

ALLIGATOR CLIP TEST LEAD



CLIPS: STEEL, cadmium plated. Std. Pkg.12

No.	Wire	NET Per Pr.
604	12 inches	$.82
605	24 inches	.85
606	36 inches	.88
607	48 inches	.91

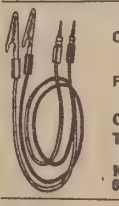
ALLIGATOR CLIP TEST LEAD With Boots



CLIPS: Steel, Cadmium Plated
BOOTS: Vinyl plastic Red and Black. Std. Pkg. 12

No.	Wire	NET Per Pr.
629	12 inches	$.92
657	24 inches	.96
658	36 inches	.99
659	48 inches	1.02

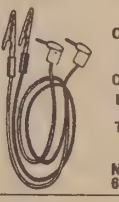
ALLIGATOR CLIP TEST LEAD



CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3. Class MS, Red and Black
PLUG HANDLES: MOLDED PHENOLIC PLASTIC, Red and Black.
CLIPS: Steel, cadmium plated
TIPS: Solderless: Brass, nickel plated. Std. Pkg.12

No.	NET Per Pr.
627	$.99

ALLIGATOR CLIP TEST LEAD



CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS, Red and Black
CLIPS: Steel, cadmium plated.
ELBOWS: MOLDED PHENOLIC plastic, Red and Black.
TIPS: Brass, Nickel Plated. Std. Pkg.12

No.	NET Per Pr.
628	$1.20

ALLIGATOR CLIP TEST LEAD



CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
CLIPS: Steel, Cadmium Plated.
ELBOWS: MOLDED PHENOLIC plastic, Red and Black.
SPRING: Four-leaved phosphor bronze, nickel plated. Std. Pkg. 12

No.	NET Per Pr.
647	$1.30

ALLIGATOR CLIP TEST LEAD



CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-349A, Type 3, Class MS, Red and Black
CLIPS: Steel, cadmium plated
LUGS: Brass, Nickel Plated. Std. Pkg. 12

No.	NET Per Pr.
649	$1.20

CROCODILE CLIP TEST LEAD



CLIPS: STEEL, Cadmium Plated.
BOOT: Vinyl Plastic, Red and Black.
HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
LUG: Brass, Nickel Plated. Std. Pkg. 12

No.	NET Per Pr.
671	$1.20

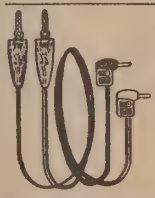
CROCODILE CLIP TEST LEAD



CLIPS: Steel, Cadmium plated.
BOOTS: Vinyl plastic, Red and Black.
ELBOWS: MOLDED PHENOLIC plastic, Red and Black.
TIPS: Brass, Nickel Plated.
SPRING: Four-leaved phosphor bronze, nickel plated. Std. Pkg. 25

No.	NET Per Pr.
648	$1.30

CROCODILE CLIP TEST LEAD



CLIPS: STEEL, cadmium plated.
BOOT: Vinyl plastic. Red and Black.
ELBOWS: MOLDED PHENOLIC plastic, Red and Black.
TIPS: Brass, Nickel Plated.
SPRING: Four-leaved phosphor bronze, nickel plated. Std. Pkg. 12

No.	NET Per Pr.
675	$1.20

"UNIVERSAL TEST LEAD" Completely Interchangeable



Fifty Leads In One! One lead can make any required test lead combination. All parts adapt into prod handle or tip handle. Complete as shown. With plastic kit. Std. Pkg. 6
WIRE: 5 KV rubber covered, 26 strands #34 copper, #20 AWG insulated to an O.D. of .125".

No.	NET Ea.
699	$3.00

"UNIVERSAL TEST LEAD" Completely Interchangeable



Fifty Leads In One. One lead can make any required test lead combination. All parts adapt into prod handle or meter tip. Supplied with miniature tips, clips, banana plugs and spade tips. Complete as shown. With plastic kit. **WIRE:** 5 KV rubber covered, 26 strands #34 copper, #20 AWG insulated to an O.D. of .125". Std. Pkg. 6

No.	Description	NET Ea.
679	Miniature	$3.00

METER TEST LEADS Solderless Prod



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIP: Solderless: Brass, nickel plated.
ELBOW: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.
BODY: Brass, nickel plated.
SPRING: Four leaved, phosphor bronze, nickel plated. Std. Pkg. 6

No.	Type	NET Per Pr.
625	Phone Tip Meter Tip	$1.50
685	Banana Meter Tip	1.70

NEEDLE PROD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
NEEDLE: Steel, nickel plated.
ELBOW: MOLDED PHENOLIC PLASTIC, Red and Black.
BODY: Brass, nickel plated.
SPRING: Four leaved, phosphor bronze, nickel plated. Std. Pkg.12

No.	Type	NET Per P.r
626	Phone Tip Meter Tip	$1.50
686	Banana Meter Tip	1.70

SLIM JIM TEST LEAD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PROBE: Steel, cadmium plated.
INSULATOR: Vinyl spaghetti tubing, Red and Black.
ELBOWS: MOLDED PHENOLIC plastic. Red and Black.
TIPS: Brass, nickel plated. Std. Pkg. 12

No.	NET Per Pr.
698	$1.35

MIDGET ALLIGATOR CLIP TEST LEAD



CLIPS: STEEL, Cadmium plated
BOOTS: Vinyl plastic Red and Black. Std. Pkg. 12

No.	Wire	NET Per Pr.
716	12 inches	$.92
717	18 inches	.94
718	24 inches	.96
719	36 inches	.99

RETRACTILE ALL SOLDERLESS TEST LEAD



HANDLE: MOLDED BUTYRATE per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED PHENOLIC plastic, Red and Black. MIL-M-14 CFG.
TIP: Solderless brass, nickel plated.
WIRE #20 gauge, 41/36 strand, 4000 volt, nom. O.D. .165. Retracts to 12". Extends to 6 ft. Std. Pkg. 6

No.	NET Per Pr.
618	$3.00

TEST LEAD WIRE SPECIFICATIONS

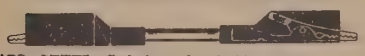
All test leads on this page are supplied with extra-flexible rubber-covered kinkless wire, 50-in. long, unless specified otherwise. **#20 wire, 26/34 strands, 5000 Volts, .125" O.D.**

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIA ELECTRONI COMPONE

JUMPERS & PATCH CORDS

COLOR CODE SUFFIX
Add to Catalog Number as required
—101 WHITE —103 BLACK —105 BLUE
—102 RED —104 GREEN —107 YELLOW

STANDARD ALLIGATOR CLIP BOTH ENDS



CLIPS: STEEL, Cadmium plated (No. 300).
BOOTS: Vinyl plastic. Boot colors match wire.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D of .140". Available in Red, Black, Yellow, Green, Blue, and White.
SPECIFY COLOR
Std. Pkg. 10

No.	Length	NET Ea.
1596-12	12 inches	$ .57
1596-24	24 inches	.59
1596-36	36 inches	.61
1596-48	48 inches	.63
1596-60	60 inches	.65

MINIATURE ALLIGATOR CLIP BOTH ENDS



CLIPS: STEEL, Cadmium plated (No. 338).
BOOTS: Vinyl plastic. Boot colors match wire.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty.
WIRE: General purpose, PVC insulated 1/64" wall, #18 AWG, 16/30 stranded conductor. Available in Red, Black, Yellow, Green, Blue, and White.
SPECIFY COLOR
Std. Pkg. 10

No.	Length	Net Ea.
1597-12	12 inches	$ .47
1597-18	18 inches	.48
1597-24	24 inches	.49
1597-36	36 inches	.51
1597-48	48 inches	.53
1597-60	60 inches	.55

STANDARD ALLIGATOR CLIP TO PIN PLUG



HANDLES: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Brass, nickel plated.
CLIPS: STEEL, Cadmium plated.
BOOTS: Vinyl plastic. Boot colors match wire.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	NET Ea.
1865-12	12 inches	$ .87
1865-24	24 inches	.89
1865-36	36 inches	.91
1865-48	48 inches	.93
1865-60	60 inches	.95

STANDARD ALLIGATOR CLIP TO BANANA PLUG



HANDLES: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
PLUG: Hex brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
CLIPS: STEEL, Cadmium plated.
BOOTS: Vinyl plastic. Boot colors match wire.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	NET Ea.
1866-12	12 inches	$ .90
1866-24	24 inches	.92
1866-36	36 inches	.95
1866-48	48 inches	.97
1866-60	60 inches	1.00

You'll find these SMITH products on the shelves of leading industrial Electronic Distributors, throughout the U.S.A. For your production runs, draw directly on our large plant inventories of standard components.

"CROSS PATCH" BANANA PLUG CORD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red, Black, Yellow, Green, Blue, White SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140".
DESCR.: Interconnects unlimited number of multiple circuits. Positive, lasting contact for all banana plugs on top and side. Std. Pkg. 10

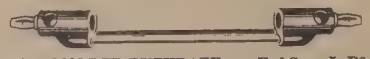
WITH PLUG SPRING 9/16" LONG

No.	Length ("A")	NET Per C
1510-8	8 inches	$130.00
1510-12	12 inches	130.00
1510-25	24 inches	135.00
1510-36	36 inches	140.00

WITH LUG SPRING 13/32" LONG

1515-8	8 inches	$130.00
1515-12	12 inches	130.00
1515-24	24 inches	135.00
1515-36	36 inches	140.00

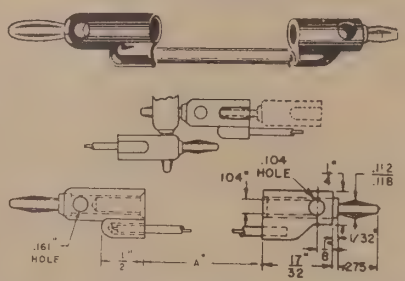
SUB-MINIATURE "CROSS PATCH" CORD



HANDLE: MOLDED BUTYRATE, per Fed Spec. L-P349A, Type 3, Class MS. Available in ten colors listed above. SPECIFY COLOR
BODY: Brass, silver plated.
SPRING: Four-leaved beryllium copper, silver plated.
WIRE: General purpose, PVC insulated, 1/64" wall. #18 AWG. 41/34 stranded conductor. Voltage rating up to 1 KV RMS.
DESCR.: Interconnects unlimited number of multiple circuits. Positive, lasting contact for banana plugs on top and side. Special lengths on request. Std. Pkg. 10

No.	Length ("A")	NET Per C
1590-6	6 inches	$130.00
1590-12	12 inches	130.00
1590-18	18 inches	135.00
1590-24	24 inches	140.00

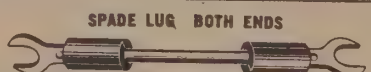
STAND "CROSS PATCH" TO MINIATURE "CROSS PATCH"



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of /140".
DESCR.: Mates with miniature or standard banana jacks or binding posts. Interconnects unlimited number of multiple circuits. Positive, lasting contact for all banana plugs on top and side. One end terminates in a miniature banana plug, other end in standard banana plug

No.	Length ("A")	NET Per C Std. Pkg. 10
1728-8	8 inches	$130.00
1728-12	12 inches	130.00
1728-24	24 inches	135.00
1728-36	36 inches	140.00

SPADE LUG BOTH ENDS



HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red, Black. SPECIFY COLOR
LUG: Brass, .050 thick, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Net Ea.
1864-12	12 inches	$ .52
1864-24	24 inches	.54
1864-36	36 inches	.56
1864-48	48 inches	.58
1864-60	60 inches	.60

MINIATURE MOLDED PATCH CORDS



HANDLE: MOLDED BUTYRATE, per Fed. L-P349A, Type 3, Class MS. Red, Yellow, B Green, assemblies. SPECIFY CO
BODY: Brass, nickel plated.
SRING: Four-leaved beryllium copper, nickel plate
WIRE: 10 KV PVC flexible wire, 65 strands #36 co insulated to an O.D. of .140".
DESCR.: Interconnects banana jacks on closely s centers where space is at a premium. Fits star banana jacks. Std. Pk

No.	WIRE	NET
1860-8	8 inches	$75.
1860-12	12 inches	75.
1860-24	24 inches	80.
1860-36	36 inches	85.

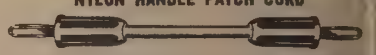
"CROSS PATCH" PIN TIP CORD



HANDLE: MOLDED BUTYRATE, per Fed. L-P349A, Type 3, Class MS. Red, Black, Yellow, G Blue, White SPECIFY CO
BODY: Brass, nickel plated.
CONTACT: Beryllium copper.
WIRE: 10 KV PVC flexible wire, 65 strands #36 cop insulated to an O.D. of .140".
DESC.: Interconnects an unlimited number of mult circuits .080" tip plug and female jack in rear of fits all standard phone tips and jacks. Side holes a standard banana plugs. Std. Pkg

No.	Length ("A")	NET Pe
1595-8	8 inches	$140
1595-12	12 inches	140
1595-24	24 inches	145
1595-36	36 inches	150

NYLON HANDLE PATCH CORD



HANDLE: MOLDED NYLON, per MIL-P-20693A. Black, Yellow or Green. SPECIFY CO
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plat
WIRE: 10 KV PVC flexible wire, 65 strands #36 co #18 AWG, insulated to an O.D. of .140".
DESCR.: Uses our standard No. 478 banana plug t terconnect circuits. Fits standard banana jacks. Std. Pk

No.	Length	NET P
1520-8	8 inches	$1
1520-12	12 inches	1
1520-24	24 inches	1
1520-36	36 inches	1

STANDARD ALLIGATOR CLIP TO SPADE LUG



HANDLES: MOLDED BUTYRATE, per Fed. L-P349A. Type 3, Class MS. Red, Black. SPECIFY CO
LUG: Brass, .050 thick, nickel plated.
CLIPS: STEEL, Cadmium plated.
BOOTS: Vinyl plastic. Boot colors match wire.
RATING: 15 Amps AC for 10°C Temp. rise, contin duty
WIRE: 10 KV PVC flexible wire, 65 strands #36 cop #18 AWG, insulated to an O.D. of .140". Std. Pkg

No.	Length	Net
1867-12	12 inches	$
1867-24	24 inches	
1867-36	36 inches	
1867-48	48 inches	
1867-60	60 inches	

FOR ENGINEERS & PURCHASING AGENTS!

NEW SMITH CATALOG

is an Important Reference Work on electronic component parts, containing: Detailed specifications! Data; Dimensional Drawings.

SEND FOR YOUR FREE COPY

© United Technical P

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

RF PATCH CORDS



	WIRE "B"	WIRE "C"	WIRE "D"
DESCRIPTION	Shielded microphone cable.	RG58/U Coaxial cable.	RG-11/U Coaxial cable.
INSULATION	Polyethylene	Polyethylene	Polyethylene
JACKET	Vinyl	Vinyl	Vinyl
NOM. CAP.	25 mmf./ft.	50 Ohm Impedance	20.5 mmf./ft.

CRIMPED FOR GREATER RELIABILITY

Patented weatherproof seal on both male and female connectors provides greater flexibility and strain relief

BNC MALE BOTH ENDS

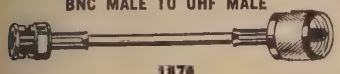


1539, 1589

WIRE: As specified above. Std. Pkg. 10

No. Wire "B"	No. Wire "C"	Length	NET Ea.
1539-12	1589-12	12"	$5.35
1539-24	1589-24	24"	5.45
1539-36	1589-36	36"	5.55
1539-48	1589-48	48"	5.65
1539-60	1589-60	60"	5.75

BNC MALE TO UHF MALE



1870

No. Wire "C"	Length	NET Ea.
1879-12	12 inches	$5.35
1879-24	24 inches	5.45
1879-36	36 inches	5.55
1879-48	48 inches	5.65
1879-60	60 inches	5.75

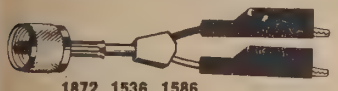
BNC FEMALE TO BNC MALE



1878

No. Wire "C"	Length	NET Ea.
1878-12	12 inches	$5.60
1878-24	24 inches	5.70
1878-36	36 inches	5.80
1878-48	48 inches	5.90
1878-60	60 inches	6.00

UHF MALE TO ALLIGATOR CLIPS



1872, 1536, 1586

CLIPS: Steel Cadmium Plated (#300).
INSUL.: Molded Vinyl (#300).
DESC.: For testing wave patterns, etc. One end terminates with UHF Male, other end with insulated alligator clips, one red, one black.
WIRE: As specified above. Std. Pkg. 10

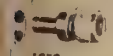
No. Wire "B"	No. Wire "C"	No. Wire "D"	Lgth.	NET Ea.
1536-12	1586-12	1872-12	12"	$5.35
1536-24	1586-24	1872-24	24"	5.45
1536-36	1586-36	1872-36	36"	5.55
1536-48	1586-48	1872-48	48"	5.65
1536-60	1586-60	1872-60	60"	5.75

SOLDERLESS COAXIAL CABLE CONNECTORS

For RG-8/U, RG-11/U, RG-13/U and RG-59/U Cables. Designed to use the inner conductor of the coaxial cable for the male pin. Can be wrench-tightened for positive contact. Std. Pkg. 25

Crimp Type

MALE CONNECTORS



1652



1656

Both types mate with female chassis fitting #1660 and Female Coupling #1680.

Withstands 350-lb pull when assembled. Packaged individually, with instruction sheet. Std. Pkg. 25

No.	For Cables	NET Ea.
1652	RG-59/U	$ .48
1656	RG-6/U	.63

FEMALE CHASSIS FITTING



Mates with #1652 connector. Mounts in 5/16" hole. Threaded stem is 3/8".

No.		NET Ea.
1660	Individually Packaged	$ .63

FEMALE COUPLING



Accepts two #1652 or 1656 connectors.

No.		NET Ea.
1680	Individually Packaged	$ .60

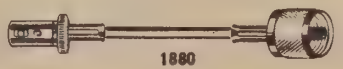
BNC FEMALE BOTH ENDS



1869

No. Wire "C"	Length	NET Ea.
1869-12	12 inches	$6.10
1689-24	24 inches	6.20
1689-36	36 inches	6.30
1869-48	48 inches	6.40
1869-60	60 inches	6.50

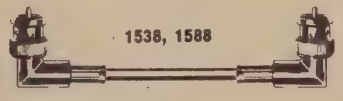
BNC FEMALE TO UHF MALE



1880

No. Wire "C"	Length	NET Ea.
1880-12	12 inches	$5.35
1880-24	24 inches	5.45
1880-36	36 inches	5.55
1880-48	48 inches	5.65
1880-60	60 inches	5.75

RIGHT ANGLE BNC TO RIGHT ANGLE BNC



1538, 1588

WIRE: As specified above.

No. Wire "B"	No. Wire "C"	Length	NET Ea.
1538-12	1588-12	12"	$10.00
1538-24	1588-24	24"	10.10
1538-36	1588-36	36"	10.20
1538-48	1588-48	48"	10.30
1538-60	1588-60	60"	10.40

BNC MALE TO ALLIGATOR CLIPS



1537, 1587

CLIPS: Steel Cadmium Plated (#300).
INSUL.: Molded Vinyl (#331).
WIRE: As specified above.
DESCR.: For testing wave patterns, etc. One end terminates with BNC Male Plug, other end with insulated alligator clips, one red, one black. Std. Pkg. 10

No. Wire "B"	No. Wire "C"	Length	NET Ea.
1537-12	1587-12	12"	$5.35
1537-24	1587-24	24"	5.45
1537-36	1587-36	36"	5.55
1537-48	1587-48	48"	5.65
1537-60	1587-60	60"	5.75

UHF COAXIAL CABLE CONNECTORS
SOLDER TYPE

R.F. Connectors for use with RG-8, 9, 10, 11, 12, 63, 65/U coaxial cables. St. Pkg. 10



1713

STRAIGHT COAXIAL CONNECTOR

Brass, Silver-plated shell.

No.	Type	NET Per C
1713	PL-259	$67.50



1715

CHASSIS TYPE COAXIAL RECEPTACLE

1715	SO-239	$67.50



1716

COAXIAL JUNCTION

For joining separate cable lengths.

1716	PL-258	$121.50

UHF MALE BOTH ENDS



1870, 1871

No. Wire "C"	No. Wire "D"	Length	NET Ea.
1871-12	1870-12	12"	$5.35
1871-24	1870-24	24"	5.45
1871-36	1870-36	36"	5.55
1871-48	1870-48	48"	5.65
1871-60	1870-60	60"	5.75

BNC MALE TO SHIELDED DOUBLE PLUG

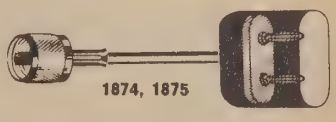


1873

BODY: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Assemblies.
SHIELD: Aluminum, black anodized.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
DESCR.: Mates with standard dual binding post having ¾" center. One end terminates with double shielded banana plug, other end with BNC Male Plug. Std. Pkg. 10

No. Wire "C"	Length	NET Ea.
1873-12	12 inches	$6.10
1873-24	24 inches	6.20
1873-36	36 inches	6.30
1873-48	48 inches	6.40
1873-60	60 inches	6.50

UHF MALE TO SHIELDED DOUBLE PLUG



1874, 1875

SHIELD: Aluminum, black anodized.
BODY: MOLDED BUTYRATE, per Fed. Spec. L-349A, Type 3, Class MS.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
DESCR.: Mates with standard dual binding post having ¾" center. One end terminates with double shielded banana plug, other end in UHF Conn. Std. Pkg. 10

No. Wire "C"	No. Wire "D"	Length	NET Ea.
1874-12	1875-12	12"	$6.10
1874-24	1875-24	24"	6.20
1874-36	1875-36	36"	6.30
1874-48	1875-48	48"	6.40
1874-60	1875-60	60"	6.50



1719

CABLE REDUCING ADAPTER

5/16" I.D. For RG-58/U.
CABLE: Brass, Silver-plated.

No.	Type	NET Per C
1719	UG-175/U	$27.00

RF COAXIAL CABLE CONNECTORS



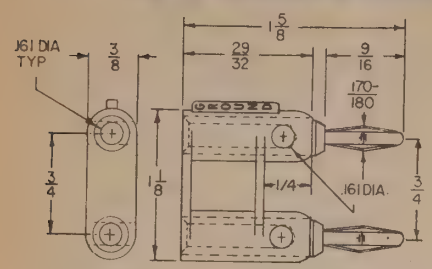
1710 1709 1717 1718

Small, weatherproof low-voltage connectors with bayonet action for quick-disconnect. Constant impedance, 50 ohms. Brass, silver-plated. For RG-55 and 58/U Cables. Std. Pkg. 5

No.	Type	Description	Each
1717	UG-88C/U	Plug	$ .93
1718	UG-913/U	90° Plug	4.05
1709	UG-290AA/U	Receptacle	1.08
1710	UG-89B/U	Jack	1.35

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONEN

STANDARD DUAL TEST ADAPTERS



MATERIALS:
BODY: Molded Butyrate, per Fed Spec. L-P349A, Type 3, Class MS. Color BLACK unless otherwise specified.
CONDUCTOR: Brass, per QQ-B-626, Comp. 22, ½ hard.
SPRING: Four-leaved beryllium copper, heat treated.
HEAD: Molded Nylon, per MIL-P-20693A.
SHIELD: Drawn Aluminum.
SCREWS: Steel, cadmium plated.

COLOR CODE SUFFIX

Add to Catalog Number as required

–101 WHITE	–105 BLUE	–108 BROWN
–102 RED	–106 ORANGE	–112 PURPLE
–103 BLACK	–107 YELLOW	–113 GREY
–104 GREEN		

FINISHES:
CONDUCTOR: Nickel plate, per QQ-N-290, Class Type VII.
SPRING: Nickel plate, as above.
TERMINAL: Gold washed.
CONNECTOR: Non-tarnish.
SHIELD: Black Anodized.

RATINGS:
CURRENT: 15 Amps AC for 10°C Temp. Rise, continuous duty, except where limited by co-axial connector
VOLTAGE: 5 KV, 60 cycle AC continuous working voltage, except where limited by co-axial connectors.
CAPACITY: 1.0 mmfd nominal between ¾" spaced conductors.
RESISTANCE: 1 milliohm or less per conductor.

CABLE MOUNTED DUAL BANANA PLUGS



SET-SCREW TYPE

REAR: 7/32 Dia. cable guide. Dual banana jacks on ¾" centers.
FRONT: Dual banana plugs on ¾" centers. Set-screws secure leads to conductors.
COLORS: Available in 10 std. colors as coded above. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1675		$.72

TURRET-TERMINAL TYPE

REAR: 7/32 Dia. cable guide. Dual banana jacks on ¾" centers.
FRONT: Dual banana plugs on ¾" centers. Turret terminals for permanent solder connection of leads.
COLORS: Available in 10 std. colors as coded above. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1676		$.81

SHIELDED TYPE

REAR: Mounting screw and locating boss. Inline cable entry with flush cable guide.
FRONT: Dual banana plugs ¾" centers. Turret terminals for permanent solder connection of leads.
SHIELD: Aluminum shield electrically connected to GND conductor fully enclosed plug and mating binding posts to reduce noise pickup.

No.	Std. Pkg. 1	NET Ea.
1787		$2.25

COMPONENT MOUNTING DUAL PLUGS



TURRET-TERMINAL TYPE

REAR: Dual banana jacks on ¾" centers for stacking.
FRONT: Dual banana plugs on ¾" centers. Turret terminals for permanent solder connection of component leads.
COLORS: Available in 10 std. colors as coded above. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1678		$.81

.080" PHONE TIP TYPE

REAR: Dual phone tip jacks on ¾" centers for stacking.
FRONT: Dual .080" phone tips on ¾" centers. Turret terminals for permanent solder connections of component leads.
COLORS: Available in Red or Black only. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1693		$.81

THREE TERMINAL ISOLATION TYPE

REAR: Dual banana jacks on ¾" centers for stacking.
CENTER: Turret-terminal connections to isolated front and rear conductors in HOT circuit, and straight-thru connection of GND circuit, with terminal, allow insertion of "T" and "P" networks in input-output circuits in instruments.
FRONT: Dual banana plugs on ¾" centers.
COLORS: Available in 10 colors as coded above. (Specify color)

No.	Std. Pkg. 1	NET Ea.
1770		$2.50

MORE THAN TEN THOUSAND
ELECTRONIC COMPONENT PARTS MANUFACTURED UNDER ONE ROOF!

COMPONENT MOUNTING DUAL PLUGS



SET-SCREW TYPE

REAR: Dual banana jacks on ¾" centers for stacking.
FRONT: Dual banana jacks on ¾" centers. Set-screws secure component leads to conductors.
COLORS: Available in 10 std. colors as coded above. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1677		$.72

SET-SCREW PHONE TIP

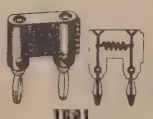
REAR: Dual banana jacks on ¾" centers for stacking.
FRONT: Dual .080" phone tips on ¾" centers. Set-screws secure component leads to conductors.
COLORS: Available in Red or Black only. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1694		$.72

FOUR TERMINAL ISOLATION TYPE

REAR: Dual banana jacks on ¾" centers for stacking.
CENTER: Turret-terminal connections to isolated front and rear conductors in both GND and HOT circuits allow insertion of matching pad or other 4-terminal networks in input circuits of instruments.
FRONT: Dual banana plugs on ¾" centers.
COLORS: Available in 10 colors as coded above. (Specify color)

No.	Std. Pkg. 1	NET Ea.
1696		$3.25



MOLDED-IN PRECISION RESISTORS

REAR: Dual banana jacks on ¾" centers for stacking.
FRONT: Dual banana plugs on ¾" centers. Banana jack side holes for stacking.
INTERNAL: Resistors and capacitors are available molded into housing. All values are available on special order only. Std. Pkg. 1

No.	NET Ea.
1681	$2.75

SHORTING TYPE



DUAL BANANA PLUG SHORTING TYPE

REAR: Dual banana jacks on ¾" centers for stacking.
INTERNAL: Busbar shorted across line.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.
COLORS: Available in Red, Black, Yellow, and Green. (Specify color)

No.	Std. Pkg. 25	NET Ea.
1516		$1.00

METAL SHORTING BAR TYPE

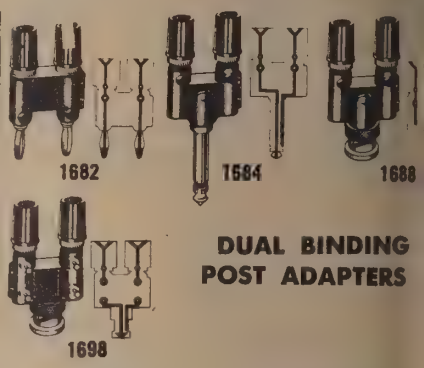
REAR: 3/32" thick brass busbar. 15 amps. continuous duty.
FRONT: Dual banana plugs on ¾" centers. Unit sits flush to panel.

No.	Std. Pkg. 10	NET Ea.
1683		$.75

.080" PHONE TIP

REAR: Dual banana jacks on ¾" centers for stacking.
INTERNAL: Busbar shorted across line.
FRONT: Dual .080" phone tips on ¾" centers. Banana jack holes for side stacking.
COLORS: Available in Red, Black, Yellow, and Green. (Specify color)

No.	Std. Pkg. 10	NET Ea.
1692		$1.00



DUAL BINDING POST ADAPTERS

BINDING POSTS TO DUAL BANANA PLUGS

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: Dual banana plugs on ¾" centers.

No.	Std. Pkg. 1	NET Ea.
1682		$2.2

BINDING POSTS TO 2-CIRCUIT PHONE PLUG

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: Standard ¼" 2-circuit phone plug.

No.	Std. Pkg. 1	NET Ea.
1684		$4.6

BINDING POSTS TO BNC MALE

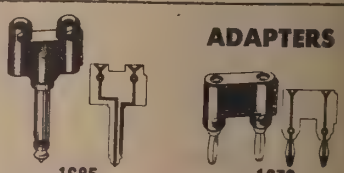
REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: BNC series co-axial plug.

No.	Std. Pkg. 1	NET Ea.
1698		$4.6

BINDING POSTS TO ISOLATED BNC MALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers.
CENTER: Turret-terminal connections to isolated front and rear conductors in both GND and HOT circuits allow insertion of matching pad or other 4-terminal networks in input circuits.
FRONT: BNC series co-axial plug.

No.	Std. Pkg. 1	NET Ea.
1698		10.0



ADAPTERS

DUAL BANANA JACKS TO 2-CIRCUIT PHONE PLUG

REAR: Dual banana jacks on ¾" centers, rear and side for stacking.
FRONT: Standard ¼" 2-circuit phone plug.

No.	Std. Pkg. 1	NET Ea.
1685		$2.60

DUAL PHONE-TIP TO DUAL BANANA PLUGS

REAR: Dual .080" phone tip jacks on ¾" centers.
FRONT: Dual banana plugs on ¾" enters. Banana jack holes for side stacking.

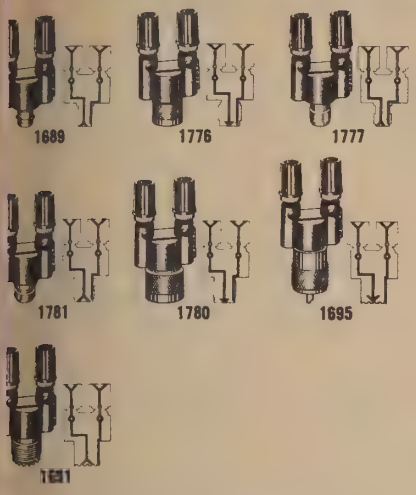
No.	Std. Pkg. 10	NET Ea.
1679		$.81

USE OUR VAST NATIONAL DISTRIBUTION NETWORK for Off-The-Shelf Deliveries of your smaller hardware requirements!

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

© United Technical Pu

DUAL BINDING POST ADAPTERS



BINDING POSTS TO BNC FEMALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: BNC series co-axial jack.

No.	Std. Pkg.	NET Ea.
1689	1	$4.60

BINDING POSTS TO TNC MALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: TNC series co-axial plug.

No.	Std. Pkg.	NET Ea.
1776	1	$7.00

BINDING POSTS TO TNC FEMALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: TNC series co-axial jack.

No.	Std. Pkg.	NET Ea.
1777	1	$6.00

BINDING POSTS TO TYPE N MALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: Type N co-axial plug.

No.	Std. Pkg.	NET Ea.
1780	1	$7.00

BINDING POSTS TO TYPE N FEMALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: Type N co-axial jack.

No.	Std. Pkg.	NET Ea.
1781	1	$6.00

BINDING POSTS TO UHF MALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: UHF series co-axial plug.

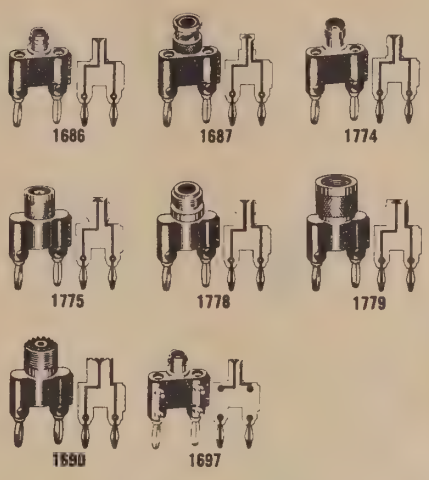
No.	Std. Pkg.	NET Ea.
1695	1	$5.00

BINDING POSTS TO UHF FEMALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ¾" centers. Banana jack holes for side stacking.
FRONT: UHF series co-axial jack.

No.	Std. Pkg.	NET Ea.
1691	1	$5.25

COAXIAL CONNECTOR ADAPTERS



BNC FEMALE TO BANANA PLUGS

REAR: BNC series co-axial jack. Banana jack holes for side stacking.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1686	1	$2.60

BNC MALE TO BANANA PLUGS

REAR: BNC series co-axial plug.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1687	1	$3.60

TNC FEMALE TO BANANA PLUGS

REAR: TNC series co-axial jack.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1774	1	$5.25

TNC MALE TO BANANA PLUGS

REAR: TNC series co-axial plug.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1775	1	$6.00

TYPE N FEMALE TO BANANA PLUGS

REAR: Type N co-axial jack.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1778	1	$5.25

TYPE N MALE TO BANANA PLUGS

REAR: Type N co-axial plug.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1779	1	$6.00

UHF FEMALE TO BANANA PLUGS

REAR: UHF series co-axial jack.
FRONT: Dual banana plugs on ¾" centers. Banana jack holes for side stacking.

No.	Std. Pkg.	NET Ea.
1690	1	$4.60

BNC FEMALE TO ISOLATED DUAL BANANA PLUGS

REAR: BNC series co-axial jack.
CENTER: Turret-terminal connections to isolated front and rear conductors in both GND and HOT circuits allow insertion of matching pad or other 4-terminal networks in input circuits.
FRONT: Dual banana plugs on ¾" centers.

No.	Std. Pkg.	NET Ea.
1697	1	$9.00

SHIELDED CO-AXIAL CONNECTOR ADAPTERS



BNC FEMALE TO DUAL BANANA PLUGS

REAR: BNC series co-axial jack.
FRONT: Dual banana plugs on ¾" centers.
SHIELD: Aluminum shield electrically connected to GND conductor fully enclose plug and mating binding posts to reduce noise pickup.

No.	Std. Pkg.	NET Ea.
1783	1	$3.25

BNC FEMALE TO DUAL BANANA JACKS

REAR: BNC series co-axial jack.
FRONT: Dual banana plugs on ¾" centers.
SHIELD: Aluminum shield electrically connected to GND conductor fully encloses jacks and mating plug to reduce noise pickup.

No.	Std. Pkg.	NET Ea.
1784	1	$3.25

TNC FEMALE TO DUAL BANANA PLUGS

REAR: TNC series co-axial jack.
FRONT: Dual banana plug ¾" center.
SHIELD: Aluminum shield electrically connected to GND conductor fully encloses plug and binding posts to reduce noise pickup.

No.	Std. Pkg.	NET Ea.
1785	1	$5.25

TYPE N FEMALE TO DUAL BANANA PLUGS

REAR: Type N co-axial jack.
FRONT: Dual banana plugs on ¾" centers.
SHIELD: Aluminum shield electrically connected to GND conductor fully enclosed plug and binding posts to reduce noise pickup.

No.	Std. Pkg.	NET Ea.
1786	1	$5.25

UHF FEMALE TO DUAL BANANA PLUGS

REAR: UHF series co-axial jack.
FRONT: Dual banana plugs on ¾" centers.
SHIELD: Aluminum shield electrically connected to GND conductor fully enclose plug and mating binding posts to reduce noise pickup.

No.	Std. Pkg.	NET Ea.
1788	1	$4.50

SPECIAL REQUIREMENTS?

Use our Engineering and Production Facilities to design and develop new products or modify existing components to meet your specific needs. "Specials are Standard with SMITH!"

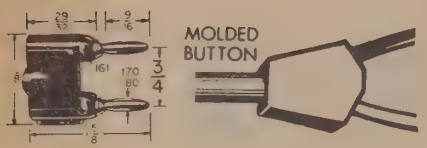
ORIGINAL EQUIPMENT MANUFACTURERS:

For your PRODUCTION requirements of SMITH standard products, we suggest you contact the factory. Use our facilities for variations to meet YOUR SPECIFICATIONS

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENT

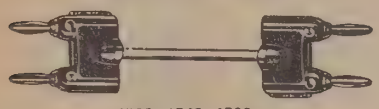
STANDARD DUAL BANANA PLUG (¾") PATCH CORDS
CENTERS

CABLE TYPES AVAILABLE



	WIRE "A"	WIRE "B"	WIRE "C"
DESCRIPTION	2-cond. tw. 18 ga. 65/36 str.	Shielded microphone cable.	RG58/U Coaxial cal
INSULATION	Vinyl	Polyethylene	Polyethylene
JACKET	Vinyl	Vinyl	Vinyl
NOM. CAP.	30 pf./ft.	25 pf./ft.	50 Ohm Impedance

DOUBLE PLUG BOTH ENDS



1530, 1540, 1580

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual binding post having ¾" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. Each end terminates with molded double banana plug. **Std. Pkg. 10**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1530-12	1540-12	1580-12	12"	$4.35
1530-24	1540-24	1580-24	24"	4.45
1530-36	1540-36	1580-36	36"	4.55
1530-48	1540-48	1580-48	48"	4.65
1530-60	1540-60	1580-60	60"	4.75

PLUG TO "CROSS-PATCH" PLUGS

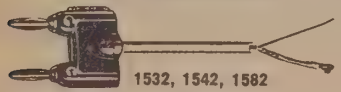


1523, 1524, 1525

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
BODY: Brass nickel plated.
SPRING: Four-leaved beryllium, nickel plated.
WIRE: As specified above.
PLUG: Our No. 1510. Red and black.
DESCR.: Mates with standard dual binding post having ¾" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana plug, other end with "Cross-Patch" banana plugs, color coded Red and Black. **Std. Pkg. 10**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1523-12	1524-12	1525-12	12"	$5.35
1523-24	1524-24	1525-24	24"	5.45
1523-36	1524-36	1525-36	36"	5.55
1523-48	1524-48	1525-48	48"	5.65
1523-60	1524-60	1525-60	60"	5.75

PLUG TO TINNED LEADS

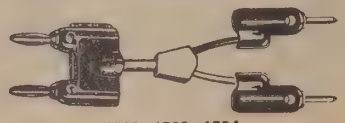


1532, 1542, 1582

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium eopper, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual binding post having ¾" center. Polarity indicated by the word GROUND molded on the side. One end terminates with double banana plug, other end stripped and tinned. **Std. Pkg. 10**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1532-12	1542-12	1582-12	12"	$3.35
1532-24	1542-24	1582-24	24"	3.45
1532-36	1542-36	1582-36	36"	3.55
1532-48	1542-48	1582-48	48"	3.65
1532-60	1542-60	1582-60	60"	3.75

PLUG TO "CROSS-PATCH" PIN PLUGS

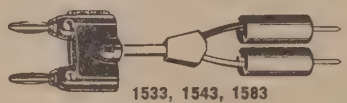


1592, 1593, 1594

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
WIRE: As specified above.
PLUG: Our No. 1595. Red and black.
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
DESCR.: Mates with standard dual binding post having ¾" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana plug, other end with "Cross-Patch" Pin plugs with standard .080" tip and jack in rear, banana jack in side, color coded Red and Black. **Std. Pkg. 10**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1592-12	1593-12	1594-12	12"	$5.35
1592-24	1593-24	1594-24	24"	5.45
1592-36	1593-36	1594-36	36"	5.55
1592-48	1593-48	1594-48	48"	5.65
1592-60	1593-60	1594-60	60"	5.75

PLUG TO PHONE TIP

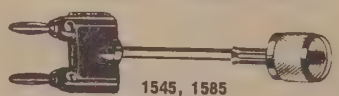


1533, 1543, 1583

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: As specified above.
PLUG: Our No. 203. Red and black.
DESCR.: Mates with standard dual binding post having ¾" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana plug, other end with insulated tip plug, one red and one black. **Std. Pkg. 10**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1533-12	1543-12	1583-12	12"	$4.70
1533-24	1543-24	1583-24	24"	4.80
1533-36	1543-36	1583-36	36"	4.90
1533-48	1543-48	1583-48	48"	5.00
1533-60	1543-60	1583-60	60"	5.10

UHF MALE TO DOUBLE PLUG

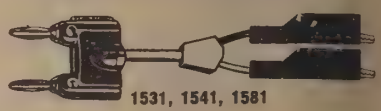


1545, 1585

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual binding post having ¾" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana plug, other end with UHF Male Plug. **Std. Pkg. 10**

No. Wire "B"	No. Wire "C"	Length	NET Ea.
1545-12	1585-12	12"	$5.35
1545-24	1585-24	24"	5.45
1545-36	1585-36	36"	5.55
1545-48	1585-48	48"	5.65
1545-60	1585-60	60"	5.75

DOUBLE PLUG TO ALLIGATOR CLIPS

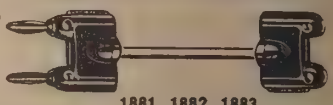


1531, 1541, 1581

HANDLES: MOLDED BUTYRATE, per Fed. Spe L-P349A, Type 3, Class MS. Black or Grey match wire.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plate
CLIP: Steel cadmium plated (No. 300).
INSUL.: Molded vinyl plastic (No. 331).
WIRE: As specified above.
DESCR.: Mates with standard dual binding post ha ing ¾" center. Polarity indicated by the wo GROUND molded on side. One end terminates wi double banana plug, other end with insulated all gator clips, one red, one black. **Std. Pkg.**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET E
1531-12	1541-12	1581-12	12"	$5.
1531-24	1541-24	1581-24	24"	5.
1531-36	1541-36	1581-36	36"	5.
1531-48	1541-48	1581-48	48"	5.
1531-60	1541-60	1581-60	60"	5.

DOUBLE PLUG TO DOUBLE JACK

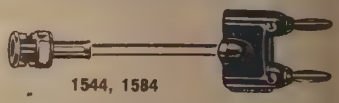


1881, 1882, 1883

HANDLES: MOLDED BUTYRATE, per Fed. Spec L-P349A, Type 3, Class MS. Black or Grey t match wire.
PLUG: Brass, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual binding post havin ¾" center. Polarity indicated by the word GROUN molded on side. Interconnects unlimited number o multiple circuits top and side. One end terminate with molded double banana plug, other end in doubl extension jack. **Std. Pkg. 1**

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea
1881-12	1882-12	1883-12	12"	$4.3
1881-24	1882-24	1883-24	24"	4.4
1881-36	1882-36	1883-36	36"	4.5
1881-48	1882-48	1883-48	48"	4.6
1881-60	1882-60	1883-60	60"	4.7

BNC MALE TO DOUBLE PLUG



1544, 1584

HANDLES: MOLDED BUTYRATE, per Fed. Spe P-P349A, Type 3, Class MS. Black or Grey match wire.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plate
WIRE: As specified above.
DESCR.: Mates with standard dual binding post havir ¾" center. Polarity indicated by the word GROUN molded on side. One end terminates with doub banana plug, other end with BNC Male Plug. **Std. Pkg.**

No. Wire "B"	No. Wire "C"	Length	NET E
1544-12	1584-12	12"	$5.
1544-24	1584-24	24"	5.
1544-36	1584-36	36"	5.
1544-48	1584-48	48"	5.
1544-60	1584-60	60"	5.

SPECIAL REQUIREMENTS?

We are equipped to manufacture Probes, Test Leads, Jumpers, Patch Cords etc., for NON-STANDARD applications. Our nationwide network of technically qualified sales-engineers is at your service, eager t help you with your special requirements and pr duction runs.

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

© United Technical P

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENTS

STANDARD DUAL BANANA PLUG (¾") PATCH CORDS
CENTERS



CABLE TYPES AVAILABLE

	WIRE "A"	WIRE "B"	WIRE "C"
DESCRIPTION	2-cond. tw. 18 ga. 65/36 str.	Shielded microphone cable.	RG58/U Coaxial cable.
INSULATION	Vinyl	Polyethylene	Polyethylene
JACKET	Vinyl	Vinyl	Vinyl
NOM. CAP.	30 pf./ft.	25 pf./ft.	50 Ohm Impedance

DOUBLE JACK TO "CROSS-PATCH" PLUGS



1895, 1896, 1897

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: As specified above.
PLUG: Our No. 1510. Red and black.
DESCR.: Mates with standard dual banana plugs having ¾" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana jacks, other end with "Cross-Patch" banana plugs, color coded Red and Black. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1895-12	1896-12	1897-12	12"	$5.35
1895-24	1896-24	1897-24	24"	5.45
1895-36	1896-36	1897-36	36"	5.55
1895-48	1896-48	1897-48	48"	5.65
1895-60	1896-60	1897-60	60"	5.75

DOUBLE JACK TO "CROSS-PATCH" PIN PLUGS



1861, 1898, 1899

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
BODY: Brass, nickel plated.
WIRE: As specified above.
PLUG: Our No. 1595. Red and black.
DESCR.: Mates with standard dual banana plugs having ¾" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana jacks, other end with "Cross-Patch" Pin plugs with standard .080" tip and jack in rear, banana jack in side, color coded Red and Black. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1861-12	1898-12	1899-12	12"	$5.35
1861-24	1898-24	1899-24	24"	5.45
1861-36	1898-36	1899-36	36"	5.55
1861-48	1898-48	1899-48	48"	5.65
1861-60	1898-60	1899-60	60"	5.75

FOR YOUR
SPECIAL REQUIREMENTS

We are equipped to manufacture Patch Cords, Jumpers and Test Leads in every conceivable combination of terminal ends — plugs, jacks, clips and connectors — to be found in our entire line.

What are YOUR special requirements? We welcome your inquiry!

DOUBLE JACK TO PHONE TIP

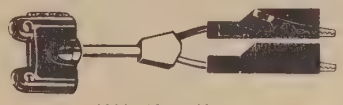


1892, 1893, 1894

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
PLUG: Brass, nickel plated.
WIRE: As specified above.
PLUG: Our No. 203, Red and black.
DESCR.: Mates with standard dual banana plugs having ¾" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana jacks, other end with insulated tip plug, one red and one black. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1892-12	1893-12	1894-12	12"	$4.70
1892-24	1893-24	1894-24	24"	4.80
1892-36	1893-36	1894-36	36"	4.90
1892-48	1893-48	1894-48	48"	5.00
1892-60	1893-60	1894-60	60"	5.10

DOUBLE JACK TO ALLIGATOR CLIPS



1889, 1890, 1891

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
JACKS: Brass, nickel plated.
CLIP: Steel cadmium plated (No. 300).
INSUL.: Molded vinyl plastic (No. 331).
WIRE: As specified above.
DESCR.: Mates with standard dual banana plugs having ¾" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana jacks, other end with insulated alligator clips, one red, one black. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1889-12	1890-12	1891-12	12"	$5.35
1889-24	1890-24	1891-24	24"	5.45
1889-36	1890-36	1891-36	36"	5.55
1889-48	1890-48	1891-48	48"	5.65
1889-60	1890-60	1891-60	60"	5.75

DOUBLE JACK TO DOUBLE PLUG



1881, 1882, 1883

HANDLES: MOLDED BUTYRATE, per Fed. Spec. LP349A, Type 3, Class MS. Black or Grey to match wire.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual binding post having ¾" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. One end terminates with molded double banana plug, other end in double extension jack.

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1881-12	1882-12	1883-12	12"	$4.35
1881-24	1882-24	1883-24	24"	4.45
1881-36	1882-36	1883-36	36"	4.55
1881-48	1882-48	1883-48	48"	4.65
1881-60	1882-60	1883-60	60"	4.75

DOUBLE JACK TO STRIPPED & TINNED LEADS



1886, 1887, 1888

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
PLUG: Brass, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual plugs having ¾" center. Polarity indicated by the word GROUND molded on side. One end terminates in double extension jack, other end in stripped and tinned leads. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1886-12	1887-12	1888-12	12"	$3.35
1886-24	1887-24	1888-24	24"	3.45
1886-36	1887-36	1888-36	36"	3.55
1886-48	1887-48	1888-48	48"	3.65
1886-60	1887-60	1888-60	60"	3.75

SHIELDED DOUBLE PLUG TO SHIELDED DOUBLE PLUG



1876, 1877

SHIELD: Aluminum, black anodized.
BODY: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
DESCR.: Mates with standard dual binding post having ¾" center. Both ends terminate with double shielded banana plugs. Std. Pkg. 10

No. RG58/U Wire	No. RG-11/U Wire	Length	NET Ea.
1876-12	1877-12	12"	$5.85
1876-24	1877-24	24"	5.95
1876-36	1877-36	36"	6.05
1876-48	1877-48	48"	6.15
1876-60	1877-60	60"	6.25

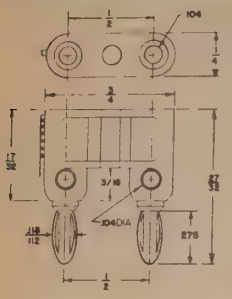
DOUBLE JACK TO SHIELDED DOUBLE PLUG



1884, 1885

SHIELD: Aluminum, black anodized.
HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Black or Grey to match wire.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: As specified above.
DESCR.: Mates with standard dual binding post having ¾" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. One end terminates with molded double shielded banana plug, other end in double extension jack. Std. Pkg. 10

No. Wire "B"	No. Wire "C"	Length	NET Ea.
1884-12	1885-12	12"	$5.30
1884-24	1885-24	24"	5.40
1884-36	1885-36	36"	5.50
1884-48	1885-48	48"	5.60
1884-60	1885-60	60"	5.70



MINIATURE DUAL TEST ADAPTERS

CAPACITY: 3.0 pf. nominal between ½" spaced conductors.
RESISTANCE: 1 milliohm or less per conductor.
MATERIALS:
BODY: Molded Butyrate, per Fed. Spec. L-P349A, Type 3, Class MS. Color BLACK unless otherwise specified.
CONDUCTOR: Brass, per QQ-B-626, Comp. 22, ½ hard.
SPRING: Four-leaved beryllium copper, heat treated.
HEAD: Molded Nylon, per MIL-P-20693A. **SCREWS:** Steel, cadmium plated.
FINISHES:
CONDUCTOR: Nickel plate, per QQ-N-290, Class I, Type VII.
SPRING: Nickel plated. **TERMINAL:** Gold washed. **CONNECTOR:** Non-tarnish Plate.

RATINGS:
CURRENT: 5 Amps AC for 10°C Temp. Rise, continuous duty, except where limited by co-axial connectors.
VOLTAGE: 2 KV, 60 cycle AC continuous working voltage, except where limited by co-axial connectors.

SET SCREW CONNECTION



1754 1749

BANANA PLUGS

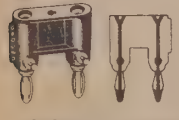
REAR: Dual banana jacks on ½" centers for stacking.
FRONT: Dual banana plugs on ½" centers. Set-screws secure leads to conductors.
COLORS: Available in Red or Black (Specify color.) **Std. Pkg. 10**

No.	NET Ea.
1749	$ .72

.080 PHONE TIP

REAR: Dual banana jacks on ½" centers for stacking.
FRONT: Dual .080" phone tips on ½" centers. Set-screws secure component leads to conductors.
COLORS: Available in Red or Black (Specify color.) **Std. Pkg. 10**

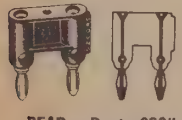
No.	NET Ea.
1754	$ .72



TURRET TERMINAL CONNECTION

REAR: Dual banana jacks on ½" centers for stacking.
FRONT: Dual banana plugs on ½" centers, Turret terminals for permanent solder connection of component leads.
COLORS: Available in Red or Black (Specify color.) **Std. Pkg. 10**

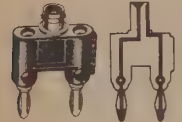
No.	NET Ea.
1750	$ .81



PHONE TIP ADAPTER

REAR: Dual .080" phone tip jacks on ½" centers for stacking.
FRONT: Dual banana plugs on ½" centers.
COLORS: Available in Red or Black (Specify color.) **Std. Pkg. 10**

No.	NET Ea.
1751	$ .81



BNC FEMALE TO BANANA PLUGS

REAR: BNC series co-axial jack. Banana jack holes for stacking.
FRONT: Dual banana plugs on ½" centers. Banana jack holes for side stacking.

No.	Std. Pkg. 1	NET Ea.
1758	Black only	$3.00

MOLDED-IN SHORTING TYPE



1752 1753

BANANA PLUGS

REAR: Dual banana jacks on ½" centers for stacking.
INTERNAL: Busbar shorted across line.
FRONT: Dual banana plugs on ½" centers. Banana jack holes for side stacking.
COLORS: Available in Red or Black (Specify color.) **Std. Pkg. 10**

No.	NET Ea.
1752	$ .72

.080 PHONE TIP

REAR: Dual banana jacks on ½" centers for stacking.
INTERNAL: Busbar shorted across line.
FRONT: Dual .080 phone tips on ½" centers. Banana jack holes for side stacking.
COLORS: Available in Red or Black (Specify color.) **Std. Pkg. 10**

No.	NET Ea.
1753	$ .72

BINDING POSTS TO



1755 1756 1757

DUAL BANANA PLUGS

REAR: Insulated dual 5-way binding posts, Red and Black heads on ½" centers, Banana jack holes for side stacking.
FRONT: Dual banana plugs on ½" centers.

No.	Std. Pkg. 1	NET Ea.
1755	Black only	$2.25

BNC MALE

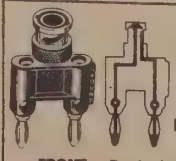
REAR: Insulated dual 5-way binding posts, Red and Black heads on ½" centers. Banana jack holes for side stacking.
FRONT: BNC series co-axial plug.

No.	Std. Pkg. 1	NET Ea.
1756	Black only	$4.60

BNC FEMALE

REAR: Insulated dual 5-way binding posts, Red and Black heads on ½" centers. Banana jack holes for side stacking.
FRONT: BNC series co-axial jack.

No.	Std. Pkg. 1	NET Ea.
1757	Black only	$4.60



BNC MALE TO BANANA PLUGS

REAR: BNC series co-axial plug.
FRONT: Dual banana plugs on ½" centers. Banana jack holes for side stacking.

No.	Std. Pkg. 1	NET Ea.
1759	Black only	$3.95

MINIATURE DUAL BANANA PLUG PATCH CORDS

MINIATURE DUAL BANANA PLUG TO STANDARD DUAL BANANA PLUG



HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
PLUG: Brass, Nickel plated.
SPRING: Four-leaved Beryllium Copper, Nickel plate.
WIRE: RC-174 Coaxial wire.
DESCR.: Mates with standard or miniature banana jacks or binding posts having ½" center or ¾" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. One end terminates in a miniature dual banana plug, ½" center, other end in a standard dual banana plug ¾" center. **Std. Pkg. 10**

No.	Length	NET Ea.
1729-12	12"	$4.35
1729-24	24"	4.45
1729-36	36"	4.55
1729-48	48"	4.65
1729-60	60"	4.75

MINIATURE DUAL BANANA PLUG PATCH CORDS



HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
PLUGS: Brass, Nickel plated.
SPRING: Four-leaved Beryllium Copper, Nickel plated.
WIRE: RG-174/U Coaxial Cable.
DESCR.: Mates with miniature dual binding posts or banana jacks having ½" centers. Polarity indicated by word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. Each end terminated with molded double banana plug. **Std. Pkg. 10**

No.	Length	NET Ea.
1599-12	12"	$4.35
1599-24	24"	4.45
1599-36	36"	4.55
1599-48	48"	4.65
1599-60	60"	4.75

MINIATURE DUAL BANANA PLUG TO MINIATURE CROSS PATCH BANANA PLUGS



HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
BODIES: Brass, Nickel plated.
SPRING: Four-leaved Beryllium Copper, Nickel plated.
WIRE: RG-174/U Coaxial Cable.
PLUGS: Our No. 1590, Red and Black.
DESCR.: Mates with miniature dual binding posts or banana jacks having ½" centers. Polarity indicated by word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana plug, other end with Cross-Patch banana plugs, color coded Red and Black. **Std. Pkg. 10**

No.	Length	NET Ea.
1738-12	12"	$5.35
1738-24	24"	5.45
1738-36	36"	5.55
1738-48	48"	5.65
1738-60	60"	5.75

MINIATURE DUAL BANANA PLUG TO STANDARD CROSS PATCH PIN PLUGS



HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.
BODIES: Brass, Nickel plated.
SPRING: Four-leaved Beryllium Copper, Nickel plated.
WIRE: RG-174/U Coaxial Cable.ble.
PLUGS: Our No. 1595, Red and Black.
DESCR.: Mates with miniature dual binding posts or banana jacks having ½" centers. Polarity indicated by word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana plug, other end with cross-patch pin plugs with standard .080" tip and jack in rear, banana jack in side, color coded Red and Black. **Std. Pkg. 10**

No.	Length	NET Ea.
1535-12	12"	$5.35
1535-24	24"	5.45
1535-36	36"	5.55
1535-48	48"	5.65
1535-60	60"	5.75

 © United Technical Pub

pecify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

MINIATURE DUAL BANANA PLUG PATCH CORDS

INIATURE DUAL BANANA PLUG TO BNC MALE



IDLES: MOLDED BUTYRATE, per Fed. Spec. P349A, Type 3, Class MS.
IG: Brass, Nickel plated.
ING: Four-leaved Beryllium Copper, Nickel plated.
E: RG-174/U Coaxial Cable.
IN.: BNC male.
ICR.: Mates with miniature dual binding posts or nana jacks having ½" center. Polarity indicated the word GROUND molded on side. One end rminates with the double banana plug, other end th BNC male conn. Std. Pkg. 10

).	Length	NET Ea.
-12	12"	$5.35
-24	24"	5.45
-36	36"	5.55
-48	48"	5.65
-60	60"	5.75

IATURE DUAL BANANA PLUGS TO TINNED LEADS



IDLE: MOLDED BUTYRATE, per Fed. Spec. P349A, Type 3, Class MS.
IES: Brass, Nickel plated.
ING: Four-leaved Beryllium Copper, Nickel plated.
E: RG-174/U Coaxial Cable.
CR.: Mates with miniature dual binding posts or nana jacks having ½" centers. Polarity indicated the word GROUND molded on side. One end rminates with double banana plug, other end ipped and tinned. Std. Pkg. 10

).	Length	NET Ea.
-12	12"	$3.35
-24	24"	3.45
-36	36"	3.55
-48	48"	3.65
-60	60"	3.75

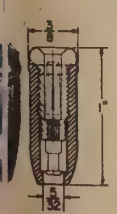
MINIATURE DUAL BANANA PLUG TO INSULATED MINI-CLIPS



NDLES: MOLDED BUTYRATE, per Fed. Spec. -P348A, Class MS.
IES: Brass, Nickel plated.
ING: Four-leaved Beryllium Copper, Nickel plated.
P: Steel cadmium plated (No. 338).
ULATOR: Molded vinyl plastic (No. 389).
RE: RG-174/U Coaxial Cable.
CR.: Mates with miniature dual binding posts or nana jacks having ½" centers. Polarity indicated the word GROUND molded on side. One end rminates with double banana plug, other end with sulated miniature clips. Std. Pkg. 10

o.	Length	NET Ea.
1-12	12"	$5.35
1-24	24"	5.45
1-36	36"	5.55
1-48	48"	5.65
1-60	60"	5.75

NYLON IN-LINE TIP JACK



Color Code Suffix
Add to Catalog Number as Required

—101 WHITE	—106 ORANGE
—102 RED	—107 YELLOW
—103 BLACK	—108 BROWN
—104 GREEN	—112 PURPLE
—105 BLUE	—113 GREY

All Nylon

HANDLE: MOLDED NYLON, per MIL-P-20693A. Supplied in 10 colors, as coded above.
BODY: Molded Nylon, per MIL-P-20693A.
CONTACT: Phosphor Bronze, gold plated.
TING: 15 Amps AC for 10°C Temp. rise, continuous uty. 5 KV 60 cycle AC continuous working voltage.
SCR.: Fits all standard phone-tip plugs, with recessed ntact for safe connection. Ideally suited for use in atch and extension cords. Can also be used for panel ounting where wrap-around terminal connection must be nsulated at rear. Std. Pkg. 50

1513	NET Per C $30.00

MINIATURE SINGLE TEST ADAPTERS

Materials:

BODIES MACHINED: Butyrate, per MIL-P-10408A, Type 1, Class 2, Color Black or Red, Specify color by adding color code suffix to basic part No. as coded above.
CONDUCTORS: Brass, per QQ-B-626, Comp. 22, half hard.
SPRINGS: Four-leaved beryllium copper, heat-treated.
HEADS: Molded Nylon, Per MIL-P-20693A.
SCREWS: Steel, cadmium plated.

Finishes:

CONDUCTORS: Nickel Plate, per QQ-N-290, Class I, Type VII.
SPRING: Nickel Plate, as above.
TERMINAL: Gold washed.

Mechanical	Standard Adapters	Miniature Adapters
PHONE TIP:	.080 Dia. x ½" long.	.080 Dia. x ⅜" long
BANANA PLUG:	.180/.170 Dia. x 9/16" long	.118/.112 Dia. x 9/32" long
PHONE JACKS:	.080 Dia.	.080 Dia.
BANANA JACKS:	.161 Dia.	.104 Dia.
BODIES:	⅜" Dia.	¼" Dia.

Ratings:

CURRENT: 15 Amps (Standard), 5 Amps (Miniature) AC for 10°C Temp. Rise, Continuous Duty, except where limited by a co-axial connector.
VOLTAGE: 5 KV (Standard), 2 KV (Miniature) 60 cycle AC Continuous Working Voltage, except where limited by co-axial connector.
RESISTANCE: 1 Milliohm or less when seated in proper mating connectors.

COLOR CODE SUFFIX Add to Catalog Number as Required —103 BLACK —102 RED



BINDING POST TO BANANA PLUG

REAR: Insulated 5-way binding post.
FRONT: Standard or Miniature Banana plug. Banana jack hole or side stacking. Std. Pkg. 10

No.	Description	NET Ea.
5025	Standard Adapter	$1.10
5035	Miniature Adapter	1.10



BINDING POST TO PHONE TIP

REAR: Insulated 5-way binding post.
FRONT: Standard .080 phone tip. Banana jack hole for side stacking. Std. Pkg. 10

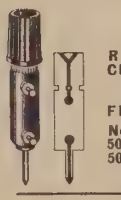
No.	Description	NET Ea.
5026	Standard Adapter	$1.00
5036	Miniature Adapter	1.00



BINDING POST TO ISOLATED BANANA PLUG

REAR: Insulated 5-way binding post.
CENTER: Turret-terminal connections to isolated front and rear conductors allow insertion of component in series input circuit.
FRONT: Standard or miniature banana plug. Std. Pkg. 10

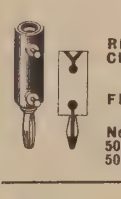
No.	Description	NET Ea.
5027	Standard Adapter	$1.10
5037	Miniature Adapter	1.10



BINDING POST TO ISOLATED PHONE TIP

REAR: Insulated 5-way binding post.
CENTER: Turret-terminal connections to isolated front and rear conductors allow insertion of component in series input circuit.
FRONT: Standard .080 phone tip. Std. Pkg. 10

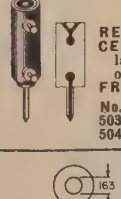
No.	Description	NET Ea.
5028	Standard Adapter	$1.00
5038	Miniature Adapter	1.00



BANANA JACK TO ISOLATED BANANA PLUG

REAR: Standard or Miniature Banana Jack.
CENTER: Turret-terminal connections to isolated front and rear conductors allow insertion of component in series input circuit.
FRONT: Standard or miniature banana plug. Std. Pkg. 10

No.	Description	NET Ea.
5029	Standard Adapter	$1.00
5039	Miniature Adapter	1.00



TIP JACK TO ISOLATED PHONE TIP

REAR: Standard .080 tip jack.
CENTER: Turret-terminal connections to isolated front and rear conductors allow insertion of component in series input circuit.
FRONT: Standard .080 phone tip. Std. Pkg. 10

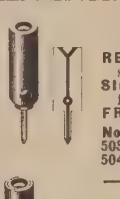
No.	Description	NET Ea.
5030	Standard Adapter	$.95
5040	Miniature Adapter	.95



IN-LINE BANANA JACK

HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
CAP: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Suitable for test lead extension where long leads are required. Accepts standard banana plugs. Std. Pkg. 50

No.	NET Per C
251	$21.00



STACKING SOLDERLESS PHONE TIP

REAR: Standard or miniature banana jack for stacking.
SIDE: Wire lead hole secures test lead with internal set-screw.
FRONT: Standard .080 phone tip. Std. Pkg. 10

No.	Description	NET Ea.
5031	Standard Adapter	$.65
5041	Miniature Adapter	.65



STACKING SOLDERLESS BANANA PLUG

REAR: Miniature Banana jack for stacking.
SIDE: Wire lead hole secures test lead with internal set-screw.
FRONT: Miniature banana plug.

No.	Description	NET Ea.
5042	Miniature Adapter	$.65



BNC SERIES JACK TO BANANA PLUG

REAR: BNC Series co-axial jack.
SIDE: Banana jack hole for side stacking.
FRONT: Standard banana plug. Std. Pkg. 10

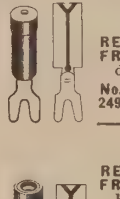
No.	Description	NET Ea.
5032	Standard Adapter	$2.00



TIP JACK TO BANANA PLUG

REAR: Standard .080 phone tip jack.
FRONT: Standard or miniature banana plug. Banana jack hole for side stacking. Std. Pkg. 10

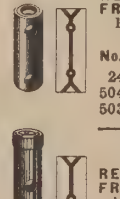
No.	Description	NET Per C
214	Standard Adapter	$50.00
5033	Miniature Adapter	50.00



TIP JACK TO SPADE LUG

REAR: Standard .080 tip jack.
FRONT: Tapered spade lug fits studs from ⅛" down to #6. Std. Pkg. 50

No.	Description	NET Per C
249	Standard Adapter	$40.00



BANANA PLUG SPLICE

REAR: Standard or miniature banana jack.
FRONT: Standard or miniature banana jack. Banana jack hole for side stacking. Std. Pkg. 50

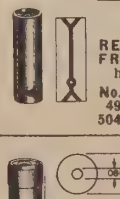
No.	Description	NET Per C
245	Standard banana jack both ends	$25.00
5043	Miniature ban. jack both ends	25.00
5034	Stand. ban. jack to min. ban. jack	25.00



PHONE TIP PLUG SPLICE

REAR: Standard .080 phone jack.
FRONT: Standard .080 phone jack. Banana jack hole for side stacking. Std. Pkg. 50

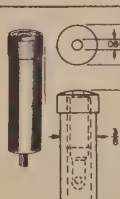
No.	Description	NET Per C
246	Standard Adapter	$30.00



BANANA JACK TO TIP JACK

REAR: Standard or miniature banana jack.
FRONT: Standard .080 tip jack. Banana jack hole for side stacking. Std. Pkg. 50

No.	Description	NET Per C
496	Standard banana to tip jack	$30.00
5044	Miniature banana to tip jack	30.00



IN-LINE PHONE TIP JACK

HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
CAP: MOLDED PHENOLIC plastic, Red, Black, Yellow, Green.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Suitable for test lead extension where long leads are required. Accepts standard phone tip plug. Std. Pkg. 50

No.	NET Per C
248	$21.00

IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING!

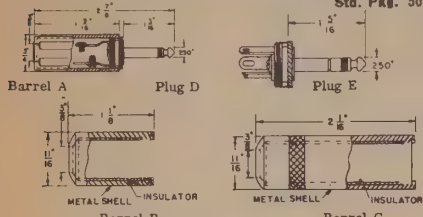
specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

STANDARD PHONE PLUGS

BODY: Body, tip, and sleeve—Brass, nickel plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC working voltage.
DESCR.: Fits standard phone jacks. Molded styrene separator insures maximum insulation between elements.
LUGS: 2 circuit plugs are screw terminals with ribbed clips and cord anchor. 3 circuit plugs are solder lugs.
Std. Pkg. 50



Phenolic Barrel



BARREL: MOLDED PHENOLIC plastic, Red and Black. SPECIFY COLOR
Std. Pkg. 50

No.	Circuit	Terminals	Plug	Barrel	NET Per C
222	2	Screw	D	A	$57.00
227	3	Solder	E	A	80.00

Shielded Barrel



BARREL: BRASS, nickel plated with tubular insert.
Std. Pkg. 25

No.	Circuit	Terminals	Plug	Barrel	NET Per C
252	2	Screw	D	B	$90.00
272	2	Screw	D	C	100.00
228	3	Solder	E	B	105.00
238	3	Solder	E	C	115.00

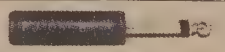
STANDARD PHONE PLUG
Baby Phenolic Barrel



BARREL: MOLDED PHENOLIC plastic, Red and Black. SPECIFY COLOR
BODY: Body, tip, sleeve—Brass, nickel plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage.
DESCR.: Molded styrene separator insures maximum insulation between conductors. Fits standard phone jacks.
Std. Pkg. 25

No.	Circuit	Terminals	NET Per C
249	Two	Solder	$45.00

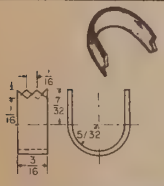
PJ055 AND PJ068 PLUGS



BARREL: MOLDED plastic.
BODY: Body, tip, sleeve—Machined brass.
TERM.: Brass, hot tinned.
INSUL.: Ethyl cellulose type EM-1 MIL-P-3412.
DESCR.: Designed especially for high quality communications equipment and to meet the exacting requirements of the armed services. Parts are assembled together in a mold, providing a finished plug with complete continuity of thermo plastic insulation between the tip rod and plug sleeve.
Std. Pkg. 25

No.	Type	NET Per C
217	PJ055B	$100.00
247	PJ068B	215.00

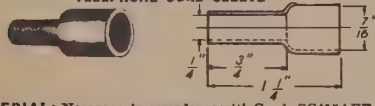
CORD CLAMP STRAIN RELIEF



MATERIAL: Cold Rolled Steel, per QQ-S-636. Finish zinc per Spec. 7253, Table II, Type I.
DESCR.: Used on Government cord assemblies. Made in accordance with Signal Corps. Spec. SC-A-7674.
Std. Pkg. 100

No.	NET Per C
747	$2.00

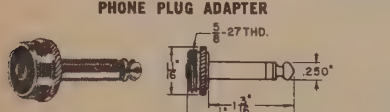
TELEPHONE CORD SLEEVE



MATERIAL: Neoprene in accordance with Grade SC415AFF per MIL-R-3065.
DESCR.: Used on Government cord assemblies, for Strain Relief, Dust and Moisture Seal.
Std. Pkg. 100

No.	NET Per C
745	$10.00

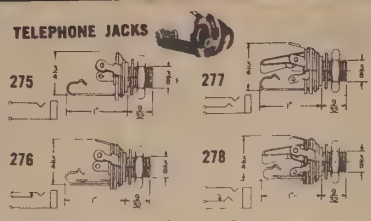
PHONE PLUG ADAPTER



BODY: Body, tip, sleeve—Brass, nickel plated.
INSUL.: XXXP PHENOLIC.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage.
DESCR.: Assembled to insure positive contact with input wire of mating microphone connector. Molded styrene separator insures maximum insulation between conductors. Mates with No. 116 microphone connector. Fits standard phone jacks.
Std. Pkg. 25

No.	NET Per C
118	$40.00

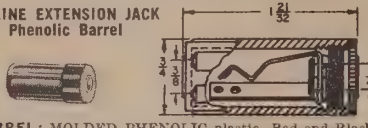
TELEPHONE JACKS



BUSHING: BRASS, nickel plated.
INSUL.: Bakelite, type PBE-P per MIL-P-3115B.
SPRING: Nickel-Silver alloy, spring temper. New tapered design provides for ease of insertion while eliminating possibility of shorts.
SLEEVE TERM.: Brass, hot tinned.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage.
DESCR.: Notched insulating washers accurately locate all parts, and eliminate possibility of shorts and arc-over. Springs designed for firm, low-resistance electrical contact. Bushings ¼" long, threaded ⅜"-32. Mounts in ⅜" hole in panels up to 5/32" thick. Overall diameter ⅝", require 1" clearance behind panel. Supplied with ½" hex brass nut and ⅜" steel panel washer, all nickel plated.
Std. Pkg. 50

No.	Circuit	NET Per C
275	Two Conductor Open	$30.00
276	Two Conductor Closed	35.00
277	Three Conductor Open	39.00
278	Three Conductor Closed	60.00

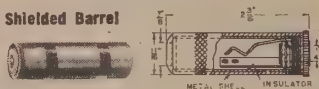
IN-LINE EXTENSION JACK
Phenolic Barrel



BARREL: MOLDED PHENOLIC plastic, Red and Black.
BODY: Brass, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage.
SPRING: Nickel, silver, special alloy, spring temper.
INSUL.: XXP PHENOLIC.
DESCR.: For microphone and Hi-Fi extension cords. Mates with standard phone plugs.
Std. Pkg. 25

No.	Type	NET Per C
274	Solder Connection	$70.00
288	Screw Connection	80.00

Shielded Barrel



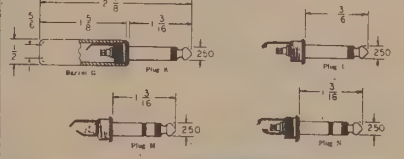
BARREL: Brass, nickel plated, with tubular insulator.
BODY: Brass, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage.
SPRING: Nickel, silver, special alloy, spring temper.
INSUL.: XXP Bakelite.
DESCR.: For microphone and Hi-Fi extension cords. Mates with standard phone plugs.
Std. Pkg. 25

No.	Type	NET Per C
273	Solder Connection	$100.00
289	Screw Connection	110.00

IMPROVED "TURRET-CENTER" STYLE



BODY: Body, Tip, Ring, and sleeve—Brass, nickel plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 1.5 KV 60 cycle AC continuous working voltage.
DESCR.: New, improved construction has co-axial "turret-terminal" tip lug and widely separated contacts for maximum voltage ratings. Styrene separator, Mylar sleeves, and Nylon bushings used for increased performance. Fits standard phone jacks.
Std. Pkg. 50



Phenolic Barrel



BARREL.: MOLDED PHENOLIC plastic, Red and Black SPECIFY COLOR

No.	Circuit	Terminals	Plug	Barrel	NET Per C
171	2	Solder	K	G	$60.00
172	2	Screw	L	G	65.00
308	3	Solder	M	G	75.00
309	3	Screw	N	G	85.00

Shielded Barrel

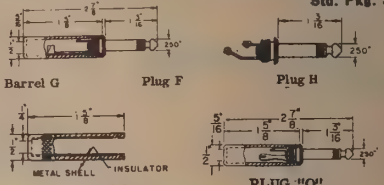


Std. Pkg. 25
BARREL: BRASS, nickel plated with tubular insert.

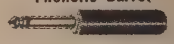
No.	Circuit	Terminals	Plug	Barrel	NET Per C
173	2	Solder	K	J	$85.00
174	2	Screw	L	J	90.00
311	3	Solder	M	J	100.00
312	3	Screw	N	J	110.00

SLIM PHONE PLUGS
Cable Clamp Style

BODY: Body, tip, and sleeve—Brass, nickel plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage.
DESCR.: Fits standard phone jacks. Molded styrene separator insures maximum insulation between elements.
Std. Pkg. 50



Phenolic Barrel



BARREL: MOLDED PHENOLIC plastic, Red and Black. SPECIFY COLOR

No.	Circuit	Terminals	Plug	Barrel	NET Per C
225	2	Solder	F	G	$51.00
307	2	Screw	H	G	60.00

Shielded Barrel



BARREL: BRASS, nickel plated with tubular insert.

No.	Circuit	Terminals	Plug	Barrel	NET Per C
226	2	Solder	F	J	$72.00
316	2	Screw	H	J	85.00

ECONOMY TYPE

DESCR.: An inexpensive modified version of our popular #225 and 226 plugs shown above. Features two small solder lugs.
Std. Pkg. 50

Phenolic Barrel

BARREL: MOLDED PHENOLIC plastic, Red and Black. SPECIFY COLOR

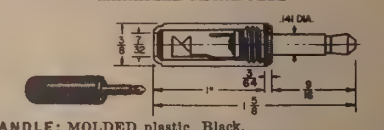
No.	Circuit	Terminals	Plug	Barrel	NET Per C
320	2	Solder	O	G	$50.00

Shielded Barrel

Std. Pkg. 25
BARREL: BRASS, nickel plated with tubular insert.

No.	Circuit	Terminals	Plug	Barrel	NET Per C
330	2	Solder	O	J	$70.00

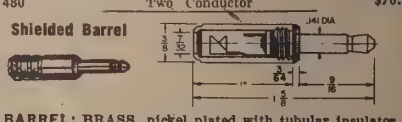
MINIATURE PHONE PLUG



HANDLE: MOLDED plastic, Black.
BODY: Body, tip, sleeve—Brass, nickel plated.
TERM.: Brass, hot tin dipped.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 350 Volts 60 cycle AC continuous working voltage.
DESCR.: Designed for use with small radios, tape recorders, etc. Solder terminals.

No.	Circuit	NET Per C
480	Two Conductor	$70.00

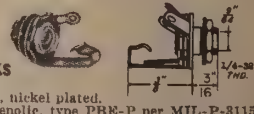
Shielded Barrel



BARREL: BRASS, nickel plated with tubular insulator.
BODY: Body, tip, sleeve—Brass, nickel plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 350 Volts 60 cycle AC continuous working voltage.
DESCR.: Designed for use with small radios, tape recorders, etc. Solder terminals.
Std. Pkg. 25

No.	Circuit	NET Per C
481	Two Conductor	$100.00

MINIATURE TELEPHONE JACKS



BUSHING: BRASS, nickel plated.
INSUL.: XXXP Phenolic, type PBE-P per MIL-P-3115A.
SPRING: Nickel silver alloy, spring temper.
TERM.: Brass, hot tinned.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 500 Volts 60 cycle AC continuous working voltage.
DESCR.: Notched insulation washers- interlock springs and lugs, eliminate possibility of shifting which result in electrical shorts. Springs firmly hold mating plug. Supplied with hex brass nut and steel mounting washer, all nickel plated.
Std. Pkg. 50

No.	Circuit	NET Per C
482	Two Conductor, Open	$42.00
483	Two Conductor, Closed	$45.00

For VARIATIONS of these standard parts to meet your SPECIAL requirements, or for entirely NEW parts made to your specifications, WE WELCOME YOUR INQUIRY!

© United Technical Pub

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

INSTRUMENT KNOBS



Plain — With Pointer — With Skirt

Molded black bakelite instrument knobs with molded in brass insert for ¼" shafts. **Style B** pointer knobs have white vinyl pointer. **Style C** skirt type have white indicator line. **Style D** same as style A except with protruding brass insert for mounting special dials and pointers. Std. Pkg. 10

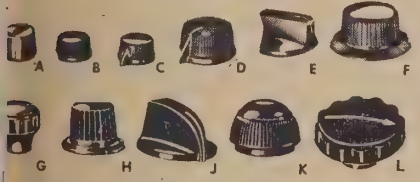
No.	Style	O.D.	Pointer Size	Height	Per C
2200	A	1⅛"		5/8"	$35.00
2201	A	1⅜"		11/16"	36.00
2202	A	1⅝"		¾"	42.00
2203	A	2⅜"		⅞"	60.00
2204	B	1⅛"	¾" pointer	11/16"	54.00
2205	B	1⅜"	1 1/16" pointer	¾"	55.00
2206	B	1⅝"	1 5/16" pointer	13/16"	59.00
2207	B	2⅜"	1 9/16" pointer	15/16"	80.00
2208	C	1¼"	1½" Skirt	13/16"	66.00
2209	C	1⅜"	1¾" Skirt	⅞"	68.00
2210	C	1⅝"	2 1/16" Skirt	29/32"	80.00
2211	C	2⅜"	3" Skirt	1 1/32"	105.00
2212	D	1¼"		23/32"	43.00
2213	D	1⅜"		25/32"	45.00
2214	D	1⅝"		27/32"	50.00
2215	D	2⅜"		31/32"	68.00
			SKIRT ONLY		
2216		1½"	Skirt only		9.50
2217		1¾"	Skirt only		16.00
2218		2 1/16"	Skirt only		18.00
2219		3"	Skirt only		22.00

Matte Finish — Made to Meet MS-91531

Molded Black, Matte finish bakelite instrument knobs, with molded-in brass insert for ¼" shafts. All knobs supplied with two (2) Allen-head set-screws. Style B pointer knobs have white vinyl pointer. Style C skirt knobs have white indicator line on skirt. Std. Pkg. 10

No.	Style	O.D.	Pointer size	Height	NET Per C
2460	A	1⅛"		5/8"	$100.00
2461	A	1⅝"		29/32"	120.00
2462	A	2⅜"		⅞"	146.00
2463	B	1⅛"	¾" pointer	11/16"	105.00
2464	B	1⅝"	1 5/16" pointer	13/16"	121.00
2465	B	2⅜"	1 9/16" pointer	15/16"	150.00
2466	C	1⅛"	1½" skirt	13/16"	147.00
2467	C	1⅝"	2 1/16" skirt	29/32"	180.00
2468	C	2⅜"	3" skirt	1 1/32"	222.00

CONTROL KNOBS



Molded bakelite control knobs. Supplied with ¼" molded hole; complete with set screw. *Recessed for locknut. Std. Pkg. 25

No.	Style	O.D.	Height	Color	NET Per C
2240	A	¾"	19/32"	Black	$17.00
2241	A	¾"	19/32"	Walnut	18.00
2242	B	11/16"	13/32"	Black	9.00
2243	B	11/16"	13/32"	Walnut	12.50
2244*	B	1"	½"	Black	16.00
2245*	B	1"	½"	Walnut	17.50
2275†	B	11/16"	13/32"	Black	12.00
2276†	B	11/16"	13/32"	Red	31.00
2246	C	11/16"	13/32"	Black	9.00
2247	C	11/16"	13/32"	Walnut	12.50
2273†	C	11/16"	13/32"	Black	12.00
2274†	C	11/16"	13/32"	Red	31.00
2248*	D	1"	½"	Black	20.00
2249*	D	1"	½"	Walnut	21.00
2250*	E	1⅛"	¾"	Black	17.00
2251*	E	1⅛"	¾"	Walnut	18.00
2252*	F	1½"	11/16"	Black	22.00
2253*	F	1½"	11/16"	Walnut	23.50
2254*	F	1½"	11/16"	Ivory	25.00
2258	G	⅞"	¾"	Black	19.00
2259	G	⅞"	¾"	Walnut	20.00
2265	H	29/32"	19/32"	Black	20.00
2266	H	29/32"	19/32"	Red	21.00
2267	J	1 3/16"	⅝"	Black	16.50
2268	J	1 3/16"	⅝"	Red	18.00
2269	K	⅞"	⅝"	Black	24.00
2270	K	⅞"	⅝"	Red	26.00
2283	L	⅞"	½"	Black	30.00
2284	L	⅞"	½"	Red	31.00

† Supplied with brass insert.

PUSH BUTTON KNOBS



Std. Pkg. 25

No.	Style	O.D.	Height	Color	Per C
2277	A	½"	51/64"	Black	$8.50
2278	A	½"	51/64"	Red	10.00
2279	B	31/64"	5/16"	Black	6.00
2280	B	31/64"	5/16"	Red	7.50

POINTER KNOBS

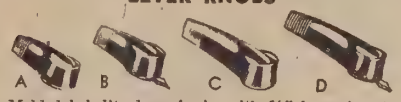


A — Length 1¼" Hgt. 5/8"
B — Length 2" Hgt. 5/8"
C — Length 1¼" Hgt. 13/16"

Molded bakelite pointer knobs, supplied with ¼" plain hole or brass inset. Complete with set screw. Std. Pkg. 25

No.	Style	Type Hole	Color	NET Per C
2220	A	¼" Plain	Black	$10.00
2221	A	¼" Plain	Walnut	14.00
2222	A	¼" Plain	Ivory	15.00
2223	A	¼" Brass Insert	Black	15.00
2224	A	¼" Brass Insert	Walnut	21.00
2225	A	¼" Brass Insert	Red	22.00
2226	B	¼" Plain	Black	25.00
2227	B	¼" Plain	Walnut	26.00
2228	B	¼" Brass Insert	Black	31.00
2229	B	¼" Brass Insert	Walnut	32.00
2230	C	¼" Plain	Black	16.00
2231	C	¼" Plain	Walnut	17.00

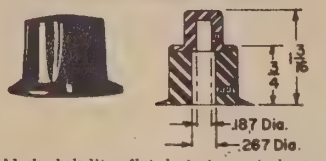
LEVER KNOBS



Molded bakelite lever knobs with ¼" brass insert, complete with set screw. Std. Pkg. 25

No.	Style	Length	Height	Color	NET Per C
2232	A	1⅝"	19/32"	Black	$30.00
2233	A	1⅝"	19/32"	Walnut	31.00
2234	B	1 15/16"	13/32"	Black	50.00
2235	B	1 15/16"	13/32"	Walnut	51.00
2236	C	2½"	⅝"	Black	30.00
2237	C	2½"	⅝"	Walnut	32.00
2238	D	2 13/16"	⅝"	Black	51.00
2239	D	2 13/16"	⅝"	Walnut	52.00

FLUTED INSTRUMENT KNOBS



Molded black bakelite fluted instrument knobs, supplied with white-filled line on crown and skirt, opposite set-screw. Supplied with ¼" plain hole with set-screw. Std. Pkg. 10

No.	Skirt Dia.	Height	NET Per C
2391	¾"	½"	$31.00
2392	1⅛"	5/8"	36.00
2393	1¼"	¾"	40.00
2394	1½"	⅞"	42.00
2395	2"	1 1/16"	55.00
	With ⅛" plain hole with set-screw		
2396	¾"	½"	33.00

CONCENTRIC FLUTED

Molded black and Red bakelite dual-concentric fluted instrument knobs. Outside knob is black with white filled line on skirt. Inner knob is red with white-filled line on skirt and crown. Both knobs supplied with set-screws. Std. Pkg. 10

No.	NET Per C
2397	$66.00

BINDING POST KNOBS



Std. Pkg. 25

No.	Style	O.D.	Height	threaded 8-32 brass inserts Color	NET Per C
2271	A	¾"	½"	Black	$10.00
2272	A	¾"	½"	Red	12.00
2285	B	½"	7/16"	Red	10.00
2286	B	½"	7/16"	Black	10.00
2287	C	½"	½"	Red	10.00
2288	C	½"	½"	Black	10.00

CONTROL PLATES



MATERIAL: Brass Black Satin Finish. Etched silver numerals.

DIMENSION: 13/32" I.D. x O.D. as specified, x .020" thick. Std. Pkg. 5

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	Total Graduations	O.D.	NET Per C
2900	2906	180	20	2"	$105.00
2901	2907	270	20	2"	105.00
2902	2908	325	20	2"	105.00
2903	2909	180	100	3½"	150.00
2904	2910	270	100	3½"	150.00
2905	2911	325	100	3½"	150.00

DIAL PLATES



MATERIAL: Brass Chrome Silver Finish, .020" thick.

DESCR.: Mounting Holes 9/64". Std. Pkg. 5

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	A	B	NET Per C
2912	2928	180	1⅛"	3/8"	$80.00
2913	2929	270	1⅛"	3/8"	80.00
2914	2930	325	1⅛"	3/8"	80.00
2915	2931	360	1⅛"	3/8"	80.00
2916	2932	180	1¾"	31/64"	100.00
2917	2933	270	1¾"	31/64"	100.00
2918	2934	325	1¾"	31/64"	100.00
2919	2935	360	1¾"	31/64"	100.00
2920	2936	180	2¾"	¾"	135.00
2921	2937	270	2¾"	¾"	135.00
2922	2938	325	2¾"	¾"	135.00
2923	2939	360	2¾"	¾"	135.00
2924	2940	180	4"	15/16"	170.00
2925	2941	270	4"	15/16"	170.00
2926	2942	325	4"	15/16"	170.00
2927	2943	360	4"	15/16"	170.00

DIAL AND KNOB ASSEMBLY



DIAL: Brass Chrome Silver Finish, .020" thick.

KNOB: Molded Bakelite with ¼" Brass insert. Std. Pkg. 5

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	O.D.	NET Each
2960	2976	180	1½"	$1.35
2961	2977	270	1½"	1.35
2962	2978	325	1½"	1.35
2963	2979	360	1½"	1.35
2964	2980	180	1¾"	1.50
2965	2981	270	1¾"	1.50
2966	2982	325	1¾"	1.50
2967	2983	360	1¾"	1.50
2968	2984	180	2¾"	3.00
2969	2985	270	2¾"	3.00
2970	2986	325	2¾"	3.00
2971	2987	360	2¾"	3.00
2972	2988	180	4"	3.45
2973	2989	270	4"	3.45
2974	2990	325	4"	3.45
2975	2991	360	4"	3.45

VERNIER DIAL MARKERS



MATERIAL: Brass Chrome Silver Finish. Supplied with hardware. Std. Pkg. 5.

No.	For °Dials	Dial O.D.	NET Per C
2944	180	1⅞"	$85.00
2945	270	1⅞"	85.00
2946	325	1⅞"	85.00
2947	360	1⅞"	85.00
2948	180	2⅜"	85.00
2949	270	2⅜"	85.00
2950	325	2⅜"	85.00
2951	360	2⅜"	85.00
2952	180	2⅞"	85.00
2953	270	2⅞"	85.00
2954	325	2⅞"	85.00
2955	360	2⅞"	85.00
2956	180	4"	85.00
2957	270	4"	85.00
2958	325	4"	85.00
2959	360	4"	85.00

KNOB DIAL PLATES



2261 — 2262 — 2290

DIAL: BRASS, chrome silver, 1⅝" O.D.
KNOB: Molded bakelite black (our 2250).
DESCR.: For matching dials on instruments, receivers, amplifiers. Dial has clear black etched numbers. Knob fits 1'4" shaft. Std. Pkg. 10

No.	Type	NET Each
2261	10 to 0 180 Degrees	$1.05
2262	10 to 0 270 Degrees	1.05
	DIAL PLATES ONLY ½" I.D.	
2263	10 to 0 180 Degrees	.80
2264	10 to 0 270 Degrees	.80

DIAL: Nickel silver, 1⅝" O.D.
KNOB: Molded bakelite.
DESCR.: Engraved numerals, varnish coated. 10 to 0, in 360 degrees. Knob fits ¼" shaft. Std. Pkg. 10

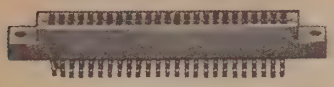
No. 2290	NET Each
	$1.05

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

PRINTED CIRCUIT CONNECTORS



COMMERCIAL

INSULATOR: Glass filled blue Alkyd.
CONTACTS: Beryl Copper .00001 gold flash; pierced terminal.
ACCEPTS: 1/16" Printed Circuit Cards.
MTG. HOLE: .125 Clearance.
DESCR.: Bifurcated bellows action assures positive electrical contact.

.156 SPACING

.125 Mtg. Hole Clearance
Pierced Terminal — Std. Pkg. 5

Smith No.	No. of Contacts	Single or Double	Mtg. Centers	NET Ea.
6216	6	S	1.531	1.65
6217	10	S	2.156	1.75
6218	15	S	2.937	1.60
6219	18	S	3.406	2.40
6220	22	S	4.031	2.50
6221	28	S	5.046	4.25
6222	36	S	6.219	3.30
6223	12	D	1.531	1.70
6224	20	D	2.156	1.75
6225	30	D	2.937	1.65
6226	36	D	3.406	2.45
6227	44	D	4.031	2.50
6228	56	D	5.046	4.25
6229	72	D	6.219	3.40
6230	86	D	7.302	3.90

MIL-C-21097

MILITARY

INSULATOR: Diallyl Phthalate, Green, Type GDI-30 per MIL-P-19833.
CONTACTS: Beryl. Copper .000031 gold per MIL-G-45204, Type II over .0005 silver per QQ-S-365, pierced terminal.
ACCEPTS: 1/16" Printed Circuit Cards.
MTG. HOLE: .125 Clearance.
DESCR.: Bifurcated bellows action assures positive electrical contact.

.156 SPACING

.125 Mtg. Hole Clearance. Pierced Terminal — Std. Pkg. 5

No. Smith	No. of Contacts	Single or Double	Mtg. Centers	NET Ea.
6200	6	S	1.531	2.75
6201	10	S	2.156	2.95
6202	15	S	2.937	3.25
6203	18	S	3.406	3.70
6204	22	S	4.031	3.90
6205	28	S	5.046	4.25
6206	36	S	6.219	4.65
6207	43	S	7.302	7.15
6208	12	D	1.531	2.90
6209	20	D	2.156	3.00
6210	30	D	2.937	3.25
6211	36	D	3.406	3.70
6212	44	D	4.031	3.90
6213	56	D	5.046	4.25
6214	72	D	6.219	4.65
6215	86	D	7.302	7.15

.100 SPACING

.125 Mtg. Hole Clearance. Pierced Terminal — Std. Pkg. 1

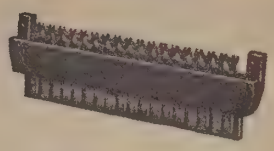
Smith No.	No. of Contacts	Single or Double	Mtg. Centers	NET Ea.
6231	40	D	2.625	6.75
6232	60	D	—	7.50
6233	70	D	4.125	8.40
6234	80	D	4.625	9.25
6235	100	D	—	9.90
6236	120	D	6.625	10.10

.050 SPACING

.125 Mtg. Hole Clearance. Dip Solder Terminal — Std. Pkg. 1

Smith No.	No. of Contacts	Single or Double	Mtg. Centers	NET Ea.
6237	40	D	1.500	10.25
6238	60	D	2.000	12.00
6239	80	D	2.500	12.50
6240	100	D	3.000	14.10
6241	110	D	3.250	14.50
6242	128	D	3.500	15.50

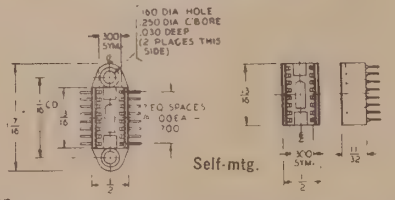
PRINTED CIRCUIT EDGE STRIPS



Convert any P.C. Board for plug-in applications. Can also be used where high reliability is required. Molded diallyl phthalate body with gold plated contacts .125 Micro-inch. Available in single or double sided. For 1/16" boards. — Std. Pkg. 1

No.	Contacts	Single or Double	NET Each
6254	6	S	$ 4.00
6255	10	S	5.25
6256	15	S	6.90
6257	18	S	7.60
6258	22	S	8.90
6259	12	D	5.80
6260	20	D	8.25
6261	30	D	11.25
6262	36	D	13.25
6263	44	D	13.50

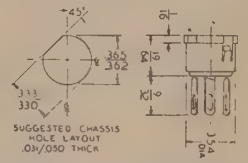
INTEGRATED SOCKETS DUAL IN-LINE



For 14 and 16 pin in-line Hybrid packages having .100" x .300" grid spacing. Accepts round or flat pins. Body of general purpose phenolic. Brass electro plated contacts for P.C. version and brass cadmium plated contacts for self-mounting type.

No.	Pins	Body	NET Per C
6252	14	P.C.	$50.00
6253	16	P.C.	50.00

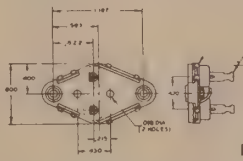
TRANSISTOR SOCKETS



Snap-in type transistor sockets for TO-5 and TO-18 3 and 4 lead, plus 3 lead in-line transistors. Phosphor bronze, cadmium plated contacts with a polysulfone body. Fits in "D" shape hole. — Std. Pkg. 100

No.	NET Per C
6264	$15.00

POWER TRANSISTOR SOCKET



For use with transistors having a TO-3 case. Body of general purpose phenolic with contacts of phosphor bronze, gold over silver plated. Mounting plate with 6-32 tapped holes. — Std. Pkg. 100

No.	NET Per C
6266	$25.00

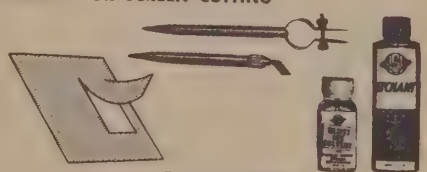
P. C. PROTOTYPE ETCHING EQUIPMENT FOR SCREEN CUTTING

Photo layout film for hand-cutting mechanical negatives. A red film is laminated to a transparent backing sheet. When knife-cut, the red film laminate is peeled back to permit light to penetrate only through the cutaway area; the remainder is light-safe. Supplied in 8" x 10" sheets. — Std. Pkg. 6
No. 6268 — NET Each $1.00

SWIVEL CUTTING KNIFE for cutting circles and curves. Also locks tight for cutting straight lines. — Std. Pkg. 6
No. 6269 — NET Each $1.00

EXTRA BLADES for above. — Std. Pkg. 12
No. 6270 — NET Each $.50

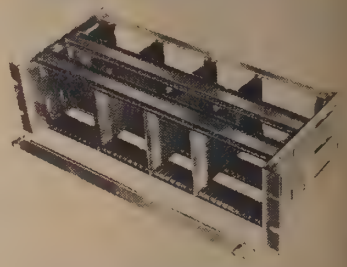
PARALLEL LINE-CUTTING KNIFE, for cutting parallel lines up to ½" in width. — Std. Pkg. 1
No. 6271 — NET Each $3.50



FOR ETCHING

A low cost kit to enable the engineer to quickly etch copper-clad boards in minutes. The kit contains a unique felt-tip Resist Ink pen to apply the Resist-Ink as easily as writing. Also included is a 2-oz. bottle of Resist-Ink solvent and a 6-oz. bottle of ferric-chloride etchant solution. — Std. Pkg. 1
No. 6272 — NET Each $3.95

A UNIVERSALLY ADJUSTABLE PRINTED CIRCUIT CARD RACK



Complete and Economical Support System for Printed Circuit Card

ADJUSTABLE UP-AND-DOWN
For Card Widths 2⅜" to 4¾"

ADJUSTABLE LOCKING BAR
Holds Cards Securely against Rear Connectors

ADJUSTABLE CARD SPACING
Variable in .400" Increments

ADJUSTABLE FRONT-TO-BACK
For Card Lengths 3½" to 7¼"

ADJUSTABLE
For P.C. Connector Sizes

ADJUSTABLE CALIBRATED SLIDE RACKS
For Fast, Precise Adjustments to Any Card Size

FITS STANDARD 19-INCH EQUIPMENT RACKS

- Simple Adjustments for Multiple Card Sizes
- Simple Adjustments for Card Spacing
- Front to Back Adjustment of Printed Circuit Card Connectors
- Simple Adjustments for Printed Circuit Connector Sizes
- Locking Bar to Secure P.C. Cards
- Complete with Board Guides

SPECIFICATIONS

CARD CAPACITY
Up to 39 cards, depending on component height

CARD SIZES
1/16" thick standard.
With Locking Bar Feature:
Maximum Card Width: 4¾"
Maximum Card Length: 6½"
Minimum Card Width: 2⅜"
Minimum Card Length: 4⅜"
Without Front Card Lock:
Maximum Card Length: 7¼"
Minimum Card Length: 3½"

CARD SPACING
.400" Minimum Centers, Adjustable in .400" increments.

CARD GUIDES
Precision Molded Plastic. Four guides provided for each card to insure location accuracy. Guides nest together in staggered holes for minimum practical card spacing.

ADJUSTABILITY
All card guide and connector rails slide smoothly on Nylon bushings for ease in adjusting. Card rails adjust symmetrically to keep cards centered in rack. Connector rails adjust front-to-back to keep cards against locking rail. Adjust index marks permanently stamped on side plates for standard card sizes.

CONNECTOR SPACING
Accommodates card-edge connectors with mounting centers from 0.936" minimum to 4.437" maximum.

CONSTRUCTION
Heavy-gauge clear Anodized aluminum. Guide and alignment members are extrusions for maximum precision of fits.

DIMENSIONS
Designed ot fit standard 19" equipment racks, 5¼" panel space. Length 19"; Width 5¼"; Depth 8"

ASSEMBLY
Supplied knocked-down. All hardware, card guides and complete assembly instructions included.

SPECIAL FEATURES

LOCKING BAR
Front locking bar holds cards securely against rear connectors. Held in place with captive screws for rapid card change. Card identification marking available on front of locking bar.

STACKING
Can be stacked for wider panels in multiples of 5¼". Accessory brackets available for free-standing stacking.

SPECIALS
Special color anodized finishes available on request. Non-standard sizes available on special order.

CARD RACK, CAT. NO. 3050

In Lots of	Suggested Resale Each
1 to 9	$27.95
10 to 24	25.95
25 to 99	23.95
100 up	21.95

BOARD GUIDES, CAT. NO. 3051

Std. Pkg.	Suggested Resale Per C
100	$5.00

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

© United Technical P

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

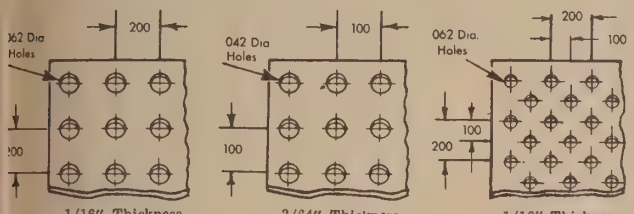
PRINTED CIRCUIT PRE-PUNCH BOARDS

SPECIFICATIONS

All boards are precision-punched and pre-cut to size with various spacings to accommodate and provide economical mounting of components in Electronic circuitry. They are ideal for production and prototype uses. They can be etched as required, drilled, punched or sawed. The following specifications apply:

XXXP—Phenolic unclad, Type PBE-P per MIL-P-3115, 250° F Max.
EXXXP—Epoxy Paper, Type PEE per MIL-P-22324, 250° F Max.
XXXPC—Phenolic, Copper Clad, Type PP per MIL-P-13949, 250° F Max.
G-10—Epoxy Glass, unclad, Type GEE per MIL-P-18177, 300° F Max.
G-10—Epoxy Glass, Copper Clad, Type GE per MIL-P-13949B, 300° Max.

Many Others Available — Specials — Inquire



1/16" Thickness "F" PATTERN | 3/64" Thickness "P" PATTERN | 1/16" Thickness "G" PATTERN

"F" PATTERN — MATERIALS AVAILABLE

Std. Pkg. 10

Size	No. of Holes	XXXP No.	XXXP NET Per C	G-10 No.	G-10 NET Per C	XXXP 1 Side Copper Clad No.	XXXP 1 Side Copper Clad NET Per C	G-10 1 Side Copper Clad No.	G-10 1 Side Copper Clad NET Per C
3x4	15x20	6001	28.00	6014	72.00	6027	39.00	6040	100.00
3x4.5	15x22	6002	35.00	6015	81.00	6028	45.00	6041	110.00
3x6	15x30	6003	45.00	6016	105.00	6029	60.00	6042	150.00
3x6.5	15x32	6004	48.00	6017	115.00	6030	62.00	6043	160.00
3.5x4	17x20	6005	33.00	6018	82.00	6031	45.00	6044	114.00
3.5x4.5	17x22	6006	36.50	6019	91.00	6032	50.00	6045	127.00
3.5x6	17x30	6007	50.50	6020	120.00	6033	67.00	6046	155.00
3.5x6.5	17x32	6008	55.50	6021	131.00	6034	73.00	6047	183.00
4x4.5	20x22	6009	45.00	6022	108.00	6035	60.00	6048	150.00
4x6	20x30	6010	56.00	6023	138.00	6036	75.00	6049	192.00
4x6.5	20x32	6011	60.00	6024	147.00	6037	81.00	6050	207.00
4.5x6	22x30	6012	61.50	6025	152.00	6038	83.00	6051	207.00
4.5x6.5	22x32	6013	66.00	6026	162.00	6039	88.00	6052	230.00

"P" PATTERN — MATERIALS AVAILABLE

Std. Pkg. 10

Size	No. of Holes	G-10 No.	G-10 NET Per C	G-10 1 Side Copper Clad No.	G-10 1 Side Copper Clad NET Per C
2.5x4	25x40	6092	66.00	6109	90.00
2.5x4.5	25x45	6093	74.00	6110	100.00
2.5x6	25x60	6094	99.00	6111	134.00
2.5x6.5	25x65	6095	105.00	6112	142.00
3x4	30x40	6096	77.00	6113	105.00
3x4.5	30x45	6097	85.00	6114	115.00
3x6	30x60	6098	110.00	6115	155.00
3x6.5	30x65	6099	122.00	6116	165.00
3.5x4	35x40	6100	88.00	6117	119.00
3.5x4.5	35x45	6101	96.00	6118	132
3.5x6	35x60	6102	127.00	6119	177.00
3.5x6.5	35x65	6103	135.00	6120	184.00
4x4.5	40x45	6104	114.00	6121	155.00
4x6	40x60	6105	144.00	6122	197.00
4.5x6	45x60	6107	157.00	6124	220.00
4x6.5	40x65	6106	152.00	6123	212.00
4.5x6.5	45x65	6108	168.00	6125	235.00

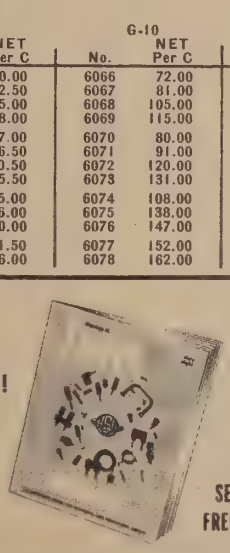
"G" PATTERN — MATERIALS AVAILABLE

Std. Pkg. 10

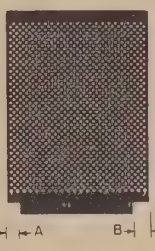
Size	No. of Hole	XXXP No.	XXXP NET Per C	G-10 No.	G-10 NET Per C	G-10 1 Side Copper Clad No.	G-10 1 Side Copper Clad NET Per C
3x4	(15x20)2	6053	30.00	6066	72.00	6079	100.00
3x4.5	(15x22)2	6054	32.50	6067	81.00	6080	110.00
3x6	(15x30)2	6055	45.00	6068	105.00	6081	150.00
3x6.5	(15x32)2	6056	48.00	6069	115.00	6082	160.00
3.5x4	(17x20)2	6057	37.00	6070	80.00	6083	114.00
3.5x4.5	(17x22)2	6058	36.50	6071	91.00	6084	127.00
3.5x6	(17x30)2	6059	50.50	6072	120.00	6085	155.00
3.5x6.5	(17x32)2	6060	55.50	6073	131.00	6086	183.00
4x4.5	(20x22)2	6061	45.00	6074	108.00	6087	150.00
4x6	(20x30)2	6062	56.00	6075	138.00	6088	192.00
4x6.5	(20x32)2	6063	60.00	6076	147.00	6089	207.00
4.5x6	(22x30)2	6064	61.50	6077	152.00	6090	207.00
4.5x6.5	(22x32)2	6065	66.00	6078	162.00	6091	230.00

FOR ENGINEERS & PURCHASING AGENTS!

New Smith Catalog is an important Reference Work on electronic component parts, containing:
Detailed specifications! Data;
Dimensional Drawings.



SEND FOR YOUR FREE COPY #69-70



4.5" x 6.5" PLUG-IN CARDS WITH ETCHED FINGERS

.062 Holes. .100 x .200 Alternate Centers.
.156 Spacing. 1/16" Thickness.

Total Contacts	1 or 2 Sides	Fig. A	Fig. B	G-10 No.	G-10 NET Ea.	XXXP No.	XXXP NET Ea.
43	2	.408	.508	6126	3.71	6130	3.35
43	2	.458	.458	6127	3.71	6131	3.35
22	1	.408	.508	6128	3.05	6132	2.43
22	1	.458	.458	6129	3.05	6133	2.43

CONNECTOR INFORMATION:

With Plug-In Cards SMITH Nos.	Use SMITH Connector Commercial No.	Military No.
6126 and 6130	6227	6212
6127 and 6131	6227	6212
6128 and 6132	6220	6204
6129 and 6133	6220	6204

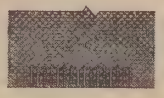


FIG. 1

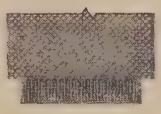


FIG. 2

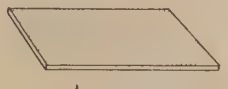
PLUG-IN CARDS WITH ELCO "VARICON" CONTACTS

.062 Holes. .100 x .200 Alternate Centers.
1/16" Thickness.

No.	Fig.	No. of Contacts	Size	Material	NET Ea.
6134	1	16	4.5x6.5	Paper Epoxy	4.00
6135	1	16	4.5x6.5	Glass Epoxy	4.40
6136	1	12	3x4.5	Paper Epoxy	2.85
6137	1	12	3x4.5	Glass Epoxy	3.15
6138	1	14	3x4.5	Paper Epoxy	3.00
6139	1	14	3x4.5	Glass Epoxy	3.50
6140	2	35	4.5x6.5	Glass Epoxy	7.50
6141	2	35	4.5x6.5	Paper Epoxy	6.20

CONNECTOR INFORMATION:

Plug-In Cards, SMITH Nos.	Use Elco Connector No.
6134 and 6135	5009-016-156-001
6136 and 6137	5009-012-156-001
6138 and 6139	5004-014-103-002
6140	7008-035-146-001
6141	7001-035-146-001



BLANK PANELS

1 and 2 Sides Copper.
1/16" Thickness.

Std. Pkg. 5

Size	XXXP Copper 1 Side No.	XXXP Copper 1 Side NET Per C	XXXP Copper 2 Sides No.	XXXP Copper 2 Sides NET Per C	G-10 Copper 1 Side No.	G-10 Copper 1 Side NET Per C	Copper 2 Sides G-10 No.	Copper 2 Sides G-10 NET Per C
3x4.5	6142	38.00	6144	51.00	6146	88.00	6148	98.00
4.5x6.5	6143	70.00	6145	98.00	6147	170.00	6149	193.00



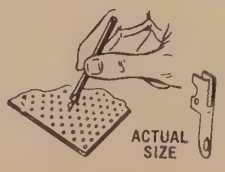
MINIATURE TUBULAR TERMINALS For .062-.067 Diam. Hole

For printed circuits. Suitable for mounting transistors, resistors, neons, etc. Tapered section retains wire leads. Positive locking in hole, no staking required. Firmly holds wires of .010 to .050 diam.
Material: .006 thick brass, precision-formed and pre-tinned
Std. Pkg. 100
No. 6160 NET Per C $1.30



INSERTION TOOL, for hand insertion.
No. 6161 Std. Pkg. 6 NET Each $1.25

PUSH-IN TERMINALS For .062 Diam. Holes

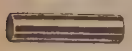


Miniature type, excellent for point-to-point or feed-thru wiring. Serrated slot grips transistor or heavier leads. Multiple connections quickly and easily made. **Material:** .008 thick Beryllium Copper. **Finish:** Fused Tin Plate.
Std. Pkg. 100
No. 6162 NET Per C $1.70

INSERTION TOOL, for hand insertion.
No. 6163 Std. Pkg. 6 NET Each $.65

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENTS

BRASS SPACERS
Cadmium Plated





These brass bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a #4, #6, or #8 screw. Std. Pkg. 100

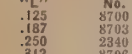
1/4" O.D.

Length "L"	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	NET Per C
.125	8700	8701	8702	$3.70
.187	8703	8704	8705	3.90
.250	2340	2100	2105	4.20
.312	8706	8707	8708	4.70
.375	2341	2101	2106	4.90
.437	8709	8710	8711	5.30
.500	2342	2102	2107	5.70
.562	8712	8713	8714	6.20
.632	8715	8716	8717	6.60
.687	8718	8719	8720	8.10
.750	2343	2103	2108	8.20
.812	8721	8722	8723	8.40
.875	8724	8725	8726	9.10
.937	8727	8728	8729	9.30
1.000	2344	2104	2109	9.70

3/8" O.D.

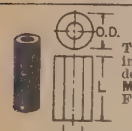
.125	8730	8731	8732	$6.00
.187	8733	8734	8735	6.60
.250	2345	2110	2115	7.30
.312	8736	8737	8738	7.80
.375	2346	2111	2116	8.70
.437	8739	8740	8741	9.40
.500	2347	2112	2117	9.60
.562	8742	8743	8744	11.00
.625	8745	8746	8747	11.90
.687	8748	8749	8750	12.10
.750	2348	2113	2118	12.20
.812	8751	8752	8753	13.50
.875	8754	8755	8756	14.80
.937	8757	8758	8759	15.30
1.000	2349	2114	2119	16.70

BRASS THREADED SPACERS
Cadmium Plated
1/4" O.D.



Length "L"	THD 4-40 No.	THD 6-32 No.	THD 8-32 No.	NET Per C
.125	8760	8761	8762	$4.30
.187	8763	8764	8765	4.60
.250	2370	2120	2125	4.80
.312	8766	8767	8768	5.30
.375	2371	2121	2126	5.60
.437	8769	8770	8771	5.90
.500	2372	2122	2127	6.70
.562	8772	8773	8774	7.20
.625	8775	8776	8777	7.90
.687	8778	8779	8780	10.10
.750	2373	2123	2128	10.20
.812	8781	8782	8783	10.50
.875	8784	8785	8786	10.80
.937	8787	8788	8789	11.00
1.000	2374	2124	2129	11.40

FIBRE SPACERS



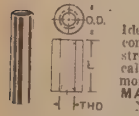
These fibre bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc.
MATERIAL: FIBRE, per MIL-F-1148A, Grade CH.

1/4" O.D.

Std. Pkg. 100

Length "L"	for #4 Screw No.	for #6 Screw No.	for #8 Screw No	NET Per C
.125	8880	8881	8882	$3.30
.187	8883	8884	8885	3.80
.250	2335	2130	2140	4.30
.312	8886	8887	8888	4.90
.375	2336	2131	2141	5.50
.437	8889	8890	8891	6.00
.500	2337	2132	2142	6.50
.562	8892	8893	8894	7.00
.625	8895	8896	8897	7.50
.687	8898	8899	8900	8.00
.750	2338	2133	2143	8.50
.812	8901	8902	8903	8.80
.875	8904	8905	8906	9.30
.937	8907	8908	8909	9.70
1.000	2339	2134	2144	10.00

PHENOLIC THREADED SPACERS 1/4" O.D.



Ideal for use in mounting chassis, components, etc. Good mechanical strength, resists abrasives and chemicals. Excellent dielectric and low moisture absorption. Std. Pkg. 100
MATERIAL: PBE Grade MIL-P-79A. Natural color.

Length "L"	THD. 4-40 No.	THD. 6-32 No.	THD. 8-32 No.	NET Per C
.250	8660	8661	8662	$ 8.00
.312	8663	8664	8665	9.00
.375	8666	8667	8668	.950
.437	8669	8670	8671	10.00
.500	8672	8673	8674	11.00
.562	8675	8676	8677	12.00
.625	8678	8679	8680	13.00
.687	8681	8682	8683	14.00
.750	8684	8685	8686	15.00
.812	8687	8688	8689	15.50
.875	8690	8691	8692	16.50
.937	8693	8694	8695	17.00
1.000	8696	8697	8698	18.00

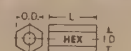
NYLON SPACER BUSHINGS



Natural Color, MIL-P-20693A. Std. Pkg. 100

No.	I.D.(A)	B	C	D	E	NET Per C
2534	#4 (.115)	.235	3/64	1/4	.147	$2.30
2535	#6 (.140)	.290	3/64	1/4	.170	2.40
2536	#8 (.170)	.344	1/16	3/8	.205	2.50
2537	#10 (.200)	.399	1/16	3/8	.260	2.70
2538	1/4"(.260)	.513	1/16	3/8	.312	3.50

BRASS HEX SPACERS
Cadmium Plated
1/4" HEX



Length "L"	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	NET Per C
.125	8790	8791	8792	$3.80
.187	8793	8794	8795	4.00
.250	2380	2300	2305	4.30
.312	8796	8797	8798	5.20
.375	2381	2301	2306	5.40
.437	8799	8800	8801	5.60
.500	2382	2302	2307	5.80
.562	8802	8803	8804	6.40
.625	8805	8806	8807	6.70
.687	8808	8809	8810	8.20
.750	2383	2303	2308	8.50
.812	8811	8812	8813	8.80
.875	8814	8815	8816	9.20
.937	8817	8818	8819	9.60
1.000	2384	2304	2309	9.90

3/8" HEX

.125	8850	8851	8852	$6.20
.187	8853	8854	8855	6.80
.250	2385	2310	2315	7.40
.312	8856	8857	8858	8.10
.375	2386	2311	2316	9.00
.437	8859	8860	8861	10.10
.500	2387	2312	2317	11.00
.562	8862	8863	8864	12.10
.625	8865	8866	8867	13.50
.687	8868	8869	8870	13.60
.750	2388	2313	2318	14.40
.812	8871	8872	8873	15.20
.875	8874	8875	8876	16.70
.937	8877	8878	8879	17.00
1.000	2389	2314	2319	18.60

BRASS THREADED HEX SPACERS
Cadmium Plated
1/4" HEX



Std. Pkg. 100

Length "L"	THD 4-40 No.	THD 6-32 No.	THD 8-32 No.	NET Per C
.125	8820	8821	8822	$4.50
.187	8823	8824	8825	4.80
.250	2330	2320	2325	5.30
.312	8826	8827	8828	5.60
.375	2331	2321	2326	6.50
.437	8829	8830	8831	6.70
.500	2332	2322	2327	7.40
.562	8832	8833	8834	8.10
.625	8835	8836	8837	8.50
.687	8838	8839	8840	11.00
.750	2333	2323	2328	11.20
.812	8841	8842	8843	11.30
.875	8844	8845	8846	11.60
.937	8847	8848	8849	11.70
1.000	2334	2324	2329	12.10

CERAMIC STANDOFFS



MADE TO JAN. SPECS.
Grade L-5 Ceramic made to JAN 1 - 8 and JAN 1 - 10 Specs. Outside of ceramic is glazed. Std. Pkg. 50

No.	Type	A	B	C	Thd.	NET Per C
2600	NL523W01-004	1/2"	3/8"	5/32"	6-32	$18.00
2601	NL523W01-005	5/8"	3/8"	1/4"	6-32	20.00
2602	NL523W01-006	3/4"	3/8"	1/4"	6-32	21.00
2603	NL523W01-008	1"	3/8"	3/8"	6-32	22.00
2604	NL523W01-010	1 1/4"	3/8"	3/8"	6-32	24.00
2605	NL523W01-012	1 1/2"	3/8"	3/8"	6-32	25.00
2606	NL523W01-016	2"	3/8"	3/8"	6-32	26.00
2607	NL523W02-005	5/8"	1/2"	5/16"	8-32	20.00
2608	NL523W02-006	3/4"	1/2"	1/4"	8-32	21.00
2609	NL523W02-008	1"	1/2"	3/8"	8-32	22.00
2610	NL523W02-010	1 1/4"	1/2"	3/8"	8-32	24.00
2611	NL523W02-012	1 1/2"	1/2"	3/8"	8-32	27.00
2612	NL523W02-016	2"	1/2"	3/8"	8-32	33.00
2613	NL523W02-020	2 1/2"	1/2"	3/8"	8-32	34.00
2614	NL523W02-024	3"	1/2"	3/8"	8-32	35.00
2615	NL523W03-008	1"	3/4"	3/8"	10-32	30.00
2616	NL523W03-010	1 1/4"	3/4"	3/8"	10-32	31.00
2617	NL523W03-012	1 1/2"	3/4"	3/8"	10-32	39.00
2618	NL523W03-016	2"	3/4"	3/8"	10-32	40.00
2619	NL523W03-020	2 1/2"	3/4"	3/8"	10-32	45.00
2620	NL523W03-024	3"	3/4"	3/8"	10-32	50.00
2621	NL523W03-032	4"	3/4"	3/8"	10-32	60.00
2622	NL523W04-010	1 1/4"	1"	7/16"	1/4-20	42.00
2623	NL523W04-012	1 1/2"	1"	1/2"	1/4-20	53.00
2624	NL523W04-016	2"	1"	5/8"	1/4-20	58.00
2625	NL523W04-020	2 1/2"	1"	5/8"	1/4-20	60.00
2626	NL523W04-024	3"	1"	5/8"	1/4-20	70.00
2627	NL523W04-032	4"	1"	5/8"	1/4-20	85.00
2628	NL523W04-040	5"	1"	5/8"	1/4-20	105.00
2629	NL523W04-048	6"	1"	5/8"	1/4-20	115.00

COMMERCIAL

Grade L5 Ceramic with outside glazed. Std. Pkg. 50

No.	A	B	C	Thd.	NET Per C
2640	1/4"	1/4"	3/32" Thru	6-32	$15.00
2641	1/2"	1/4"	3/32"	6-32	16.00
2642	3/8"	3/8"	3/32"	6-32	17.00
2643	1/2"	3/8"	3/32"	6-32	18.00
2644	1/2"	1/2"	3/16"	6-32	20.00
2645	3/4"	1/2"	3/16"	6-32	21.00
2646	1"	1/2"	3/16"	6-32	23.00
2647	1 1/2"	1/2"	3/16"	6-32	27.00
2648	2 1/2"	1/2"	1/2"	6-32	30.00
2649	2 1/2"	3/4"	3/4"	1/4-20	45.00
2650	4"	3/4"	3/4"	1/4-20	60.00

ALUMINUM SPACERS

Irridite 14-2 per MIL-C-5541 Std. Pkg. 100

ROUND — CLEAR HOLE





LENGTH "L"	.250 O.D. for #4 screw No.	.250 O.D. for #6 screw No.	.250 O.D. for #8 screw No.	.250 O.D. NET Per C	.312 O.D. for #10 screw No.	.312 O.D. NET Per C
.125	8480	8500	8520	$ 9.75	8540	$ 8.50
.250	8481	8501	8521	10.50	8541	10.75
.375	8482	8502	8522	11.00	8542	11.50
.500	8483	8503	8523	11.75	8543	12.25
.625	8484	8504	8524	12.50	8544	13.00
.750	8485	8505	8525	14.25	8545	14.50
.875	8486	8506	8526	14.50	8546	14.75
1.000	8487	8507	8527	15.00	8547	15.25
1.250	8488	8508	8528	20.00	8548	21.50
1.500	8489	8509	8529	21.50	8549	22.50
1.750	8490	8510	8530	21.75	8550	23.50
2.000	8491	8511	8531	22.25	8551	25.50
2.50	8492	8512	8532	24.00	8552	28.00
3.00	8493	8513	8533	26.00	8553	28.75
3.50	8494	8514	8534	30.00	8554	46.00
4.00	8495	8515	8535	32.00	8555	48.00
5.00	8496	8516	8536	40.00	8556	54.00
6.00	8497	8517	8537	44.00	8557	62.00

ROUND — TAPPED HOLE

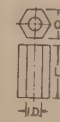




LENGTH "L"	.250 O.D. 4-40 THD	.250 O.D. 6-32 THD	.250 O.D. 8-32 THD	.250 O.D. NET Per C	.312 O.D. 10-32 THD	.312 O.D. NET Per C
.125	8320	8340	8360	$ 8.75	8380	$ 9.00
.250	8321	8341	8361	12.00	8381	12.75
.375	8322	8342	8362	12.50	8382	13.00
.500	8323	8343	8363	13.00	8383	14.00
.625	8324	8344	8364	14.75	8384	15.25
.750	8325	8345	8365	15.50	8385	17.75
.875	8326	8346	8366	17.00	8386	18.75
1.000	8327	8347	8367	18.00	8387	19.75
1.250	8328	8348	8368	19.50	8388	20.50
1.500	8329	8349	8369	20.25	8389	21.50
1.750	8330	8350	8370	21.50	8390	22.50
2.00	8331	8351	8371	21.75	8391	24.00
2.50	8332	8352	8372	24.00	8392	26.00
3.00	8333	8353	8373	25.50	8393	28.00
3.50	8334	8354	8374	29.00	8394	31.00
4.00	8335	8355	8375	32.00	8395	34.00

HEX — CLEAR HOLE





LENGTH "L"	.250 O.D. for #4 screw	.250 O.D. for #6 screw	.250 O.D. for #8 screw	.250 O.D. NET Per C	.312 O.D. for #10 screw	.312 O.D. NET Per C
.125	8560	8580	8600	$ 9.25	8620	$11.50
.250	8561	8581	8601	11.00	8621	13.50
.375	8562	8582	8602	12.00	8622	14.25
.500	8563	8583	8603	12.25	8623	15.00
.625	8564	8584	8604	13.50	8624	16.00
.750	8565	8585	8605	15.00	8625	16.50
.875	8566	8586	8606	15.50	8626	17.00
1.000	8567	8587	8607	20.00	8627	17.50
1.250	8568	8588	8608	21.00	8628	22.00
1.500	8569	8589	8609	22.00	8629	23.75
1.750	8570	8590	8610	22.50	8630	25.50
2.00	8571	8591	8611	23.50	8631	26.00

HEX — TAPPED HOLE





LENGTH "L"	.250 O.D. 4-40 THD	.250 O.D. 6-32 THD	.250 O.D. 8-32 THD	.250 O.D. NET Per C	.312 O.D. 10-32 THD	.312 O.D. NET Per C
.125	8400	8420	8440	$11.00	8460	$12.25
.250	8401	8421	8441	12.00	8461	15.00
.375	8402	8422	8442	13.50	8462	16.00
.500	8403	8423	8443	14.00	8463	16.75
.625	8404	8424	8444	15.25	8464	17.50
.750	8405	8425	8445	16.00	8465	20.00
.875	8406	8426	8446	18.00	8466	20.50
1.000	8407	8427	8447	18.50	8467	21.00
1.250	8408	8428	8448	20.25	8468	21.75
1.500	8409	8429	8449	22.00	8469	22.75
1.750	8410	8430	8450	21.50	8470	26.00
2.00	8411	8431	8451	22.50	8471	28.00
2.50	8412	8432	8452	25.00	8472	30.00
3.00	8413	8433	8453	26.50	8473	32.00
3.50	8414	8434	8454	30.00	8474	33.00
4.00	8415	8435	8455	31.00	8475	38.00

NYLON SPACERS 1/4" O.D.



Non-conductive and molded of corrosive resistant Nylon. Useful for a wide variety of applications as well as for bushings, bearings, rollers and glides. Available in Natural finish. 1/4" O.D. in various clearance hole diameters. Std. Pkg. 100

Length	#4 (.115") No.	#6 (.140") No.	#8 (.171") No.	NET Per C
.125	4000	4001	4002	$ 3.30
.187	4003	4004	4005	3.80
.250	4006	4007	4008	4.30
.312	4009	4010	4011	4.90
.375	4012	4013	4014	5.50
.437	4015	4016	4017	6.00
.500	4018	4019	4020	6.50
.562	4021	4022	4023	7.00
.625	1024	4025	4026	7.50
.687	4027	4028	4029	8.00
.750	4030	4031	4032	8.50
.812	4033	4034	4035	8.80
.875	4036	4037	4038	9.30
.937	4039	4040	4041	9.70
1.000	4042	4043	4044	10.00

MORE THAN TEN THOUSAND ITEMS MANUFACTURED UNDER ONE ROOF

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

© United Technical Pub

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

RUBBER GROMMETS



Formerly listed by Radio Essentials, Inc., and American Radio Hardware Inc., (Their catalog numbers as below, minus first digit).

Std. Pkg. 100

Cat. No.	I.D. A	P.H. B	P.T. C	O.D. D	W E	NET Per C
91114	1/8	1/4	1/16	11/32	3/16	$2.50
91118	3/16	5/16	1/16	7/16	7/32	2.50
91103	3/16	15/32	1/8	9/16	3/8	3.30
91122	1/4	11/32	1/32	1/2	5/32	3.10
91102	9/32	13/32	5/32	5/8	3/8	3.50
91117	5/16	7/16	1/8	19/32	3/8	3.50
91116	5/16	1/2	1/8	3/4	3/8	5.00
91106	5/16	1/2	3/16	5/8	1/2	7.20
91119	9/32	13/32	1/16	9/16	1/4	2.70
91123	9/32	1/2	1/4	11/16	7/16	5.50
91120	19/64	7/16	1/16	5/8	1/4	3.10
91113	21/64	13/32	1/16	5/8	1/4	3.10
91107	3/8	7/16	3/32	5/8	5/16	5.00
91121	3/8	1/2	1/16	21/32	1/4	3.00
91100	3/8	1/2	9/64	13/16	13/32	8.00
91124	7/16	9/16	1/16	3/4	1/4	3.50
91111	3/8	11/16	9/64	7/8-1"	13/32	9.00
91109	3/8	7/8	1/4	1-1/16	3/8	15.00
91112	49/64	1-3/32	1/16	1-5/8	5/16	12.00

RECESS RUBBER BUMPERS

Std. Pkg. 100



FIG 1

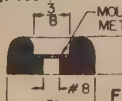


FIG. 2

No.	Fig.	A	B	C	NET Per C
2192	1	7/32"	17/32"	1/4"	$1.70
2193	1	1/4"	9/16"	5/16"	2.20
2194	1	9/32"	1/2"	3/8"	3.30
2184	1	5/32"	5/8"	3/32"	3.30
		With molded-in metal washer			
2185	2	5/8"	31/32"	5/8"	5.00

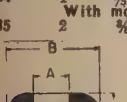


FIG 3

With Screw

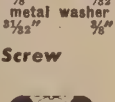


FIG. 4

8-32 X 1/2 SCREW & NUT

Supplied complete with 1/2" mounting screw and hex nut For panels up to 1/4" thick. Specify longer screw for thicker panels

Std. Pkg. 100

No.	Fig.	A	B	C	Screw	NET Per C
2196	3	7/32"	17/32"	1/4"	6-32	$6.70
2197	3	1/4"	9/16"	5/16"	6-32	7.20
2198	3	9/32"	1/2"	3/8"	6-32	8.30
2199	3	1/4"	5/8"	9/32"	6-32	8.30
		With molded-in metal washer				
2195	4	5/8"	31/32"	5/8"	8-32	10.00

VINYL CABINET BUMPERS



All molded cabinet bumpers with brass insert to absorb screw load. Molded of ethylene vinyl, color black.

Std. Pkg. 100

No.	Size Screw	A	B	NET Per C
2181	4	3/8"	9/16"	$5.50
2182	6	7/16"	3/4"	6.50
2183	8	5/8"	15/16"	7.50

NYLON STRAIN RELIEF BUSHINGS



One piece construction. Eliminates grommets, wire knots and costly labor. Completely insulates wire from chassis and prevents cord pull push and twist. No. 937 ideal for small mike cables; No. 938 for line cords; No. 939 for Co-Ax Wire.

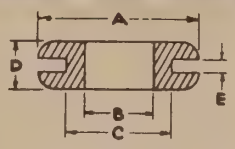
Std. Pkg. 50

A: Chassis Hole
B: Diameter of head
C: Length
D: Chassis Thickness

No.	Wire Size	A	B	C	D	NET Per C
937	1/8-3/16"	.375	.440	.415	to 1/16"	$4.00
938	SP-1 & SPT-1	.437	.468	.406	to 1/16"	4.00
939	.235-.265	.500	.560	.438	to 3/32"	4.50



No. 940 Setting Pliers — NET Each $25.00



RUBBER GROMMETS



Std. Pkg. 100

Cat. No.	I.D. A	P.H. B	P.T. C	O.D. D	W E	NET Per C
2185	1/8	3/16	1/16	5/16	3/16	2.40
2172	3/16	5/16	1/16	7/16	3/16	2.20
2170	1/4	3/8	1/16	5/8	1/4	2.50
2174	5/16	7/16	1/16	5/8	1/4	2.40
2175	3/8	1/2	1/16	21/32	1/4	2.50
2177	7/16	9/16	1/16	3/4	1/4	2.50
2186	1/2	3/4	1/16	1-1/16	5/16	5.30
2188	9/16	13/16	1/16	1-1/16	5/16	5.40
2187	5/8	7/8	1/16	1-1/8	5/16	5.30
2189	3/4	7/8	1/32	1"	5/32	5.20

VINYL GROMMETS

DESCR.: Exceptional aging qualities. High dielectric properties. Oil resistant. Durameter hardness 45 to 85.

Cat. No.	I.D. A	P.H. B	P.T. C	O.D. D	W E	NET Per C
2145	1/8	1/4	1/16	11/32	3/16	1.10
2146	3/16	5/16	1/16	7/16	7/32	1.35
2147	1/4	3/8	1/16	9/16	1/4	1.65
2148	3/8	1/2	1/16	5/8	1/4	1.75
2149	1/2	5/8	1/16	13/16	9/32	2.65

SNAP-LOCK PLASTIC GROMMETS

Snaps in Place—FAST! • Stays Put—LOCKED IN!



Std. Pkg. 100

Two identical halves snap tight, lock in place. Provides a rigid bearing surface, greater dielectric, extreme chemical and wear resistance. Identical halves form complete grommet. Color, black.

Cat. No.	I.D. A	P.H. B	P.T. C	O.D. D	W E	NET Per C
2178	3/16	5/16	1/16	7/16	1/4	3.30
2179	1/4	3/8	1/16	1/2	1/4	3.50
2180	3/8	1/2	1/16	5/8	1/4	3.65

INSULATED GROMMET BUSHINGS

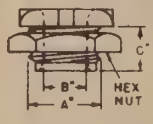


Std. Pkg. 25

Black Phenolic—Matte Finish

No.	BUSHING A	B	C	COLLAR D	E	G	H	NET Per C
931	1/2"	3/8"	1/4"—32	.3750"	1/4"	1/2"	1/8"	$40.00
932	3/4"	7/16"	5/16"—32	.4250"	5/16"	5/8"	1/8"	40.00
933	1/4"	1/2"	3/8"—27	.4375"	5/16"	11/16"	1/8"	40.00
934	5/16"	9/16"	15/32"—32	.4500"	5/16"	3/4"	1/8"	40.00
935	5/8"	3/4"	7/8"—27	.4500"	5/16"	1"	1/8"	40.00

BAKELITE INSULATING BUSHINGS



BODY: MOLDED Phenolic, black. U.L. approved, recommended for temperatures up to 300 degrees Fahrenheit.
NUT. Steel, cadmium plated.

Std. Pkg. 50

No.	A	B	C	NET Per C
2136	13/32"	17/64"	1/4"	$ 9.50
2137	17/32"	5/16"	5/16"	10.50
2138	21/32"	29/64"	5/16"	11.00
2139	27/32"	9/16"	11/32"	11.50

EXTRUDED "CATERPILLAR" NYLON GROMMET



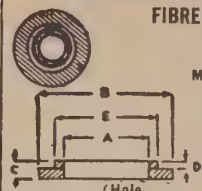
Shape your own grommets to fit any size or shape opening. Made of non-conductive Black Nylon, Type 6/6, fungus resistant to conform to Mil M 20693a, Type 1. Available in 25 ft. rolls for panel thickness .052 to .125

Std. Pkg. 1

No.	A	B	C	D	E	NET Ea.
2692	.052	.150	.040	.190	.125	$10.00
2693	.085	.155	.045	.200	.162	11.50
2694	.125	.175	.045	.220	.206	12.00

FIBRE WASHERS

SHOULDER WASHERS



MATERIAL: Fibre, per MIL-F-1148A, Grade CH.

A. Inside Diameter
B. Outside Diameter
C. Thickness Overall
D. Height of Shoulder
E. Diameter of Shoulder

No.	A	(Hole Size)	B	C	D	E	NET Per C	NET Per M
2150	.140	No. 6	.375	.093	.031	.237	$1.00	$7.00
2151	.110	No. 4	.250	.062	.031	.187	.90	6.00
2152	.136	No. 6	.250	.093	.031	.187	.95	6.50
2153	.136	No. 6	.312	.093	.031	.187	1.05	7.30
2154	.250	1/4"	.500	.068	.028	.312	1.10	7.80
2155	.172	No. 8	.375	.093	.031	.246	1.05	7.30
2156	.196	No.10	.375	.093	.031	.308	1.05	7.30
2159	.265	17/64"	.500	.097	.031	.365	1.10	8.00
2157	.375	3/8"	.750	.093	.031	.500	1.40	11.00
2158	.385	3/8"	.625	.093	.031	.500	1.35	10.20

FLAT WASHERS



MATERIAL: Fibre, per MIL-F-1148A, Grade CH.

No.	(Hole Size)	A I.D.	B O.D.	C Thickness	NET Per C	NET Per M
2160	No. 6	.136	.250	1/16	$ .95	$6.30
2161	No. 4	.110	.250	1/16	.95	6.30
2162	No. 6	.140	.375	1/16	.90	6.00
2163	No. 8	.172	.375	1/16	.90	6.00
2164	No. 10	.196	.375	1/16	.90	6.00
2165	1/4"	.250	.500	1/16	.90	6.00
2166	1/4"	.250	.500	3/32	.95	6.30
2167	5/16"	.312	.500	1/16	.95	6.00
2168	3/8"	.385	.625	1/16	1.05	7.20
2169	3/8"	.375	.750	1/16	1.25	9.20

FIBRE WASHER KIT

Each kit contains about 1,000 Flat and Shoulder Washers, packed in an 18-compartment plastic box, in the following approximate quantities of SMITH standard washers:
100 each #2151, 2161, 2153, 2160: 75 each #2150, 2162; 60 each #2155, 2163; 50 each #2156, 2164, 2154, 2165; 35 each #2159, 2167; 25 each #2158, 2168; 10 each #2157, 2169.

No.		NET Each
2173	Kit of 1,000 Washers	$8.00

NYLON WASHERS

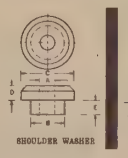
SHOULER WASHERS

MATERIAL: Natural Nylon per MIL-P-20693A.

No.	A	(Hole Size)	B	C	D	E	NET Per C	NET Per M
2660	.140	No. 6	.375	.093	.031	.237	$250	$20.00
2661	.110	No. 4	.250	.062	.031	.187	220	17.00
2662	.136	No. 6	.250	.093	.031	.187	220	17.00
2663	.136	No. 6	.312	.093	.031	.187	2.30	18.00
2664	.250	1/4"	.500	.068	.028	.312	2.40	19.00
2665	.172	No. 8	.375	.093	.031	.246	2.50	20.00
2666	.196	No. 10	.375	.093	.031	.308	2.50	20.00
2669	.265	17/64"	.500	.097	.031	.365	3.30	26.00
2667	.375	3/8"	.750	.093	.031	.500	6.50	50.00
2668	.385	3/8"	.625	.093	.031	.500	4.00	33.00

FLAT WASHERS

No.	(Hole Size)	A I.D.	B O.D.	C Thickness	NET Per C	NET Per M
2514	No. 4	.115	.281	.047	$1.90	$19.00
2670	No. 6	.136	.250	1/16	1.90	15.00
2671	No. 4	.110	.250	1/16	1.90	15.00
2672	No. 6	.140	.375	1/16	2.30	18.00
2515	No. 6	.140	.312	.047	2.00	20.00
2673	No. 8	.172	.375	1/16	2.50	20.00
2516	No. 8	.170	.375	.062	2.20	22.00
2674	No. 10	.196	.375	1/16	2.50	20.00
2517	No. 10	.200	.437	.062	2.30	23.00
2675	1/4"	.250	.500	1/16	2.50	20.00
2676	1/4"	.250	.500	3/32	3.10	25.00
2518	1/4"	.260	.562	.062	2.50	25.00
2677	5/16"	.312	.500	1/16	2.50	20.00
2678	3/8"	.385	.625	1/16	2.80	22.00
2679	3/8"	.375	.750	1/16	3.40	27.00



SHOULDER WASHER — FINISHING WASHER

MOLDED NYLON WASHERS

SHOULDER-FINISHING

Non conductive and corrosion resistant, ideal for insulation, cushioning or spacing protection. Meets Military Specification MIL-P-20693, Type 1, Available in Natural.

Std. Pkg. 100

SHOULDER WASHERS

No.	I.D.	O.D.	A	B	C	NET Per C
2681	.122	.187	.281	.040	.040	$2.25
2682	.148	.281	.328	.040	.040	2.40
2683	.174	.250	.375	.060	.050	2.50
2684	.201	.281	.437	.050	.050	2.75
2685	.260	.375	.562	.060	.060	3.00
2686	.385	.500	.750	.060	.060	4.75

FINISHING WASHERS

No.	O.D.	I.D.	Thickness	NET Per C
2687	.437	.143	.100	$5.00
2688	.515	.171	.115	5.25
2689	.580	.191	.152	5.50
2690	.609	.223	.160	6.00
2691	.683	.251	.183	6.50

© United Technical Pub

specify* **SMITH**

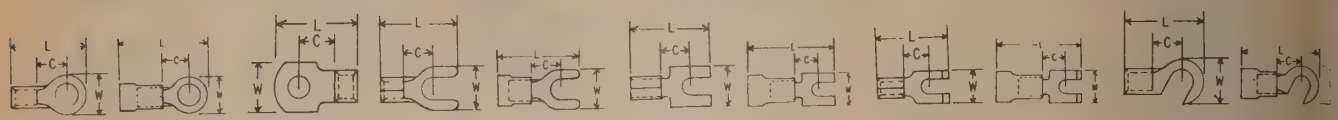
HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENT

SOLDERLESS TERMINALS

COLOR CODE: RED: 22-18 AWG; BLUE: 16-14 AWG; YELLOW: 12-10 AWG

RING | FLAG | SPADE | BLOCK SPADE | BLOCK SPADE FLANGED | HOOK



NON-INS. INS. NON-INS. NON-INS. INS. NON-INS. INS. NON-INS. INS. NON-INS. INS.

WIRE SIZE 12—10 AWG

UL APPROVED .040 Electrolytic Copper Tin Plated

Smith Cat.No.	Material	Stud Size	Dimensions W	C	L	Net Per C
RING TERMINAL — NON-INSULATED						
4931	Butted Seam	8-10	3/8	9/32	47/64	$2.80
4932	Butted Seam	12¼	39/64	7/16	31/32	3.20
4933	Butted Seam	5/16-⅜	39/64	7/16	31/32	3.20
4934	Brazed	8-10	39/64	7/16	47/64	4.80
4935	Brazed	12¼	39/64	7/16	31/32	5.50
4936	Brazed	5/16-⅜	39/64	7/16	31/32	5.50
RING TERMINAL — INSULATED						
4937	Vinyl	8-10	3/8	9/32	1-1/64	5.50
4938	Vinyl	12¼	39/64	7/16	1-9/32	6.00
4939	Vinyl	5/16-⅜	39/64	7/16	1-9/32	6.00
4940	Nylon	8-10	3/8	9/32	1-1/64	7.00
4941	Nylon	12¼	39/64	7/16	1-9/32	8.00
4942	Nylon	5/16-⅜	39/64	7/16	1-9/32	8.00
FLAG TERMINAL — NON-INSULATED						
4943	Butted Seam	8-10	3/8	9/32	11/16	$3.20
SPADE TERMINAL — NON-INSULATED						
4944	Butted Seam	8	3/8	9/32	47/64	$2.80
4945	Butted Seam	10	3/8	9/32	47/64	2.80
4946	Brazed	8	3/8	9/32	47/64	4.80
4947	Brazed	10	3/8	9/32	47/64	4.80
SPADE TERMINAL — INSULATED						
4948	Vinyl	8	3/8	9/32	1-1/64	5.50
4949	Vinyl	10	3/8	9/32	1-1/64	5.50
4950	Nylon	8	3/8	9/32	1-1/64	7.00
4951	Nylon	10	3/8	9/32	1-1/64	7.00
BLOCK SPADES — NON-INSULATED						
4952	Butted Seam	8	5/16	9/32	47/64	$2.80
4953	Butted Seam	10	5/16	9/32	47/64	2.80
4954	Brazed	8	5/16	9/32	47/64	4.80
4955	Brazed	10	5/16	9/32	47/64	4.80
BLOCK SPADE - INSULATED						
4956	Nylon	8	5/16	9/32	1-1/64	5.50
4957	Vinyl	10	5/16	9/32	1-1/64	5.50
4958	Nylon	8	5/16	9/32	1-1/64	7.50
4959	Nylon	10	5/16	9/32	1-1/64	7.50
HOOK TERMINAL — NON-INSULATED						
4960	Butted Seam	8	3/8	9/32	47/64	$2.80
4961	Butted Seam	10	3/8	9/32	47/64	2.80
4962	Brazed	8	3/8	9/32	47/64	4.80
4963	Brazed	10	3/8	9/32	47/64	4.80
HOOK TERMINAL — INSULATED						
4964	Vinyl	8	3/8	9/32	1-1/64	5.50
4965	Vinyl	10	3/8	9/32	1-1/64	5.50
4966	Nylon	8	3/8	9/32	1-1/64	7.50
4967	Nylon	10	3/8	9/32	1-1/64	7.50

WIRE SIZE 26—24 AWG

UL APPROVED .020 Electrolytic Copper Tin Plated

Smith Cat.No.	Material	Stud Size	Dimensions W	C	L	Net Per C
MINIATURE RING TERMINAL - NON-INSULATED						
4968	Butted Seam	4	13/64	7/32	37/64	$6.00
4969	Butted Seam	6	13/64	7/32	37/64	6.00
4970	Butted Seam	8	1/4	9/32	21/32	6.00
4971	Butted Seam	10	1/4	9/32	21/32	6.00
MINIATURE RING TERMINAL — INSULATED						
4972	Nylon	4	13/64	7/32	39/64	7.00
4973	Nylon	6	13/64	7/32	39/64	7.00
4974	Nylon	8	1/4	9/32	11/16	7.00
4975	Nylon	10	1/4	9/32	11/16	7.00
MINIATURE SPADE TERMINAL - NON-INSULATED						
4976	Butted Seam	4	13/64	7/32	37/64	$6.00
4977	Butted Seam	6	1/4	9/32	11/16	6.00
MINIATURE SPADE TERMINAL — INSULATED						
4978	Nylon	4	13/64	7/32	39/64	7.00
4979	Nylon	6	1/4	9/32	11/16	7.00

WIRE SIZE 16—14 AWG

UL APPROVED .030 Electrolytic Copper Tin Plated

Smith Cat.No.	Material	Stud Size	Dimensions W	C	L	Net Per C
RING TERMINAL — NON-INSULATED						
4865	Butted Seam	4-6	1/4	7/32	19/32	$2.00
4866	Butted Seam	8	21/64	1/4	11/16	2.00
4867	Butted Seam	10	21/64	1/4	11/16	2.00
4868	Butted Seam	12¼	15/32	13/32	57/64	2.50
4869	Brazed	4-6	1/4	7/32	19/32	3.20
4870	Brazed	8	21/64	1/4	11/64	3.20
4871	Brazed	10	21/64	1/4	11/64	3.20
4872	Brazed	12¼	15/32	13/32	57/64	4.00
RING TERMINAL — INSULATED						
4873	Vinyl	4-6	1/4	7/32	25/32	4.00
4874	Vinyl	8	21/64	1/4	7/8	4.00
4875	Vinyl	10	21/64	1/4	7/8	4.00
4876	Vinyl	12¼	15/32	13/32	1-3/16	4.50
4877	Nylon	4-6	1/4	7/32	25/32	6.50
4878	Nylon	8	21/64	1/4	7/8	6.50
4879	Nylon	10	21/64	1/4	7/8	6.50
4880	Nylon	12¼	15/32	13/32	1-3/64	7.50
FLAG TERMINAL — NON-INSULATED						
4881	Butted Seam	8-10	3/8	11/32	11/16	$3.00
SPADE TERMINAL — NON-INSULATED						
4882	Butted Seam	4-6	21/64	1/4	11/16	$2.00
4883	Butted Seam	8	21/64	1/4	11/16	2.00
4884	Butted Seam	10	21/64	1/4	11/16	2.00
4885	Brazed	4-6	21/64	1/4	11/16	3.20
4886	Brazed	8	21/64	1/4	11/16	3.20
4887	Brazed	10	21/64	1/4	11/16	3.20
SPADE TERMINAL — INSULATED						
4888	Vinyl	4-6	21/64	1/4	7/8	4.00
4889	Vinyl	8	21/64	1/4	7/8	4.00
4890	Vinyl	10	21/64	1/4	7/8	4.00
4891	Nylon	4-6	21/64	1/4	7/8	6.50
4892	Nylon	8	21/64	1/4	7/8	6.50
4893	Nylon	10	21/64	1/4	7/8	6.50
BLOCK SPADES — NON-INSULATED						
4894	Butted Seam	4-6	19/64	1/4	21/32	$2.00
4895	Butted Seam	8	19/64	1/4	21/32	2.00
4896	Butted Seam	10	19/64	1/4	21/32	2.00
4897	Brazed	4-6	19/64	1/4	21/32	3.20
4898	Brazed	8	19/64	1/4	21/32	3.20
4899	Brazed	10	19/64	1/4	21/32	3.20
BLOCK SPADES — INSULATED						
4901	Vinyl	4-6	19/64	1/4	27/32	4.00
4902	Vinyl	8	19/64	1/4	27/32	4.00
4903	Vinyl	10	19/64	1/4	27/32	4.00
4904	Nylon	4-6	19/64	1/4	27/32	6.50
4905	Nylon	8	19/64	1/4	27/32	6.50
4906	Nylon	10				6.50
BLOCK SPADES FLANGED — NON-INSULATED						
4907	Butted Seam	4-6	19/64	1/4	21/32	$2.00
4908	Butted Seam	8	19/64	1/4	21/32	2.00
4909	Butted Seam	10	19/64	1/4	21/32	2.00
4910	Brazed	4-6	19/64	1/4	21/32	3.20
4911	Brazed	8	19/64	1/4	21/32	3.20
4912	Brazed	10	19/64	1/4	21/32	3.20
BLOCK SPADES FLANGED — INSULATED						
4913	Vinyl	4-6	19/64	1/4	27/32	4.00
4914	Vinyl	8	19/64	1/4	27/32	4.00
4914	Vinyl	10	19/64	1/4	27/32	4.00
4916	Nylon	4-6	19/64	1/4	27/32	6.50
4917	Nylon	8	19/64	1/4	27/32	6.50
4918	Nylon	10	19/64	1/4	27/32	6.50
HOOK TERMINAL — NON-INSULATED						
4919	Butted Seam	4-6	21/64	1/4	11/16	$2.00
4920	Butted Seam	8	21/64	1/4	11/16	2.00
4921	Butted Seam	10	21/64	1/4	11/16	2.00
4922	Brazed	4-6	21/64	1/4	11/16	3.20
4923	Brazed	8	21/64	1/4	11/16	3.20
4924	Brazed	10	21/64	1/4	11/16	3.20
HOOK TERMINAL — INSULATED						
4925	Vinyl	4-6	21/64	1/4	7/8	4.00
4926	Vinyl	8	21/64	1/4	7/8	4.00
4927	Vinyl	10	21/64	1/4	7/8	4.00
4928	Nylon	4-6	21/64	1/4	7/8	6.50
4929	Nylon	8	21/64	1/4	7/8	6.50
4930	Nylon	10	21/64	1/4	7/8	6.50

STANDARD PACKAGE: 100 OF A NUMBER

WIRE SIZE 22—18 AWG

UL APPROVED .020 Electrolytic Copper Tin Plated

Smith Cat.No.	Material	Stud Size	Dimensions W	C	L	Net Per C
RING TERMINAL — NON-INSULATED						
4801	Butted Seam	4-6	1/4	7/32	19/32	$2.
4802	Butted Seam	8	21/64	1/4	11/16	2.
4803	Butted Seam	10	21/64	1/4	11/16	2.
4804	Brazed	4-6	1/4	7/32	19/32	3.
4805	Brazed	8	21/64	1/4	11/16	3.
4806	Brazed	10	21/64	1/4	11/16	3.
RING TERMINAL — INSULATED						
4809	Vinyl	4-6	1/4	7/32	25/32	4.
4810	Vinyl	8	21/64	1/4	7/8	4.
4811	Vinyl	10	21/64	1/4	7/8	4.
4812	Nylon	4-6	1/4	7/32	25/32	6.
4813	Nylon	8	21/64	1/4	7/8	6.
4814	Nylon	10	21/64	1/4	7/8	6.
FLAG TERMINAL — NON-INSULATED						
4815	Butted Seam	8-10	3/8	11/32	21/32	$3.
SPADE TERMINAL — NON-INSULATED						
4816	Butted Seam	4-6	21/64	1/4	11/16	$2.
4817	Butted Seam	8	21/64	1/4	11/16	2.
4818	Butted Seam	10	21/64	1/4	11/16	2.
4819	Brazed	4-6	21/64	1/4	11/16	3.
4820	Brazed	8	21/64	1/4	11/16	3.
4821	Brazed	10	21/64	1/4	11/16	3.
SPADE TERMINAL — INSULATED						
4822	Vinyl	4-6	21/64	1/4	7/8	4.
4823	Vinyl	8	21/64	1/4	7/8	4.
4824	Vinyl	10	21/64	1/4	7/8	4.
4825	Nylon	4-6	21/64	1/4	7/8	6.
4826	Nylon	8	21/64	1/4	7/8	6.
4827	Nylon	10	21/64	1/4	7/8	6.
BLOCK SPADES — NON-INSULATED						
4829	Butted Seam	4-6	19/64	1/4	21/32	$2.
4830	Butted Seam	8	19/64	1/4	21/32	2.
4831	Butted Seam	10	19/64	1/4	21/32	2.
4832	Brazed	4-6	19/64	1/4	21/32	3.
4833	Brazed	8	19/64	1/4	21/32	3.
4834	Brazed	10				3.
BLOCK SPADES — INSULATED						
4835	Vinyl	4-6	19/64	1/4	27/32	4.
4836	Vinyl	8	19/64	1/4	27/32	4.
4837	Vinyl	10	19/64	1/4	27/32	4.
4838	Nylon	4-6	19/64	1/4	27/32	6.
4839	Nylon	8	19/64	1/4	27/32	6.
4840	Nylon	10	19/64	1/4	27/32	6.
BLOCK SPADES FLANGED — NON-INSULATED						
4841	Butted Seam	4-6	19/64	1/4	21/32	$2.
4842	Butted Seam	8	19/64	1/4	21/32	2.
4843	Butted Seam	10	19/64	1/4	21/32	2.
4844	Brazed	4-6	19/64	1/4	21/32	3.
4845	Brazed	8	19/64	1/4	21/32	3.
4846	Brazed	10	19/64	1/4	21/32	3.
BLOCK SPADES FLANGED — INSULATED						
4847	Vinyl	4-6	19/64	1/4	27/32	4.
4848	Vinyl	8	19/64	1/4	27/32	4.
4849	Vinyl	10	19/64	1/4	27/32	4.
4850	Nylon	4-6	19/64	1/4	27/32	6.
4851	Nylon	8	19/64	1/4	27/32	6.
4852	Nylon	10	19/64	1/4	27/32	6.
HOOK TERMINAL — NON-INSULATED						
4853	Butted Seam	4-6	21/64	1/4	11/16	$2.
4854	Butted Seam	8	21/64	1/4	11/16	2.
4855	Butted Seam	10	21/64	1/4	11/16	2.
4856	Brazed	4-6	21/64	1/4	11/16	3.
4857	Brazed	8	21/64	1/4	11/16	3.
4858	Brazed	10	21/64	1/4	11/16	3.
HOOK TERMINAL — INSULATED						
4859	Vinyl	4-6	21/64	1/4	7/8	4.
4860	Vinyl	8	21/64	1/4	7/8	4.
4861	Vinyl	10	21/64	1/4	7/8	4.
4862	Nylon	4-6	21/64	1/4	7/8	6.
4863	Nylon	8	21/64	1/4	7/8	6.
4864	Nylon	10	21/64	1/4	7/8	6.

SEE NEXT PAGE FOR SMITH SOLDERLESS TERMINAL BARREL STYLES

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

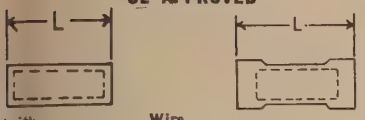
© United Technical Pu

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

BUTT CONNECTORS
UL APPROVED



Smith Cat.No.	Material	Wire Size	Thick	L	Cost Per C
ON-INSULATED					
986	Butted Seam	26-24	.016	5/8	$6.50
987	Butted Seam	22-18	.030	9/16	2.00
988	Butted Seam	16-14	.030	9/16	2.00
989	Butted Seam	12-10	.040	9/16	3.00
NSULATED —					
990	Nylon	26-24	.016	7/8	9.50
991	Vinyl	22-18	.030	15/16	5.00
992	Vinyl	16-14	.030	15/16	5.00
993	Vinyl	12-10	.040	15/16	6.00

PARALLEL CONNECTORS —



ON-INSULATED					
994	Butted Seam	22-18	.030	5/16	$2.00
995	Butted Seam	12-10	.030	5/16	2.00
996	Butted Seam	12-10	.040	5/16	2.50
NSULATED					
997	Vinyl	22-18	.030	11/16	3.50
998	Vinyl	16-14	.030	11/16	3.50
999	Vinyl	12-10	.040	11/16	4.50

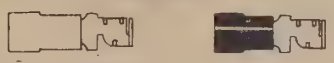
CONNECTORS



BUTT CONNECTORS — CLOSED END

Smith Cat.No.	Material	Wire Size	I.D.	O.D.	L	Cost Per C
005	Nylon	22-14	1/4	13/32	45/64	$3.50
006	Nylon	18-10	3/8	15/32	3/4	4.50

*CROSS-LOCK DISCONNECT — SELF-MATING

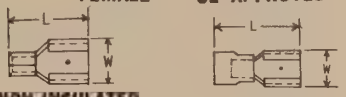


NON-INSULATED

Smith Cat.No.	Material	Wire Size	W	Thick	Cost Per C
5001	Butted Seam	22-18	1/4	.030	$3.50
5002	Butted Seam	16-14	1/4	.030	3.50
INSULATED					
5003	Vinyl	22-18	1/4	.030	6.00
5004	Vinyl	16-14	1/4	.030	6.00

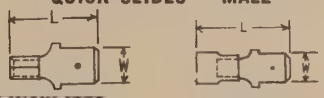
* U. S. PATENT

QUICK SLIDES — FEMALE — UL APPROVED

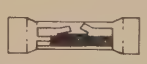


Smith Cat.No.	Material	Wire Size	W	Thick	L	Cost Per C
NON-INSULATED						
5007	Butted Seam	18-14	.187 .205	.016 .030	31/64	$2.00
5008	Butted Seam	18-14	.250		41/64	2.00
INSULATED			.187	.016		
5009	Vinyl	18-14	.205	.030	25/32	4.50
5010	Vinyl	18-14	.250	.032	55/64	4.50

QUICK SLIDES — MALE



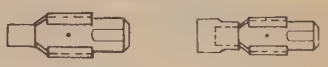
NON-INSULATED						
5011	Butted Seam	18-14	.187	.016 .030	1/2	$2.00
5012	Butted Seam	18-14	.250	.032	23/32	2.00
INSULATED						
5013	Vinyl	18-14	.187	.016 .030	25/32	4.50
5014	Vinyl	18-14	.250	.032	59/64	4.50



SNAP PLUG RECEPTACLE INSULATED

5024	Vinyl	used with .157 plug	$6.00

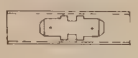
*QUICK SLIDES — SELF MATING
UL APPROVED



NON-INSULATED —					
5015	Butted Seam	18-14	.187-.205	31/64	$2.50
5016	Butted Seam	18-14	.250	41/64	2.50
INSULATED — PATENTED					
5017	Vinyl	18-14	.187-.205 —	25/32	4.50
5018	Vinyl	18-14	.250 —	25/32	4.50

* U. S. PATENT

QUICK SLIDE RECEPTACLE INSULATED
DOUBLE MALE INLINE CONNECTION



5019	Vinyl	.157	.250W	$7.50

SNAP PLUGS —



Smith Cat.No.	Material	Snap Area	Wire Size	L	Thick	Net Per C
NON-INSULATED						
5020	Butted Seam	16-14	.157	3/16	.030	$2.00
5021	Butted Seam	16-14	.176	3/16	.030	2.00
INSULATED						
5022	Vinyl	16-14	.157	3/16	.030	4.00
5023	Vinyl	16-14	.176	3/16	.030	4.00

SMITH BARREL STYLES
NON-INSULATED TERMINALS



BUTTED SEAM
- Eletrolytic pure copper, tin plated.
- Open end for visual inspection of wire contact.
- Tight grip, multiple barrel serrations for full wire contact.

BRAZED — Same as above except silver brazed barrel.

INSULATED TERMINALS



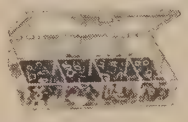
VINYL INSULATED
- Electrolytic pure copper, tin plated.
- Vinyl insulation, butted seam.
- Flared for easy wire insertion.
- Color coded for proper wire selection.

NYLON INSULATED
- Electrolytic pure copper, tin plated.
- Flared for easy wire insertion.
- Nylon insulation.
- Butted seam with seamless brass sleeve attached.
- Color Coded.

TOOL & KITS



ALL KITS PACKED IN PLASTIC BOXES



TOOL NO. 4980

Made of heavy gauge heat treated tool steel with insulated handles. Adjustable tension screw, cuts and crimps wire and all types of terminals 10-22 AWG, also 7 mm.
NET $3.95

TERMINAL KIT, UNINSULATED

Terminal Kit, Uninsulated, contains 200 popular assorted types, 18 styles.

Cat. No. 4981	With Tool	NET $8.95
Cat. No. 4984	Less Tool	NET $5.00

TERMINAL KIT, VINYL INSULATED

Terminal Kit, Vinyl Insulated Types, contains 180 popular types, 18 styles.

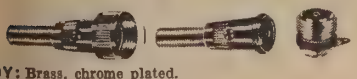
Cat. No. 4982	With Tool	NET $12.95
Cat. No. 4985	Less Tool	NET $ 9.00

TERMINAL KIT, NYLON INSULATED

Terminal Kit, Nylon Insulated Types, contains 165 assorted types, 18 styles.

Cat. No. 4983	With Tool	NET $15.95
Cat. No. 5000	Less Tool	NET $12.00

MICROPHONE CONNECTORS



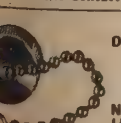
DY: Brass, chrome plated.
RING: Steel cadmium plated,
SUL.: XXXP PHENOLIC
ELET: Brass, not tinned for easy soldering.
Standard Type ⅝-27 Thread
SCR.: Designed for use with single conductor cable. Microphone connectors provided with flexible protector spring. Cable clamped firmly to connector by hollow point set screw. **Std. Pkg. 50**

Type	NET Per C
Single Contact Male	$30.00
Single Contact Female	39.00

CHASSIS CONNECTORS

ount in .385 hole grounded: .500 hole insulated with shoulder washer. **Std. Pkg. 25**

7 Single Contact Male	30.00



CAP AND CHAIN

DESCR.: Brass, nickel plated. Seals chassis connectors against dust. Eliminates noisy connections. Used with any threaded one or two conductor chassis unit. **Std. Pkg. 25**

No.		NET Per C
118	⅝-27 Thread	$55.00

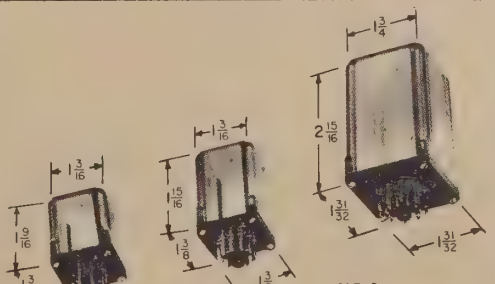


FIG. 1 FIG. 2 FIG. 3

Molded plastic housings and pin headers fit standard tube sockets. For use in packaging relays, networks, miniature interchangeable circuits in plug-in, replaceable modules. Available in three sizes and materials for a wide range of temperature and environmental applications.

PLUG-IN MODULE HOUSING

HEADERS: MOLDED PHENOLIC plastic, Black.
HOUSINGS: MOLDED POLYSTYRENE, Black, MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS, Clear. MOLDED NYLON, per MIL-P-20693A, Natural. Housings are supplied complete with header.
PINS: Brass, nickel plated.
SCREWS: Steel, Cadmium plated. **Std. Pkg. 10**

HOUSING	STYRENE Cat. No.	STYRENE NET Each	BUTYRATE Cat. No.	BUTYRATE NET Each	NYLON Cat. No.	NYLON NET Each
			Miniature (Fig. 1)			
8-Pin	2437-08	$.66	2421-08	$.76	2424-08	$.69
9-Pin	2437-09	.76	2421-09	.88	2424-09	.88
11-Pin	2437-11	.76	2421-11	.88	2424-11	.88
20-Pin	2437-20	.88	2421-20	1.00	2424-20	1.00
			Standard (Fig. 2)			
8-Pin	2438-08	$.64	2422-08	$.64	2432-08	$.76
9-Pin	2438-09	.70	2422-09	.76	2432-09	.88
11-Pin	2438-11	.70	2422-11	.76	2432-11	.88
20-Pin	2438-20	.88	2422-20	.88	2432-20	1.00
			Large (Fig. 3)			
8-Pin	2439-08	$.81	2423-08	$1.20	—	—
11-Pin	2439-11	.88	2423-11	1.25	—	—
20-Pin	2439-20	1.15	2423-20	1.47	—	—

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

AMP "SOLISTRAND" Non-Insulated



The only terminal designed for use with solid, stranded or irregularly shaped wires, or combinations of wires. Corrosion resistant, high strength, electro-tinned; versatile — widely adaptable.

Std. Pkg. 100

RING TONGUE

Wire Size	No.	AMP No.	Stud Size	Tong. W.	O'all L.	Stud Clear.	NET Per C
	2850	32989	4	7/32	17/32	5/32	$5.50
22	2851	34194	6	7/32	17/32	5/32	5.50
	2852	32990	8	7/32	17/16	15/64	6.50
to	2853	33214	10	7/32	17/16	5/32	6.50
	2854	33215	1/4	15/32	15/16	27/64	8.50
16	2855	33452	5/16	15/32	15/16	27/64	8.50
	2856	33453	3/8	17/32	1 1/16	17/32	8.50
	2857	32991	4	1/4	5/16	11/64	$6.50
16	2858	34197	6	1/4	5/16	11/64	6.50
	2859	32992	8	5/16	11/32	1/4	6.50
to	2860	320093	10	5/16	11/32	1/4	6.50
	2861	33218	1/4	15/32	15/16	5/16	8.50
14	2862	33454	5/16	15/32	15/16	5/16	8.50
	2863	33455	3/8	17/32	1 1/8	17/32	8.50

SPADE TONGUE (B)

22	2864	32897	6	11/32	5/8	13/64	$5.50
to	2865	32898	8	11/32	5/8	13/64	5.50
16	2866	32899	10	11/32	5/8	13/64	5.50
16	2867	32903	6	11/32	5/8	13/64	$5.50
to	2868	32904	8	11/32	5/8	13/64	5.50
14	2869	32905	10	11/32	5/8	13/64	5.50

BUTT CONNECTOR (C)

2870	31818	22-16 .140 I.D.	37/64		$7.00
2871	31819	16-14 .170 I.D.	37/64		7.00

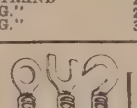
SOLDERLESS TERMINAL ASSORTMENT



A basic assortment of the most commonly used Ring Tongue and Spade Terminals for wire sizes 22 thru 14. Packed in a re-usable clear plastic compartmented box.

No.	Approx. Quantity of Terminals	Style	Std. Pkg. 1 NET
1526	200	"PLASTI-GRIP"	$20.00
1527	300	"PLASTI-GRIP"	29.00
1528	200	"SOLISTRAND"	14.00
1529	300	"SOLISTRAND"	20.00
1577	200	"P.I.D.G."	25.00
1578	300	"P.I.D.G."	37.00

AMP "PLASTI-GRIP" (P.G.)



Insulated, strong, special plastic has high dielectric strength. Applied with single operation of press dies or hand tools. High tensile strength. High conductivity copper, electro-tinned. Color coded for wire size.

Std. Pkg. 100

RING TONGUE (A)

Wire Size	No.	AMP No.	Stud Size	Tong. W.	O'all L.	Stud Clear.	NET Per C
	2750	34141	4	7/32	21/32	5/32	$8.50
22	2751	34142	6	7/32	25/32	5/32	8.50
	2752	34145	8	7/32	25/32	1/4	8.50
to	2753	34146	10	7/32	25/32	1/4	8.50
	2754	34150	1/4	15/32	1 1/16	27/64	9.50
16	2755	34151	5/16	15/32	1 1/16	27/64	9.50
	2756	34152	3/8	17/32	1 13/64	17/32	9.50
	2757	34157	4	1/4	1 1/16	5/32	$8.50
16	2758	34158	6	1/4	1 1/16	5/32	8.50
	2759	34160	8	11/32	27/32	17/64	8.50
to	2760	34161	10	11/32	27/32	17/64	8.50
	2761	34162	1/4	15/32	1 1/16	27/64	9.50
14	2762	34163	5/16	15/32	1 1/16	27/64	9.50
	2763	34164	3/8	17/32	1 13/64	33/64	9.50

SPADE TONGUE (B)

22	2764	34153	6	11/32	49/64	13/64	$8.50
to	2765	34155	8	3/8	57/64	19/64	8.50
16	2766	34156	10	3/8	57/64	19/64	8.50
16	2767	34165	6	3/8	57/64	19/64	$8.50
to	2768	34166	8	3/8	57/64	19/64	8.50
14	2769	34167	10	3/8	57/64	19/64	8.50

HOOK TONGUE (C)

20-16	2770	34501	6	9/32	47/64	3/16	$8.50
	2771	321699	8	11/32	55/64	9/32	8.50
16-14	2772	320263	8	11/32	55/64	17/64	$11.50

BUTT CONNECTOR (D)

2773	34070	22-16 .140 I.D.	1		$10.00
2774	34071	16-14 .170 I.D.	1 1/4		10.00

SOLDERLESS TERMINALS

AMP Pre-Insulated Diamond Grip



Color-coded for wire size. Std. Pkg. 100

RING TONGUE (A)

Wire Size	No.	AMP No.	Stud Size	Tongue Width	Overall Length	Stud Clear.	Per C
22	1550	320882	4	3/16	21/32	5/32	$11.00
	1551	31881	6	7/32	25/32	5/32	11.00
to	1552	31886	8	7/32	25/32	1/4	11.00
	1553	31887	10	5/32	25/32	1/4	11.00
16	1554	31894	1/4	15/32	1 1/16	27/64	12.00
14	1555	32441	4	1/4	1 1/16	11/64	11.00
	1556	32442	6	1/4	1 1/16	11/64	11.00
to	1557	31902	8	11/32	27/32	5/32	11.00
	1558	322238	10	5/16		1/4	11.00
16	1559	31906	1/4	15/32	1/16	5/16	12.00

FLANGED SPADE (B)

22-16	1560	32562	6	19/64	29/32	13/64	$11.00
	1561	32498	8	27/64	13/16	1/4	12.00
	1562	320861	6	19/64	29/32	13/64	11.00
14-16	1563	320862	8	19/64	29/32	13/64	11.00
	1564	320863	10	19/64	29/32	13/64	11.00

SPADE TONGUE (C)

	1565	34541	6	1/4	53/64	19/64	$12.00
22-16	1566	32053	8	3/8	57/64	19/64	11.00
	1567	32054	10	3/8	57/64	19/64	11.00
	1568	35559	6	19/64	47/64	13/64	11.00
14-16	1569	321233	8	19/64	47/64	13/64	12.00
	1570	32060	10	3/8	57/64	3/16	11.00

HOOK TONGUE (D)

22-16	1571	34313	6	9/32	47/64	13/64	$11.00
	1572	32456	8	11/32	55/64	9/32	11.00
	1573	320381	6	11/32	27/32	9/32	11.00
14-16	1574	320306	8	11/32	27/32	9/32	13.00
	1575	35481	10	11/32	27/32	9/32	13.00
18-14	1576	Terminal Strip Connectors					$4.50

BUTT CONNECTOR (F)

22-16	1548	320559 .125 I.D.		$41.00
16-14	1549	320562 .150 I.D.		41.00

QUICK DISCONNECT TERMINALS



Terminals of pure electrolytic copper. Resists corrosion and insures shelf life. Beveled entry for easy wire threading and improved V-ridges for wire protection. Male tongue width .248/.251, female entry .225 Min.

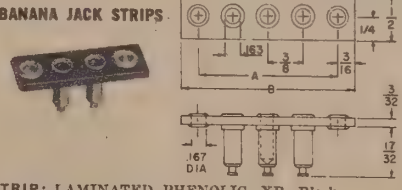
Std. Pkg. 100

Male	Female	Wire-Size	NET Per C
		Non-Insulated	
2742	2745	22-16	$2.10
2743	2746	16-14	2.10
2744	2747	12-10	2.10
		Insulated	
2794	2797	22-16	4.50
2795	2798	16-14	4.50
2796	2799	12-10	4.50

Std. Pkg. 1

No. 2748	Kit, 50 each, 12 types in plastic box	NET Ea. $19.80

BANANA JACK STRIPS



STRIP: LAMINATED PHENOLIC, XP, Black.
BODY: Brass, nickle plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC continuous working voltage.
DESCR.: From 2 to 10 Banana jacks assembled on 3/8" centers on a heavy-duty board. Provides positive contact with standard banana plugs. Mounting holes accept screws up to #8.

Std. Pkg. 25

No.	Jacks	Mtg. Ctrs. ("A")	Length ("B")	Net Per C
1972	2	1 1/8"	1 1/2"	$23.00
1973	3	1 1/2"	1 7/8"	30.00
1974	4	1 7/8"	2 1/4"	40.00
1975	5	2 1/4"	2 5/8"	50.00
1976	6	2 5/8"	3"	56.00
1977	7	3"	3 3/8"	66.00
1978	8	3 3/8"	3 3/4"	76.00
1979	9	3 3/4"	4 1/8"	82.00
1980	10	4 1/8"	4 1/2"	92.00

SOLDER LUGS—Hot Tinned



Std. Pkg. 1000

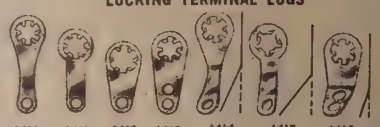
No.	Material	Length	Thick.	Hole	NET Per M
1484	Ph. Br.	5/8"	.020"	No. 6	$12.00
1485-4	Ph. Br.	17/32"	.012"	No. 4	10.00
1485-6	Ph. Br.	17/32"	.012"	No. 6	10.00
1485-8	Ph. Br.	17/32"	.012"	No. 8	10.00
1485-10	Ph. Br.	17/32"	.012"	No. 10	10.00
1486-4	Ph. Br.	13/16"	.012"	No. 4	10.00
1486-6	Ph. Br.	13/16"	.012"	No. 6	10.00
1486-8	Ph. Br.	13/16"	.012"	No. 8	10.00
1486-10	Ph. Br.	13/16"	.012"	No. 10	10.00
1488-4	Ph. Br.	9/16"	.012"	No. 4	10.00
1488-6	Ph. Br.	9/16"	.012"	No. 6	10.00
1488-8	Ph. Br.	9/16"	.012"	No. 8	10.00
1490	Brass	3/4"	.020"	No. 10	12.00
1491	Copper	15/16"	.020"	No. 10	20.00
1493	Brass	1-1/8"	.027"	1/4"	25.00
1494-6	Brass	5/8"	.020"	No. 6	11.00
1494-8	Brass	5/8"	.020"	No. 8	11.00
1495	Brass	5/8"	.020"	No. 8	12.00
1496	Brass	3/4"	.020"	1/4"	12.00
1497	Brass	7/8"	.017"	5/8"	15.00

SOLDER LUG ASSORTMENT

A complete assortment of the most widely used Solder Lug styles, with hole sizes from #4 thru #10. Packed in a re-usable clear plastic compartmented box. Std. Pkg. 1

No.	Approx Quantity of Terminals	NET
1546	1400	$13.00

LOCKING TERMINAL LUGS



BRASS HOT TINNED Std. Pkg. 1000

No.	Length	Thick	Hole	NET Per M
1410-4	7/64"	.018"	No. 4	$11.00
1410-6	7/64"	.018"	No. 6	11.00
1410-8	7/64"	.018"	No. 8	11.00
1410-10	57/64"	.018"	No. 10	12.00
1410-14	13/16"	.018"	1/4"	12.00
1411-4	47/64"	.020"	No. 4	11.00
1411-6	47/64"	.020"	No. 6	11.00
1411-8	47/64"	.020"	No. 8	11.00
1412-4	7/8"	.018"	No. 4	10.00
1412-6	7/8"	.018"	No. 6	10.00
1412-8	7/8"	.018"	No. 8	10.00
1413-4	25/32"	.018"	No. 4	11.00
1413-6	25/32"	.018"	No. 6	11.00
1413-8	25/32"	.018"	No. 8	11.00
1414-4	1 1/16"	.018"	No. 4	11.00
1414-6	1 1/16"	.018"	No. 6	11.00
1414-8	1 1/16"	.018"	No. 8	11.00
1414-10	1 5/64"	.018"	No. 10	12.00
1415-4	1 7/64"	.018"	No. 4	11.00
1415-6	1 7/64"	.018"	No. 6	11.00
1415-8	1 7/64"	.018"	No. 8	11.00
1416-4	1 7/16"	.020"	No. 4	11.00
1416-6	1 7/16"	.020"	No. 6	11.00
1416-8	1 7/16"	.020"	No. 8	11.00

LOCKING TYPE TERMINAL LUGS

Brass Electro Plated



No.	Length	Thick	Hole	NET Per M
1465	47/64"	.020	#4	$12.00
1466	47/64"	.020	#6	12.00
1467	7/8"	.020	#8	12.00
1468	13/16"	.020	1/4"	12.00

LOCKING TERMINAL LUG ASSORTMENT

A complete assortment of the most widely used Locking Terminal Lug styles, with hole sizes from #4 thru #10. Packed in a re-usable clear plastic compartmented box.

No.	Approx. Quantity of Terminals	NET
1547	900	$13.00



TERMINAL LUGS & SCREWS

Recommended for heavy duty terminal strips. Lugs are tapped with screw inserted. Brass hot tinned.

Std. Pkg. 100

No.	Screw	NET Per C
1478	6-32	$5.00
1479	8-32	7.00



EYELET TYPE SOLDER LUGS

Std. Pkg. 1000

No.	Length	Hole	NET Per M
1480	5/8"	5/64" slot	$5.00
1481	5/8"	#8	10.00
No. 3874	Staking Tool Kit		Net Ea. $1.50

© United Technical Pub

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

TIE DOWN TERMINAL STRIPS





Miniature Type

LUG: STEEL cadmium plated, spaced 5/16" centers.
STRIP: XP Phenolic 3/8" wide x .062 thick.
MOUNT.: .140 I.D. for No. 6 screw.

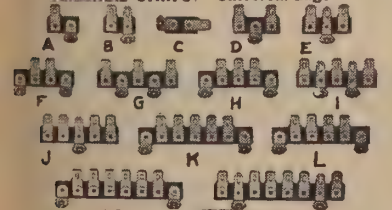
Standard Type

LUG: STEEL cadmium plated, spaced 1/4" centers.
STRIP: XP Phenolic 5/16" wide & .062 thick.
MOUNT.: .096 I.D. for No. 3 screw or 3/32 rivet

Std. Pkg. 100

STANDARD TYPE			MINIATURE TYPE	
	NET Per C	Illustration	No.	NET Per C
	$3.00	A	1061	$4.00
	3.10	B	1062	4.10
	3.00	C	1003	4.00
	3.10	D	1004	4.10
	3.00	E	1039	4.00
	3.00	F	1005	4.00
	3.00	G	1009	4.00
	3.30	H	1055	5.50
	3.20	I	1043	4.50
	3.30	J	1064	5.50
	3.20	K	1063	4.50
	3.20	L	1059	4.50
	4.20	M	1074	5.50
	4.10	N	1072	5.50
	4.60	O	1067	6.00
	5.00	P	1073	6.10
	5.60	Q	1068	6.50
	5.60	R	1071	6.50
	5.00	S	1065	6.10
	4.60	T	1066	6.00
	4.50	U	1084	6.00
	6.00	V	1069	7.00
	6.20	W	1076	7.50
	6.80	X	1158	9.00
	6.80	Y	1156	9.00
	6.50	Z	1157	8.80
	6.50	AA	1060	8.80
	7.00	BB	1078	9.50
	7.50	CC	1075	10.00
	7.00	DD	1096	9.50
	7.50	EE	1070	10.00
	6.50	FF	—	

TERMINAL STRIPS, Universal Lugs



LUG: Steel, cadmium plated, spaced 3/8"
STRIP: XP Phenolic 3/8" wide x .062 thick.
MOUNT.: .140" I.D. for No. 6 screw.
DESCR.: QUICK CONNECT-DISCONNECT; TIE POINT SOLDER: WRAP and SOLDER.

Std. Pkg. 100

No.	Illust.	NET Per C	No.	Illust.	NET Per C
085	A	$3.00	1092	H	$6.50
086	B	3.50	1093	I	7.00
087	C	3.00	1094	J	6.00
088	D	3.80	1095	K	8.00
089	E	4.20	1097	L	7.50
090	F	5.50	1098	M	9.00
091	G	6.50	1099	N	9.50

QUALIFIED SALES ENGINEERS

The men and their organizations comprising the nationwide network of SMITH REPRESENTATIVES are technically qualified and eager to consult with you on your requirements for standard or special components manufactured by Herman H. Smith Inc.



HEAVY DUTY TERMINAL BOARDS

LUG: BRASS, cadmium plated .042 thick spaced 1/2" centers. Terminals numbered.
STRIP: XP Phenolic 7/8" wide x 3/32" thick, numbered.
SCREW: Brass, nickel plated 8-32 x 5/16".

Std. Pkg. 25

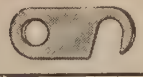
No.	Terminals	Mtg. Center	NET Per C
902	2	1½"	$20.00
903	3	2"	22.00
904	4	2½"	27.00
905	5	3"	33.00
906	6	3½"	39.00
907	7	4"	45.00
908	8	4½"	50.00
909	9	5"	60.00
910	10	5½"	62.00
911	11	6"	65.00
912	12	6½"	70.00



SCREW TYPE TERMINAL BOARD

LUGS: BRASS, hot tinned, spaced 7/16" centers.
SCREW: Steel, cadmium plated 6-32x3/8.
STRIP: XP Phenolic 5/8" wide x .062 thick.

No.	Terminal	Mounting Center	Std. Pkg.	NET Per C
914	1	7/8"	50	$ 7.50
872	2	1-7/16"	50	9 00
873	3	1-3/4"	50	12.00
874	4	2-3/16"	50	15.00
875	5	2-5/8"	25	18.00
876	6	3-1/16"	25	21.00
877	7	3-1/2"	25	25.00
928	8	3-15/16"	25	28.00
929	9	4-3/8"	25	31.00
930	10	4-13/16"	25	35.00



878 Shorting Link 1.80

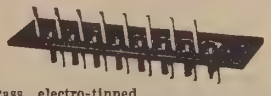


LUG: STEEL, cadmium plated.
BASE: STEEL, cadmium plated. Mounting holes for No. 6 screw
STRIP: XP Phenolic

Std. Pkg. 100

No.	Terminals	Dimensions "A"	Dimensions "B"	NET
3002	2	1.000	5/8"	$7.50
3003	3	1.312	13/16"	8.50
3004	4	1.625	1 1/16"	9.00
3005	5	1.937	1 5/16"	10.50
3006	6	2.250	1 7/16"	11.00
3007	7	2.562	1 11/16"	12.50
3008	8	2.875	1 13/16"	14.00
3009	9	3.187	2 1/16"	15.00
3010	10	3.500	2 3/16"	16.00
3011	11	3.812	2 7/16"	17.00
3012	12	4.125	2 9/16"	19.00
3013	13	4.937	4 3/32"	22.00

WIRE WRAP TERMINAL STRIPS



LUG: Brass, electro-tinned.
STRIP: Cotton Fabric Base Phenolic, Type LE.
SCREW: Brass, nickel plated.
DESCR.: Accommodates lugs for wires, size AWG #18 to 22. Rated 750 volts RMS (⅓ breakdown voltage).

Std. Pkg. 25

No.	Term.	(A) Mtg Ctrs.	B	NET Per C
941	8	3½"	3⅜"	$100.00
942	10	4¼"	4⅝"	120.00
943	12	5"	5⅜"	140.00



INSTRUMENT CASES AND COVERS

Ideal for small instruments and test equipment. The right size and the right mounting for your requirements. Molded of high quality, glass finish, thermosetting plastic. Threaded brass insert for cover mounting. BLACK ONLY.

Std. Pkg. 5

No.	H	W	D	Insert	NET Ea.
2255	6-1/4"	x 3-3/4"	x 2"	6-32	$ .65
2257	6-13/16"	x 5-9/32"	x 2-5/16"	4-40	1.45
2289	8-1/2"	x 7-7/16"	x 3"	6-32	2.65
2377	4"	x 2-7/8"	x 1-9/16"	4-40	.48

PHENOLIC COVERS

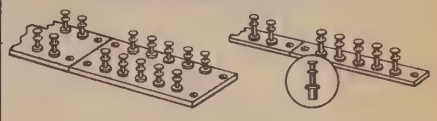
2256	For No. 2255	.65
2260	For No. 2257	.95
2390	For No. 2289	2.20
2378	For No. 2377	.33

PANEL PLATE

Brushed and lacquered Aluminum

2379	For No. 2255	1.00

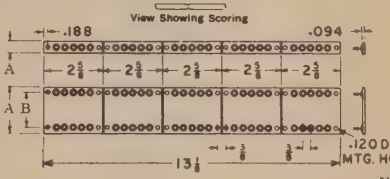
SCORED TERMINAL BOARDS



featuring
SNAP-APART SEPARATION

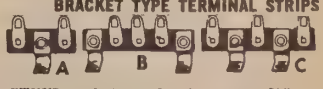
SMITH Scored Boards are fabricated in PBE material per MIL-P-3115C, Temp. 250° F. Max., Type XXXP. Terminals are securely staked and are made of Brass per QQ-626 comp. 22, half-hard with hot-tinned dip solder finish, per MIL-F-14072, Type 221. Smith type 2008.

Std. Pkg. 10



No.	A	B	Terminals	NET Price Each
2810	½"	Single Row	25	$1.30
2811	1½"	1"	50	2.30
2812	2"	1½"	50	2.34
2813	2½"	2"	50	2.50
2814	3"	2½"	50	2.50

BRACKET TYPE TERMINAL STRIPS



LUGS: STEEL cadmium plated, spaced 3/8" centers.
STRIPS: XP Phenolic 3/8" wide x .062 thick.
MOUNT: .140 I.D. for No. 6 screw.

Std. Pkg. 100

No.	Fig.	Lugs	NET Per C
1077	A	2	$4.00
1079	C	3	5.50
1080	B	3	5.50
1081	B	4	6.00
1082	B	5	7.00
1083	B	6	8.00

"T" TYPE TERMINAL STRIPS

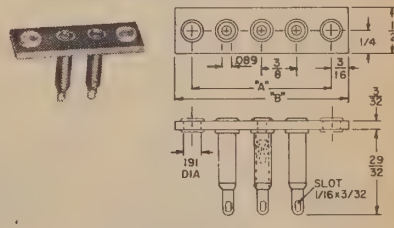


LUGS: STEEL, cadmium plated, spaced 3/8" centers.
BRACKETS: Brass, cadmium plated.
STRIP: X Phenolic 3/8" wide x .062 thick.
MOUNT: .140 I.D. for No. 6 screw.

Std. Pkg. 100

No.	Lugs	NET Per C
815	1	$5.00
816	2	6.50
817	3	7.50
818	4	8.50
819	5	10.00

PIN JACK STRIPS



STRIP: LAMINATED PHENOLIC, XP, Black.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC continuous working voltage.
DESCR.: From 2 to 10 pin jacks assembled on 3/8" centers on a heavy-duty board. Provides positive contact with standard phone tip plugs. Mounting holes accept screws up to #8.

Std. Pkg. 25

No.	Jacks	Mtg. Ctrs. ("A")	Length ("B")	NET Per C
1982	2	1⅛"	1¼"	$25.00
1983	3	1½"	1⅞"	32.00
1984	4	1⅞"	2¼"	42.00
1985	5	2¼"	2⅝"	52.00
1986	6	2⅝"	3"	58.00
1987	7	3"	3⅜"	68.00
1988	8	3⅜"	3¾"	78.00
1989	9	3¾"	4⅛"	84.00
1990	10	4⅛"	4½"	94.00

USE OUR VAST NATIONAL DISTRIBUTION NETWORK for Off-The-Shelf Deliveries of your smaller hardware requirements!

© United Technical Pub

specify* **SMITH**

HERMAN H. SMITH, INC.

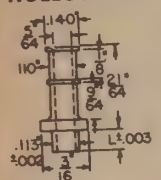
FOR INDUSTRIAL ELECTRONIC COMPONENTS

SWAGE TURRET TERMINALS

Terminals shown below are "stock" items, available for speedy delivery. All brass, silver-plated, precision made. See next page for Suggested Resale Prices. For quantities over 15,000 request special prices. Inquiries are invited, for special types and sizes to particular requirements.

L indicates Shank Length of Lug. T indicates thickness of mounting boards. Standard Package 100

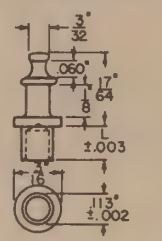
2000
HOLLOW LUG



No.	L	T
2000A	.075	1/32
2000B	.105	1/16
2000C	.135	3/32
2000D	.165	1/8
2000E	.195	3/32
2000F	.230	3/16

Staking Tool Kit No. 3860

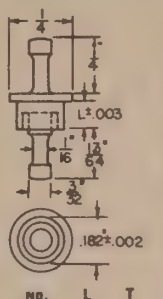
2001
SHORT TERMINAL LUG



No.	L	T
2001A	.075	1/32
2001B	.105	1/16
2001C	.135	3/32
2001D	.165	1/8

Staking Tool Kit No. 3860

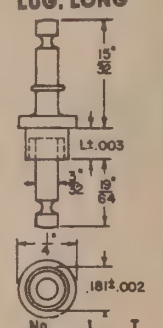
2002
DOUBLE END TERMINAL LUG



No.	L	T
2002A	.105	1/16
2002B	.135	3/32
2002C	.165	1/8
2002D	.195	3/32
2002E	.230	1/16

Staking Tool Kit No. 3861

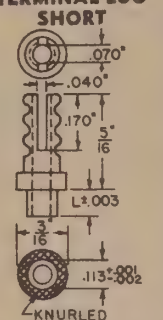
2003
DOUBLE END LUG, LONG



No.	L	T
2003A	.105	1/16
2003B	.135	3/32
2003C	.165	1/8
2003D	.195	3/32
2003E	.230	3/16

Staking Tool Kit No. 3862

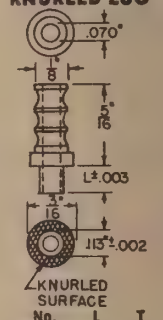
2004
SLOTTED TERMINAL LUG SHORT



No.	L	T
2004A	.075	1/32
2004B	.105	1/16
2004C	.135	3/32
2004D	.165	1/8

Staking Tool Kit No. 3863

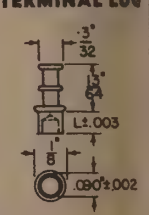
2005
HOLLOW KNURLED LUG



No.	L	T
2005A	.105	1/16
2005B	.135	3/32
2005C	.165	1/8

Staking Tool Kit No. 3860

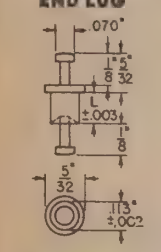
2006
SHORT TERMINAL LUG



No.	L	T
2006A	.075	1/32
2006B	.105	1/16
2006C	.135	3/32
2006D	.165	1/8

Staking Tool Kit No. 3864

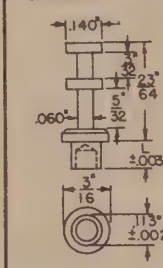
2007
SHORT DOUBLE END LUG



No.	L	T
2007A	.075	1/32
2007B	.105	1/16
2007C	.135	3/32
2007D	.165	1/8

Staking Tool Kit No. 3865

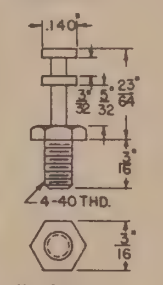
2008
TERMINAL LUG



No.	L	T
2008A	.075	1/32
2008B	.105	1/16
2008C	.135	3/32
2008D	.165	1/8
2008E	.195	3/32
2008F	.230	3/16
2008G	.293	1/4

Staking Tool Kit No. 3860

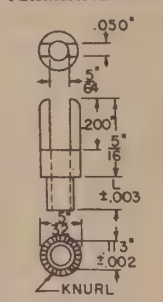
2009
TERMINAL LUG



No. 2009

Staking Tool Kit Not Required

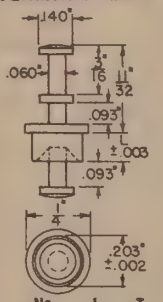
2010
SPLIT TERMINAL LUG



No.	L	T
2010A	.075	1/32
2010B	.105	1/16
2010C	.135	3/32
2010D	.165	1/8

Staking Tool Kit No. 3866

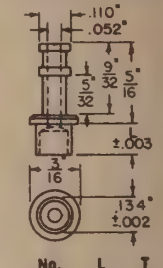
2011
DOUBLE END TERMINAL LUG



No.	L	T
2011A	.105	1/16
2011B	.135	3/32
2011C	.165	1/8
2011D	.195	3/32
2011E	.230	3/16

Staking Tool Kit Not Available

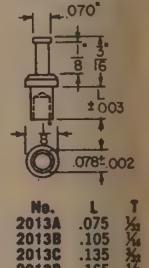
2012
TERMINAL LUG



No.	L	T
2012A	.105	1/16
2012B	.135	3/32
2012C	.165	1/8

Staking Tool Kit No. 3860

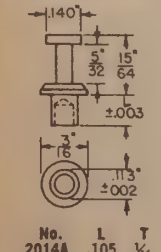
2013
TERMINAL LUG



No.	L	T
2013A	.075	1/32
2013B	.105	1/16
2013C	.135	3/32
2013D	.165	1/8

Staking Tool Kit No. 3864

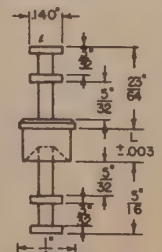
2014
TERMINAL LUG



No.	L	T
2014A	.105	1/16
2014B	.135	3/32
2014C	.165	1/8
2014D	.195	3/32
2014E	.230	3/16

Staking Tool Kit No. 3860

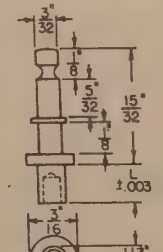
2015
TERMINAL LUG



No.	L	T
2015A	.135	3/32
2015B	.165	1/8
2015C	.195	3/32
2015D	.230	3/16

Staking Tool Kit Not Available

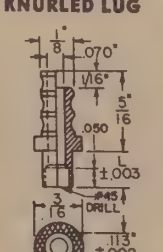
2016
TERMINAL LUG



No.	L	T
2016A	.105	1/16
2016B	.135	3/32
2016C	.165	1/8

Staking Tool Kit No. 3860

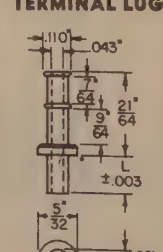
2017
HOLLOW KNURLED LUG



No.	L	T
2017A	.105	1/16
2017B	.135	3/32
2017C	.165	1/8
2017D	.195	3/32

Staking Tool Kit No. 3860

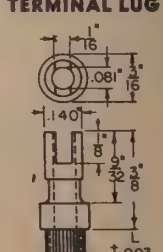
2018
HOLLOW TERMINAL LUG



No.	L	T
2018A	.075	1/32
2018B	.105	1/16
2018C	.135	3/32
2018D	.165	1/8
2018E	.195	3/32
2018F	.230	3/16

Staking Tool Kit No. 3863

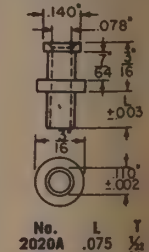
2019
SPLIT TERMINAL LUG



No.	L	T
2019A	.075	1/32
2019B	.105	1/16
2019C	.135	3/32
2019D	.165	1/8
2019E	.195	3/32
2019F	.230	3/16

Staking Tool Kit No. 3860

2020
TERMINAL LUG



No.	L	T
2020A	.075	1/32
2020B	.105	1/16
2020C	.135	3/32
2020D	.165	1/8

Staking Tool Kit No. 3860

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING!

© United Technical

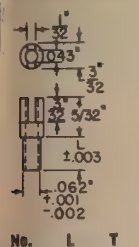
specify* **SMITH**

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

SWAGE TURRET TERMINALS

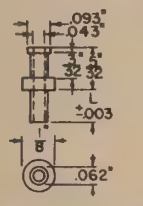
2021 MINIATURE SPADE LUG



No.	L	T
2021A	.037	1/4
2021B	.053	3/32
2021C	.084	1/16
2021D	.115	3/32
2021E	.147	1/8

Staking Tool Kit No. 3867

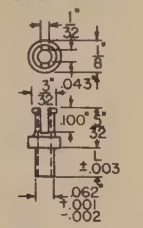
2022 MINIATURE HOLLOW LUG



No.	L	T
2022A	.037	1/4
2022B	.053	3/32
2022C	.084	1/16
2022D	.115	3/32
2022E	.147	1/8

Staking Tool Kit No. 3864

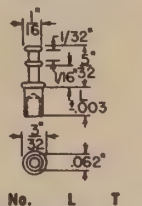
2023 MINIATURE HOLLOW SPLIT LUG



No.	L	T
2023A	.037	1/4
2023B	.053	3/32
2023C	.084	1/16
2023D	.115	3/32
2023E	.147	1/8

Staking Tool Kit No. 3864

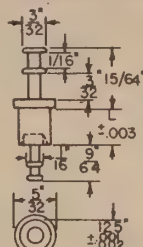
2024 MINIATURE DOUBLE TIE LUG



No.	L	T
2024A	.037	1/4
2024B	.053	3/32
2024C	.084	1/16
2024D	.115	3/32
2024E	.147	1/8

Staking Tool Kit No. 3868

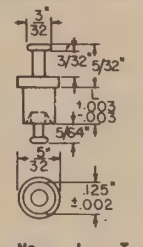
2025 MINIATURE THROUGH LUG



No.	L	T
2025A	.075	1/32
2025B	.105	1/16
2025C	.135	3/32
2025D	.165	1/8

Staking Tool Kit No. 3869

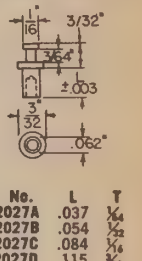
2026 MINIATURE THROUGH LUG



No.	L	T
2026A	.075	1/32
2026B	.105	1/16
2026C	.135	3/32
2026D	.165	1/8

Staking Tool Kit No. 3866

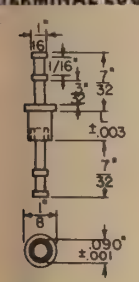
2027 MINIATURE LUG



No.	L	T
2027A	.037	1/4
2027B	.054	3/32
2027C	.084	1/16
2027D	.115	3/32
2027E	.147	1/8

Staking Tool Kit No. 3868

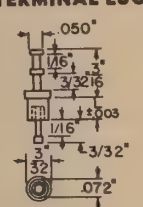
2028 FEED-THRU TERMINAL LUG



No.	L	T
2028A	.054	1/32
2028B	.084	1/16
2028C	.115	3/32
2028D	.147	1/8

Staking Tool Kit No. 3870

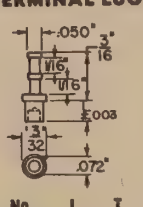
2029 TERMINAL LUG



No.	L	T
2029A	.054	1/32
2029B	.084	1/16
2029C	.115	3/32
2029D	.147	1/8

Staking Tool Kit No. 3871

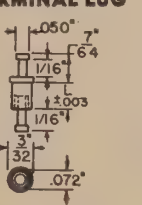
2030 TERMINAL LUG



No.	L	T
2030A	.054	1/32
2030B	.084	1/16
2030C	.115	3/32
2030D	.147	1/8

Staking Tool Kit No. 3868

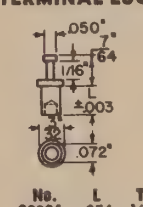
2031 FEED TERMINAL LUG



No.	L	T
2031A	.054	1/32
2031B	.084	1/16
2031C	.115	3/32
2031D	.147	1/8

Staking Tool Kit No. 3871

2032 TERMINAL LUG



No.	L	T
2032A	.054	1/32
2032B	.084	1/16
2032C	.115	3/32
2032D	.147	1/8

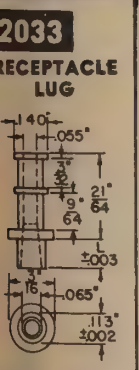
Staking Tool Kit No. 3868

SUGGESTED RESALE

Cat. No. Series	NET Per C
2000	$2.80
2001	3.00
2002	4.20
2003	6.80
2004	5.30
2005	4.00
2006	1.80
2007	2.30
2008	2.80
2009	5.10
2010	4.30
2011	5.40
2012	4.80
2013	1.80
2014	2.30
2015	6.30
2016	3.20
2017	4.10
2018	4.10
2019	5.00

Cat. No. Series	NET Per C
2020	$2.80
2021	2.70
2022	2.50
2023	3.00
2024	2.60
2025	4.20
2026	3.80
2027	2.00
2028	2.70
2029	2.50
2030	2.10
2031	2.40
2032	2.10
2033	6.20
2034	7.20
2035	6.30
2036	6.30
2037	18.00
2038	19.00

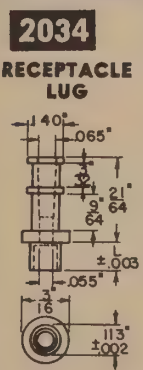
2033 RECEPTACLE LUG



No.	L	T
2033A	.075	1/32
2033B	.105	1/16
2033C	.135	3/32
2033D	.165	1/8
2033E	.195	5/32
2033F	.230	3/16

Staking Tool Kit No. 3860

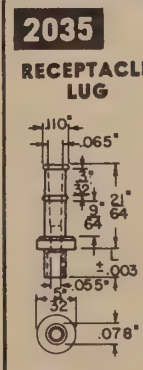
2034 RECEPTACLE LUG



No.	L	T
2034A	.075	1/32
2034B	.105	1/16
2034C	.135	3/32
2034D	.165	1/8
2034E	.195	5/32
2034F	.230	3/16

Staking Tool Kit No. 3860

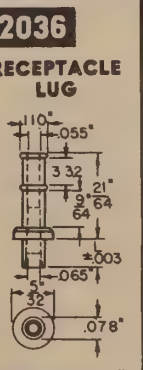
2035 RECEPTACLE LUG



No.	L	T
2035A	.075	1/32
2035B	.105	1/16
2035C	.135	3/32
2035D	.165	1/8
2035E	.195	5/32
2035F	.230	3/16

Staking Tool Kit No. 3863

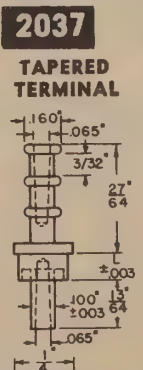
2036 RECEPTACLE LUG



No.	L	T
2036A	.075	1/32
2036B	.105	1/16
2036C	.135	3/32
2036D	.165	1/8
2036E	.195	5/32
2036F	.230	3/16

Staking Tool Kit No. 3863

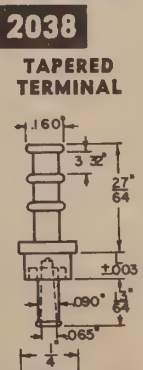
2037 TAPERED TERMINAL



No.	L	T
2037A	.105	1/16
2037B	.135	3/32
2037C	.165	1/8

Staking Tool Kit Not Available

2038 TAPERED TERMINAL



No.	L	T
2038A	.105	1/16
2038B	.135	3/32
2038C	.165	1/8

Staking Tool Kit Not Available

ALL STAKING TOOL KITS Each.....$3.00

ACCESSORY TOOL HOLDERS



Anvil Bench Tool Holder, 1/4" anvils. Malleable iron base with bottom felt pad for bench use.
No. 3877 Net Ea. $4.20



Anvil tool holder for use with drill press, arbor, kick press, punch press or vise.
No. 3878 Net Ea. $1.50

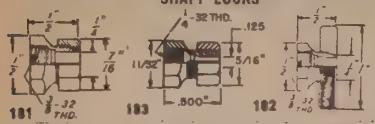
We invite your inquiries on other types of turret terminals not shown here.

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

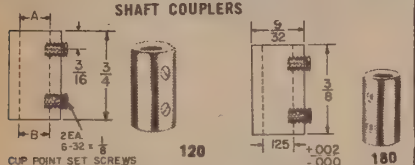
SHAFT LOCKS



DESCR.: Brass, nickel plated shaft locks, supplied with lock nut. Standard (No. 181, 182) for ¼" shafts; miniature (No. 183) for ⅛" shafts. Std. Pkg. 50

No.	(A)	(B)	(C)	(D)	(E)	Per C
181	.253	1/2"	1/2"	7/16"	3/8"-32	$30.00
182	.253	1/2"	1/2"	1"	3/8"-32	50.00
183	.128	1/2"	11/32"	5/16"	1/4"-32	20.00

SHAFT COUPLERS



DESCR.: Brass and insulated shaft couplers. Supplied with two 6-32 x ⅛" slotted cup-point set screws, except as indicated. Std. Pkg. 50

Brass, Nickel Plated Couplers

No.	(A)	(B)	(C)	(D)	(E)	NET Per C
120	1/4"	1/4"	7/16"	3/4"	3/16"	$30.00
131	1/4"	3/8"	1/2"	3/4"	3/16"	30.00
133	3/8"	3/8"	1/2"	3/4"	3/16"	30.00
With Four Set Screws, Spaced 90°						
138	1/4"	1/4"	7/16"	3/4"	3/16"	35.00
Miniature Coupler, With 4-40 x ⅛" Allen Head Cup-Point Set Screws						
180	1/8"	1/8"	9/32"	3/8"	5/64"	40.00
Insulated Black Fibre, Per Mil-F-1148A, Grade Ch.						
140	1/4"	1/4"	7/16"	3/4"	3/16"	30.00
141	1/4"	3/8"	1/2"	3/4"	3/16"	30.00
142	3/8"	3/8"	1/2"	3/4"	3/16"	30.00

EXTENDERS Brass and Insulated

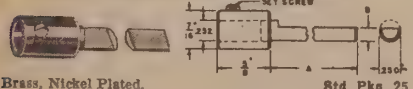


Std. Pkg. 25

Long Shaft Type

No.	A	B	C	Material	NET Per C
130	¼"-¼"		1¼"	Brass N.P.	$40.00
130	¼"-½"		1¼"	Fibre	40.00
132	⅜"-½"		1¼"	Brass N.P.	40.00
134	⅜"-⅜"		1¼"	Fibre	40.00
Short Shaft Type					
160	¼"-¼"		⅜"	Brass N.P.	$35.00
161	¼"-¼"		⅜"	Fibre	35.00
162	⅜"-¼"		⅜"	Brass N.P.	35.00
163	⅜"-¼"		⅜"	Fibre	35.00
MINIATURE EXTENDER With Allen Head Set Screws					
189	⅛"-⅛"		⅜"	Brass N.P.	$35.00

SHAFT EXTENDERS For Volume Controls



Brass, Nickel Plated. Std. Pkg. 25

No.	A	B	NET Per C
FULL ROUND			
2356	2"	.250"	$33.00
2357	3",	.250"	34.00
2358	4"	.250"	36.00
WITH FLAT			
2359	2"	.219"	37.00
2360	3"	.219"	40.00
2361	4"	.219"	50.00
2362	2"	.156"	37.00
2363	3"	.156"	40.00
2364	4"	.156"	55.00

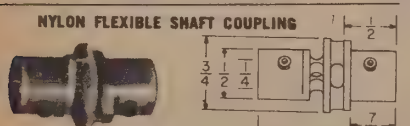
BUSHING EXTENDERS For Volume Controls



Brass, Nickel Plated. Std. Pkg. 25

No.	A	B	NET Per C
2350	⅝"	⅜"	$28.00
2351	⅝"	½"	33.00
2352	⅝"	⅝"	36.00
2353	1 1/16"	⅝"	38.00
2354	1 1/16"	¾"	39.00
2355	⅝"	¾"	40.00

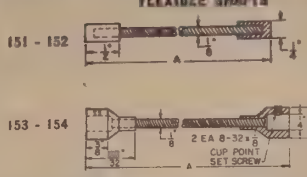
NYLON FLEXIBLE SHAFT COUPLING



DESCR.: Molded nylon with molded-in brass bushings. Hi-temp nylon not influenced by moisture. Designed for long reach shaft coupling. Supplied with 2 Allen head set screws. Std. Pkg. 25

No. 164 NET Ea. $1.65

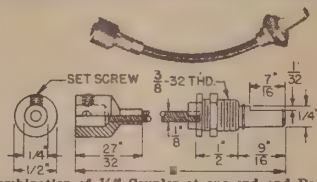
FLEXIBLE SHAFTS



High quality phosphor bronze non-magnetic, non-rusting flexible shafts. Remote control when necessary to mount condensers and potentiometers away from panel at unusual angles. Turns at any angle up to 90°; free from back lash.

No.	Size "A"	Description	Std. Pkg. 25 NET Per C
151	3"	With ¼" hub	$75.00
152	6"	With ¼" hub	85.00
153	3⅝"	With ¼" coupler	120.00
154	6⅝"	With ¼" coupler	125.00

BI-DIRECTIONAL FLEXIBLE SHAFT AND PANEL BEARING

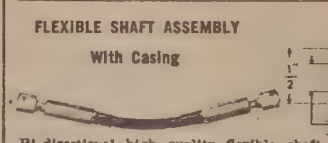


Combination of ¼" Coupler at one end and Panel Bearing Assembly at other. High quality phosphor bronze non-magnetic, non-rusting flexible shaft, turns at any angle up to 90°. Free from backlash. Std. Pkg. 25

No.	Length "A"	NET Ea.
165	4⅛"	$1.45
166	7⅛"	1.55

FLEXIBLE SHAFT ASSEMBLY

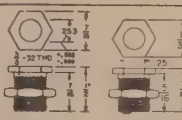
With Casing



Bi-directional high quality flexible shaft. Cable casing acts as a support and reduces amount of deflection in cable. Metal parts steel cadmium plated.

No.	Length	NET Ea.
169	8"	$6.30
170	12"	7.50

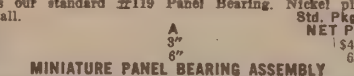
PANEL BEARINGS



DESCR.: Brass, nickel plated panel bearings, supplied with hex nut. Standard (No. 119) for ¼" shafts; miniature (No. 184) for ⅛" shafts. Std. Pkg. 100

No.	(A)	(B)	(C)	(D)	(E)	Per C
119	.253	7/16"	1/2"	7/16"	3/8"-32	$15.00
184	.128	11/32"	7/16"	5/16"	1/4"-32	15.00

PANEL BEARING ASSEMBLY



Uses our standard #119 Panel Bearing. Nickel plated overall. Std. Pkg. 25

No.	A	NET Per C
148	3"	$40.00
149	6"	60.00

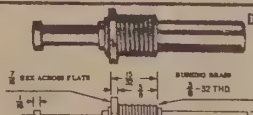
MINIATURE PANEL BEARING ASSEMBLY

Miniature ⅛" shaft assembly, using our standard #184 Panel Bearing. Brass, nickel plated overall. Std. Pkg. 25

No.	Length "A"	NET Per C
1448	2"	$40.00
1449	4"	60.00

DIAL DRIVE ASSEMBLY

Brass, Nickel Plated



Uses our standard #119 Panel Bearing. Shaft turned down for dial drive. Nickel Plated overall. Std. Pkg. 25

No.	NET Per C
126	$36.00

DIAL LOCK



HEAD: Captive: Brass, nickel plated.

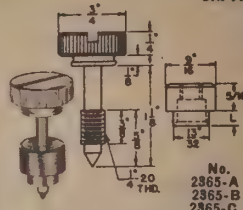
BODY: Brass nickel plated.

DESCR.: Prevents detuning of the dial when locked by means of the captive knurled nut. Supplied with hex nut & lockwasher. Std. Pkg. 25

No.	NET Per C
199	$70.00

CAPTIVE SCREW & BUSHING

Large Head



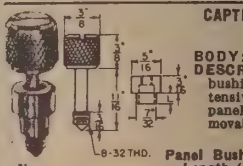
BODY: BRASS, nickel plated.

DESCR.: Supplied with panel bushing as shown. Used extensively for quick removal of panels from chassis. Non-removable from panel. Std. Pkg. 25

No.	Panel Bushing Length (L)	NET Per C
2365-A	7/32"	$70.00
2365-B	11/32"	70.00
2365-C	15/32"	70.00

CAPTIVE SCREW & BUSHING

Small Head

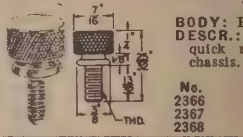


BODY: BRASS, nickel plated.

DESCR.: Supplied with panel bushing as shown. Used extensively for quick removal of panels from chassis. Non-removable from panel. Std. Pkg. 25

No.	Panel Bushing Length (L)	NET Per C
2375-A	7/32"	$35.00
2375-B	11/32"	35.00
2375-C	15/32"	35.00

THUMB SCREW



BODY: BRASS, nickel plated.

DESCR.: Used extensively for quick removal of panels from chassis. Std. Pkg. 25

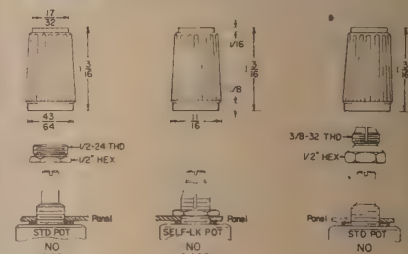
No.	Thread	NET Per C
2366	6-32	$18.00
2367	8-32	18.00
2368	10-32	7.00

LOCKING AND PLAIN POT COVERS



MATERIALS: Covers are aluminum, black anodized. Adapter Nuts are Brass, Nickel Plated.

MECHANICAL: Fits ⅜-32 threaded bushings. Long covers, (L Dimension 1-3/16") for shafts up to 1" long. Short covers (L Dimension ⅞") for stub shaft pots.



NO 2401 NO 2402 NO 2407

PLAIN POT COVER

DESCR.: Cover replaces knob on pot shaft to prevent accidental change of setting. Adapter nut replaces conventional mounting nut at front of panel. Cover easily removed and replaced for changing pot setting. Std. Pkg. 5

No.	Deser.	Length "L"	NET Ea.
2401	Long Cover	1-3/16"	$1.65
2404	Short Cover	7/8"	1.65

LOCKING POT COVER

DESCR.: Locking cover for pots with built-in locking feature, such as Ohmite type CLU, CTS type LT, etc. Cover replaces locking nut supplied with pot, and both locks setting and prevents attempts to turn locked shaft. Cover looks like knob, and provides more finished appearance on panel. Std. Pkg. 5

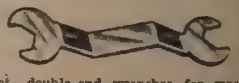
Length "L"	NET Ea.	No.	Deser.
2402	Long Cover	1-3/16"	$1.40
2405	Short Cover	7/8"	1.40

POT-LOCKING ADAPTER COVER

DESCR.: Converts standard, non-locking pots to locking type, and provides finished appearance on panel, while preventing attempts to turn locked shaft. Lock nut adapter replaces conventional mounting nut at front of panel. Cover easily removed for change of pot setting. Std. Pkg. 5

Length "L"	NET Ea.	No.	Deser.
2403	Long Cover	1-3/16"	$1.75
2406	Short Cover	7/8"	1.75

SHAFT WRENCHES



Specially designed offset, double-end wrenches for most hex sizes encountered in electronic construction. Made of heavy gauge, cadmium plated steel, clearly marked with size. No. 999 is especially useful for Toggle Switch and Volume Control mounting nuts. Std. Pkg. 25

No.	For Nut Sizes	NET Per C
997	Set of 2	$42.00
998	5/16" - 3/8"	21.00
999	1/2" - 9/16"	21.00

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

© United Technical Pub

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENTS

EQUIPMENT HANDLES

MATERIAL AND FINISH SPECIFICATIONS

e following specifications are met by all panel handles, rules, and hardware where applicable:

Materials:

ASS: In accordance with Federal Spec. QQ-B-626, Composition 22, ½ Hard.
UMINUM: In accordance with Federal Spec. QQ-A-365, omposition A, Type 3.
EEL: Cold-Rolled, in accordance with QQ-S-633b, Grade S-1010.

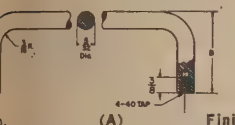
Finishes:

NICKEL PLATE: Polished Nickel Plate, in accordance with Federal Spec. QQ-N-290, Class I, Type VI.
BLACK OXIDE: In accordance with MIL-F-495A.
SATIN ETCH: Commercial finish.
BLACK ANODIZE: In accordance with MIL-A-8625A.
OPTICAL BLACK: Color in accordance with Fed. Std. 595, type 37038. Paint complies with Fed. Spec. TT-E-527.

Note:

Aluminum Handles, either round or oval, and matching ferrules, can be supplied anodized in colors per MIL-A-8625A on special order.

PANEL HANDLES



⅝" Diameter panel handles, Brass and Aluminum, finished as shown, with internal 4-40 thread. Individually packaged. Std. Pkg. 10

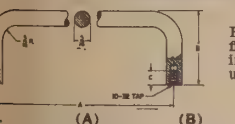
	(A)	Finish	NET Ea.
		BRASS	
32	1⅛"	Nickel Plate	$.85
33	1⅛"	Black Oxide	.85
36	2"	Nickel Plate	.95
37	2"	Black Oxide	.95
40	3"	Nickel Plate	1.00
41	3"	Black Oxide	1.00
		ALUMINUM	
34	1⅛"	Satin	.75
35	1⅛"	Blk. Anodize	.80
38	2"	Satin	.80
39	2"	Blk. Anodize	.85
42	3"	Satin	.90
43	3"	Blk. Anodize	.95

PANEL HANDLES



	(A)	Finish	NET Ea.
		BRASS	
6	2"	Nickel Plate	$1.00
7	2"	Black Oxide	1.00
0	3"	Nickel Plate	1.05
1	3"	Black Oxide	1.05
4	4"	Nickel Plate	1.10
5	4"	Black Oxide	1.10
8	6"	Nickel Plate	1.20
9	6"	Black Oxide	1.20
		ALUMINUM	
8	2"	Satin	.65
9	2"	Blk. Anodize	.75
2	3"	Satin	.75
3	3"	Blk. Anodize	.80
6	4"	Satin	.80
7	4"	Blk. Anodize	.85
0	6"	Satin	.85
1	6"	Blk. Anodize	.90

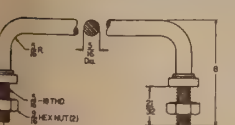
PANEL HANDLES



Brass Panel Handles, finished as shown, with internal thread. Individually packaged. Std. Pkg. 10

	(A)	(B)	(C)	NET Ea.
		BRASS NICKEL PLATE		
50	3"	1-5/16"	7/16"	$1.15
57	3"	1-1/2"	9/16"	1.20
56	4-1/4"	1-1/2"	9/16"	1.30
51	4-9/16"	1-1/2"	9/16"	1.35
52	6-7/16"	1-3/4"	9/16"	1.70
		BRASS BLACK OXIDE		
91	3"	1-5/16"	7/16"	$1.15
92	3"	1-1/2"	9/16"	1.20
94	4-1/4"	1-1/2"	9/16"	1.30
95	4-9/16"	1-1/2"	9/16"	1.35
96	6-7/16"	1-3/4"	9/16"	1.70

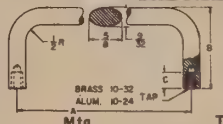
PANEL HANDLES



Brass Panel Handles, finished as shown with male threaded stud. Supplied complete with matching ferrules, and brass, nickel plated hex nuts. Individually packaged. Std. Pkg. 10

	(A)	(B)	NET Ea.
		BRASS NICKEL PLATE	
07	2"	2-1/8"	$1.55
08	3"	2-1/8"	1.60
11	4"	2-1/8"	1.70
53	4-1/4"	2-1/8"	1.75
14	6"	2-11/16"	1.90
		BRASS BLACK OXIDE	
08	2"	2-1/8"	$1.55
10	3"	2-1/8"	1.60
12	4"	2-1/8"	1.70
13	4-1/4"	2-1/8"	1.75
15	6"	2-11/16"	1.90

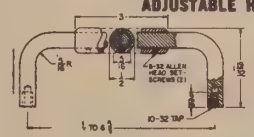
OVAL PANEL HANDLES



Flat, oval panel handles in Brass and Aluminum, finished as shown. Brass handles have internal 10-32 thread, Aluminum handles have internal 10-24 thread. Individually packaged. Std. Pkg. 10

No.	Mtg. Ctrs. (A)	Height (B)	Tap Depth (C)	Finish	NET Ea.
			BRASS		
1644	3"	1-9/32"	9/32"	Nickel Plate	$2.50
1645	3"	1-9/32"	9/32"	Black Oxide	2.50
1647	4-9/16"	1-1/2"	1/2"	Nickel Plate	2.70
1648	4-9/16"	1-1/2"	1/2"	Black Oxide	2.70
1651	6-7/16"	1-3/4"	1/2"	Nickel Plate	2.75
1653	6-7/16"	1-3/4"	1/2"	Black Oxide	2.75
1655	9"	1-3/4"	1/2"	Nickel Plate	3.40
1657	9"	1-3/4"	1/2"	Black Oxide	3.40
			ALUMINUM		
1646	3"	1-9/32"	9/32"	Black Anodize	1.65
1649	4-9/16"	1-1/2"	9/32"	Black Anodize	1.80
1654	6-7/16"	1-3/4"	9/32"	Black Anodize	2.10
1658	9"	1-3/4"	9/32"	Black Anodize	2.20

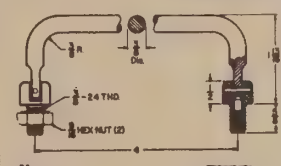
ADJUSTABLE HANDLES



Adjustable Brass Panel handles, with mounting center range from 4½" to 6⅝". Finished as shown. Internal 10-32 thread, supplied with Allen-Head locking screws. Individually packaged. Std. Pkg. 10

No.	Finish	NET Ea.
1659	Nickel Plate	$4.50
1661	Black Oxide	4.50

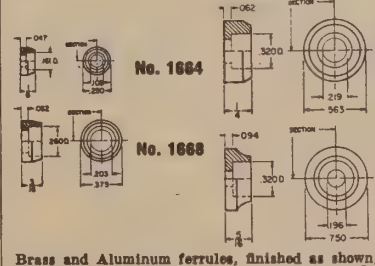
FOLDING HANDLES



Folding Brass panel handles, with spring-loaded detents which snap into upright or left-or-right folded position. Finished as shown. Supplied with brass, nickel plated hex nuts. Mounts in ⅜" panel holes. Individually packaged. Std. Pkg. 10

No.	Finish	NET Ea.
1662	Nickel Plate	$5.00
1663	Black Oxide	5.00

FERRULES



No. 1664 — No. 2054
No. 1668 — No. 2055

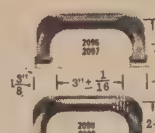
Brass and Aluminum ferrules, finished as shown, to match handles listed above. Std. Pkg. 50

No.	Fig.	(A)	(B)	(C)	(D)	(E)	Per C
				BRASS, NICKEL PLATED			
1664	1	5/32"	.109	1/8"	1/4"	3/64"	$18.00
1668	1	1/4"	.203	3/16"	3/8"	1/16"	18.00
2055	1	5/16"	.219	1/4"	9/16"	1/16"	18.00
2054	2	5/16"	.196	5/16"	3/4"	3/32"	18.00
				BRASS, BLACK OXIDE			
1665	1	5/32"	.109	1/8"	1/4"	3/64"	$18.00
1669	1	1/4"	.203	3/16"	3/8"	1/16"	18.00
1673	1	5/16"	.219	1/4"	9/16"	1/16"	18.00
1672	2	5/16"	.196	5/16"	3/4"	3/32"	18.00
				ALUMINUM SATIN ETCH			
1666	1	5/32"	.109	1/8"	1/4"	3/64"	13.00
1670	1	1/4"	.203	3/16"	3/8"	1/16"	13.00
				ALUMINUM, BLACK ANODIZED			
1667	1	5/32"	.109	1/8"	1/4"	3/64"	13.00
1671	1	1/4"	.203	3/16"	3/8"	1/16"	13.00

EQUIPMENT HANDLES

shown on this page are considered standard catalog items and are available for immediate delivery in quantity. We welcome inquiries for SPECIAL REQUIREMENTS and will be glad to supply information and quotations promptly.

MOLDED GRIP HANDLES



HANDLE: Molded High Impact styrene.
HDWRE.: Steel, nickel plated.
DESCR.: Designed for economy and rugged use. Std. Pkg. 10

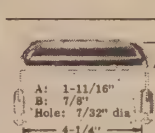
ATTACHES WITH RIVETS OR SCREWS

No.	Color	NET Each
2096	Black	$.66
2097	Grey	.66

ATTACHES WITH THREADED STUD

2098	Black	$1.05
2099	Grey	1.05

MOLDED GRIP HANDLES



HANDLE: Molded high impact Styrene, Fungus Resistant.
HDWRE.: Steel, Nickel plated.
DESCR.: Rounded palm fitting design. Attaches to case with machine screws. Std. Pkg. 10

No.	Color	NET Ea.
2085	Black	$1.45
2086	Grey	1.45

HANDLE: Molded high impact Styrene, Fungus Resistant.
HDWRE.: Steel, Nickel plated.
DESCR.: Rounded palm fitting design. Attaches to case with washers and nuts supplied. Will support 100 lbs. Std. Pkg. 10

No.	Color	Stud Lgth.	NET Ea.
2087	Black	9/16"	$1.45
2088	Grey	9/16"	1.45

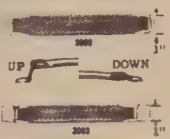
SPRING GLIDE HANDLE



HANDLE: Genuine leather, contoured BLACK, matching stitching, 6" long.
CAPS: Steel, chrome plated.
DESCR.: Strong, silent spring glide, frequency of decibel extremes will not induce handle rattle. Handle moves up for comfortable carrying down when not in use. Std. Pkg. 10

No.	Color	NET Ea
2089	Black	$2.75

RETRACTO-LINK HANDLES



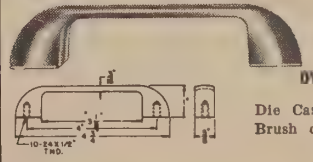
HANDLE: Genuine leather, matching stitching, BLACK.
HDWRE.: Steel, nickel plated.
DESCR.: Assemblies are shaped with all hardware installed except for decorative cover caps which are packed separately. Supplied in two styles—different lengths. Std. Pkg. 10

ATTACHES WITH PRONGS THAT BEND INSIDE CASE

No.	Length	NET Each
2090	4½"	$2.50
2091	5½"	2.50
2092	6¾"	2.50

ATTACHES WITH RIVETS OR SCREWS

2093	4½"	$2.50
2094	5½"	2.50
2095	6¾"	2.50

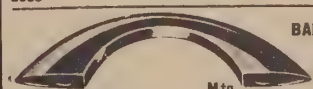


OVAL HANDLE

Die Cast Zamac Handle. Brush chrome plated.

Std. Pkg. 10
NET Per C

No.	NET Per C
2065	$90.00

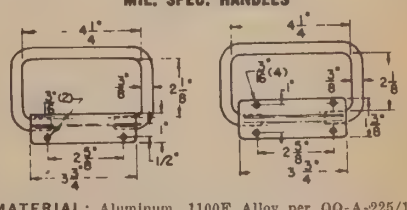


BAKELITE HANDLE

Std. Pkg. 10

No.	Thread	O.D.	Mtg. Centers	Color	NET Per C
2281	8-32	4¼"	2¾"	Black	$18.00
2282	8-32	4¼"	2⅜"	Red	18.00

MIL. SPEC. HANDLES



MATERIAL: Aluminum, 1100F Alloy per QQ-A-225/1A.
FINISH: Alodine per MIL-C-5541A. Sprayed to MIL-E-15090B. Gloss gray color #16376 per Fed. Std. 595.

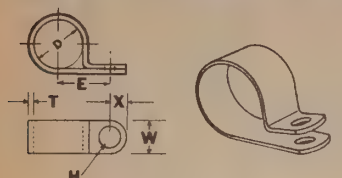
No.	Type	(A)	NET Ea.
2063	Half Bracket	1"	$1.65
2064	Full Bracket	1⅜"	1.65
	WITH TRANSFLUX PLASTIC PROTECTOR		
2048	Half Bracket	1"	2.00
2049	Full Bracket	1⅜"	2.00

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONEN

PLASTIC CABLE CLAMPS



ALL-MOLDED POLYPROPYLENE

Marked for easy identification. Polypropylene cable clamps feature excellent support at low cost. Manufactured entirely from propylene, they exhibit no environmental stress cracking and have excellent heat resistance at prolonged periods of time. Propylene clamps are impervious to most acids, alkalies, organic solvents and detergents. Conforms to applicable Mil. Specs. Std. Pkg. 100

T = .060 X = 7/32"
W = 1/2" H = 13/64"

No.	Hole (D)	E	NET Per C
8910	1/8"	.360	$1.60
8911	3/16"	.423	1.80
8912	1/4"	.457	1.90
8913	5/16"	.498	2.00
8914	3/8"	.529	2.10
8915	7/16"	.560	2.20
8916	1/2"	.592	2.30
8917	9/16"	.623	2.40
8918	5/8"	.654	2.50
8919	11/16"	.752	2.60
8920	3/4"	.783	2.70
8921	7/8"	.845	2.90
8922	1"	.908	3.00

CELLULOSE

Marked for easy identification. Cellulose Cable Clamps feature excellent support at low cost. Made entirely from cellulose, they are ultra-violet stabilized for extreme weather resistance. Tough and lightweight, they provide exceptional service in both outdoor and indoor applications. Conforms to applicable Mil. Specs. Std. Pkg. 100

T = .060 X = 7/32"
W = 1/2" H = 13/64"

No.	Hole (D)	E	NET Per C
8925	1/8"	.360	$2.10
8926	3/16"	.423	2.20
8927	1/4"	.457	2.30
8928	5/16"	.498	2.40
8929	3/8"	.529	2.50
8930	7/16"	.560	2.60
8931	1/2"	.592	2.70
8932	9/16"	.623	2.90
8933	5/8"	.654	3.00
8934	11/16"	.752	3.30
8935	3/4"	.783	3.50
8936	7/8"	.845	3.70
8937	1"	.908	3.90

NYLON

Marked for easy identification. Black Nylon Cable Clamps feature excellent support. Manufactured from the best material available they exhibit a tough rigidity at elevated temperatures. Nylon is insoluble in common solvents, alkalies, dilute mineral acids and most organic acids. Made to meet these Military Specifications: Mil-Std.-24E; MS-30914(ord.) Mil-C-21565(NAS); Mil-P-17091-B; Mil-P-20693. Std. Pkg. 100

T = .060 X = 7/32"
W = 1/2" H = 13/64"

No.	Hole (D)	E	NET Per C
8940	1/8"	.360	$2.30
8941	3/16"	.423	2.40
8942	1/4"	.457	2.50
8943	5/16"	.495	2.60
8944	3/8"	.529	2.70
8945	7/16"	.560	2.80
8946	1/2"	.592	2.90
8947	9/16"	.623	3.00
8948	5/8"	.654	3.20
8949	11/16"	.752	3.30
8950	3/4"	.783	3.50
8951	7/8"	.845	3.70
8952	1"	.908	3.90

T = .050 W = 3/8" X = 7/32" H = 13/64"

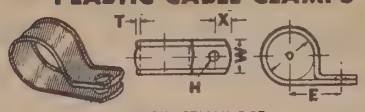
8955	1/8"	.325	1.90
8956	3/16"	.378	2.00
8957	1/4"	.409	2.10
8958	5/16"	.441	2.20
8959	3/8"	.471	2.30
8960	7/16"	.519	2.40
8961	1/2"	.550	2.50



BEADED WIRE TIES
White Nylon

No. 8962 5" Long Std. Pkg. 100 NET Per C $2.30

PLASTIC CABLE CLAMPS



ETHYL CELLULOSE

Made to meet MIL Std 242B (Ships), MS 3914 (Ord.) Withstands temperatures from —60 to +175 degrees F.

T .060 — W 1/2" X 7/32" — H .204 Std. Pkg. 100

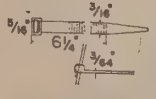
No.	Hole (D)	E	NET Per C
831	1/8	.360	$2.34
832	5/32	.423	2.40
833	1/4	.457	2.58
834	5/16	.498	2.85
835	3/8	.529	3.00
836	7/16	.560	3.30
837	1/2	.592	3.60
838	9/16	.623	4.20
839	5/8	.654	4.50
840	11/16	.752	4.80
841	3/4	.783	5.10
842	7/8	.845	5.40
843	1	.908	5.70
844	1 1/8	.970	6.00
845	1 1/4	1.062	6.30

NYLON

MIL P17091A, Amend 2. Withstands temperatures from —60 to +250 degrees F. Std. Pkg. 100

	1/8" to 1/2" (D)	9/16" to 1 1/4" (D)
T	.040	.060
W	3/8"	1/2"
X	7/32"	13/64"
H	.167	.204

No.	Hole (D)	E	Per C
771	1/8	.310	$3.60
772	5/32	.373	3.90
773	1/4	.407	4.20
774	5/16	.448	4.65
775	3/8	.479	4.80
776	7/16	.510	5.10
777	1/2	.542	5.40
778	9/16	.623	6.60
779	5/8	.654	7.20
780	11/16	.752	7.50
781	3/4	.783	8.10
782	7/8	.845	8.70
785	1	.908	10.20
784	1 1/8	1.002	12.00
785	1 1/4	1.062	13.80



NYLON LOCKING CLAMP

Wedge and ratchet design makes for positive holding and locking. Accommodates cables from 1/8" to 1 3/4". No knot tying, just slip clamp around cable, insert tongue and pull tight.

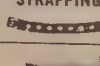
No.	Std. Pkg.	NET Per C
800	100	$9.00



NYLON MOUNTING TABS

For use with No. 800 locking clamp when premounted assembly points are desired. Furnished with .203 mounting hole. Std. Pkg. 100

No.	NET Per C
801	$3.00



NYLON PERFORATING STRAPPING

For bundling of wire, cable and tubing. Time saver for harnessing. Use No. 803 ratchet buckle for fast assembly. Supplied on 50' rolls.

No.	Std. Pkg.	NET Per Roll
802	1	$15.00



NYLON RATCHET BUCKLE

For No. 802 strapping. Quick and easier assembly with this ingenious item. Std. Pkg. 100

No.	NET Per C
803	For 1/2" Strapping $10.20



TIGHTENING TOOL

Used with strapping for fast assembly. Std. Pkg. 1

No.	NET Ea.
804	$18.00



NYLON ADJUSTABLE CABLE TIE

Efficiently and economically replaces lacing cord, tape and other fasteners in wrap-around applications. Adjustable from 1/8" to 1 3/8" diameter. Once applied it cannot slip. Made of Nylon. Std. Pkg. 500/1000

No. 8963C	NET Per C $ 1.50
No. 8963M	NET Per M $13.00

BLIND HOLE MOUNTING ACCESSORIES

Molded of polyethylene and requires no mounting hardware or special tools, just snaps into hole. Color Gray, temperature rating 100-203°F. Std. Pkg. 100

GROMMETS — max. panel thickness .095



No.	Mtg. Hole	Cable Dia.	NET Per C
8974	1/4"	1/8"	$2.00
8975	3/8"	1/4"	2.25
8976	1/2"	3/8"	2.50
8977	5/8"	1/2"	3.50
8978	3/4"	5/8"	4.00

CABLE STRAPS — mounting hole 1/4", 5/16" wide for panel thickness 1/16".



No.	Max. Cable Dia.	NET Per C
8971	1/4"	$2.00
8972	7/16"	2.50
8973	5/8"	3.00



NYLON LACING CORD

MIL-T-713-D, Type P, classes 3, and 1. Supplied in 1-lb. tubes. Std. Pkg.

Natural Color

No.	Class	Test	Yardage	NET Ea.
734	1	70 lb.	600	$9.0
735	2	48 lb.	800	9.3
736	3	32 lb.	1140	9.6

Black Color

No.	Class	Test	Yardage	NET Ea.
791	1	70 lb.	600	$10.8
792	2	48 lb.	800	11.1
793	3	32 lb.	1140	11.4

NYLON LACING TAPE
Braided — MGD Finish

#18 size meets MIL-T-43435, size 3, finish B. Furnished in 500 yard spools.

Natural Color

No.	Size	Width	Thick	Test	NET Ea.
766	18	.090	.0125	50 lbs.	
767	21	.0625	.009	25 lbs.	$10.5 8.0

Black Color

769	18	.090	.0125	50 lbs.	$11.0
770	21	.0625	.009	25 lbs.	8.5

Commercial Type

Has all application of above but at a much lower cost. Supplied in 1-lb tubes in natural color.

No.	Width	Yardage	NET Ea.
743	1/8"	620	$5.7



LINEN LACING CORD

Mildew proofed. Spec. MIL-T-713-A Type N.

Natural Color

No.	Tube	Ply	Class	Ydg.	NET Ea.
725	4 oz.	4	—	210	$1.8
726	8 oz.	4	—	425	3.3
727	1 lb.	4	—	850	6.0
728	4 oz.	6	3	150	1.8
729	8 oz.	6	3	300	3.3
730	1 lb.	6	3	600	6.0
737	4 oz.	8	2	115	1.8
738	8 oz.	8	2	235	3.3
739	1 lb.	8	2	470	6.0
731	4 oz.	9	—	100	1.8
732	8 oz.	9	—	200	3.3
733	1 lb.	9	—	400	6.0
740	4 oz.	12	1	75	1.8
741	8 oz.	12	1	150	3.3
742	1 lb.	12	1	300	6.0

Black Color

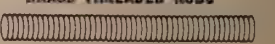
794	1 lb.	4	—	850	6.6
795	1 lb.	6	3	600	6.6
796	1 lb.	8	2	470	6.6
797	1 lb.	9	—	400	6.6
798	1 lb	12	1	300	6.6

DACRON LACING CORD

Conforms to the physical requirements of MIL-T-713A. Greater tensile strength with minimal stretch than nylon. Fungus, acid and abrasion resistance. Supplied in 1 lb tubes in natural color.

No.	Class	Test	Yardage	NET Ea.
722	1	78 lbs.	750	$10.5
723	2	57 lbs.	1000	11.0
724	3	37 lbs.	1500	11.5

BRASS THREADED RODS



Std. Pkg. 10

1-Ft. Length No.	NET Ea.	Threaded	2-Ft. Length No.	NET Ea.
1400-1	$.50	6-32	1400-2	$1.00
1401-1	.50	8-32	1401-2	1.00
1402-1	.50	10-32	1402-2	1.00
1403-1	.55	1/4-20	1403-2	1.10

NYLON THREADED RODS
Std. Pkg. 10

1-Ft. Length No.	NET Ea.	Threaded	2-Ft. Length No.	NET Ea.
1420-1	$1.10	6-32	1420-2	$2.20
1421-1	1.20	8-32	1421-2	2.40
1422-1	1.50	10-32	1422-2	3.00
1423-1	1.80	1/4-20	1423-2	3.60

Brass Acetate & Nylon PLAIN RODS



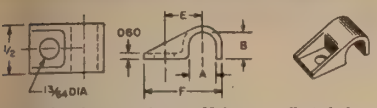
Std. Pkg. 10

1/4" DIA No.	Net Ea.	Type	Length	1/8" DIA No.	NET Ea.
1404	$.35	Brass N.P.	6"	1431	$.30
1405	.70	Brass N.P.	12"	1432	.60
1406	.15	Fibre	6"	1433	.15
1407	.30	Fibre	12"	1434	.30
1408	.24	Nylon	6"	1440	.30
1409	.48	Nylon	12"	1441	.60

MORE THAN TEN THOUSAND ELECTRONIC COMPONENT PARTS MANUFACTURED UNDER ONE ROOF

© United Technical Pub

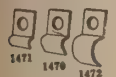
NYLON "HALF" CABLE CLAMPS



Made of solvent resistant Nylon, unaffected by most solvents, alkalies, dilute mineral acids and most organic acids. Available in Black and conforms to the following Military Specifications: MIL-P17091A and Amendment 2, MIL-P-17091B/, MIL-M-20693A, Type 1, MIL-STD-242A (Ships)/ MIL-STD-242B (Ships), MS-39014 (ORD).
Std. Pkg. 100

No.	Wire Size	A	B	E	F	NET Per C
964	1/8	.115	.115	.307	.675	5.50
965	3/16	.172	.172	.336	.732	5.90
966	1/4	.234	.234	.366	.793	6.50
967	5/16	.297	.297	.400	.859	6.70
968	3/8	.359	.359	.430	.920	7.00
968	7/16	.422	.422	.460	.980	7.25
970	1/2	.484	.484	.492	1.044	8.00

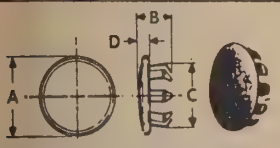
CABLE CLAMPS



Steel Cadmium Plated with No. 8 Mtg. Hole.
Std. Pkg. 100

	Length	Width	Cable	NET Per C
	5/8"	3/8"	1/4"	$.85
0	3/4"	1/2"	1/4"	.90
2	1"	3/8"	1/2"	1.00

SNAP BUTTON HOLE PLUGS

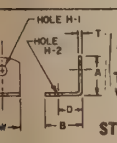


Metal plugs for covering punched or drilled holes. Firm grip spring action prongs in steel, nickel plated.
Std. Pkg. 100

No.	Hole	A	B	C	Prongs	NET Per C
650	1/4"	13/32	15/64	1/16	6	$2.75
651	5/16"	7/16	1/4	1/16	6	2.75
652	3/8"	1/2	15/64	1/16	6	2.75
653	1/2"	21/32	9/32	5/64	8	3.00
654	5/8"	13/16	19/64	5/64	8	4.00
655	3/4"	59/64	19/64	5/64	12	4.00
608	7/8"	1-1/16	19/64	1/16	12	4.50
612	1"	1-9/64	21/64	3/32	12	5.25
*656	1"	1-5/32	19/64	5/64	12	22.00

*Vent

ANGLES



A — Length of leg C — Hole Location
B — Length of leg D — Hole Location
T — Thickness H1 — Hole Diameter
W — Width H2 — Hole Diameter
Std. Pkg. 100

STEEL, Cadmium Plated

No.	A	B	C	D	W	T	H1	H2	Net Per C
444	7/16	7/16	17/64	1/4	3/8	.032	3/16	#4	$.80
445	1/2	1/2	11/32	23/64	1/2	.050	#6	#4	1.00
446	49/64	27/64	39/64	15/64	5/16	.032	#6	#6	1.00
447	19/64	1/2	61/64	23/64	5/16	.050	#8	#8	1.10
476	11/16	11/16	1/2	1/2	3/8	.032	#6	#6	1.70

Note: No. 1476 has Hot Tin Dipped finish

BRASS, Nickel Plated

474	15/32	15/32	19/64	19/64	5/16	.025	#8	#8	$2.00
475	21/32	21/32	3/8	3/8	3/8	.050	#8	#8	4.00

FAHNESTOCK SPRING BATTERY CLIPS



Clips are made of brass, nickel plated and are available in the single and double clip types.
Std. Pkg. 100

SINGLE CLIPS

No.	Width	Length	Mtg. Hole	NET Per C
539	7/32"	11/16"	#4	$2.80
533	5/16"	25/32"	#6	2.80
534	3/8"	1"	#6	4.00

DOUBLE CLIPS

535	5/16"	1 15/32"	#6	11.00
536	3/8"	2 1/8"	#8	13.00

USE OUR VAST NATIONAL DISTRIBUTION NETWORK for Off-The-Shelf Deliveries of your smaller hardware requirements!

MOLDED "IN-LINE" FUSE HOLDER



For use in automobile radios, T.V., and other applications. Provides positive insulated connection. For use with XXXXX fuse, supplied with 18" wire loop.
Std. Pkg. 50

No.	NET Per C
1295	$40.00

MINI-SHIELDS FOR MINI-TUBES



These Mini-Shields fit snugly on all Mini-Tubes. Available in two sizes for 1½" & 2" long tubes.

		Std. Pkg. 50	NET Per C
550	for 2" tube	1¾"	$7.80
551	for 1½" tube	1¼"	6.60

MINI-SPRING FOR MINI-TUBES



The Mini-Tube guard gives support to the Mini-Tube in two ways. It maintains a direct axial pressure downwards plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently. Std. Pkg. 50

No.	Type	Height (H)	NET Per C
560	Short	1½"	$12.00
561	Medium	1⅞"	12.00
562	Long	2⅜"	12.00
563	9 Prong	1⅞"	12.00

MINIATURE WAFER SOCKETS



Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate 1/16" thick, bottom plate 3/64" thick; high grade spring brass cadmium plated contact; .095 dia. mounting holes. Std. Pkg. 50

No.	Description	MTG. Cen.	SEVEN PIN NET Per C
880	Eyelet only	⅞"	$11.00
881	Eyelet and Shield	⅞"	12.00
882	Grd Strap and Shield	⅞"	13.00
887	Eyelet only	1"	12.00
888	Eyelet and Shield	1"	13.00
889	Grd Strap and Shield	1"	14.00
	NINE PIN		
890	Eyelet only	1¼"	$14.00
891	Eyelet and Shield	1⅛"	15.00
892	Grd Strap and Shield	1⅛"	16.00

MOLDED MINIATURE SOCKETS



Saddle Type

Molded from either high dielectric black general purpose bakelite or low loss mica-filled bakelite. Both types supplied with center pin. .098 dia. mtg. holes. Std. Pkg. 50

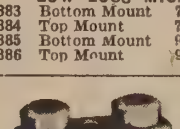
GENERAL PURPOSE BLACK BAKELITE

No.	Type	Pin	Mtg. Ctrs.	Mtg. Hole	NET Per C
895	Bottom Mount	7	⅞"	⅝"	$12.00
896	Top Mount	7	⅞"	⅝"	12.00
897	Bottom Mount	9	1⅛"	¾"	14.00
898	Top Mount	9	1⅛"	¾"	14.00

LOW LOSS MICA-FILLED BAKELITE

883	Bottom Mount	7	⅞"	⅝"	13.00
884	Top Mount	7	⅞"	⅝"	13.00
885	Bottom Mount	9	1⅛"	¾"	15.00
886	Top Mount	9	1⅛"	¾"	15.00

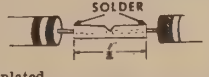
CRYSTAL SOCKET



For HC-6/U Type Crystals

Glazed ceramic base. Phosphor bronze silver plated contacts spaced .486". Pin diameter .051. mtg. hole .125.
Std. Pkg. 50 NET Per C
No. 1945 $15.00

"CLEAPS" (Connectors for Joining Severed Wires)



MATERIAL: Brass, cadmium plated.
WIRE SIZE: For wires, .010" to .050" (B&S Gauge 16 to 30).
DESCR.: Used to splice cut leads of condensers, resistors, etc., in process of trouble-shooting. Insert wire in each tapered end and solder thru center opening. Std. Pkg. 1000

No.	NET Per M
1270	$10.00

COOLING FAN

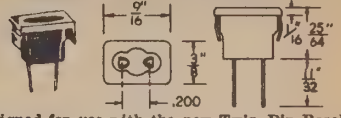


Designed for efficient cooling of tubes, rectifiers, industrial equipment, amateur transmitters, hi-fi equipment and all other devices requiring the assisted convection of air. Permits more efficient RF shielding of equipment depending on convection cooling. Shaded pole motor with Nylon fan blade. Supplied complete with all mounting hardware.
Std. Pkg. 1

POWER INPUT: 115 Volts AC 60 cycles.
AIR FLOW: 30 CFM (nominal).
SPEED: 3000 RPM (nominal).
SIZE: 3½"x2½"x3" overall.

No. 2427
NET Each $7.00

SNAP-IN BULB CONNECTOR

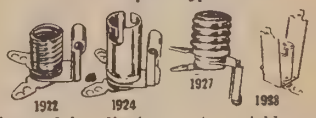


Designed for use with the new Twin Pin Baseless Miniature Lamps (G.E. #10-25 volts, #12-6.3 volts, or #15-7.0 volts). Easily assembled to any unit for indicating purposes. Withstands excessive temperatures. Snaps into a .500x.296 rectangular hole in panels .032 to .062 thick. Bezel — brass, cad. plated; contacts — brass, silver plated.
Std. Pkg. 25

No.	NET Per C
1504	$19.00

PILOT LIGHT SOCKETS

Clip-On Type



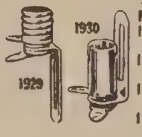
Can be used by clipping on to variable condenser or chassis. All brackets are cadmium plated.
Std. Pkg. 100

No.	Type	NET Per C
1922	Miniature Screw Up Clip	$16.00
1923	Miniature Screw Down Clip	16.00
1924	Miniature Bayonet Up Clip	16.00
1925	Miniature Bayonet Down Clip	16.00
1926	Candelabra Up Clip	16.00
1927	Candelabra Down Clip	16.00
1938	Clip-in Socket	16.00

PILOT LIGHT SOCKETS

Bracket Type

Std. Pkg. 100



No.	Type	NET Per C
1928	Miniature Screw Up Bracket	$16.00
1929	Miniature Screw Down Bracket	16.00
1930	Miniature Bayonet Up Bracket	16.00
1931	Miniature Bayonet Down Bracket	16.00
1932	Candelabra Up Bracket	16.00
1933	Candelabra Down Bracket	16.00

Std. Pkg. 50

UNMOUNTED TYPE SOCKETS

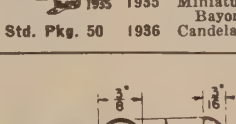


Std. Pkg. 100

No.	Type	NET Per C
1934	Miniature Screw Base	$16.00
1935	Miniature Bayonet Base	16.00
1936	Candelabra Base	16.00

Std. Pkg. 50

PILOT LIGHT SHIELD



DESCR.: Prevents glare when used in radio receiver meters, etc. Ribbed bottom holds shield securely in place on bulb.
Std. Pkg. 100

No.	Type	NET Per C
1963	Brass Cad. Plate	$3.60
1968	Plain Brass	3.30
1969	Flared Brass Cad. Plate	4.20

NAVY TYPE LAMP SOCKETS

75W-125V

CANDELABRA BAYONET BASE



Vibration-proof socket for surface mounting. Made to rigid specifications of black phenolic. Has bayonet sleeve of brass and double contacts of heavy spring phosphor bronze.
Std. Pkg. 10

No.	NET Per C
1950	$135.00

CANDELABRA SCREW BASE



Made of black phenolic to strict requirements. Instead of usual screw shell has phosphor bronze wire coiled spring for perfect contact and elimination of vibration. Designed for soldering wire leads.
Std. Pkg. 10

No.	NET Per C
1951	$60.00

CANDELABRA SCREW BASE



Easily wired and mounted. A very practical unit made of black phenolic to rigid specifications. Has phosphor bronze spring contact to assure positive contact and elimination of vibration.
Std. Pkg. 10

No.	NET Per C
1952	$110.00

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENT

ROUND HEAD STEEL MACHINE SCREWS
Cadmium Plated

Size	No.	NET Per C	No.	NET Per M
2-56 x ¼"	1173C	$.75	1173M	$5.30
2-56 x ⅛"	1174C	.80	1174M	5.60
2-56 x ¾"	1775C	.85	1175M	6.50
3-48 x ¾"	1176C	.90	1176M	6.85
4-36 x ¼"	1177C	.80	1177M	5.60
4-36 x ⅜"	1178C	.85	1178M	5.85
4-36 x ½"	1183C	.90	1183M	6.15
4-36 x ⅝"	1184C	1.00	1184M	7.85
4-36 x ¾"	1185C	1.10	1185M	9.00
4-40 x ¼"	1350C	.75	1350M	5.60
4-40 x ½"	1352C	.85	1352M	6.20
4-40 x ⅝"	1353C	.90	1353M	6.65
4-40 x ⅜"	1354C	1.10	1354M	9.00
6-32 x ¼"	1000C	.80	1000M	5.85
6-32 x ⅜"	1001C	.90	1001M	7.00
6-32 x ½"	1002C	1.00	1002M	7.80
6-32 x ⅝"	1355C	1.00	1355M	8.00
6-32 x ¾"	1356C	1.15	1356M	9.40
6-32 x 1"	1357C	1.20	1357M	9.80
6-32 x 2"	1358C	1.95	1358M	17.55
8-32 x ¼"	1006C	1.00	1006M	7.80
8-32 x ⅜"	1007C	1.05	1007M	8.10
8-32 x ½"	1008C	1.10	1008M	8.50
8-32 x ¾"	1359C	1.30	1359M	10.90
10-32 x ½"	1360C	1.35	1360M	11.20
10-32 x ¾"	1361C	1.55	1361M	13.15
10-32 x 1"	1362C	1.70	1362M	14.70

BRASS MACHINE SCREWS
Round Head Nickel Plated

Size	No.	NET Per C	No.	NET Per M
4-36 x ¼"	1044C	$1.05	1044M	$8 50
4-36 x ⅜"	1045C	1.00	1045M	7.80
4-36 x ½"	1046C	1.35	1046M	11.20
4-40 x ¼"	1047C	1.10	1047M	8.80
4-40 x ⅜"	1048C	1.26	1048M	10.50
4-40 x ½"	1049C	1.35	1049M	11.20
6-32 x ¼"	1050C	1.56	1050M	13.00
6-32 x ⅜"	1051C	1.62	1051M	13.50
6-32 x ½"	1052C	1.50	1052M	12.50
8-32 x ¾"	1056C	1.92	1056M	16.00
8-32 x ⅜"	1057C	2.30	1057M	19.20
8-32 x ½"	1058C	2.70	1058M	22.50

BINDING HEAD STEEL MACHINE SCREWS
Cadmium Plated

Size	No.	NET Per C	No.	NET Per M
2-56 x ¼"	1369C	0.75	1369M	$5.30
2-56 x ⅛"	1370C	.80	1370M	5.60
2-56 x ⅝"	1371C	.85	1371M	6.50
4-40 x ¼"	1372C	.80	1372M	5.60
4-40 x ½"	1373C	.85	1373M	6.20
4-40 x ¾"	1374C	1.10	1374M	9.10
6-32 x 3/16"	1375C	.85	1375M	6.50
6-32 x ¼"	1425C	.85	1425M	6.40
6-32 x ⅜"	1426C	.90	1426M	7.00
6-32 x ½"	1427C	.95	1427M	7.15
6-32 x ⅝"	1376C	1.00	1476M	7.95
6-32 x ¾"	1377C	1.15	1377M	9.40
8-32 x ¼"	1428C	.85	1428M	6.40
8-32 x 7/16"	1378C	1.05	1378M	8.65
8-32 x ⅜"	1429C	1.00	1429M	8.10
8-32 x ½"	1430C	1.05	1430M	8.40
8-32 x ¾"	1379C	1.30	1379M	10.90
10-32 x ½"	1380C	1.35	1380M	11.20
10-32 x ¾"	1381C	1.40	1381M	12.10

OVAL HEAD STEEL NICKEL PLATED RACK SCREWS

Size	No.	NET Per C	No.	NET Per M
6-32 x ¾"	1382C	$1.10	1382M	$8.85
8-32 x ¾"	1383C	1.35	1383M	11.20
10-32 x ½"	1111C	1.20	1111M	9.60
10-32 x ¾"	1112C	1.40	1112M	11.00

NYLON SCREWS
Natural Color, MIL-P-20693A. Std. Pkg. 100

Size	A No.	B No.	C No.	D No.	E No.	F No.	NET Per C
4-40 x ¼	2500	2520	2540	2560	2580	2480	$3.50
4-40 x ⅜	2501	2521	2541	2561	2581	2481	3.50
4-40 x ½	2502	2522	2542	2562	2582	2482	3.50
6-32 x ¼	2503	2523	2543	2563	2583	2483	3.50
6-32 x ⅜	2504	2524	2544	2564	2584	2484	3.50
6-32 x ½	2505	2526	2545	2565	2585	2485	3.50
6-32 x ⅝	2506	2526	2546	2566	2586	2486	3.50
6-32 x ¾	2507	2527	2547	2567	2587	2487	3.50
8-32 x ¼	2509	2529	2549	2569	2589	2489	3.50
8-32 x ⅜	2510	2530	2550	2570	2590	2490	3.50
8-32 x ½	2511	2531	2551	2571	2591	2491	3.50
8-32 x ⅝	2512	2532	2552	2572	2597	2492	3.50

NYLON HEX NUT
Natural Color, MIL-P-20693A. Std. Pkg. 100

2554	4-40 x 1/4"	$7.00
2555	6-32 x 5/16"	7.00
2556	8-32 x 11/32"	7.00
2556	10-32 x 3/8"	7.00

SELF TAPPING SCREWS
Steel, Cadmium Plated

ROUND HEAD — TYPE A — Sharp Point

Size	No.	NET Per C	No.	NET Per M
4 x ⅛"	1801C	$.80	1807M	$6.00
6 x ⅛"	1802C	.85	1802M	6.67
6 x ⅜"	1803C	.90	1803M	7.00
6 x ⅛"	1804C	1.00	1804M	8.10
8 x ⅜"	1805C	.95	1805M	7.50
8 x ½"	1806C	1.15	1806M	9.45

ROUND HEAD — TYPE Z — Blunt Point

Size	No.	NET Per C	No.	NET Per M
4 x ⅛"	1807C	$.90	1807M	$7.00
6 x ⅛"	1808C	.90	1808M	7.00
6 x ⅜"	1809C	.90	1809M	7.00
6 x ½"	1810C	1.00	1810M	8.10
8 x ⅜"	1811C	.95	1811M	7.50
8 x ½"	1812C	1.15	1812M	9.45

SLOTTED HEX HEAD — TYPE Z — Blunt Point

Size	No.	NET Per C	No.	NET Per M
6 x ¼"	1830C	$1.15	1830M	$9.45
6 x ⅜"	1831C	1.15	1831M	9.45
6 x ½"	1832C	1.15	1832M	9.45
8 x ⅜"	1833C	.95	1833M	7.50
8 x ½"	1834C	1.15	1834M	9.45

PAN HEAD METAL SCREWS
Steel, Cadmium Plated

Size	No.	NET Per C	No.	NET Per M
4 x ½"	1389C	$1.25	1389M	$10.20
6 x ¼"	1390C	1.25	1390M	10.20
6 x ⅜"	1391C	1.25	1391M	10.55
6 x ½"	1392C	1.30	1392M	10.80
6 x ¾"	1393C	1.40	1393M	11.70
8 x ¼"	1394C	1.40	1394M	11.70
8 x ⅜"	1395C	1.45	1395M	12.35
8 x ½"	1396C	1.50	1396M	12.60
8 x 1"	1397C	1.80	1397M	16.20

ROUND HEAD STEEL WOOD SCREWS

Size	No.	NET Per C	No.	NET Per M
4 x ½"	1384C	$1.10	1384M	$9.10
4 x ⅝"	1385C	1.25	1385M	10.50
6 x ⅝"	1386C	1.35	1386M	11.35
6 x 1"	1387C	1.60	1387M	14.00
8 x ⅝"	1388C	1.55	1388M	13.50

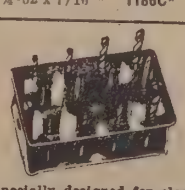
HEXAGON NUTS
Brass Nickel Plated
Std. Pkg. 100

Size	No.	NET Per C	No.	NET Per M
4-36 x ¼"	1188C	$1.30	1188M	$10.00
4-40 x ¼"	1168C	1.30	1168M	10.00
6-32 x ¼"	1189C	1.50	1189M	13.00
6-32 x 5/16"	1190C	1.50	1190M	13.00
8-32 x 5/16"	1192C	1.50	1192M	13.00
10-32 x 5/16"	1193C	1.70	1193M	14.00
¼-32"	1187C	3.00	1187M	25.00
Steel Nickel Plated				
¼-32"	1186C	$1.50	1186M	$13.20

HEX NUTS STEEL
Cadmium Plated
Std. Pkg. 100

* Nickel plated.

Size	No.	NET Per C	No.	NET Per M
2-56 x 3/16"	1363C	$ .80	1363M	$ 6.50
3-48 x 3/16"	1364C	.80	1364M	6.50
4-36 x ¼"	1365C	.80	1365M	6.50
6-32 x ¼"	1179C	.80	1179M	6.50
6-32 x 5/16"	1180C	.80	1180M	6.50
8-32 x ¼"	1366C	.80	1366M	6.50
8-32 x 5/16"	1181C	.80	1181M	7.50
10-32 x ⅜"	1367C	.90	1367M	7.50
¼-20 x 7/16"	1368C	1.45	1368M	11.50
¼-32 x 7/16"*	1186C*	1.60	1186M*	13.00



DRILL & TAP KIT for
- Hams
- Laboratories
- Servicemen

Specially designed for electronic bench duty, this kit contains the most popular sizes of taps and corresponding tap and body drills for precise and speedy work. Drill and tap size identifications are engraved on the steel cadmium plated drill stand, to facilitate correct replacement as needed. Contains: 4-40, 6-32, 8-32, 10-32 Taps with eight corresponding tap and body drills.

No.		NET Ea.
750	Kit	$15.00
749	Stand Only	.06

VOL CONTROL & TOGGLE SWITCH NUTS
Nickel Plated

Size	No.	NET Per C	No.	NET Per M
Vol. Cont. Brass*	1195C	$4.00	1195M	$35.00
Vol. Cont. Steel*	1199C	2.50	1199M	22.00
Toggle Sw. Hex†	1196C	2.00	1196M	18.00
Toggle Sw. Ring‡	1197C	3.50	1197M	30.00

* 3/8-32 x 1/2 x 3/32" †15/32 x 9/16 x 5/64"
‡ 15/32 x 5/8 x 1/16"

FLAT STEEL WASHERS
Nickel Plated

Size	No.	NET Per C	No.	NET Per M
For #2 Screw	1138C	$.70	1138M	$4.80
For #4 Screw	1149C	1.05	1149M	8.50
For #6 Screw	1150C	.90	1150M	6.60
For #8 Screw	1151C	.70	1151M	4.80
For #10 Screw	1153C	.95	1152M	6.60
For ¼" Screw	1147C	.90	1147M	6.60
For ⅜" Screw	1148C	.95	1148M	7.25

INTERNAL TOOTH LOCKWASHERS STEEL
Cadmium Plated

Size	No.	NET Per C	No.	NET Per M
#4	1127C	$.55	1127M	$4.00
#6	1128C	.55	1128M	4.00
#8	1129C	.60	1129M	4.50
#10	1130C	.60	1130M	4.50
¼"	1132C	.80	1132M	6.50
#⅜"	1131C	1.15	1131M	10.00
Narrow Rim ⅜"	1145C	1.50	1145M	12.00
Narrow Rim 15/32"	1146C	1.75	1146M	14.00

EXTERNAL TOOTH LOCKWASHERS STEEL
Cadmium Plated

Size	No.	NET Per C	No.	NET Per M
#4	1139C	$.55	1139M	$4.00
#6	1140C	.55	1140M	4.00
#8	1141C	.60	1141M	4.50
#10	1142C	.60	1142M	4.50
¼"	1144C	.70	1144M	5.00
⅜"	1143C	1.32	1143M	5.75

COUNTER SUNK WASHERS BRASS
Nickel Plated

Size	No.	NET Per C	No.	NET Per M
#6	1115C	$.75	1115M	$5.30
#8	1116C	.91	1116M	6.75
#10	1117C	1.00	1117M	7.80

HEX AND SPLINE KEYS



HEX KEYS
SPLINE KEYS

Made of special alloy steel, tempered to avoid brittleness and impose maximum resistance to torsional strain. Ends ground for easy insertion.

HEX KEYS Std. Pkg. 50

No.	Screw	O.D.	NET Per C
340	No. 2	.034	$7.80
341	No. 3, 4	.050	7.80
342	No. 5, 6	.062	7.80
343	No. 8	.078	7.80
344	No. 10	.093	9.00
345	No. 1/8"	.125	9.00
346	No. 5/16"	.156	9.00

SPLINE KEYS

No.	Screw	O. D.	NET Per C
370	No. 4	.058	$7.80
371	No. 5	.068	7.80
372	No. 6	.075	7.80
373	No. 8	.095	7.80
374	No. 10	.109	9.00
375	No. 1/4"	.143	9.00
376	No. 5/16"	.182	9.00

HEX AND SPLINE KEY KITS

Attractive tearproof vinyl plastic kit with individual pockets for each of six keys in kit. Std. Pkg. 5
Kit of 6 hex keys for screws from No. 3 to 5/16".
No. 355 $60.00 NET Per C
Kit of 6 spline keys for screws from No. 5 to 5/16".
No. 385 $60.00 NET Per C
Combination Kit of 3 hex and 3 spline keys for No. 6-8-10 screws.
No. 390 $60.00 NET Per C
Kit of 7 hex keys for screws from No. 2 to 5/16" and 4 spline keys Nos. 4, 6, 8, and 10.
No. 395 $120.00 NET Per C

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

© United Technical Pub

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

"PANELABELS"

Modern Panel Title Decals



New size type face on all word titles to match modern instrument panels and sound equipment.

Packaged individually in clear plastic boxes — instant selection — box itself can be used as water tray for applying the decals.

Standard Packages of 6.

Please order by catalog number.

NET, EACH PACKAGE $1.50

TRANSMITTER

For industrial prototype use. Hams, Citizens' Banders. Also for Microwave and Broadcast stations.

No. 3700	BLACK
No. 3701	WHITE

RECEIVER

Hams, Citizens' Banders, industrial prototypes, Hi-Fi and Experimenter applications.

No. 3702	BLACK
No. 3703	WHITE
No. 3704	RED
No. 3705	GOLD

DIALS

For all uses in transmitters, Ham and Citizens' Band industrial prototypes, Hi-Fi, electricians, experimenters.

No. 3706	BLACK
No. 3707	WHITE
No. 3708	RED
No. 3709	GOLD

ALPHABETS

Most popular item in the line! For all general uses above.

3710	2-inch	BLACK
3711	2-inch	WHITE
3712	2-inch	RED
3713	2-inch	GOLD
3714	5/8-inch	BLACK
3715	5/8-inch	WHITE
3716	5/8-inch	RED
3717	5/8-inch	GOLD
3718	Assorted	BLACK
3719	Assorted	WHITE
3720	Assorted	RED
3721	Assorted	GOLD

INSTRUMENTS

Primarily for Technicians, Hams and industrial use.

No. 3722	BLACK
No 3723	WHITE

HI-FI AND STEREO

For experimenters, commercial sound distributors, industrial prototypes.

No. 3724	BLACK
No. 3725	WHITE
No. 3726	RED
No. 3727	GOLD

SOUND SYSTEMS

For industrial use by commercial sound distributors, custom installers, electricians and experimenters.

No. 3728	BLACK
No. 3729	WHITE
No. 3730	RED
No. 3731	GOLD

TRANSISTORS AND DIODES

Used by Hams, experimenters, technicians, and industrial prototype use. Includes complete list of transistor and diode numbers plus symbols of PNP, NPN, 4 and 5 element transistors, diode symbols.

No. 3732	BLACK
No. 3733	WHITE

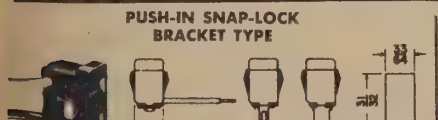
ELECTRICAL DISTRIBUTION

Used primarily by electricians and custom installers on the job and in distribution panel design.

No. 3734	BLACK
No. 3735	WHITE

BOOKLET OF COMPLETE TITLE LISTS OF ALL PANELABELS AVAILABLE ON REQUEST

PUSH-IN SNAP-LOCK BRACKET TYPE



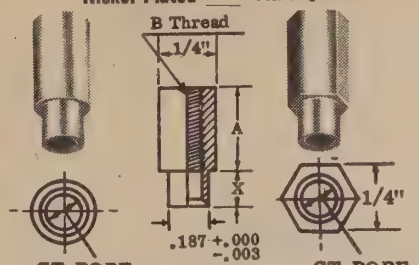
Carbon Steel spring clips lock unit securely in place when pushed into opening. UL Approved.

RATING: 15 Amps, 125 Volts AC or DC.
LEADS: Plastic wire #14 gauge, 6" long.
Std. Pkg. 50

No.	Terminals	Color	NET Per C
1283-103	Wire Leads	Black	$18.00
1284-103	Solder	Black	18.00
1285-103	Kilpits	Black	20.00

BRASS THREADED SWAGE STANDOFFS

Nickel Plated — **Std. Pkg. 100**



ROUND

No.	NET Per C	A	B	X
4100	$10.00	1/4	4/40	.105
4101	10.00	1/4	4/40	.135
4102	10.00	1/4	4/40	.165
4103	11.00	5/8	4/40	.105
4104	11.00	5/8	4/40	.135
4105	11.00	5/8	4/40	.165
4106	12.50	1/2	4/40	.105
4107	12.50	1/2	4/40	.135
4108	12.50	1/2	4/40	.165
4109	14.00	5/8	4/40	.105
4110	14.00	5/8	4/40	.135
4111	14.00	5/8	4/40	.165
4112	16.00	3/4	4/40	.105
4113	16.00	3/4	4/40	.135
4114	16.00	3/4	4/40	.165
4115	20.00	1	4/40	.105
4116	20.00	1	4/40	.135
4117	20.00	1	4/40	.165
No. 3872			Staking Tool Kit	
4118	10.00	1/4	6/32	.105
4119	10.00	1/4	6/32	.135
4120	10.00	1/4	6/32	.165
4121	11.00	3/8	6/32	.105
4122	11.00	3/8	6/32	.135
4123	11.00	3/8	6/32	.165
4124	12.50	1/2	6/32	.105
4125	12.50	1/2	6/32	.135
4126	12.50	1/2	6/32	.165
4127	14.00	5/8	6/32	.105
4128	14.00	5/8	6/32	.135
4129	14.00	5/8	6/32	.165
4130	16.00	3/4	6/32	.105
4131	16.00	3/4	6/32	.135
4132	16.00	3/4	6/32	.165
4133	20.00	1	6/32	.105
4134	20.00	1	6/32	.135
4135	20.00	1	6/32	.165
No. 3873			Staking Tool Kit	
4136	10.00	1/4	8/32	.105
4137	10.00	1/4	8/32	.135
4138	10.00	1/4	8/32	.165
4139	11.00	3/8	8/32	.105
4140	11.00	3/8	8/32	.135
4141	11.00	3/8	8/32	.165
4142	12.50	1/2	8/32	.105
4143	12.50	1/2	8/32	.135
4144	12.50	1/2	8/32	.165
4145	14.00	5/8	8/32	.105
4146	14.00	5/8	8/32	.135
4147	14.00	5/8	8/32	.165
4148	16.00	3/4	8/32	.105
4149	16.00	3/4	8/32	.135
4150	16.00	3/4	8/32	.165
4151	20.00	1	8/32	.105
4152	20.00	1	8/32	.135
4153	20.00	1	8/32	.165

HEX

No.	NET Per C
4200	$11.00
4201	11.00
4202	11.00
4203	12.00
4204	12.00
4205	12.00
4206	13.50
4207	13.50
4208	13.50
4209	15.00
4210	15.00
4211	15.00
4212	17.00
4213	17.00
4214	17.00
4215	21.00
4216	21.00
4217	21.00
No. 3872	NET Ea. $3.00
4218	11.00
4219	11.00
4220	11.00
4221	12.00
4222	12.00
4223	12.00
4224	13.50
4225	13.50
4226	13.50
4227	15.00
4228	15.00
4229	15.00
4230	17.00
4231	17.00
4232	17.00
4233	21.00
4234	21.00
4235	21.00
No. 3873	NET Ea. $3.00
4236	11.00
4237	11.00
4238	11.00
4239	12.00
4240	12.00
4241	12.00
4242	13.50
4243	13.50
4244	13.50
4245	15.00
4246	15.00
4247	15.00
4248	17.00
4249	17.00
4250	17.00
4251	21.00
4252	21.00
4253	21.00

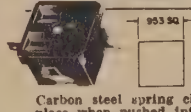
CONVENIENCE OUTLETS

BRACKET TYPE
Top or Bottom Mount



Flat steel bracket mounts with two #6 screws or equivalent size eyelets. Black Only.
RATING: 15 Amps., 125 Volts AC or DC.
LEADS: No. 1279 has two leads, plastic wire #16 gauge, 8" long. UL Approved. **Std. Pkg. 50**

No.	Type	Terminals	NET Per C
1291	Bottom Mount	Solder	$12.00
1279	Bottom Mount	Wire Leads	22.80
1299	Top or Bottom Mount	Solder	12.00



THREE WIRE OUTLET
(With grounding lead)

Carbon steel spring clips lock unit securely in place when pushed into opening. UL Approved.
RATING: 15 Amps, 125 Volts, AC or DC.
LEADS: Two #14 gauge 6" long plastic wire and one #16 gauge green ground lead 6" long.
Std. Pkg.50

No.	Color	NET Per C
1280-103	Black	$38.00
1280-101	White	42.00

TEFLON* SPAGHETTI TUBING



— 101 WHITE	— 107 YELLOW
— 102 RED	— 108 BROWN
— 103 BLACK	— 112 PURPLE
— 104 GREEN	— 113 GREY
— 105 BLUE	— 115 NATURAL
— 106 ORANGE	

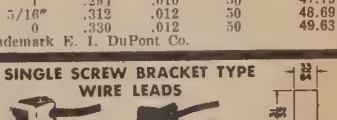
(If no color is specified, Natural Teflon (—115) will be supplied.)

Meets and exceeds MIL-I-22129B. Ideal for slip-on insulation, and provides greater reliability and resistance to high temperatures. Shrink-back is virtually eliminated. Individually packed in dust-proof bags. SPECIFY COLOR

Cat. No.	AWG Wire Size	Nom. I.D.	Nom Wall Thk.	Std. Pkg. Ft.	NET Each
STANDARD WALL					
7701-24	24	.022	.012	100	$11.68
7701-22	22	.027	.012	100	12.95
7701-20	20	.034	.016	100	17.75
7701-19	19	.038	.016	100	19.38
7701-18	18	.042	.016	100	20.88
7707-17	17	.047	.016	100	22.93
7701-16	16	.053	.016	100	24.63
7701-15	15	.059	.016	100	25.30
7701-14	14	.066	.016	100	27.25
7701-13	13	.076	.016	100	30.30
7701-12	12	.085	.016	100	32.75
7701-11	11	.095	.016	100	36.38
7701-10	10	.106	.016	100	40.00
7701-09	9	.118	.020	100	57.10
7701-81	1/8"	.125	.020	100	61.00
7701-08	8	.133	.020	50	31.25
7701-07	7	.148	.020	50	33.69
7701-06	6	.166	.020	50	36.44
7701-05	5	.186	.020	50	40.10
7701-04	4	.208	.020	50	43.56
7701-03	3	.234	.020	50	49.88
7701-41	1/4"	.250	.020	50	52.88
7701-02	2	.263	.020	50	54.82
7701-01	1	.294	.020	50	60.94
7701-51	3/16"	.312	.020	50	67.50
7701-00	0	.330	.020	50	68.57
THINWALL					
7702-30	30	.012	.009	100	$10.53
7702-28	28	.015	.009	100	9.20
7702-26	26	.018	.009	100	8.88
7702-24	24	.022	.010	100	9.63
7702-22	22	.027	.010	100	10.75
7702-20	20	.034	.012	100	13.63
7702-19	19	.038	.012	100	14.68
7702-18	18	.042	.012	100	15.75
7702-17	17	.047	.012	100	17.38
7702-16	16	.053	.012	100	19.00
7702-15	15	.059	.012	100	19.63
7702-14	14	.066	.012	100	21.00
7702-13	13	.076	.012	100	23.75
7702-12	12	.085	.012	100	25.50
7702-11	11	.095	.012	100	28.38
7702-10	10	.106	.012	100	30.50
7702-09	9	.118	.015	100	44.00
7702-81	1/8"	.125	.015	100	45.00
7702-08	8	.133	.015	50	24.32
7702-07	7	.148	.015	50	26.63
7702-06	6	.166	.015	50	29.75
7702-05	5	.186	.015	50	33.50
7702-04	4	.208	.015	50	36.75
7702-03	3	.234	.015	50	40.75
7702-41	1/4"	.250	.015	50	43.75
7702-02	2	.263	.015	50	45.50
7702-01	1	.294	.015	50	50.69
7702-51	3/16"	.312	.015	50	55.12
7702-00	0	.330	.015	50	56.12
LIGHTWEIGHT					
7703-28	28	.015	.006	100	$ 7.63
7703-26	26	.018	.006	100	7.75
7703-24	24	.022	.006	100	8.13
7703-22	22	.027	.006	100	9.38
7703-20	20	.034	.006	100	11.13
7703-19	19	.038	.006	100	12.38
7703-18	18	.042	.006	100	13.38
7703-17	17	.047	.006	100	14.88
7703-16	16	.053	.006	100	16.13
7703-15	15	.059	.006	100	16.75
7703-14	14	.066	.008	100	19.50
7703-13	13	.076	.008	100	22.25
7703-12	12	.085	.008	100	24.38
7703-11	11	.095	.008	100	27.38
7703-10	10	.106	.008	100	29.50
7703-09	9	.118	.008	50	16.63
7703-81	1/8"	.125	.008	50	17.88
7703-08	8	.133	.008	50	18.44
7703-07	7	.148	.008	50	20.00
7703-06	6	.166	.010	50	25.88
7703-05	5	.186	.010	50	28.38
7703-04	4	.208	.010	50	31.38
7703-03	3	.234	.010	50	34.50
7703-41	1/4"	.250	.010	50	36.69
7703-02	2	.263	.010	50	37.57
7703-01	1	.294	.010	50	41.19
7703-51	5/16"	.312	.012	50	48.69
7703-00	0	.330	.012	50	49.63

* Reg. Trademark E. I. DuPont Co.

SINGLE SCREW BRACKET TYPE WIRE LEADS



Can be dropped into opening and held in place by metal bracket and single central screw, supplied. UL Approved. SPECIFY COLOR

RATING: 15 Amps, 125 Volts AC or DC.
LEADS: Plastic wire #14 gauge, 6" long.
Std. Pkg. 50

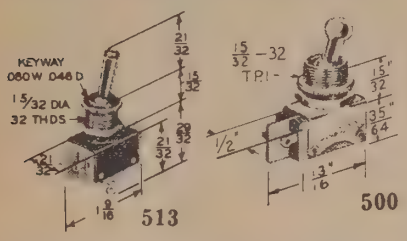
No.	Color	NET Per C
1281-103	Black	$18.00
1282-103	Black	18.00

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENT

ARROW HART & HEGEMAN SWITCHES

SMALL CANOPY TYPE SWITCHES



513 500

Laminated type 15/32-32 slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Solder terminals. SPST rated at 3 amps-250 volts AC-DC; all other rated at 1 amp-250 volts, 3 amps-125 volts AC-DC. Std. Pkg. 10

BAT LEVER POSITIVE ACTION

15/32" long shaft No.	NET Each	CIRCUIT	13/32" long shaft No.	NET Each
510	$ .91	SPST	584	$ .91
511	1.16	SPDT	585	1.16
542	1.21	2-Circ.	586	1.21
512	1.65	DPST	587	1.65
513	1.89	DPDT	588	1.89

BAT LEVER MOMENTARY ACTION

15/32" long shaft

Normally Closed (ON) NET Each	CIRCUIT	Normally Open (OFF) No.	NET Each
$1.45	SPST	1024	$1.45
1.69	SPDT	—	—
2.18	DPST	1025	2.20
2.45	DPDT	—	—

BALL LEVER POSITIVE ACTION

15/32" long shaft NET Each	CIRCUIT	3/4" long shaft NET Each
$ .91	SPST	$1.09
1.16	SPDT	1.45
1.21	2 Circ.	1.40
1.65	DPST	1.96
1.89	DPDT	2.18

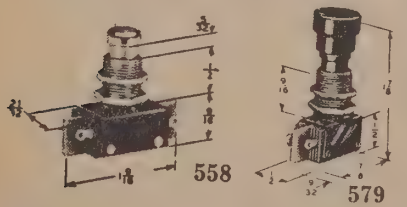
It's Sound Planning to SPECIFY SMITH FOR SWITCHES

To assist you in planning your prototypes and production, Smith maintains an inventory of all switches listed here —

IN STOCK — IN DEPTH

to meet your Immediate Requirements!

MOMENTARY PUSH SWITCHES



558 579

Laminated type 15/32-32 x 9/16" slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. All switches accept snap on button. SPST rated at 3 amps-250 volts AC-DC. All others rated at 1 amp-250 volts. 3 amps-125 volts AC-DC. Std. Pkg. 10

SUPPLIED LESS BUTTON: ORDER BUTTON SEPARATELY.

QUICK MAKE AND BREAK

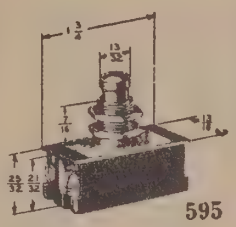
Normally Closed (ON) No.	NET Each	CIRCUIT	Normally Open (OFF) No.	NET Each
552	$1.77	SPST	555	$1.77
556	2.05	SPDT	—	—
557	2.09	2 Circ.	—	—
564	2.46	DPST	558	2.46
559	2.88	DPDT	—	—

SLOW MAKE AND BREAK

Rated at 1 amp.-125 volts AC

Normally Closed (ON) NET Each	CIRCUIT	Normally Open (OFF) No.	NET Each
$ .99	SPST	579	$ .99
1.28	2 Circ.	—	—

STANDARD DUTY MOMENTARY PUSH SWITCHES



595

Molded phenolic base, 15/32-32 x 7/16" long slotted sleeve, nickel finish. Screw terminals. Supplied with hex nuts.

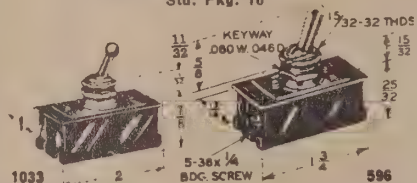
Two circ. rated at 3 amps.-250 volts, 6 amps-125 volts. AC-DC. All others rated at 6 amps-250 volts, 12 amps-125 volts AC-DC. DPST also rated at 1 HP at 250 volts AC-DC. Std. Pkg. 10

Normally Closed (ON) No.	NET Each	CIRCUIT	Normally Open (OFF) No.	NET Each
1026	$2.59	SPST	544	$2.59
1027	2.63	SPDT	—	—
1028	2.67	2 Circ.	—	—
1029	2.71	DPST	595	$2.71

STANDARD DUTY TOGGLE SWITCHES

QUICK MAKE AND BREAK

Std. Pkg. 10



1033 596

BALL LEVER No.	NET Each	CIRCUIT	BAT LEVER No.	NET Each
1030	$1.75	SPST	597	$1.75
1031	1.84	SPDT	598	1.84
1032	1.75	2 Circ.	599	1.75
1033	1.84	DPST	596	1.84

MIDGET SIZE TOGGLE SWITCHES



590 527

Molded phenolic base, 15/32-32 x 15/32" long slotted sleeve, nickel finish. Side connected silver plated solder contacts. Supplied with hex nut and knurled nut. SPST rated at 3 amps 250 volts; 6 amps.-125 volts; all others rated at 1 amp-250 volts, 6 amps.-125 volts. Std. Pkg. 10

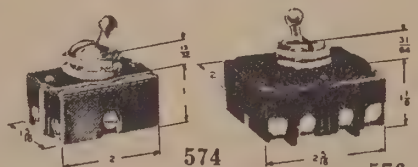
BALL LEVER No.	NET Each	CIRCUIT	BAT LEVER No.	NET Each
590	$1.05	SPST	591	$1.05
589	1.29	SPDT	592	1.29
594	1.26	2 Circ.	593	1.26

6" WIRE LEADS

BALL LEVER NET Each	CIRCUIT	BAT LEVER NET Each
$1.11	SPST	$1.11
1.54	SPDT	1.54
1.69	2 Circ.	1.69

EXTRA HEAVY DUTY POWER SWITCHES

3 POSITION—POSITIVE CENTER OFF

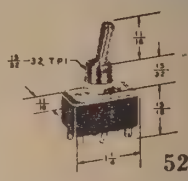


574 576

Slotted sleeve 3/4-32, nickel finish. Screw terminals. Supplied with 2 hex nuts. Rated at 5 amps-250 volts. 10 amps-125 volts plus HP rating shown below. Std. Pkg. 5

No.	Circuit	Description	NET Each
574	DPDT 3/4 HP	250 volts AC-DC	$ 6.45
575	TPDT 1/2 HP	115/230 volts AC, 3 phase	9.90
576	4PDT 1/2 HP	115/230 volts AC, 2 phase	13.20

INTERMEDIATE SIZE TOGGLE SWITCHES



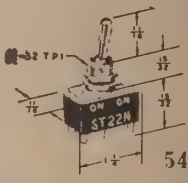
523

Molded phenolic base, 15/32-32 x 15/32" long slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. SPDT rated at 1 amp-250 volts, 6 amps-125 volts AC-DC; all others rated at 3 amps-250 volts, 6 amps-125 volts AC-DC. Std. Pkg. 10

BAT LEVER

POSITIVE ACTION No.	NET Each	CIRCUIT	MOMENTARY ACTION No.		NET Each
520	$1.21	SPST	524	OFF	$1.74
521	1.33	SPDT	549	—	1.89
583	1.50	2 Circ.	—	—	—
522	1.66	DPST	537	OFF	2.49
523	2.04	DPDT	525	—	2.73

ST TYPE TOGGLE SWITCHES



548

MEETS AN SPEC. JAN-23

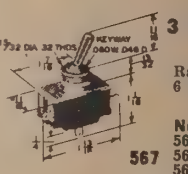
Rated at 3 amps-250 volts, 6 amps-125 volts AC-DC.

Std. Pkg. 10

No.	AWS No.	CIRCUIT	Position	NET Each
545	ST 12A	SPST	OFF-ON	$1.64
546	ST 12D	SPDT	ON-ON	1.86
1040	ST 12V	2-Circ.	ON-OFF	1.89
547	ST 22K	DPST	OFF-ON	2.32
548	ST 22N	DPDT	ON-ON	2.53

MOMENTARY NORMALLY OPEN (OFF)

1041	ST 12C	SPST	OFF-ON	$2.13
1042	ST 22M	DPST	OFF-ON	2.81



567

3 POSITION CENTER OFF

Rated at 3 amps-250 volts, 6 amps-125 volts AC-DC. Std. Pkg. 10

No.	CIRCUIT	NET Each
566	SPDT	$2.22
565	2 Circ.	2.48
567	DPDT	2.62

CANOPY TYPE ROTARY SWITCHES



1034 570

Laminated type. 11/32-32 x 15/32" sleeve, nickel finish. Solder lugs. Supplied with hex nut and dress nut. SPST rated at 3 amps-250 volts AC-DC, all others rated at 1 amp-250 volts, 3 amps-125 volts, AC-DC. Key removable in OFF position only on SPST and DPST—key removable in both positions on all others. 1⅛" shaft. Std. Pkg. 10

KEY TYPE No.	NET Each	CIRCUIT	ROTARY TYPE No.	NET Each
1034	$2.15	SPST	570	$1.24
1035	2.21	SPDT	571	1.39
1036	2.27	2 Circ.	—	—
1037	2.72	DPST	572	1.77
1038	2.78	DPDT	573	2.84

SWITCH ACCESSORIES



508 509 581 1146 1170 1171 1172 1196 1197 1198

No.	Description	Std. Pkg.	NET Per C
508	ON-OFF name plate	100	$6.00
509	HI-LO name plate	100	6.00
581	Snap-On Button (Red or Black)	50	27.00
1146	Narrow Rim Lockwasher	100	1.32
1170	Key—Remove off position	50	25.00
1171	Key—Remove both positions	50	25.00
1172	Locking Ring	100	2.70
1196	Hex Nut—Brass N.P.	100	2.00
1197	Ring Nut—Brass N.P.	100	3.30
1198	Dress Nut—Brass N.P.	100	20.00

© United Technical Pub

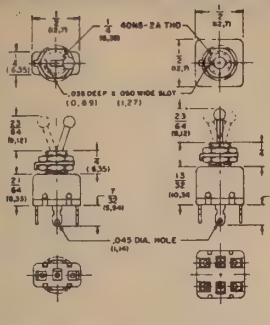
specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

ARROW, H. & H. MIDGET TOGGLE SWITCHES





SUB-MINIATURE TOGGLE SWITCHES

Offers the greatest switching flexibility and is available in both positive and momentary action. Gold plated silver stationary contacts to insure continuity on low energy circuits and Rhodium plated silver movable contacts to withstand mechanical wear. Molded diallyl phthalate and aluminum housing. Available in Commercial and Military types Rating. Resistive and *Inductive.

5A. 125V. AC
5A. 29V. DC
Max. Inrush: 25A.
Minimum rating: 40 milliamps at 1.5 volts
*AC: 75% Power Factor
DC: An Inductors
Mechanical Life: 100,000 cycles

Std. Pkg. 5

COMMERCIAL

Housing and mounting hardware gold anodized. Available only in stainless steel ball lever.

Smith No.	AH&H No.	Circuit*	Net Each
4740	TC-3	SPDT A-B-A	$5.00
4741	TE-3	SPDT C-B-A	5.30
4742	TG-3	SPDT C-B-C	5.30
4743	TM-3	SPDT C-D-A	5.30
4744	TS-1	SPST B-D-A	4.60
4745	TS-2	DPST B-D-A	5.60
4746	TS-3	SPDT A-D-A	5.00
4747	TC-6	DPDT A-B-A	6.50
4748	TE-6	DPDT C-B-C	8.25
4749	TG-6	DPDT C-B-C	8.25
4750	TM-6	DPDT C-D-A	8.25
4751	TS-6	DPDT A-D-A	6.50

*A-ON, B-OFF, C-Momentary ON, D-None

MILITARY

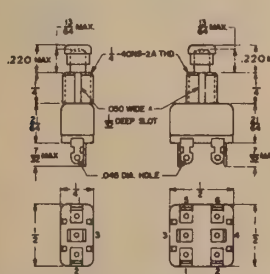
Meets Mil S-3950B, MS75028 and MS75029. Housing and hardware, clear anodized. Available only with aluminum bat lever.

Smith No.	AH&H No.	MS No.	Circuit*	NET Each
760	TC-3-M	MS75028-21	SPDT A-B-A	$5.30
761	TE-3-M	MS75028-31	SPDT C-B-A	5.60
762	TG-3-M	MS75028-27	SPDT C-B-C	5.60
763	TM-3-M	MS75028-26	SPDT C-D-A	5.60
764	TS-1-M	MS75028-22	SPST B-D-A	5.00
765	TS-2-M	MS75029-22	DPST B-D-A	6.00
766	TS-3-M	MS75028-23	SPDT A-D-A	5.30
767	TC-6-M	MS75029-21	DPDT A-B-A	6.80
768	TE-6-M	MS75029-31	DPDT C-B-A	8.60
769	TG-6-M	MS75029-27	DPDT C-B-C	8.60
770	TM-6-M	MS75029-26	DPDT C-D-A	8.60
771	TS-6-M	MS75029-23	DPDT A-D-A	6.80

*A-ON, B-OFF, C-Momentary ON, D-None

ARROW, H. & H. SUB-MINIATURE MOMENTARY PUSH BUTTON SWITCHES





Smallest momentary switch available, combining maximum performance, dependability and durability with minimum weight and envelope. Gold plated leaf contacts, with molded diallyl phthalate body and anodized aluminum housing. Mounts with ¼" diameter slotted sleeve, supplied with mounting hardware. Nylon push button caps are optional and are available in seven colors.

Rating: 2A. 29V.DV Resistive
1A. 115V.AC
Minimum Rating: 10 Micro-amps at 50 MV.
Weight: 2.5 Grams Single Pole
4.0 Grams Double Pole
Mechanical Life: Min. 1,000,000 Cycles.

Smith No.	Circuit	Net Each
4755	SPDT NO/MC	4.60
4756	DPDT NO/MC	5.60
4757	3PST 3P/NO	5.30
4758	3PST 3P/NC	7.60
4754	Button Only, Available in Red, Black, Green, Yellow Blue, Brown, Natural	.17

Std. Pkg. 25

CONTINENTAL-WIRT SLIDE SWITCHES

MATERIALS: Housings—Steel, cad. plated; Insulators—Phenolic: Contacts—Silver Plated Brass; Knobs & Toppers—Black Phenolic (except #8655—Natural Nylon).

RATINGS: Based on 125 Volts
Rating A—3.0 amps AC, 0.5 amps DC
Rating B—6.0 amps AC, 0.5 amps DC
Rating C—0.5 amp AC-DC

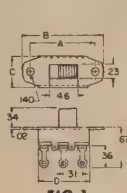


FIG.1

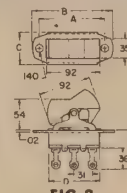


FIG.2

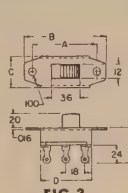


FIG.3

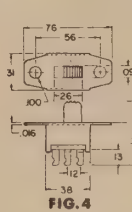


FIG.4

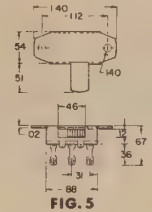


FIG.5

DETENT SLIDE SWITCHES

	RATING A No.	NET Per C	DIMENSIONS FIGURE 1 A	B	C	D	RATING B No.	NET Per C
SPST	515	$12.00	1.12	1.40	0.54	0.88	1105	$16.00
SPDT	516	13.00	1.12	1.40	0.54	0.88	1106	16.00
DPST	517	17.00	1.12	1.40	0.54	0.88	1107	25.00
DPDT	518	18.00	1.12	1.40	0.54	0.88	1108	27.00
DP3P0S	1054	30.00	1.40	1.65	0.54	1.18	8637	31.00
3PDT	1109	48.00	1.12	1.40	0.71	0.88	8638	52.00
3P3P0S	8635	56.00	1.40	1.65	0.78	1.18	8639	67.00
4PDT	1104	60.00	1.12	1.40	1.00	0.88	8640	60.00
4P3P0S	8636	69.00	1.40	1.65	1.00	1.18	8641	75.00

SPRING-RETURN SLIDE SWITCHES

SPST	568	35.00	1.12	1.40	0.54	0.88	8643	23.00
SPDT	569	28.80	1.12	1.40	0.54	0.88	8644	23.00
DPDT	8642	37.00	1.12	1.40	0.71	0.88	8645	27.00

ROCKER SWITCHES

	RATING A Detent No.	NET Per C	DIMENSIONS FIGURE 2 A	B	C	D	Spr. Return No.	NET Per C
SPST	8646	41.00	1.12	1.40	0.54	0.88	8651	50.00
SPDT	8647	41.00	1.12	1.40	0.54	0.88	8651	50.00
DPST	8648	47.00	1.12	1.40	0.54	0.88	—	—
DPDT	8649	45.00	1.12	1.40	0.54	0.88	—	—
3PDT	8650	77.00	1.12	1.40	0.71	0.88	—	—

MINIATURE SLIDE SWITCHES

	RATING C No.	NET Per C	DIMENSIONS FIGURE 3 A	B	C	D	Spr. Return No.	NET Per C
SPDT	1226	27.00	0.81	1.00	0.40	0.63	1236	40.00
DPDT	1227	33.00	0.81	1.00	0.40	0.63	—	—
SP3P0S	1238	40.00	1.00	1.19	0.40	0.80	—	—
DP3P0S	1239	40.00	1.00	1.19	0.40	0.80	—	—

SUBMINIATURE SLIDE SWITCH

RATING C

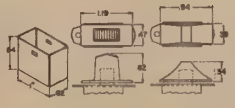
SPDT	8655	$45.00	FIGURE 4	— —

SIDE-ACTION SLIDE SWITCH

RATING A

SPDT	8653	$24.00	FIGURE 5	— —
DPDT	8654	27.00		— —

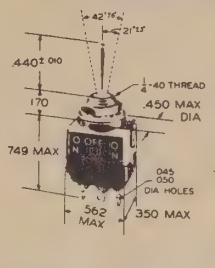
Slide Switch Accessories



519 8656 8657

No.	Description	NET Per C
519	Nylon Shield	$15.00
8656	Black Slide Topper For Standard Switch	9.00
8657	Black Slide Topper For Miniature Switch	11.00

CUTLER-HAMMER MINIATURE MILITARY SWITCHES



Extremely compact, highly reliable power or dry circuit switches. Usable as a pre-set switch in aircraft recognition systems; for walkie-talkies; for electronic instruments and communications systems.

RATINGS: Res. Load 4 Amps. @ 28 V.D.C. 1 Amp @ 50 V.D.C. 3 Amps. @ 115 V.A.C.
MINIMUM RATING: 25 Microamps. @ 5 Millivolts.

SINGLE POLE

WEIGHT: 5.0 Grams.
CUBIC CONTENT: .147 cubic inches "behind panel" volume.

Std. Pkg. 5

.440 LEVER APPROVED TO MIL-S-8834

No.	C-H No.	"MS" No.	Type	Circuit†	NET Each
1841	8866K1	MS24655-211	SPDT	A-B-A	$7.48
1842	8866K2	MS24655-271	SPDT	C-B-C	8.42
1843	8866K3	MS24655-311	SPDT	A-B-C	8.42
1844	8866K4	MS24655-231	SPDT	A-D-A	7.40
1845	8866K4	MS24655-241	SPST	A-B-D	8.42
1846	8866K6	MS24655-281	SPST	D-B-C	8.42
1847	8866K7	MS24655-221	SPST	A-D-B	7.40

DOUBLE POLE

WEIGHT: 6.5 grams.
CUBIC CONTENT: .230 cubic inches "behind panel" volume.

Std. Pkg. 5

No.	C-H No.	"MS" No.	Type	Circuit†	NET Each
1851	8867K1	MS24656-211	DPDT	A-B-A	$ 9.35
1852	8867K2	MS24656-271	DPDT	C-B-C	10.90
1853	8867K3	MS24656-311	DPDT	A-B-C	10.90
1854	8867K4	MS24656-231	DPDT	A-D-A	9.35
1855	8867K5	MS24656-241	DPST	A-B-D	10.90
1856	8867K6	MS24656-281	DPST	D-B-C	10.90
1857	8867K7	MS24656-221	DPST	A-D-B	9.35

†Circuit Code: A = On B = Off C = Momentary On D = None E = Momentary Off

C-H MINIATURE MILITARY SWITCHES



Same as above, but with .687" lever. Total weight: 5.0 - 6.5 grams. Bushing dia. 15/32". Gold plated solder lug terminals.

SINGLE POLE

1 1/16" LEVER APPROVED TO MIL-S-8834

No.	C-H No.	Type	Circuit†	NET Each
3933	8868K1	SPDT	A-B-A	$7.60
3934	8868K2	SPDT	C-B-C	8.60
3935	8868K3	SPDT	A-B-C	8.60
3936	8868K4	SPDT	A-D-A	7.60
3937	8868K5	SPST	A-B-D	8.60
3938	8868K6	SPST	D-B-C	8.60
3939	8868K7	SPST	A-D-B	7.60

DOUBLE POLE

No.	C-H No.	Type	Circuit†	NET Each
3940	8869K1	DPDT	A-B-A	$ 9.46
3941	8869K2	DPDT	C-B-C	11.00
3942	8869K3	DPDT	A-B-C	11.00
3943	8869K4	DPDT	A-D-A	9.46
3944	8869K5	DPST	A-B-D	11.00
3945	8869K6	DPST	D-B-C	11.00
3946	8869K7	DPST	A-D-B	9.46

†Circuit Code: A = On B = Off C = Momentary On D = None E = Momentary Off

PUSH BUTTON SWITCHES



Push to make—Push to break
AC-DC, UL Approved; 11/16" shank; bakelite case. Pushing the button once closes the contacts. Pushing it again opens the contacts. Rated at 6 Amps. 125 Volts; 3 Amps., 250 Volts. **Std. Pkg. 10**

No.	C-H No.	Type	Term.	NET Each
989	7206K4	SPST	Lug	$1.27
990	7208K4	SPST	Screw	1.43
991	7207K4	SPST	Wire	1.43

It's Sound Planning to SPECIFY SMITH FOR SWITCHES

To assist you in planning your prototypes and production, Smith maintains an inventory of all switches listed here —

IN STOCK — IN DEPTH to meet your Immediate Requirements!

*IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENTS

CUTLER-HAMMER SWITCHES

TOGGLE SWITCHES
STANDARD DUTY
15 Amps. 125 Volts — 10 Amps. 250 Volts
AC, UL Approved 15/32" shank; slow-make and break; bakelite case. AC rated only for longer life and greater capacity. Std. Pkg. 10



BACK CONNECTED LUG TERMINALS

No.	C-H No.	Type	NET Each
966	7501K13	SPST	$ .92
967	7505K4	SPDT	1.06
968	7561K4	DPST	1.41
969	7565K5	DPDT	1.66
970	7611K2	TPST	2.86
971	7615K2	TPDT	3.53



BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	NET Each
972	7500K14	SPST	$1.06
973	7504K4	SPDT	1.24
974	7560K5	DPST	1.66
975	7564K6	DPDT	2.05
976	7610K2	TPST	3.33
977	7614K2	TPDT	4.22

CENTER OFF STANDARD DUTY TOGGLE SWITCHES



BACK CONNECTED LUG TERMINALS

No.	C-H No.	Type	NET Each
978	7503K13	SPDT	$1.06
979	7563K4	DPDT	1.66
980	7613K2	TPDT	3.53

BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	NET Each
981	7502K13	SPDT	$1.24
982	7562K4	DPDT	2.05
983	7612K2	TPDT	4.22



TOGGLE SWITCHES
LIGHT DUTY
AC-DC, UL Approved; 15/32" shank; quick make — quick break; bakelite case. Unusually small size for electrical capacity. Std. Pkg. 10

BACK CONNECTED LUG TERMINALS
SMALL BAT HANDLE 15/32" LONG

No.	C-H No.	Type	Current Rating 125 V.	250 V	NET Each
950	8280K16	SPST		3 Amps.	$ .92
951	8381K8	SPST	6 Amps.	3 Amps.	1.06
952	8282K14	SPDT	3 Amps.	1 Amp.	1.16
953	8284K14	2 circ.	3 Amps.	1 Amp.	1.21
954	8360K7	DPST		3 Amps.	1.65
955	8370K7	DPST	6 Amps.	3 Amps.	1.77
956	8363K7	DPDT		3 Amps.	1.89
957	8373K7	DPDT	6 Amps.	3 Amps.	2.04

STANDARD BAT HANDLE 11/16" LONG

					NET Each
1160	8280K38	SPST		3 Amps.	$ .92
1161	8381K38	SPST	6 Amps.	3 Amps.	1.06
1162	8908K448	SPDT	3 Amps.	1 Amp.	1.16
1163	8908K449	2 Circ.	3 Amps.	1 Amp.	1.21
1164	8360K38	DPST		3 Amps.	1.65
1165	8908K451	DPST	6 Amps.	3 Amps.	1.77
1166	8363K38	DPDT		3 Amps.	1.89
1167	8908K453	DPDT	6 Amps.	3 Amps.	2.04



SIDE CONNECTED SCREW TERMINALS

No.	C-H No.	Type	Current Rating 125 V.	250 V.	NET Each
958	8285K8	SPST		3 Amps.	$1.11
959	8396K8	SPST	6 Amps.	3 Amps.	1.24
960	8297K8	SPDT	3 Amps.	1 Amp.	1.45
961	8372K7	DPST	6 Amps.	3 Amps.	2.17
962	8365K7	DPDT		3 Amps.	2.50
963	8375K7	DPDT	6 Amps.	3 Amps.	2.62

WIRE LEADS — SIX INCHES LONG
Small Bat Handle 15/32" Long

No.	C-H No.	Type	Current Rating 125 V.	250 V.	NET Each
964	8290K16	SPST		3 Amps.	$1.11
965	8391K8	SPST	6 Amps.	3 Amps.	1.24



PUSH BUTTON MOMENTARY SWITCHES
Std. Pkg. 10
AC-DC, UL Approved, 15/32" shank; rated at ¾ Amp, 125 volts — ¼ Amp, 250 volts.

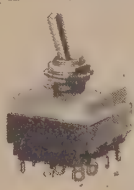
No.	C-H No.	Type	Term.	NET Each
992	8411K11	SP Norm. Op	Lug	$ .64
993	8411K12	SP Norm. Op	Screw	.70
994	8411K8	SP Norm. Cl	Lug	.46
995	8411K7	SP Norm. Cl	Screw	.53



TOGGLE SWITCHES
HEAVY DUTY
AC - DC, UL Approved; 15/32" shank; quick make-quick break; bakelite case. Screw Terminals.
Std. Pkg. 10

No.	C-H No.	Current Rating Type	125 V	250-V	NET Each
984*	7321K3	DPST	12 A	6 A	$1.85
985*	7320K3	DPST	12 A	6 A	1.85
986+	7361K5	SPST	15 A	10 A	3.18
987+	7360K8	DPST	15 A	10 A	3.18
988±	7402K4	DPST		20 A	4.27

*1 Hp — 125/250V. +1½ Hp — 125/250V.
±1½ Hp — 125V, 2 Hp — 250V.



FOUR POLE SWITCHES
AC-DC GOVERNMENT APPROVED PER MIL-S-6745. 15/32" shank. Rated 10 amps, 115 volt AC—20 amps, 28 volts DC (Nominal rating per pole) SEALED LEVER Std. Pkg. 5

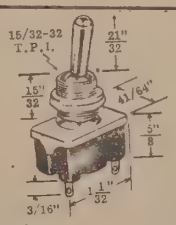
SOLDER LUGS

No.	C-H No.	"MS" No.	Type	Circuit†	NET Each
944	7661K6	—	4PST	A-D-B	$5.68
945	7665K4	—	4PDT	A-D-A	6.93
3922	7669K4	—	4PST	A-D-E	7.81
3923	7671K4	—	4PDT	A-B-C	8.58
3924	7673K4	—	4PDT	C-B-C	8.58
3925	7675K4	—	4PDT	A-D-C	8.58
		CENTER OFF			
948	7663K5	—	4PDT	A-B-A	6.93

SCREW TERMINALS (Per MIL-S-3950)

No.	C-H No.	"MS" No.	Type	Circuit†	NET Each
946	7660K12	MS25068- *	4PST	A-D-B	$6.60
947	7664K5	MS25068-23	4PDT	A-D-A	7.70
3926	7660K13	MS25068-24	4PST	A-B-D	6.16
3927	7666K6	MS25068- *	4PST	A-D-C	8.36
3928	7666K9	MS25068-28	4PST	D-B-C	8.36
3929	7668K7	MS25068-25	4PST	A-C-D	8.36
3930	7670K6	MS25068-31	4PDT	A-B-C	9.24
3931	7672K5	MS25068-27	4PDT	C-B-C	9.24
3932	7674K5	MS25068-26	4PDT	A-D-C	9.24
		CENTER OFF			
949	7662K7	MS25068-21	4PDT	A-B-A	7.70

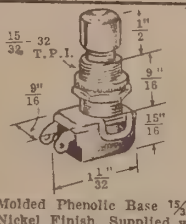
†Circuit Code: A = On B = Off C = Momentary On D = None E = Momentary Off



MIDGET TOGGLE SWITCH

Bat lever. Molded phenolic base. 15/32-32 x 15/32" long. Slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. Rated 1 amp.-250 volts; 3 amps.-125 volts. Std. Pkg. 10

No.	Circuit	NET Each
920	SPST	$1.21
921	SPDT	1.44
922	2 Circ.	1.50
923	DPST	1.77
924	DPDT	2.04



MIDGET MOMENTARY SWITCH
SLOW MAKE AND BREAK

Molded Phenolic Base 15/32-32 x 9/16" slotted sleeve, Nickel Finish. Supplied with hex nut and knurled nut. Side connected silver plated solder contacts. Rated at 3 amps.-120 volts A.C. Supplied less button; order button separately. Std. Pkg. 10

Normally Closed (ON)

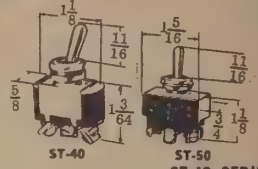
No.	Circuit	NET Each
925	SPST	$ .99
926	2 Circ.	1.07

Normally Open (OFF)

No.	Circuit	NET Each
927	SPST	$ .99

It's Sound Planning to SPECIFY SMITH FOR SWITCHES

"ST" SWITCHES



Nominal Rating Per. Pole:
10 Amps. 115 V. AC
20 Amps. 28V. DC
Std. Pkg. 10

ST-40 SERIES — Single Pole With Screw Terminals

HHS	C-H	JAN Type	Circuit	NET Each
1720	8801K13	ST40A SPST	On-None-Off	$2.10
1721	8813K12	ST40B SPST	On-None-Mom-Off	2.31
1722	8811K12	ST40C SPST	On-None-Mom-On	2.31
1723	8810K12	ST40D SPDT	On-None-On	2.53
1724	8800K13	ST40E SPDT	On-Off-On	2.53
1725	8804K12	ST40F SPDT	On-None-Mom-On	2.75
1726	8812K13	ST40G SPDT	Mom-On-Off-Mom-On	2.75
1727	8809K13	ST40H SPDT	Off-On-Mom-On	2.75

All ST-40 Switches have Sealed Lever.

ST-42 SERIES — Single Pole With Solder Lugs

HHS	C-H	JAN Type	Circuit	Each
1730	8803K6	ST42A SPST	On-None-Off	$1.78
1731	8819K5	ST42B SPST	On-None-Mom-Off	1.79
1732	8817K5	ST42C SPST	On-None-Mom-On	1.91
1733	8816K5	ST42D SPDT	On-None-On	1.85
1734	8802K6	ST42E SPDT	On-Off-On	1.85
1735	8805K5	ST42F SPDT	On-None-Mom-On	2.02
1736	8818K5	ST42G SPDT	Mom-On-Off-Mom-On	2.02
1737	8815K6	ST42H SPDT	On-Off-Mom-On	2.02

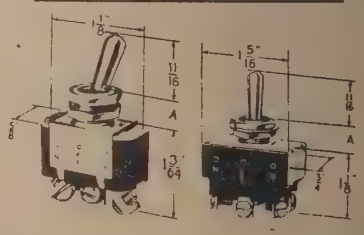
ST-50 SERIES — Double Pole With Screw Terminals

HHS	C-H	JAN Type	Circuit	Each
1740	8822K8	ST50K DPST*	On-None-Off	$2.81
1741	8828K5	ST50L DPST	On-None-Mom-Off	3.41
1742	8826K5	ST50M DPST	Off-None-Mom-On	3.41
1743	8824K8	ST50N DPDT*	On-None-On	3.41
1744	8820K10	ST50P DPDT*	On-Off-On	3.41
1745	8830K5	ST50R DPDT	On-None-Mom-On	3.70
1746	8834K4	ST50S DPDT*	Mom-On-Off-Mom-On	3.70
1747	8832K4	ST50T DPDT*	On-Off-Mom-On	3.70

* These switches are equipped with Sealed Lever.

ST-52 SERIES — Double Pole With Solder Lugs

HHS	C-H	JAN Type	Circuit	Each
1760	8823K5	ST52K DPST	On-None-Off	$1.98
1761	8829K5	ST52L DPST	On-None-Mom-Off	2.31
1762	8827K5	ST52M DPST	Off-None-Mom-On	2.31
1763	8825K5	ST52N DPDT	On-None-On	2.09
1764	8821K5	ST52P DPDT	On-Off-On	2.09
1765	8831K5	ST52R DPDT	On-None-Mom-On	2.38
1766	8835K3	ST52S DPDT	Mom-On-Off-Mom-On	2.38
1767	8833K3	ST52T DPDT	On-Off-Mom-On	2.38



"MS" SERIES Made to Spec. MIL-S-3950B
Supersedes all previous specifications. Made to meet MIL-S-3950B. Provided with sealed lever for protection against sand, dust and moisture. Std. Pkg. 10

SINGLE POLE

No.	C-H No.	"MS" No.	Type	Circuit†	NET Each
3900	8800K16	MS35058-21	SPST	A-B-A	$2.53
3901	8801K22	MS35058-22	SPST	A-D-B	1.99
3902	8810K15	MS35058-23	SPST	A-D-A	2.53
3903	8801K23	MS35058-24	SPDT	A-B-D	1.99
3904	8813K18	MS35058-25	SPDT	A-E-D	2.31
3905	8804K13	MS35058-26	SPDT	A-D-C	2.75
3906	8812K14	MS35058-27	SPDT	C-B-C	2.75
3907	8811K18	MS35058-28	SPDT	D-B-C	2.31
3908	8813K17	MS35058-29	SPDT	A-D-E	2.31
3909	8811K17	MS35058-30	SPDT	B-D-C	2.31
3910	8809K16	MS35058-31	SPDT	A-B-C	2.75

DOUBLE POLE

No.	C-H No.	"MS" No.	Type	Circuit†	NET Each
3911	8820K16	MS35058-21	DPDT	A-B-A	3.30
3912	8822K20	MS35059-22	DPST	A-D-B	2.75
3913	8824K14	MS35059-23	DPDT	A-D-A	3.30
3914	8822K21	MS35059-24	DPDT	A-B-D	2.75
3915	8828K12	MS35059-25	DPDT	A-E-D	3.30
3916	8830K13	MS35059-26	DPDT	A-D-C	3.63
3917	8834K5	MS35059-27	DPDT	C-B-C	3.63
3918	8826K14	MS35059-28	DPDT	D-B-C	3.30
3919	8828K13	MS35059-29	DPDT	A-D-E	3.30
3920	8826K15	MS35059-30	DPDT	B-D-C	3.30
3921	8823K6	MS35059-31	DPDT	A-B-C	3.63

†Circuit Code: A = On B = Off C = Momentary On D = E = Momentary Off

© United Technical Pub

specify* **SMITH**

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

ARROW, HART & HEGEMAN "SNAP ACTING" MOMENTARY CONTACT SWITCHES

PRECISION SNAP-ACTING SWITCH A precision snap-acting switch is a mechanically operated electric switch having predetermined and accurately controlled characteristics, and having contacts other than the blade and jaw, or mercury type, where the maximum separation between any butting contacts is 1/8 inch.

MOMENTARY CONTACT SWITCH A momentary contact switch is a switch which returns from the operated condition to its normal circuit condition when the actuating force is removed.

ACTUATOR An actuator is the mechanism of the switch or enclosure which, when moved as intended, will operate the contacts.

Std. Pkg. 5



A B C D E F G H I J

TERMINAL CODE: S = solder lugs; L = screws, lock washers; C = screws, cup washers; Q = quick connect

RATINGS CODE: #1 = 15 Amp 480 VAC; ½ Amp 125 VDC; ¼ Amp 250 VDC. #2 = 20 Amp 480 VAC; 10 Amp 125 VAC; "L" Load; ½ Amp 125 VDC; ¼ Amp 250 VDC; 1 HP 120 VAC; 2 HP 240 VAC.

HIGH SENSITIVITY PIN TYPE (A)

RATINGS
LIMIT LOAD to 1 10 Amp, 125 V., A.C.
or 10 Watts, 125 V., A.C.
or 5 Watts, 25 V., D.C.

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4701	$7.05	4705	$7.05	4709	$7.33
C	4702	7.20	4706	7.20	4710	7.45
L	4703	7.20	4707	7.20	4711	7.45
Q	4704	7.05	4708	7.05	4712	7.33

ROLLER LEAF ACTUATOR (C)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4501	$2.65	4533	$2.65	4565	$3.01
C	4502	2.73	4534	2.73	4566	3.20
L	4503	2.73	4535	2.73	4567	3.20
Q	4504	2.65	4536	2.65	4568	3.01

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4601	$3.06	4633	$3.06	4665	$3.40
C	4602	3.20	4634	3.20	4666	3.20
L	4603	3.20	4635	3.20	4667	3.20
Q	4604	3.06	4636	3.06	4668	3.40

FLEXIBLE LEAF ACTUATOR (D)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4505	$1.97	4537	$1.97	4569	$2.37
C	4506	2.04	4538	2.04	4570	2.65
L	4507	2.04	4539	2.04	4571	2.64
Q	4508	1.97	4540	1.97	4572	2.37

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4605	$2.15	4637	$2.15	4669	$2.73
C	4606	2.11	4638	2.11	4670	2.57
L	4607	2.11	4639	2.11	4671	2.57
Q	4608	2.15	4640	2.15	4672	2.73

STANDARD ROLLER (E)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4521	$3.06	4553	$3.06	4585	$3.49
C	4522	3.20	4554	3.20	4586	3.63
L	4523	3.20	4555	3.20	4587	3.63
Q	4524	3.06	4556	3.06	4588	3.49

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4621	$3.20	4653	$3.20	4685	$3.75
C	4622	3.27	4654	3.27	4686	3.71
L	4623	3.27	4655	3.27	4687	3.71
Q	4624	3.20	4656	3.20	4688	3.75

RIGID HINGE (F)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4525	$2.37	4557	$2.37	4589	$2.81
C	4526	2.44	4558	2.44	4590	2.87
L	4527	2.44	4559	2.44	4591	2.87
Q	4528	2.37	4560	2.37	4592	2.81

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4625	$2.79	4657	$2.79	4689	$3.06
C	4626	2.57	4658	2.57	4690	2.94
L	4627	2.57	4659	2.57	4691	2.94
Q	4628	2.79	4660	2.79	4692	3.06

ADJUSTABLE RIGID LEVER (B)

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4721	$3.20	4725	$3.20	4729	$3.71
C	4722	3.34	4726	3.34	4730	3.63
L	4723	3.34	4727	3.34	4731	3.63
Q	4724	3.20	4728	3.20	4732	3.71

PIN TYPE (G)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4529	$1.82	4561	$1.82	4593	$2.15
C	4530	1.89	4562	1.89	4594	2.29
L	4531	1.89	4563	1.89	4595	2.29
Q	4532	1.82	4564	1.82	4596	2.15

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4629	$1.89	4661	$1.89	4693	$2.44
C	4630	1.97	4662	1.97	4694	2.37
L	4631	1.97	4663	1.97	4695	2.37
Q	4632	1.89	4664	1.89	4696	2.44

PANEL MOUNTED TYPE (H)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4509	$4.29	4541	$4.29	4573	$4.80
C	4510	4.32	4542	4.32	4574	4.87
L	4511	4.32	4533	4.32	4575	4.87
Q	4512	4.29	4544	4.29	4576	4.80

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4609	$4.40	4641	$4.40	4673	$4.94
C	4610	4.47	4642	4.47	4674	5.02
L	4611	4.47	4643	4.47	4675	5.02
Q	4612	4.40	4644	4.40	4676	4.94

SHORT OVERTRAVEL BUTTON (I)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4513	$2.37	4545	$2.37	4577	$2.65
C	4514	2.44	4546	2.44	4578	2.73
L	4515	2.44	4547	2.44	4579	2.73
Q	4516	2.37	4548	2.37	4580	2.65

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4613	$2.44	4645	$2.44	4677	$3.06
C	4614	2.37	4646	2.37	4678	2.79
L	4615	2.37	4647	2.37	4679	2.79
Q	4616	2.44	4648	2.44	4680	3.06

SHORT ROLLER (J)

General Purpose 15 Amp (RATING #1)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4517	$3.06	4549	$3.06	4581	$3.49
C	4518	3.20	4550	3.20	4582	3.63
L	4519	3.20	4551	3.20	4583	3.63
Q	4520	3.06	4552	3.06	4584	3.49

Heavy Duty 20 Amp (RATING #2)

WITH TERMINALS	S.P. NORM. OPEN No.	S.P. NORM. OPEN NET Ea.	S.P. NORM. CLOSED No.	S.P. NORM. CLOSED NET Ea.	S.P.D.T. No.	S.P.D.T. NET Ea.
S	4617	$3.20	4649	$3.20	4681	$3.75
C	4618	3.27	4650	3.27	4682	3.71
L	4619	3.27	4651	3.27	4683	3.71
Q	4620	3.20	4652	3.20	4684	3.75

© United Technical Pub

specify* SMITH
HERMAN H. SMITH, INC.
FOR INDUSTRIAL ELECTRONIC COMPONENTS

TEFLON TEST JACKS, PROBES, PLUGS

COLOR CODE SUFFIX
(Add to Catalog Number as Required)
—101 White —103 Black —105 Blue —107 Yellow —112 Purpl
—102 Red —104 Green —106 Orange —108 Brown —113 Grey

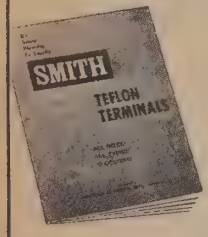
SMITH TEFLON* TERMINALS



OVER 1000 TYPES
10 COLORS - IN STOCK!

- Miniature
- Subminiature
- Microminiature

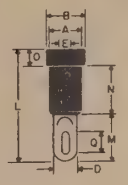
- Standoff — Feed-thru
- Probes — Test Jacks
- Connectors — Sockets
- Custom Fabrication



Smith Complete 12-page Teflon Terminals Catalog FREE on Request

*Reg. Trademark E. I. DuPont Co.

TEST JACKS



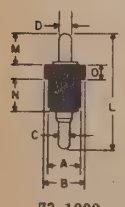
Cat. No.	DIMENSIONS A	B	C	D	E*	L	M	N	O	P**	Q	R	NET Per M
PHONE TIP JACK													
63-1000	.185	.218	—	.105	.050	.687	.354	.287	.046	.250	—	—	$120.00
63-1001	.185	.218	—	.105	.041	.687	.354	.287	.046	.250	—	—	160.00
63-1002	.185	.218	—	.110	.080	.687	.354	.287	.046	.250	—	—	160.00
63-1014	.185	.218	—	.115	.050	.687	.354	.281	.052	.250	—	—	160.00
63-1015	.185	.218	—	.103	.080	.687	.330	.146	.187	.187	—	—	160.00
63-1016	.185	.218	—	.115	.050	.625	.355	.224	.046	.200	—	—	160.00
63-1017	.185	.218	—	.104	.060	.718	.316	.356	.046	.315	—	—	160.00
63-1037	.185	.218	—	.110	.050	.687	.330	.146	.187	.250	—	—	160.00

*Probe Diameter **Probe Length

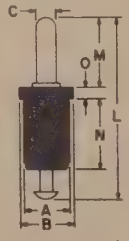


BANANA JACK													
63-1074	.218	.250	.054	.074	.104	.655	.187	.375	.093	.280	.116	.035	$300.00
63-1508	.265	.460	.062	.093	.161	1.000	.250	.597	.160	.546	.215	.032	500.00
TURRET LUG													
63-1003	.185	.218	.054	.074	.090	.437	.120	.271	.046	.195	.053	.037	$180.00
63-1004	.185	.218	.054	.074	.080	.437	.120	.271	.046	.195	.053	.037	180.00
63-1005	.185	.218	.054	.074	.080	.640	.187	.400	.050	.287	.104	.037	180.00
63-1006	.204	.250	.054	.074	.080	.437	.120	.271	.046	.195	.053	.037	200.00
63-1007	.170	.218	.046	.078	.090	.375	.060	.269	.046	.250	.040	.010	220.00
63-1010	.148	.172	.040	.060	.040	.345	.120	.179	.046	.140	.077	.023	180.00
63-1011	.218	.250	.066	.098	.105	.400	.060	.294	.046	.250	.037	.010	220.00
63-1012	.120	.142	.040	.060	.040	.449	.120	.283	.046	.245	.060	.030	190.00
63-1013	.200	.218	.054	.074	.093	.761	.187	.386	.187	.455	.116	.035	270.00
63-1020	.200	.218	.054	.074	.093	.699	.187	.386	.125	.390	.116	.035	400.00
63-1029	.140	.172	.046	.080	.040	.253	.060	.143	.050	.125	.040	.010	220.00
63-1032	.148	.172	.046	.080	.040	.203	.060	.097	.046	.078	.040	.010	210.00
63-1033	.120	.150	.046	.080	.040	.203	.060	.113	.030	.078	.040	.010	210.00
63-1054	.185	.218	.054	.074	.090	.340	.120	.174	.046	.140	.077	.023	210.00
63-1057	.185	.218	.054	.074	.080	.467	.120	.301	.046	.225	.047	.035	210.00
63-1072	.120	.142	.040	.060	.040	.410	.120	.244	.046	.205	.060	.030	180.00
63-1077	.140	.172	.040	.060	.040	.345	.120	.179	.046	.140	.077	.023	180.00
63-1078	.148	.172	.046	.080	.040	.190	.050	.094	.046	.078	.030	.010	200.00
63-1079	.185	.218	.054	.074	.050	.437	.120	.271	.046	.195	.053	.037	190.00
63-1080	.185	.218	.080	.125	.080	.455	.105	.300	.050	.315	.065	.020	250.00
63-1081	.200	.375	.054	.074	.093	.834	.187	.417	.230	.518	.116	.035	350.00

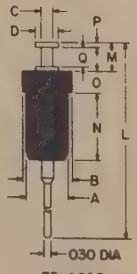




73-1000 Group



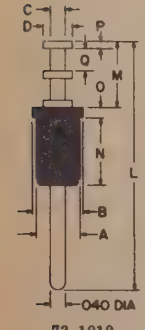
73-1006 Group



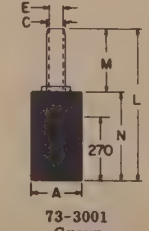
73-1007 Group

PROBES & PLUGS

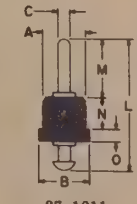
73-1000	.185	.218	.030	.050	—	1.531	.250	.287	.046	—	—	—	$150.00
73-1001	.185	.218	.030	.050	—	.906	.250	.287	.046	—	—	—	150.00
73-1002	.185	.218	.030	.050	—	2.083	.250	.287	.046	—	—	—	150.00
73-1003	.185	.218	.030	.050	—	1.937	.250	.141	.046	—	—	—	130.00
73-1018	.148	.172	.030	.050	—	1.937	.250	.165	.046	—	—	—	180.00
73-1028	.185	.218	.030	.040	—	1.870	.120	.250	.046	—	—	—	180.00
73-1006	.185	.218	.081	—	—	.739	.281	.287	.046	—	—	—	$150.00
73-1011	.185	.218	.050	—	—	.562	.250	.135	.052	—	—	—	120.00
73-1015	.185	.218	.081	—	—	.739	.281	.287	.046	—	—	—	130.00
73-1016	.185	.218	.050	—	—	.562	.250	.141	.046	—	—	—	120.00
73-1017	.185	.218	.081	—	—	.562	.250	.141	.046	—	—	—	130.00
73-1022	.171	.187	.040	—	—	.687	.272	.212	.040	—	—	—	180.00
73-1023	.185	.218	.050	—	—	.906	.250	.287	.046	—	—	—	150.00
73-1026	.185	.218	.090	—	—	.648	.190	.287	.046	—	—	—	170.00
73-1027	.185	.218	.062	—	—	.612	.250	.141	.046	—	—	—	150.00
73-1007	.185	.218	.050	.093	—	2.005	.125	.287	.093	.020	.085	—	$150.00
73-1008	.185	.218	.050	.093	—	1.000	.125	.287	.093	.020	.085	—	150.00
73-1009	.185	.218	.050	.093	—	2.000	.125	.150	.230	.020	.085	—	160.00
73-1010	.185	.218	.060	.125	—	1.052	.281	.287	.046	.031	.093	—	$150.00
73-3001	.218	—	.080	—	.062	.645	.270	.375	—	—	—	—	$120.00
73-3012	.218	—	.090	—	.062	.645	.270	.375	—	—	—	—	150.00
37-1011	.185	.218	.050	—	—	.562	.250	.135	.052	—	—	—	$150.00



73-1010



73-3001 Group

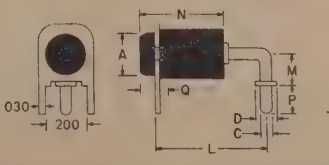


37-1011

TEFLON PRINTED CIRCUIT TEST JACK

Standard Package 100

Cat. No.	A	B	C	D	E*	L	M	N	P	Q**	NET Per M
63-3002	.187	.218	.050	.080	.080	.500	.140	.378	.125	.250	$350.00
63-3003	.187	.218	.050	.080	.080	.400	.140	.378	.125	.250	350.00
63-3004	.187	.218	.040	.080	.080	.520	.140	.398	.130	.250	350.00
63-3005	.187	.218	.035	.080	.080	.400	.140	.378	.187	.250	360.00
63-3009	.187	.218	.050	.080	.080	.500	.140	.689	.125	.500	390.00



*Probe Diameter **Probe Length

* IT'S SOUND PLANNING TO "SPECIFY SMITH" WHEN DESIGNING OR PURCHASING

 © United Technical Pub

specify* SMITH

HERMAN H. SMITH, INC.

FOR INDUSTRIAL ELECTRONIC COMPONENTS

RUBBER COVERED TEST LEAD WIRE



Single conductor exceptionally flexible rubber covered wire for test lead applications. Conductor is tinned, soft annealed copper wire, stranded as shown. Available in Red and Black. Specify color. Std. Pkg. 6

No.	AWG	Strand	Volt	O.D.	Spool	NET Each
7500	20	41/36	5,000	.120"	100'	$3.30
7501	20	26/34	5,000	.125"	100'	3.30
7502	18	65/36	12,000	.150"	100'	5.00
7503	18	65/36	22,000	.245"	100'	7.00

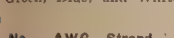
PLASTIC COVERED TEST LEAD WIRE



Single conductor exceptionally flexible wire for modern test lead applications. Conductor is tinned, soft annealed copper wire, stranded as shown. Insulation is special flexible compound PVC, smooth finish, grease and oil resistant. Available in Red, Black, Yellow, Green, Blue, and White. Specify color. Std. Pkg. 6

No.	AWG	Strand	Volt	O.D.	Spool	NET Each
7510	18	65/36	5,000	.140"	100'	$3.70

PLASTIC-COVERED HOOK UP WIRE



Single conductor flexible stranded wire, soft annealed copper, stranded as shown. Insulation is UL rated PVC, smooth finish. Available in Red, Black, Yellow, Green, Blue, White, and Brown. Specify color. Std. Pkg. 6

No.	AWG	Strand	Volt	O.D.	Spool	NET Each
7561	18	16/30	1,000	.109"	100'	$4.70
7562	16	26/30	1,000	.123"	100'	5.50
7563	14	41/30	1,000	.141"	100'	5.50

PORTABLE APPLIANCE CORD (Zip-Cord)



Two conductor, UL type SPT-1 Vinyl covered appliance cord. Available in White or Brown. Specify color. Std. Pkg. 6

No.	AWG	Strand	Volt	O.D.	Spool	NET Each
7564	18	41/34	300	.110"	100'	$6.00

SHIELDED AUDIO CABLE



Single conductor, stranded tinned copper wire, clear polyethylene insulation. Spiral or braided shield, as shown, tinned. Gray PVC jacket overall. *No. 7520 has 3/36 Phos. bronze wires for pull resistance. Std. Pkg. 6

No.	AWG	Strand	Shield	Cap. mm/ft	O.D.	Spool	NET Each
7520	26	*7/36	Spiral #36		.140"	100'	$5.00
7521	22	19/34	Braid #34	25	.195"	100'	6.70

STEREO AUDIO CABLE



Two separate, shielded audio cables, molded side-by-side for stereo application. Color coded red stripe on one cable for channel identification. Each cable has stranded, tinned copper wire innter conductor color coded clear and red polyethylene insulation. Spiral shield, tinned. Gray PVC jacket overall. Can be separated in "zip-cord" fashion for termination. Std. Pkg. 6

No.	AWG	Strand	Shield	Cap. mm/ft	O.D.	Spool	NET Each
7540	20	10/30	Spiral #36	35	.110"	100'	$7.00

CO-AXIAL CABLE



MIL-type coaxial cable. Stranded bare copper center conductor, polyethylene insulation. Copper braided shield, black PVC jacket overall. Std. Pkg. 6

No.	RG-type	AWG	Braid	Cap. mmf/ft	Spool	NET Each
7530	RG-58C/U	#20 #21	Tinned	28.5	100'	$8.00
7531	RG-11/U	#18	Bare	20.5	50'	9.00

MULTIPLE CONDUCTOR CABLE



Two color-coded (Orange and Yellow) PVC insulated stranded wires. Jute filler. Gray PVC full-round .015 jacket. Std. Pkg. 6

No.	AWG	Strand	Volt	O.D.	Spool	NET Each
7550	18	65/36	600	.210"	100'	$7.50

RADIO CHASSIS PUNCHES



ROUND

A complete line of chassis hole punches for swiftly cutting clean, accurately located holes in chassis and panels. An assortment of round, square, "D," and Keyed holes can be punched by inserting in drilled pilot hole, and turning with wrench. Finished hole is smooth, accurately sized without burrs. Round punches are provided with center-line markings for enlarging holes larger than pilot hole. Individually packed.

ROUND HOLE PUNCHES

No.	Hole Size	NET Ea.	No.	Hole Size	NET Ea.
3801	1/2"	$2.35	3814	1 1/4"	$3.35
3802	9/16"	2.85	3815	1 5/16"	4.15
3803	5/8"	2.85	3816	1 3/8"	4.15
3804	11/16"	2.85	3817	1 7/16"	4.55
3805	3/4"	2.85	3818	1 1/2"	5.50
3806	13/16"	2.85	3819	1 5/8"	6.80
3807	7/8"	2.85	3820	1 3/4"	7.80
3808	15/16"	3.20	3821	2"	8.35
3809	1"	3.20	3822	2 1/16"	9.00
3810	1 1/16"	3.35	3823	2 1/8"	9.30
3811	1 1/8"	3.35	3824	2 1/4"	15.10
3812	1 3/32"	3.35	3825	2 5/8"	21.00
3813	1 5/16"	3.35	3826	3"	29.00



SQUARE

SQUARE PUNCHES

3827	1/4"	$7.45	3830	7/8"	$9.50
3828	5/8"	7.45	3831	1"	9.10
3829	3/4"	8.10			



"KEY"

"KEY" PUNCHES

3832	15/32"	$8.10	3834	1 11/64"	$9.10
3833	1 6/16"	8.50	3835	1 13/64"	10.70

METER HOLE PUNCH

3836	2 25/32"	$13.75



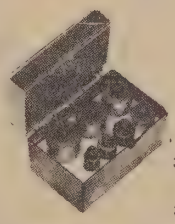
"D" PUNCHES

3837	1/2x15/32"	$4.90	3838	5/8x17/32"	$7.00

BALL BEARING DRIVE SCREWS

Reduces friction and effort when punching round holes 11/16" and larger. For use only with Round punches listed above.

No.	Use with Nos.	NET Ea.
3839	3804 to 3808	$1.60
3840	3809 to 3817	1.70
3841	3818 to 3819	4.10
3842	3820 to 3824 and 3836	4.30
3843	3825 to 3826	7.00



CHASSIS PUNCH SET

A set of 7 of the most often used chassis punch sizes for electronic construction. Packed in a plastic platform box to keep punches sharp and rust-free. Contains the following sizes: 1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 1/4".

No.	Description	NET Ea.
3844	Set of 7 Punches	$22.00

RELAY SOCKET PUNCH

3845	P&B KHP Relay Socket Punch, 1.015 & .859	$20.00

THE SMITH ORGANIZATION

has been a major supplier of electronic components to the industry for 25 years. Today, with its modern plant facilities and capabilities we are in a position to convert your ideas and needs, whether they be one or a million, and deliver what you want, when you want it!



ENGINEERING & DESIGN

PRECISION TURNING

STAMPING

MOLDING

ASSEMBLY

WE INVITE YOU to use our manufacturing and engineering facilities and our know-how to meet YOUR PARTICULAR REQUIREMENTS.

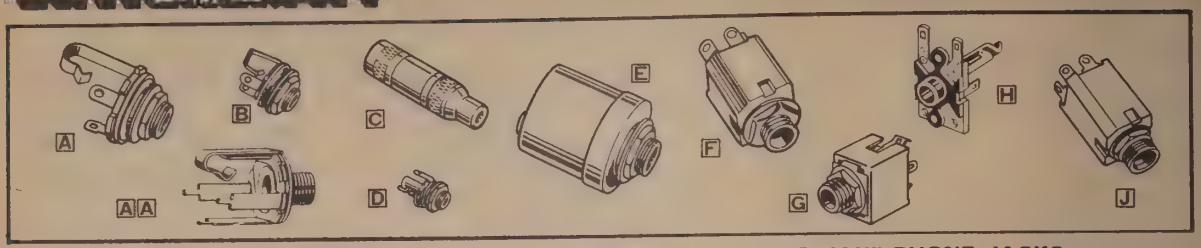
MASTER INDEX

FOR SMITH PAGES IN THIS DIRECTORY

	Smith Page
Alligator Clips	9,10
Angle Brackets	36
Banana Jacks	3,4,6
Banana Plugs	1,2,5,6
Battery Clips	9
Binding Posts	7,8,9
Bumpers, Rubber	26
Cable Clamps	35,36
Captive Hardware	33
Ceramic Standoffs	25
Chassis Punches	44
Coaxial Connectors	14
Convenience Outlets	38
Crystal Sockets	36
Decals	38
Dial Locks	33
Dials, Instrument	22
Dual Test Adapters	2,15,16
Fans	36
Fahnestock Clips	36
Fibre Washers	26
Fuse Holder	36
Giant Banana Jacks and Plugs	6
Grommets	26
Handles	34
Hardware, Brass & Steel	37
Hardware, Nylon	26,35
Hole Plugs	36
Jumper Cables	13
Knobs	22
Lacing Cords	35
Lugs	29
Meter Cases	30
Mike Connectors	28
Miniature Components	8,19,20
Nylon Washers, Bushings	26
Patch Cords	13,14,17 to 20
Phone Tip Jacks	3,4,6,8
Phone Tip Plugs	1,2,5
Pilot Light Sockets, Shields	36
Plug-In Modular Housings	28
Pot Covers	33
Printed Circuit Pre-punch Boards	24
Printed Circuit Card Rack	23
Printed Circuit Jacks	4
Printed Circuit Connectors	23
Rods, Plain & Threaded	35
Shaft Accessories	33
Single Instrument Test Adapters	20
Spacers, Brass & Aluminum	25
Swage Standoffs	38
SWITCHES	39 to 42
Teflon Spaghetti Tubing	38
Teflon Terminals	43
Teflon Test Jacks, Probes, Plugs	43
Telephone Jacks and Plugs	21
Terminal Boards, Scored	30
Terminal Lugs, Solderless	27,28,29
Terminal Strips	30
Test Leads	12
Test Lead Accessories	11
Test Prods	11
Tube Sockets, Shields	36
Turret Terminals	31,32

SWITCHCRAFT INC.

Phone Jacks



"LITTEL-JAX" PHONE JACKS

A Quality phone jacks that mate with standard $^1/_4$" phone plugs. Notched insulating washers mechanically interlock springs and solder lugs. "V" bend in tip spring firmly "holds" mating plug. Minimum space requirements. Economical. Mounts in single $^3/_8$" hole, panels up to $^5/_{32}$" thick, except L-11 and L-12A in panels up to $^1/_4$" thick.

Nos. C-11 and C-12A mate with No. 440 (PJ-055B) Plug; C-12B, S-12B and S-13B mate with No. 480 (JAN-PJ-068) or No. 484 (W.E. No. 309) Plug. Nos. C-11 and C-12B have locating pins (non-turn devices). No. S-11 similar to No. 11 except .210" I.D. sleeve. C-11, C-12B and C-12A per JAN-J-641. All others mate with standard $^1/_4$" dia. plugs.

AA New "Littel-Jax" PC-12A for printed circuit mounting. Std. $^1/_4$" dia. jack with all the construction features of standard "Littel-Jax". Same circuit as in No. 12A.

No. 14B Stereo "Littel-Jax", switches-out speakers when connecting stereo headphones. Dual, N.O. switch contacts, open both stereo circuits independently when a 3-conductor plug is inserted.

TWO CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
11	I	250	—	$0 55
C-11	I	440	JJ-034	.80
L-11	I	250	—	.65
S-11	I	S-250	—	.60
12A	III	250	—	.60
C-12A	III	440	JJ-089	.95
L-12A	III	250	—	.70
S-12A	III	480	—	.70
PC-12A	III	250	—	.70
13	V	250	—	1.15
13A	VI	250	—	1.05
13E	IX	250	—	1.15
THREE CONDUCTOR TYPES				
12B	IV	267	—	.70
C-12B	IV	480	JJ-033	.95
L-12B	IV	267	—	.90
S-12B	IV	480	—	.90
13B	VIII	267	—	1.00
S-13B	VIII	480	—	1.25
14B	XII	267	—	1.30

"TINI-JAX" MINIATURE PHONE JACKS

B Miniature 2-conductor Phone Jacks, approximately $^1/_2$ the size of the "Littel-Jax"; otherwise similar in construction. Mount in $^1/_4$" dia. hole; panel up to $^1/_8$" thick. No. 43A has a unique spring design that requires a pear shaped tip, such as Switchcraft "Tini-Plug" No. 750.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
41	I	750	2	$0.55
42A	III	750	2	.60
43A	VI	750	2	.90

"TINI-EXTENSION JAX"

C An extension or cable jack to mate with "Tini-Plug". Two-conductor. Metal housing for ruggedness and electrical shielding. Solder lug terminals.

Switchcraft Part No. 125 ..... U.S.A. List Price **$1.50**

"MICRO-JAX" SUB MINIATURE PHONE JACK

D Precision manufactured jack for miniaturized applications. Two-conductor, single closed circuit. See Schematic Circuit III. Silver plating on special tempered nickel silver springs. Internally keyed nylon insulation interlocks springs and solder lugs to eliminate shorts. Fits .190" dia. hole in panels to $^3/_{32}$" thick. Only 1/25th the size of standard phone jacks. Mates with "Micro-Plug", Series 850, 880.

Switchcraft Part No. TR-2A ..... U.S.A. List Price **$0.60**

"SHIELDED JAX"

E A unique modification of the "Littel-Jax". The shield is assembled into and made part of the jack. Ideal for high impedance circuits.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
CN-11	I	250	2	$1.05
CN-12A	III	250	2	1.10
CN-12B	IV	267	3	1.25

"HI-D JAX" PHONE JACKS

F New smaller, more compact phone jacks, mate with std. $^1/_4$" phone plugs. Molded box body protects integral silver-plated, nickel silver springs. Low contact resistance and electrical leakage with little capacity between the springs. Mount on $^5/_8$" centers in single $^3/_8$" hole in panels up to $^5/_{32}$" thick, depth behind panel $1^3/_{32}$". All part Nos. with "L" prefix mount in panels up to $^1/_4$" thick; part Nos. with "N" prefix feature a threaded nylon bushing to provide complete insulation of jack sleeve from mtg. panel. Part Nos. with "NL" prefix feature a $^3/_8$" long threaded nylon bushing (same as "N" series) and mount in panels up to $^1/_4$" thick. Stereo "HI-D Jax", Nos. 114B, L-114B and N-114B, switches out speakers when connecting stereo headphones. Dual N.O. switch contacts open both stereo circuits independently when a 3-cond. plug is inserted.

TWO CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	U.S.A. List Price
111	I	250	$0.55
L-111	I	250	.70
N-111	I	250	.70
NL-111	I	250	.75
112A	III	250	.60
L-112A	III	250	.75
N-112A	III	250	.75
NL-112A	III	250	.80
113	V	250	1.10
113D	VI	250	1.10
113E	IX	250	1.10
THREE CONDUCTOR TYPES			
112B	IV	267	.65
L-112B	IV	267	.80
N-112B	IV	267	.80
113B	VIII	267	.85
L-113B	VIII	267	.90
N-113B	VIII	267	.90
NL-113B	VIII	267	.95
113F	VII	267	.85
114B	XII	267	.95
L-114B	XII	267	1.05
N-114B	XII	267	1.05
NL-114B	XII	267	1.10

"TINI-D JAX" MINIATURE PHONE JACK

G New, small completely enclosed, molded phone jack. Mate with Switchcraft "Tini-Plug", No. 750 etc. Phenolic housing protects the bifurcated beryllium copper springs from being bent during mounting. No. 142A has threaded bushing for conventional mtg. Tip spring terminals that "snap-in" P.C. boards. Mount on $^3/_8$" centers, in $^1/_4$" dia. hole in panels up to $^1/_8$" thick. Depth behind panel $^7/_{16}$".

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
142A	III	750	2	$0.65

"R-JAX" ECONOMY PHONE JACKS

H Radically new jack design. Simple mounting needs only two (2) $^3/_{32}$" dia. rivets to fasten securely to mounting panel. Accept standard $^1/_4$" dia. phone plugs.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
2A	II	250	2	$0.55
2B	IV	267	3	.60
3E	IX	250	2	.90
4B	XII	267	3	.80

"UNIJAX" PHONE JACKS

J New, miniature 2-cond. and 3-cond. phone jacks, mate with std. .173" dia. phone plugs. Molded "box" body protects integral silver-plated beryllium copper tip and ring springs. Extremely low contact resistance and electrical leakage with low electrical capacity between springs. Mounts in $^9/_{32}$" dia. hole in panels up to $^1/_8$" thick. Mounts on $^{15}/_{32}$" centers. Only $^7/_8$" depth behind panel.

TWO CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	U.S.A. List Price
UJ-1	I	TT-251	$0.55
UJ-2A	III	TT-251	.60
THREE CONDUCTOR TYPES			
UJ-2B	IV	TT-253	.65
UJ-4B	XII	TT-253	.95



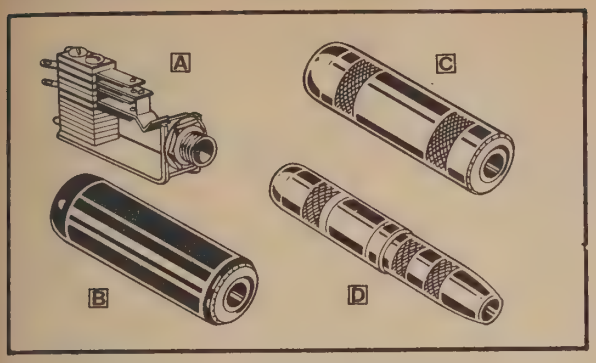
The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

Trade Discount Applies To List Prices Only

© United Technical Publications

Phone Jacks

SWITCHCRAFT INC.



"LF-JAX" LONG FRAME JACKS

A Quality long frame phone jacks with a ground lug that is an integral part of the frame. Fine silver contacts rated at 3 amp., 300 watts, A.C., non-inductive load. Frame also available with a non-turn device, prefix Part No. with letter "R." Standard types mount in single ⅜" dia. hole in panels up to 5/16" thick. Depth behind panel, only 2 25/32".

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
31	I	250	2	$0.95
32	II	250	2	1.25
32A	III	250	2	1.25
32B	IV	267	3	1.25
33	V	250	2	1.35
33A	VI	250	2	1.35
33B	VIII	267	3	1.35
33C	XXVIII	267	3	1.35
33E	IX	250	2	1.35
34	X	267	3	1.50
34A	XI	250	2	1.50
34B	XII	267	3	1.50
35	XIII	250	2	1.80
36	XIV	267	3	2.05

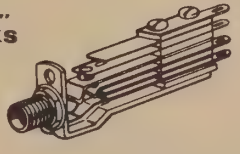
"EXTENSION JAX" CABLE EXTENSION JACKS

Standard ¼", 2 and 3-conductor extension phone jacks with solder lugs or screw type terminals. Size 1 1/16" O.D., 2 5/32" long; 121 and 131 ½" O.D., 2½" long. Black handles are durable plastic. Shielded handles are brass, bright nickel plated.

Part No.	Fig.	Cond.	Typical Mating Plug	Term.	Handle	U.S.A. List Price
80	B	2	250	Screw	Black	$1.45
88	B	2	250	Solder	Black	1.30
120	C	2	270	Screw	Shielded	1.90
121	D	2	270	Solder	Shielded	2.00
126	C	2	R-280	Solder	Shielded	2.10
128	C	2	270	Solder	Shielded	1.75
S-128	C	2	S-250	Solder	Shielded	1.85
131	D	3	290	Solder	Shielded	2.50
830	B	3	267	Screw	Black	1.90
S-830	B	3	480	Screw	Black	2.50
838	B	3	267	Solder	Black	1.75
1230	C	3	290	Screw	Shielded	2.45
S-1230	C	3	480	Screw	Shielded	3.00
1238	C	3	290	Solder	Shielded	2.25

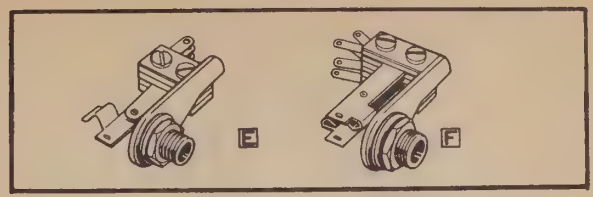
NEW

"TINI-TELEPHONE" JAX PHONE JACKS



Series TT-600, high-quality, miniature phone jacks in 2-cond. and 3-cond. types. Mate with std. .173" dia. phone plugs. Gusseted steel frame for extra rigidity and stability. Special nickel-silver springs provide long life. Welded crossbar palladium contacts. Solder-lug terminals std., wire-wrap term. available on special order. Mounts in ¼" hole, on 7/16" centers, in panels up to 9/32" thick. Only 2 3/16" depth behind panel.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
TT-631	I	TT-251	2	$1.25
TT-632A	II	TT-251	2	1.50
TT-632B	IV	TT-253	3	1.45
TT-632C	XVIII	TT-251	2	1.70
TT-633	V	TT-251	2	1.75
TT-633B	VIII	TT-253	3	1.75
TT-634A	XI	TT-251	2	1.80
TT-634B	XII	TT-253	3	1.75
TT-634C	XVII	TT-251	2	1.75
TT-635	XIII	TT-251	2	2.15
TT-636	XX	TT-253	3	2.15
TT-636A	XIV	TT-253	3	2.50
TT-636C	XXII	TT-253	3	2.45



"SF-JAX" SHORT FRAME PHONE JACKS

E Series 20—High quality commercial jacks, solder lugs parallel to mounting surface. Mount in ⅜" dia. holes, panels up to 5/16" thick.

F Series 50—Similar to Series 20, except solder lug location necessitates more depth but requires less panel space. Mount in panels up to ¼" thick.

Series C-20 and C-50—MIL Types with Military insulation and finishes, otherwise similar to commercial Series 20 and 50; both will mount in panels up to ¼" thick.

SERIES 20 and C-20

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
21	I	250	—	$0.85
22	II	250	—	1.05
22A	III	250	—	1.05
22B	IV	267	—	1.05
23	V	250	—	1.25
C-23	V	440	JJ-099	1.70
23A	VI	250	—	1.25
C-23A	VI	440	JJ-098	1.70
23B	VIII	267	—	1.25
23C	XXVIII	267	—	1.25
23E	IX	250	—	1.25
C-23E	IX	440	JJ-102	1.70
24	X	267	—	1.30
24A	XI	250	—	1.40
24B	XII	267	—	1.40
25	XIII	250	—	1.65
26	XIV	267	—	1.75

SERIES 50 and C-50

51	I	250	—	$0.85
C-51	I	440	JJ-096	1.50
52	II	250	—	1.05
52A	III	250	—	1.05
C-52A	III	440	JJ-097	1.65
52B	IV	267	—	1.05
C-52B	IV	482	JJ-103	1.65
53	V	250	—	1.25
53A	VI	250	—	1.25
C-53A	VI	440	JJ-092	1.90
53B	VIII	267	—	1.25
53C	XXVIII	267	—	1.25
53E	IX	250	—	1.25
54	X	267	—	1.40
54A	XI	250	—	1.40
C-54A	XI	440	JJ-093	1.95
54B	XII	267	—	1.40
C-54B	XII	482	JJ-101	1.95
55	XIII	250	—	1.65
C-55B	XV	482	JJ-095	2.30
56	XIV	267	—	1.75

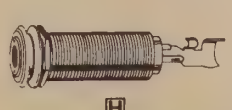


G

JACK COVERS

G Handy, rugged, spring-load phone jack covers. Covers jack openings when phone plug is removed. Protects against dust and moisture. Series 500—Use with standard ⅜"-32 threaded bushing type phone jacks. Series 600—Use with certain type tip jacks with ¼" mounting; height of tip jack head 1/16" to 3/16". Also used as covers for "Tini-Jax".

Part No.	Color	U.S.A. List Price	Part No.	Color	U.S.A. List Price
510	Olive Drab	$1.35	515	Black	$1.35
512	Bright Nickel	1.35	520	Navy Gray	1.35



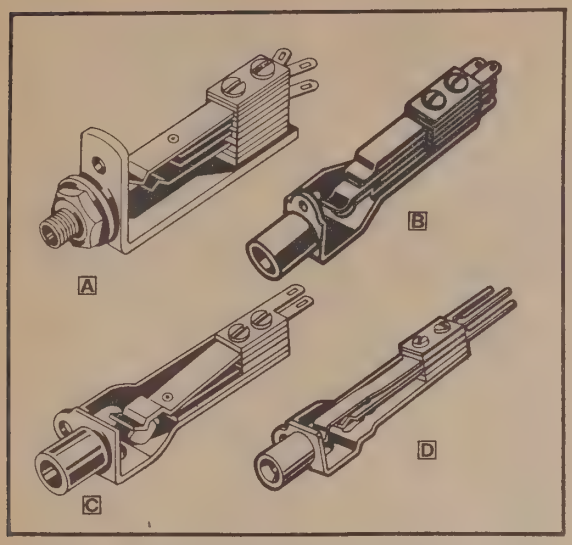
H

"THICK-PANEL JAX"

H Phone jacks with long bushing. Mount in single 15/32" dia. hole in panels up to 1¼" thick. Solder lug terminals. Ideal for use with microphones; extra shielding virtually eliminates audio hum. No. 151, 2-conductor mates with 240, 245, 250, 255, 270 and 280 Plugs. No. 152B, 3-conductor mates with 260, 267, 269 and 297 Plugs.

Part No.	Description	U.S.A. List Price
151	2-cond. Brass Nickel Plated	$1.65
152B	3-cond. Brass Nickel Plated	1.80

SWITCHCRAFT INC. Phone Jacks and Plugs



"T-JAX" TELEPHONE TYPE PHONE JACKS

C Long frame, switchboard type, phone jacks. For high quality communication equipment. Springs of nickel silver alloy for maximum life and corrosion resistance. Fine silver contacts are standard. Available in two frame designs. Part numbers in chart cover "A" frame design as shown in Fig. C. For frame design "C" as shown in Fig. B, add prefix letter "C" to part numbers. All jacks listed mate with standard ¼" dia. phone plugs.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
T-331	I	250	2	$1.15
T-332A	III	250	2	1.30
T-332B	IV	267	3	1.30
T-334B	XII	267	3	1.60

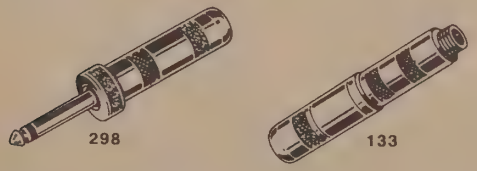
"DUAL-JAX BLOCK"



Molded black phenolic jack blocks for mounting "MT-Jax" and "T-Jax" long frame phone jacks, on ⅝" centers. Can be rack panel mounted individually or in multiples. Blocks are 2¾" W. x 1¼" H. x ⅝" D. Mount with four No. 8-32 flat head screws.

Part No.	Description	U.S.A. List Price
2300	Jack Block, less jacks	$1.60
2331	Two MT-331 jacks	4.20
2332A	Two MT-332A jacks	4.60
2332B	Two MT-332B jacks	4.60
2333	Two MT-333 jacks	5.15

"LOCK-PLUG" AND "EXTENSION JAX"



Standard size ¼", 3-cond. phone plug and mating cable extension jacks, with built-in locking device. Ideal for all P.A., audio applications. Plug has coupling ring that can be threaded to the bushing of a "Littel-Jax" or to the mating end of the "Lock-Extension Jax". "Lock-Plug" handle, 1 51/64" long; ½" dia. "Lock-Extension Jax", ½" O.D.; 2½" long. Solder lug terminals. Available in 2-cond. types on special order.

Part No.	Description	U.S.A. List Price
298	3-Conductor "Lock-Plug"	$2.15
133	3-Conductor "Extension Jax"	2.75

"M-JAX" MILITARY TYPE PHONE JACKS

A Very heavy long frame jacks often referred to as the Navy Jack. Ideal for industrial and Military equipment. Long heavy duty springs with fine silver contacts. Mounts on single ⅜" hole, in panels up to ¼" thick.

Part No.	Schematic No.	Adjusted for Plug	Mil-Type No.	U.S.A. List Price
M-441	I	250	—	$1.75
M-443B	VIII	482	JJ-106	2.40
M-444*	XII	484 & 480	JJ-083	2.60
M-444B	XII	482	JJ-082	2.50
M-445	XIII	440	JJ-104	3.05
M-446A	XVI	482	JJ-081	4.25

*Bushing, .2085".

"MT-JAX" MILITARY TELEPHONE JACKS

C Long frame, telephone switchboard jacks designed for high quality communication and military equipment. Springs are of a special nickel silver alloy with welded cross bar palladium contacts. "MT-Jax" are available in two frame designs, namedly "A" & "C". Part numbers in chart cover "A" frame design as shown in Fig. C. For frame design "C" as shown in Fig. B, add prefix letter "C" to part numbers.

Part No.	Schematic No.	Adjusted for Plug	Mil-Type No.	U.S.A. List Price
MT-331	I	440*	JJ-086	$1.30
MT-332	I	440	—	—
MT-332A	III	440	JJ-024	1.50
MT-332B	IV	482†	JJ-022	1.50
MT-332C	XVIII	440	JJ-016	1.75
MT-333	V	440	JJ-084	1.70
MT-333B	VIII	482	—	1.75
MT-333E	IX	440	—	1.75
MT-334A	XI	440	—	1.80
MT-334B	XII	482	JJ-042	1.80
MT-334C	XVII	440	JJ-072	1.80
MT-334E	XXV	440	JJ-085	1.80
MT-334F	XIX	440	JJ-035	1.80
MT-335A	XXVI	440	JJ-017	2.05
MT-336A	XIV	482	JJ-075	2.55
MT-336B	XXI	482	JJ-077	2.55
MT-336C	XXII	482	JJ-073	2.55
CMT-336E	XXIII	440	JJ-019	2.55
MT-342B	IV	480‡	—	1.75
MT-344B§	XII	480	—	2.05

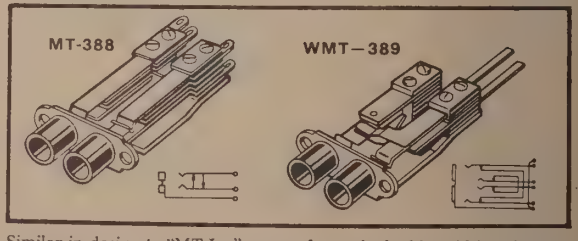
*MIL Type PJ-055. ‡MIL Type PJ-068.
†MIL Type PJ-051B. §Bushing, .2085".

"WMT-JAX" MILITARY TELEPHONE JACKS

D Long-frame telephone phone jacks, same as "MT-Jax", except with wire-wrapping terminals designed to meet all electrical and mechanical requirements for efficient and reliable wire-wrapping terminals. Wire-wrapping terminals have special shoulder which provides a "stop" for the wire-wrapping tool. Construction, materials, contacts and mounting styles identical to those of "MT-Jax".

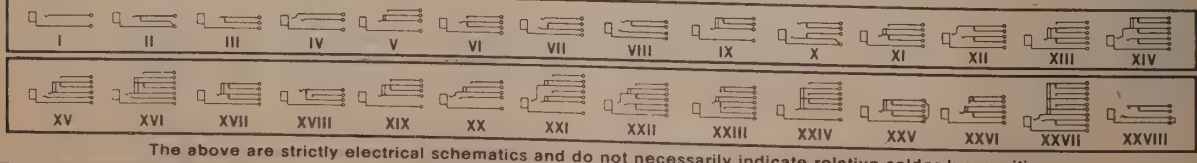
Part No.	Schematic No.	Adjusted for Plug	Conductors	U.S.A. List Price
WMT-331	I	440*	2	$1.40
WMT-332A	III	440	2	1.65
WMT-332B	IV	482†	3	1.65
WMT-334B	XII	482	3	2.00
WMT-334E	XXV	440	2	2.00
WMT-335A	XXVI	440	2	2.25
WMT-336A	XIV	482	3	2.75
WMT-336C	XXII	482	3	2.75
WMT-342B	IV	480‡	3	1.95
WMT-344B	XII	480	3	2.25

*MIL Type PJ-055. †MIL Type PJ-051B. ‡MIL Type PJ-068.



Similar in design to "MT-Jax" except frame is double width, with two mounting ears on 1⅜" centers; bushings are on ⅝" centers. MT-388, MIL-Type No. JJ-088, mates with Nos. 411, 412, 413, 420 and 425 plugs. MT-389 has two 3-conductor jacks interconnected; mates with No. 482 Plug. Also, available with wire-wrapping terminals as Part Nos. WMT-388, WMT-389. Same quality construction, etc.; but now provides the speed, convenience and proven reliability of wrapped, solderless connections.

Switchcraft Part No. MT-388 ..... U.S.A. List Price **$4.55**
Switchcraft Part No. MT-389 ..... U.S.A. List Price **5.05**
Switchcraft Part No. WMT-388 ..... U.S.A. List Price **4.75**
Switchcraft Part No. WMT-389 ..... U.S.A. List Price **5.25**

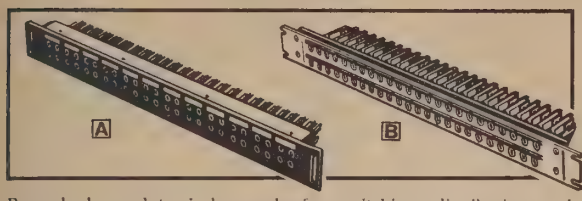


The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

Trade Discount Applies To List Prices Only
© United Technical Publications

Jack Panels, Plugs, Patch Cords

JACK PANELS



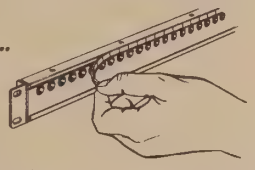
Rugged, heavy-duty jack panels for switching, distribution and control of audio signals in broadcasting stations, theaters, P. A. systems installations, etc. Series 1200, Fig. A, black phenolic panels reinforced with steel for the utmost rigidity. Mounting brackets slotted to fit all standard 19" relay racks. Panel includes plastic covered designation strips. Series 2800, Fig. B, clear anodized aluminum panel. Extremely rugged, yet lightweight. Includes new narrow designation strip for each row. Add Prefix "X" to part numbers to indicate offset ground lugs on jacks. Aluminum panels available only with offset lugs.

Part No.	Fig.	Rows	Number of Jacks	Size, In. W x D x H	U.S.A. List Price
1200	A	Single	24 *	19x1¼x1¾	$15.25
1232A	A	Single	24 T-332A	19x1¼x1¾	42.00
1332A	A	Single	24 MT-332A	19x1¼x1¾	47.25
1400	A	Single	26 *	19x ⅛x1¾	15.25
1432A	A	Single	26 T-332A	19x ⅛x1¾	45.25
1532A	A	Single	26 MT-332A	19x ⅛x1¾	51.50
2400	A	Double	48 *	19x1¼x2⅛	15.75
2432A	A	Double	48 T-332A	19x1¼x2⅛	73.50
2532A	A	Double	48 MT-332A	19x1¼x2⅛	87.25
2600	A	Double	52 *	19x ⅛x1¾	19.00
2632A	A	Double	52 T-332A	19x ⅛x1¾	83.00
2732A	A	Double	52 MT-332A	19x ⅛x1¾	96.50
2800	B	Double	48 *	19x ⅛x1¾	42.00
X2832A	B	Double	48 T-332A	19x ⅛x1¾	99.75
X2932A	B	Double	48 MT-332A	19x ⅛x1¾	113.50

*Supplied less jacks

NEW

JACK PANELS with "kwik-change" designation strip



Switchcraft jack panels now feature the exclusive "kwik-change" designation strip in Series 1400-300 and Series 2600-300. Identical to Series 1400 and Series 2600 as described above, except for new designation strip. "kwik-change" strip consists of a clear plastic snap-on cover and a re-usable plastic marking strip. Marking strip has matte-finish for in-the-field identification with ink, pencil, etc. Part nos. listed below are jack panels less jack. Can be supplied with jacks on special order. "kwik-change" designation strips are available in KITS for retro-fitting old style panels.

Part No.	Rows	Number of Jacks	Size, In. W x D x H	U.S.A. List Price
1400-301	Single	26	19x1¼x1¾	$19.50
2600-301	Double	52	19x ⅛x1¾	22.00

"KWIK-CHANGE" DESIGNATION STRIP KITS

Part No.	Description	U.S.A. List Price
DS-301	Designation Strip Kit (single width) consists of: 1 extruded aluminum mounting strip 1 plastic cover 1 marking strip sheet (5 strips to a sheet) 4 mounting screws. For use on Series 1400 & 2600 jack panels and similar types.	$3.50
DS-302	Plastic Cover (single width)	.90
DS-303	Marking Strip Sheet (single width 5 strips to a sheet)	.50
DS-311	Designation Strip Kit (double width) consists of: 1 extruded aluminum mounting strip 1 plastic cover 1 marking strip sheet (3 strips to a sheet) 4 mounting screws.	3.75
DS-312	Plastic Cover (double width)	1.00
DS-313	Marking Strip Sheet (double width—3 strips to a sheet)	.60

REPLACEMENT PATCH CORDS

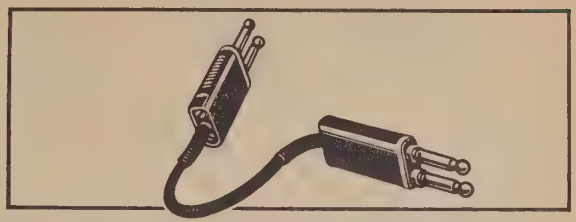
Patch cords are made of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall. Cords designed for use with Switchcraft plugs 413, 420 and 482 or equivalents. When used with No. 420, clip off unnecessary lead.

Series 89Q—2-conductor shielded cord with shield termination at both ends.

Series 89P—2-conductor shielded cord with shield termination at one end only.

Part No. Both Ends Shielded	Part No. One End Shielded	Length	U.S.A. List Price
89QA89	89PA89	6 inch	$2.50
89QB89	89PB89	1 foot	3.05
89QD89	89PD89	2 feet	3.30
89QF89	89PF89	3 feet	3.70
89QH89	89PH89	4 feet	3.85
89QK89	89PK89	6 feet	4.95
89QN89	89PN89	10 feet	7.15

PATCH CORD SETS



All patch cords are constructed of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall.

Series 17Q—2-conductor patch cords have No. 413 "Twin-Plug" at each end with shields grounded both ends.

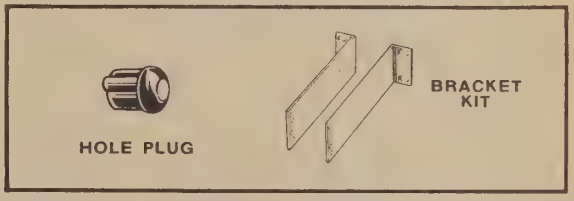
Series 17P—Same as 17Q, except shield grounded one plug only.

Series 18Q—2-conductor patch cords use Military Plug PJ-051 (Switchcraft Part No. 482) at each end with shields grounded both ends.

Series 19Q—Single conductor patch cords utilize Military Plug PJ-047B (Switchcraft Part No. 420) connected to each end with shield grounded both ends.

Part No.	Length	Plugs Used	U.S.A. List Price
17QA17	6 inch	413	$12.10
17QB17	1 foot	413	12.40
17QD17	2 feet	413	12.65
17QF17	3 feet	413	12.95
17QH17	4 feet	413	13.40
17QK17	6 feet	413	14.30
17QN17	10 feet	413	15.15
17PA17	6 inch	413	12.10
17PB17	1 foot	413	12.40
17PD17	2 feet	413	12.65
17PF17	3 feet	413	13.00
17PH17	4 feet	413	13.40
17PK17	6 feet	413	14.30
17PN17	10 feet	413	15.15
18QA18	6 inch	482	12.65
18QB18	1 foot	482	13.20
18QD18	2 feet	482	13.75
18QF18	3 feet	482	14.30
18QH18	4 feet	482	14.85
18QK18	6 feet	482	15.95
18QN18	10 feet	482	18.15
19QA19	6 inch	420	6.60
19QB19	1 foot	420	6.90
19QD19	2 feet	420	7.45
19QF19	3 feet	420	8.00
19QH19	4 feet	420	8.55
19QK19	6 feet	420	10.00
19QN19	10 feet	420	11.55

JACK PANEL ACCESSORIES



Hole Plug, P-1801, molded nylon, fits all Switchcraft jack panels, Series 1200, 1400, 2400, 2600, 2800. Designed to plug unused holes in jack panels. Bracket Kit, K-107, consists of 2 long L-shaped steel, stand-off brackets and eight No. 6-32 self-tapping screws. To hold jack panels, Series 1400, 2600, 7" in front of mounting rack.

Part No.	Description	U.S.A. List Price
P-1801	Hole Plug	$0.30
K-107	Bracket Kit	4.50



412

MILITARY TYPE "TWIN-PLUG"

Meet exact industrial and military requirements. No. 411, both design and materials, is manufactured in accordance with MIL-P-642(A) specs. Nos. 412 and 413, use identical materials. "Twin-Plug" sleeves spaced ⅝" center to center with self-aligning feature.

Part No. 411—Two electrically independent 2-conductor plugs in black plastic handle. Has provision for Cord Clamp No. S-2674. Military Type PJ-327 (Old Navy No. 491242). Interchangeable with W.E. 327 . . . . . U.S.A. List Price **$5.25**

Part No. 412—Two electrically independent 2-conductor plugs in black plastic handle. Has external cord clamp. Old Military Type PJ-289. Similar to W.E. 289B . . . . . U.S.A. List Price **$4.90**

Part No. 413—Three circuit plug with two electrically independent tip circuits in heavy duty die cast frame. Molded black phenolic handle notched to indicate polarity. Interchangeable with MIL-Type PJ-421 and W.E. 241 . . . . . U.S.A. List Price **$4.90**

Part No. 414—Six circuit plug. Two electrically independent 3 conductor ¼" dia. fingers. Black polarized handle. Interchangeable with WE-338A . . . . . U.S.A. List Price **$9.25**

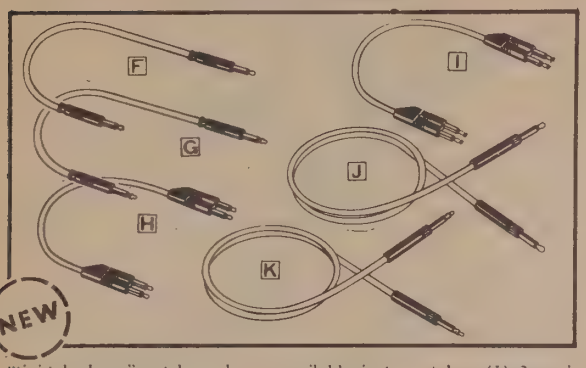
Part No. 415—Six circuit plug. Two electrically independent 3 conductor fingers. One ¼" dia. finger, one .206" dia. For automatic polarization. Black handle . . . . . U.S.A. List Price **$10.25**

Part No. S-2674—Strain relief clamp, natural brass. For use with Nos. 411, 414, 415 "Twin-Plug". Pkg. of 10 . . U.S.A. List Price **$0.60**

SWITCHCRAFT INC.

"TT" Jack Panels, Jacks, Plugs, Patch Cords

TT-PATCH CORDS



"tini-telephone" patch cords are available in two styles—(1) 2-cond., 3-cond., and twin-plugs molded on braided shield, grey plastic jacketed cable; (2) 2-cond., 3-cond., attachable phone plugs with braided shield, nylon woven, black cord. TT-Patch Cords mate with "UNIJAX", Series TT-30, WTT-30, TT-600 and Part Nos. TT-89, WTT-89.

Series TT-100— F Single cond. Shielded cable with a 2-cond. phone plug molded at each end.

Series TT-120— G 2-cond. Shielded cable with a 3-cond. phone plug molded at each end

Series TT-140— H 2-cond. Shielded cable with a 3-cond. twin-plug molded at each end. Sleeve circuits are common. Tip circuits wired tip to tip.

Series TT-160— I 4-cond. Shielded cable with 5-cond. twin-plug molded at each end. Sleeve circuits common. Tip circuits wired tip to tip, ring circuits wired ring to ring.

Series TT-720— J 2-cond. Shielded cord with a TT-251 phone plug attached to each end. Shield is grounded to sleeve of each plug and the tinsel cond. is wired tip to tip. The other conductor is clipped off.

Series TT-740— K 2-cond. Shielded cord with a TT-253 phone plug attached to each end. Shield is grounded to sleeve of each plug, the two cond. are wired tip to tip and ring to ring.

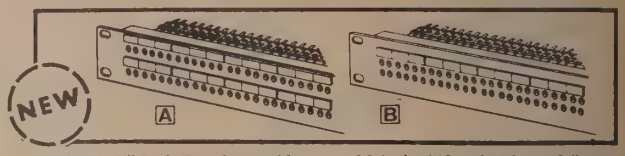
Part No.	Length	Plug Type	U.S.A. List Price
TT-101	6 inch	2-cond. Single	$5.60
TT-102	1 foot	2-cond. Single	5.70
TT-104	2 feet	2-cond. Single	5.90
TT-106	3 feet	2-cond. Single	6.10
TT-107	4 feet	2-cond. Single	6.30
TT-108	5 feet	2-cond. Single	6.50
TT-121	6 inch	3-cond Single	6.80
TT-122	1 foot	3-cond Single	6.90
TT-124	2 feet	3-cond Single	7.10
TT-126	3 feet	3-cond Single	7.30
TT-127	4 feet	3-cond Single	7.50
TT-128	5 feet	3-cond. Single	7.70
TT-141	6 inch	3-cond twin	7.10
TT-142	1 foot	3-cond twin	7.20
TT-144	2 feet	3-cond twin	7.40
TT-146	3 feet	3-cond twin	7.60
TT-147	4 feet	3-cond twin	7.80
TT-148	5 feet	3-cond. twin	7.90
TT-161	6 inch	5-cond twin	9.50
TT-162	1 foot	5-cond twin	9.80
TT-164	2 feet	5-cond twin	10.40
TT-166	3 feet	5-cond twin	11.00
TT-167	4 feet	5-cond twin	11.30
TT-168	5 feet	5-cond. twin	11.60
TT-721	6 inch	TT-251	9.15
TT-722	1 foot	TT-251	9.90
TT-724	2 feet	TT-251	10.60
TT-726	3 feet	TT-251	11.45
TT-727	4 feet	TT-251	12.50
TT-728	5 feet	TT-251	13.35
TT-729	6 feet	TT-251	14.10
TT-741	6 inch	TT-253	11.35
TT-742	1 foot	TT-253	12.05
TT-744	2 feet	TT-253	12.75
TT-746	3 feet	TT-253	13.60
TT-747	4 feet	TT-253	14.70
TT-748	5 feet	TT-253	15.50
TT-749	6 feet	TT-253	16.25

TT REPLACEMENT CORDS

Series TT—700 cords made of high quality bronze tinsel conductors, covered with thermoplastic insulation, then a braided shield and braided black nylon jacket. Cord ends reinforced to accept the internal threaded end of the TT-Phone Plug. For use as a replacement cord on Series TT-100, TT-120, TT-140, TT-160.

Part No.	Length	U.S.A. List Price
TT-701	6 inch	$4.00
TT-702	1 foot	4.75
TT-704	2 feet	5.45
TT-706	3 feet	6.35
TT-707	4 feet	7.40
TT-708	5 feet	8.20
TT-709	6 feet	9.00

SERIES TT "TINI-TELEPHONE" JACK PANELS

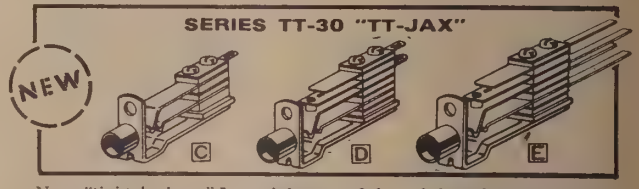


Series "TT" Jack Panels provide up to 96 jacks (48 pairs) in a 1¾" x 19" standard size panel. Constructed of black anodized, extruded aluminum with an extra wide flange for greater rigidity. **Series 1600**, a double row panel for 96 "TT-Jax" consists of an aluminum panel and 4 molded plastic inserts which accommodate 24 jacks each. **Series 1700**, a double row panel for 48 "TT-Twin-Jax", consists of an aluminum panel with 2 molded plastic inserts which accommodate 24 twin jacks each. Both Series feature Switchcraft's exclusive "kwik-change" designation strips. Strips consist of a clear plastic snap-on cover and a reusable plastic marking strip.

Part No.	Fig.	Rows	Number of Jacks	U.S.A. List Price
1600	A	Double	96* single jacks	$ 30.00
1632A	A	Double	96 TT-32A	145.00
1634B	A	Double	96 TT-34B	184.00
1700	B	Double	48* twin jacks	35.00
1789	B	Double	48 TT-89	260.00
TT-505			Panel Insert. Less jacks. 24 holes. For No. 1600.	3.80
TT-506			Panel Insert. Blank. For No. 1600.	1.90
TT-507			Panel Insert. Less jacks. 48 holes. For No. 1700.	5.30

*Supplied less jacks.

SERIES TT-30 "TT-JAX"



New, "tini-telephone" Jax, miniatures of the std. long frame telephone-type jacks. Rugged steel frame, with gusset for extra rigidity. Special nickel silver springs with welded crossbar palladium contacts. Series TT-30 require only 2 3/16" depth behind panel, mounted on 5/16" centers, in a ¼" dia. hole in panels up to ⅜" thick. Designed to be mounted on Series 1600 "TT" Jack Panel. Series TT-30 jacks also available with wire-wrap terminals, Fig. E.

Series WTT-30. Same quality construction. Depth behind panel 2 11/16". Both TT-30 and WTT-30 jacks can be mounted in combination or interchangeably with "TT-Switch" and "TT Lamp-Jax" on Series 1600 panels.

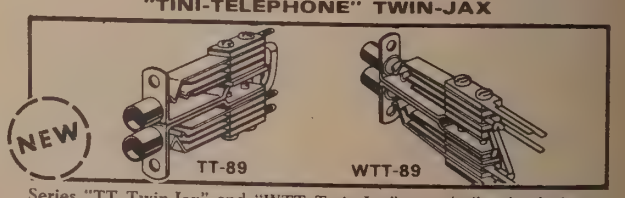
SERIES TT-30

Part No.	Fig.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
TT-31	D	I	TT-251	2	$1.20
TT-32A	D	III	TT-251	2	1.45
TT-32B	C	IV	TT-253	3	1.40
TT-32C	D	XVIII	TT-251	2	1.65
TT-33	D	V	TT-251	2	1.70
TT-33B	C	VIII	TT-253	3	1.70
TT-34A	D	XI	TT-251	2	1.75
TT-34B	C	XII	TT-253	3	1.70
TT-34C	D	XVII	TT-251	2	1.70
TT-35	D	XIII	TT-251	2	2.10
TT-36	C	XIV	TT-253	3	2.10
TT-36A	C	XIV	TT-253	3	2.45
TT-36C	C	XXII	TT-253	3	2.40

SERIES WTT-30

WTT-31	E	I	TT-251	2	1.30
WTT-32A	E	III	TT-251	2	1.55
WTT-32B	E	IV	TT-253	3	1.50
WTT-33	E	V	TT-251	2	1.80
WTT-34B	E	XII	TT-253	3	1.80
WTT-36A	E	XIV	TT-253	3	2.55
WTT-36C	E	XXII	TT-253	3	2.50

"TINI-TELEPHONE" TWIN-JAX



Series "TT Twin-Jax" and "WTT Twin-Jax" are similar in design to the Series "TT-Jax" and "WTT-Jax" single jacks described above, except the 2 frames are welded back-to-back with mtg. holes on 13/16" centers and bushings on 5/16" centers. Twin jacks are designed to be mounted on Series 1700 jack panels. Part No. TT-89 has solder lug terminals; Part No. WTT-89, wire-wrapping terminals. Both mate with TT-Patch Cords, Series TT-120 and TT-140.

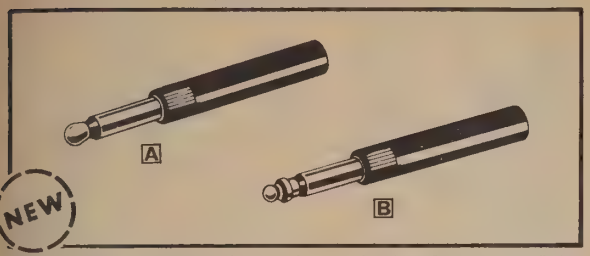
Switchcraft Part No. TT-89 . . . . . U.S.A. List Price **$5.00**
Switchcraft Part No. WTT-89 . . . . . U.S.A. List Price **5.10**

Trade Discount Applies To List Prices Only

© United Technical Publication

"TT" Plugs, Jacks, Switches

TT-PHONE PLUG



Series TT-250 miniaturized 2- and 3-cond. phone plugs. .173" dia. finger fits all "tini-telephone" jacks—Series TT-30, WTT-30, TT-600 and Part Nos. TT-89 and WTT-89. Also mates with "Unijax". Series TT-250 plugs are used on Series TT-720, 740 patch cords. Handles twist-on and twist-off. Each handle includes a special boss which mates with a groove in the plug body. A 30° clockwise twist locks the handle on the plug body. The knurled area of the handle should be squeezed lightly to unlock. To remove—slide handle forward. Plastic handle; 1½" long x 5/16" dia.

Part No.	Fig.	Conductors	Handle	U.S.A. List Price
TT-251	A	2	Black	$2.20
TT-252	A	2	Red	2.20
TT-253	B	3	Black	3.20
TT-254	B	3	Red	3.20

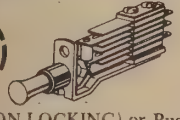
"TT LAMP-JAX"



E Small, space-saving "tini-telephone" lamp-jack. Designed to mount on Series 1600 TT-Jack Panels. Lamp-Jax, one-piece molded housing, has integral heat sink fins. Accepts industry standard T-1 ¾ bi-pin lamps. C TT-Jewel Assembly consists of a colored jewel and a brass sleeve which accepts the bi-pin lamp. Jewel serves as a re-lamping tool for the lamp jack. Lamp jack mounts on the Series TT-Jack Panel Series 1600 with one #3-48, 5/16" long screw (not furnished). Depth behind panel—2 3/16".

Part No.	Fig.	Description	U.S.A. List Price
TT-420	E	Lamp Jack	$1.30
TT-401	C	Jewel—Red	.35
TT-403	C	Jewel—Green	.35
TT-404	C	Jewel—Blue	.35
TT-405	C	Jewel—White	.35
TT-408	C	Jewel—Yellow	.35
TT-413	C	Jewel—Amber	.35
P-2315	D	6 V Bi-Pin Lamp	1.75
P-2316	D	28 V Bi-Pin Lamp	1.95

"TT-SWITCH"



Series TT-300 "tini-telephone" switch. Small, compact. Designed to be mounted in combination or interchangeable with "TT-Jax", "TT Lamp-Jax" on Series 1600 jack panels. Available in momentary (NON-LOCKING) or Push-to-Lock/Pull-to-Release actions. White plastic knob. Special nickel silver springs with welded crossbar palladium contacts rated at 2 amps, 200 watts, non-inductive load. Mounts with No. 3-28 screw (not furnished) in ¼" dia. hole in panels to 3/8" thick. Depth behind panel 2 3/16".

Part No. Non-Locking	Part No. Push-Lock/ Pull-Release	Action	Schematic No.	U.S.A. List Price
TT-301	TT-301L	S.P.S.T. n.o.	1-A	$3.25
TT-303	TT-303L	S.P.D.T.	1-C	3.75
TT-306	TT-306L	D.P.D.T.	2-C	4.75
TT-307	TT-307L	3 P.S.T. n.o.	3-A	4.80

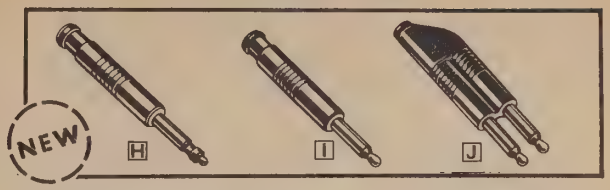
"TINI-TELEPHONE" ACCESSORIES



F TT-Hole Plug—used to close-off unused holes in TT-Jack Panels, Series 1600, 1700. Black plastic with brass sleeve. G Kwik-Change Designation Strip Kits for Series 1600, 1700 TT-Jack Panels. No. TT-501 Kit consists of an extruded aluminum mounting strip, 4 screws, a sheet of five marking strips and a clear plastic designation strip cover.

Part No.	Description	U.S.A. List Price
TT-501	Designation Strip Kit	$3.00
TT-502	Designation Marking Strip Sheet of five strips	.50
TT-503	Clear plastic designation strip cover.	1.00
TT-510	TT-Hole Plug	.35

TT-PHONE PLUG



H TT-Phone Plug Terminating Plugs for terminating circuits with a specific load. A precision ½ watt, ±1% resistor is molded into the handle. Resistance value marked on handle. I TT-Phone Plug Dummy Plugs designed to be inserted into "TT-Jax" to actuate shunt and isolated switching circuits. J TT-Phone Plug Looping Plugs for looping or patching adjacent jack circuits. Fingers of twin looping plugs are wired internally. Terminating and Dummy plugs: .173" dia. finger; 1½" L. x 19/64" dia. handle. Looping twin plugs: (2) .173" dia. fingers; 19/64" W. x 1¾" L. handle.

Part No.	Description	U.S.A. List Price
TT-201	2-cond. terminating plug—135 ohms	$3.35
TT-202	2-cond. terminating plug—600 ohms	3.35
TT-203	3-cond. terminating plug—135 ohms	3.75
TT-204	3-cond. terminating plug—600 ohms	3.75
TT-205	2-cond. dummy plug	1.55
TT-206	3-cond. dummy plug	1.95
TT-207	2-cond. looping plug	5.10
TT-208	3-cond. looping plug	6.00

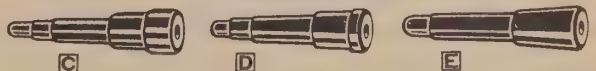
"LAMP-JAX" SWITCHBOARD PANEL TYPE



Quality long frame panel type lamp jacks. No. LT-47, black nylon lamp housing completely insulates lamp from frame. Interchangeable with W.E. Nos. 47A, 47B. Accepts std. lamps and lamp caps. W.E. Nos. 2, 72, etc. No. LT-48, new Ballast Lamp-Jax for use in circuits subjected to increasing temperature and wattage. Steel frame and bushing. Teflon sleeve. Accepts std. telephone lamps or ballast lamp No. 60XA. Both lamp jacks mount in std. Switchcraft jack panels.

Switchcraft Part No. LT-47 U.S.A. List Price **$1.50**
Switchcraft Part No. LT-48 U.S.A. List Price **2.25**

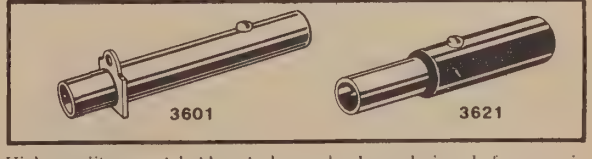
"DUMMY-PLUG"



Low cost, 2- and 3-conductor molded plastic, dummy plugs for use in switchboards, jack panels. Inserts in jack as does a phone plug to switch circuits, but can not couple incoming signals. Can also be used to plug up unused phone jacks to prevent accidental insertion of a phone plug. Series 491, 3-conductor, .207" dia. finger. Series 492, 3-conductor, .250" dia. finger. Series 493, 2-conductor, .250" dia.

Part No.	Fig.	Handle	Typical Mating Jack	U.S.A. List Price
491-01	C	Red	MT-342B	$0.55
491-02	C	Black	MT-342B	.55
491-05	C	White	MT-342B	.55
492-01	D	Red	MT-332B	.55
492-02	D	Black	MT-332B	.55
492-05	D	White	MT-332B	.55
493-01	E	Red	MT-331	.55
493-02	E	Black	MT-331	.55
493-05	E	White	MT-331	.55

"CV-JAX" AND PLUGS



High quality coaxial-video jacks and plugs designed for use in patching high frequency signals, microwave, telemetry and data transmitting applications. Jacks are made for 50 and 70 ohm circuits and use standard RG cables. No. 3601 accepts RG59/U. Mount in single 7/16" hole; Depth behind panel is 2 29/64". No. 3621, terminating plug with 75 ohm ±1% ½ watt resistor; No. 3622, feed through plug; No. 3623 same as 3621 but with tip jack for incircuit testing.

JACKS		PLUGS	
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price
3601	$10.50	3621	$ 5.00
		3622	4.50
		3623	6.05

SWITCHCRAFT® INC.

Phone Plugs

"LITTEL-PLUG" PHONE PLUGS

Small size phone plugs fit standard ¼" phone jacks except *Nos. S-250, S-260, S-280 and S-290 which have a .206" dia. sleeve. **Nos. C-240, C-245 and C-270 feature an integral cable clamp with screw terminals. †No. R-280 has short sleeve or Revere Recorders. ‡No. 288 has a wide insulator between tip and sleeve for use in a 3-conductor jack to perform a 2-conductor function without shorting. Plugs with solder terminals have built-in cable clamp. Shielded metal handles are nickel plated brass; others are molded of durable plastic; ⅝" long x ½" dia.

TWO-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Ter-minals	U.S.A. List Price
240	A	11	Black	Screw	$0.95
C-240**	A	11	Black	Screw	—
245	A	11	Red	Screw	.95
C-245**	A	11	Red	Screw	—
250	A	11	Black	Solder	.90
255	A	11	Red	Solder	.90
270	B	11	Shielded	Screw	1.35
C-270**	B	11	Shielded	Screw	—
280	B	11	Shielded	Solder	1.30
288‡	B	11	Shielded	Solder	1.35
S-250	A	S-11	Black	Solder	—
S-280	B	S-11	Shielded	Solder	—
R-280†	B	—	Shielded	Solder	—

THREE-CONDUCTOR TYPE

260	A	12B	Black	Screw	$1.50
S-260*	A	S-12B	Black	Screw	—
267	A	12B	Black	Solder	1.35
269	A	12B	Red	Solder	1.35
290	B	12B	Shielded	Screw	1.75
297	B	12B	Shielded	Solder	1.65

STANDARD 1/4" PHONE PLUGS

Available with phenolic or shielded, nickel plated over brass handle.

TWO-CONDUCTOR TYPE—SCREW TERMINALS

Typical mating jack "Littel-Jax" No. 11. No. 169 features circuit closing device. No. 170 has a two-piece handle with built-in clamp for ¼" cable.

Part No.	Fig.	Handle	Length & Dia.	U.S.A. List Price
40	A	Black	2 1/16 x ¾	$1.00
45	A	Red	2 1/16 x ¾	1.00
70	B	Shielded	2 1/16 x 1 1/16	1.60
160	C	Shielded	1x 1 1/16	1.30
169	C	Shielded	1x¾	2.65
170	D	Shielded	2 1/16 x 1 1/16	2.05

THREE-CONDUCTOR TYPE—SOLDER TERMINALS

Typical mating jack "Littel-Jax" No. 12B. No. 190A has two-piece handle with built-in cable clamp for ¼" cable.

60	A	Black	2 1/16 x 1 1/16	$1.35
90	C	Shielded	1x 1 1/16	1.70
190	B	Shielded	2 1/16 x 1 1/16	1.95
190A	D	Shielded	2 1/16 x 1 1/16	2.45

"LUG-PLUG" PHONE PLUGS

Low cost, two-conductor phone plugs. Fit all ¼" phone jacks.

No. 385 Plug has a .206" dia. sleeve and mates with S-11 "Littel-Jax." All have solder lug terminals. Handle: Shielded metal or phenolic.

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Length & Dia.	U.S.A. List Price
350	A	11	Black	1⅜ x ½	$0.80
355	A	11	Red	1⅜ x ½	.80
380	—	11	Shielded	1x½	1.00

"TINI-PLUG" MINIATURE PHONE PLUGS

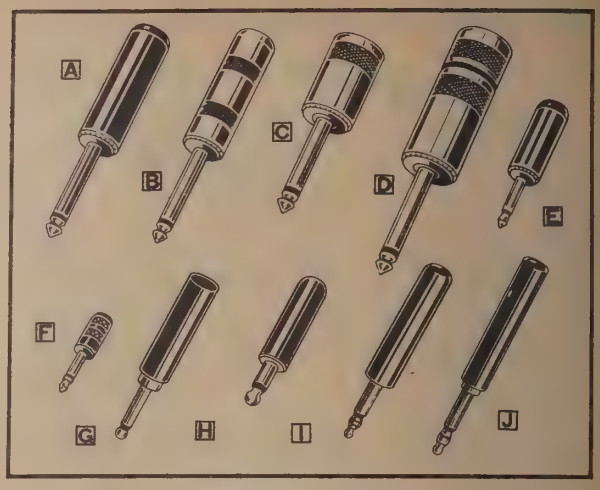
Miniature 2-conductor phone plugs for use with "TINI-JAX" only ⅓ the size of standard phone plugs. Handle 1⅝" overall length, are plastic or brass, nickel plated.

Part No.	Fig.	Terminal	Handle	U.S.A. List Price
740	E	Screw	Black	$0.95
745	E	Screw	Red	.95
750	E	Solder	Black	.90
755	E	Solder	Red	.90
770	E	Screw	Shielded	1.30
780	E	Solder	Shielded	1.25

"MICRO-PLUG"® SUB-MINIATURE PHONE PLUGS

Sub-miniature 2-conductor phone plugs, only 1 1/64" long; ¼" O.D., .097" dia. sleeve. Mate with No. TR-2A. Have screw on handles in black, red or natural anodized aluminum; accommodates cables up to 7/64" dia. All plugs have integral cable clamps.

Part No.	Fig.	Description	U.S.A. List Price
850	F	Black Handle	$0.85
855	F	Red Handle	.85
880	F	Natural Handle	.85



MILITARY TYPE "LITTEL-PLUG" AND "EXTENSION JAX"

Designed to meet exact industrial and military requirements. Plugs are made in accordance with MIL-P-642(A) specifications. One-piece tip rod and one-piece sleeve and plug body provide internal interlock to prevent parts shifting in position. Type 820 Extension Jack meets MIL-J-641A specifications and mates with "Littel-Plug" No. 430. No. 470 has shielded handle; all others plastic: †Red; ‡Black. All plugs have screw terminals.

Part No.	Fig.	Mil-Type No.	Typical Mating Jack	Cond.	U.S.A. List Price
420‡	G	PJ-047B	MT-388	2	$1.75
425†	G	PJ-047R	MT-388	2	1.75
430‡	H	PJ-054B	820	2	1.50
435†	H	PJ-054R	820	2	1.50
440‡	—	PJ-055B	MT-331	2	1.50
445†	—	PJ-055R	MT-331	2	1.50
450‡	H	PJ-540B	820	2	1.50
455†	H	PJ-540R	820	2	1.50
470	—	PJ-055M	MT-331	2	2.10
480‡	I	PJ-068	MT-342B	3	3.60
482†	J	PJ-051R	MT-332B	3	4.00
483‡	J	PJ-051B	MT-332B	3	4.00
484†	J	PJ-309	M-444	3	3.60
820‡	—	JJ-026	430 Plug	2	2.10

Switchcraft Part No. P-1074-1—Strain Relief Clamp. Nickel Plate Brass. Package of 25 ..... U.S.A. List Price **$0.85**

TYPE 410 PLUG AND TYPE 810 JACK

Miniature 2-conductor extension jack and mating plug; often referred to as "Throat Microphone Plug and Jack." Plug is Military Type PJ-291; jack is Type JJ-048. Each is of two-piece molded construction. Plug has solder-cup terminals; jack has solder lugs. After wiring, shells must be cemented and clamped till dry. Overall size (engaged), 2⅝" x 17/32" x ⅜".

Switchcraft Part No. 410 Plug ..... U.S.A. List Price **$1.05**
Switchcraft Part No. 810 Jack ..... U.S.A. List Price **1.40**

"FLAT-PLUG" PHONE PLUGS



¼" phone plugs featuring flat, space-saving handles. Ideal for applications where conventional plugs would protrude too far. Nos. 220, 225 have adapter clips which make them convenient to clamp standard phone tips to terminals. Shielded flat plugs, Nos. 228 and 238 have nickel plated steel handles; all others have red or black plastic handles. Nos. S-230 and S-235 have .206" dia. sleeve.

TWO-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating Jack	Handle	Terminals	U.S.A. List Price
220	K	11	Black	Screw	$1.40
225	K	11	Red	Screw	1.40
227	K	11	Black	Solder	1.10
228	L	11	Shielded	Solder	1.25
229	K	11	Red	Solder	1.10

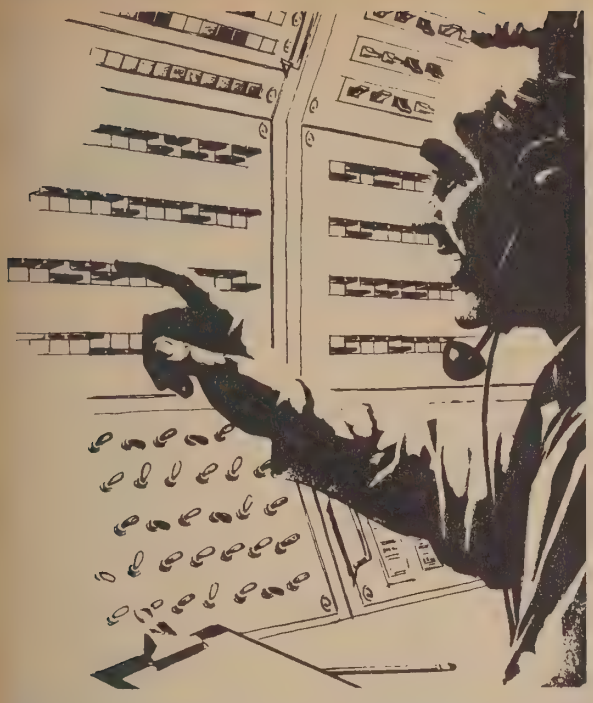
THREE-CONDUCTOR TYPE

230	K	12B	Black	Screw	$1.70
S-230	K	S-12B	Black	Screw	2.15
235	K	12B	Red	Screw	1.70
237	K	12B	Black	Solder	1.65
238	L	12B	Shielded	Solder	1.80
239	K	12B	Red	Solder	1.65

Trade Discount Applies To List Prices Only
© United Technical Publication

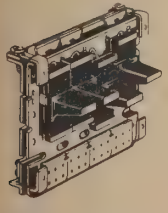
Switches

SWITCHCRAFT® INC.



Switchcraft switches give you unlimited latitude in the selection of switching functions and actuation for customizing your equipment designs. Whether you choose pushbutton, slide or lever actuated switches, Switchcraft Authorized Industrial Distributors can aid you in the selection and specification of the proper switch to fill your particular requirements. All "Multi-Switch"® switches are factory-assembled to your specifications or select one from the standard listing shown in this catalog. Factory assembly, plus rigorous inspection and testing, is your assurance of optimum performance and dependability.

"MULTI-SLIDE" SWITCHES
SERIES 39000

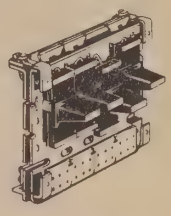


Revolutionary compact switching method provides versatile multiple station slide switching. Allows 1 to 18 stations per row standard on all but all-lock function which is limited to 12 stations. Requires only ¾" depth behind panel. Narrow frame design permits mounting on compact electronic equipment without sacrificing versatility or function. Three standard functions available: **Interlock:** actuating slide-button automatically restores previously actuated station to normal. Only one slidebutton can be actuated at a time with standard interlock function. **Non-Lock:** each station has momentary action with no interaction between stations. **All-Lock:** all stations, except release, lock when depressed—restore to normal when release button is actuated. Special slide-to-release cancelling feature in interlock and all-lock switches permits immediate correction of switching error without cancelling actuated switches. Slide-buttons are on ⅝" centers. Up to 3 miniature switch stacks, rated at 3 amps; 300 watts max., AC non-inductive load, can be mounted at each station for a minimum of 1-A (SPDT) to a max. of 3-C (3PDT) per station. For power switching, snap switch modules can be mounted to each station on special order. Refer to "PIGGY BACK" SNAP-SWITCH MODULES, Series SA, SC and SD under littel "Multi-Switch" listing. Switches mount on panels up to ⅛" thick. End brackets have four 6-32 tapped mtg. holes. A black slidebutton is furnished for each station and a red slidebutton is supplied when switch requires a release. A kit of chromatic legend tabs, Part No. K-120, is available for positive color coding of an actuated station. Kit consists of 10 tabs each of 6 colors: Red, black, green, blue, white and yellow. Pressure sensitive tabs mount easily in recess of slidebutton; can be hot-stamped for identification. The following part numbers cover a completely assembled switch, in various functions, with 2-C switch stacks at each station. Only the most commonly used switches are listed here.

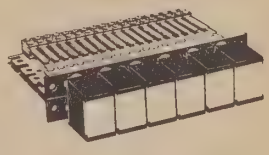
Part Numbers			No. of Stations	U.S.A. List Price
Interlock with Lock-Out	Non-Lock	All-Lock		
39021-206	39022-206	39023-206	2	$13.70
39041-206	39042-206	39043-206	4	22.90
39061-206	39062-206	39063-206	6	30.60
39081-206	39082-206	39083-206	8	39.30
39101-206	39102-206	39103-206	10	48.00
39121-206	39122-206	39123-206	12	56.70

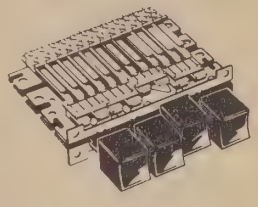
Switchcraft Part No. K-120 . . . . . U.S.A. List Price **$1.20**

Only Switchcraft offers 3 complete lines of slide, multiple station pushbutton, and lever switches . . . 3 proven solutions to man-machine interface problems.

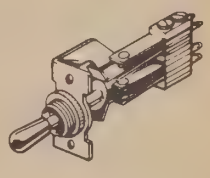


SLIDE ACTION . . . Series 39000 "Multi-Slide" switches provide design engineers with an entirely new switching method to solve man-machine system problems. "Multi-Slide" switches help eliminate operating confusion inherent in constant manipulation of pushbutton matrixes by providing slide-switch variety. Series 39000 Switches offer 3 types of actuation: interlock, all-lock, non-lock.



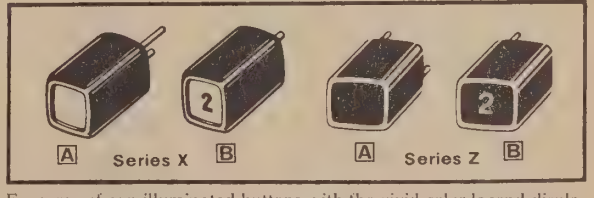


PUSHBUTTON ACTION . . . Whatever your requirements for switching, you will find Switchcraft "Multi-Switch"® switches enable you to design a cybernetically correct, error-reducing panel. Both illuminated and non-illuminated types are available with non-lock, all-lock, interlock, push-to-lock, push-to-release functions. Illuminated types offer single or multiple lighting effects. Series 7000 and 21000 frames are available from 1 to 37 stations in a row. littel "Multi-Switch"® switches Series 35000, 36000, 37000, are compact switching units offering 1 to 18 stations in a row. Series 65000, 66000, 67000, 70000 and 71000 are low cost switches, in all functions, up to 18 stations in a row.



LEVER ACTION . . . Switchcraft offers the largest selection of illuminated and non-illuminated lever-type switches in the industry. They come in a wide choice of sizes, 2 or 3 position, locking and non-locking types. They range in size and style from miniaturized "Feather Lever", featuring changeable push-on color knobs to "Lever-Lite", a 3-color illuminated type lever switch; to the industry standard "Telever", a telephone type switch featuring field changeable functions.

"GLO-BUTTON" PUSHBUTTONS
SERIES X, Y, Z

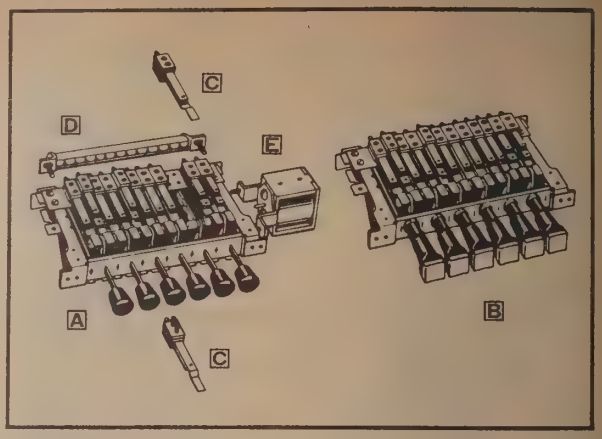


Economy of non-illuminated buttons with the vivid color-legend display of illuminated buttons. "Glo-Button" pushbuttons look and function like an illuminated button, but require no lamp or power. Mount on all pushbutton switches with standard .050" x .187" plungers, as Switchcraft Series 7000, 8000, 35000, 70000 and 71000 "Multi-Switch" ® switches, and other switches having maintained plunger action with a maximum of 1/16" fallback. "Glo-Button" pushbuttons have a translucent front screen on which a legend is marked in an opaque color. The opaque color provides a background for the legend while the legend itself remains clear (Figs. A). An internal fluorescent illuminator is carried on a pusher which has two legs extending from the rear. When the button is depressed, the rear legs of the pusher bring the fluorescent illuminator flush with the screen which then lights up due to reflected ambient light, and projects a clearly visible legend, see Figs. B. All "Glo-Button" pushbuttons have black button housings and are available with standard legends: "A" thru "Z", "0" thru "50", and "ON", "OFF". Eight basic types of buttons are offered: To order, specify part number and add suffix letter or numeral to part number which describes desired legend. Example: To order ½" sq. "Glo-Button" pushbutton with black screen, orange-red illuminator and numeral "7" part number would read X21248-7.

Series No.	Size	Screen Color	Illuminator Color	U.S.A. List Price
X21248	½" square	Black	Orange-Red	$1.25
X51248	½" square	White	Orange-Red	1.25
Y21248	¾" h. x ⅝" w	Black	Orange-Red	1.50
Y28248	¾" h x ⅝" w	Black	Chartreuse	1.50
Y51248	¾" h. x ⅝" w	White	Orange-Red	1.50
Z21248	⅝" h x ¾" w	Black	Orange-Red	1.50
Z28248	⅝" h x ¾" w	Black	Chartreuse	1.50
Z51248	⅝" h x ¾" w	White	Orange-Red	1.50

"Multi-Switch"® Switches

Basic design simplicity provides a unique multiple station pushbutton switch that's rugged, compact, versatile and completely flexible in switching functions. Hundreds of circuit and function combinations are possible as **all switching components**—frame, switch stacks, lamps and other accessories **are changeable.** Order the "Multi-Switch"® you now require, from stock, and later change circuits and/or functions in the field by simple positioning adjustments of stop plate, latch bar spring, and/or interchanging or adding-on switch stacks. Standard "Multi-Switch"® switches are available with these functions: **Interlock,** restores to normal any previously actuated station when another station is actuated. [D] **Lock-out** feature when combined with interlock prevents the operation of more than one pushbutton at a time. (Standard on all assembled interlock switches.) **Non-Lock,** momentary action of each station. **All-Lock,** accumulative locking of all stations with restoration of all stations to normal when release station is depressed. **Push-Lock/Push-Release**—pushbutton locks when depressed and is released when again depressed.



SERIES 7000 NON-ILLUMINATED SWITCHES

[A] Heavy gauge steel switch frames mount on panels up to $\frac{3}{8}$" thick, with $3\frac{5}{16}$" depth behind panel. Rugged, welded end-mounting brackets have four 8-32 tapped holes for ease of panel mounting. Attractive, round brown push-on-buttons supplied for each station, plus extra red button for use when switch requires a release station. Center-to-center distance between buttons is $\frac{5}{8}$". Steel plunger .050" x .187" accepts standard push-on-buttons and "Glo-Button" pushbuttons. Standard plunger is $1\frac{1}{8}$"long, but can be supplied up to $5\frac{3}{4}$" long on special order. Switch frames with buttons on $\frac{3}{4}$" centers are available in Series 8000 which has all the same features as Series 7000. Switches feature switch stacks with welded-crossbar palladium contacts rated at 3 amps, 300 watts, max., A.C. non-inductive load. Series 7000 "Multi-Switch"® switches are available with from 1 to 37 stations; Series 8000 from 1 to 31 stations. When ordering Series 8000 add 10% to prices. All switches are completely assembled and tested at the factory. All assemblies listed in the Part No. table have 2-C or 4-C switch stacks at each station. Additional switching and other options are available on special order. Only the most commonly used switch assemblies are listed below.

Part Numbers/2-C PER STATION

*Interlock with Lock-Out	U.S.A. List Price	**Non-Lock	**All-Lock	**Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
7200K-606	$16.85	7202-606	7203-606	7207-606	2	$13.55
7400K-606	25.20	7402-606	7403-606	7407-606	4	21.60
7600K-606	34.05	7602-606	7603-606	7607-606	6	30.20
7800K-606	42.95	7802-606	7803-606	7807-606	8	38.80
71000K-606	52.10	71002-606	71003-606	71007-606	10	47.40
71200K-606	61.25	71202-606	71203-606	71207-606	12	56.00

Part Numbers/4-C PER STATION

7200K-612	21.05	7202-612	7203-612	7207-612	2	17.75
7400K-612	33.60	7402-612	7403-612	7407-612	4	30.00
7600K-612	46.65	7602-612	7603-612	7607-612	6	42.80
7800K-612	59.75	7802-612	7803-612	7807-612	8	55.60
71000K-612	73.10	71002-612	71003-612	71007-612	10	68.40
71200K-612	86.45	71202-612	71203-612	71207-612	12	81.20

*Changeable functions in the field.
**Not changeable in the field.

SERIES 21000 ILLUMINATED SWITCHES

[B] Similar in switching functions and characteristics to non-illuminated "Multi-Switch"® switch but, with these outstanding features: modern square button design with bright uniform front and side illumination provided by lamp diffusers; knurled retaining collar for quick easy front-of-panel lamp replacement. Two lamp voltages: 6V and 28V. Buttons with white jewels and white diffusers are furnished for switching and release stations. Standard switches listed below provide "L" type lighting (pushbuttons light in "IN" position). To have pushbutton light in "OUT" position, prefix Part No. with M (e.g. M21100). To have them light in both the "IN" and "OUT" positions, prefix with N. All switches include switch stacks at each station incorporating welded-crossbar palladium contacts rated at 3 amps, 300 watts, A.C., non-inductive load. Center-to-center distance between buttons is $\frac{5}{8}$" on Series 21000, available with up to 37 stations in a row. Series 22000, buttons on $\frac{3}{4}$" centers, available up to 31 stations only. Add 10% to price of Series 21000 when ordering Series 22000. Series 21000 and 22000 switches are completely assembled and inspected at the factory. All assemblies listed in the Part No. table have 2-C or 4-C switch stacks at each station and provides "L" type lighting. Additional switching and/or other types of lighting available on special order. Only the most commonly used switch assemblies are listed.

Part Numbers/2-C PER STATION

*Interlock with Lock-Out	U.S.A. List Price	**Non-Lock	**All-Lock	**Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
21200K-506	$23.45	21202-506	21203-506	21207-506	2	$20.15
21400K-506	38.95	21402-506	21403-506	21407-506	4	35.35
21600K-506	54.40	21602-506	21603-506	21607-506	6	50.55
21800K-506	69.95	21802-506	21803-506	21807-506	8	65.80
211000K-506	86.20	211002-506	211003-506	211007-506	10	81.50
211200K-506	101.95	211202-506	211203-506	211207-506	12	96.75

Part Numbers/4-C PER STATION

21200K-512	27.65	21202-512	21203-512	21207-512	2	24.35
21400K-512	47.35	21402-512	21403-512	21407-512	4	43.75
21600K-512	67.00	21602-512	21603-512	21607-512	6	63.15
21800K-512	86.75	21802-512	21803-512	21807-512	8	82.60
211000K-512	107.20	211002-512	211003-512	211007-512	10	102.50
211200K-512	127.15	211202-512	211203-512	211207-512	12	121.90

*Changeable functions in the field.
**Not changeable in the field.

SWITCH STACKS

[C] Interchangeable switch stacks for installation on "Multi-Switch"® switches to increase switching circuitry. Series 70P, utilizes welded-crossbar palladium contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. Use where the switching circuits of a released station will return to normal before contacts of a newly operated station are actuated. Series 700P, same as Series 70P, except to be used on push-lock/push-release functions or on other functions where contacts of a newly operated station must be actuated before contacts of a released station return to normal. Select from switch stack listing below and specify **Part No.** with your order for a completed switch assembly.

Part No.	Part No.	Circuit	U.S.A. List Price
71P	701P	1-A	$0.80
72P	702P	1-B	.80
73P	703P	1-C	1.05
73PD	703PD	1-D	1.20
76P	706P	2-C	1.65

LOCK-OUT BAR "K" SERIES

[D] Prevents operation of more than one switching station at a time. Mounts on back of standard "Multi-Switch" Series 7000, 8000, 21000 and 22000 frames with two screws (furnished). Available from 2 to 37 stations for a single frame. Lock-Out Bars listed are for $\frac{5}{8}$" center plunger only; for $\frac{3}{4}$" centers, order special.

Part No.	No. of Stations	U.S.A. List Price	Part No.	No. of Stations	U.S.A. List Price
K-02	2	$3.30	K-08	8	$4.15
K-04	4	3.60	K-10	10	4.70
K-06	6	3.85	K-12	12	5.25

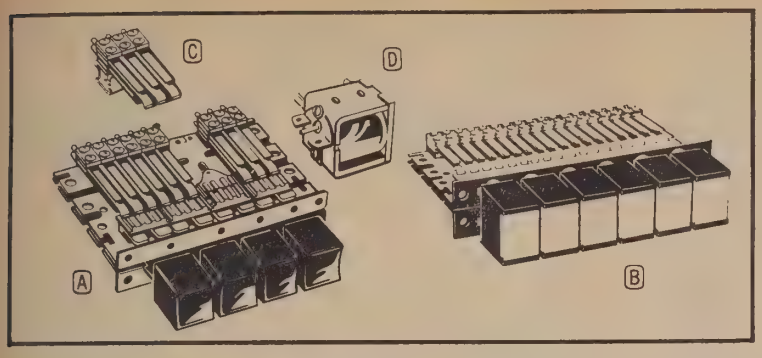
SOLENOID RELEASE—"J" SERIES

[E] A simple solenoid assembly which can be easily assembled on the end of a standard switch. Part No. J-1, is for use on interlocked switches; Part No. J-2, for use on all-lock switches with up to 12 stations. Both are for use in 115 volt, 60 cycle, A.C. circuits. Specify type of solenoid with your order for a standard "Multi-Switch"® switch.

Switchcraft Part No. J-1 . . . . . U.S.A. List Price **$ 9.50**
Switchcraft Part No. J-3 . . . . . U.S.A. List Price **10.00**

Trade Discount Applies To List Prices Only
© United Technical Publicatio

littel "Multi-Switch"® Switches



Compact, versatile high-quality, multiple station pushbutton switches. Four standard functions available: **Interlock**—actuating a pushbutton automatically restores to normal the pushbutton previously actuated. **Lock-Out**—prevents operation of more than one pushbutton at a time. This feature is included on all interlock frames. **Non-Lock**—each pushbutton has momentary action. **All-Lock**—all pushbuttons, except release, lock when depressed. All pushbuttons restored to normal by actuating release pushbutton. **Push-Lock/Push-Release**—pushbutton locks when depressed and is released when again depressed. Buttons on 5/8" centers. **Switches available from 1 to 18 stations.**

SERIES 35000 NON-ILLUMINATED SWITCHES

A Switches mount on panels up to ⅛" thick. Provides 6PDT switching in .6 sq. in. Narrow rectangular silhouette permits stacking in parallel rows on ¾" centers. Only 2 5/16" depth behind panel. End brackets have four 6-32 tapped mounting holes. A square black pushbutton is furnished for each station and an extra red pushbutton is supplied for use when switch has momentary release station (All-Lock function). Plungers made from .050" x .187" steel will accept std. push-on pushbuttons as well as Switchcraft pushbuttons, Series 590, A-590, C-590, D-590, E-590, 600 and "Glo-Button" pushbuttons Series X, Y, and Z. Refer to listings in this catalog. On 2-C PER STATION switches, each station includes two No. 83P switch stacks. On 4-C PER STATION switches, each station includes four No. 83P switch stacks. The following part numbers cover completely assembled and factory tested switches. Should you require additional switching or optional accessories as power switching, different pushbuttons, solenoid release, etc., make your selection from these product listings and add them to the switch part number of your choice shown below. Only the most commonly used switches are listed here.

Part Numbers/2-C PER STATION

Interlock with Lock-Out	Non-Lock	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
35021K-206	35022-206	35023-206	35027-206	2	$12.70
35041K-206	35042-206	35043-206	35047-206	4	20.40
35061K-206	35062-206	35063-206	35067-206	6	28.60
35081K-206	35082-206	35083-206	35087-206	8	36.80
35101K-206	35102-206	35103-206	35107-206	10	45.00
35121K-206	35122-206	35123-206	35127-206	12	53.20

Part Numbers/4-C PER STATION

35021K-212	35022-212	35023-212	35027-212	2	16.90
35041K-212	35042-212	35043-212	35047-212	4	28.80
35061K-212	35062-212	35063-212	35067-212	6	41.20
35081K-212	35082-212	35083-212	35087-212	8	53.60
35101K-212	35102-212	35103-212	35107-212	10	66.00
35121K-212	35122-212	35123-212	35127-212	12	78.40

SERIES 37000 SINGLE LAMP ILLUMINATED SWITCHES

B Identical in switching functions and characteristics as non-illuminated Series 35000, but features large rectangular shaped pushbuttons which serve as a color or legend coded panel indicator light which actuates up to 6PDT switching. Switches mount in parallel rows from 1" centers and up. Depth behind panel 2 5/16". Pushbuttons with large transparent clear display screen and white legend insert, can be hot stamped or engraved, are furnished for switching and release stations. On 2-C PER STATION switches, each station includes two Nos. 83P switch stacks, one No. H-83P lighting stack and one No. H (convenience) lighting spring. On 4-C PER STATION switches, each station includes four No. 83 switch stacks, one No. H-83P lighting stack and one No. H (convenience) spring. Lighting arrangements such as "L"—pushbuttons light in "IN" position; "M"—pushbuttons light in "OUT" position; and "N"—pushbuttons light in both "IN" and "OUT" positions, can be effected by wiring direct to the No. H-83; and No. H lighting stacks. A single 6V or 28V lamp can be used at each station, not furnished with switch. Refer to Lamp listing on page 11. The following part numbers cover completely assembled and factory tested switches. Should you require additional switching, power switch, solenoid, etc., make your selection from the various listings on page 11 and add to the switch part number you have chosen from listing below. Only the most commonly used switches are listed here.

Part Numbers/2-C PER STATION

Interlock with Lock-Out	Non-Lock	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
37021K-1206	37022-1206	37023-1206	37027-1206	2	$20.10
37041K-1206	37042-1206	37043-1206	37047-1206	4	35.70
37061K-1206	37062-1206	37063-1206	37067-1206	6	51.30
37081K-1206	37082-1206	37083-1206	37087-1206	8	67.40
37101K-1206	37102-1206	37103-1206	37107-1206	10	83.00
37121K-1206	37122-1206	37123-1206	37127-1206	12	98.60

Part Numbers/4-C PER STATION

37021K-1212	37022-1212	37023-1212	37027-1212	2	24.30
37041K-1212	37042-1212	37043-1212	37047-1212	4	44.10
37061K-1212	37062-1212	37063-1212	37067-1212	6	63.90
37081K-1212	37082-1212	37083-1212	37087-1212	8	84.20
37101K-1212	37102-1212	37103-1212	37107-1212	10	104.00
37121K-1212	37122-1212	37123-1212	37127-1212	12	123.80

SERIES 38000 TWIN LAMP ILLUMINATED SWITCHES

B Same compact assembly and versatility as Series 37000, except features twin lamp illumination at each station for redundant or two color, split-face (alternate) lighting. On 2-C PER STATION switches, each station includes three No. H-83P lighting switch stacks and one No. H lighting spring. This arrangement provides up to 3PDT circuitry. One pole is needed for lighting lamps. On 4-C PER STATION switches, each station includes three No. H-83P lighting switch stacks, two No. 83P switch stacks and one No. H lighting spring. This combination offers 5PDT circuitry; of which, one pole is required for lighting lamps. Series 38000 accepts standard industry No. 718 flange base lamp. Two at each station. Lamps are not furnished with switch. See lamp listing. The following part numbers cover completely assembled and factory tested switches. Should you require additional switching or optional accessories such as power switching modules, solenoid release, etc., make your selection from product listings shown on this page and add them to the switch part number of your choice shown below.

Part Numbers/2-C PER STATION

Interlock with Lock-Out	Non-Lock	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
38021K-1206	38022-1206	38023-1206	38027-1206	2	$25.30
38041K-1206	38042-1206	38043-1206	38047-1206	4	46.10
38061K-1206	38062-1206	38063-1206	38067-1206	6	66.90
38081K-1206	38082-1206	38083-1206	38087-1206	8	88.20
38101K-1206	38102-1206	38103-1206	38107-1206	10	109.00
38121K-1206	38122-1206	38123-1206	38127-1206	12	129.80

Part Numbers/4-C PER STATION

38021K-1212	38022-1212	38023-1212	38027-1212	2	29.50
38041K-1212	38042-1212	38043-1212	38047-1212	4	54.50
38061K-1212	38062-1212	38063-1212	38067-1212	6	79.50
38081K-1212	38082-1212	38083-1212	38087-1212	8	105.00
38101K-1212	38102-1212	38103-1212	38107-1212	10	130.00
38121K-1212	38122-1212	38123-1212	38127-1212	12	155.00

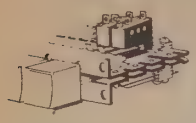
LAMP ADAPTER

Lamp Adapter, Part No. T-1, converts T-1 lamp base to a T-1 ¾ lamp base. For Series 21000, 22000, 37000, Adapter permits use of T-1 (P-1890) midget flange base in sockets designed for T-1 ¾ lamps.
Switchcraft Part No. T-1 . . . . . U.S.A. List Price **$0.75**



Accessories for littel "Multi-Switch"® Switches

"PIGGY-BACK" SNAP-SWITCH MODULES



Increases the switching load capacity of littel "Multi-Switch"® switches from 3 amps to 15 amps. Module consists of a snap-action switch, actuator and mounting bracket. Two types available: Miniature types 83SA, for all switching functions except push-lock/push-release; No. 803SA, for push-lock/push-release function. Both rated at 15 amps, ½ HP, 125/250 V.A.C. Subminiature types Nos. 83SC and 83SD, are similar to No. 83SA in function, and Nos. 803SC, 803SD are similar to No. 803SA in function. Subminiature types are rated at 10 amps, ¼ HP, 125 V.A.C. Solder terminals.

Part No.	SPDT Circuits	U.S.A. List Price	Part No.	SPDT Circuits	U.S.A. List Price
83SA	1	$3.55	83SD	2	$10.00
803SA	1	3.55	803SC	1	5.55
83SC	1	5.55	803SD	2	10.00

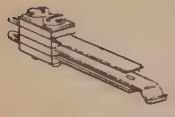
LIGHTING SWITCH STACKS



Lighting switch stacks provide convenient rear-of-frame lamp circuit wiring on Series 37000, 38000. Part No. H consists of "convenience" spring only which effectively extends lamp socket terminal to rear-of-switch. Part Nos. H-83P, H-803P consist of standard Series 80P and 800P switch stacks with a Part No. H "convenience" spring added. Use No. H for lighting only – has no switching capability. Use No. H-83P for all functions except push-lock/push-release; No. H-803P for push-lock/push-release.

Part No.	Circuit	U.S.A. List Price
H	—	$0.55
H-83P	1-C	1.45
H-803P	1-C	1.45

SWITCH STACKS



C Interchangeable switch stacks for littel "Multi-Switch"® switches, Series 35000, 37000, 38000, 39000, Series 80P, constructed with cross-bar welded palladium contacts. For use where switch contacts of a released station will return to normal before contacts of a newly operated station are actuated. Series 800P, same as 80P, except designed to be used on push-lock/push-release function. Both Series rated 3 amps, 300 watts max., A.C., non-inductive load. Switch stacks fasten direct to removable switch mounting brackets. Should you require more switching than a standard assembly can provide, select appropriate switch stack from listing and add to the standard switch you have selected.

Part Numbers Series 80P	Part Numbers Series 800P	Circuit	U.S.A. List Price
81P	801P	1-A	$0.80
82P	802P	1-B	.80
83P	803P	1-C	1.05
83PD	803PD	1-D	1.20

LAMPS FOR littel "MULTI-SWITCH"® SWITCHES

Lamps are not furnished with Series 37000, 38000 switches. Series 37000 will accept No. P-1593-2 (6V) and P-1593-1 (28V) lamps. Also, No. P-1890 (6V) lamp when used with °No. T-1 lamp adapter. Series 38000 accepts only No. P-1890. Specify lamps when ordering "Multi-Switch"® switches.

Part No.	Description	U.S.A. List Price
P-1593-1	28 V, 40 ma., Ind. No. 327, Flange Base.	$1.50
P-1593-2	6 V, 200 ma., Ind. No. 328, Flange Base	1.20
°P-1890	6 V, 115 ma., Ind. No. 718, Flange Base.	3.50

SERIES NJ SOLENOID RELEASE

D A simple solenoid assembly which can be added to the end of a standard Series 35000, 37000, or 38000, littel "Multi-Switch"® switch to provide electrical release of activated stations. No. NJ-1 designed for use with up to 18 interlock stations; No. NJ-3 will handle up to 12 all-lock stations. Both are for use in 115 V, 60 cycle, A.C. circuits.

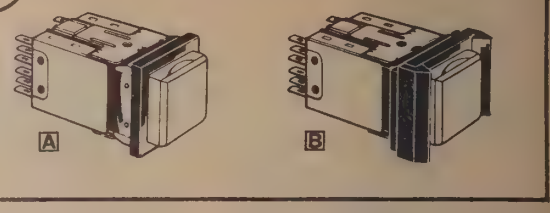
Part No.	Function Used On	Voltage	Max. Duty Cycle	U.S.A. List Price
NJ-1	Interlock	115 V.A.C.	25%	$10.00
NJ-3	All-Lock	115 V.A.C.	10%	10.00

BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



NEW SERIES PL "PUSH-LITE" SWITCHES



"Push-Lite" switch is the first completely enclosed, lighted pushbutton switch which features long-life, highly-reliable leaf-spring switching. Available in momentary or push-lock/push-release functions; single or twin lamps; with or without barriers; full or split-face display; 1-C to 4-C switching; black or grey switch housing. Standard pushbutton color is white, other colors available on special order. Molded crossbar palladium contacts rated at 2 amps, 200 watts, max., A.C., non-inductive load are standard. Power switching up to 5 amps available on special order. Mount with clamp-type bracket, no screws, washers or nuts needed. A Flange mounting requires 1"x.875" panel cutout; B barrier mounting requires $1\frac{3}{16}$"x.875" panel cutout. Can be mounted in vertical or horizontal rows and in matrixes. Depth behind panel only $1\frac{3}{4}$". "Push-Lite" switch accepts standard T-$1\frac{3}{4}$ flange base lamps (not furnished with switch) in either 6V, 28V or neon-115V. See listing below. Specify one lamp for single lamp type or two lamps of twin-lamp type when redundant or split-face lighting is required. Barriers and colored filter snap-inserts optional.

MOMENTARY ACTION—SINGLE LAMP

Part Numbers Black Housing White Pushbutton	Part Numbers Grey Housing White Pushbutton	Action	Schematic	U.S.A. List Price
PL-1032-05	PL-4032-05	S.P.D.T.	1-C	$9.25
PL-1062-05	PL-4062-05	D.P.D.T.	2-C	9.50
PL-1122-05	PL-4122-05	4 P.D.T.	4-C	10.25

MOMENTARY ACTION—TWIN LAMP

PL-2032-05	PL-5032-05	S.P.D.T	1-C	9.50
PL-2062-05	PL-5062-05	D.P.D.T	2-C	9.75
PL-2122-05	PL-5122-05	4 P.D.T	4-C	10.50

PUSH-LOCK/PUSH-RELEASE—SINGLE LAMP

PL-1037-05	PL-4037-05	S P D T	1-C	9.75
PL-1067-05	PL-4067-05	D.P D.T	2-C	10.00
PL-1127-05	PL-4127-05	4 P D.T	4-C	10.75

PUSH-LOCK/PUSH-RELEASE—TWIN LAMP

PL-2037-05	PL-5037-05	S.P.D.T.	1-C	10.75
PL-2067-05	PL-5067-05	D.P.D.T.	2-C	11.00
PL-2127-05	PL-5127-05	4 P.D.T.	4-C	11.75

COLOR FILTER SNAP-INSERTS

Translucent filters for special color-coding in "Push-Lite" switch. Use with white or clear pushbuttons. Series PL-300 filters are used for full color display; Series PL-400 for split-face display.

SERIES PL-300 FULL DISPLAY COLOR FILTERS

Part No.	Color	U.S.A. List Price Per Pkg. of 25	Part No.	Color	U.S.A. List Price Per Pkg. of 25
PL-301	Red	$2.75	PL-305	White	$2.75
PL-303	Green	2.75	PL-308	Yellow	2.75
PL-304	Blue	2.75			

SERIES PL-400 SPLIT-FACE DISPLAY COLOR FILTERS

Part No.	Color	U.S.A. List Price Per Pkg. of 50	Part No.	Color	U.S.A. List Price Per Pkg. of 50
PL-401	Red	$4.00	PL-405	White	$4.00
PL-403	Green	4.00	PL-408	Yellow	4.00
PL-404	Blue	4.00			

LIGHT DIVIDER

Light divider for use in standard "Push-Lite" switch pushbutton to separate lighting from twin-lamps. Order a light divider for each Series PL-2000 or PL-5000 switch specified where split-face lighting is desired.
Switchcraft Part No. PL-551 ..... U.S.A. List Price **$2.50** per package of 25

OPTIONAL MOUNTING BARRIERS

Barriers, molded of plastic, can be used to separate "Push-Lite" switches and prevent accidental operation of adjacent switches. Series PL-100 is an end barrier. One is required when switches are adjacently mounted. two are required when switches are individually mounted. Series PL-200 is a center barrier. Two are required between switches when adjacently mounted.

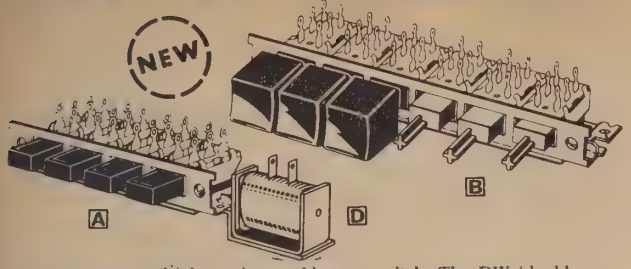
Part No.	Description	U.S.A. List Price Per Pkg. of 10
PL-102	End barrier—black	$1.50
PL-111	End barrier—grey	1.50
PL-202	Center barrier—black	1.50
PL-211	Center barrier—grey	1.50

For LAMP listing, refer to Page 15.

Trade Discount Applies To List Prices Only

© United Technical Publicati

DW "Multi-Switch"® Switches



New, economy multiple station pushbutton switch. The DW (double-wipe) "Multi-Switch"® switch is available up to 18 stations in a single row; or on special order, ganged assemblies with interaction between rows. Max. switching per station is 4-C (D.P.D.T.). Each station utilizes specially designed switching modules with U-shaped, high reliable **bifurcated contactors rated at 3 amps, A.C.; 0.5 amp, D.C., 125 V,** non-inductive load. DW "Multi-Switch"® switches are available in 5 series: 65000, 66000, 67000, 70000, and 71000. All provide four standard functions: **Interlock**—actuating a pushbutton automatically restores to normal the pushbutton previously actuated. **Lock-Out**—prevents operation of more than one pushbutton at a time. This feature is included on all interlock switches. **Non-Lock**—each pushbutton has momentary action. **All-Lock**—all pushbuttons, except release, lock when depressed. All pushbuttons restored to normal by actuating (momentary) release pushbutton. **Push-Lock/Push-Release**—pushbuttons lock when depressed and release when again depressed. All Series—pushbuttons on ⅝" centers. DW "Multi-Switch"® switches are available in single row assemblies with **interlock** and **all-lock** functions from one to twelve stations; with **non-lock** and **push-lock/push-release** functions up to eighteen stations.

SERIES 65000

A Series 65000 switches are completely assembled and tested at the factory. All standard assemblies have 2-C and/or 4-C switch modules with solder-lug terminals. Integral black pushbutton-actuators at each station. Eliminates possible pushbutton loss. Assemblies, from 1 to 18 stations mount with only two No. 6 screws (not furnished). Depth behind panel—2-C assemblies—1 1/16"; 4-C assemblies—1 15/16". Overall switch height is 27/32". The following part numbers cover a completed switch assembly. Only the most commonly used switch assemblies are listed here:

Part Numbers/2-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
65021K-206	65023-206	65027-206	2	$ 2.80
65041K-206	65043-206	65047-206	4	5.00
65061K-206	65063-206	65067-206	6	7.20
65081K-206	65083-206	65087-206	8	9.40
65101K-206	65103-206	65107-206	10	11.55
65121K-206	65123-206	65127-206	12	13.75

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
65022-206	2	$2.65	65082-206	8	$ 9.20
65042-206	4	4.85	65102-206	10	11.30
65062-206	6	7.00	65122-206	12	13.50

Part Numbers/4-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
65021K-212	65023-212	65027-212	2	$ 3.30
65041K-212	65043-212	65047-212	4	6.00
65061K-212	65063-212	65067-212	6	8.70
65081K-212	65083-212	65087-212	8	11.40
65101K-212	65103-212	65107-212	10	14.05
65121K-212	65123-212	65127-212	12	16.75

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
65022-212	2	$3.15	65082-212	8	$11.20
65042-212	4	5.85	65102-212	10	13.80
65062-212	6	8.50	65122-212	12	16.50

SOLENOID RELEASE—DW SERIES

D Two simple, pull-type, solenoid assemblies are available that can be added on the end of a Series 65000, 66000, 67000, 70000, 71000 DW "Multi-Switch"® switch. Solenoid assembly, mounting hardware, screws and instruction sheet furnished. Specify separately.

Part No.	Description	U.S.A. List Price
DW-1	Used with interlock function in switches having 1 to 12 stations. Operates from 115 V AC, 60 Hz source. Coil resistance is 361Ω Duty cycle is 20%.	$6.50
DW-3	Used with all-lock function in switches having 1 to 12 stations. Operates from 115 V AC, 60 Hz source. Coil resistance is 130Ω Duty cycle is 10%.	6.50

LAMPS FOR SERIES 67000

Lamps are not furnished with Series 67000 switches. Specify one of the flange base lamps for each station.

Part No.	Description	U.S.A. List Price
P-1593-1	28 V, 40 ma., Ind. No. 327, Flange Base.	$1.50
P-1593-2	6 V, 200 ma., Ind. No. 328, Flange Base.	1.20
P-1593-5	6 V, 200 ma., Ind. No. 377, Flange Base.	1.50
*P-1890	6 V, 115 ma., Ind. No. 718, Flange Base.	3.50

*T-1 subminiature flange base lamp. Must be used with **No. T-1 Lamp Adapter.**

SERIES 70000, 71000

B New, versatile DW "Multi-Switch"® switches, Series 70000, 71000 retain all features of Series 65000, but feature "Cross-Rib" actuators which accept 7 different Switchcraft pushbuttons, plus many other types and styles. Series 70000 switches have a 15/16" long "Cross-Rib" actuator to accept Series 590, A-590, C-590, D-590, E-590 and "Glo-Button" X, Y, Z. Series 71000 switches have a ¾" long "Cross-Rib" actuator to accept all the same pushbuttons as Series 70000 except Series A-590, E-590. Pushbuttons must be ordered separately as they are not supplied with switches. Only the most commonly used switch assemblies are listed here:

Part Numbers (*) 2-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
70021K-206	70023-206	70027-206	2	$ 2.80
70041K-206	70043-206	70047-206	4	5.00
70061K-206	70063-206	70067-206	6	7.20
70081K-206	70083-206	70087-206	8	9.40
70101K-206	70103-206	70107-206	10	11.55
70121K-206	70123-206	70127-206	12	13.75

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
70022-206	2	$2.65	70082-206	8	$ 9.20
70042-206	4	4.85	70102-206	10	11.30
70062-206	6	7.00	70122-206	12	13.50

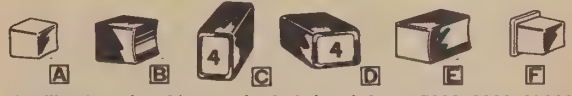
Part Numbers (*) 4-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
70021K-212	70023-212	70027-212	2	$ 3.30
70041K-212	70043-212	70047-212	4	6.00
70061K-212	70063-212	70067-212	6	8.70
70081K-212	70083-212	70087-212	8	11.40
70101K-212	70103-212	70107-212	10	14.05
70121K-212	70123-212	70127-212	12	16.75

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
70022-212	2	$3.15	70082-212	8	$11.20
70042-212	4	5.85	70102-212	10	13.80
70062-212	6	8.50	70122-212	12	16.50

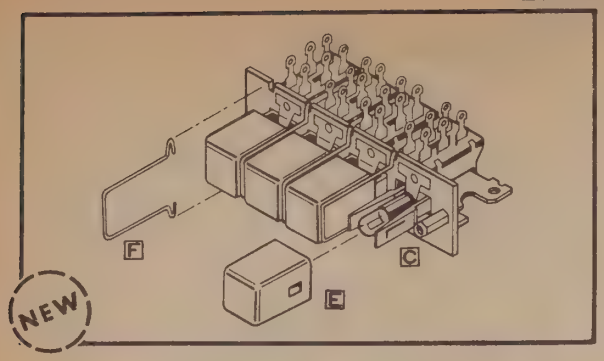
(*) Series 71000 switches are the same as 70000 part numbers in table except first two digits are 71, i.e.

PUSHBUTTONS FOR "MULTI-SWITCH"® SWITCHES



Non-illuminated pushbuttons for Switchcraft Series 7000, 8000, 35000, 70000 and 71000 "Multi-Switch"® switches; and all other pushbutton switches with a standard .050" x .187" plunger. Also fit on Series 5000 "Push-Push" switch. Series 590, A, small pushbutton with concave face. Series A-590, B, square with lateral concave face. Series C-590, C, and D-590, D, rectangular pushbuttons with recessed face. Pushbuttons have black housing with white face. Legend on face is black. Available legends are "A" thru "Z", "0" thru "60", and "ON", "OFF". Series C-590 mounts on multiple station pushbutton switches with plungers on ⅝" centers; Series D-590—plungers on ¾" centers. To order: specify Series number and add suffix letter or numeral to part number which describes desired legend. **Example:** To order C-590 with letter "A" part number would read C-590-A. Series E-590, E, dual pushbutton simultaneously actuates two pushbutton stations (⅝" plunger centers) or individual switches mounted on 1¼" centers or more. Concave face. Series 600, F, similar to Series 590, except has 19/32" square shoulder.

Part No.	Fig.	Color	Size	U.S.A. List Price
591	A	Red	½" sq.	$2.50 Pkg. of 12
592	A	Black	½" sq.	2.50 Pkg. of 12
595	A	White	½" sq.	2.50 Pkg. of 12
596	A	Brown	½" sq.	2.50 Pkg. of 12
A-591	B	Red	19/32" sq.	5.40 Pkg. of 12
A-592	B	Black	19/32" sq.	5.40 Pkg. of 12
A-595	B	White	19/32" sq.	5.40 Pkg. of 12
A-596	B	Brown	19/32" sq.	5.40 Pkg. of 12
C-590	C	Black Housing White Face	⅝" W. x ¾" H.	1.00
D-590	D	Black Housing White Face	¾" W. x ⅝" H.	1.00
E-591	E	Red	1 15/32" W. x 19/32" H.	.65
E-592	E	Black	1 15/32" W. x 19/32" H	.65
E-593	E	Green	1 15/32" W. x 19/32" H.	.65
E-594	E	Blue	1 15/32" W. x 19/32" H.	.65
E-595	E	White	1 15/32" W. x 19/32" H.	.65
E-596	E	Brown	1 15/32" W x 19/32" H	.65
E-598	E	Yellow	1 15/32" W. x 19/32" H.	.65
601	F	Red	½" sq., 19/32" sq shoulder	3.00 Pkg. of 12
602	F	Black	½" sq.; 19/32" sq. shoulder	3.00 Pkg. of 12
605	F	White	½" sq., 19/32" sq shoulder	3.00 Pkg. of 12
606	F	Brown	½" sq.; 19/32" sq. shoulder	3.00 Pkg. of 12



SERIES 66000, 67000

C New non-illuminated (Series 66000) and illuminated (Series 67000) DW "Multi-Switch"® switches retain all quality construction and reliable switching of Series 65000. **Series 67000 has large square pushbutton.** E providing brilliant, evenly-diffused lighting. Standard white pushbuttons (other colors available on special order) easily snap-off actuators for simple front-of-panel relamping. Lamp sockets, at each station, accept a single 6V, **and/or 28V lamp.** Lamp socket terminals separate from switching terminals. **Series 66000, 67000** mount with only two #6-32 machine screws (not furnished). Two #6-32 tapped studs ("stand offs") are integral with the frame and are used to provide proper positioning of the switches. Depth behind panel 1 1/2" (2-C switching); 2 3/8" (4-C switching). Series 66000 is **2 7/32" high;** Series 67000 is 1 1/16" high. Series 66000 is a non-illumination companion to the Series 67000. Utilizes same large square white pushbutton, but less lamp socket terminal board and lamp sockets. Only the most commonly used switch assemblies are listed here:

SERIES 66000/2-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
66021K-506	66023-506	66027-506	2	$ 3.40
66041K-506	66043-506	66047-506	4	6.00
66061K-506	66063-506	66067-506	6	8.60
66081K-506	66083-506	66087-506	8	11.20
66101K-506	66103-506	66107-506	10	13.80
66121K-506	66123-506	66127-506	12	16.40

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
66022-506	2	$3.10	66082-506	8	$10.00
66042-506	4	5.40	66102-506	10	12.30
66062-506	6	7.70	66122-506	12	14.60

SERIES 67000/2-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
67021K-506	67023-506	67027-506	2	$ 3.70
67041K-506	67043-506	67047-506	4	6.70
67061K-506	67063-506	67067-506	6	9.70
67081K-506	67083-506	67087-506	8	12.70
67101K-506	67103-506	67107-506	10	15.70
67121K-506	67123-506	67127-506	12	18.70

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
67022-506	2	$3.40	67082-506	8	$11.50
67042-506	4	6.10	67102-506	10	14.20
67062-506	6	8.80	67122-506	12	16.90

SERIES 66000/4-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
66021K-512	66023-512	66027-512	2	$ 3.90
66041K-512	66043-512	66047-512	4	7.00
66061K-512	66063-512	66067-512	6	10.10
66081K-512	66083-512	66087-512	8	13.20
66101K-512	66103-512	66107-512	10	16.30
66121K-512	66123-512	66127-512	12	19.40

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
66022-512	2	$3.60	66082-512	8	$12.00
66042-512	4	6.40	66102-512	10	14.80
66062-512	6	9.20	66122-512	12	17.60

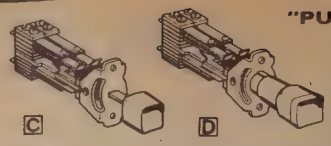
SERIES 67000/4-C PER STATION

Interlock with Lock-Out	All-Lock	Push-Lock/ Push-Release	No. of Stations	U.S.A. List Price
67021K-512	67023-512	67027-512	2	$ 4.20
67041K-512	67043-512	67047-512	4	7.70
67061K-512	67063-512	67067-512	6	11.20
67081K-512	67083-512	67087-512	8	14.70
67101K-512	67103-512	67107-512	10	18.20
67121K-512	67123-512	67127-512	12	21.70

Part No. Non-Lock	No. of Stations	U.S.A. List Price	Part No. Non-Lock	No. of Stations	U.S.A. List Price
67022-512	2	$3.65	67082-512	8	$13.50
67042-512	4	7.10	67102-512	10	16.70
67062-512	6	10.30	67122-512	12	19.90

METAL BARRIERS FOR SERIES 67000

F Sturdy wire barriers fit between pushbuttons and prevent accidental simultaneous actuation of adjacent pushbuttons. Can be installed on Series 67000 only.
Switchcraft Part No. P-2359 ..... U.S.A. List Price **$1.25** per pkg. of 25



"PUSH-PUSH" SWITCHES

Push-to-lock, push-to-release or momentary action push-button switches. Welded cross-bar palladium contacts rated at 3 amps, 300 watts, max., non-inductive load. Mount with two 3-48 screws (not supplied) on 5/8" centers. Depth behind panel, 2 7/8". **Series 5000, Fig. C,** non-illuminated, supplied with square brown button. **Series 15000, Fig. D,** illuminated; available in three lighting arrangements, "L" button lights in "IN" position; "M" button lights in "OUT" position; "N" button lights in "IN" and "OUT" positions. Series 15000 part numbers listed below provide "L" type lighting. For "M" type prefix part no. with "M"; for "N" type prefix part no. with "N". Series 15000 supplied less lamp. 6V or 28V lamps can be used.
*Add suffix letter "L" to part number to indicate locking type.

NON-ILLUMINATED SERIES 5000

Part Number Non-Locking*	Action	Schematic Circuit	U.S.A. List Price
5006	D.P.D.T.	2-C	$ 7.20
5012	4 P.D.T.	4-C	9.60

ILLUMINATED SERIES 15000

15003	S.P.D.T.	1-C	$ 9.05
⊕15006	D.P.D.T.	2-C	—
15012	4 P.D.T.	4-C	12.20

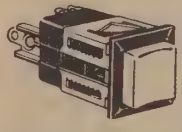
ILLUMINATED "LITTEL-LITE" SWITCHES



Series 210 "Littel-Lite" Switches are unusually small, momentary contact, illuminated pushbutton types. Requires minimum panel space; ideal for limited space applications and press-to-test circuits. One-piece, clear plastic button and shaft is illuminated by a single miniature lamp, 6V or 28V. Lamps are not furnished, see lamp listing below. Includes kit of 4 color chips (red, amber, green, and yellow), can be inserted in switch at any time. Nickel silver spring contacts are recommended for low lever circuits where contact resistance is not important. Also available, fine silver contacts (Part No. suffix "S") rated at 3 amps, 300 watts, max., A.C. non-inductive load. Lighting circuit is independent of switching circuit. Mounts in single 3/8" hole in panels up to 1/4" thick; depth behind panel 1 3/16".

Part Number	Action	Schematic Circuit	U.S.A. List Price
211	S.P.S.T. n.o.	1-A	$1.95
213	S.P.D.T.	1-C	2.40
211S	S.P.S.T. n.o.	1-A	2.25
213S	S.P.D.T.	1-C	2.65

"UNISWITCH" SWITCH



New, low cost, momentary action pushbutton switches. Only 1 1/16" sq. and mount in a single panel cutout. .615" sq. from front of panel. Contacts rated at 250 ma., 30 watts max., A.C. non-inductive load. **Series US** non-illuminated, **Series LUS** illuminated. Use one 6V, 1/4 watt, T-1 3/4 bi-pin lamp. (Not supplied with switch.) Lamps replaced from front of panel. Both switches incorporate a special "Adjusto-Clip" which allows simple, "snap-lock" mounting. The "Uniswitch" switches mount in panels 13/16" min. to 17/64" max. thick in .615" sq. holes. Depth behind panel only 1 5/16" max. "Uniswitch" switches available in 1-A circuit (SPST n.o.).

Part Numbers

Pushbutton Colors					U.S.A. List Price
Red	Green	Blue	White	Yellow	
LUS-01-1	LUS-03-1	LUS-04-1	LUS-05-1	LUS-08-1	$1.90
US-01-1	US-03-1	US-04-1	US-05-1	US-08-1	1.50

LUS Series—Illuminated
US Series—Non-illuminated

LAMPS FOR ILLUMINATED SWITCHES

The "Push-Lite" switch accepts 6 different incandescent flange base lamps. The "NF-Lite" and "Littel-Lite" switches accept 2 different screw base lamps. The "Push-Push" accepts 5 different incandescent flange base lamps. "Uniswitch" accepts one 6V bi-pin lamp. Switches are not supplied with lamps. When ordering these switches be sure to specify:

Part No.	Used with Switch	Voltage	Lamp Base	Ind. No.	U.S.A. List Price
P-1217	"NF-Lite" "Littel-Lite"	6	Screw	1768	$1.35
P-1218	"NF-Lite" "Littel-Lite"	28	Screw	335	2.00
P-1593-1	"Push-Lite" "Push-Push"	28	Flange	327	1.50
P-1593-2	"Push-Lite" "Push-Push"	6	Flange	328	1.20
P-1593-5	"Push-Lite" "Push-Push"	6	Flange	377	1.50
P-1593-6	"Push-Lite" "Push-Push"	28	Flange	387	1.25
P-1593-7	"Push-Lite" "Push-Push"	6	Flange	381	1.55
*P-1890	"Push-Lite"	6	Flange	718	3.50
P-2290	"Uniswitch"	6	Bi-Pin	7377	1.60

*T-1 subminiature lamp. Must use with **No. T-1 Lamp Adapter.**

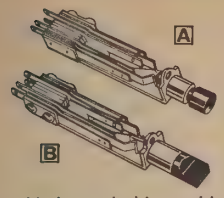
LAMP ADAPTER

Lamp Adapter, **Part No. T-1,** converts T-1 lamp base to a T-1 3/4 lamp base. Adapter permits use of T-1 (P-1890) midget flange base in sockets designed for T-1 3/4 lamps such as on Series 67000.
Switchcraft Part No. T-1 ..... U.S.A. List Price **$0.75**

Trade Discount Applies To List Prices Only
© United Technical Publicatio

Pushbutton Switches

SWITCHCRAFT INC.



"T-SWITCH" SWITCHES

Rugged, long frame switches for quality communication equipment. Welded cross-bar palladium contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires minimum of panel space, only $^{9}/_{16}$"x$^{13}/_{16}$"; $2^{7}/_{8}$" depth behind panel. Series 11000, Fig. A, pushbutton T-Switch. Available in momentary action and push-to-lock, pull-to-release action. Series 11200, Fig. B, two position turn button "T-Switch". Available in non-locking and locking action. Black button with white arrow to indicate switching position.

*Add Suffix "L" to Part Numbers to Indicate Locking Type.

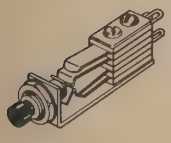
A PUSHBUTTON—SERIES 11000

Part No. Non-Locking*	Action	Schematic Circuit	U.S.A. List Price
11003	S.P.D.T.	1-C	$4.65
11006	D.P.D.T.	2-C	5.80
11006D	D.P.D.T.	2-D	5.80
11012	4 P.D.T.	4-C	7.90

B TURN BUTTON—SERIES 11200

11203	S.P.D.T.	1-C	$4.65
11206	D.P.D.T.	2-C	5.80
11206D	D.P.D.T.	2-D	5.80
11212	4 P.D.T.	4-C	7.90

MINIATURE "TF" BUTTON SWITCHES



"Tiny Frame" switches. Small, sturdily constructed, provides simple, direct acting pushbutton switching for use where space is at a premium. Available in Series 970L push-to-lock, pull-to-release; or Series 970, momentary action. Nickel silver springs, integral contacts, recommended for low level circuits where contact resistance is unimportant. Requires only $1^{19}/_{32}$" depth behind panel; mounts in single $^{1}/_{4}$" hole in panels up to $^{3}/_{32}$" thick.

SERIES 970—NON-LOCKING

Part No.	Action	Schematic Circuit	U.S.A. List Price
976	D.P.D.T.	2-C	$1.70

SERIES 970L—LOCKING

976L	D.P.D.T.	2-C	$1.95

"CordMASTER" PENDANT SWITCH

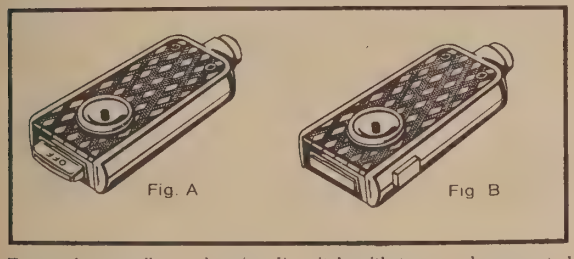
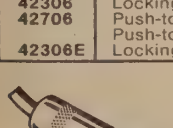


Fig. A Fig. B

Extremely versatile pendant (cord) switch with top or edge operated pushbutton operation, illuminated and non-illuminated. Attractively patterned stainless steel sheath fits over white shock resistant thermoplastic switch housing to provide greater strength. Series 42000, Fig. A, has top operated pushbutton action. Three standard functions available: Non-Lock—momentary action; Locking—button locks when depressed, releases when side button is depressed; Push-to-Lock, Push-to-Release—button locks when depressed and is released when depressed again. Series 42000E, Fig. B, has edge operation; supplied with "L" type illumination (top jewel lights when button is depressed). Illumination supplied by Ind. No. 377, 6 V miniature, T-1 $^{3}/_{4}$ flange base lamp (not supplied with switch). Part No. listed has locking function with front button release. Both Series have spring tempered nickel silver contact springs with cross-bar welded palladium contacts rated at 2 amps, 200 watts, max., A.C., non-inductive load. This switch is not recommended for 120 V A.C. line switching. Switches accept cables up to .270" dia. Overall dimensions: $1^{3}/_{4}$" W. x $3^{11}/_{16}$" L. x $^{5}/_{8}$" H.

Part No.	Function	Action	Schematic	U.S.A. List Price
42206	Non-Lock	D.P.D.T.	2-C	$ 9.45
42306	Locking	D.P.D.T.	2-C	10.00
42706	Push-to-Lock, Push-to-Release	D.P.D.T.	2-C	10.50
42306E	Locking	D.P.D.T.	2-C	11.05

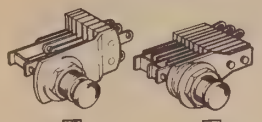
"CORD-SWITCH" SWITCHES



Attractive cord mounted switch for remote control applications. Momentary action. Rated at 250 mils, A.C., non-inductive load, 30-watts max. Part Nos. E-903 and E-913 have bright nickel plated brass housing. Part Nos. EP-903 and EP-913 feature a molded black plastic housing. Housing dia. $^{11}/_{16}$", length $2^{3}/_{16}$".

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
E-903	E-913	S.P.D.T. Break-Make	1-C	$2.50
EP-903	EP-913	S.P.D.T. Break-Make	1-C	2.25

NON-LOCKING FLAT FRAME SWITCHES



FF Switches. Fig. E, Series 1000. Flat frame construction provides multiple pole switching with minimum depth behind panel. Fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. One piece black button and shaft. $^{3}/_{8}$" diameter threaded shank; mounts in panels up to $^{1}/_{4}$" thick.

NF Switches. Fig. F, Series 4000, same as FF Switches, except smaller spring design, ideal for mounting in ultra-compact equipment. Only $^{1}/_{2}$" W.; $1^{5}/_{8}$" L.; mounts in $^{3}/_{8}$" hole in panels up to $^{5}/_{32}$" thick.

Part Numbers Series 1000	Part Numbers Series 4000	Action	Schematic Circuit	U.S.A. List Price
1001	4001	S P S T no	1-A	$1.40
1003	4003	S.P.D.T.	1-C	1.55
1004	4004	D P S.T. no	2-A	1.70
1006	4006	D P D T	2-C	1.95
1009	4009	3 P D T	3-C	2.80

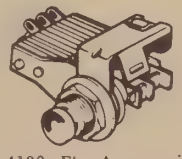
"TINY-SWITCH" PUSHBUTTON SWITCHES



Series 950, red button, and Series 960, black button, subminiature pushbutton switches for limited space applications. Integral contacts suitable for low level circuits where contact resistance is not important. Mounts in $^{1}/_{4}$" hole in panels up to $^{3}/_{32}$" thick; depth behind panel $^{3}/_{8}$".

Part Number Red Button	Part Number Black Button	Action	Schematic Circuit	U.S.A. List Price
951	961	S P S T no	1-A	$1.05
952	962	S P S T nc.	1-B	1.05
953	963	S P D T.	1-C	1.25

ILLUMINATED "NF-LITE" SWITCHES



Series 4100 and 4200 "NF-LITE" illuminated switches indicate switching and circuit functions at a glance. Flat frame construction provides multiple pole momentary action switching. Lighting circuit is independent of switching circuit. Ideal for control panel or press-to-test applications. Contacts are fine silver rated at 3 amps, 300 watts max., A.C., non-inductive load.

Series 4100, Fig. A, uses single miniature lamp, 6V or 28V. Light from lamp is filtered through color chip to clear plastic pushbutton. Various colored chips can be inserted at any time. Series 4200, Fig. B, same as Series 4100, except utilizes two lamps for greater illumination or color coding of two circuit conditions. Both series require $^{11}/_{16}$" min., $1^{5}/_{16}$" max., depth behind panel depending on size of stack; mounts in $^{3}/_{8}$" hole in panels up to $^{1}/_{4}$" thick. Series 4100 furnished with one kit of 4 color chips (red, amber, green, and yellow). Series 4200 furnished with two kits. Lamps must be purchased separately. See lamp listing on page 9.

SERIES 4100

Part Number	Action	Schematic Circuit	U.S.A. List Price
4106	D.P.D.T.	2-C	$2.75
4109	D.P.D.T.	3-C	3.55

SERIES 4200

⊕4201	S P.S T no.	1-A	—
4206	D P.D.T	2-C	$3.90
4209	3 P.D.T	3-C	4.50

"BOX SWITCH"

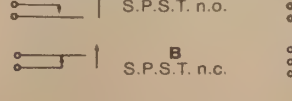


Series BX. Miniature, momentary action, pushbutton switch offers broad switching capabilities in minimum panel space. $^{11}/_{16}$" square switch requires $^{55}/_{64}$" min. to $1^{5}/_{64}$" max. depth behind panel. Molded plastic body protects against damaging dust and dirt and prevents bending or disfiguring of contacts caused by excessive handling. Attractive bezel frames pushbutton and acts as built-in escutcheon plate. Unique "Adjusto-Clips" provide snap-in, front of panel, mounting in panels from $^{3}/_{64}$" to $^{17}/_{64}$" thick in .615" sq. holes. Red, black, green, or white pushbuttons. $^{7}/_{64}$" button stroke. Integral slide contacts of special spring tempered phosphor bronze, silver plated, rated at: 250 ma., 30 watts max., A.C., non-inductive load. Evenly spaced solder lug terminals are clearly identifed for ease of wiring.

Part Nos. Red Button	Part Nos. Black Button	Part Nos. Green Button	Part Nos. White Button	Action	Schematic Circuit	U.S.A. List Price
BX-01-1	BX-02-1	BX-03-1	BX-05-1	S P S T n.o.	1-A	$3.45
BX-01-3	BX-02-3	BX-03-3	BX-05-3	S.P.D.T.	1-C	3.60
BX-01-6	BX-02-6	BX-03-6	BX-05-6	D.P.D.T.	2-C	3.95
BX-01-10	BX-02-10	BX-03-10	BX-05-10	D.P.D.T.- D.P.S.T. n.o.	2-C & 2-A	4.50

BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



© United Technical Publications

Trade Discount Applies To List Prices Only

Lever and Pushbutton Switches

"CORDETTE" PENDANT SWITCHES



Small lightweight pendant, momentary action (cord) switches provide remote switching of industrial and commercial instrumentation and control devices. Attractive one-piece grey molded body protects switching controls from dirt and dust. Switch has 1-A (S.P.S.T.) circuit. Integral brass, hard gold contacts rated at 500 MA., 50 watts max., A.C. non-inductive load. Not recommended for use in high voltage circuits. Part No. 921 has phono jax termination molded to body. Mates with Switchcraft molded cable assemblies with phono plug terminations such as 3501, 3501MC, etc. or industry standard phono plugs. Part No. 921K same as 921 except 6′ of 2-cond. unshielded cable molded to switch body. Stripped and tinned cable termination. Overall dimensions $1\frac{3}{16}$″ wide by $2\frac{15}{16}$″ long (not including cable).

Switchcraft Part No. 921 ..... U.S.A. List Price **$4.50**
Switchcraft Part No. 921K ..... U.S.A. List Price **5.25**

"HI-D SWITCH" SWITCHES



Series H-100, H-200—compact momentary action switches. Molded box body protects contact springs. Low electrical leakage, low capacity. Integral fine-silver plated contacts for use in circuits where contact resistance is not critical. One piece plastic button and shaft in Red—Series H-100, and Black—Series H-200. Mounts on $\frac{5}{8}$″ centers in either of two planes: in a single $\frac{3}{8}$″ hole in panels up to $\frac{5}{32}$″ thick. Depth behind panel $1\frac{3}{32}$″.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
H-101	H-201	S.P.S.T. n.o.	1-A	$1.20
H-102	H-202	S.P.S.T. n.c.	1-B	1.20
H-103	H-203	S.P.D.T.	1-C	1.35

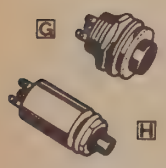
SERIES "DA-SWITCH"



Series DA. Completely enclosed, momentary action pushbutton switch. Anodized aluminum body protects switch contacts from dirt, dust and from being bent. A-B contact arrangement provides a 1-A, 1-B or 1-C circuit when externally wired. Integral hard gold plated contacts rated at 500 MA., 50 watts max., A.C., non-inductive load. Terminals accept AMP Series 53 taper pins. Mount in $\frac{3}{8}$″ hole on $\frac{17}{32}$″ centers. Depth behind panel $\frac{15}{16}$″.

Part No.	Button Color	Part No.	Button Color	U.S.A. List Price
DA-01-3	Red	DA-04-3	Blue	$2.65
DA-02-3	Black	DA-05-3	White	2.65
DA-03-3	Green	DA-08-3	Yellow	2.65

"BUTTON-SWITCH" SWITCHES



Series 903, 923. Unusually small, momentary action pushbutton switches. Enclosed in metal housing; black or red plastic button. Series 903, Fig. G, back panel mounting; $\frac{15}{32}$″ hole, mounts in panels up to $\frac{19}{64}$″ thick. Series 923, Fig. H, front panel mounting; $\frac{1}{4}$″ hole, mounts in panels up to $\frac{5}{32}$″ thick. Both rated at 250 mils, A.C., non-inductive load, 30 watts max.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
903	913	S.P.D.T. "Break-Make"	1-C	$1.55
903D	913D	S.P.D.T. "Make-Break"	1-D	1.55
923	933	S.P.D.T. "Break-Make"	1-C	1.65
923D	933D	S.P.D.T. "Make-Break"	1-D	1.65

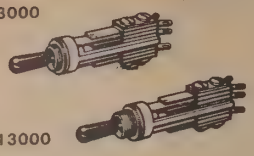
"LITTEL-SWITCH" SWITCHES



Series 100, 200, tiny momentary contact pushbutton switches. Rugged, dependable action. All contacts insulated from panel bushing with interlocking phenolic washers. Series 100 and 200, springs are of nickel silver, recommended only for low level circuits where contact resistance is unimportant. Series 100S and 200S have fine silver contacts rated at 3 amps or 300 watts max., A.C., non-inductive load. One-piece plastic button and shaft in red or black. Mounts in $\frac{3}{8}$″ hole in panels up to $\frac{1}{4}$″.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
101	201	S P S T n o	1-A	$1.05
101S	201S	S.P.S.T. n o	1-A	1.35
102	202	S.P.S.T n c	1-B	1.05
102S	202S	S.P.S T n c	1-B	1.35
103	203	S P D T.	1-C	1.25
103S	203S	S P D T.	1-C	1.55

"LEV-R" SWITCHES



Small lever action switches in two and three position types, locking and non-locking action. Requires half the space usually needed for a lever switch; frame bushing and shaft nickel plated brass. Supplied with locknut and screw-on black knob. Fine silver contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. Non-locking types have spring return. Series 3000 mounts in panels up to $\frac{3}{32}$″ thick; Series 13000 mounts in panels up to $\frac{1}{4}$″ thick. Both Series are $\frac{5}{8}$″ wide; requires $2\frac{1}{4}$″ behind panel; mounts in single $\frac{1}{2}$″ dia. hole. †n.o. center position off. ‡Inter-communications "Talk-Listen" switches, lever locks on one side of neutral and operates non-locking on the other side. *Add suffix letter "L" to Part No. to indicate locking type.

SERIES 3000
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
3001	S.P.S.T. n.o.	1-A		$2.40
3003	S.P.D.T.	1-C		2.85
3004	D.P.S.T. n.o.	2-A		3.10
3006	D.P.D.T.	2-C		3.45
3006D	D.P.D.T.	2-D		3.70
3009	3 P.D.T.	3-C		4.45

THREE POSITION TYPES

3033	S.P.D.T. n.o.	1-C†		$3.10
3034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	3.20
3036	S.P.D.T. Ea. Sec.	1-C	1-C	3.60
3036D	S.P.D.T. Ea. Sec.	1-D	1-D	4.05
3037	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.70
30312	D.P.D.T. Ea. Sec.	2-C	2-C	4.85
30313	D.P.D.T. n.o. Ea. Sec.	2-C†	2-C†	4.85

SERIES 13000
TWO POSITION TYPES

13001	S.P.S.T. n.o.	1-A		$2.60
13003	S.P.D.T.	1-C		3.00
13004	D.P.S.T. n.o.	2-A		3.30
13006	D.P.D.T.	2-C		3.60
13006D	D.P.D.T.	2-D		3.85
13009	3 P.D.T.	3-C		4.80

THREE POSITION TYPES

13033	S.P.D.T. n.o.	1-C†		$3.30
13034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	3.40
13036	S.P.D.T. Ea. Sec.	1-C	1-C	3.95
13036D	S.P.D.T. Ea. Sec.	1-D	1-D	4.20
13037	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.95
130312	D.P.D.T. Ea. Sec.	2-C	2-C	5.10
130313	D.P.D.T. n.o. Ea. Sec.	2-C†	2-C†	5.10

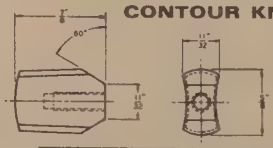
INTER-COM SWITCHES‡
SERIES 3000

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
3033T	S.P.D.T. n.o.	1-C†		$3.10
3037T	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.70

SERIES 13000

13033T	S.P.D.T. n.o.	1-C†		$3.30
13037T	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.95

CONTOUR KNOBS FOR LEVER SWITCHES



Attractive contour knobs designed for today's modern equipment. Series M-1177 knobs, 8-32″ tapped hole for use with "LEV-R" switches Series 3000, 12000 and 13000. Series M-1178 knobs, 6-32″ tapped hole for use with "TEL-EVER" switches Series 6000 and 16000.

Part No. Series 1177	Part No. Series 1178	Color	U.S.A. List Price Per Pkg. of 10
M-1177-1	M-1178-1	Red	$4.50
M-1177-2	M-1178-2	Black	4.50
M-1177-15	M-1178-15	White	4.50

SPECIAL WRENCHES

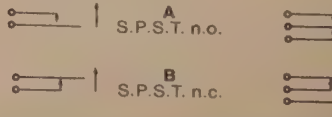


Special Switchcraft wrenches designed to assemble knurled locknuts normally furnished with lever and button switches and jacks. A-1070 wrench fits $\frac{15}{32}$″-32 locknuts; A-1071 for use with $\frac{1}{4}$″-32 knurled locknuts.

Switchcraft Part No. A-1070 ..... U.S.A. List Price **$7.90**
Switchcraft Part No. A-1071 ..... U.S.A. List Price **7.90**

BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.

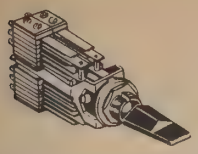


Trade Discount Applies To List Prices Only

© United Technical Publications

Lever Switches

SWITCHCRAFT INC.



"LT SWITCH"

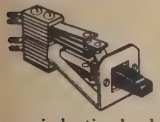
Series 41000. Smallest, high-quality, telephone type lever switch available. Two or three position types with positive locking and/or non-locking action. Special damping block guards against transient leaf bounce. "Can't-Cheat" detent guide prevents accidental actuator by-pass of switching positions. Switch has rigid "U"-shaped, twin girder frame. Its parallel steel members terminate in an interlocked box where spring combinations are mounted. The special long life, nickel-silver springs can be individually fastened to any one of the frame's four switch stacks mounting positions. Welded cross bar palladium contacts rated at 3 amps, 200 watts max., A.C., non-inductive load are standard. Series 41000 mounts on $^{23}/_{32}$" centers in a $^{15}/_{32}$" dia. hole in panels up to $^{1}/_{4}$" thick. Requires only $2^{1}/_{8}$" depth behind panel. The bushing includes a keyway to accept the non-turn ring which prevents switch turning or twisting in panel. *Add suffix "L" to Part No. to indicate locking type.

SERIES 41000
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuits Pos. 1	Pos. 2	U.S.A. List Price
41203	S.P.D.T.	1-C		$4.45
41206	D.P.D.T.	2-C		5.55
41208	4 P.S.T. n.o.	4-A		6.10
41212	4 P.S.T.	4-C		7.50

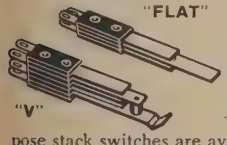
THREE POSITION TYPES

41306	S.P.D.T. Ea. Sec.	1-C	1-C	$5.55
41308	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	6.10
41312	D.P.D.T. Ea. Sec.	2-C	2-C	7.50
41324	4 P.D.T. Ea. Sec.	4-C	4-C	11.05



"LK" LITTEL-KEY SWITCHES

Series 23000. Short frame lever-type switches available in 2 or 3 positions, locking or non-locking types. Ideal for applications where panel mounting space and depth behind panel is at a premium. Fine silver contacts, rated at 3 amps, 300 watts max., A.C., non-inductive load. Frame has 2 tapped No. 3-48 holes for easy mounting. Mounts in panels up to $^{1}/_{8}$" thick. Depth behind panel only $2^{3}/_{32}$". Series 23000 switches are available in circuit combinations from 1-A up to 4-A. We invite your inquiries. Samples and/or quotations will be handled promptly.



STACK SWITCHES

General purpose stack switch assemblies made from a pile-up of various actuator springs, contact springs and lifters. These stack switch assemblies can be used on manually operated devices where switching is operated by cams, levers, pushbuttons and other mechanical devices. General purpose stack switches are available with a "Flat" or "V" actuator spring. Fine silver or palladium cross bar welded contacts are standard, rated at 3 amps, 300 watts max., A.C., non-inductive load. Supplied with pressure plate and two No. 5-40 screws; mount on $^{3}/_{8}$" centers. Height of stack depends on switching circuit; 1-B circuit $^{21}/_{64}$" H., min.; 2-C circuit $^{45}/_{64}$" H., max. Only the most commonly used "Flat" actuator stack switches are listed below. Contact Switchcraft for price and delivery information on "V" actuator spring stack switches.

FLAT ACTUATOR SPRING

Part No.	Contact Material	Action	Schematic Circuit	U.S.A. List Price
AA01AA	Silver	S.P.S.T. n.o.	1-A	$0.95
AA01AB	Palladium	S.P.S.T. n.c.	1-A	1.05
AA03AA	Silver	S.P.D.T.	1-C	1.20
AA03AB	Palladium	S.P.D.T.	1-C	1.40
AA06AA	Silver	D.P.D.T.	2-C	1.70
AA06AB	Palladium	D.P.D.T.	2-C	2.00



STACK SWITCH KITS

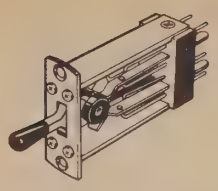
Experimental kits of component parts for assembling switch stacks. Designed to speed the assembly of engineering samples in the lab, aid maintenance men in the field and save time in general replacement. Ideal for mechanical engineers and coin machine servicing; used in relays, electronic organs, etc. Each kit consists of 136 springs in different thicknesses, over 152 phenolic spacers and insulators in various sizes, hard-rubber insulating tubing, two sets of stack assembling pins, two roller assemblies, assorted contacts, etc. Kit No. K-119, consisting of "Tini-Stack" components are miniature variations of standard switch stack springs, spacers, etc. All in compartmented plastic box.

Kit No. K-101. Assorted $^{1}/_{4}$" and $^{3}/_{8}$" mtg. center contact springs and associated parts ..... NET **$12.60**

Kit No. K-102. Assorted $^{1}/_{4}$" mtg. center contact springs and associated parts ..... NET **12.60**

Kit No. K-103. Assorted $^{3}/_{8}$" mtg. center contact springs and associated parts ..... NET **12.60**

Kit No. K-119. "Tini-Stack". Assorted $^{3}/_{16}$" mtg. center contact springs and associated parts ..... NET **12.60**



"LO-CAP" SWITCHES

Series 10000. Low-capacity lever actuated switches, previously referred to as **Federal Anti-Capacity switches.** Specially designed flat actuator springs and round contact springs are wide spaced in a large molded insulating block. This construction eliminates the build-up of induced alternating current between springs. Rugged "U" shaped aluminum frame. Roller actuation for easy lever operation. Available in 2 and 3 position models, locking and non-locking types. Actuator springs have fine silver contacts rated at 1 amp, 100 watts, max., A.C., non-inductive load. Supplied with polished chrome escutcheon plate. Mounts with two No. 6-32 flat head screws (not supplied). Mounting centers $1^{15}/_{16}$". Depth behind panel $3^{7}/_{16}$". †n.o. center position off.
*Add suffix letter "L" to Part No. to indicate locking type.

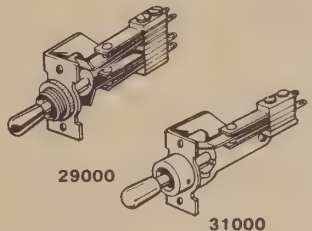
TWO POSITION TYPES

Part No. Non-Locking*	Old Federal No.**	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
10206	—	D.P.D.T.	2-C		$8.40

THREE POSITION TYPES

10307	1425	S.P.D.T.n.o. Ea. Sec.	1-C†	1-C†	$8.40
10313	1424	D.P.D.T.n.o. Ea. Sec.	2-C†	2-C†	9.20
10325	12494	4 P.D.T. n.o. Ea. Sec.	4-C†	4-C†	21.00

**Old Federal Part No. refer to locking type switches only.



"FEATHER-LEVER" SWITCHES

Miniature lever switches, lightweight, compact, mount on $^{7}/_{16}$" centers. Available in 2 and 3 position, locking and non-locking types. Actuator designed with nylon roller for smoother, easy lever operation over entire life of switch. Rugged steel frame withstands rough usage, shock and vibration. Nickel silver springs with fine silver contacts, rated at 2 amperes, 200 watts, max., A.C., non-inductive load. Supplied with black plastic push-on knob. Other push-on knobs, available in 10 colors. See listing below. **Series 29000,** with bushing, mounts in $^{5}/_{16}$" O.D. panel hole. Supplied with locknut. **Series 31000,** is available on "SPECIAL" order in all circuit combinations offered in Series 29000. Contact Switchcraft for price and delivery information. **Series 31000,** mounts with 2 No. 2-56 machine screws. Both Series supplied with black push-on knob. Require only $1^{9}/_{32}$" depth behind panel, mount in panels up to $^{1}/_{8}$" thick. †n.o., center position off. ‡Inter-communications "Talk-Listen" switches, lever locks on one side of neutral and operates non-locking on the other side.
*Add suffix letter "L" to Part No. to indicate Locking type.

TWO POSITION TYPES

Part No. Non-Locking	Part No. Locking	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
29201	29201L	S.P.S.T. n.o.	1-A		$2.30
29203	29203L	S.P.D.T.	1-C		2.65
29206	29206L	D.P.D.T.	2-C		3.20

THREE POSITION TYPES

29303	29303L	S.P.D.T. n.o.	1-C†		$2.90
29304	29304L	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	3.00
29306	29306L	S.P.D.T. Ea. Sec.	1-C	1-C	3.40
29307	29307L	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.45
29312	29312L	D.P.D.T. Ea. Sec.	2-C	2-C	4.40

INTER-COMM SWITCHES‡

29303T	S.P.D.T. n.o.	1-C†		$2.90
29307T	S.P.D.T. n.o. Ea. Sec.	1-C	1-C	3.45



PUSH-ON COLOR KNOBS

Kit of molded plastic knobs. Available in 10 colors. For "Feather-Lever" Switches, Series 29000, 31000. Knobs can be changed quickly—simply pull off present knob and push-on new one. For permanence, use plastic cement.

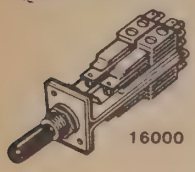
Part No.	Color	Part No.	Color	U.S.A. List Price Per Pkg. of 10
K-108	One of ea. color	K-114	Brown	$0.90
K-109	Red	K-115	Orange	0.90
K-110	Black	K-116	Yellow	0.90
K-111	Green	K-117	Ivory	0.90
K-112	Blue	K-118	Gray	0.90
K-113	White	—	—	0.90

SWITCHCRAFT INC.

Lever Switches



6000



16000

"TELEVER" SWITCHES

Series 6000 and 16000. Rugged telephone type lever switches featuring "T-Beam" frame construction which results in a relatively light construction with sturdiness of a structural "T-Beam". Available in two and three positions, locking and non-locking types. Nylon rollers on the lever actuate the special nickel silver springs, providing smooth action; assures long dependable spring life. Welded crossbar palladium contacts are standard, rated at 3 amps, 300 watts max., A.C., non-inductive load. Series 6000 mounts with four No. 3-48 machine screws. Mounting centers 17/32" x 13/16", mounts in panels up to 1/4" thick. Series 16000 features single hole mounting; 15/32"-32 threaded bushing. Mounts in 1/2" dia. hole in panels up to 1/4" thick. Part No. 545, "Stop Plate" provides positive "stops" for two position action. Part No. 540, "Stop Plate" provides non-locking or momentary action. The "Stop Plates" can be changed in the field. Both Series switches supplied with black insulated knob. All have tinned solder lug terminals. *Add suffix letter "L" to Part No. to indicate locking type. Series 16000 non-locking type can be converted to locking type by removing "Stop Plate".

SERIES 6000
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
6006	D.P.D.T.	2-C		$5.55
60012	4 P.D.T.	4-C		7.40
60012D	4 P.D.T.	4-D		8.30
60024	8 P.D.T.	8-C		11.30

THREE POSITION TYPES

6036	S.P.D.T. Ea. Sec.	1-C	1-C	$5.55
6038	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	6.15
60312	D.P.D.T. Ea. Sec.	2-C	2-C	7.40
60312D	D.P.D.T. Ea. Sec.	2-D	2-D	8.35
60316	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	9.75
60324	4 P.D.T. Ea. Sec.	4-C	4-C	11.30

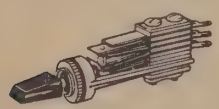
SERIES 16000
TWO POSITION TYPES

16006	D.P.D.T.	2-C	$5.80
16006D	D.P.D.T.	2-D	6.50
16008	4 P.S.T. n.o.	4-A	6.50
16009	3 P.D.T.	3-C	6.95
160012	4 P.D.T.	4-C	7.90
160012D	4 P.D.T.	4-D	8.70
160024	8 P.D.T.	8-C	11.55

THREE POSITION TYPES

16036	S.P.D.T. Ea. Sec.	1-C	1-C	$5.80
16036D	S.P.D.T. Ea. Sec.	1-D	1-D	6.50
16038	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	6.50
160312	D.P.D.T. Ea. Sec.	2-C	2-C	7.90
160312D	D.P.D.T. Ea. Sec.	2-D	2-D	8.70
160316	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	10.20
160324	4 P.D.T. Ea. Sec.	4-C	4-C	11.55

Part No. 530 Escutcheon Plate. For Series 6000 Telever switches with 4 mounting screws . . . . . U.S.A. List Price **$1.05**
Part No. 540 Stop Plate. For Series 16000 Telever switches. To convert from locking to non-locking action. Includes two mounting screws . . . . . U.S.A. List Price **$0.35**
Part No. 545 Stop Plate. For Series 16000 Telever switches. To convert from 3-position to 2-position. Includes two mounting screws. U.S.A List Price **$0.35**



"LEV-R" SWITCHES

"LEV-R" Switches: Series 28000. Compact, lever action switch in two and three position, locking and non-locking types. Smooth, easier lever action assured with special nylon roller. Supplied with locknut, non-turn ring (slips over slotted bushing to prevent switch from turning in mounting hole), and a black knob which is molded directly to the lever. Eliminates loose or lost knobs. Fine silver contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. Mounts on 5/8" centers in panels up to 3/32" thick. Requires only one 15/32" dia. mounting hole for bushing and one 1/8" dia. hole for non-turn device; depth behind panel, 2 1/4". *Add suffix letter "L" to Part No. to indicate locking type. †Center position open (OFF).

TWO POSITION TYPES

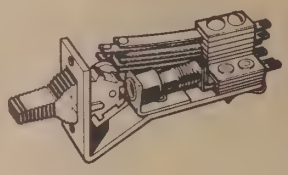
Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
28201	S.P.S.T. n.o.	1-A		$3.20
28203	S.P.D.T.	1-C		3.80
28206	D.P.D.T.	2-C		4.40

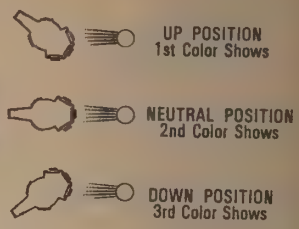
THREE POSITION TYPES

28304	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	$4.15
28306	S.P.D.T. Ea. Sec.	1-C	1-C	4.55
28307	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	4.65
28312	D.P.D.T. Ea. Sec.	2-C	2-C	5.65

3-COLOR ILLUMINATED LEVER SWITCHES

"LEVER-LITE" SWITCHES SERIES 25000





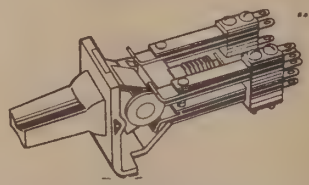
"Lever-Lite", Series 25000. Illuminated switches indicate positions at a glance. Individual color chips can be inserted in each switch position. Available in 2 or 3 position, locking and non-locking types. Reduces panel space; minimizes costly wiring. Supplied with 6V miniature screw base lamp and six color chips, Red, Green, Amber, Yellow, Blue and White; 28V lamp also available. See lamp listing below. Nickel-silver springs, silver contacts rated 3 amps, 300 watts max., A.C., non-inductive load. Requires only 2 1/4" depth behind panel, can be mounted on 5/8" centers in panels up to 3/32" thick.
Size: 2 1/4" L. x 39/64" W. x 1 1/32" H. *Add suffix letter "L" to Part No. to indicate locking type.

TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
25201	S.P.S.T. n.o.	1-A		$4.85
25203	S.P.D.T.	1-C		5.15
25206	D.P.D.T.	2-C		6.05
25209	3 P.D.T.	3-C		6.95

THREE POSITION TYPES

25304	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	$5.50
25306	S.P.D.T. Ea. Sec.	1-C	1-C	6.05
25308	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	6.70
25312	D.P.D.T. Ea. Sec.	2-C	2-C	7.25



"LEVER-LITE" SWITCHES SERIES 27000

"Lever-Lite", Series 27000 illuminated lever switch, three color lighting identical to Series 25000, but utilizes a larger, contoured lever and larger, factory installed color filters. Available in 2 or 3 position, locking and non-locking types. Mounts on 3/4" centers, in panels up to 3/32" thick. Depth behind panel 2 3/16". Nickel silver springs with fine silver contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. On standard 2 position type AMBER lights in the "NEUTRAL" position; GREEN lights in the "DOWN" position. On 3 position types, RED lights in the "UP" position, AMBER in "NEUTRAL" position and GREEN in the "DOWN" position. Supplied with a 6V lamp. †n.o. center position off. *Add suffix "L" to part number to indicate locking type.

TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
27206	D.P.D.T.	2-C		$7.90
27212	4 P.D.T.	4-C		9.70

THREE POSITION TYPES

27306	S.P.D.T. Ea. Sec.	1-C	1-C	$7.90
27307	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	8.05
27312	D.P.D.T. Ea. Sec.	2-C	2-C	9.70

LAMPS FOR "LEVER-LITE" SWITCHES

Lamps are mounted in a "snap-out" frame assembly. A 6V lamp is furnished with each of the above listed switches. Specify the following part numbers when ordering replacement lamps:

Part No.	Voltage	Base	Ind. No.	U.S.A. List Price
P-1217	6V	Screw	1768	$1.35
P-1218	28V	Screw	Hudson 369	2.00

ESCUTCHEON PLATES FOR "LEVER-LITE" SWITCHES

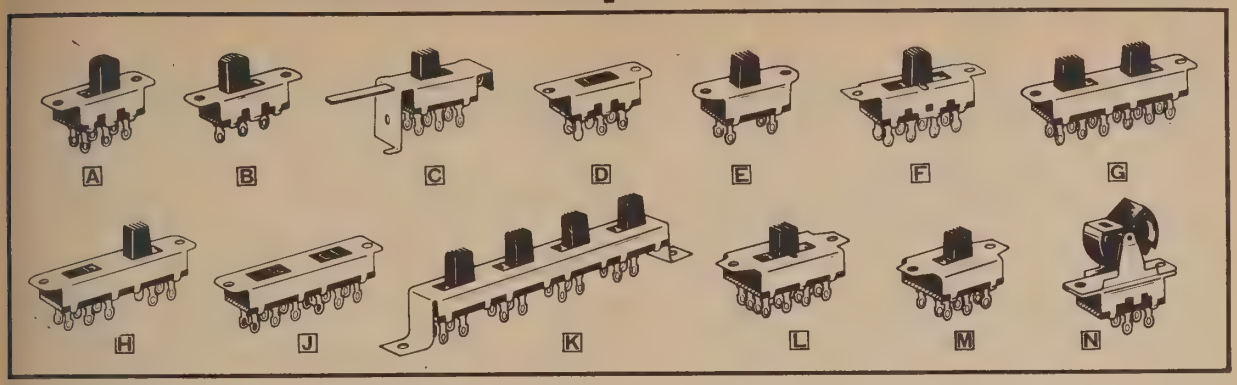
For easy and convenient mounting of Series 25000 and 27000 Switches. Satin black finish. Eliminates punching rectangular hole in mounting panel. Part No. 531 for Series 25000, complete with two No. 3-48 black machine screws. Part No. 532 for Series 27000, complete with two No. 2-56 machine screws.
Switchcraft Part No. 531 . . . . . U.S.A. List Price **$0.25**
Switchcraft Part No. 532 . . . . . U.S.A. List Price **0.35**

AMBIENT LIGHT SHIELD

For use where "LEVER-LITE" Series 27000 switches are mounted on minimum centers. Shield gives positive separation of lighting between switches. Shield is placed between panel and switch, held in place by mounting screws. Two shields can be used per switch if desired.
Switchcraft Part No. P-1864 . . . . . U.S.A. List Price **$0.20**

Trade Discount Applies To List Prices Only
© United Technical Publicatio

"double-wipe" Slide Switches



New low-cost, precision "double-wipe" slide switches. Switches use special U-shaped, bifurcated sliders to assure continuous wiping action. Contacts rated at 0.5 amp, D.C., 3 amps, A.C., 125 volts non-inductive load. Standard solder lug terminals have a $\frac{5}{64}$" dia. center hole and wrap-around notch for wiring ease. Most switches furnished with black $\frac{11}{32}$" knob and .140" ($\frac{9}{64}$") dia. mounting holes. Nos. 46206LFR, 46256LFR and 47227LF flush screwdriver actuated knob. All slide and rocker switches are U.L. approved unless otherwise noted. **See next page for slide switch contact arrangement.**

SERIES 46000R
2 AND 3 POSITION GENERAL PURPOSE TYPE

Series 46000R rated at 3 amps, A.C., 0.5 amp. D.C. 125 volts, non-inductive load; except shorting types 46203LRS and 46206LRS, rated at 0.5 amp, 125 volts, D.C. only. No. 46206MP, 2 position momentary switch with $1\frac{1}{8}$" plunger and extruded and tapped 6-32 mounting holes. Nos. 46206LFR and 46256LFR feature a flush screwdriver slotted knob. No. 46204MBR pushbutton switch with $\frac{5}{16}$" knob. Series 46000R U.L. listed as approval.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
46201MR	S.P.S.T. Momentary	I	B	$0.40
46202LR	S.P.S.T. Locking	II	A	.35
46202MR	S.P.S.T. Momentary	I	B	.40
46203LR	S.P.D.T. Locking	III	A	.40
46203LSR	S.P.D.T. Locking	III	A	.45
46203MR	S.P.D.T. Momentary	III	B	.45
46204LR	D.P.S.T. Locking	2-II	A	.45
46204MR	D.P.S.T. Momentary	2-I	B	.50
46206LR	D.P.D.T. Locking	2-III	A	.50
46206LSR	D.P.D.T. Locking	2-III	A	.55
46206MR	D.P.D.T. Momentary	2-III	B	.60
46206MP	D.P.D.T. Momentary	2-III	C	.75
46206LFR	D.P.D.T. Locking	2-III	D	.65
46256LFR	D.P.D.T. Locking	V	D	.70
46204MBR	D.P.S.T. Momentary	IV	E	.65

Three position types with positive center detent action. All have shutter type dust cover to prevent dirt and dust from contaminating switch contacts. Series 46300LDR type—locking in all positions. Series 46300MDR type—momentary action on either side of center. Center position OFF. Series 46300TDR type—momentary one side of center (locking) position, locking other side.

Part No.	Circuitry	Action Positions #1 Center #2 Locking		Schematic	Fig.	U.S.A. List Price
46311LDR	S.P.T.T.	L	L	VI	F	$0.65
46311MDR	S.P.T.T	M	M	VI	F	.75
46311TDR	S.P.T.T	L	M	VI	F	.70
46313LDR	D.P.T.T.	L	L	2-VI	F	.70
46313MDR	D.P.T.T	M	M	2-VI	F	.80
46313TDR	D.P.T.T.	L	M	2-VI	F	.75

SERIES 47000 TANDEM SLIDE SWITCHES

Compact, two-gang, slide switches. Series 47000L two independent knobs: Part No. 47206LC, single knob construction with coupling link between knobs. One knob $\frac{11}{32}$", other flush screwdriver operated. No. 47227LF two knobs flush with switch housing, one knob screwdriver actuated. Knobs are coupled. Shorting bar each section. Rated at 0.5 amp, D.C., 3 amps, A.C., 125 volts non-inductive load. U.L. listed as approved.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
47202L	S.P.S.T.-S.P.S.T. Locking	II II	G	$0.75
47206L 47206LC	D.P.D.T.-D.P.D.T. Locking	2-III 2-III	G H	1.10 1.10
47227LF	D.P.D.T.-D.P.D.T. Locking	V V	J	1.75

SERIES 48000 QUADRUM SLIDE SWITCHES

Four-gang slide switches with independent knob operation. $\frac{11}{32}$" knob height and .153" mounting holes.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
48208L*	4 S.P.S.T. Locking	4-II	K	$1.80
48224L*	4 D.P.D.T. Locking	8-III	K	2.40

*Not submitted for U.L. approval.

SERIES 49000
3 POSITION GENERAL PURPOSE TYPE

Large, heavy duty 3 and 4 pole slide switches. Knob height ½". Mounting holes $\frac{9}{64}$". Series 49000L, non-shorting. U.L. listed as approved.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
49309L	3 P.D.T. Locking	3-III	L	$0.95
49329L	3 P.T.T. Locking	3-VI	L	1.00
49312L	4 P.D.T. Locking	4-III	L	1.00
49331L	4 P.T.T. Locking	4-VI	L	1.10

SERIES 50000
2 POSITION GENERAL PURPOSE TYPE

Series 50000L and M, non-shorting; Series 50000LS and MS; with shorting contacts. U.L. listed as approved.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
50207L	3 P.S.T. Locking	3-II	M	$0.90
50207M	3 P.S.T. Momentary	3-II	M	1.05
50208L	4 P.S.T. Locking	4-II	M	.95
50209L 50209LS	3 P.D.T. Locking	3-III	M	1.00 1.05
50209M 50209MS	3 P.D.T. Momentary	3-III	M	1.15 1.20
50212L 50212LS	4 P.D.T. Locking	4-III	M	1.05 1.10

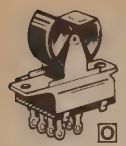
SERIES 51000
2 POSITION ROCKER SWITCHES

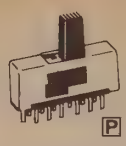
Compact rocker switches offer same quality and dependability as standard slide switches. Rugged rocker bracket is precision welded to standard slide switch housing. Rocket pivots between bracket members to allow free actuation of switch mechanism. Black rocker.

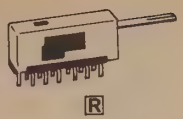
Part No.	Action	Schematic	Fig.	U.S.A. List Price
51201MR	S.P.S.T. n.o. Momentary	I	N	$0.95
51202LR 51202MR	S.P.S.T. n.c. Locking S.P.S.T. n.c. Momentary	II II	N N	.90 .95
51203LR 51203MR	S.P.D.T. Locking S.P.D.T. Momentary	III III	N N	.95 .90
51204LR 51204MR	D.P.S.T. Locking D.P.S.T. Momentary	2-I 2-I	N N	1.00 1.05
51206LR 51206MR	D.P.D.T. Locking D.P.D.T. Momentary	2-III 2-III	N N	1.05 1.00

SWITCHCRAFT INC.

Switches


O


P


R

SERIES 52000
2 POSITION ROCKER SWITCHES

Larger than Series 51000, offering 3 and 4 poles of switching. Series 52000L, non-shorting; Series 52000LS with shorting contacts. U.L. listed as approved.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
52207L	3 P.S.T. Locking	3-II	O	$1.25
52208L	4 P.S.T. Locking	4-II	O	1.30
52209L	3 P.D.T. Locking	3-III	O	1.35
52209LS				1.40
52212L	4 P.D.T. Locking	4-III	O	1.40
52212LS				1.45

SERIES 53000
2 POSITION MINIATURE SLIDE SWITCHES

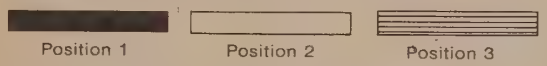
Printed circuit terminals snap easily in P.C. boards. Nos. 53206L, 53212L have $\frac{1}{2}$" knobs, plunger. No. 53212MP is constructed with a momentary plunger.

Part No.	Action	Schematic	Fig.	U.S.A. List Price
53206L*	D.P.D.T. Locking	2-III	P	$1.20
53212L*	4 P.D.T. Locking	4-III	P	1.50
53212MP*	4 P.D.T. Momentary	4-III	R	1.70

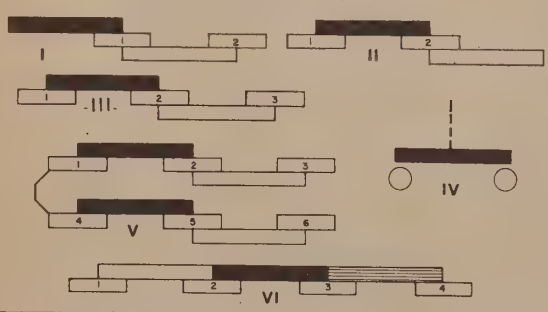
*Not submitted for U.L. approval.

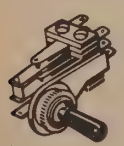
"DW" SLIDE SWITCH CONTACT ARRANGEMENT

Standard "break" before "make" (non-shorting). "Make" before "break" (shorting) switches are available in some models, refer to Series 46000, 49000, 50000 and 52000



BASIC SCHEMATIC CHART





"LEV-R" SWITCHES, SERIES 12000

Small right-angle action switches requiring minimum of depth behind panel. Available in two and three position, locking and non-locking types. Long leaf-type springs insure long switch life. Fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires only $\frac{7}{8}$" depth behind panel, single $\frac{1}{2}$" dia. mounting hole; mounts in panels up to $\frac{3}{32}$" thick. Supplied with nickel plated locknut and removable black pastic knob. †n.o. center position off. *Add suffix letter "L" to Part No. to indicate locking type

TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
12003	S.P.D.T.	1-C		$2.45
12006	D.P.D.T.	2-C		3.05
12006D	D.P.D.T.	2-D		3.35

THREE POSITION TYPES

12033	S P D T n.o	1-C†		$2.75
12034	S P S T n.o Ea. Sec	1-A	1-A	2.85
12035	S P S T n.c Ea. Sec	1-B	1-B	2.85
12036	S P D.T Ea Sec	1-C	1-C	3.20
12036D	S P D T Ea Sec	1-D	1-D	3.45
12037	S P D.T Ea Sec.	1-C†	1-C†	3.35

THREE POSITION TYPES
LOCKING ONE SIDE—NON-LOCKING OTHER SIDE

12033T	S P D.T n o	1-C†		$2.75
12037T	S P D T Ea Sec	1-C†	1-C†	3.35



"RS" SWITCHES

Rugged rotary switches, available in various multiple circuits, two and three position types, locking or non-locking action. Ideal for communication, musical and test equipment applications. Fibre cam actuates long, leaf-type springs resulting in easy action; good wiping action of contacts. Fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires only $\frac{7}{8}$" depth behind panel, mounts in single $\frac{3}{8}$" hole in panels up to $\frac{1}{4}$" thick.
*Add suffix letter "L" to part number to indicate locking type.

TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
2003	S.P.D.T.	1-C		$2.05
2006	D P.D.T.	2-C		2.75

THREE POSITION TYPES

2036	S.P.D.T. Ea. Sec.	1-C	1-C	2.75



"double-wipe"

SLIDE SWITCH SAMPLER

Kit consisting of 15 of the most popular and frequently used "double-wipe" slide switches in a handy reusable plastic case. Offers the engineer or technician a complete line of switches for immediate use or evaluation. All types of slide switches represented—locking and non-locking action; 2 and 3 position types; one and two knobs; knob, rocker, plunger and screwdriver actuated switches; circuitry from SPDT to 4 PTT. Kit No. K-122A contains one each of the following: 46203LSR, 46203MR, 46206LR, 46256LFR, 46313LDR, 46313MDR, 46313TDR, 47206L, 47227LF, 49331L, 50212L, 51206LR, 52212L, 53212L, and 53212MP.
Switchcraft Part No. K-122A . . . . . U.S.A. List Price **$12.25**



"CRADLE-SWITCH"

High quality "Cradle Switch" holds W.E. and other standard telephone industry handsets. Housing is sturdy, yet flexible enough to withstand shocks and vibrations. Housing includes specially designed Hook Switch with a 4-C (4 P.D.T.) contact arrangement. Switch has long silver springs with gold alloy contacts rated at 1 amp., 100 watts max., A.C., non-inductive load. Ideal for use in critical low level audio circuits such as in communication and instrumentation applications.

Part No.	Description	U.S.A. List Price
14412G	Handset Cradle Switch. Black housing. 4-C (4 P.D.T.) circuit.	$8.40
14512G	As above, except beige.	8.40
14612G	As above, except white.	8.40


SERIES 14000

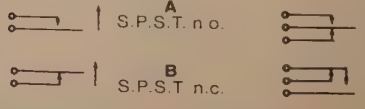
"HOOK SWITCH" SWITCHES

Quality constructed leaf-type switches actuated by a hook (or hanger) such as designed in Series 14000; or by a nylon actuator as in Series 14100G. Ideal for equipment where it is necessary to actuate a circuit by hanging an accessory on a "hook", as a headset, telephone handset or microphone. Series 14000 utilizes fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Series 14100G features welded cross-bar gold alloy contacts rated at 1 amp, 100 watts max., A.C., non-inductive load.

Part No.	Action	Schematic Circuit	U.S.A. List Price
14006	D.P.D.T.	2-C	$3.50
14106G	D.P.D.T.	2-C	3.85

BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



Trade Discount Applies To List Prices Only
© United Technical Publicatio

Q-G® Audio Connectors

SWITCHCRAFT INC.

U.S. Patent No. 3,219,961 Canadian Patent No. 761,114

AUDIO CONNECTORS WITH COMPLETE GROUNDING PROVISIONS!

Switchcraft's "Quick-Ground" connectors feature a separate "Ground-Terminal" electrically integral with the connector shell. Ground continuity between mating plugs automatically accomplished through the exclusive "Ground Contactors". Possible loss of insert screw is eliminated by new "Captive Design" Insert Screw. Socket and pin assemblies utilize "wedge-action" to insure firm, reliable positioning in connector shell. Q-G® Series 3, 4 and 5-contact audio connectors, offer 4 and 5-contact versatility when "Ground Terminal" is utilized. Can be used interchangeably with Canon type XLR-3, XLR-4, XLR-5 and Amphenol type 91-850 Series. **°Number of insert contacts or pins must be specified to complete Part Number.**

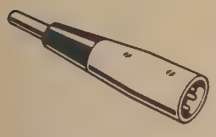
A(°)F CORD PLUGS



Fresh, streamlined design includes rugged, diecast zinc body, satin nickel finish, high-impact resistant thermo-setting plastic socket insert, molded latchlock, dual pressure plates, keyed neoprene relief bushing. Features "Ground Terminal" and "Ground Contactors" offers 4, 5 and 6-contact versatility. Mates with Switchcraft A(°)M and other connectors with similar contact arrangements. Takes 7/32" O.D. cable. Overall length 3 7/32"; dia. 3/4".

Part No.	Insert Contacts	U.S.A. List Price
A3F	3	$2.45
A4F	4	3.05
A5F	5	5.25

A(°)M CORD PLUGS



Has "Captive Design" insert screw, one-piece pin insert assembly easily removable for fast soldering. Polarizing groove. Die-cast zinc shell, satin nickel finish. Mates with Switchcraft A(°)F and other connectors with similar contact arrangements. Brass, silver plated chromate dipped pins to resist tarnishing. Overall length 2 25/32"; dia. 3/4".

Part No.	Insert Pins	U.S.A. List Price
A3M	3	$2.10
A4M	4	2.25
A5M	5	4.25

B(°)M RECEPTACLES



For panel or chassis mounting; locknut accommodates panels up to 1/4" thick. Single hole mounting, can be keyed by using "D" shaped panel hole or S-3519 mounting adapter. Pin insert features "Captive Design" insert screw and "Ground Terminal". Mates with Switchcraft A(°)F and other connectors with similar contact arrangements. Diecast zinc shell, satin nickel finish. Dimensions: Flange 1 7/64" dia.; Barrel 13/16" overall; pin extensions 9/32".

Part No.	Insert Pins	U.S.A. List Price
B3M	3	$3.00
B4M	4	3.15
B5M	5	5.15

B(°)F AUDIO RECEPTACLE

NEW



New panel mount receptacle. Supplied with 1 1/4-18 UNEF spanner nut; mounts in 1 1/4" dia. hole, in panels up to 7/16" thick. Mates with Switchcraft A(°)M, R(°)M, S(°)FM and other connectors with similar pin arrangements. Flange 1 7/16" dia.; Barrel 1 7/16" overall; pin extension 1/4".

Part No.	Insert Contacts	U.S.A. List Price
B3F	3	$5.00
B4F	4	5.25
B5F	5	7.25

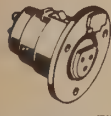
C(°)M RECEPTACLES



Mounts on wall, panel or chassis with three .136" dia. mounting holes. High impact thermosetting plastic pin insert. "Captive Design" insert screw, "Ground Terminal". Pins, brass, silver plated, chromate dipped; resists tarnishing. Mates with Switchcraft A(°)F and other connectors with similar contact arrangements. Dimensions: Flange 1 7/16" dia.; Barrel 13/16" overall; pin extensions 9/32".

Part No.	Insert Pins	U.S.A. List Price
C3M	3	$1.60
C4M	4	1.75
C5M	5	3.75

C(°)F RECEPTACLES



For panel or chassis mounting; has socket insert, push-type latch locking device. Flange has three .136" holes for mounting screws. Mates with Switchcraft A(°)M and other connectors with similar contact arrangements. Dimensions: Flange 1 7/16" dia.; Barrel 1 13/16" overall; pin extension 1/4".

Part No.	Insert Contacts	U.S.A. List Price
C3F	3	$3.20
C4F	4	3.35
C5F	5	5.25

D(°)M RECEPTACLES



Narrow, rectangular flange design receptacle for mounting on compact panel or chassis. Mates with Switchcraft A(°)F and other connectors with similar contact arrangements. Dimensions: Flange 7/8" x 1 7/16"; Barrel 13/16" overall; pin extension 9/32".

Part No.	Insert Pins	U.S.A. List Price
D3M	3	$2.00
D4M	4	2.15
D5M	5	3.65

D(°)F RECEPTACLES



Rectangular flange design receptacle permits close mounting on crowded panel or chassis. Features "Captive Design" loss-proof insert screw, positive latch locking device and high impact thermo-setting socket insert. Mates with Switchcraft A(°)M and other connectors with similar contact arrangements. Dimensions: Flange 1 1/16" x 1 7/16"; Barrel 1 13/64" overall; pin extension 1/4".

Part No.	Insert Contacts	U.S.A. List Price
D3F	3	$3.30
D4F	4	3.45
D5F	5	5.35

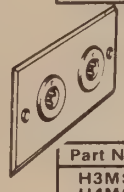
G(°)M TYPE WALL PLATES



Single gang wall plates with a B(°)M male receptacle. Fits standard electrical outlet box. Wall plates available in brushed stainless steel as standard or brushed brass on special order. Dimensions: Wall Plate 4 1/2" H. x 2 3/4" W.

Part No.	Finish	Insert Pins	U.S.A. List Price
G3MS	Stainless Steel	3	$5.20
G4MS	Stainless Steel	4	5.50

H(°)M TYPE WALL PLATES



Two gang wall plates with two B(°)M male receptacles. Mounts in standard electrical switch box (single). Wall plates available in brushed stainless steel as standard or brushed brass on special order. Dimensions: Wall Plate 4 1/2" H. x 2 3/4" W. Six contacts.

Part No.	Finish	Insert Pins	U.S.A. List Price
H3MS	Stainless Steel	3 ea.	$7.30
H4MS	Stainless Steel	4 ea.	7.90

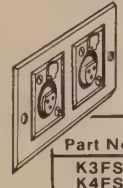
J(°)F TYPE WALL PLATES



Single gang wall plates with a D(°)F female receptacle. Fits standard electrical outlet box. Wall plates available in brushed stainless steel as standard or brushed brass on special order. Dimensions: 4 1/2" H. x 2 3/4" W.

Part No.	Finish	Insert Contacts	U.S.A. List Price
J3FS	Stainless Steel	3	$5.40
J4FS	Stainless Steel	4	5.70

K(°)F TYPE WALL PLATES



Two gang wall plates with two D(°)F female receptacles. Mounts in standard electrical outlet junction box. Wall plates available in stainless steel as standard or brushed brass on special order. Dimensions: 4 1/2" H. x 2 3/4" W.

Part No.	Finish	Insert Contacts	U.S.A. List Price
K3FS	Stainless Steel	3 ea.	$7.70
K4FS	Stainless Steel	4 ea.	8.30

P(°)F PLUG

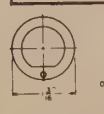
NEW



Female audio connector mounts directly to a flexible gooseneck and/or microphone stem. Diecast zinc housing has a 5/8-27NS-2B internal thread, 9/16" deep. Mate with all female receptacles with similar pin arrangements. Overall length 2 1/4"; dia. 3/4".

Part No.	Insert Contacts	U.S.A. List Price
P3F	3	$2.40
P4F	4	3.00
P5F	5	5.00

MOUNTING ADAPTER



For use with B3M panel and chassis receptacle. Eliminates necessity of providing a flat "D" shaped hole in panel to prevent turning of receptacle.

Switchcraft Part No. S-3519 . . U.S.A. List Price **$0.45**

MALE ADAPTER RECEPTACLES

NEW



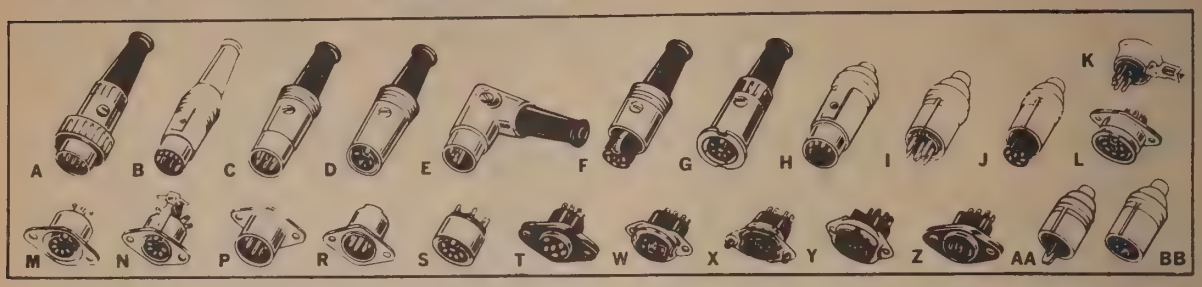
Male adapter receptacles mount directly to microphones or other equipment. Series L(°)M has plain cylindrical shell, 47/64" dia., with 3/64" collar. Series L(°)MN has same shell with Knurled coupling nut. Series M(°)M, short cylindrical shell 13/16" L., with 13/16-27 thread.

Part No.	Insert Pins	U.S.A. List Price
L3M	3	$2.50
L4M	4	2.65
L5M	5	3.65
L3MN	3	3.00
L4MN	4	3.15
L5MN	5	4.15
M3M	3	2.75
M4M	4	2.90
M5M	5	3.90

© United Technical Publications

Trade Discount Applies To List Prices Only

SWITCHCRAFT INC. Preh Audio Connectors



Here is the most complete low-cost family of miniature audio connectors available today. Exact replacements for plugs and receptacles, used on most foreign built tape recorders, radios and dictation equipment. Switchcraft/Preh 2 to 7 contact connectors include male and female plugs and receptacles with bright nickel-plated shells and plastic snap-on shells. Check these outstanding features . . . lock-ring coupling, silver plated contact pins for low contact resistance, contact friction coupling for low mechanical interference noise, exclusive "automatic" grounding and polarization provisions. Thirteen receptacles offer some form of internal switching. Positioning "Ground Key-Rib" or "Ground Contact"—electrically integral with the connector shell—is provided in each plug and receptacle (except those with plastic housings or shells) to ground or shield the connector shell. Designed for low level circuitry, they have unlimited use in commercial, industrial, consumer and military applications.

PLUGS

STRAIGHT CORD PLUGS with 30° Lock Ring

Part No.	Fig.	Description	Pin or Cont. Arr.	U.S.A. List Price
03CL2M	A	2 pins, ins. sw. actuator.	1	$1.75
05CL3M	A	3 pins at 180°	2	1.75
05CL5M	A	5 pins at 180°	5	1.95
09CL4M	A	4 pins at 210°	3	1.85
12CL5M	A	5 pins at 240°	4	1.95

STRAIGHT CORD PLUG with Shielded Barrel

05GM3M	B	3 pins at 180° Gray	2	1.10
05GM5M	B	5 pins at 180° Gray	5	1.30
09GM4M	B	4 pins at 210° Gray	3	1.20
12GM5M	B	5 pins at 240° Gray	4	1.30
12GM6M	B	6 pins at 240° Gray	6	1.40
12HN5M	B	5 pins at 240° Gray	4	1.30
15GM7M	B	7 pins at 270° Gray	7	1.50

STRAIGHT CORD PLUG with Extended Barrel

03BL2M	C	2 pins, ins. sw. actuator	1	1.65
05BL3M	C	3 pins at 180°	2	1.65
05BL5M	C	5 pins at 180°	5	1.85
09BL4M	C	4 pins at 210°	3	1.75
12BL5M	C	5 pins at 240°	4	1.85
12BL6M	C	6 pins at 240°	6	1.95

STRAIGHT CORD PLUG with Flush Socket Insert

04AL2F	D	2 cont., cl. ckt. sw. Ckt. #4	A	1.65
06AL3F	D	3 contacts at 180°	B	1.65
06AL5F	D	5 contacts at 180°	F	1.85
10AL4F	D	4 contacts at 210°	D	1.75
13AL5F	D	5 contacts at 240°	E	1.85
13AL6F	D	6 contacts at 240°	G	1.95

RIGHT ANGLE CORD PLUG with 8 Position Barrel

03DL2M	E	2 pins, ins. sw. actuator	1	2.00
05DL3M	E	3 pins at 180°	2	2.00
05DL5M	E	5 pins at 180°	5	2.20
09DL4M	E	4 pins at 210°	3	2.10
12DL5M	E	5 pins at 240°	4	2.20

STRAIGHT CORD PLUG with Extended Socket

07FL3F	F	3 contacts at 180°	B	1.60
11FL4F	F	4 contacts at 210°	D	1.70
14FL5F	F	5 contacts at 240°	E	1.80

STRAIGHT CORD PLUG with Lock Flange

06EL3F	G	3 contacts at 180°	B	1.65
06EL5F	G	5 contacts at 180°	F	1.85
10EL4F	G	4 contacts at 210°	D	1.75
13EL5F	G	5 contacts at 210°	E	1.85

STRAIGHT CORD PLUG with Snap-Lock Plastic Shell

05LK3M	H	3 pins at 180°	2	.90
05LK5M	H	5 pins at 180°	5	1.10
09LK4M	H	4 pins at 210°	3	1.00
12LK5M	H	5 pins at 240°	4	1.10

STRAIGHT CORD PLUG with Short Plastic Shell

Part No.	Fig.	Description	Pin or Cont. Arr.	U.S.A. List Price
05QK3M	I	3 pins at 180°	2	$ .60
05QK5M	I	5 pins at 180°	5	.80
09QK4M	I	4 pins at 210°	3	.70
12QK5M	I	5 pins at 240°	4	.80
12QK6M	I	6 pins at 240°	6	.90

STRAIGHT CORD PLUG with Ext. Socket and Shell

07QK3F	J	3 contacts at 180°	B	.60
07QK5F	J	5 contacts at 180°	F	.80
08QK3F	J	3 cont. — 180°, 2 blanks	C	.60
11QK4F	J	4 contacts at 210°	D	.70
14QK5F	J	5 contacts at 240°	E	.80
14QK6F	J	6 contacts at 240°	G	.90

RIGHT ANGLE CORD PLUG with Ins. Plastic Shell

05UK3M	K	3 pins at 180°	2	.60
05UK5M	K	5 pins at 180°	5	.80

RECEPTACLE for Lock-Ring Plugs

55HA2F	L	2 cont., clsd. ckt. sw. Ckt. #4	A	1.00
57HA3F	L	3 contacts at 180°	B	1.00
57HA5F	L	5 contacts at 180°	F	1.20
60HA4F	L	4 contacts at 210°	D	1.10
61HA5F	L	5 contacts at 240°	E	1.20

RECEPTACLE for Shielded and Extended Barrel Plugs

55GA2F	M	2 cont. plus clsd. ckt. sw. Ckt. #4	A	.70
57GA3F	M	3 contacts at 180°	B	.70
57GB5F	M	5 contacts at 180°	F	.90
57NC5F	N	5 cont. — 180° P.C. term.	F	.80
58GB3F	M	3 cont. — 180° 2 blanks	B	.75
58NC3F	N	3 cont. — 180° 2 blanks. P.C. term.	C	.60
59GB3F	P	3 cont. — 180° clsd. ckt. sw. Ckt. #5	B	1.30
59GB5F	P	5 cont. — 180° clsd. ckt. sw. Ckt. #5	F	1.50
60GA4F	M	4 contacts at 210°	D	.80
61GA5F	M	5 contacts at 240°	E	.90
61GA6F	M	6 contacts at 240°	G	1.00
62GB7F	M	7 contacts at 270°	H	1.10

RECEPTACLE for Flush and Extended Socket Plugs

56KD2M	R	2 pins, ins. sw. actuator.	1	1.00
57KD3M	R	3 pins at 180°	2	1.00
57KD5M	R	5 pins at 180°	5	1.20
60KD4M	R	4 pins at 210°	3	1.10
61KD5M	R	5 pins at 240°	4	1.20

RECEPTACLE with Recessed Mounting for Extended Socket Plugs

57JD3M	S	3 pins at 180°	2	1.00
60JD4M	S	4 pins at 210°	3	1.10
61JD5M	S	5 pins at 240°	4	1.20

RECEPTACLE for Short and Right Angle Plastic Shell Plugs

Part No.	Fig.	Description	Pin or Cont. Arr.	U.S.A. List Price
57LA3F	T	3 contacts at 180°	C	$ .40
60LA4F	T	4 contacts at 210°	D	.50
61LA5F	T	5 contacts at 240°	E	.60
61LA6F	T	6 contacts at 240°	G	.70

CONTROL AND SWITCHING RECEPTACLES FOR 01QK2M PLUG

Each receptacle includes an elongated center contact for positive polarization. When inserting mating plug, contact is made to terminals 1 and 2. Receptacle's built-in closed-circuit switch is not actuated. Plug may then be turned 180°, without a polarity change, and re-inserted to open switch and make contact to terminal 2. Convertible feature available in Nos. 51DA2F, 52BA2F, 52CA2F and 52DA2F.

RECEPTACLE with Metal Mounting Flange

52DA2F	W	2 cont. clst. ckt. sw. Ckt. #2. Conv't.	J	.65
53DA2F	W	2 contacts	K	.55
54DA2F	W	2 cont. clsd. ckt. sw. Ckt. #3. Not Conv't.	L	.60

RECEPTACLE with Metal Rivet Mounting Flange

52BA2F	X	2 cont. clsd. ckt. sw. Ckt. #2. Conv't.	J	.70
53BA2F	X	2 contacts	K	.60
54BA2F	X	2 cont. clsd. ckt. sw. Ckt. #3. Not Conv't.	L	.65

RECEPTACLE with 1-C Circuit

51DA2F	Y	2 cont. Make-break. Ckt. #2. Conv't.	M	.80

RECEPTACLE with Insulated Plastic Body

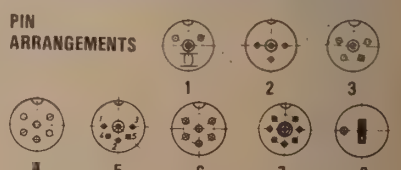
52CA2F	Z	2 cont. clsd. ckt. sw. Ckt. #2. Conv't.	J	.60
53CA2F	Z	2 contacts	K	.50
54CA2F	Z	2 cont. clsd. ckt. sw. Ckt. #3. Not Conv't.	L	.55

CONTROL AND SWITCHING PLUGS

PLUGS with Snap-On Plastic Shells

01QK2M	AA	Male plug. 2 cont.	8	.40
02QK2F	BB	Female plug. 2 cont.	K	.50

PIN ARRANGEMENTS



SCHEMATIC CIRCUITS



CONTACT ARRANGEMENTS

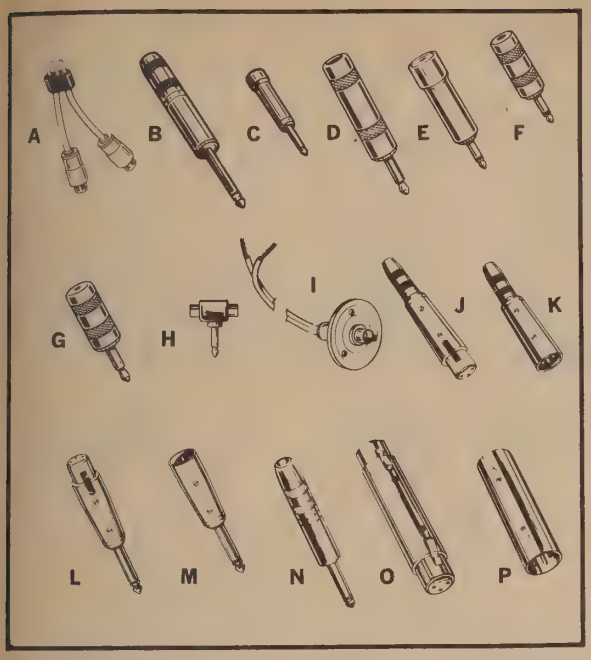


Trade Discount Applies To List Prices Only

© United Technical Publications

Adapters

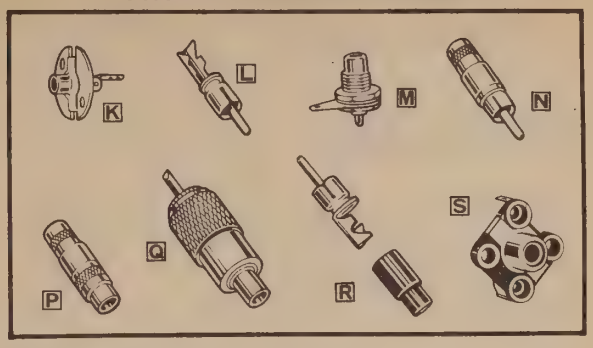
SWITCHCRAFT INC.



Versatile adapters for interconnecting components and cables that do not have mating jacks and/or plugs. Positive mating contacts prevent resistive line-losses. Nos. 369, 374, 375, 376, 377, have shielded, nickel plated brass handles. No. 378, "Tini-Tee," provides dual output jacks for two separate earphones. Allows two to listen at once from a single transistorized radio, tape recorder, etc. Part No. 330B, Special Stereo Adapter, adapts Lear Jet Model HSA-900 tape recorder to RCA, or other stereo units with a three contact in-line socket assembly. Two single conductor color coded phono jack outputs to one 3 pin in-line input. Completely shielded. 4" long.

Part No.	Fig.	Description	U.S.A. List Price
330BP1	A	Two single conductor, color coded phono jack outputs to one 3-pin in-line input. Completely shielded. 4" long.	$2.65
369P1	B	2-cond. Revere/Wollensak phone jack input to a standard 2-cond. phone plug output. Shielded.	2.65
370P1	C	Phono jack input to a 2-cond. "Tini-Plug" (¾" dia. finger) output. Shielded.	1.60
374P1	D	Phone jack input to a 2-cond. "Tini-Plug" (¾" dia. finger) output.	2.25
375P1	E	Phono jack input to a 2-cond. "Micro-Plug"® (.097" dia. finger) output.	2.05
376P1	F	"Tini-Jax" input to a 2-cond. "Micro-Plug" (.097" dia. finger) output.	2.05
377P1	G	"Micro-Jax" input to a 2-cond. "Tini-Plug" (¾" dia. finger) output.	2.05
378P1	H	"Tini-Tee" Adapter. 2-cond. "Tini-Plug" input to two 2-cond. "Tini-Jax" outputs.	2.65
379P1	I	Speaker enclosure phono jack. Molded flanged phono jack to stripped and tinned leads. 24" cable.	1.60
381	—	Adapter Cable. 11' 2-cond. shielded cable from 3-cond. right angle phone plug to "Y" junction. Two single cond. shielded 1' cables from "Y" junction to two 2-cond. phone plugs.	7.35
383P1	J	3 Contact Switchcraft A3F female microphone input to 2-cond. extension phone jack output.	5.00
384P1	K	Three Pin A3M male microphone input to 2-cond extension phone jack output	4.50
386P1	L	3 Contact Switchcraft A3F female microphone input to a standard 2-cond. phone plug output.	4.90
387P1	M	3 Pin Switchcraft A3M male microphone input to a std. 2-cond. phone plug output	4.35
388P1	N	2-cond., .206"dia. finger phone plug input to a 2-cond. ¼" dia. phone jack output. Shielded	2.90
389P1	O	Coupler. 3-pin audio connector (Switchcraft A3M) at each end. Shielded.	5.15
390P1	P	Coupler. 3-pin male audio connector (Switchcraft A3M) at each end. Shielded.	4.35

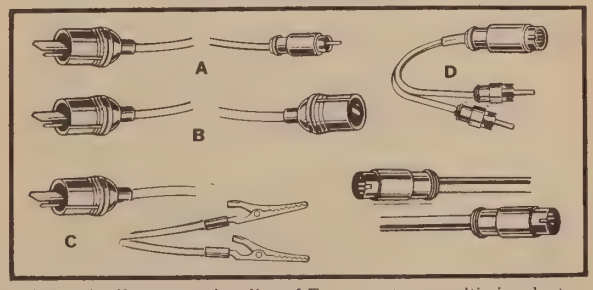
PHONO JACKS AND PLUGS



Low cost 2-cond. jacks and plugs for record players, FM-AM tuners, tape recorders, test equipment, etc. 3501MC has ⅜" O.D. shell and cable clamp. 3501FP for front panel mount in ¼" hole, in panels up to ⅛" thick. 3501FR for rear panel mount in ⅜" hole, in panels up to $^{13}/_{64}$" thick. 3502 has unique cable clamp with $^{13}/_{32}$" O.D. shielded removable handle. 3503 ext. jack has shielded removable handle, $^{13}/_{32}$" O.D. with cable clamp. 3508 Series, new color coded phono plugs with cable clamp and "snap-on" plastic handles in Red, Black, and White. Series 3511 "4-Leaf Clover" Jax. Molded phono Jack with dual contact surfaces for minimum shunt resistance, greater reliability. Open and closed circuit types. Mate with all Switchcraft phono plugs.

Part No.	Fig.	Description	U.S.A. List Price
3501F	K	Chassis jack	$0.15
3501M	—	Plug, less cable clamp	.10
3501MC	L	Plug with cable clamp	.15
3501FP	M	Chassis jack	.40
3501FR	—	As above, chassis jack	.50
3502	N	Plug	.55
3503	P	Extension jack	.70
3508-1	R	Plug, Red handle	.25
3508-2	R	Plug, Black handle	.25
3508-5	R	Plug, White handle	.25
3511	S	Chassis jack, open circuit	.35
3511A	S	Chassis jack, open circuit, grounded	.35
3512	S	Chassis jack, closed circuit	.40
3512A	S	Chassis jack, closed circuit, grounded	.40

EUROPEAN-TYPE ADAPTERS AND CABLE ASSEMBLIES



Switchcraft offers a complete line of European-type, multi-pin adapters and cable assemblies. These quality cables and adapters are designed to mate with multi-pin inputs and outputs on tape or cassette recorders, amplifiers, speakers, etc.

Part No.	Fig.	Description	U.S.A. List Price
25DK32	A	European-type 2 pin male cord plug to phono plug. 6' shielded cable.	$2.25
32ZN36	B	Speaker ext. cable. European-type 2 pin male cord plug to 2-contact female cord plug. 10' parallel cable	3.00
32ZR36	—	As above, except 15'.	3.40
32ZK86	C	European-type 2 contact female cord plug to 2 alligator clips. 6' parallel cable.	2.35
32ZN86	—	Same as above, except 10'	2.65
33FK25	D	Stereo Hi-Fi Cable. European-type 3 pin (at 180°) male cord plug to 2 color coded phono plugs. 6' parallel cable.	4.25
33FN25	—	Same as above, except 10'	4.90

Part No.	Description	U.S.A. List Price
35TK35	European type extension cable, 5 pin (180° DIN) connector at each end. Gray shielded cable, 4-cond. 6 ft.	$8.15
35TN35	As above, except 10 ft.	9.75

TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

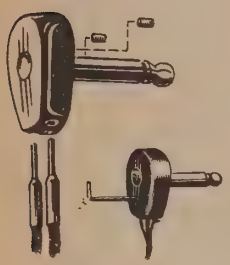
PLUGS AND JACKS: General Purpose Audio, Miniature, Adapters

"511" and "513" STANDARD PHONE PLUGS

General purpose. To fit standard 0.250" I.D. jacks. "511" two-conductor plugs have screw terminals and ribbed bakelite or knurled metal shell. The "513" three-conductor plugs use an identical shell, but the terminals are solder lug type only. All metal parts are bright plated brass. Stay cord anchorage is provided.



Two-Circuit Type		Three-Circuit Type	
511 Black plastic shell	$0.85	513 Black plastic shell	$1.20
511-1 Red plastic shell	0.85	513-1 Red plastic shell	1.20
511-2 Metal one piece shell	1.45	513-2 Metal, one piece shell	1.80
511-3 Metal two piece shell (With cable clamp)	2.00	513-3 Metal, two piece shell (With cable clamp)	2.35
511-4 Metal stubby shell	1.10	513-4 Metal stubby shell	1.45
511-5 Metal stubby. Has long tip to sleeve insulator which leaves "ring" spring open when inserted in 3-ckt. jack.	1.25	515 Adapter. Couples Amphenol mike plug to standard jacks.	0.60



"512" FLAT PLUG

Compact, non protruding. Adapts phone pin tips. or any two conductors, to a two-circuit plug. One piece molded phenolic plastic. Fits standard jacks 0.250" I.D.

512	Black	$1.10	512-2	With headset hanger	$1.60
512	Red	1.10			

"514" MIN-A-PLUG

Small size for use with shielded microphone cable. Two conductor types, plastic or metal shell. Shield connection clamp.

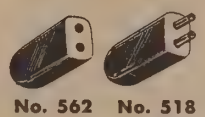


TWO CONDUCTOR TYPES (0.250" dia.) SOLDER TERMINALS

		List			List
514	Black plastic	$0.85	514-2	Shielded	$1.20
514-1	Red plastic	0.85	514-4	Shielded, stubby	1.00

"518" PLUG — "562" JACK

Two circuit miniature disconnect plug and jack. Unshielded. Parallel pin plug locks into jack springs. No. 518 and 562 acetate shells are cemented together. No. 518-7 and 562-7 bakelite shells are held together with screws. No. 518-8 plug set is polarized (one male and one female terminal per plug).



No. 562 No. 518

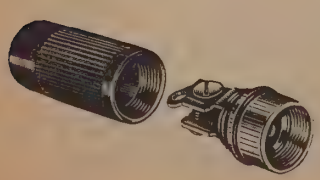


No. 562-7 No. 518-7

518 Plug $0.90 518-7 Plug $1.00 518-8 $1.40
562 Jack 1.30 562-7 Jack 1.40

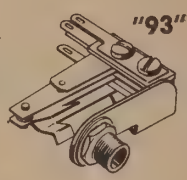
"525" CONNECTOR

Adapts headset cords, or any two wires, to single contact microphone plugs — such as Amphenol 75MC series. Same shell as No. 511.



525	Black Plastic	$1.60
525-1	Red Plastic	1.60
525-2	Shielded one piece shell	2.20
525-3	Shielded, two piece shell (With cable clamp)	2.75
525-4	Shielded stubby shell	2.00





"93" and "95" JACKS

Threaded bushing 3/8" in diameter mounts jack to panel or chassis. Ideal for limited space and depth. The "95" is only 1 3/16" deep behind panel. The "93" is offset to one side. Nickel silver springs, tinned terminals. Jack circuits described below.

95-01	Open ckt., two conductor	$0.50	93-01		$0.7
95-02	Closed ckt., two conductor	0.60	93-02		0.9
95-25	Open ckt., three conductor (0.250" dia. plugs)	0.65	93-06		1.0
			93-07		1.2
95-50	Open ckt., three conductor (0.206" dia. plugs)	0.70	93-25		0.9
			93-26		1.2
			93-27		1.3

TELEPHONE TYPE PLUGS

"516" and "517" PLUGS



The three circuit 516 has been the accepte standard for telephone switchboards, instru ment systems, and in other communicatio areas. Supplied on TRIMM 851 series patc cords. Red, black or gray shell which can b attached without removing cord. Interchange able with WE 310. The three-circuit 517 plug are identical with 516 types, but with special tip contour that reduces "clicks" i service.

Net Prices

516	Red	$1.50	517	Red	$1.70	516-10	Red, marked PJ-051	$1.60
516-1	Black	1.50	517	Black	1.70	516-11	Black, marked PJ-051B	1.60

"506" TWIN 3-CKT. PLUG



A broadcast standard now widely used i instrumentation and missile control. Sup plied on 840 patch cords. Electrically com mon plug shafts spaced 5/8" C to C. Se aligning. Bakelite shell notched on one edg to indicate polorization. Interchangeabl with WE 241 and MIL PJ-241.

506 Black $2.60 Net
506-1 Red $2.60 Net

"536" - "537" MINIATURE PLUGS

Used with "94" series jacks and "866"-"867" patch cords. Both two-circuit 536 and three-circuit 537 have molded in place insulation and screw terminals. Contact your distributor for miniature line prices.



536 Black $0.90 Net
536-1 Red 0.90 Net

537 Black $1.50 N
537-1 Red 1.50 N

"500" and "501" (PJ-055) TWO-CIRCUIT PLUGS

The 500 telephone plug — long the two-circuit switchboard standard has been replaced, for the most part, by the slightly shorter 501. The 501 has been widely used on high quality military communication equipment. Commonly referred to as PJ-055. Black or Red plastic shell or nickel plated brass for shielded types.



Net Prices

501	Black	$.72	501-10	Black, marked PJ-055B	$.7
501-1	Red	.72	501-11	Red, marked PJ-055R	.7
501-2	Metal shell	1.00	501-12	Metal, marked PJ-055M	1.0
500	Red	.90	500-10	Red, marked PJ-047R	.9
500-1	Black	.90	500-11	Black, marked PJ-047B	.9

Trade Discount Applies To List Prices Only

© United Technical Publications

TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

PATCH CORDS, JACK PANELS AND TELEPHONE PLUGS: Audio, Broadcast, Miniature

TRIMM patch cords feature telephone type plugs on cords built to withstand hard use. Two or more conductors of bronze tinsel are covered with numerous layers of insulation and waterproofing. The cords are color coded, shielded (if desired) then covered with a final braid of nylon to assure long service. The nylon is standard black unless a color is specified. Available at a slight extra charge are: Blue (BL), Brown (BR), Green (GR), Red (RD), Slate Gray (GY) and White (WH).



"840" PATCH CORDS

Broadcast type "506" twin plugs at both ends. Conductors are wired to tip and the shield (when used) is connected to the grounded shaft. Commonly supplied with shield attached at one end only. Available without shield (W in code number), or with shield attached at both ends (X in code number). PP indicates the cord has a plug at both ends.

Standard Shielding		"X" Shielding	
840-05-PP	840- 4-PP	840-05X-PP	840- 4X-PP
840- 1-PP	840- 5-PP	840- 1X-PP	840- 5X-PP
840- 2-PP	840- 6-PP	840- 2X-PP	840- 6X-PP
840- 3-PP	840-10-PP	840- 3X-PP	840-10X-PP

Without Shield

840-2W-PP 840-3W-PP



"841" and "851" SPACESAVERS

841 patch cords use two No. 517 triple circuit plugs of special broadcast design. The unique plug tip contour reduces "clicks" in service. Conductors are wired to tip and ring. Shield (if used) is wired to plug shaft. 851 patch cords use two No. 516 triple circuit plugs with standard ball tip construction. Both types commonly have shield connected at one end only.

841 1-PP	841- 6-PP	851- 4-PP
841-2-PP	841-10-PP	851- 5-PP
841-3-PP	851- 1-PP	851- 6-PP
841-4 PP	851- 2-PP	851-10-PP
841-5-PP	851- 3-PP	

"X" Shielding

841-1X-PP 851-1X-PP
841-2X-PP 851-2X-PP

Without Shield

851-2W-PP
851-3W-PP

"866" - "867" MINIATURE PATCH CORDS

Two conductor (866) and three conductor (867) patch cords using new miniature "536" and "537" plugs. Have same high quality construction details and optional features as standard patch cords. Same coding. Contact your distributor for miniature line prices.

866-1-PP	867-1-PP	866- 5-PP	867- 5-PP
866-2-PP	867-2-PP	866-10-PP	867-10-PP



"90" and "91" JACKS

Commonly known as the telephone jack. The "90" series nickel plated bushing fits a 29/64" dia. mounting hole and the jack is held to the panel with a mounting screw. The "91" series has a 3/8" threaded bushing for mounting and has the standard mounting screw hole in addition. Screws or nuts and washers furnished. Cadmium plated frame, nickel silver springs and tinned terminals.

90SN-01	90CSN-14B	91-01	91-09B
90SN-02B	90SN-25	91-02B	91-25
90SN-06B	90SN-26B	91-05B	91-26B
90SN-07B	90SN-27B	91-06B	91-50
90SN-08B	90SN-50	91-07B	91-51B
90SN-09B	90SN-51B		



"92" JACKS

Twin jacks on a single frame used in toll and carrier frequency systems. 92-1009B provides **unbalanced** normal through circuitry while 92-1030B provides **balanced** normal through circuitry between jacks. A single plug inserted into either side of the jack opens circuit up to jack for testing up to that point. Brass bushing as in 92-1009B, or nickel plated as in 92N-1009B. G indicates gold contacts.

92S-1009B	92SN-1009B
92S-1009BG	92SN-1009BG
92S-1030B	92SN-1030B
92S-1030BG	92SN-1030BG
92S-25	92SN-25

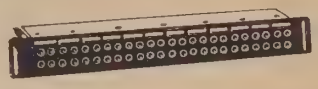


"94" MINIATURE JACKS

Uses one half the space of conventional jacks. Fits new 96-700 miniature jack mounting strips. Same high reliability. Cadmium plated steel frame. Molded spring insulation prevents moisture absorption. Welded gold crossbar contacts on nickel silver springs.

94S-01	94S-08B	94S-26B
94S-02B	94S-25	94S-27B
		94S-32B

"96" JACK PANELS



5/8" thick bakelite panel with end brackets, side reinforcing strips and designation strips. Complete with jacks mounted and choice of jack circuits. All jacks insulated from each other. Ordinarily supplied with jack ground lug offset (to reduce wiring time). Straight ground lugs are available to duplicate W.E. jacks. Types 96-71 through 96-77 are three circuit types for No. 516 or 517 plugs. Types 96-01 through 96-07 usually used with No. 506 twin plugs although other standard two-circuit plugs will fit.

Code No.	Rows	No. of Jacks	Jack Type	Jack Mounting Strip Type	Width
96-01	1	24	90LN-02B	96-21	1¾"
96-02	2	48	90LN-02B	96-22	2⅛"
96-03	2	48	90LN-02B	96-23	3½"
96-04	2	48	90LN-02B	96-24	3½"
96-06	1	26	90LN-02B	96-26	1¾"
96-07	2	52	90LN-02B	96-27	1¾"
96-71	1	24	90LN-26B	96-21	1¾"
96-72	2	48	90LN-26B	96-22	2⅛"
96-74	2	48	90LN-26B	96-24	3½"
96-76	1	26	90LN-26B	96-26	1¾"
96-77	2	52	90LN-26B	96-27	1¾"

"96-700" MINIATURE JACK MOUNTING STRIPS

Bakelite panels 3/8" thick, 1¾" wide. Fits standard 19" panel mountings. One or two rows of mounting holes for the installation of one or two rows of miniature jacks, 48 or 52 jacks per row. Standard designation strip is JP-35. Contact your distributor for miniature line prices.

	Rows	Total Jacks	No. Desig. Strips		Rows	Total Jacks	No. Desig. Strips
96-721-1	1	48	1	96-726	1	52	1
96-721-2	2	96	2	96-727	2	104	2

"96" JACK MOUNTING STRIPS — WITHOUT JACKS

Used as a mounting base where non-standard arrangement of jacks, lamps sockets, turn or push keys, and coaxial jacks are combined on one panel. Suppliesd with end brackets, designation strips and side reinforcing strips mounted. Available in numerous other types than those listed.

Code No.	Rows	Jack Holes per Row	Jack Hole Spacing c. to c.	Width	Designation Strip Qty.	Designation Strip Type
96-20	1	12	1⅜	1¾	1	JP-30
96-20-1	1	12	⅝ - 2¼ - ⅝	1¾	1	JP-35
96-21	1	24	⅝ - ¾ - ⅝	1¾	1	JP-30
96-22	2	24	⅝ - ¾ - ⅝	2⅛	1	JP-30
96-23	2	24	⅝ - ¾ - ⅝	3½	1	JP-30
96-24	2	24	⅝ - ¾ - ⅝	3½	2	JP-30
96-25	2	12	1⅜	3½	2	JP-30
96-26	1	26	⅝	1¾	1	JP-34
96-27	2	26	⅝	1¾	2	JP-34
96-28	2	Upper 24 Lower 12	⅝ - ¾ - ⅝	3½	2	JP-35
96-31	1	24	⅝ - ¾ - ⅝	1¾	1	JP-38
96-32	2	24	⅝ - ¾ - ⅝	2⅛	2	JP-33
96-37	2	24	⅝ - ¾ - ⅝	1¾	2	JP-34
*96-38	1	32	⅝	1¾	2	JP-31-3
*96-39	2	32	⅝	1¾	2	JP-31-3
96-40	4	24	⅝ - ¾ - ⅝	3½	3	Special

ALUMINUM JACK MTG. STRIPS— LESS JACKS

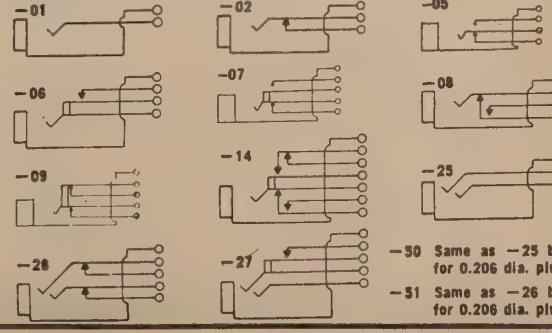
The "99" series features a front aluminum panel 3/16" thick separated from a rear sub-panel 1/8" thick to which the jacks are mounted. Overall thickness of 1 1/32". Sub-panel forms common ground for jacks. Fits 19" rack. The "99-200" series backs the aluminum front panel with a 1/16" bakelite strip to isolate jacks from each other. Total thickness of 5/16".

Code No.	Rows	Jacks/ Row	Jack Hole Spacing c. to c.	Designation Strip Width	Qty.	Type	Notes
99-20	1	12	1⅜"	1¾	1	JP-37	
99-20-1	1	12	⅝ - 2¼ - ⅝	1¾	1	JP-37	
99-21	1	24	⅝ - ¾ - ⅝	1¾	1	JP-37	
99-22	2	24	⅝ - ¾ - ⅝	2⅛	1	JP-30	
99-22-1	2	24	⅝ - ¾ - ⅝	2⅛	2	JP-33	1
99-22-2	2	23	⅝ - ¾ - ⅝	2⅛	2	JP-33	2
99-24	2	24	⅝ - ¾ - ⅝	3½	2	JP-37	1
99-26	1	26	⅝"	1¾	1	JP-34	
99-27	2	26	⅝"	1¾	2	JP-34	1

NOTES 1. Designation strip above top, and below bottom row.
2. Designation strip above each row.

JACK CIRCUIT DIAGRAMS

Standardized coding: The jack series number PLUS a DASH NUMBER to indicate the spring arrangement. This is a limited listing of the many circuits available.



-30 Same as -25 but for 0.206 dia. plug.

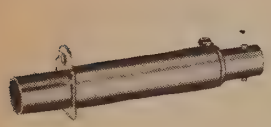
-31 Same as -26 but for 0.206 dia. plug.

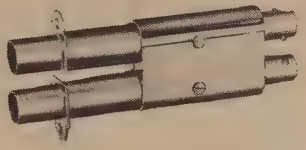
© United Technical Publications

TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

COAXIAL JACKS, PLUGS AND PANELS: Video Patch Cords, Hybrid Audio/Visual





COAXIAL JACKS: "89" SERIES

Developed for a wide range of RF applications including video frequencies, carrier and UHF frequencies. Triple layer plating of silver, palladium and hard gold on female contact assures extremely low contact resistance and long wear.

SINGLE JACKS

W.E. Compatible	Cable	RCA Compatible
89-01	RG-58	89-701
89-02	RG-59	89-702
89-05	RG-11	*
89-06	RG-8, 9	*
89-07	RG-54; WE 724 Belden 8281 (Jack similar to WE 477B)	89-707
89-11	RG-187	*
89-14	Amphenol 21-597 & RG-122U	
89-15	(Similar to WE 470B)	89-715
89-32	Female BNC	89-732
89-34	Female TNC	89-734

TWIN TYPES — Non-Switching

89-51	RG-58	89-751
89-52	RG-59	89-752
89-57	WE 724 or Belden 8281	*
89-64	Amphenol 21-597 or RG-122	*
89-82S	Single BNC at rear	89-782S
89-207	General T43M	*
89-218	WE 754E, RG-22, General T43	*

TWIN TYPES — Switching

89-102	RG-59	89-802
89-132	BNC at rear	89-832

TERMINATING JACKS

These jacks are used in circuitry in which there is a need to maintain a known load in the circuit. When plug is fully inserted load is automatically disconnected and circuit transferred to plug. Similar to regular single jacks — fitting same cable, etc. (For example: 89-01-40-50 fits RG-58 cable).

W.E. Compatible	Impedance	RCA Compatible
89-01-40-50	50 ohm	89-701-40-50
89-02-40-75	75 ohm	89-702-40-75
89-07-40-75	75 ohm	89-707-40-75
89-32-40-50	50 ohm	89-732-40-50
89-32-40-75	75 ohm	89-732-40-75
89-82S-40-75	75 ohm	89-782S-40-75

COAXIAL PLUGS: "530" SERIES



For use with "89" series jacks. Assembled on cords to form "849" series patch cords. Silver and hard gold plated contact pin assures minimum resistance and long wear.

W.E. Compatible	Cable	RCA Compatible
530-1	RG-58	530-701
530-2	RG-59	530-702
530-6	(Similar to WE 358A) RG-54, Belden 8281, WE 724	530-706
530-15	RG-58	530-715
530-16	RG-59	530-716

COAXIAL ADAPTER PLUGS

530-32	BNC at rear	530-732
530-34	TNC at rear	530-734

TERMINATING and DUMMY PLUGS

W.E. Compatible	Impedance	RCA Compatible
530-41	50 ohm	530-741
530-42	75 ohm	530-742
530-46	50 ohm	530-746
530-47	75 ohm	530-747
530-19	dummy plug (no center contact)	

COAXIAL BRIDGING PLUGS "531" SERIES

A twin coaxial plug (sometimes called a looping plug). Internally wired to connect two adjacent coaxial jacks spaced ⅝" C to C. Two plugs essentially similar to "530" series mounted in a plastic handle-like shell.



W.E. Compatible	Impedance	RCA Compatible
531-1	50 ohm	531-701
531-2*	75 ohm	531-702
531-11**	50 ohm	531-711
531-12**	75 ohm	531-712

*Equivalent to WE 477B.

**With pin tip test jacks (white jack wired to ground and green—50 ohm, or purple—75 ohm jack to center conductor).



COAXIAL PATCH CORDS: "839" SERIES

Used for testing and interfacing between other instruments and coax panels. The cord comes with a male BNC connector on one end and a coax connector on the other.

W.E.	RCA
839-2X-PP	839-2X-700PP
839-6X-PP	839-6X-700PP

COAXIAL PATCH CORDS: "849" SERIES

The following cords use two 530-2 (for WE) or two 530-702 (for RCA) plugs and RG59B/U cable—75 ohm.

W.E.	RCA	W.E.	RCA
849-05X-PP	849-05X-700PP	849-3X58-PP	849-3X58-700PP
849-1X-PP	849-1X-700PP	849-3X-PP	849-3X-700PP
849-105X-PP	849-105X-700PP	849-4X-PP	849-4X-700PP
849-2X-PP	849-2X-700PP	849-6X-PP	849-6X-700PP

The following cords, as above, but with RG-58C/U cable—50 ohm.

W.E.	RCA	W.E.	RCA
849-1X58-PP	849-1X58-700PP	849-3X58-PP	849-2X58-700PP
849-2X58-PP	849-2X58-700PP	849-4X58-PP	849-4X58-700PP

HYBRID PATCH CORDS: "869" SERIES

Audio and Video patch cord. Twin plug contains a coax and a three-circuit telephone plug. On ⅝" centers. Will fit combination panels with "89" series coaxial jacks and "90" series telephone jacks. 75 ohm cable on section (RG-187) and audio is carried by two additional conductors with shield overall (but not common to coax shield).



869-105X-PP 869-2X-PP 869-3X-PP

PARALLELING FITTINGS

Two types are provided — those that parallel several cables or jacks (864 series) and other types called power dividers (869 series) which internally contain passive networks to provide constant impedance. The most common types using BNC connectors are listed below.

864-102		1 input — 2 jacks
864-201		2 inputs — 1 jack
865-102-50	50 ohm	1 input — 2 jacks
865-102-75	75 ohm	1 input — 2 jacks
865-201-50	50 ohm	2 inputs — 1 jack
865-201-75	75 ohm	2 inputs — 1 jack

COAXIAL JACK PANEL ASSEMBLIES

The "89" series coaxial jacks can be mounted on the "96" or "99" series strips in almost any specified configuration. Listed below are some of the more standard types already produced. Consult factory for information regarding price or your special requirements.

W.E.	RCA	Qty/Row	Rows	Jack Type	Jack Mtg. Strip
99-80		12	1	89-32	99-20
	99-780	12	1	89-732	99-20
98-84		24	2	89-02	96-24
	96-784	24	2	89-702	96-24
*96-94-2		24	2	89-02	96-524-2
	*96-794-2	24	2	89-702	96-524-2
96-85		12	2	89-02	96-25
	96-785	12	2	89-702	96-25
*96-95-2		12	2	89-02	96-525-2
	*96-795-2	12	2	89-702	96-525-2
*96-98-2		Top 24 Bottom 12	2	89-02	96-528-2
	*96-798-2	Top 24 Bottom 12	2	89-702	96-528-2

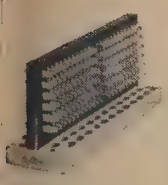
*Denotes sub-chassis with 24 UHF connectors.

© United Technical Publication

TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

TERMINAL BLOCKS, TURN AND PUSH KEYS, LAMP SOCKETS: Related Panel Equipment



TERMINAL BLOCKS

Originally developed for telephone and telegraph exchange use, now are quite generally found in broadcast and microwave relay stations, large instrument systems —wherever very large numbers of circuits need convenient places of termination.

Terminals are of three basic types: standard solder types, wire wrap type, and hybrid wire wrap on one side, solder on the other. All are of 0.040" brass, tinlate plated. Standard solder type available in four different lengths with "butterfly" notched design assuring retention of wire. All blocks having numbering along the top row. Costs as shown are for standard solder lugs.

"421 SERIES"

Molded of black phenolic plastic material, including base. Provides 20 terminals per row, in two banks of ten, with up to ten rows. Base 6 1/16" long x 3" wide. Has steel mounting strip inset in groove in base, with standard mounting dimensions and accommodating #10-32 screws. Interchange with W.E. "L" series, as indicated by ( ) following TRIMM no.

Code No.	No. Rows	No. Term
421C-1	1	20
421C-2	2	40
421C-3 (L34)	3	60
421C-4 (L4A)	4	80
421C-5 (L5A)	5	100
421C-6 (L6A)	6	120
421C-7	7	140
421C-8 (L8A)	8	160
421C-9	9	180
421C-10	10	200

"427" SERIES

Molded of black phenolic plastic material, including base. Provides 26 terminals per row in two banks of 13. Base 8" x 2 5/8" wide. Fits Cook Elec. frames.

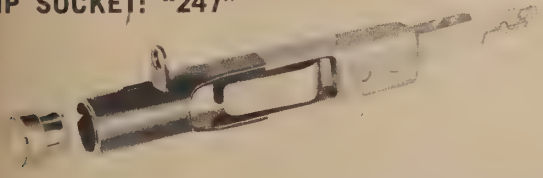
Code No.	No. Rows	No. Term.
427B-1	1	26
427B-2	2	52
427B-3	3	78
427B-4	4	104
427B-5	5	130
427B-6	6	156
427B-7	7	182
427B-8	8	208
427B-9	9	234
427B-10	10	260
427B-11	11	286
427B-12	12	312

OTHER SERIES

Summarized below are terminal arrangements and base dimensions for other types. All bases 5/8" thick phenolic. Available in 1 to 14 rows. Write for additional information.

Series	Term. per Row	Base Dimensions	Notes
421A	20	6 7/16" x 2 5/8"	Eq. to W.E. "M" type.
427D	26	8" x 3 3/16"	

LAMP SOCKET: "247"



Switchboard type lamp socket; intended for use with standard No. 2 switchboard lamps, and to be assembled on to standard 5/8" thick jack mounting strips with 7/16" dia. jack bushing holes. Has lug for #6-32 mounting screw 3/8" off center line. May be mounted 5/8" c. to c. horizontally.

Frame, one piece steel construction. Springs nickel silver insulated from frame and each other with XXXP phenolic laminated spacers. Lamp mounts close to lens of lamp cap, giving maximum illumination.

247 Lamp Socket 47B

"240" GLASS LAMP CAP

Code No.	Color	W.E. Type
240-AY	Lamp Cap White Opalescent	2-AY
240-H	Lamp Cap Red Opalescent	2-H
240-L	Lamp Cap Green Opalescent	2-L
240-U	Lamp Cap Amber	2-U
240-W	Lamp Cap Blue	2-W

PUSH KEYS: "204" - "206"



Long frame push button type key very similar to turn keys. The usual applications for push button type keys are as an impulse switch for relays, or motor starters; buzzer signals, test circuits requiring momentary contact, etc. Mounting, dimensional and contact data, similar to turn keys. Available in non-locking and locking forms. Knob of black plastic material with depressed dimple for finger.

LOCKING TYPE, "204"

204-1A 204-2A

NON-LOCKING TYPE, "206"

Part. No.	Part No.
206-1A	206-2A
206-1B	206-2B
206-1C	206-2C
206-1D	206-3C
	206-4A

TURN KEYS: "205" - "207"



Long frame rotating cam type keys or switches. Intended to be assembled on to standard 5/8" thick jack mounting strips having 2 7/64" dia. jack bushing holes. Hole for #6-32 screw 3/8" off center provided. Entirely interchangeable with telephone type jacks, and essentially similar to W.E. "552" series. See table below for cross reference.

Knob of molded black nylon, has two flat areas on each side to provide convenience in turning. White filled line on front of knob readily identifies in which of two positions key has been turned.
Requires 2 23/32" depth behind panel.

LOCKING TYPE, "205"

Part No.	Part No.	Part No.	Part No.
205-1A	205-2A	205-3A	205-2A2B
205-1B	205-2B	205-3C	205-1A2C
205-1C	205-2C	205-4A	205-1000
205-1D	205-2D	205-4C	205-1001

NON-LOCKING TYPE, "207"

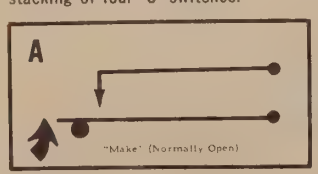
Part-No.	Part No.	Part No.
207-1A	207-1B	207-2C

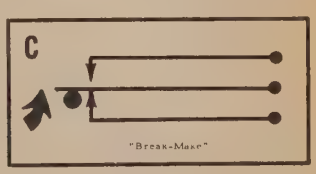
CROSS REFERENCE W.E. to TRIMM

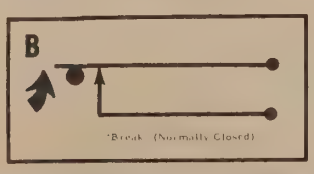
TRIMM Code	W.E. Type	TRIMM Code	W.E. Type
205-2C	552A	205-1000	552E
205-3A	552B	205-1D	552G
205-1001	552C	205-2C1A	552H
205-2B 2C	552D		

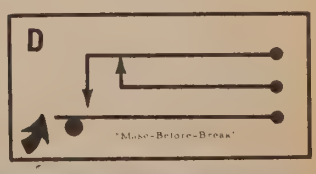
SWITCH DIAGRAMS

Basic switching for Turn Keys and Push Keys is described by these diagrams. Other combinations are available. Coding: The series number of the switch followed by a dash number. 205-4C is then a locking type Turn Key with a stacking of four 'C' switches.









© United Technical Publications

SOLDERLESS TERMINALS

Packaged Four Convenient Ways

Vaco offers convenient packaging for every type and size of terminal user. All Vaco Paks are shown with stock number, actual size illustration of terminal, and wire and stud size for easy shelf identification.



"D" PAK
(5 Paks to Master Carton). Use prefix "D" when ordering.



"C" PAK
(100 per Pak–5 Paks to Master Carton). Use prefix "C" when ordering.



"MB" PAK
(Contains 1000 of a number.) Use prefix "MB" when ordering.



"V" PAK
For small quantity user.

	Wire Size	Stud Size	Series 10000 Vaco Single-Grip Terminals and Connectors are one-piece, non-insulated basic type and meet most requirements. Stock No.	Qty. per "D" Pack	Series 20000 Vaco Hi-Temp Solderless Terminals and Connectors are similar in construction to the basic 10000 Series, except special nickel plating permits use in temperature range up to 650°F. Recommended for use in heating elements, electric dryers, etc. Stock No.	Qty. per "D" Pack	Series 30000 Similar to 10000 Series except with brazed barrel, providing a seamless connector. Especially recommended for solid strand wire. Stock No.	Qty. per "D" Pack	Series 50000 Vaco Single-Grip Insulated Terminals, with heavy plastic sleeve, provides insulation from tongue to wire insulation. The sleeve also prevents wire from flexing at the crimp for greater strength. Stock No.	Qty. per "D" Pack	Series 60000 Similar to 50000 Series except with flared or bell-mouth insulation. Stock No.	Qty. per "D" Pack	Series 90000 Vaco Double-Grip Insulated Terminals and Connectors have nylon sleeve that extends beyond the tin-plated bronze sleeve to provide complete insulation from tongue to wire. Engineered to meet the most exacting requirements. Stock No.	Qty. per "D" Pack
RING TONGUE Non-Insulated / Insulated	22-18	4	11204	29			31204	★	51204	14	61204	13	91204	★
	22-18	5-6	11205	29	21205	29	31205		51205	14	61205	13	91205	
	22-18	5-6	11206	29			31206		51206	14	61206	13	91206	
	22-18	8	11208	29	21208	29	31208		51208	14	61208	13	91208	
	22-18	10	11210	29	21210	29	31210		51210	14	61210	13	91210	
	22-18	12-¼	11214	23			31214		51214	13	61214	11	91214	
	22-18	⅜	11238	23			31238		51238	13	61238	11	91238	
	16-14	4	11304	29			31304		51304	14	61304	13	91304	
	16-14	5-6	11305	29	21305	29	31305		51305	14	61305	13	91305	
	16-14	5-6	11306	29			31306		51306	14	61306	13	91306	
	16-14	8	11308	29	21308	29	31308		51308	14	61308	13	91308	
	16-14	10	11310	29	21310	29	31310		51310	14	61310	13	91310	
	16-14	12-¼	11314	23			31314		51314	13	61314	11	91314	
	16-14	⅜	11338	23			31338		51338	13	61338	11	91338	
	12-10	4-6	11406	23			31406		51406	13	61406	11	91406	
	12-10	8	11408	23			31408		51408	13	61408	11	91408	
	12-10	10	11410	23	21410	★	31410		51410	13	61410	11	91410	
	12-10	12-¼	11414	17			31414		51414	12	61414	9	91414	
	12-10	⅜	11438	17			31438		51438	12	61438	9	91438	
SPADE TONGUE Non-Insulated / Insulated	22-18	4	13204	32			33204		53204	14	63204	13	93204	
	22-18	5-6	13206	32			33206		53206	14	63206	13	93206	
	22-18	8	13208	29			33208		53208	14	63208	13	93208	
	22-18	10	13210	29			33210		53210	14	63210	13	93210	
	16-14	4-6	13306	29			33306		53306	14	63306	13	93306	
	16-14	8	13308	29			33308		53308	14	63308	13	93308	
	16-14	10	13310	29			33310		53310	14	63310	13	93310	
	12-10	4-6	13406	23			33406		53406	13	63406	11	93406	
	12-10	8	13408	23			33408		53408	13	63408	11	93408	
	12-10	10	13410	23			33410		53410	13	63410	11	93410	
	22-18	4-6	14206	32					54206	14	64206	13	94206	
HOOK TONGUE Non-Insulated / Insulated	22-18	4-6	15206	29			35206		55206	14	65206	13	95206	
	22-18	8	15208	29			35208		55208	14	65208	13	95208	
	22-18	10	15210	29			35210		55210	14	65210	13	95210	
	16-14	4-6	15306	29			35306		55306	14	65306	13	95306	
	16-14	8	15308	29			35308		55308	14	65308	13	95308	
	16-14	10	15310	29			35310		55310	14	65310	13	95310	
	12-10	4-6	15406	23			35406		55406	13	65406	11	95406	
	12-10	8	15408	23			35408		55408	13	65408	11	95408	
	12-10	10	15410	23			35410		55410	13	65410	11	95410	
FLAG TONGUE Non-Insulated	22-18	8-10	16210	29										
	16-14	8-10	16310	29										
	12-10	8-10	16410	25										

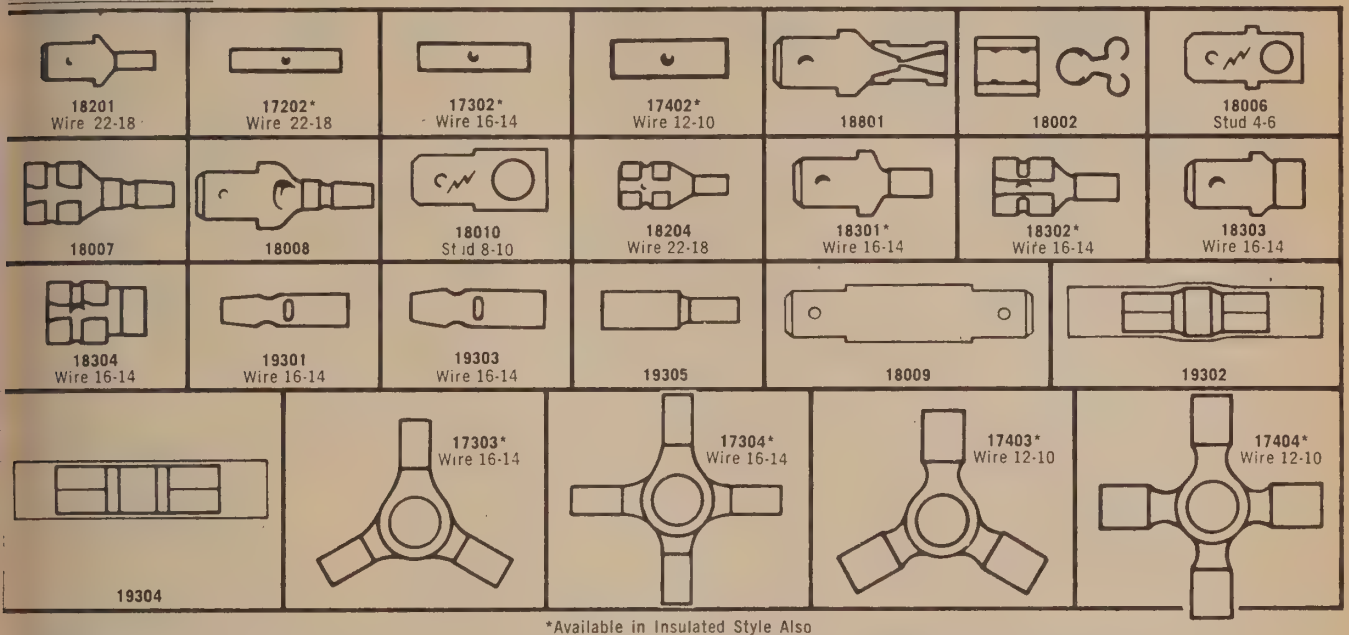
★Note: not available in "D" pac

© United Technical Publication

QUICK CONNECTORS

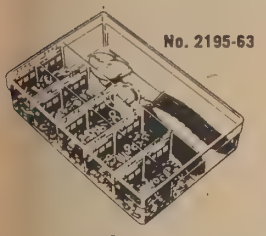
- Use Quick Connect Terminals For Fast Connect and Disconnect Feature
- Insulated and Non-Insulated Styles Available

Illustrations Actual Size

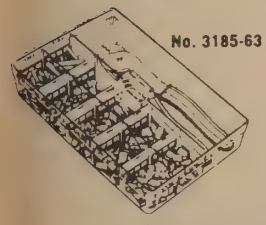


*Available in Insulated Style Also

TERMINAL KITS



No. 2195-63 Service Kit. Kit contains 10 different types of popular electrical, radio and TV single-grip terminals and No. 1963 crimping tool. Terminals included are: 11205, 11206 11210, 11305, 11306, 11310, 14206, 13306, 13310, 15208. **Price.....$10.25**



No. 3185-63 Service Kit. Especially designed for the appliance, automotive and electrical equipment service man. Contains varied assortment of popular quick connect terminals and adapters plus No. 1963 crimping tool. Terminals included are: 18301, 18302, 18303, 18304, 18001, 18002, 18008, 18007, 19301, 19302. **Price.....$10.25**



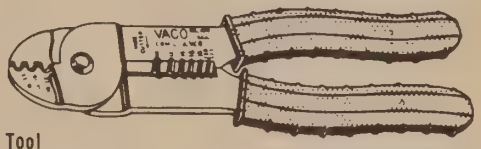
No. 6175-63 Service Kit. Kit contains 10 different types of popular insulated single-grip terminals for electrical, radio and TV plus No. 1963 crimping tool. Terminals included are: 51205, 51206, 51210, 51305, 53206, 53306, 53310, 51306, 51310, 54206.
Price $10.25



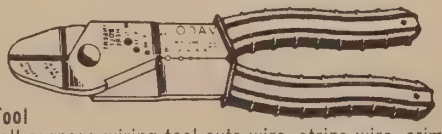
No. 5000-63 Non-Insulated "Cash Register" Assortment. Heavy steel box contains 20 compartmented sections each with supply of 50 single-grip, non-insulated terminals (1000 in all). Complete with identification card in cover for easy selection of any terminal. Size: 13¼"x9¼"x2".
Price each $34.00

No. 4900-63 Insulated "Cash Register" Assortment. Same as No. 5000-63 except assortment contains 500 insulated, single-grip terminals in 20 different types and sizes. Plastic insulation is color-coded for size.
Size: 13¼"x9¼"x2".
Price each $34.00

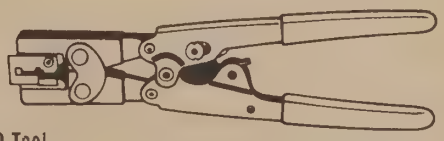
ATTACHING TOOLS



No. 1900 Tool
Features specially designed crimping dies for use on non-insulated type terminals . . . forms cold weld between wire and terminal barrel. Cuts wire, strips wire and crimps terminals 22 to 10 gauge AWG. Plastic comfort grip handles.
Price . . . $4.50



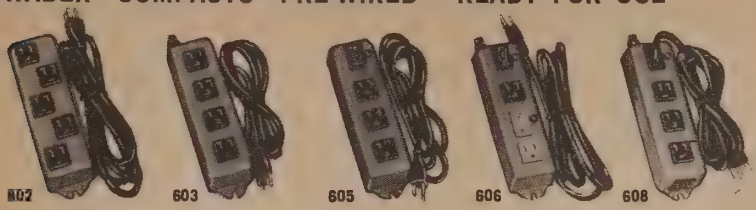
No. 1963 Tool
Patented, all purpose wiring tool cuts wire, strips wire, crimps insulated and non-insulated terminals and slices 6 sizes of bolts (4-40, 5-40, 6-32, 8-32, 10-32, and 10-24). Special features include end positioned wire cutter for reaching into hard-to-get-at places, and new bolt slicing principle that permits less hand pressure for slicing bolts with no burrs to file. Plastic comfort grip handles.
Price . . . $5.25



No. T1710 Tool
One tool . . . one die . . . crimps all styles of insulated and non-insulated terminals in wire range from 22-10 gauge AWG. Built-in ratchet with safety release assures uniform crimps every time, and compound lever action from narrow span handles puts "ease in the squeeze." Terminals are quickly positioned for double crimps by special terminal locator. Plastic comfort grip handles.
Price . . . $40.00

WABER — A Subsidiary of G-L INDUSTRIES INC. — WABER

WABER "COMPACTS" PRE-WIRED — READY FOR USE



Compact in size, these sturdy Waber units provide quality "U" ground type outlets in a variety of configurations for schools, labs, or industry. They are particularly useful for OEM applications. Custom variations can be made to meet your specific needs.

- All of the above "U" ground units are grounded electrically, as well as mechanically.
- Variations from any of the above standard units can be made to your specific requirements. Colors can be matched to existing equipment on quantity requirements.

FEATURES

- TOUGH HSJ UL APPROVED CORD-SET
- RATED AT 15A., 130 V. CONTINUOUS DUTY
- SEAMLESS DRAWN STEEL CASE. GRAY FINISH
- SNAP-IN COMPONENTS, FUSES, CIRCUIT BREAKERS UL LISTED
- 8¼ INCH MTG. CTRS. SIZE 8⅝ x 2¼ x 1½
- SHIPPING WEIGHT:
  2 LBS. FOR 6 FOOT CORD-SET MODELS
  3 LBS. FOR 15 FOOT CORD-SET MODELS

Model No.	On-Off Switches	Pilot Lights	Fuse	Circuit Breaker	6 Ft. Cord-Set	15 Ft. Cord-Set	"U" Gr. Outlets	Shipping Wt. Lbs.	Industrial Net Price
602					1		5	2	4.80
602-15						1	5	3	5.80
603	1		1		1		4	2	5.25
603-15	1		1			1	4	3	6.25
603CB	1			1	1		4	2	6.25
603CB-15	1			1		1	4	3	7.25
605	1	1	1		1		3	2	5.95
605-15	1	1	1			1	3	3	6.95
605CB	1	1		1	1		3	2	6.95
605CB-15	1	1		1		1	3	3	7.95
606	2	2	1		1		2	2	5.95
606-15	2	2	1			1	2	3	6.95
606CB	2	2		1	1		2	2	6.95
606CB-15	2	2		1		1	2	3	7.95
608	1	1	1		1		4	2	6.50
608-15	1	1	1			1	4	3	7.50
608CB	1	1		1	1		4	2	7.50
608CB-15	1	1		1		1	4	3	8.50

WABER DELUXE OUTLET BOXES IN SIX COLORFUL MODELS



Waber models 25 & 35 series provide 7 color keyed switch-outlet groups with center write-on strip.

Models 26 & 27 timer models provide settings for up to 12 hours. Model 26 turns power on at end of preset time and Model 27 turns power off.

The P series have a power light for each switch outlet set.

FEATURES

- TOUGH HSJ FINEST QUALITY UL APPROVED CORD-SET
- RATED 15 AMPS 130 VOLTS CONTINUOUS DUTY
- SEAMLESS STEEL CASE IN HANDSOME GRAY FINISH
- ALL SNAP IN COMPONENTS, FUSES, CIRCUIT BREAKERS UL LISTED
- MOUNTING CENTERS 13/" x 2⅞"
  SIZE: 13⅜ x 4⅛ x 1½"
- "U" GROUND MODELS ARE ELECTRICALLY GROUNDED

Model No.	On-Off Switches	Pilot Lights	6 Ft. Cord-Sets	15 Ft. Cord-Sets	10 Ft. Cord-Sets	Panel Fuse	Circuit Breaker	2 Wire Outlets	"U" Gr. Outlets	Timer 12 Hour	Shipping Wt. Lbs.	Industrial Net Price
25	8	1	1			1			7		3	15.50
25-15	8	1		1		1			7		4	16.50
25CB	8	1	1				1		7		3	16.50
25CB-15	8	1		1			1		7		4	17.50
25P	8	8	1			1			7		3	19.50
25P-15	8	8		1		1			7		4	20.50
25PCB	8	8	1				1		7		3	20.50
25PCB-15	8	8		1			1		7		4	21.50
35	8	1			1	1		7			3	13.50
35CB	8	1			1		1	7			3	14.50
35P	8	8			1	1		7			3	17.50
35PCB	8	8			1		1	7			3	18.50
26	6	1	1			1			7	1	3	24.00
26-15	6	1		1		1			7	1	4	25.00
26CB	6	1	1				1		7	1	3	25.00
26CB-15	6	1		1			1		7	1	4	26.00
26P	6	6	1			1			7	1	3	28.00
26P-15	6	6		1		1			7	1	4	29.00
26PCB	6	6	1				1		7	1	3	29.00
26PCB-15	6	6		1			1		7	1	4	30.00
27	6	1	1			1			7	1	3	24.00
27-15	6	1		1		1			7	1	4	25.00
27CB	6	1	1				1		7	1	3	25.00
27CB-15	6	1		1			1		7	1	4	26.00
27P	6	6	1			1			7	1	3	28.00
27P-15	6	6		1		1			7	1	4	29.00
27PCB	6	6	1				1		7	1	3	29.00
27PCB-15	6	6		1			1		7	1	4	30.00

EIGHT POPULAR WABER OUTLET BOXES OFFER REAL CONVENIENCE AT LOW COST



FEATURES

- TOUGH UL APPROVED 15 AMP HSJ (3-WIRE) OR HPN (2-WIRE) CORD-SET
- RATED 15A. 130V. CONTINUOUS DUTY
- SEAMLESS DRAWN STEEL CASE IN HANDSOME GRAY FINISH
- ALL SNAP-IN COMPONENTS, FUSES, CIRCUIT BREAKERS UL LISTED
- 12¾" MOUNTING CENTERS
  SIZE: 13⅛ x 2⅜ x 1⅝
- "U" GROUND MODELS HAVE ELECTRICAL WIRED GROUND
- CUSTOM UNIT INQUIRIES INVITED

Here are eight Waber Models of proven utility. Models 15 and 17 are in-line units designed for series stringing with an outlet on one end and the cord-set coming out the other. Model 15 is the control unit and Model 17 the slave unit.

Waber Models 20 and 24 have 6 outlets controlled by an "on-off" switch, pilot light, and panel-mounted fuse or circuit breaker. Model 20 is the 2-wire type and Model 24 is the 3-wire "U" ground type.

Waber Models 30 and 32 feature 4 color-coded switch-outlet sets, protected by either a fuse or circuit breaker. Model 30 is the 2-wire type and Model 32 is the 3-wire "U" ground type. Available also with a pilot light for each switch outlet group in the Models 30P and 32P series.

Model No.	On-Off Switches	Pilot Lights	Panel Fuse	Circuit Breaker	6 Ft. Cord-Set	15 Ft. Cord-Set	10 Ft. Cord-Set	2 Wire Outlets	"U" Gr. Outlets	Shipping Wt. Lbs.	Industrial Net Prices
15	1	1	1		1				7	2	8.75
15-15	1	1	1			1			7	3	9.75
15CB	1	1		1	1				7	2	9.75
15CB-15	1	1		1		1			7	3	10.75
17					1				9	2	6.75
17-15						1			9	3	7.75
20	1	1	1				1	6		2	5.95
20CB	1	1		1			1	6		2	6.95
24	1	1	1		1				6	2	8.50
24-15	1	1	1			1			6	3	9.50
24CB	1	1		1	1				6	2	9.50
24CB-15	1	1		1		1			6	3	10.50
30	4		1				1	4		2	5.95
30CB	4			1			1	4		2	6.95
30P	4	4	1				1	4		2	7.50
30PCB	4	4		1			1	4		2	8.50
32	4		1		1				4		8.50
32-15	4		1			1			4		9.50
32CB	4			1	1				4		9.50
32CB-15	4			1		1			4		10.50
32P	4	4	1		1				4		10.50
32P-15	4	4	1			1			4		11.50
32PCB	4	4		1	1				4		11.50
32PCB-15	4	4		1		1			4		12.50

WABER 'U' GROUND WALL OUTLET MODELS



Get four or six "U" ground outlets from one wall outlet. Waber Model 611 is the four outlet unit and Waber Model 19 provides the six "U" ground outlets. Plug in male outlet to wall receptacle and secure mounting ears.

Either of these models is also available with panel mounted fuse or push-to-reset circuit breaker. Overall size of the Model 611 is 8⅝ x 2¼ x 1½ and the Model 19 is 13⅛ x 2⅜ x 1⅝. Shipping weight is 2 pounds.

	Net
Model 611 (fuse)	$4.75
Model 611CB (circuit breaker)	5.75
Model 611B (no fuse or crct. bkr.)	4.25
Model 19 (fuse)	6.75
Model 19CB (circuit breaker)	7.75
Model 19B (no fuse or crct. bkr.)	6.25

Net

© United Technical Publications

WABER — A Subsidiary of G-L INDUSTRIES INC. — WABER

PRE-WIRED WABER OUTLET PANELS MADE TO FIT STANDARD 19" RACKS

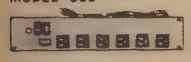
Waber pre-wired, ready-to-use, master power controls provide a quick and easy power source for standard relay racks. You have your choice from this great variety of configurations with outlets on the outside, inside, or combinations of both. Choose the Waber pre-wired panel you need from the many standard units shown here.

DUST AND SAFETY COVERS AVAILABLE FOR THESE PANELS

All of the 900 series rack mount outlet boxes are supplied with open backs, with the exception of Model 914. This is supplied with dust cover. Dust and safety covers are available at 4.00 each.



MODEL 900



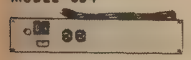
MODEL 901



MODEL 903



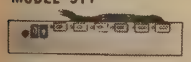
MODEL 904



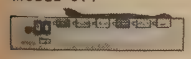
MODEL 907



MODEL 911



MODEL 914



MODEL 917



MODEL 920



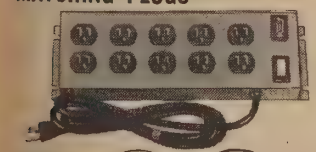
MODEL 921

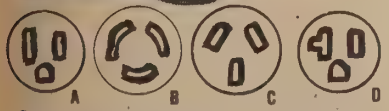
Model	On-Off Switches	Pilot Lights	Panel Fuse	Circuit Breaker	6 Ft. Cord-Set	15 Ft. Cord-Set	Panel Size 1¾ x 19"	Panel Size 3½ x 19"	"U" Gr. Outlets (Front)	"U" Gr. Outlets (Back)	0-150 v Voltmeter	Shipping Wt. (Lbs.)	Industrial Net Price
900	1	1	1		1			1	6			3	10.95
900-15	1	1	1			1		1	6			4	11.95
900CB	1	1		1	1			1	6			3	11.95
900CB-15	1	1		1		1		1	6			4	12.95
901	1	1	1		1			1	6		1	3	14.50
901-15	1	1	1			1		1	6		1	4	15.50
901CB	1	1		1	1			1	6		1	3	15.50
901CB-15	1	1		1		1		1	6		1	4	16.50
903	1	1	1		1		1		6			3	10.95
903-15	1	1	1			1	1		6			4	11.95
903CB	1	1		1	1		1		6			3	11.95
903CB-15	1	1		1		1	1		6			4	12.95
904	1	1	1		1			1	2	4		3	12.95
904-15	1	1	1			1		1	2	4		4	13.95
904CB	1	1		1	1			1	2	4		3	13.95
904CB-15	1	1		1		1		1	2	4		4	14.95
907	1	1	1		1			1	2	4	1	3	16.50
907-15	1	1	1			1		1	2	4	1	4	17.50
907CB	1	1		1	1			1	2	4	1	3	17.50
907CB-15	1	1		1		1		1	2	4	1	4	18.50
911	1	1	1		1		1			6		3	12.95
911-15	1	1	1			1	1			6		4	13.95
911CB	1	1		1	1		1			6		3	13.95
911CB-15	1	1		1		1	1			6		4	14.95
914	7	7	1		1			1		6		3	22.00
914-15	7	7	1			1		1		6		4	23.00
914CB	7	7		1	1			1		6		3	23.00
914CB-15	7	7		1		1		1		6		4	24.00
917	7	7	1		1			1		6	1	3	25.45
917-15	7	7	1			1		1		6	1	4	26.45
917CB	7	7		1	1			1		6	1	3	26.45
917CB-15	7	7		1		1		1		6	1	4	27.45
920	7	7	1		1			1	6			3	18.50
920-15	7	7	1			1		1	6			4	19.50
920CB	7	7		1	1			1	6			3	19.50
920CB-15	7	7		1		1		1	6			4	20.50
921	7	7	1		1			1	6		1	3	21.95
921-15	7	7	1			1		1	6		1	4	22.95
921CB	7	7		1	1			1	6		1	3	22.95
921CB-15	7	7		1		1		1	6		1	4	23.95

FEATURES

- TOUGH HSJ FINEST QUALITY UL APPROVED CORD-SET
- RATED AT 15 AMPERES 130 VOLTS CONTINUOUS DUTY
- STEEL PANEL IN A HANDSOME GRAY FINISH
- ALL SNAP-IN COMPONENTS, FUSES, CIRCUIT BREAKERS UL LISTED
- ALL OUTLETS ELECTRICALLY GROUNDED

WABER 800 SERIES PROVIDES POPULAR DUPLEXES WITH MATCHING PLUGS





Four different duplex types are available in this series including the new 20 Ampere 125 Volt type. Models 804-805-806-807 feature five duplex outlets. Special duplexes available on request.

FEATURES

- TOUGH HSJ FINEST QUALITY UL APPROVED CORD-SET
- RATED 15 AMPS 130 VOLTS CONTINUOUS DUTY. MODELS 803 AND 807 RATED 20 AMPS 125 VOLTS
- SEAMLESS STEEL CASE IN HANDSOME GRAY FINISH
- ALL SNAP-IN COMPONENTS, FUSES. CIRCUIT BREAKERS UL LISTED
- MOUNTING CENTERS 13" x 2⅞" SIZE: 13⅜ x 4⅛ x 1½"
- OUTLETS ELECTRICALLY GROUNDED

Model	On-Off Switch	Pilot Light	Fuse	Circuit Breaker	6 Ft. Cord 15A	15 Ft. Cord 15A	6 Ft. Cord 20A	15 Ft. Cord 20A	"U" Ground	Locking	Crow's Foot	20A-125V	Shipping Wt. Lbs.	Net
800	•	•	•		•				A				3	13.50
800-15	•	•	•			•			A				4	14.50
800CB	•	•		•	•				A				3	14.50
800CB-15	•	•		•		•			A				4	15.50
801	•	•	•		•						B		3	24.50
801-15	•	•	•			•					B		4	25.50
801CB	•	•		•	•						B		3	25.50
801CB-15	•	•		•		•					B		4	26.50
802	•	•	•		•							C	3	34.95
802-15	•	•	•			•						C	4	35.95
802CB	•	•		•	•							C	3	35.95
802CB-15	•	•		•		•						C	4	36.95
803	•	•	•				•					D	5	24.50
803-15	•	•	•					•				D	6	25.50
803CB	•	•		•			•					D	5	25.50
803CB-15	•	•		•				•				D	6	26.50
804-15			•			•			A				5	12.00
805-15			•			•				B			5	21.50
806-15			•			•						C	5	30.00
807-15			•					•				D	6	21.50

NEW! WABER EXECUTIVE CONSOLES DELUXE DESK TOP - LAB TOP MODELS



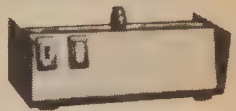
Model 95 (7½ x 2¾ x 2¾")



Model 97 (11 x 2¾ x 2¾")



Model 96 (9¼ x 2¾ x 2¾")



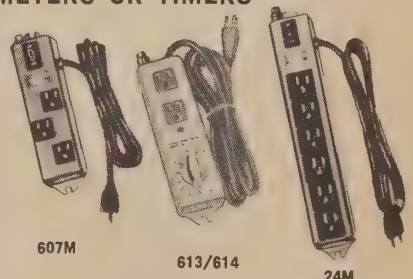
Model 98 (9¼ x 2¾ x 2¾")

Available in 3 different sizes, these models have 4, 6 or 8 "U" ground outlets, each controlled by its own switch and pilot light. The outlets are in the rear of the units.

Model 98 Series offers a master switch and pilot light controlling six "U" ground outlets on the rear panel. All of the above units are rated at 15 A. 130 V.

	Industrial Net
Model 95 (fuse, 6′ cord-set)	$12.95
Model 95-15 (fuse, 15′ cord-set)	13.95
Model 95CB (circuit breaker, 6′ cord-set)	13.95
Model 95CB-15 (circuit breaker, 15′ cord-set)	14.95
Model 96 (fuse, 6′ cord-set)	15.50
Model 96-15 (fuse, 15′ cord-set)	16.50
Model 96CB (circuit breaker, 6′ cord-set)	16.50
Model 96CB-15 (circut breaker, 15′ cord-set)	17.50
Model 97 (fuse, 6′ cord-set)	19.50
Model 97-15 (fuse, 15′ cord-set)	20.50
Model 97CB (circuit breaker, 6′ cord-set)	20.50
Model 97CB-15 (circuit breaker, 15′ cord-set)	21.50
Model 98 (fuse, 6′ cord-set)	10.95
Model 98-15 (fuse, 15′ cord-set)	11.95
Model 98CB (circuit breaker, 6′ cord-set)	11.95
Model 98CB-15 (circuit breaker, 15′ cord-set)	12.95

HANDY WABER ELECTRICAL OUTLET BOXES EQUIPPED WITH METERS OR TIMERS



607M — 613/614 — 24M

WABER MODEL 607M OUTLET BOX WITH ILLUMINATED AC VOLTMETER

This outlet box features an "on-off" switch with three "U" ground outlets, with an edge-wise reading 0 to 150 volts AC Voltmeter for continuous line voltage checks. Size: 8⅝ x 2¼ x 1½" with 8¼" mounting centers.

	Net
Model 607M (fuse, 6′ cord-set)	$ 8.95
Model 607M-15 (fuse, 15′ cord-set)	9.95
Model 607MCB (circuit breaker, 6′ cord-set)	9.95
Model 607MCB-15 (circuit breaker, 15′ cord-set)	10.95

WABER MODEL 613 AND 614 TIMER MODELS

2 timed outlets are featured in this compact unit with up to 12-hour timer control. Model 613 turns power off at end of preset interval. Model 614 turns power on. Size: 8⅝ x 2¼ x 1½" with 8¼" mounting centers.

	Net
Model 613 (fuse, 6′ cord-set)	$13.00
Model 613-15 (fuse, 15′ cord-set)	14.00
Model 613CB (circuit breaker, 6′ cord-set)	14.00
Model 613CB-15 (circuit breaker, 15′ cord-set)	15.00
Model 614 (fuse, 6′ cord-set)	13.00
Model 614-15 (fuse, 15′ cord-set)	14.00
Model 614CB (circuit breaker, 6′ cord-set)	14.00
Model 614CB-15 (circuit breaker, 15′ cord-set)	15.00

WABER MODEL 24M FEATURES AC VOLTMETER

Our popular Model 24 now available with an illuminated voltmeter, provides continuous check of AC line voltage. The illuminated wide angle meter monitors from 0 to 150 AC Volts.

	Net
Model 24M (fuse, 6′ cord-set)	$11.95
Model 24M-15 (fuse, 15′ cord-set)	12.95
Model 24MCB (circuit breaker, 6′ cord-set)	12.95
Model 24MCB-15 (circuit breaker, 15′ cord-set)	13.95

© United Technical Publications

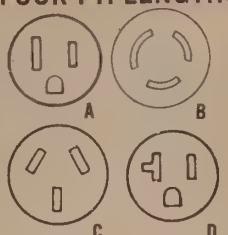
Net

WABER — A Subsidiary of G-L INDUSTRIES INC. — WABER

WABER RUGGED HEAVY DUTY ELECTRICAL PRE-WIRED OUTLET BOXES IN CONVENIENT TWO AND FOUR FT. LENGTHS



700 703 704* 705 710 712 715 707



* Model 704 Series has outlets on the end.

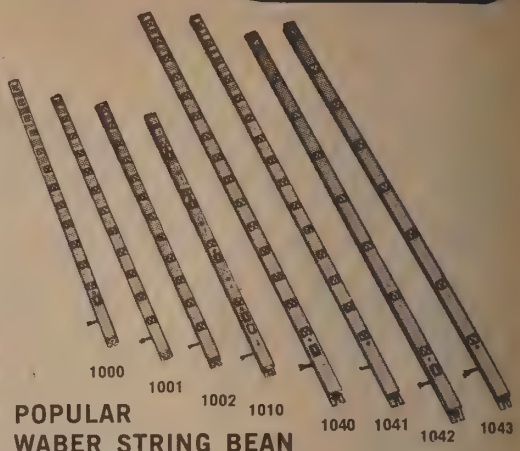
These rugged, versatile units have proven themselves to users in a wide variety of applications. Now veterans of the Waber line, these seamless steel outlet boxes are doing yeoman service in racks, work-benches, production benches and lab tables across the country. No wiring to do . . . just plug in.

Individual Outlet Type Model	On-Off Switch	Pilot Light	6' Cord-Set	15' Cord-Set	Fuse	Circuit Breaker	Type of Outlet	No. of Outlets	0-150 V. Meter	Net
700	•	•	•		•		A	8		14.95
700-15	•	•		•	•		A	8		15.95
700CB	•	•	•			•	A	8		15.95
700CB-15	•	•		•		•	A	8		16.95
703	•	•	•		•		A	8	•	17.50
703-15	•	•		•	•		A	8	•	18.50
703CB	•	•	•			•	A	8	•	18.50
703CB-15	•	•		•		•	A	8	•	19.50
704	•	•	•		•		A	9		15.95
704-15	•	•		•	•		A	9		16.95
704CB	•	•	•			•	A	9		16.95
704CB-15	•	•		•		•	A	9		17.95
705	•	•	•		•		A	15		18.95
705-15	•	•		•	•		A	15		19.95
705CB	•	•	•			•	A	15		19.95
705CB-15	•	•		•		•	A	15		20.95
710			•				A	8		12.95
710-15				•			A	8		13.95
712			•				A	9		13.95
712-15				•			A	9		14.95
715			•				A	15		16.95
715-15				•			A	15		17.95

FEATURES

- TOUGH HSJ FINEST QUALITY UL APPROVED CORD-SET
- SEAMLESS STEEL CASE IN HANDSOME GRAY FINISH
- ALL SNAP-IN COMPONENTS, FUSES, CIRCUIT BREAKERS, UL LISTED
- SHIPPING WEIGHTS: 2 FT. MODELS, 6 FT. CORDS 4 LBS., 15 FT. CORDS 5 LBS.; 4 FT. MODELS, 6 FT. CORDS 6 LBS., 15 FT. CORDS 7 LBS.
- MODELS 764, 765, 766, 767 ARE TWO FT. MODELS WITH 23¾" MOUNTING CENTERS. SIZE IS 24 x 2 x 1½". ALL OTHER MODELS ARE 49 x 2 x 1½" WITH 48¾" MOUNTING CENTERS
- ALL MODELS ARE RATED 15 AMPS, 130 V. EXCEPT MODELS 727, 728, and 766. THESE ARE RATED 20 AMPS, 125 VOLTS
- ALL OUTLETS HAVE MATCHING PLUGS ON CORD-SET

Duplex Style Outlets Model	On-Off Switch	Pilot Light	6' Cord 15A	15' Cord 15A	6' Cord 20A	15' Cord 20A	Fuse	Circuit Breaker	Type of Outlet	No. of Outlets	Net
707	•	•	•				•		A	14	15.75
707-15	•	•		•			•		A	14	16.75
707CB	•	•	•					•	A	14	16.75
707CB-15	•	•		•				•	A	14	17.75
711			•						A	14	13.95
711-15				•					A	14	14.95
720	•	•	•				•		B	14	28.95
720-15	•	•		•			•		B	14	29.95
720CB	•	•	•					•	B	14	29.95
720CB-15	•	•		•				•	B	14	30.95
725			•						B	14	27.50
725-15				•					B	14	28.50
727	•	•			•		•		D	14	28.95
727-15	•	•				•	•		D	14	29.95
727CB	•	•			•			•	D	14	29.95
727CB-15	•	•				•		•	D	14	30.95
728					•				D	14	27.50
728-15						•			D	14	28.50
730	•	•	•				•		C	14	32.95
730-15	•	•		•			•		C	14	33.95
730CB	•	•	•					•	C	14	33.95
730CB-15	•	•		•				•	C	14	34.95
735			•						C	14	31.95
735-15				•					C	14	32.95
764	•	•	•				•		A	8	13.35
764-15	•	•		•			•		A	8	14.35
764CB	•	•	•					•	A	8	14.35
764CB-15	•	•		•				•	A	8	15.35
765	•	•	•				•		B	8	24.50
765-15	•	•		•			•		B	8	25.50
765CB	•	•	•					•	B	8	25.50
765CB-15	•	•		•				•	B	8	26.50
766	•	•			•		•		D	8	24.50
766-15	•	•				•	•		D	8	25.50
766CB	•	•			•			•	D	8	25.50
766CB-15	•	•				•		•	D	8	26.50
770			•						A	8	11.90
770-15				•					A	8	12.90



POPULAR WABER STRING BEAN PRE-WIRED SLIM DESIGN HEAVY DUTY ELECTRICAL OUTLET BOXES

These popular Waber STRING BEAN models offer 8 variations in 2 convenient lengths; 4 ft. and 6 ft. Only 1½" wide x 1⅛" deep these units are specially valuable where space is at a premium.

FEATURES

- Tough UL Approved HSJ Cord-Set
- Seamless steel case in handsome gray finish
- All snap-in components, fuses, circuit breakers UL listed
- Models 1000, 1001, 1002, 1010 have 48¾" mounting centers. Size is 49x1½x1⅛". Models 1040, 1041, 1042, and 1043 have 71¾" mounting centers. Size is 72x1½x1⅛"
- Rated 15 amperes, 130 volts continuous duty

Model	No. of Switches	No. of Pilots	6' Cord	15' Cord	Fuse	Circuit Breaker	"U" Gr. Outlets	4 Ft. Length	6 Ft. Length	Shipping Weight	Net
1000	1	1	1		1		12	•		5	15.95
1000-15	1	1		1	1		12	•		6	16.95
1000CB	1	1	1			1	12	•		5	16.95
1000CB-15	1	1		1		1	12	•		6	17.95
1001			1		1		12	•		5	14.95
1001-15				1	1		12	•		6	15.95
1001CB			1			1	12	•		5	15.95
1001CB-15				1		1	12	•		6	16.95
1002			1				12	•		5	13.95
1002-15				1			12	•		6	14.95
1010	9	9	1		1		8	•		5	19.95
1010-15	9	9		1	1		8	•		6	20.95
1010CB	9	9	1			1	8	•		5	20.95
1010CB-15	9	9		1		1	8	•		6	21.95
1040	1	1	1		1		15		•	6	19.95
1040-15	1	1		1	1		15		•	7	20.95
1040CB	1	1	1			1	15		•	6	20.95
1040CB-15	1	1		1		1	15		•	7	21.95
1041		1	1				15		•	6	16.95
1041-15		1		1			15		•	7	17.95
1042	1	1	1		1		8		•	6	16.95
1042-15	1	1		1	1		8		•	7	17.95
1042CB	1	1	1			1	8		•	6	17.95
1042CB-15	1	1		1		1	8		•	7	18.95
1043		1	1				8		•	6	14.95
1043-15		1		1			8		•	7	15.95

NEW! WABER OUTLET STRIPS WITH CONNECTORS READY TO WIRE IN

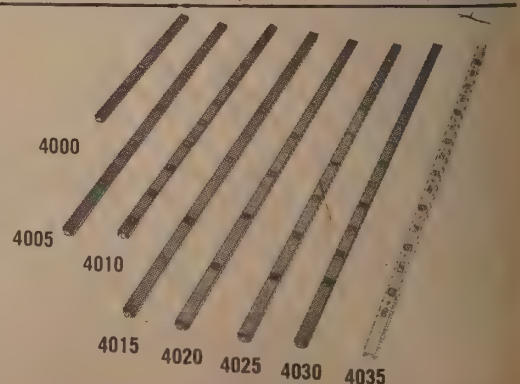
HERE'S HOW IT WORKS . . .

Mounting is easy. Bottom cover is screwed to bench, back wall, or wherever outlet strip is wanted. After connections are made, top cover is mounted to bottom plate with self tappers. Size is 1⅝" wide x 1⅜" deep. Lengths are as shown. Case is of sturdy steel with handsome gray finish. Outlets are "U" ground type and UL listed.

When an outlet strip is to be wired into a fixed installation the Waber Model 4000 Series are ideal for this purpose. Choose from the wide range shown here. Many outlets or few . . . long or short strip . . . the choice is yours.

Model No.	Length Ft.	No. of Outlets	Centers	Shipping Wt.	Net
4000	3	6	6"	4	$ 7.75
4005	5	5	10"	7	8.50
4010	5	10	6"	7	11.00
4015	6	4	14"	7	8.50
4020	6	6	10"	7	9.75
4025	6	8	8"	7	11.00
4030	6	12	5"	7	13.50
4035	6	8*	8"	7	18.50

* Each controlled by its own switch and pilot light



Net

© United Technical Publications

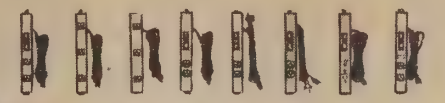
WABER

A Subsidiary of G-L INDUSTRIES INC.

WABER

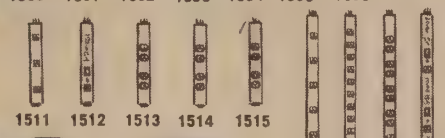
MAKE YOUR OWN COMBINATIONS! WABER "PICK-A-STRIP" LETS YOU MIX 'EM OR MATCH 'EM FOR ANY COMBINATION ...ANY LENGTH

TAKE ANY ONE OF THESE MASTERS



1500 1501 1502 1503 1504 1505 1506 1507

AND ADD ANY COMBINATION OF THESE SLAVES



1511 1512 1513 1514 1515



3073 3074

1520 1521 1522 1523

Combine slaves to any master to give you outlets ... as you want them ... controlled by master best for you. Intermix slaves, make any desired length, and space out with Waber extensions, permitting Pick-A-Strip units where you want them. Outlet boxes are completely wired, ready to plug in. Choose exactly what you need.

Sturdy steel construction, finished in gray. Rating 15 amperes, 130 volts continuous duty. Units are 12¾" L x 1 1/16" W x 1½" H with 12⅜" mounting centers. The 24" models are 24¾" L x 1 1/16" W x 1½" H with 24⅜" mounting centers.

1500 series master units are equipped with finest quality, UL approved HSJ cord-sets.

WABER MASTER UNITS

WABER MODEL 1500 SERIES

This has 2 "U" ground outlets, female connector, on-off switch, pilot light, and choice of fuse or circuit-breaker, 6 or 15 foot cord. U.L. listed cord-set.

	Net
Model 1500 (fuse, 6′ cord-set)	$6.95
Model 1500-15 (fuse, 15′ cord-set)	7.95
Model 1500CB (circuit breaker, 6′ cord-set)	7.95
Model 1500CB-15 (circuit breaker, 15′ cord-set)	8.95

WABER MODEL 1501 SERIES

3 "U" ground outlets and female connector. Fuse or circuit breaker, 6 or 15-foot cord.

	Net
Model 1501 (fuse, 6′ cord-set)	$6.50
Model 1501-15 (fuse, 15′ cord-set)	7.50
Model 1501CB (circuit breaker, 6′ cord-set)	7.50
Model 1501CB-15 (circuit breaker, 15′ cord-set)	8.50

WABER MODEL 1502 SERIES

3 "U" ground outlets and female connector. Outlets only and choice of 6- or 15-foot cord. U.L. listed cord-set.

	Net
Model 1502 (6′ cord-set)	$5.25
Model 1502-15 (15′ cord-set)	6.25

WABER MODEL 1503 SERIES

Features a duplex "U" ground outlet and female connector, on-off switch, pilot light, choice of fuse or circuit breaker, 6 or 15- foot cord. U.L. listed cord-set.

	Net
Model 1503 (fuse, 6′ cord-set)	$6.95
Model 1503-15 (fuse, 15′ cord-set)	7.95
Model 1503CB (circuit breaker, 6′ cord-set)	7.95
Model 1503CB-15 (circuit breaker, 15′ cord-set)	8.95

WABER MODEL 1504 SERIES

Same as 1503 series except duplex outlet is locking type.

	Net
Model 1504 (fuse, 6′ cord-set)	$15.50
Model 1504-15 (fuse, 15′ cord-set)	16.50
Model 1504CB (circuit breaker, 6′ cord-set)	16.50
Model 1504CB-15 (circuit breaker, 15′ cord-set)	17.50

WABER MODEL 1505 SERIES

Same as Model 1503 series except duplex outlet is crow's foot type.

	Net
Model 1505 (fuse, 6′ cord-set)	$15.50
Model 1505-15 (fuse, 15′ cord-set)	16.50
Model 1505CB (circuit breaker, 6′ cord-set)	16.50
Model 1505CB-15 (circuit breaker, 15′ cord-set)	17.50

WABER MODEL 1506 SERIES

Unit has on-off switch, pilot light, "U" ground outlet controlled by own switch, pilot light and female connector. Choice of fuse or circuit breaker, 6 or 15 foot cord.

	Net
Model 1506 (fuse, 6′ cord-set)	$7.50
Model 1506-15 (fuse, 15′ cord-set)	8.50
Model 1506CB (circuit breaker, 6′ cord-set)	8.50
Model 1506CB-15 (circuit breaker, 15′ cord-set)	9.50

WABER MODEL 1507 SERIES

2 "U" ground outlets, on-off switch, pilot light, and a 0 to 150 volt edgewise reading AC voltmeter. Fuse or circuit breaker 6 or 15-foot cord, and female connector.

	Net
Model 1507 (fuse, 6′ cord-set)	$ 8.95
Model 1507-15 (fuse, 15′ cord-set)	9.95
Model 1507CB (circuit breaker, 6′ cord-set)	9.95
Model 1507CB-15 (circuit breaker, 15′ cord-set)	10.95

WABER SLAVE MODELS

Slave models below designed with male connector on one end and "U" ground female connector on other end. Units are plugged one into the other. Connectors are in addition to components listed.

	Net
Model 1511 (3 "U" ground receptacles)	$ 3.75
Model 1512 (2 "U" ground outlets each coded switch and pilot light)	5.00
Model 1513 (4 "U" ground outlets)	3.75
Model 1514 (4 locking outlets, duplex type)	10.75
Model 1515 (4 crow's foot outlets, duplex type)	10.75

WABER 24 INCH SLAVE MODELS

	Net
Model 1520 (6 "U" ground outlets)	$6.95
Model 1521 (11 "U" ground outlets)	8.50
Model 1522 (10 "U" ground outlets, duplex type)	6.95
Model 1523 (5 "U" ground outlets, each controlled by its own on-off switch and pilot light, color coded)	9.50

WABER EXTENSION CORDS

These quality extension cords are ideal as spacers between slave units or can be used instead of a master unit. These cord-sets are rated at 15 amperes, 130 volts.

	Net
Model 3073 (7′ extension cord)	$2.75
Model 3074 (16′ extension cord)	4.50



1560 1561 1562 1563

THESE FOUR WABER ELECTRICAL OUTLET BOXES RECESS INTO DESKS AND CABINETS

Waber "Iceberg" made to recess into desks, counters, cabinets, and hi-fi installations of all types.

Four units available. Two have outlets on surface plate, and two have outlets on back with control from face plate. Size of unit is 1½" wide x 10" long x 1½" deep. Mounting hole size is 9½ x 1 7/32". Units with fuse or circuit breaker, 6- or 15-foot cord. Rating 15 amps, 130 volts continuous duty.

Model 1560 has five "U" ground outlets only. Choice of 6- or 15-foot HSJ cord. Model 1561 has three surface mounted "U" ground outlets controlled by switch and pilot. Choice of fuse or circuit breaker, 6- or 15-foot HSJ cord-set. Model 1562 has the switch, and pilot surface mounted with access to three "U" ground outlets from back. Choice of fuse post or circuit breaker, 6- or 15-foot HSJ cord. Model 1563 has four color coded switches, pilot lights and protective device surface mounted, with access to four "U" ground outlets from back. Each outlet controlled by its own switch.

	Net
Model 1560 (6′ cord-set)	$5.75
Model 1560-15 (15′ cord-set)	6.75
Model 1561 (fuse, 6′ cord-set)	6.95
Model 1561-15 (fuse, 15′ cord-set)	7.95
Model 1561CB (6′ cord-set, circuit breaker)	7.95
Model 1561CB-15 (circuit breaker, 15′ cord-set)	8.95
Model 1562 (6′ cord-set, fuse)	6.95
Model 1562-15 (15′ cord-set, fuse)	7.95
Model 1562CB (6′ cord-set, circuit breaker)	$7.95
Model 1562CB-15 (15′ cord-set, circuit breaker)	8.95
Model 1563 (6′ cord-set, fuse)	8.50
Model 1563-15 (15′ cord-set, fuse)	9.50
Model 1563CB (6′ cord-set, circuit breaker)	9.50
Model 1563CB-15 (15′ cord-set, circuit breaker)	10.50



200



201



202



205



203

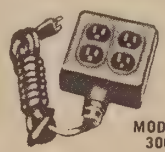
WABER "VARI-FINE" SOLID STATE AC-DC MOTOR SPEED CONTROLLERS

Waber Vari-Fine Controllers are solid state devices for speed and light control, featuring stepless change from zero to maximum. They provide infinite control of motor speed and light intensity, and can be used to vary the speed of AC/DC motors of the universal type. They handle load current up to the maximum rating at 117 volts 60 cps. These units are fused for circuit protection. Compact and portable, Waber Vari-Fine Controllers have many applications in the home, laboratory, school, or factory where the regulation of motor or light is desirable.

	Net
Model 205 (Rated at 5 amperes, 117 volts)	$9.95
Model 200 (Rated at 7 amperes, 117 volts)	14.95
Model 201 (Rated at 12 amperes, 117 volts)	19.95
Model 202 (Twin, rated 7 amperes each side)	26.95
Model 203 (Twin, rated 12 amperes each side)	34.95

SEAMLESS CASTINGS MAKE THESE WABER MODELS IDEAL FOR CHEM LABS

Two duplex outlets, in popular styles, are well protected by the seamless heavy casting. Available with 6- or 15-foot UL approved cord-set. Cords are with matching plugs.

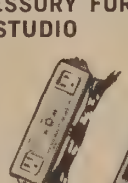


MODEL 300

Model	15A, 6′ Cord-Set	15A, 15′ Cord-Set	20A 6′ Cord	20A, 15′ Cord	"U" Ground	Locking	Crow's Foot	20A, 125V.	Net
300	•				•				$ 9.95
300-15		•			•				10.95
301	•					•			18.95
301-15		•				•			19.95
302	•						•		22.95
302-15		•					•		23.95
303			•					•	18.95
303-15				•				•	19.95

WABER MODELING SWITCHES EXCELLENT ACCESSORY FOR PHOTOGRAPHIC STUDIO

Photofloods last longer ... lots, lots longer! And it licks the heat problem, too. Flick the switch to "low" and you have the shadows you need to properly position and focus your subject. When you're ready to shoot, flick the switch to "high" and the lights come on at maximum brilliance.



210



211

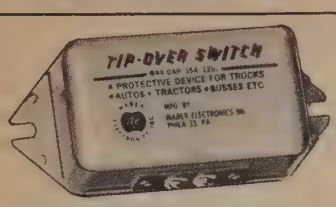
Model 210 (for two bulbs of the same type. Up to 1650 watts, total.) $5.97

Model 211 (for up to four bulbs of any type. Max. 1650 watts, total.) 10.89

WABER

A Subsidiary of G-L INDUSTRIES INC.

WABER



WABER TIPOVER SWITCH — This unit installs easily in automobiles, trucks, buses, and tractors. The mercury operated switches automatically shut off the motor when the vehicle is tipped past a forty-five degree angle. In addition to minimizing the danger of fire or explosion, this unit is especially valuable in stalling moving blades, wheel and parts found on many farm vehicles. This unit will operate with either 6 or 12 volt ignition systems. Installation is permanent. Nothing to burn out or replace.

3067 .....$5.97 Net

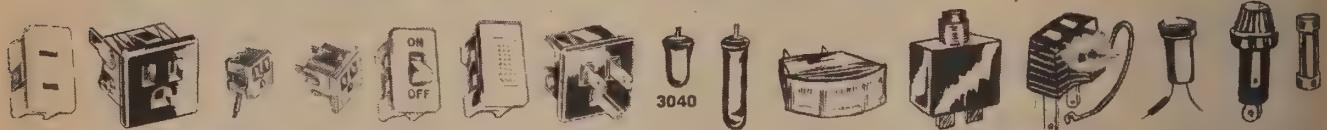
WABER HIGH QUALITY EXTENSION CORDS AND CORD SETS

Need a cord-set or extension cord? Waber offers you various types and lengths from which to choose. Ideal for industrial "workhorse" applications.



Catalog No.	Description	Length Ft.	Type Cord	Size AWG	Cond.	"A" End	"B" End	Ind. Net
3071	"U" Ground Cord-Set	6	HSJ	16	3	male U	free	$2.25
3072	"U" Ground Cord-Set	15	HSJ	16	3	male U	free	4.20
3073	"U" Ground Extension Cord	7	HSJ	16	3	male U	female U	2.75
3074	"U" Ground Extension Cord	16	HSJ	16	3	male U	female U	4.50
3075	2 Wire Cord-Set	10	HPN	16	2	maleplug	free	1.60
3076	"U" Ground Cord-Set	15	S	12	3	male U	free	6.25
3084	"U" Ground Cord-Set	10	SJO	18	3	male U	free	1.50
3085	20A - 250V Cord-Set	15	S	12	3	maleplug	free	6.50
3086	"U" Ground Cord-Set	6	S	12	3	male U	free	3.50
3087	20A - 125V Cord-Set	6	S	12	3	maleplug	free	3.50
3088	20A - 125V Cord-Set	15	S	12	3	maleplug	free	6.50

WABER REPLACEMENT PARTS AND ELECTRICAL ACCESSORIES



3001 3011 3015 3017 3020 3025 3019 3040-10 3045 3050 3055 3077 3078 3079

SNAP-IN CONVENIENCE OUTLET — Polarized with male, quick connect terminals. UL rated 15 A, 125 V. Takes polarized and non-polarized caps. Mounting Hole 1 1/32" x 21/32".

3001 (Black) .....$.36 Net
3001-W (White) ..... .40 Net
3001-G (Gray) ..... .40 Net
3001-R (Red) ..... .40 Net

SNAP-IN "U" GROUND CONVENIENCE OUTLET — UL Quick connect terminals. Rated 15 A, 125 V. Mounting hole: 1 1/32" x 1 1/32".

3011 (Black) .....$.48 Net
3011-W (White) ..... .56 Net
3011-G (Gray) ..... .56 Net
3011-R (Red) ..... .56 Net

SNAP-IN "U" GROUND CONVENIENCE OUTLET — UL Wire leads or male quick connect terminals with ground lead. Rated 15 A, 125 V. Mounting hole 31/32" x 31/32".

3015 (Black with wire leads) .....$.38 Net
3015-W (White with wire leads) ..... .42 Net
3017 (Black with quick connect terminals) .. .38 Net
3017-W (White with quick connect terminals) .42 Net

SNAP-IN ON-OFF SWITCH — With male quick connect terminals. UL rated 20 A, 125 V. Mounting hole 1 7/32" x 21/32".

3020 (Black) .....$.60 Net
3020-W (White) ..... .66 Net
3020-R (Red) ..... .66 Net
3020-G (Gray) ..... .66 Net

SNAP-IN PILOT-LIGHT — Brilliant nylon lens. Male, quick connect terminals. UL. Strong spring steel mounting clip. Mounting hole 1 7/32" x 21/32". 125 VAC. 125 VAC.

3025 (Black) .....$.70 Net
3025-W (White) ..... .76 Net
3025-R (Red) ..... .76 Net
3025-G (Gray) ..... .76 Net

MALE LOAD PLUGS — UL. With male quick connect terminals. Rated 15 A, 125 V. Mounting hole 31/32" x 31/32". Black body.

3019 .....$.78 Net

MERCURY TILT SWITCHES — Contacts in rugged all steel body. Unequalled durability for all fields including switching of heavy loads and highly inductive circuits. Low contact resistance. All steel body acts as one side of the circuit. Provides practically limitless life where a tilt action is required. Part No. 3040 is rated at 1 A, 115 VAC, and Part No. 3040-10 is rated at 10 A, 115 VAC.

3040 (package of 3) .....$1.50 Net
3040-10 (package of 2) ..... 2.25 Net

EDGEWISE READING AC VOLTMETER KIT — Modern space-saving edgewise reading meter, spring clamp, diode and series resistor. Scale reads from 0 to 150 volts AC. Mounting hole 37/64" x 1 17/64".

3045 .....$3.75 Net

PUSH TO RESET CIRCUIT BREAKER — Protect from overloads with this thermal type circuit breaker. Mounts easily in 7/16" hole. Plunger pops out on overloads. Push in to reset.

3050 (15 Amperes, 125 Volts) .....$1.75 Net
3051 (20 Amperes, 125 Volts) ..... 1.75 Net

2 WIRE TO 3 WIRE ADAPTER — Polarized with "U" ground slot and green grounding lead equipped with convenient spade lug. UL rated 15 A, 125 V. Molded body. Automatically converts any standard 2 wire parallel outlet to a 3 wire "U" ground outlet.

3055 .....$.36 Net

BRIGHT NEON PILOT LIGHTS — These handsome pilot lights, in a compact space saving size, mount easily in a 3/4" diameter hole. Included is a spring clip to lock pilot firmly in place.

3077 (Package of three) .....$1.50 Net

FUSE POST — UL approved. Mounting hole 5/8" dia.

3078 .....$.40 Net

FUSE — UL approved. Heavy duty. 15 Amp rating.

3079 .....$.16 Net

3 GREAT WABER MODELS - SKIN PACKED - CHROME PLATED



MODEL 11 Never before anything so useful, so handy for the home, workshop, or office. This sturdy chrome case features six individual, heavy duty outlets with an on-off master switch and bright pilot light. You get a handy control center for power tools, appliances, or equipment with **positive circuit breaker protection against burnout or overload.**



MODEL 12 Control a piece of equipment or appliance by a flip of a switch! Each of the four individual, heavy duty outlets is controlled by its own on-off switch with contrasting colors for swift, positive identification. You get a handsome control center for power tools, appliances, or equipment with **positive circuit breaker protection against burnout or overload.**



MODEL 601U Now you can have this chrome beauty with "U" ground type outlets. It features a sturdy steel case, 3 individual grounded outlets, with an on-off master switch and bright pilot light. This handy control center can be used in any number of applications with positive "push-to-reset" circuit breaker protection.

WABER MOBILE BENCH DOUBLES AS TABLE OR CARRIER



Use the versatile unit either as a table or as a carrier to transport equipment. It will prove a real asset in many ways.

The framing is of attractive and durable 1-inch square steel tubing finished in bright chorme plate. The table top is constructed of hard board with a formica surface. Size of the top is 24 x 48".

In addiiton, this unit includes an electrical outlet box with 3 "U" ground outlets, on-off switch, pilot light, fuse protection, and a 15-foot U.L. listed cord-set. Rating is 15 amperes, 130 volts, continuous duty. Shipping weights 60 and 75 lbs.

Casters are 5-in. heavy duty rubber, all swiveling: Size 25 W x 48 L x 37" H. Capacity: 600 pounds.

Model LOW-20 .....$120.00
Model LOW-21 (Size 30 W x 60 L x 37" H) 140.00

Net

© United Technical Publications

WABER A Subsidiary of G-L INDUSTRIES INC. WABER

CHOOSE FROM THESE FOUR WABER LAB-ON-WHEELS SCOPE CARTS


LOW-25


LOW-7


LOW-6


LOW-8

WABER LOW-6

Versatile scope dolly handles big scopes and test equipment with ease. Spacious non-skid deck, inclined at 22°. Welded square tubing combines rigidity with functional design with free access to controls. Capacity 500 pounds. Size: 19¼ W x 29½ L x 36½" H. Shipping Weight 60 lbs. 5 inch casters.
Model LOW-6 .....$89.00 Net

WABER LOW-7

This Scope Cart has ample size to handle a wide range of scope sizes. Moves out easily on its heavy 3-inch rubber wheels and handles beautifully for positioning. Frame is 1-inch square steel tubing finished in beautiful gray Size is 34 H x 19 W x 31" L.
Capacity 500 pounds. Shipping weight 60 lbs.
Model LOW-7 .....$59.50 Net

WABER LOW-8

Here is an unusually good buy in a scope dolly. Just roll it out and put it to work.

The top shelf will take a large variety of instruments and can be adjusted for convenient viewing angle. The sturdy bottom shelf gives you additional capacity. Size is 34 H x 19 W x 31" L and the rubber tired casters are 3 inches in diameter. Capacity 500 pounds. Shipping weight 60 lbs.
Model LOW-8 .....$79.50 Net

WABER LOW-25

You can't buy better value in a scope cart . . . solid steel construction . . . 3 inch swiveling casters . . . adjustable stops to accommodate various size instruments. Size: 30 x 32 x 19". Capacity 500 pounds. Shipping weight 55 pounds.
Model LOW-25 .....$42.50 Net

Each of the above units is equipped with a Waber Outlet Box featuring a fuse post, switch, pilot light, and 3 "U" ground outlets. Rating is 15 amperes, 130 volts. Carts may be obtained with two locking casters. Add $4.50 to the prices shown and specify when ordering.

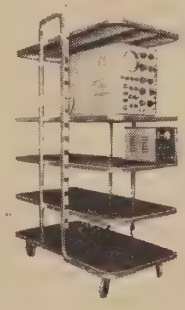


WABER MODEL LOW-3

The WABER "Lab On Wheels" will greatly expand your present work area, rolls effortlessly, and will provide ample space for your instruments, supplies, assemblies, breadboards, prototypes, etc. Provisions are available for mounting a WABER Outlet box (1,000 series) to supply power to the unit.

Shelves are adjustable to make every inch count. Each shelf is covered with tempered hardboard. Size: 28 L x 26 W x 66" H. This unit could prove a real workhorse for the school, lab, or industrial plant. Shipping weight 100 lbs.

Model LOW-3
(less outlet box) $149.00



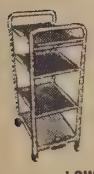
WABER MODEL LOW-4

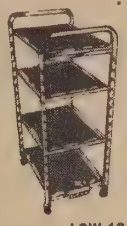
This double cantilevered carrier is built to hold greater load capacities with sway-free rigidity, strength and durability. The tremendous area available will accommodate your projects with ease, and provisions for a WABER 1000 series Outlet Box will "power-up" the carrier. When your projects are held-up you can wheel it out of the way and your lab tables are cleared for action. When you're ready to go again, wheel it back in.

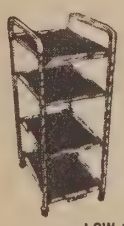
Size of the WABER Double Cantilevered Carrier is 48 L x 26 W x 71" H. Tempered hardboard is provided with each of the five shelves, and the shelves are adjustable. Shpg. wt. 120 lbs.

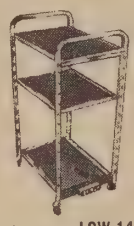
Waber Model LOW-4 (less outlet box) $188.00

WABER INSTRUMENT TRANSPORTS MOVE EASILY... MOVE SAFELY


LOW-11


LOW-12


LOW-13


LOW-14

WABER MODEL LOW-11 CARRIER

Sturdy instrument cart provides ample area on a free moving carrier. 4 sturdy shelves are made of durable half-inch plywood laminated with black ribbed non-slip facing.

Construction is of 1-inch square steel tubing beautifully finished in gleaming chrome plate. Two middle shelves are adjustable to desired position.

Casters are 5-inch heavy duty rubber, all swiveling. Shelf size: 21 x 21". 40" H. Cap.: 600 pounds. Shipping weight 92 lbs.
Model LOW-11 .....$110.00 Net

WABER MODEL LOW-12 CARRIER

Highly useful carrier built for service. 4 sturdy shelves are made of half-inch plywood with a thick ribbed non-slip laminated top.

This carrier is well constructed of 1-inch square steel tubing handsomely finished in bright chrome plate. Two middle shelves are adjustable to desired positions.

Casters are 5-inch rubber, all swiveling. Shelf size: 21 x 29". 60" H. Cap.: 600 lbs. Shipping weight 102 lbs.
Model LOW-12 .....$125.00 Net

WABER MODEL LOW-13 CARRIER

Same specifications as LOW-12 above except guard rail on top shelf is the longer dimension.
Model LOW-13 .....$125.00 Net

WABER MODEL LOW-14 CARRIER

This popular 3-shelf model provides easy mobility for your instruments. Shelves are made of half-inch plywood faced with a thick ribbed non-slip laminated top.

Framework is made of 1-inch square steel tubing finished in bright chrome plate.

Casters are 5 inches, all swiveling. Shelf size: 21 x 29". 58" H. Capacity: 600 lbs. Shipping weight 72 lbs.
Model LOW-14 .....$120.00 Net

All of the above carriers are equipped with an outlet box with 3 "U" ground outlets, neon pilot light, on-off switch, fuse protection, and an HSJ cord-set. Rating is 15 amperes, 130 volts continuous duty. These carts may be obtained with two locking casters. Add $4.50 to the prices shown and specify when ordering.

WABER MODEL LOW-5

Transport stocks, instruments, assemblies with ease with this low cost WABER Basic Dolly. You can make your own adaptations to serve many purposes in your projects, where mobility would be desirable. Size: 32 L x 18½ W x 37½" H. Here is one of the most versatile and rugged units available to serve the needs of the lab, school or industry. Shipping weight 30 lbs. 5" swiveling casters, 600 lb. capacity. Model LOW-5 .....$48.00 Net

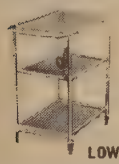


WABER MODEL LOW-28

Beautifully constructed of one inch square steel tubing, this handsome carrier rolls easily on its five inch rubber, swiveling casters. The deck is constructed of half inch plywood faced with a ribbed matting. Size: 19 x 21". This unit has a load capacity of 500 lbs. Shipping weight 25 lbs.
Model LOW-28 .....$27.00 Net



WABER TRANSPORTS FOR AUDIO-VISUAL OR LAB USE


LOW-18


LOW-15


LOW-16


LOW-17

WABER MODEL LOW-15 CARRIER

Picture this handy cart in your lab giving mobility to your equipment. The 2 decks are made of half-inch plywood laminated with a heavy ribbed facing.

Constructed of 1-inch square steel tubing finished in bright chrome plate.

Casters are 5 inches, all swiveling. Shelf size: 22 L x 36 W x 36" H. Capacity: 600 pounds. Shipping weight 40 lbs.
Model LOW-15 .....$110.00 Net

WABER MODEL LOW-16 CARRIER

Audio Visual users appreciate this versatile carrier. Both decks are constructed of durable half-inch plywood with a thick ribbed surface.

Framework is decorator 1-inch square steel tubing finished in bright chrome plate.

5-inch casters are of the swiveling type. Shelf size: 18 L x 24 W x 21" H. Capacity: 600 pounds. Shipping weight 37 lbs.
Model LOW-16 .....$80.00 Net

WABER MODEL LOW-17 CARRIER

Schools, Labs, and Audio-Visual users find this a work-horse of carriers. Each of the 2 shelves is made of sturdy half-inch plywood laminated with a heavy duty ribbed non-slip top.

1-inch square steel construction provides support for this carrier and finish is in bright chrome plate.

All 5 inch casters are swiveling type. Shelf size: 21 L x 29 W x 32" H. Capacity 500 pounds. Shipping weight 40 lbs.
Model LOW-17 .....$90.00 Net

WABER MODEL LOW-18 CARRIER

Featuring 3 decks, each of half-inch plywood faced with a ribbed non-slip top, these easy rolling carriers provide many advantages for the school, shop or lab.

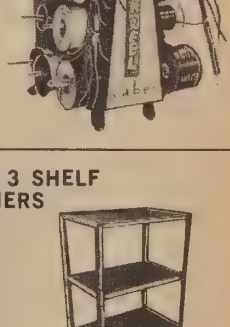
Here again construction is 1-inch square steel tubing finished with bright chrome plate.

5-inch casters are swiveling type. Shelf size: 21 L x 29 W x 42" H. Capacity: 600 pounds. Shipping weight 50 lbs.
Model LOW-18 .....$125.00 Net

All of the above carriers are equipped with an outlet box providing 3 "U" ground outlets, neon pilot light, on-off switch, fuse protection, and an HSJ cord-set. Rating is 15 amperes, 130 volts continuous duty. These carts may be obtained with two locking casters. Add $4.50 to the prices shown and specify when ordering.

WABER WHEEL 'N' REEL MOBILE WIRE RACK

Here's the answer to your wire handling problems. This new Waber "Wheel 'N' Reel"® Mobile Wire Rack holds up to 20 generous size reels of wire, each one in position to be dispensed easily and effortlessly. Move it into position for cable assemblies; store it out of the way when not in use. Unlike fixed position wire racks, you can take a large assortment of wire to the area where needed. The "Wheel 'N' Reel" will pay for itself in time saved. Sturdy steel construction with handsome grey finish. Shpg. weight 108 lbs. 1900 pound load capacity.
Model LOW-10 .....$140. Net



WABER 2 AND 3 SHELF STURDY CARRIERS

All welded construction, ease of movement, ample shelf and load capacity, and a Waber electrical outlet box are all provided in this highly useful mobile carrier.

This unit is made of one inch angle iron welded together in a sturdy transport. The shelves are steel with a retaining lip.

Also included is the Waber outlet box, featuring a fuse post, switch, pilot light, three "U" ground outlets and HSJ cord-set.

Shelf size is 19½ x 29 inches. The unit rides easily on 3" rubber swiveling casters. Capacity is 600 lbs. Shipping weight is 55 lbs.

LOW-29 (3 shelf unit 44" high) .....$57.50 Net
LOW-30 (2 shelf unit 32" high) ..... 42.50 Net

NYLON CONNECTORS

ORDER DATA

Waldom/Molex Miniature Nylon Connector/Housings

ORDER TERMINALS SEPARATELY FROM CHART BELOW

Part Number	Configuration	No. of Circuits	W/ Mounting Ears Plug	W/ Holding Tabs Receptacle	W/ Mounting Ears Receptacle	Amps. per Circuit	Volts per Circuit	Std. Pkg.	Per Pkg.	100-499 Per C	500-Over Per C
1625-1P	Plug	1				5	250	10	$ .75	$ 5.50	$ 4.25
1625-1R	Receptacle	1		X		5	250	10	.65	4.95	3.65
1625-3P	Plug	3	X			5	250	10	1.20	10.85	8.00
1625-3R	Receptacle	3		X	X	5	250	10	1.40	12.10	9.05
1625-4P	Plug	4				5	250	10	3.15	24.10	18.00
1625-4R	Receptacle	4		X		5	250	10	3.10	23.90	17.70
1625-5P	Plug	5				5	250	5	1.05	16.10	11.90
1625-5R	Receptacle	5		X	X	5	250	5	1.30	20.25	15.05
1625-6P	Plug	6				5	250	5	.95	15.05	11.25
1625-6R	Receptacle	6		X	X	5	250	5	1.10	17.05	12.40
1649-8P	Plug	8				5	250	5	.80	11.30	8.50
1649-8R	Receptacle	8		X	X	5	250	5	.90	13.90	10.40
1625-9P	Plug	9	X			5	250	5	1.05	16.10	11.90
1625-9R	Receptacle	9		X	X	5	250	5	1.15	18.40	13.40
1625-12P	Plug	12	X			5	250	5	1.10	17.50	12.90
1625-12R	Receptacle	12		X	X	5	250	5	1.25	19.70	14.65
1625-15P	Plug	15	X			5	250	5	1.70	26.50	19.80
1625-15R	Receptacle	15		X	X	5	250	5	1.85	30.00	25.10
1625-24P	Plug	24	X	X	X	5	250	5	1.80	28.60	22.15
1625-24R	Receptacle	24	X	X	X	5	250	5	1.90	30.10	23.35
1772-36P	Plug	36	X			4	250	5	2.90	44.00	33.00
1772-36R	Receptacle	36			X	4	250	5	2.95	44.50	33.00

Waldom/Molex Standard Nylor Connector Housings

ORDER TERMINALS SEPARATELY FROM CHART BELOW

1619P	Plug	1				12	250	10	.75	4.90	4.05
1619R	Receptacle	1		X		12	250	10	.60	4.55	3.55
1545P	Plug	2	X			12	250	10	1.62	12.50	9.35
1545R	Receptacle	2		X	X	12	250	10	1.64	12.65	9.40
1396R	Plug	3	X			12	250	10	.90	7.05	5.25
1396R	Receptacle	3		X	X	12	250	10	1.00	7.55	5.65
1490P	Plug	4	X			9	250	10	1.30	10.00	7.35
1490R	Receptacle	4		X	X	9	250	10	1.45	11.00	8.25
1653P	Plug	5				9	250	5	1.00	15.40	11.55
1653R	Receptacle	5		X		9	250	5	1.40	21.80	16.00
1261P	Plug	6	X			9	250	5	1.30	19.70	12.95
1261R	Receptacle	6		X	X	9	250	5	1.25	19.55	12.90
1292P	Plug	9	X			9	250	5	1.25	19.50	12.85
1292R	Receptacle	9		X	X	9	250	5	1.35	21.00	14.55
1360P	Plug	12	X			7.5	250	5	1.30	19.95	12.45
1360R	Receptacle	12			X	7.5	250	5	1.45	22.15	13.85
1375P	Plug	15	X			7.5	250	5	1.65	25.80	19.10
1375R	Receptacle	15			X	7.5	250	5	1.90	29.10	21.60

CONNECTOR DIMENSIONS Miniature .062" Connctors

	1625-1		1625-3		1625-4		1625-5		1625-6		1649-8		1625-9		1625-12		1625-15		1772-36	
	R	P	R	P	R	P	R	P	R	P	R	P	R	P	R	P	R	P	R	P
A	N/A	N/A	.265	.318	N/A	N/A	.265	N/A	.552	N/A	.330	N/A	.552	.615	.563	.614	.563	.614	.707	.825
B	N/A	N/A	.650	.745	N/A	N/A	.940	N/A	.505	N/A	1.715	N/A	.650	.752	.795	.903	.934	1.042	1.677	1.795
C	.203 Dia.		.203		.203		.203		.484		.310		.531		.531		.531		.859	
D	.781		.781		.781		.781		.781		.781		.781		.781		.781		.781	
E	N/A		.203		.203		.203		.484		.220		.484		.484		.484		.687	
F	N/A		.484		.625		.781		.343		1.500		.484		.625		.765		1.515	
G	N/A		.390		.390		.390		.390		.390		.390		.390		.390		.390	
H	N/A		.187		N/A		.187		.375		.312		.375		.375		.375		.562	
I	.203 Dia.		.203		.203		.203		.484		.225		.531		.531		.531		1.015	
J	.750		.750		.750		.750		.750		.750		.750		.750		.750		.750	
K	.296 Dia.		.281		.296		.296		.578		.312		.578		.578		.593		.812	
L	N/A		.484		.625		.781		.343		1.500		.484		.625		.781		1.640	
M	N/A		.578		.734		.875		.453		1.593		.578		.718		.859		1.640	
N	N/A		.375		.375		N/A		.375		N/A		.375		.375		.375		.375	
O	N/A		.187		N/A		N/A		N/A		N/A		.375		.375		.375		.625	

Standard .093" Connectors

	1619		1545		1396		1490		1653		1261		1292		1360		1375	
	R	P	R	P	R	P	R	P	R	P	R	P	R	P	R	P	R	P
A	N/A	N/A	.705	.800	.840	.933	1.038	1.131	N/A	N/A	.718	.750	.828	.937	1.050	1.155	1.240	1.343
B	N/A	N/A	.312	.375	.312	.375	.312	.375	N/A	N/A	.600	.695	.725	.725	.655	.760	.655	.760
C	.234 Dia.		.250		.234		.236		.234		.632		.625		.640		.632	
D	1.000		1.000		1.031		1.000		1.000		1.031		1.031		1.031		1.031	
E	N/A		.250		.234		.236		.234		.632		.625		.640		.632	
F	N/A		.531		.671		.875		1.062		.437		.671		.870		1.067	
G	N/A		.437		.437		.437		.437		.437		.437		.437		.437	
H	N/A		.250		.234		.236		N/A		.562		.562		.562		.562	
I	.241 Dia.		.250		.234		.250		.250		.734		.634		.634		.632	
J	.968		.968		.968		.968		.968		.968		.968		.968		.968	
K	.358 Dia.		.352		.338		.338		.343		.640		.734		.734		.734	
L	N/A		.531		.671		.859		1.062		.531		.765		.975		1.169	
M	N/A		.640		.773		.968		1.171		.531		.765		.975		1.169	
N	N/A		.421		.421		.421		.421		.421		N/A		.421		.421	
O	N/A		.250		.234		.250		N/A		.562		.562		.562		.562	

Dimensions subject to nominal variation N/A — Not Applicable.

Waldom/Molex Pin Terminals

Part Number	Configuration	Mating Diameter	Wire Size 16	18	20	22	24	26	28	30	Std. Pkg.	100-999 Per C	1,000-4,999 Per M	5,000-Over Per M
1189	Female	.093"	X	X	X						100	$3.50	$21.50	$14.60
1190	Male	.093"	X	X	X						100	3.50	21.50	14.60
1380	Male	.093"		X	X	X		X	X		100	3.50	21.50	14.60
1381	Female	.093"		X	X	X		X	X		100	3.50	21.50	14.60
1433	Female	.093"				X	X	X	X	X	100	3.50	21.50	14.60
1434	Male	.093"				X	X	X	X	X	100	3.50	21.50	14.60
1560	Male	.062"		X	X	X					100	4.20	27.00	18.20
1561	Female	.062"		X	X	X					100	4.20	27.00	18.20
1854	Male	.062"					X	X	X	X	100	4.20	27.00	18.20
1855	Female	.062"					X	X	X	X	100	4.20	27.00	18.20

NOTE: .093" Pin Terminals are used with Standard Connectors.
.062" Pin Terminals are used with Miniature Connectors.

Waldom/Molex Tooling

Use with Pin Types	Prototype Hand Tool	Each	Manual Production Tool	Each
1189-1190	HT-1919	$4.95	HT-1031-C	$35.00
1380-1381	HT-1919	$4.95	HT-1031-C	$35.00
1433-1434	HT-1921	$4.95	HT-1708	$50.00
1560-1561	HT-1921	$4.95	HT-1719-C	$55.00
1854-1855	HT-1921	$4.95	HT-1885	$55.00

These products are manufactured by Molex Products Company, and are available from Electronic/Electrical Distributors through Waldom Electronics,

molex®

Waldom/Molex connectors are being designed into some of man's most exciting circuitry. For they offer incomparable reliability, versatility and economy. Save time and labor. Provide a better mode of connection. They are being used in countless applications in the business machine, home entertainment, appliance, communications, measurement and instrumentation industries. Solving some of the most demanding circuitry problems. Making connections in some of the toughest environments imaginable. We offer Nylon Miniature Connectors in 1 to 36 circuits and standard connectors from 1 to 15 circuits. They are available with integrally molded mounting ears for ease of panel mounting. And are U.L. recognized. To simplify the attachment of individual contacts. Waldom/Molex provides a complete range of manual production and prototype hand tools. Both male and female terminals may be readily extracted and easily replaced using Waldom/Molex extractor tools. These tools permit simple servicing and circuitry variation.

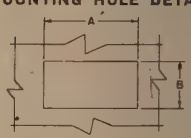


Above configuration in 9-12-15-36 circuits



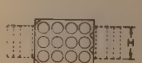
Above configuration in 2-3-4-5-6-8 circuits

MOUNTING HOLE DETAIL

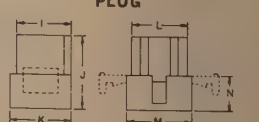


RECEPTACLE





PLUG









Net

© United Technical Publication

waldom SOLDERLESS TERMINALS AND CONNECTORS

INSULATED AND NON-INSULATED TYPES FOR EVERY WIRING APPLICATION


Ring Tongue

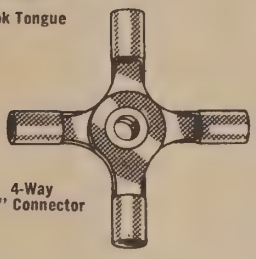

Spade Tongue

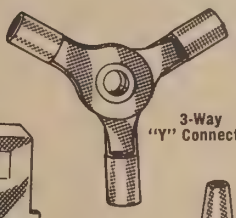

Hook Tongue


Flag Type

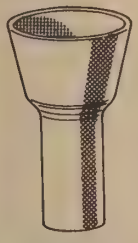

Rectangular Tongue


Flanged Spade

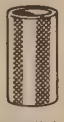

4-Way "X" Connector


3-Way "Y" Connector


Butt Connector


Nylon Insulated Closed End Connector


Male Push-On Quick Disconnect


Parallel Connector


Snap Plug


Female Flag Quick Disconnect

INSULATED TERMINALS COLOR CODED FOR QUICK IDENTIFICATION OF WIRE RANGES

Wire Range	Color	Wire Range	Color
26-24	Yellow	4	Yellow
22-18	Red	2	Red
16-14	Blue	1/0	Blue
12-10	Yellow	2/0	Yellow
8	Red	3/0	Red
6	Blue	4/0	Blue

Available in 6 Construction Styles

INSULATED



INSULKRIMP®

INSULKRIMP® terminals and connectors incorporate all the advanced features of KRIMPTITE construction, plus the advantages of the permanently attached rigid vinyl plastic insulating sleeve. Up to No. 10 wire range basic barrel is Krimptite; size No. 8 and up uses Versakrimp (brazed seam) barrel. Replacing slower methods of individually insulating connection with tubing or tape, INSULKRIMP Terminals and Connectors are rapidly applied in a single application. The tough insulating sleeve is permanently attached and will not slip off, fracture, or unravel. In addition, INSULKRIMP construction affords increased vibration resistance due to its insulation supporting plastic sleeve. Operating Temperature Range: continuous duty from —40° to 220°F; intermittent duty to 300°F.

NYLAKRIMP®

Wire Ranges 8 thru 4/0 Has the same features as the Versakrimp except that it has a Nylon insulated sleeve. Nylon Sleeve ideal for high temperature applications.



AVIKRIMP®

AVIKRIMP® terminals are truly the ultimate in construction and performance. To all the VIBRAKRIMP features has been added the permanently attached and overlapping NYLON insulating sleeve — no extra insulation necessary. It provides extra barrel strength and insulation grip to resist high vibration plus heat-resistant pre-insulation. Color coded for rapid identification, these terminals are complete in themselves, needing only the proper wire and crimping tool. WALDOM offers many sizes and types with the maximum in reliability for your most critical applications. Operation Temperature Range: continuous duty from —40° to 250°F; intermittent duty to 350°F.

NON-INSULATED



KRIMPTITE®

KRIMPTITE® terminals and connectors are the most modern labor saving answer to your wiring problems. Functionally designed to make positive connections with a minimum of experience and time needed for application. Uniformly reliable connections can be made in a fraction of the time formerly required by less reliable and more costly methods. Available in a wide range of types and sizes to meet your every wiring need. Minimum ¼ inch barrel lengths are available in all terminals listed.



VERSAKRIMP®

VERSAKRIMP® terminals and connectors have all the advantageous features of the KRIMPTITE construction plus the universality and higher tensile strength afforded by BRAZED BARREL construction. The seam is bonded with a special silver brazing alloy, and cannot possibly pull open under any conditions of stress or wire pull. Capable of being crimped by a wide variety of crimp styles, a new freedom of selection is available for your needs. Crimping location is not critical, as the specially brazed seams are guaranteed not to split and may be crimped from any direction. Recommended for both stranded and solid wires.



VIBRAKRIMP®

VIBRAKRIMP® terminals are particularly suitable where high vibration is a factor and firm insulation support is required. The seamless annealed electro-tin plated brass sleeve adds over-all strength to the terminal construction while the "skirt" portion which extends beyond the barrel is crimped in the same operation as the barrel and the wire is permanently held, preventing creep. Insulation is anchored and any wire flexing takes place beyond the terminal.

BASIC TERMINAL CONSTRUCTION DETAILS

Made of pure electrolytic copper for highest conductivity (MIL QQC576). Annealed to flow freely under crimping pressure for best connection. Electroplated with pure tin for greatest corrosion-resistance, in accordance with the highest standards of the electrical industry and MIL-T-10727 (Ord.).

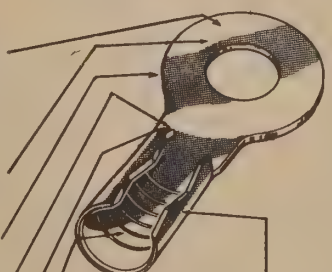
Modern construction from a single piece of metal gives greater strength, lower cost, uniform current flow for maximum conductivity.

All terminals and connectors have wire range clearly stamped on back.

The open-end design allows quick visual inspection of wire location before and after crimping.

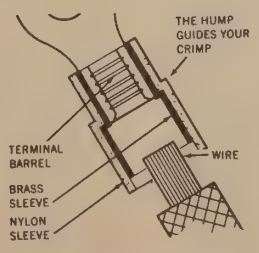
Strength gussets reinforce terminal where flat tongue has been formed into round barrel.

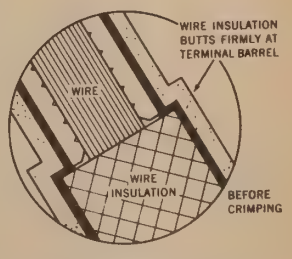
Multiple deep V-notches securely grip wire, provide best contact and maximum holding power over wide contact area.



Long barrel in all sizes eliminates loss of time finding a critical crimping location, eliminates squeeze-outs and shearing. Allows wider crimp for extra-strong, vibration-proof, moisture-tight connection with wide contact area.

Chamfered edge for faster, easier insertion of wire. Actually gathers frayed strands by funnel action.





"STEP" CONSTRUCTION GIVES EXTRA PROTECTION

Cutaway views of an AVIKRIMP barrel show how the "step" design for the brass sleeve acts to socket the wire insulation solidly in both the AVIKRIMP and VIBRAKRIMP styles for the ultimate in anti-vibration protection. In addition, the external "hump" marks the exact location of the barrel end — a quick guide to the target.

WALDOM . . . the "positive action" line . . . available through your electronic parts distributor

SOLDERLESS TERMINALS AND CONNECTORS

waldom

22-18 WIRE RANGE

MILITARY 22-18; COMMERCIAL 22-16; BUREAU OF SHIPS 1-2
CIRCULAR MIL AREA 509—2,600 UL & CSA RECOGNIZED

.032" STOCK • INSULATION COLOR RED

PRICING FOLLOWS THIS WIRE RANGE LISTING

RING TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



KRIMPTITE*
RING TONGUE
FULL BARREL

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*		AVIKRIMP*		Price Code See Page 5
Stud Size S	Width W	Clearance C	Part Number	Length L	.125 Max. Ins. Dia. Pt. No.	.145 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.145 Max. Ins. Dia. Pt. No.	Length L	.145 Max. Ins. Dia. Pt. No.	Length L	
1-2	7/32	5/32	S-1099	33/64	T-2099	T-2099X	45/64	B-3099	33/64	D-4099	43/64	N-5099	45/64	A
3-4	7/32	5/32	S-1047	33/64	T-2047	T-2047X	45/64	B-3047	33/64	D-4047	43/64	N-5047	45/64	A
	9/32	1/4	S-1096	41/64	T-2096	T-2096X	53/64	B-3096	41/64	D-4096	51/64	N-5096	53/64	A
5-6	7/32	5/32	S-1001	33/64	T-2001	T-2001X	45/64	B-3001	33/64	D-4001	43/64	N-5001	45/64	A
	9/32	1/4	S-1002	41/64	T-2002	T-2002X	53/64	B-3002	41/64	D-4002	51/64	N-5002	53/64	A
	5/16	5/16	S-1103	23/32	T-2103	T-2103X	29/32	B-3103	23/32	D-4103	7/8	N-5103	29/32	A
8	9/32	1/4	S-1097	41/64	T-2097	T-2097X	53/64	B-3097	41/64	D-4097	51/64	N-5097	53/64	A
	5/16	5/16	S-1021	23/32	T-2021	T-2021X	29/32	B-3021	23/32	D-4021	7/8	N-5021	29/32	A
10	9/32	1/4	S-1098	41/64	T-2098	T-2098X	53/64	B-3098	41/64	D-4098	51/64	N-5098	53/64	A
	5/16	5/16	S-1003	23/32	T-2003	T-2003X	29/32	B-3003	23/32	D-4003	7/8	N-5003	29/32	A
	15/32	.400	S-1111	57/64	T-2111	T-2111X	1- 5/64	B-3111	57/64	D-4111	1- 3/64	N-5111	1- 5/64	B
	9/16	9/16	S-1800	1- 7/64	T-2800	T-2800X	1-19/64	B-3800	1- 7/64	D-4800	1-17/64	N-5800	1-19/64	C
1/4	15/32	.400	S-1004	57/64	T-2004	T-2004X	1- 5/64	B-3004	57/64	D-4004	1- 3/64	N-5004	1- 5/64	B
	9/16	9/16	S-1801	1- 7/64	T-2801	T-2801X	1-19/64	B-3801	1- 7/64	D-4801	1-17/64	N-5801	1-19/64	C
5/16	15/32	.400	S-1005	57/64	T-2005	T-2005X	1- 5/64	B-3005	57/64	D-4005	1- 3/64	N-5005	1- 5/64	B
	9/16	9/16	S-1802	1- 7/64	T-2802	T-2802X	1-19/64	B-3802	1- 7/64	D-4802	1-17/64	N-5802	1-19/64	C
3/8	9/16	9/16	S-1143	1- 7/64	T-2143	T-2143X	1-19/64	B-3143	1- 7/64	D-4143	1-17/64	N-5143	1-19/64	C

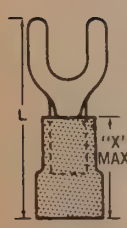
RING TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH



VERSAKRIMP*
RING TONGUE
SHORT BARREL

1-2	7/32	5/32	SS-1099	27/64	ST-2099	ST-2099X	5/8	SB-3099	27/64	SD-4099	37/64	SN-5099	5/8	A
3-4	7/32	5/32	SS-1047	27/64	ST-2047	ST-2047X	5/8	SB-3047	27/64	SD-4047	37/64	SN-5047	5/8	A
	9/32	1/4	SS-1096	35/64	ST-2096	ST-2096X	3/4	SB-3096	35/64	SD-4096	45/64	SN-5096	3/4	A
5-6	7/32	5/32	SS-1001	27/64	ST-2001	ST-2001X	5/8	SB-3001	27/64	SD-4001	37/64	SN-5001	5/8	A
	9/32	1/4	SS-1002	35/64	ST-2002	ST-2002X	3/4	SB-3002	35/64	SD-4002	45/64	SN-5002	3/4	A
	5/16	5/16	SS-1103	5/8	ST-2103	ST-2103X	53/64	SB-3103	5/8	SD-4103	25/32	SN-5103	53/64	A
8	9/32	1/4	SS-1097	35/64	ST-2097	ST-2097X	3/4	SB-3097	35/64	SD-4097	45/64	SN-5097	3/4	A
	5/16	5/16	SS-1021	5/8	ST-2021	ST-2021X	53/64	SB-3021	5/8	SD-4021	25/32	SN-5021	53/64	A
10	9/32	1/4	SS-1098	35/64	ST-2098	ST-2098X	3/4	SB-3098	35/64	SD-4098	45/64	SN-5098	3/4	A
	5/16	5/16	SS-1003	5/8	ST-2003	ST-2003X	53/64	SB-3003	5/8	SD-4003	25/32	SN-5003	53/64	A
	15/32	.400	SS-1111	51/64	ST-2111	ST-2111X	1	SB-3111	51/64	SD-4111	61/64	SN-5111	1	B
1/4	15/32	.400	SS-1004	51/64	ST-2004	ST-2004X	1	SB-3004	51/64	SD-4004	61/64	SN-5004	1	B
	9/16	9/16	SS-1801	1- 1/64	ST-2801	ST-2801X	1- 7/32	SB-3801	1- 1/64	SD-4801	1-11/64	SN-5801	1- 7/32	C
5/16	15/32	.400	SS-1005	51/64	ST-2005	ST-2005X	1	SB-3005	51/64	SD-4005	61/64	SN-5005	1	B
	9/16	9/16	SS-1802	1- 1/64	ST-2802	ST-2802X	1- 7/32	SB-3802	1- 1/64	SD-4802	1-11/64	SN-5802	1- 7/32	C
3/8	9/16	9/16	SS-1143	1- 1/64	ST-2143	ST-2143X	1- 7/32	SB-3143	1- 1/64	SD-4143	1-11/64	SN-5143	1- 7/32	C

SPADE TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



Full Barrel X=7/16"
Short Barrel X=23/64"

INSULKRIMP*
SPADE TONGUE

3-4	1/4	7/32	S-1116	5/8	T-2116	T-2116X	13/16	B-3116	5/8	D-4116	25/32	N-5116	13/16	A
	19/64	7/32	S-1803	5/8	T-2803	T-2803X	13/16	B-3803	5/8	D-4803	25/32	N-5803	13/16	A
	21/64	1/4	S-1804	23/32	T-2804	T-2804X	29/32	B-3804	23/32	D-4804	7/8	N-5804	29/32	A
5-6	1/4	7/32	S-1118	5/8	T-2118	T-2118X	13/16	B-3118	5/8	D-4118	25/32	N-5118	13/16	A
	19/64	7/32	S-1014	5/8	T-2014	T-2014X	13/16	B-3014	5/8	D-4014	25/32	N-5014	13/16	A
	5/16	5/16	S-1029	3/4	T-2029	T-2029X	15/16	B-3029	3/4	D-4029	29/32	N-5029	15/16	A
	21/64	1/4	S-1501	23/32	T-2501	T-2501X	29/32	B-3501	23/32	D-4501	7/8	N-5501	29/32	A
	3/8	1/4	S-1503	23/32	T-2503	T-2503X	29/32	B-3503	23/32	D-4503	7/8	N-5503	29/32	A
	27/64	1/4	S-1805	23/32	T-2805	T-2805X	29/32	B-3805	23/32	D-4805	7/8	N-5805	29/32	A
8	19/64	7/32	S-1030	5/8	T-2030	T-2030X	13/16	B-3030	5/8	D-4030	25/32	N-5030	13/16	A
	5/16	5/16	S-1031	3/4	T-2031	T-2031X	15/16	B-3031	3/4	D-4031	29/32	N-5031	15/16	A
	21/64	1/4	S-1806	23/32	T-2806	T-2806X	29/32	B-3806	23/32	D-4806	7/8	N-5806	29/32	A
	3/8	1/4	S-1504	23/32	T-2504	T-2504X	29/32	B-3504	23/32	D-4504	7/8	N-5504	29/32	A
	27/64	1/4	S-1507	23/32	T-2507	T-2507X	29/32	B-3507	23/32	D-4507	7/8	N-5507	29/32	A
10	5/16	5/16	S-1032	3/4	T-2032	T-2032X	15/16	B-3032	3/4	D-4032	29/32	N-5032	15/16	A
	3/8	1/4	S-1505	23/32	T-2505	T-2505X	29/32	B-3505	23/32	D-4505	7/8	N-5505	29/32	A
	27/64	1/4	S-1807	23/32	T-2807	T-2807X	29/32	B-3807	23/32	D-4807	7/8	N-5807	29/32	A

*TRADEMARK

© United Technical Publications

waldom

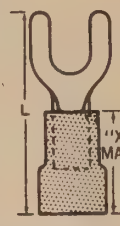
SOLDERLESS TERMINALS AND CONNECTORS

22-18 WIRE RANGE (Continued)

PRICING FOLLOWS THIS WIRE RANGE LISTING

SPADE TYPE TERMINALS—SHORT (5/32") BARREL LENGTH

ASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*		VERSAKRIMP*			VIBRAKRIMP*		AVIKRIMP*		Price Code See Page 5
ud ize S	Width W	Clear-ance C	Part Number	Length L	.125 Max. Ins. Dia. Pt. No.	.145 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.145 Max. Ins. Dia. Pt. No.	Length L	.145 Max. Ins. Dia. Pt. No.	Length L	
-4	1/4	7/32	SS-1116	17/32	ST-2116	ST-2116X	47/64	SB-3116	17/32	SD-4116	11/16	SN-5116	47/64	A
	19/64	7/32	SS-1803	17/32	ST-2803	ST-2803X	47/64	SB-3803	17/32	SD-4803	11/16	SN-5803	47/64	A
	21/64	1/4	SS-1804	5/8	ST-2804	ST-2804X	53/64	SB-3804	5/8	SD-4804	25/32	SN-5804	53/64	A
-6	1/4	7/32	SS-1118	17/32	ST-2118	ST-2118X	47/64	SB-3118	17/32	SD-4118	11/16	SN-5118	47/64	A
	19/64	7/32	SS-1014	17/32	ST-2014	ST-2014X	47/64	SB-3014	17/32	SD-4014	11/16	SN-5014	47/64	A
	5/16	5/16	SS-1029	21/32	ST-2029	ST-2029X	55/64	SB-3029	21/32	SD-4029	13/16	SN-5029	55/64	A
	21/64	1/4	SS-1501	5/8	ST-2501	ST-2501X	53/64	SB-3501	5/8	SD-4501	25/32	SN-5501	53/64	A
	3/8	1/4	SS-1503	5/8	ST-2503	ST-2503X	53/64	SB-3503	5/8	SD-4503	25/32	SN-5503	53/64	A
	27/64	1/4	SS-1805	5/8	ST-2805	ST-2805X	53/64	SB-3805	5/8	SD-4805	25/32	SN-5805	53/64	A
8	19/64	7/32	SS-1030	17/32	ST-2030	ST-2030X	47/64	SB-3030	17/32	SD-4030	11/16	SN-5030	47/64	A
	5/16	5/16	SS-1031	21/32	ST-2031	ST-2031X	55/64	SB-3031	21/32	SD-4031	13/16	SN-5031	55/64	A
	21/64	1/4	SS-1806	5/8	ST-2806	ST-2806X	53/64	SB-3806	5/8	SD-4806	25/32	SN-5806	53/64	A
	3/8	1/4	SS-1504	5/8	ST-2504	ST-2504X	53/64	SB-3504	5/8	SD-4504	25/32	SN-5504	53/64	A
	27/64	1/4	SS-1507	5/8	ST-2507	ST-2507X	53/64	SB-3507	5/8	SD-4507	25/32	SN-5507	53/64	A
0	5/16	5/16	SS-1032	21/32	ST-2032	ST-2032X	55/64	SB-3032	21/32	SD-4032	13/16	SN-5032	55/64	A
	3/8	1/4	SS-1505	5/8	ST-2505	ST-2505X	53/64	SB-3505	5/8	SD-4505	25/32	SN-5505	53/64	A
	27/64	1/4	SS-1807	5/8	ST-2807	ST-2807X	53/64	SB-3807	5/8	SD-4807	25/32	SN-5807	53/64	A

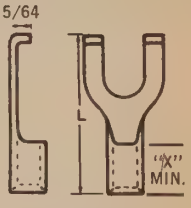


Full Barrel X=7/16"
Short Barrel X=23/64"

INSULKRIMP*

FLANGED SPADE TERMINALS—FULL (1/4") BARREL LENGTH

3-4	19/64	7/32	S-1125	5/8	T-2125	T-2125X	13/16	B-3125	5/8	D-4125	25/32	N-5125	13/16	A
	21/64	1/4	S-1808	23/32	T-2808	T-2808X	29/32	B-3808	23/32	D-4808	7/8	N-5808	29/32	A
5-6	19/64	7/32	S-1080	5/8	T-2080	T-2080X	13/16	B-3080	5/8	D-4080	25/32	N-5080	13/16	A
	21/64	1/4	S-1510	23/32	T-2510	T-2510X	29/32	B-3510	23/32	D-4510	7/8	N-5510	29/32	A
	3/8	1/4	S-1809	23/32	T-2809	T-2809X	29/32	B-3809	23/32	D-4809	7/8	N-5809	29/32	A
	27/64	1/4	S-1810	23/32	T-2810	T-2810X	29/32	B-3810	23/32	D-4810	7/8	N-5810	29/32	A
8	19/64	7/32	S-1081	5/8	T-2081	T-2081X	13/16	B-3081	5/8	D-4081	25/32	N-5081	13/16	A
	21/64	1/4	S-1811	23/32	T-2811	T-2811X	29/32	B-3811	23/32	D-4811	7/8	N-5811	29/32	A
	3/8	1/4	S-1812	23/32	T-2812	T-2812X	29/32	B-3812	23/32	D-4812	7/8	N-5812	29/32	A
	27/64	1/4	S-1516	23/32	T-2516	T-2516X	29/32	B-3516	23/32	D-4516	7/8	N-5516	29/32	A
10	3/8	1/4	S-1582	23/32	T-2582	T-2582X	29/32	B-3582	23/32	D-4582	7/8	N-5582	29/32	A
	27/64	1/4	S-1813	23/32	T-2813	T-2813X	29/32	B-3813	23/32	D-4813	7/8	N-5813	29/32	A



Full Barrel X=1/4"
Short Barrel X=5/32"

VERSAKRIMP*

FLANGED SPADE TERMINALS—SHORT (5/32") BARREL LENGTH

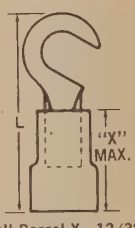
3-4	19/64	7/32	SS-1125	17/32	ST-2125	ST-2125X	47/64	SB-3125	17/32	SD-4125	11/16	SN-5125	47/64	A
	21/64	1/4	SS-1808	5/8	ST-2808	ST-2808X	53/64	SB-3808	5/8	SD-4808	25/32	SN-5808	53/64	A
5-6	19/64	7/32	SS-1080	17/32	ST-2080	ST-2080X	47/64	SB-3080	17/32	SD-4080	11/16	SN-5080	47/64	A
	21/64	1/4	SS-1510	5/8	ST-2510	ST-2510X	53/64	SB-3510	5/8	SD-4510	25/32	SN-5510	53/64	A
	3/8	1/4	SS-1809	5/8	ST-2809	ST-2809X	53/64	SB-3809	5/8	SD-4809	25/32	SN-5809	53/64	A
	27/64	1/4	SS-1810	5/8	ST-2810	ST-2810X	53/64	SB-3810	5/8	SD-4810	25/32	SN-5810	53/64	A
8	19/64	7/32	SS-1081	17/32	ST-2081	ST-2081X	47/64	SB-3081	17/32	SD-4081	11/16	SN-5081	47/64	A
	21/64	1/4	SS-1811	5/8	ST-2811	ST-2811X	53/64	SB-3811	5/8	SD-4811	25/32	SN-5811	53/64	A
	3/8	1/4	SS-1812	5/8	ST-2812	ST-2812X	53/64	SB-3812	5/8	SD-4812	25/32	SN-5812	53/64	A
	27/64	1/4	SS-1516	5/8	ST-2516	ST-2516X	53/64	SB-3516	5/8	SD-4516	25/32	SN-5516	53/64	A
10	3/8	1/4	SS-1582	5/8	ST-2582	ST-2582X	53/64	SB-3582	5/8	SD-4582	25/32	SN-5582	53/64	A
	27/64	1/4	SS-1813	5/8	ST-2813	ST-2813X	53/64	SB-3813	5/8	SD-4813	25/32	SN-5813	53/64	A

HOOK TONGUE TERMINALS—FULL (1/4") BARREL LENGTH

5-6	5/16	5/16	S-1018	23/32	T-2018	T-2018X	29/32	B-3018	23/32	D-4018	7/8	N-5018	29/32	A
8	5/16	5/16	S-1036	23/32	T-2036	T-2036X	29/32	B-3036	23/32	D-4036	7/8	N-5036	29/32	A
10	5/16	5/16	S-1037	23/32	T-2037	T-2037X	29/32	B-3037	23/32	D-4037	7/8	N-5037	29/32	A

HOOK TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH

5-6	5/16	5/16	SS-1018	5/8	ST-2018	ST-2018X	53/64	SB-3018	5/8	SD-4018	25/32	SN-5018	53/64	A
8	5/16	5/16	SS-1036	5/8	ST-2036	ST-2036X	53/64	SB-3036	5/8	SD-4036	25/32	SN-5036	53/64	A
10	5/16	5/16	SS-1037	5/8	ST-2037	ST-2037X	53/64	SB-3037	5/8	SD-4037	25/32	SN-5037	53/64	A



Full Barrel X=13/32"
Short Barrel X=5/16"

VIBRAKRIMP*

TRADEMARK

© United Technical Publications

SOLDERLESS TERMINALS AND CONNECTORS

waldom

22-18 WIRE RANGE (Continued)

RECTANGULAR TONGUE TERMINALS—FULL (1/4") BARREL LENGTH

PRICING FOLLOWS THIS WIRE RANGE LISTING

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*		AVIKRIMP*		Price Code (See Pricing Below)
Stud Size S	Width W	Clearance C	Part Number	Length L	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	
3-4	1/4	7/32	S-1814	5/8	T-2814	T-2814X	13/16	B-3814	5/8	D-4814	25/32	N-5814	13/16	A
	19/64	7/32	S-1128	5/8	T-2128	T-2128X	13/16	B-3128	5/8	D-4128	25/32	N-5128	13/16	A
	21/64	1/4	S-1815	23/32	T-2815	T-2815X	29/32	B-3815	23/32	D-4815	7/8	N-5815	29/32	A
5-6	1/4	7/32	S-1816	5/8	T-2816	T-2816X	13/16	B-3816	5/8	D-4816	25/32	N-5816	13/16	A
	19/64	7/32	S-1071	5/8	T-2071	T-2071X	13/16	B-3071	5/8	D-4071	25/32	N-5071	13/16	A
	5/16	5/16	S-1130	3/4	T-2130	T-2130X	15/16	B-3130	3/4	D-4130	29/32	N-5130	15/16	A
	21/64	1/4	S-1519	23/32	T-2519	T-2519X	29/32	B-3519	23/32	D-4519	7/8	N-5519	29/32	A
	3/8	1/4	S-1817	23/32	T-2817	T-2817X	29/32	B-3817	23/32	D-4817	7/8	N-5817	29/32	A
	27/64	1/4	S-1818	23/32	T-2818	T-2818X	29/32	B-3818	23/32	D-4818	7/8	N-5818	29/32	A
8	19/64	7/32	S-1072	5/8	T-2072	T-2072X	13/16	B-3072	5/8	D-4072	25/32	N-5072	13/16	A
	5/16	5/16	S-1132	3/4	T-2132	T-2132X	15/16	B-3132	3/4	D-4132	29/32	N-5132	15/16	A
	21/64	1/4	S-1819	23/32	T-2819	T-2819X	29/32	B-3819	23/32	D-4819	7/8	N-5819	29/32	A
	3/8	1/4	S-1820	23/32	T-2820	T-2820X	29/32	B-3820	23/32	D-4820	7/8	N-5820	29/32	A
	27/64	1/4	S-1526	23/32	T-2526	T-2526X	29/32	B-3526	23/32	D-4526	7/8	N-5526	29/32	A
10	5/16	5/16	S-1133	3/4	T-2133	T-2133X	15/16	B-3133	3/4	D-4133	29/32	N-5133	15/16	A
	21/64	1/4	S-1821	23/32	T-2821	T-2821X	29/32	B-3821	23/32	D-4821	7/8	N-5821	29/32	A
	3/8	1/4	S-1524	23/32	T-2524	T-2524X	29/32	B-3524	23/32	D-4524	7/8	N-5524	29/32	A
	27/64	1/4	S-1822	23/32	T-2822	T-2822X	29/32	B-3822	23/32	D-4822	7/8	N-5822	29/32	A



Full Barrel X=7/16"
Short Barrel X=23/64"

AVIKRIMP*
Rectangular Tongue

RECTANGULAR TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH

3-4	19/64	7/32	SS-1128	9/16	ST-2128	ST-2128X	49/64	SB-3128	9/16	SD-4128	23/32	SN-5128	49/64	A
	21/64	1/4	SS-1815	5/8	ST-2815	ST-2815X	53/64	SB-3815	5/8	SD-4815	25/32	SN-5815	53/64	A
5-6	19/64	7/32	SS-1071	9/16	ST-2071	ST-2071X	49/64	SB-3071	9/16	SD-4071	23/32	SN-5071	49/64	A
	21/64	1/4	SS-1519	5/8	ST-2519	ST-2519X	53/64	SB-3519	5/8	SD-4519	25/32	SN-5519	53/64	A
	3/8	1/4	SS-1817	5/8	ST-2817	ST-2817X	53/64	SB-3817	5/8	SD-4817	25/32	SN-5817	53/64	A
	27/64	1/4	SS-1818	5/8	ST-2818	ST-2818X	53/64	SB-3818	5/8	SD-4818	25/32	SN-5818	53/64	A
8	19/64	7/32	SS-1072	9/16	ST-2072	ST-2072X	49/64	SB-3072	9/16	SD-4072	23/32	SN-5072	49/64	A
	27/64	1/4	SS-1526	5/8	ST-2526	ST-2526X	53/64	SB-3526	5/8	SD-4526	25/32	SN-5526	53/64	A
	21/64	1/4	SS-1819	5/8	ST-2819	ST-2819X	53/64	SB-3819	5/8	SD-4819	25/32	SN-5819	53/64	A
	3/8	1/4	SS-1820	5/8	ST-2820	ST-2820X	53/64	SB-3820	5/8	SD-4820	25/32	SN-5820	53/64	A
10	21/64	1/4	SS-1821	5/8	ST-2821	ST-2821X	53/64	SB-3821	5/8	SD-4821	25/32	SN-5821	53/64	A
	3/8	1/4	SS-1524	5/8	ST-2524	ST-2524X	53/64	SB-3524	5/8	SD-4524	25/32	SN-5524	53/64	A
	27/64	1/4	SS-1822	5/8	ST-2822	ST-2822X	53/64	SB-3822	5/8	SD-4822	25/32	SN-5822	53/64	A

NET PRICES — 22-18 WIRE RANGE TERMINALS

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

	KRIMPTITE*			INSULKRIMP* No Suffix			INSULKRIMP* Suffix X			VERSAKRIMP*			VIBRAKRIMP*			AVIKRIMP*		
		BULK			BULK			BULK			BULK			BULK			BULK	
Price Code Letter	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M
A	2.50	17.80	13.90	5.15	38.00	29.75	5.80	42.65	33.35	4.05	32.20	24.15	5.30	42.40	31.80	8.00	64.50	48.40
B	3.45	24.60	19.25	6.70	49.20	38.45	7.10	52.15	40.70	5.65	45.00	33.75	6.76	54.10	40.55	9.95	79.55	59.70
C	4.50	32.40	25.30	6.70	49.20	38.45	7.10	52.15	40.70	5.65	45.00	33.75	6.76	54.10	40.55	9.95	79.55	59.70

16-14 WIRE RANGE

BUREAU OF SHIPS 21½-4 UL & CSA RECOGNIZED
CIRCULAR MIL AREA 2,050-5,180 (HEAVY DUTY 2,050-9,000)

.032" STOCK (HEAVY DUTY .050") • INSULATION COLOR CODED BLUE (HEAVY DUTY YELLOW) •

RING TONGUE TERMINALS—FULL (1/4") BARREL LENGTH

PRICING FOLLOWS THIS WIRE RANGE LISTING

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*		AVIKRIMP*		Price Code See Page 6
Stud Size S	Width W	Clearance C	Part Number	Length L	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	
1-2	1/4	7/32	S-1102	19/32	T-2102	T-2102X	25/32	B-3102	19/32	D-4102	3/4	N-5102	25/32	D
3-4	1/4	7/32	S-1048	19/32	T-2048	T-2048X	25/32	B-3048	19/32	D-4048	3/4	N-5048	25/32	D
	5/16	9/32	S-1823	45/64	T-2823	T-2823X	57/64	B-3823	45/64	D-4823	55/64	N-5823	57/64	D
	11/32	5/16	S-1095	47/64	T-2095	T-2095X	59/64	B-3095	47/64	D-4095	57/64	N-5095	59/64	D
5-6	1/4	7/32	S-1006	19/32	T-2006	T-2006X	25/32	B-3006	19/32	D-4006	3/4	N-5006	25/32	D
	5/16	9/32	S-1007	45/64	T-2007	T-2007X	57/64	B-3007	45/64	D-4007	55/64	N-5007	57/64	D
	11/32	5/16	S-1092	47/64	T-2092	T-2092X	59/64	B-3092	47/64	D-4092	57/64	N-5092	59/64	D
8	1/4	7/32	S-1824	19/32	T-2824	T-2824X	25/32	B-3824	19/32	D-4824	3/4	N-5824	25/32	D
	5/16	9/32	S-1024	45/64	T-2024	T-2024X	57/64	B-3024	45/64	D-4024	55/64	N-5024	57/64	D
	11/32	5/16	S-1093	47/64	T-2093	T-2093X	59/64	B-3093	47/64	D-4093	57/64	N-5093	59/64	D
10	5/16	9/32	S-1008	45/64	T-2008	T-2008X	57/64	B-3008	45/64	D-4008	55/64	N-5008	57/64	D
	11/32	5/16	S-1094	47/64	T-2094	T-2094X	59/64	B-3094	47/64	D-4094	57/64	N-5094	59/64	D
	15/32	.400	S-1106	57/64	T-2106	T-2106X	1- 5/64	B-3106	57/64	D-4106	1- 3/64	N-5106	1- 5/64	B
	9/16	9/16	S-1825	1- 7/64	T-2825	T-2825X	1-19/64	B-3825	1- 7/64	D-4825	1-17/64	N-5825	1-19/64	C
1/4	15/32	.400	S-1009	57/64	T-2009	T-2009X	1- 5/64	B-3009	57/64	D-4009	1- 3/64	N-5009	1- 5/64	B
	9/16	9/16	S-1826	1- 7/64	T-2826	T-2826X	1-19/64	B-3826	1- 7/64	D-4826	1-17/64	N-5826	1-19/64	C
5/16	15/32	.400	S-1041	57/64	T-2041	T-2041X	1- 5/64	B-3041	57/64	D-4041	1- 3/64	N-5041	1- 5/64	B
	9/16	9/16	S-1827	1- 7/64	T-2827	T-2827X	1-19/64	B-3827	1- 7/64	D-4827	1-17/64	N-5827	1-19/64	C
3/8	9/16	9/16	S-1147	1- 7/64	T-2147	T-2147X	1-19/64	B-3147	1- 7/64	D-4147	1-17/64	N-5147	1-19/64	C



Full Barrel X=1/4"
Short Barrel X=5/32"

KRIMPTITE*
Ring Tongue

*TRADEMARK

© United Technical Publications

waldom

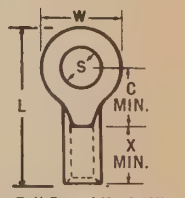
SOLDERLESS TERMINALS AND CONNECTORS

16-14 WIRE RANGE (Continued)

RING TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH

PRICING FOLLOWS THIS WIRE RANGE LISTING

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*		AVIKRIMP*		Price Code See Page 8
Stud Size S	Width W	Clearance C	Part Number	Length L	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	
1-2	1/4	7/32	SS-1102	1/2	ST-2102	ST-2102X	45/64	SB-3102	1/2	SD-4102	21/32	SN-5102	45/64	D
3-4	1/4	7/32	SS-1048	1/2	ST-2048	ST-2048X	45/64	SB-3048	1/2	SD-4048	21/32	SN-5048	45/64	D
	5/16	9/32	SS-1823	39/64	ST-2823	ST-2823X	13/16	SB-3823	39/64	SD-4823	49/64	SN-5823	13/16	D
5-6	1/4	7/32	SS-1006	1/2	ST-2006	ST-2006X	45/64	SB-3006	1/2	SD-4006	21/32	SN-5006	45/64	D
	5/16	9/32	SS-1007	39/64	ST-2007	ST-2007X	13/16	SB-3007	39/64	SD-4007	49/64	SN-5007	13/16	D
	11/32	5/16	SS-1092	41/64	ST-2092	ST-2092X	27/32	SB-3092	41/64	SD-4092	51/64	SN-5092	27/32	D
8	1/4	7/32	SS-1824	1/2	ST-2824	ST-2824X	45/64	SB-3824	1/2	SD-4824	21/32	SN-5824	45/64	D
	5/16	9/32	SS-1024	39/64	ST-2024	ST-2024X	13/16	SB-3024	39/64	SD-4024	49/64	SN-5024	13/16	D
	11/32	5/16	SS-1093	41/64	ST-2093	ST-2093X	27/32	SB-3093	41/64	SD-4093	51/64	SN-5093	27/32	D
10	5/16	9/32	SS-1008	39/64	ST-2008	ST-2008X	13/16	SB-3008	39/64	SD-4008	49/64	SN-5008	13/16	D
	11/32	5/16	SS-1094	41/64	ST-2094	ST-2094X	27/32	SB-3094	41/64	SD-4094	51/64	SN-5094	27/32	D
	15/32	.400	SS-1106	51/64	ST-2106	ST-2106X	1	SB-3106	51/64	SD-4106	61/64	SN-5106	1	B
1/4	15/32	.400	SS-1009	51/64	ST-2009	ST-2009X	1	SB-3009	51/64	SD-4009	61/64	SN-5009	1	B
	9/16	9/16	SS-1826	1- 1/64	ST-2826	ST-2826X	1- 7/32	SB-3826	1- 1/64	SD-4826	1-11/64	SN-5826	1- 7/32	C
5/16	15/32	.400	SS-1041	51/64	ST-2041	ST-2041X	1	SB-3041	51/64	SD-4041	61/64	SN-5041	1	B
	9/16	9/16	SS-1827	1- 1/64	ST-2827	ST-2827X	1- 7/32	SB-3827	1- 1/64	SD-4827	1-11/64	SN-5827	1- 7/32	C
3/8	9/16	9/16	SS-1147	1- 1/64	ST-2147	ST-2147X	1- 7/32	SB-3147	1- 1/64	SD-4147	1-11/64	SN-5147	1- 7/32	C

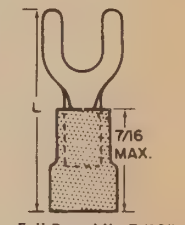


Full Barrel X=1/4"
Short Barrel X=5/32"

KRIMPTITE*
Ring Tongue

SPADE TONGUE TERMINALS—FULL (1/4") BARREL LENGTH

3-4	1/4	7/32	S-1121	5/8	T-2121	T-2121X	13/16	B-3121	5/8	D-4121	25/32	N-5121	13/16	D
	19/64	7/32	S-1828	5/8	T-2828	T-2828X	13/16	B-3828	5/8	D-4828	25/32	N-5828	13/16	D
	21/64	1/4	S-1829	23/32	T-2829	T-2829X	29/32	B-3829	23/32	D-4829	7/8	N-5829	29/32	D
5-6	1/4	7/32	S-1123	5/8	T-2123	T-2123X	13/16	B-3123	5/8	D-4123	25/32	N-5123	13/16	D
	19/64	7/32	S-1015	5/8	T-2015	T-2015X	13/16	B-3015	5/8	D-4015	25/32	N-5015	13/16	D
	21/64	1/4	S-1529	23/32	T-2529	T-2529X	29/32	B-3529	23/32	D-4529	7/8	N-5529	29/32	D
	23/64	9/32	S-1051	3/4	T-2051	T-2051X	15/16	B-3051	3/4	D-4051	29/32	N-5051	15/16	D
	3/8	1/4	S-1531	23/32	T-2531	T-2531X	29/32	B-3531	23/32	D-4531	7/8	N-5531	29/32	D
	27/64	1/4	S-1830	23/32	T-2830	T-2830X	29/32	B-3830	23/32	D-4830	7/8	N-5830	29/32	D
8	19/64	7/32	S-1033	5/8	T-2033	T-2033X	13/16	B-3033	5/8	D-4033	25/32	N-5033	13/16	D
	21/64	1/4	S-1831	23/32	T-2831	T-2831X	29/32	B-3831	23/32	D-4831	7/8	N-5831	29/32	D
	23/64	9/32	S-1052	3/4	T-2052	T-2052X	15/16	B-3052	3/4	D-4052	29/32	N-5052	15/16	D
	3/8	1/4	S-1532	23/32	T-2532	T-2532X	29/32	B-3532	23/32	D-4532	7/8	N-5532	29/32	D
	27/64	1/4	S-1535	23/32	T-2535	T-2535X	29/32	B-3535	23/32	D-4535	7/8	N-5535	29/32	D
10	23/64	9/32	S-1016	3/4	T-2016	T-2016X	15/16	B-3016	3/4	D-4016	29/32	N-5016	15/16	D
	3/8	1/4	S-1533	23/32	T-2533	T-2533X	29/32	B-3533	23/32	D-4533	7/8	N-5533	29/32	D
	27/64	1/4	S-1832	23/32	T-2832	T-2832X	29/32	B-3832	23/32	D-4832	7/8	N-5832	29/32	D

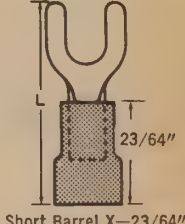


Full Barrel X=7/16"

INSULKRIMP*
Spade Tongue
Full Barrel

SPADE TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH

3-4	1/4	7/32	SS-1121	17/32	ST-2121	ST-2121X	47/64	SB-3121	17/32	SD-4121	11/16	SN-5121	47/64	D
	19/64	7/32	SS-1828	17/32	ST-2828	ST-2828X	47/64	SB-3828	17/32	SD-4828	11/16	SN-5828	47/64	D
	21/64	1/4	SS-1829	5/8	ST-2829	ST-2829X	53/64	SB-3829	5/8	SD-4829	25/32	SN-5829	53/64	D
5-6	1/4	7/32	SS-1123	17/32	ST-2123	ST-2123X	47/64	SB-3123	17/32	SD-4123	11/16	SN-5123	47/64	D
	19/64	7/32	SS-1015	17/32	ST-2015	ST-2015X	47/64	SB-3015	17/32	SD-4015	11/16	SN-5015	47/64	D
	21/64	1/4	SS-1529	5/8	ST-2529	ST-2529X	53/64	SB-3529	5/8	SD-4529	25/32	SN-5529	53/64	D
	23/64	9/32	SS-1051	21/32	ST-2051	ST-2051X	55/64	SB-3051	21/32	SD-4051	13/16	SN-5051	55/64	D
	3/8	1/4	SS-1531	5/8	ST-2531	ST-2531X	53/64	SB-3531	5/8	SD-4531	25/32	SN-5531	53/64	D
	27/64	1/4	SS-1830	5/8	ST-2830	ST-2830X	53/64	SB-3830	5/8	SD-4830	25/32	SN-5830	53/64	D
8	19/64	7/32	SS-1033	17/32	ST-2033	ST-2033X	47/64	SB-3033	17/32	SD-4033	11/16	SN-5033	47/64	D
	21/64	1/4	SS-1831	5/8	ST-2831	ST-2831X	53/64	SB-3831	5/8	SD-4831	25/32	SN-5831	53/64	D
	23/64	9/32	SS-1052	21/32	ST-2052	ST-2052X	55/64	SB-3052	21/32	SD-4052	13/16	SN-5052	55/64	D
	3/8	1/4	SS-1532	5/8	ST-2532	ST-2532X	53/64	SB-3532	5/8	SD-4532	25/32	SN-5532	53/64	D
	27/64	1/4	SS-1535	5/8	ST-2535	ST-2535X	53/64	SB-3535	5/8	SD-4535	25/32	SN-5535	53/64	D
10	23/64	9/32	SS-1016	21/32	ST-2016	ST-2016X	55/64	SB-3016	21/32	SD-4016	13/16	SN-5016	55/64	D
	3/8	1/4	SS-1533	5/8	ST-2533	ST-2533X	53/64	SB-3533	5/8	SD-4533	25/32	SN-5533	53/64	D
	27/64	1/4	SS-1832	5/8	ST-2832	ST-2832X	53/64	SB-3832	5/8	SD-4832	25/32	SN-5832	53/64	D



Short Barrel X=23/64"

INSULKRIMP*
Spade Tongue
Short Barrel

*TRADEMARK

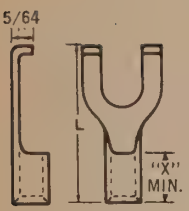
SOLDERLESS TERMINALS AND CONNECTORS

waldom

16-14 WIRE RANGE (Continued)

PRICING FOLLOWS THIS WIRE RANGE LISTING

FLANGED SPADE TERMINALS—FULL (1/4") BARREL LENGTH



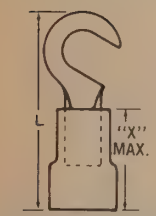
Full Barrel X=1/4"
Short Barrel X=5/32"

VERSAKRIMP*
Flanged Spade

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*		AVIKRIMP*		Price Code See Page 8
Stud Size S	Width W	Clearance C	Part Number	Length L	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	
3-4	19/64	7/32	S-1126	5/8	T-2126	T-2126X	13/16	B-3126	5/8	D-4126	25/32	N-5126	13/16	D
	21/64	1/4	S-1833	23/32	T-2833	T-2833X	29/32	B-3833	23/32	D-4833	7/8	N-5833	29/32	D
5-6	19/64	7/32	S-1083	5/8	T-2083	T-2083X	13/16	B-3083	5/8	D-4083	25/32	N-5083	13/16	D
	21/64	1/4	S-1538	23/32	T-2538	T-2538X	29/32	B-3538	23/32	D-4538	7/8	N-5538	29/32	D
	3/8	1/4	S-1834	23/32	T-2834	T-2834X	29/32	B-3834	23/32	D-4834	7/8	N-5834	29/32	D
	27/64	1/4	S-1835	23/32	T-2835	T-2835X	29/32	B-3835	23/32	D-4835	7/8	N-5835	29/32	D
8	19/64	7/32	S-1084	5/8	T-2084	T-2084X	13/16	B-3084	5/8	D-4084	25/32	N-5084	13/16	D
	21/64	1/4	S-1836	23/32	T-2836	T-2836X	29/32	B-3836	23/32	D-4836	7/8	N-5836	29/32	D
	3/8	1/4	S-1837	23/32	T-2837	T-2837X	29/32	B-3837	23/32	D-4837	7/8	N-5837	29/32	D
	27/64	1/4	S-1543	23/32	T-2543	T-2543X	29/32	B-3543	23/32	D-4543	7/8	N-5543	29/32	D
10	3/8	1/4	S-1585	23/32	T-2585	T-2585X	29/32	B-3585	23/32	D-4585	7/8	N-5585	29/32	D
	27/64	1/4	S-1838	23/32	T-2838	T-2838X	29/32	B-3838	23/32	D-4838	7/8	N-5838	29/32	D

FLANGED SPADE TERMINALS—SHORT (5/32") BARREL LENGTH

3-4	19/64	7/32	SS-1126	17/32	ST-2126	ST-2126X	47/64	SB-3126	17/32	SD-4126	11/16	SN-5126	47/64	D
	21/64	1/4	SS-1833	5/8	ST-2833	ST-2833X	53/64	SB-3833	5/8	SD-4833	25/32	SN-5833	53/64	D
5-6	19/64	7/32	SS-1083	17/32	ST-2083	ST-2083X	47/64	SB-3083	17/32	SD-4083	11/16	SN-5083	47/64	D
	21/64	1/4	SS-1538	5/8	ST-2538	ST-2538X	53/64	SB-3538	5/8	SD-4538	25/32	SN-5538	53/64	D
	3/8	1/4	SS-1834	5/8	ST-2834	ST-2834X	53/64	SB-3834	5/8	SD-4834	25/32	SN-5834	53/64	D
	27/64	1/4	SS-1835	5/8	ST-2835	ST-2835X	53/64	SB-3835	5/8	SD-4835	25/32	SN-5835	53/64	D
8	19/64	7/32	SS-1084	17/32	ST-2084	ST-2084X	47/64	SB-3084	17/32	SD-4084	11/16	SN-5084	47/64	D
	21/64	1/4	SS-1836	5/8	ST-2836	ST-2836X	53/64	SB-3836	5/8	SD-4836	25/32	SN-5836	53/64	D
	3/8	1/4	SS-1837	5/8	ST-2837	ST-2837X	53/64	SB-3837	5/8	SD-4837	25/32	SN-5837	53/64	D
	27/64	1/4	SS-1543	5/8	ST-2543	ST-2543X	53/64	SB-3543	5/8	SD-4543	25/32	SN-5543	53/64	D
10	3/8	1/4	SS-1585	5/8	ST-2585	ST-2585X	53/64	SB-3585	5/8	SD-4585	25/32	SN-5585	53/64	D
10	27/64	1/4	SS-1838	5/8	ST-2838	ST-2838X	53/64	SB-3838	5/8	SD-4838	25/32	SN-5838	53/64	D



Full Barrel X=13/32"
Short Barrel X=5/16"

VIBRAKRIMP*
Hook Tongue

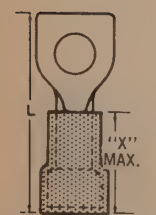
HOOK TONGUE TERMINALS—FULL (1/4") BARREL LENGTH

5-6	23/64	9/32	S-1038	23/32	T-2038	T-2038X	29/32	B-3038	23/32	D-4038	7/8	N-5038	29/32	D
8	23/64	9/32	S-1039	23/32	T-2039	T-2039X	29/32	B-3039	23/32	D-4039	7/8	N-5039	29/32	D
10	23/64	9/32	S-1040	23/32	T-2040	T-2040X	29/32	B-3040	23/32	D-4040	7/8	N-5040	29/32	D

HOOK TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH

5-6	23/64	9/32	SS-1038	5/8	ST-2038	ST-2038X	53/64	SB-3038	5/8	SD-4038	25/32	SN-5038	53/64	D
8	23/64	9/32	SS-1039	5/8	ST-2039	ST-2039X	53/64	SB-3039	5/8	SD-4039	25/32	SN-5039	53/64	D
10	23/64	9/32	SS-1040	5/8	ST-2040	ST-2040X	53/64	SB-3040	5/8	SD-4040	25/32	SN-5040	53/64	D

RECTANGULAR TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



Full Barrel X=7/16"
Short Barrel X=23/64"

AVIKRIMP*
Rectangular Tongue

3-4	1/4	7/32	S-1134	5/8	T-2134	T-2134X	13/16	B-3134	5/8	D-4134	25/32	N-5134	13/16	D
	19/64	7/32	S-1839	5/8	T-2839	T-2839X	13/16	B-3839	5/8	D-4839	25/32	N-5839	13/16	D
	21/64	1/4	S-1840	23/32	T-2840	T-2840X	29/32	B-3840	23/32	D-4840	7/8	N-5840	29/32	D
5-6	1/4	7/32	S-1136	5/8	T-2136	T-2136X	13/16	B-3136	5/8	D-4136	25/32	N-5136	13/16	D
	19/64	7/32	S-1074	5/8	T-2074	T-2074X	13/16	B-3074	5/8	D-4074	25/32	N-5074	13/16	D
	21/64	1/4	S-1546	23/32	T-2546	T-2546X	29/32	B-3546	23/32	D-4546	7/8	N-5546	29/32	D
	23/64	9/32	S-1137	3/4	T-2137	T-2137X	15/16	B-3137	3/4	D-4137	29/32	N-5137	15/16	D
	3/8	1/4	S-1841	23/32	T-2841	T-2841X	29/32	B-3841	23/32	D-4841	7/8	N-5841	29/32	D
	27/64	1/4	S-1842	23/32	T-2842	T-2842X	29/32	B-3842	23/32	D-4842	7/8	N-5842	29/32	D
8	19/64	7/32	S-1075	5/8	T-2075	T-2075X	13/16	B-3075	5/8	D-4075	25/32	N-5075	13/16	D
	21/64	1/4	S-1843	23/32	T-2843	T-2843X	29/32	B-3843	23/32	D-4843	7/8	N-5843	29/32	D
	23/64	9/32	S-1139	3/4	T-2139	T-2139X	15/16	B-3139	3/4	D-4139	29/32	N-5139	15/16	D
	3/8	1/4	S-1550	23/32	T-2550	T-2550X	29/32	B-3550	23/32	D-4550	7/8	N-5550	29/32	D
	27/64	1/4	S-1553	23/32	T-2553	T-2553X	29/32	B-3553	23/32	D-4553	7/8	N-5553	29/32	D
10	21/64	1/4	S-1844	23/32	T-2844	T-2844X	29/32	B-3844	23/32	D-4844	7/8	N-5844	29/32	D
	23/64	9/32	S-1140	3/4	T-2140	T-2140X	15/16	B-3140	3/4	D-4140	29/32	N-5140	15/16	D
	3/8	1/4	S-1551	23/32	T-2551	T-2551X	29/32	B-3551	23/32	D-4551	7/8	N-5551	29/32	D
	27/64	1/4	S-1845	23/32	T-2845	T-2845X	29/32	B-3845	23/32	D-4845	7/8	N-5845	29/32	D

*TRADEMARK

© United Technical Publications

waldom

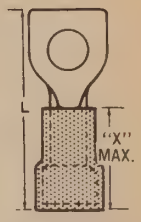
SOLDERLESS TERMINALS AND CONNECTORS

16-14 WIRE RANGE (Continued)

RECTANGULAR TONGUE TERMINALS—SHORT (5/32") BARREL LENGTH

PRICING FOLLOWS THIS WIRE RANGE LISTING

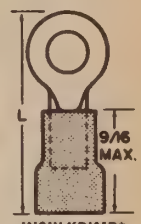
BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*		AVIKRIMP*		Price Code (See Pricing Below)
Stud Size S	Width W	Clearance C	Part Number	Length L	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L	Part Number	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	
3-4	19/64	7/32	SS-1839	49/64	ST-2839	ST-2839X	31/32	SB-3839	49/64	SD-4839	59/64	SN-5839	31/32	D
	21/64	1/4	SS-1840	5/8	ST-2840	ST-2840X	53/64	SB-3840	5/8	SD-4840	25/32	SN-5840	53/64	D
5-6	19/64	7/32	SS-1074	49/64	ST-2074	ST-2074X	31/32	SB-3074	49/64	SD-4074	59/64	SN-5074	31/32	D
	21/64	1/4	SS-1546	5/8	ST-2546	ST-2546X	53/64	SB-3546	5/8	SD-4546	25/32	SN-5546	53/64	D
	3/8	1/4	SS-1841	5/8	ST-2841	ST-2841X	53/64	SB-3841	5/8	SD-4841	25/32	SN-5841	53/64	D
	27/64	1/4	SS-1842	5/8	ST-2842	ST-2842X	53/64	SB-3842	5/8	SD-4842	25/32	SN-5842	53/64	D
8	19/64	7/32	SS-1075	49/64	ST-2075	ST-2075X	31/32	SB-3075	49/64	SD-4075	59/64	SN-5075	31/32	D
	21/64	1/4	SS-1843	5/8	ST-2843	ST-2843X	53/64	SB-3843	5/8	SD-4843	25/32	SN-5843	53/64	D
	3/8	1/4	SS-1550	5/8	ST-2550	ST-2550X	53/64	SB-3550	5/8	SD-4550	25/32	SN-5550	53/64	D
	27/64	1/4	SS-1553	5/8	ST-2553	ST-2553X	53/64	SB-3553	5/8	SD-4553	25/32	SN-5553	53/64	D
10	21/64	1/4	SS-1844	5/8	ST-2844	ST-2844X	53/64	SB-3844	5/8	SD-4844	25/32	SN-5844	53/64	D
	3/8	1/4	SS-1551	5/8	ST-2551	ST-2551X	53/64	SB-3551	5/8	SD-4551	25/32	SN-5551	53/64	D
	27/64	1/4	SS-1845	5/8	ST-2845	ST-2845X	53/64	SB-3845	5/8	SD-4845	25/32	SN-5845	53/64	D



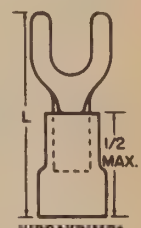
Full Barrel X=7/16"
Short Barrel X=23/64"
AVIKRIMP*
Rectangular Tongue

HEAVY DUTY RING TONGUE TERMINALS—FULL (1/4") BARREL LENGTH—.050" STOCK USE 12-10 TOOLING

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VIBRAKRIMP*			AVIKRIMP*			Price Code (See Pricing Below)
Stud Size S	Width W	Clearance C	Part Number	Length L	.215 Max. Ins. Dia. Pt. No.	.255 Max. Ins. Dia. Pt. No.	Length L	.235 Max. Ins. Dia. Pt. No.	.255 Max. Ins. Dia. Pt. No.	Length L	.235 Max. Ins. Dia. Pt. No.	.255 Max. Ins. Dia. Pt. No.	Length L	
3-4	9/32	5/16	S-1401H	45/64	T-2401H	T-2401HX	1- 1/64	D-4401H	D-4401HX	61/64	N-5401H	N-5401HX	1	L
	3/8	5/16	S-1402H	3/4	T-2402H	T-2402HX	1- 1/16	D-4402H	D-4402HX	1	N-5402H	N-5402HX	1- 3/64	L
5-6	9/32	5/16	S-1403H	45/64	T-2403H	T-2403HX	1- 1/64	D-4403H	D-4403HX	61/64	N-5403H	N-5403HX	1	L
	3/8	5/16	S-1404H	3/4	T-2404H	T-2404HX	1- 1/16	D-4404H	D-4404HX	1	N-5404H	N-5404HX	1- 3/64	L
8	9/32	5/16	S-1432H	45/64	T-2432H	T-2432HX	1- 1/64	D-4432H	D-4432HX	61/64	N-5432H	N-5432HX	1	L
	3/8	5/16	S-1406H	3/4	T-2406H	T-2406HX	1- 1/16	D-4406H	D-4406HX	1	N-5406H	N-5406HX	1- 3/64	L
10	3/8	5/16	S-1407H	3/4	T-2407H	T-2407HX	1- 1/16	D-4407H	D-4407HX	1	N-5407H	N-5407HX	1- 3/64	L
	17/32	13/32	S-1408H	59/64	T-2408H	T-2408HX	1-15/64	D-4408H	D-4408HX	1-11/64	N-5408H	N-5408HX	1- 7/32	M
	19/32	31/64	S-1409H	1- 1/32	T-2409H	T-2409HX	1-11/32	D-4409H	D-4409HX	1- 9/32	N-5409H	N-5409HX	1-21/64	N
1/4	17/32	13/32	S-1410H	59/64	T-2410H	T-2410HX	1-15/64	D-4410H	D-4410HX	1-11/64	N-5410H	N-5410HX	1- 7/32	M
	19/32	31/64	S-1411H	1- 1/32	T-2411H	T-2411HX	1-11/32	D-4411H	D-4411HX	1- 9/32	N-5411H	N-5411HX	1-21/64	N
	3/4	5/8	S-1433H	1-17/64	T-2433H	T-2433HX	1-37/64	D-4433H	D-4433HX	1-33/64	N-5433H	N-5433HX	1- 9/16	O
5/16	17/32	13/32	S-1413H	59/64	T-2413H	T-2413HX	1-15/64	D-4413H	D-4413HX	1-11/64	N-5413H	N-5413HX	1- 7/32	M
	19/32	31/64	S-1414H	1- 1/32	T-2414H	T-2414HX	1-11/32	D-4414H	D-4414HX	1- 9/32	N-5414H	N-5414HX	1-21/64	N
	3/4	5/8	S-1434H	1-17/64	T-2434H	T-2434HX	1-37/64	D-4434H	D-4434HX	1-33/64	N-5434H	N-5434HX	1- 9/16	O
3/8	18/32	31/64	S-1416H	1- 1/32	T-2416H	T-2416HX	1-11/32	D-4416H	D-4416HX	1- 9/32	N-5416H	N-5416HX	1-21/64	N
	3/4	5/8	S-1417H	1-17/64	T-2417H	T-2417HX	1-37/64	D-4417H	D-4417HX	1-33/64	N-5417H	N-5417HX	1- 9/16	O
7/16	3/4	5/8	S-1435H	1-17/64	T-2435H	T-2435HX	1-37/64	D-4435H	D-4435HX	1-33/64	N-5435H	N-5435HX	1- 9/16	O
1/2	3/4	5/8	S-1419H	1-17/64	T-2419H	T-2419HX	1-37/64	D-4419H	D-4419HX	1-33/64	N-5419H	N-5419HX	1- 9/16	O



INSULKRIMP*
Heavy Duty
Ring Tongue



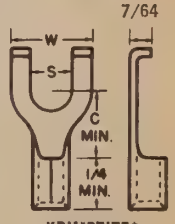
VIBRAKRIMP*
Heavy Duty
Spade Tongue

HEAVY DUTY SPADE TONGUE TERMINALS—FULL (1/4") BARREL LENGTH —.050" STOCK

5-6	3/8	5/16	S-1420H	25/32	T-2420H	T-2420HX	1- 3/32	D-4420H	D-4420HX	1- 1/32	N-5420H	N-5420HX	1- 5/64	L
8	3/8	5/16	S-1421H	25/32	T-2421H	T-2421HX	1- 3/32	D-4421H	D-4421HX	1- 1/32	N-5421H	N-5421HX	1- 5/64	L
10	3/8	5/16	S-1422H	25/32	T-2422H	T-2422HX	1- 3/32	D-4422H	D-4422HX	1- 1/32	N-5422H	N-5422HX	1- 5/64	L
1/4	17/32	13/32	S-1427H	59/64	T-2427H	T-2427HX	1-15/64	D-4427H	D-4427HX	1-11/64	N-5427H	N-5427HX	1- 7/32	M
5/16	17/32	13/32	S-1428H	59/64	T-2428H	T-2428HX	1-15/64	D-4428H	D-4428HX	1-11/64	N-5428H	N-5428HX	1- 7/32	M

HEAVY DUTY FLANGED SPADE TERMINALS—FULL (1/4") BARREL LENGTH— .050" STOCK

5-6	3/8	5/16	S-1423H	3/4	T-2423H	T-2423HX	1- 1/16	D-4423H	D-4423HX	1	N-5423H	N-5423HX	1- 3/64	L
8	3/8	5/16	S-1424H	3/4	T-2424H	T-2424HX	1- 1/16	D-4424H	D-4424HX	1	N-5424H	N-5424HX	1- 3/64	L
10	3/8	5/16	S-1425H	3/4	T-2425H	T-2425HX	1- 1/16	D-4425H	D-4425HX	1	N-5425H	N-5425HX	1- 3/64	L



KRIMPTITE*
Heavy Duty
Flanged Spade

NET PRICES — 16-14 WIRE RANGE TERMINALS

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

	KRIMPTITE*			INSULKRIMP* No Suffix			INSULKRIMP* Suffix (X)			VERSAKRIMP*			VIBRAKRIMP*			AVIKRIMP*		
		BULK			BULK			BULK			BULK			BULK			BULK	
Price Code Letter	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more per M
B	3.45	24.60	19.25	6.70	49.20	38.45	7.10	52.15	40.70	5.65	45.00	33.75	6.76	54.10	40.55	9.95	79.55	59.70
C	4.50	32.40	25.30	6.70	49.20	38.45	7.10	52.15	40.70	5.65	45.00	33.75	6.76	54.10	40.55	9.95	79.55	59.70
D	2.65	18.75	14.70	5.15	38.00	29.75	5.80	42.65	33.35	4.05	32.20	24.15	5.30	42.40	31.80	8.00	64.50	48.40
L	3.90	31.00	23.25	7.00	55 80	41.85	7.00	55.80	41.85				8.89	71.10	53.35	12.65	100.75	75.60
M	5.05	40.05	30.05	7.75	61.55	46.15	7.75	61.55	46.15				9.36	74.90	56.20	13.75	109.95	82.45
N	5.55	44.10	33.10	9.15	73.20	54.80	9.15	73.20	54.80				10.29	82.20	61.70	14.60	116.40	87.30
O	8.80	70.15	52.65	11.44	91.45	68.65	11.44	91.45	68.65				12.58	100.60	75.45	15.65	125.15	93.80

*TRADEMARK

© United Technical Publications

SOLDERLESS TERMINALS AND CONNECTORS

waldom

12-10 WIRE RANGE

BUREAU OF SHIPS 6-9
CIRCULAR MIL AREA 5,180-13,100 UL & CSA RECOGNIZED

.040" STOCK • INSULATION COLOR CODED YELLOW

PRICING FOLLOWS THIS WIRE RANGE LISTING

RING TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



KRIMPTITE*
Ring Tongue

BASIC DIMENSIONS			KRIMPTITE*		INSULKRIMP*			VERSAKRIMP*		VIBRAKRIMP*			AVIKRIMP*			Price Code (See Pricing Below)
Stud Size S	Width W	Clearance C	Part Number	Length L	.215 Max. Ins. Dia. Pt. No.	.255 Max Ins. Dia. Pt. No.	Length L	Part Number	Length L	.235 Max. Ins. Dia. Pt. No.	.255 Max. Ins. Dia. Pt. No.	Length L	.235 Max. Ins. Dia. Pt. No.	.255 Max. Ins. Dia. Pt. No.	Length L	
3-4	9/32	5/16	S-1148	45/64	T-2148	T-2148X	1- 1/64	B-3148	45/64	D-4148	D-4148X	61/64	N-5148	N-5148X	1-22/33	E
	3/8	5/16	S-1846	3/4	T-2846	T-2846X	1- 1/16	B-3846	3/4	D-4846	D-4846X	1	N-5846	N-5846X	1- 3/64	E
5-6	9/32	5/16	S-1149	45/64	T-2149	T-2149X	1- 1/64	B-3149	45/64	D-4149	D-4149X	61/64	N-5149	N-5149X	1	E
	3/8	5/16	S-1049	3/4	T-2049	T-2049X	1- 1/16	B-3049	3/4	D-4049	D-4049X	1	N-5049	N-5049X	1- 3/64	E
8	9/32	5/16	S-1150	45/64	T-2150	T-2150X	1- 1/64	B-3150	45/64	D-4150	D-4150X	61/64	N-5150	N-5150X	1	E
	3/8	5/16	S-1050	3/4	T-2050	T-2050X	1- 1/16	B-3050	3/4	D-4050	D-4050X	1	N-5050	N-5050X	1- 3/63	E
10	3/8	5/16	S-1011	3/4	T-2011	T-2011X	1- 1/16	B-3011	3/4	D-4011	D-4011X	1	N-5011	N-5011X	1- 3/64	E
	17/32	13/32	S-1115	59/64	T-2115	T-2115X	1-15/64	B-3115	59/64	D-4115	D-4115X	1- 7/64	N-5115	N-5115X	1- 7/32	F
	19/32	31/64	S-1107	1- 1/32	T-2107	T-2107X	1-11/32	B-3107	1- 1/32	D-4107	D-4107X	1- 9/32	N-5107	N-5107X	1-21/64	G
1/4	17/32	13/32	S-1100	59/64	T-2100	T-2100X	1-15/64	B-3100	59/64	D-4100	D-4100X	1- 7/64	N-5100	N-5100X	1- 7/32	F
	19/32	31/64	S-1012	1- 1/32	T-2012	T-2012X	1-11/32	B-3012	1- 1/32	D-4012	D-4012X	1- 9/32	N-5012	N-5012X	1-21/64	G
	3/4	5/8	S-1847	1-17/64	T-2847	T-2847X	1-37/64	B-3847	1-17/64	D-4847	D-4847X	1-33/64	N-5847	N-5847X	1- 9/16	H
5/16	17/32	13/32	S-1101	59/64	T-2101	T-2101X	1-15/64	B-3101	59/64	D-4101	D-4101X	1- 7/64	N-5101	N-5101X	1- 7/32	F
	19/32	31/64	S-1042	1- 1/32	T-2042	T-2042X	1-11/32	B-3042	1- 1/32	D-4042	D-4042X	1- 9/32	N-5042	N-5042X	1-21/64	G
	3/4	5/8	S-1848	1-17/64	T-2848	T-2848X	1-37/64	B-3848	1-17/64	D-4848	D-4848X	1-33/64	N-5848	N-5848X	1- 9/16	H
3/8	19/32	31/64	S-1013	1- 1/32	T-2013	T-2013X	1-11/32	B-3013	1- 1/32	D-4013	D-4013X	1- 9/32	N-5013	N-5013X	1-21/64	G
	3/4	5/8	S-1153	1-17/64	T-2153	T-2153X	1-37/64	B-3153	1-17/64	D-4153	D-4153X	1-33/64	N-5153	N-5153X	1- 9/16	H
7/16	3/4	5/8	S-1154	1-17/64	T-2154	T-2154X	1-37/64	B-3154	1-17/64	D-4154	D-4154X	1-33/64	N-5154	N-5154X	1- 9/16	H
1/2	3/4	5/8	S-1155	1-17/64	T-2155	T-2155X	1-37/64	B-3155	1-17/64	D-4155	D-4155X	1-33/64	N-5155	N-5155X	1- 9/16	H

SPADE TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



INSULKRIMP*
Spade Tongue

5-6	3/8	5/16	S-1053	25/32	T-2053	T-2053X	1- 3/32	B-3053	25/32	D-4053	D-4053X	1- 1/32	N-5053	N-5053X	1- 5/64	E
8	3/8	5/16	S-1054	25/32	T-2054	T-2054X	1- 3/32	B-3054	25/32	D-4054	D-4054X	1- 1/32	N-5054	N-5054X	1- 5/64	E
10	3/8	5/16	S-1017	25/32	T-2017	T-2017X	1- 3/32	B-3017	25/32	D-4017	D-4017X	1- 1/32	N-5017	N-5017X	1- 5/64	E
1/4	17/32	13/32	S-1184	59/64	T-2184	T-2184X	1-15/64	B-3184	59/64	D-4184	D-4184X	1-11/64	N-5184	N-5184X	1- 7/32	F
	17/32	13/32	S-1849	59/64	T-2849	T-2849X	1-15/64	B-3849	59/64	D-4849	D-4849X	1-11/64	N-5849	N-5849X	1- 7/32	F
5/16	17/32	13/32	S-1850	59/64	T-2850	T-2850X	1-15/64	B-3850	59/64	D-4850	D-4850X	1-11/64	N-5850	N-5850X	1- 7/32	F

FLANGED SPADE TERMINALS—FULL (1/4") BARREL LENGTH



VERSAKRIMP*
Flanged Spade

5-6	3/8	5/16	S-1086	3/4	T-2086	T-2086X	1- 1/16	B-3086	3/4	D-4086	D-4086X	1	N-5086	N-5086X	1- 3/64	E
8	3/8	5/16	S-1087	3/4	T-2087	T-2087X	1- 1/16	B-3087	3/4	D-4087	D-4087X	1	N-5087	N-5087X	1- 3/64	E
10	3/8	5/16	S-1088	3/4	T-2088	T-2088X	1- 1/16	B-3088	3/4	D-4088	D-4088X	1	N-5088	N-5088X	1- 3/64	E

HOOK TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



VIBRAKRIMP*
Hook Tongue

5-6	3/8	5/16	S-1057	3/4	T-2057	T-2057X	1- 1/16	B-3057	3/4	D-4057	D-4057X	1	N-5057	N-5057X	1- 3/64	E
8	3/8	5/16	S-1058	3/4	T-2058	T-2058X	1- 1/16	B-3058	3/4	D-4058	D-4058X	1	N-5058	N-5058X	1- 3/64	E
10	3/8	5/16	S-1045	3/4	T-2045	T-2045X	1- 1/16	B-3045	3/4	D-4045	D-4045X	1	N-5045	N-5045X	1- 3/64	E

RECTANGULAR TONGUE TERMINALS—FULL (1/4") BARREL LENGTH



AVIKRIMP*
Rectangular Tongue

5-6	3/8	5/16	S-1077	25/32	T-2077	T-2077X	1- 3/32	B-3077	25/32	D-4077	D-4077X	1- 1/32	N-5077	N-5077X	1- 5/64	E
8	3/8	5/16	S-1078	25/32	T-2078	T-2078X	1- 3/32	B-3078	25/32	D-4078	D-4078X	1- 1/32	N-5078	N-5078X	1- 5/64	E
10	3/8	5/16	S-1079	25/32	T-2079	T-2079X	1- 3/32	B-3079	25/32	D-4079	D-4079X	1- 1/32	N-5079	N-5079X	1- 5/64	E

NET PRICES—12-10 WIRE RANGE TERMINALS

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

Price Code Letter	KRIMPTITE*			INSULKRIMP* No Suffix			INSULKRIMP* Suffix (X)			VERSAKRIMP*			VIBRAKRIMP*			AVIKRIMP*		
		BULK			BULK			BULK			BULK			BULK			BULK	
	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M
E	3.65	26.05	20.40	6.70	49.20	38.45	7.10	52.15	40.70	5.65	45.00	33.75	6.76	54.10	40.55	9.95	79.55	59.70
F	4.85	34.45	26.85	7.10	52.15	40.70	7.85	57.95	45.25	6.80	54.05	40.55	7.50	59.95	45.00	10.20	81.25	60.95
G	5.30	37.90	29.60	7.85	57.95	45.25	8.65	63.95	49.95	7.70	61.45	46.10	7.98	63.85	47.90	11.20	88.15	66.10
H	8.15	58.50	45.70	10.50	77.30	60.40	11.30	83.25	65.05	9.80	78.30	58.75	10.34	82.75	62.10	13.10	104.75	78.60

*TRADEMARK

© United Technical Publications

SOLDERLESS TERMINALS AND CONNECTORS

waldom

TERMINALS AND BUTT CONNECTORS FOR HIGH TEMP. APPLICATIONS

900 Series is conservatively rated for continuous duty at 900°F. Steel, Nickel Plated.
650 Series is conservatively rated for continuous duty at 650°F. Silver Bearing Copper, Nickel Plated.

RING TONGUE TERMINALS (AVAILABLE IN RING TONGUE ONLY)

STOCK SIZE: 22-18 — .032": 16-14 — .032": 12-10 — .040"

Wire Range	Basic Dimensions			900° Series		650° Series				Price Code (See Pricing below)
				Krimptite*		Versakrimp*		Vibrakrimp*		
	Stud Size	Width	Stud Clearance	Part No.	Length	Part No.	Length	Part No.	Length	
22-18	5-6	7/32	5/32	S-1165	33/64	SB-3600	27/64	SD-4600	37/64	AY
22-18	5-6	9/32	1/4	S-1166	41/64	SB-3601	35/64	SD-4601	45/64	AY
22-18	8	9/32	1/4	S-1167	41/64	SB-3602	35/64	SD-4602	45/64	AY
22-18	10	9/32	1/4	S-1168	41/64	SB-3603	35/64	SD-4603	45/64	AY
22-18	1/4	15/32	13/32	S-1185	57/64	SB-3190	51/64	SD-4190	61/64	BJ
22-18	5/16	15/32	13/32	S-1191	57/64	SB-3191	51/64	SD-4191	61/64	BJ
22-18	3/8	9/16	9/16	S-1192	1-7/64	SB-3192	1-1/64	SD-4192	1-11/64	BK
16-14	5-6	1/4	7/32	S-1170	19/32	SB-3604	1/2	SD-4604	21/32	AZ
16-14	5-6	5/16	9/32	S-1171	45/64	SB-3605	39/64	SD-4605	49/64	AZ
16-14	8	5/16	9/32	S-1172	45/64	SB-3606	39/64	SD-4606	49/64	AZ
16-14	10	5/16	9/32	S-1173	45/64	SB-3607	39/64	SD-4609	49/64	AZ
16-14	1/4	15/32	13/32	S-1193	57/64	SB-3193	51/64	SD-4193	61/64	BL
16-14	5/16	15/32	13/32	S-1194	57/64	SB-3194	51/64	SD-4194	61/64	BL
16-14	3/8	9/16	9/16	S-1195	1-7/64	SB-3195	1-1/64	SD-4195	1-11/64	BM
12-10	5-6	3/8	5/16	S-1175	3/4	B-3608	3/4	D-4608	1	BA
12-10	8	3/8	5/16	S-1176	3/4	B-3609	3/4	D-4609	1	BA
12-10	10	3/8	5/16	S-1177	3/4	B-3610	3/4	D-4610	1	BA
12-10	1/4	17/32	13/32	S-1179	59/64	B-3611	59/64	D-4611	1-11/64	BB
12-10	5/16	17/32	13/32	S-1196	59/64	B-3696	59/64	D-4696	1-11/64	BB
12-10	3/8	19/32	31/64	S-1197	1-1/32	B-3697	1-1/32	D-4697	1-9/32	BN



BUTT CONNECTORS

Wire Range	900° Series Krimptite*		650° Series Versakrimp*		Price Code
	Part No.	Length	Part No.	Length	
22-18	S-1169	9/16	B-3612	21/32	BC
16-14	S-1174	9/16	B-3613	21/32	BC
12-10	S-1178	9/16	B-3614	13/16	BD



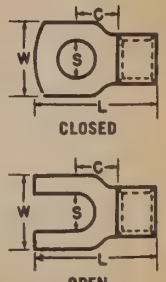
NET PRICES — HIGH TEMP. TERMINALS & BUTT CONNECTORS

Code No.	900° Series Krimptite*			650° Series Versakrimp*			Vibrakrimp*		
		Bulk			Bulk			Bulk	
	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M	Pkg. of 100	1000-4999, per M	5000 or more, per M
AY	2.65	18.75	14.70	5.70	46.05	34.55	10.85	87.65	65.80
AZ	2.90	20.70	16.25	6.60	53.30	39.95	16.15	131.10	98.35
BA	3.85	27.55	21.60	8.10	65.45	49.15	17.50	142.10	106.65
BB	4.80	38.40	28.70	10.75	87.10	65.40	19.38	157.40	118.15
BC	3.05	21.85	17.15	5.95	47.95	36.00	—	—	—
BD	5.28	37.45	29.35	8.55	68.10	51.80	—	—	—
BJ	3.65	28.95	21.60	9.45	75.50	56.40	14.20	113.70	85.00
BK	4.80	38.40	28.70	10.70	85.70	64.05	16.30	130.70	97.70
BL	3.65	28.95	21.60	9.90	79.25	59.25	20.55	164.65	123.05
BM	4.80	38.40	28.70	11.05	88.50	66.15	21.85	175.25	130.90
BN	5.45	43.50	32.45	10.60	84.95	63.50	22.50	180.70	135.05

FLAG TERMINALS — KRIMPTITE*

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

Wire Range	Stud Size - S	Maximum Width - W	Clearance* C	Stock	Closed		Open		Net Prices		
					Part Number	Length L	Part Number	Length L	Pkg. of 100	Bulk 1000-4999, per M	Bulk 5000 or more, per M
22-16	5-6	3/8	5/16	.032	S-1059	5/8	S-1156	5/8	3.70	26.45	20.70
	8	3/8	5/16	.032	S-1060	5/8	S-1157	5/8	3.70	26.45	20.70
	10	3/8	5/16	.032	S-1043	5/8	S-1158	5/8	3.70	26.45	20.70
16-14	5-6	3/8	5/16	.032	S-1061	21/32	S-1159	21/32	3.80	27.00	21.05
	8	3/8	5/16	.032	S-1062	21/32	S-1160	21/32	3.80	27.00	21.05
	10	3/8	5/16	.032	S-1044	21/32	S-1161	21/32	3.80	27.00	21.05
12-10	5-6	3/8	5/16	.040	S-1108	23/32	S-1162	23/32	5.20	37.05	28.95
	8	3/8	5/16	.040	S-1109	23/32	S-1163	23/32	5.20	37.05	28.95
	10	3/8	5/16	.040	S-1110	23/32	S-1164	23/32	5.20	37.05	28.95



* Trademark

© United Technical Publications

waldom

SOLDERLESS TERMINALS AND CONNECTORS

3-WAY & 4-WAY CONNECTORS

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

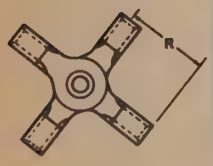
"Y" and "X" Connectors are made up of ring terminals joined to form a 3-way or 4-way splice. The wire ranges apply to each terminal. Material is tin-plated copper with a plated steel rivet. Other combinations of standard terminals can be supplied on special order.

3-WAY "Y" CONNECTORS



Wire Range	Stock	KRIMPTITE* Part Number	KRIMPTITE* Ref. Length R	INSULKRIMP* Part Number	INSULKRIMP* Max. Ins. Dia.	INSULKRIMP* Part Number	INSULKRIMP* Max. Ins. Dia.	INSULKRIMP* Ref. Length R	VERSAKRIMP* Part Number	VERSAKRIMP* Ref. Length R	VIBRAKRIMP* Part Number	VIBRAKRIMP* Max. Ins. Dia.	VIBRAKRIMP* Ref. Length R	AVIKRIMP* Part Number	AVIKRIMP* Max. Ins. Dia.	AVIKRIMP* Ref. Length R	Price Code (See pricing below)
22-16	.032	S-1065	33/64	T-2065	.125	T-2065X	.145	45/64	B-3065	33/64	D-4065	.145	43/64	N-5065	.145	45/64	BF
16-14	.032	S-1066	35/64	T-2066	.155	T-2066X	.175	47/64	B-3066	35/64	D-4066	.175	45/64	N-5066	.175	47/64	BF
12-10	.040	S-1067	37/64	T-2067	.215	T-2067X	.255	57/64	B-3067	37/64	D-4067	.235	53/64	N-5067	.235	7/8	BG

4-WAY "X" CONNECTORS



Wire Range	Stock	KRIMPTITE* Part Number	KRIMPTITE* Ref. Length R	INSULKRIMP* Part Number	INSULKRIMP* Max. Ins. Dia.	INSULKRIMP* Part Number	INSULKRIMP* Max. Ins. Dia.	INSULKRIMP* Ref. Length R	VERSAKRIMP* Part Number	VERSAKRIMP* Ref. Length R	VIBRAKRIMP* Part Number	VIBRAKRIMP* Max. Ins. Dia.	VIBRAKRIMP* Ref. Length R	AVIKRIMP* Part Number	AVIKRIMP* Max. Ins. Dia.	AVIKRIMP* Ref. Length R	Price Code (See pricing below)
22-16	.032	S-1068	33/64	T-2068	.125	T-2068X	.145	45/64	B-3068	33/64	D-4068	.145	43/64	N-5068	.145	45/64	BH
16-14	.032	S-1069	35/64	T-2069	.155	T-2069X	.175	47/64	B-3069	35/64	D-4069	.175	45/64	N-5069	.175	47/64	BH
12-10	.040	S-1070	37/64	T-2070	.215	T-2070X	.255	57/64	B-3070	37/64	D-4070	.235	53/64	N-5070	.235	7/8	BI

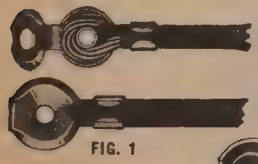
NET PRICES — 3-WAY AND 4-WAY CONNECTORS

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

Code No.	KRIMPTITE* Pkg. of 25	KRIMPTITE* Bulk 500-1499, per M	KRIMPTITE* Bulk 1500 or more, per M	INSULKRIMP* Straight Insulation Pkg. of 25	INSULKRIMP* Straight Insulation Bulk 500-1499, per M	INSULKRIMP* Straight Insulation Bulk 1500 or more, per M	INSULKRIMP* Flared Insulation Pkg. of 25	INSULKRIMP* Flared Insulation Bulk 500-1499, per M	INSULKRIMP* Flared Insulation Bulk 1500 or more, per M	VERSAKRIMP* Pkg. of 25	VERSAKRIMP* Bulk 500-1499, per M	VERSAKRIMP* Bulk 1500 or more, per M	VIBRAKRIMP* Pkg. of 25	VIBRAKRIMP* Bulk 500-1499, per M	VIBRAKRIMP* Bulk 1500 or more, per M	AVIKRIMP* Pkg. of 25	AVIKRIMP* Bulk 500-1499, per M	AVIKRIMP* Bulk 1500 or more, per M
BF	2.10	66.30	49.70	4.85	155.10	116.40	5.40	172.25	129.25	3.43	109.90	82.45	5.05	161.50	121.10	7.30	232.35	174.25
BG	2.90	91.35	68.55	6.20	198.10	148.40	6.85	217.20	162.95	4.09	131.00	98.30	6.32	202.15	151.55	8.90	283.75	212.80
BH	2.75	82.35	65.20	6.35	202.30	151.70	7.10	225.15	168.90	4.48	143.35	107.45	6.60	211.25	158.45	9.55	305.25	228.95
BI	3.95	125.25	93.95	8.15	259.20	194.40	8.85	282.00	211.50	6.57	210.10	157.55	8.30	265.20	198.90	11.70	373.75	280.35

FOLD-OVER SOLDERLESS TERMINALS

Designed to give a trim appearance to otherwise unsightly wire connections. They fold neatly over the stranding and confine it directly under binding screw or nut and automatically insure greatest possible contact. The cushion-like construction when closed permits binding nut or screw to sink into the soft copper and so serve the purpose of a lock nut and is therefore vibration proof. Each is adaptable to a wide range of wire sizes. For standard, extra flexible or solid wire.


FIG. 1

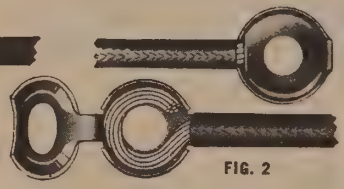
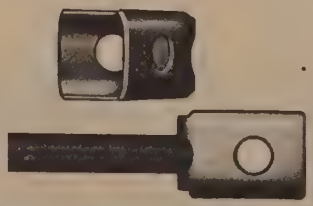
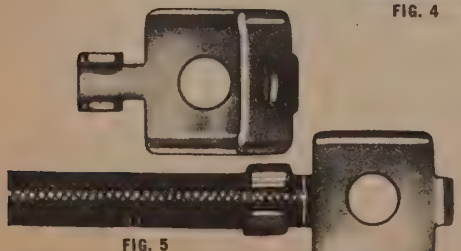

FIG. 2


FIG. 3


FIG. 4


FIG. 5

* Trademark

CIRCULAR FOLDING TERMINALS WITH INSULATION GRIP (FIG. 1)

Wire Range	Stud Size	Width	Length	Part No.	Price Per 100	1000-4999 Per M	5000-over Per M
18-14	6-8	5/16	9/16	KH-100	$2.72	$23.10	$19.65
18-14	6-10	3/8	11/16	KH-101	2.90	24.70	21.00
16-10	6-8	7/16	13/16	KH-102	3.07	26.10	22.20
16-10	6-10	9/16	15/16	KH-103	3.42	29.10	24.75
16-10	12-¼	9/16	15/16	KH-104	3.42	29.10	24.75
10-6	¼-⅜	21/32	1-1/8	KH-105	5.96	50.70	43.10
10-6	¼-⅜	13/16	1-1/4	KH-106	13.12	111.50	94.80
10-6	¼-⅜	1	1-5/16	KH-107	24.50	208.30	177.05

CIRCULAR FOLDING TERMINALS WITHOUT INSULATION GRIP (FIG. 2)

18-10	6-10	9/16	9/16	KH-120	1.57	13.40	11.40
12-8	12-¼	21/32	11/16	KH-121	1.67	14.20	12.10
18-10	6-8	7/16	7/16	KH-122	1.75	14.90	12.20
18-10	6-10	1/2	1/2	KH-123	1.84	15.60	13.25
18-14	6-10	3/8	3/8	KH-124	2.10	17.90	15.22
18-14	6-8	5/16	5/16	KH-125	3.32	28.20	24.00

SINGLE CUP WASHER TERMINALS (FIG. 3)

18-14	4-6	1/4	1/4	KH-130	1.22	10.40	8.85
16-10	6-10	9/16	9/16	KH-131	1.32	11.20	9.50
16-10	6-8	7/16	7/16	KH-132	1.39	11.80	10.00
18-14	6-10	3/8	3/8	KH-133	1.57	13.40	11.40
18-14	6-8	5/16	5/16	KH-134	1.70	14.50	12.35
18-14	4-6	1/4	1/4	KH-135	1.84	15.60	13.25

RECTANGULAR FOLDING TERMINALS WITHOUT INSULATION GRIP (FIG. 4)

6-10	10-12	15/32	3/4	KH-140	4.02	34.20	29.05
8-4	12-¼	11/16	7/8	KH-141	6.12	52.00	44.20

RECTANGULAR FOLDING TERMINALS WITH INSULATION GRIP (FIG. 5)

18-10	6-10	1/2	1	KH-150	8.75	74.40	63.25
12-6	12-¼	11/16	1-1/8	KH-151	3.50	29.80	25.35

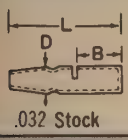
© United Technical Publications

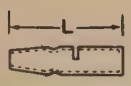
waldom

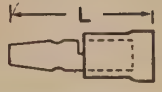
SOLDERLESS TERMINALS AND CONNECTORS

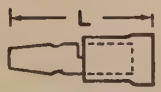
QUICK DISCONNECT DEVICES

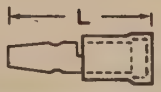
SNAP PLUGS











BASIC DIMENSIONS				KRIMPTITE*		INSULKRIMP*			VIBRAKRIMP*		AVIKRIMP*		Price Code (See Pricing Below)
Wire Range	Length L	Barrel Length B	Diameter D	Part Number	Length L	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	.175 Max. Ins. Dia. Pt. No.	Length L	
16-14	35/64	3/16	.176	S-1056	35/64	T-2056	T-2056X	51/64	D-4056	49/64	N-5056	51/64	AW
16-14	19/32	3/16	.157	S-1055	19/32	T-2055	T-2055X	21/32	D-4055	13/16	N-5055	27/32	AV

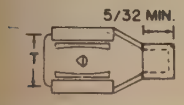


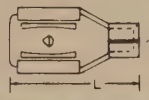
PR-1426
INSULATED SNAP PLUG RECEPTACLE
An insulated connector for use with S-1005, T-2055, T-2055X, D-4055 & N-5055. One snap plug is inserted in either end of the receptacle. Tubular Shell is high impact transparent Styrene.

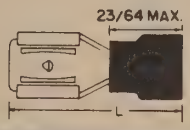
Part No.	Pkg. of 100	BULK 1000-4999, per M	BULK 5000 or more, per M
PR-1426	9.90	71.15	55.40

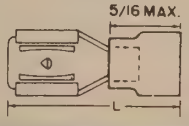
QUICK-DISCONNECT PUSH-ON TYPE TERMINALS

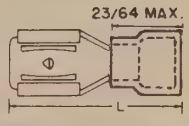
18-14 WIRE RANGE (USE 22-18 SHORT BARREL TOOLING) FEMALE IN LINE





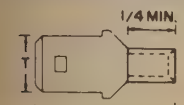


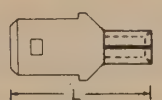


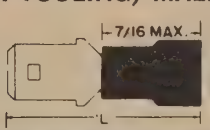


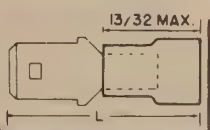
BASIC DIMENSIONS		KRIMPTITE*		INSULKRIMP*			VIBRAKRIMP*		AVIKRIMP*		Price Code Letter (See Pricing Below)
Fits Male Tab T	Stock	Part Number	Length L Max.	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	
.110 .125 x .020	.016	SS-1186	29/64	ST-2186	ST-2186X	21/32	SD-4186	39/64	SN-5186	27/32	AX
.187 x .020	.020	SS-1187	17/32	ST-2187	ST-2187X	47/64	SD-4187	11/16	SN-5187	47/64	AX
.250 x .032	.020	SS-1090	41/64	ST-2090	ST-2090X	27/32	SD-4090	51/64	SN-5090	27/32	AX

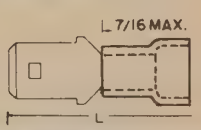
18-14 WIRE RANGE (USE 16-14 REGULAR TOOLING) MALE





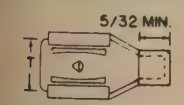


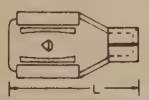


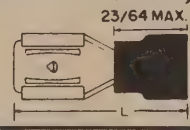


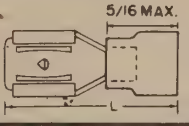
BASIC DIMENSIONS		KRIMPTITE*		INSULKRIMP*			VIBRAKRIMP*		AVIKRIMP*		Price Code Letter (See Pricing Below)
Tab Width T	Stock	Part Number	Length L Max.	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	
.187	.020	S-1190	1/2	T-2190	T-2190X	25/32					AX
.250	.032	S-1089	21/32	T-2089	T-2089X	27/32	D-4089	13/16	N-5089	27/32	AX

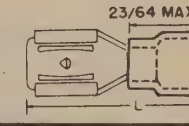
16-12 WIRE RANGE (USE 16-14 SHORT BARREL TOOLING) FEMALE IN LINE











BASIC DIMENSIONS		KRIMPTITE*		INSULKRIMP*			VIBRAKRIMP*		AVIKRIMP*		Price Code Letter (See Pricing Below)
Fits Male Tab T	Stock	Part Number	Length L Max.	.155 Max. Ins. Dia. Pt. No.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	.175 Max. Ins. Dia. Pt. No.	Length L Max.	
.250 x .032	.020	SS-1188	41/64	ST-2188	ST-2188X	27/32	SD-4188	51/64	SN-5188	27/32	AX

NET PRICES — SNAP PLUGS AND QUICK DISCONNECT PUSH ON TYPE TERMINALS

Price Code Letter	KRIMPTITE* Pkg. of 100	KRIMPTITE* BULK 1000-4999, per M	KRIMPTITE* BULK 5000 or more, per M	INSULKRIMP* No Suffix Pkg. of 100	INSULKRIMP* No Suffix BULK 1000-4999, per M	INSULKRIMP* No Suffix BULK 5000 or more, per M	INSULKRIMP* Suffix (X) Pkg. of 100	INSULKRIMP* Suffix (X) BULK 1000-4999, per M	INSULKRIMP* Suffix (X) BULK 5000 or more, per M	VIBRAKRIMP* Pkg. of 100	VIBRAKRIMP* BULK 1000-4999, per M	VIBRAKRIMP* BULK 5000 or more, per M	AVIKRIMP* Pkg. of 100	AVIKRIMP* BULK 1000-4999, per M	AVIKRIMP* BULK 5000 or more, per M
AV	2.40	16.95	13.20	5.15	38.00	29.75	5.80	42.65	33.35	5.30	42.40	31.80	8.00	64.50	48.40
AW	2.50	17.65	13.80	5.15	38.00	29.75	5.80	42.65	33.35	5.30	42.40	31.80	8.00	64.50	48.40
AX	2.90	20.65	16.10	5.30	39.05	30.55	6.00	44.05	34.45	5.85	46.65	35.00	8.35	67.60	50.70

*TRADEMARK

© United Technical Publications

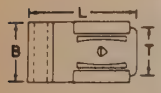
SOLDERLESS TERMINALS AND CONNECTORS

waldom

QUICK DISCONNECT DEVICES (Continued)

FEMALE FLAGS

18-14 WIRE RANGE—KRIMPTITE*

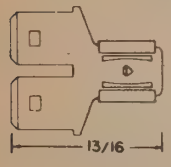


Part No.	Basic Dimensions: Tab T	Barrel Length B	Length L	Pkg. of 100	Bulk: 1000-4999, per M	Bulk: 5000 or more, per M
S-1189	.187x.020	15/64	29/64	3.10	21.95	17.25
S-1091-A	.250x.032	15/64	29/64	2.95	20.85	16.30

16-12 WIRE RANGE—KRIMPTITE*

S-1091-B	.250x.020	5/16	19/32	3.40	24.25	18.90

DOUBLE MALE TAB ADAPTER



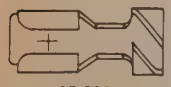
For converting one .250 x .032 Male Tab to two Male Tabs. .032 Stock.

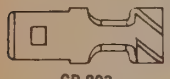
Part No.	NET PRICES: Pkg. of 100	BULK: 1000-4999, per M	BULK: 5000 or more, per M
A-1428	5.65	40.60	31.60

ECONOMICAL INSULATION-GRIP QUICK DISCONNECTS

MATERIAL: BRASS, ELECTRO-TIN PLATED


CP-801


CP-802


CP-803

Part No.	Wire Range	Description	NET PRICES: Pkg. of 100	BULK: 1000-4999, per M	BULK: 5000 or more, per M
CP-801	20-16	1/4" Female	4.35	32.70	24.60
CP-802	16-12	1/4" Female	4.57	34.75	26.05
CP-803	20-16	1/4" Male	3.73	28.45	21.35

1/4" MALE TABS

MATERIAL: .031 BRASS, CADMIUM PLATED

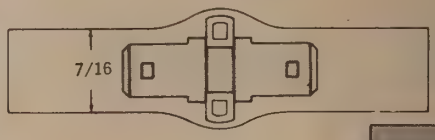

S-1432T


S-1431T

Part No.	Height	Mtg. Hole	NET PRICES: Pkg. of 100	BULK: 1000-4999, per M	BULK: 5000 or more per M
S-1431T	7/16	.156	2.35	18.35	15.30
S-1432T	29/64	.144	4.10	32.10	26.75

INSULATED TAB RECEPTACLE

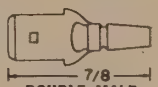
For connecting two .250 Female Disconnects.



Part No.	NET PRICES: Pkg. of 100	1000-4999, per M	5000 or more, per M
TR-1427	9.19	66.20	51.50

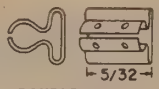


SNAP PLUG TO TAB ADAPTERS



DOUBLE MALE
A-1429

For adapting .157 Plug Receptacle to .250 Female Disconnect. .032 Stock.



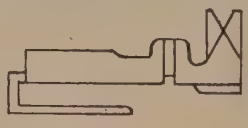
DOUBLE FEMALE
A-1430

For adapting .157 Plug to .250 x .032 Tab.

Part No.	NET PRICES: Pkg. of 100	1000-4999, per M	5000 or more, per M
A-1429	5.87	42.25	32.90
A-1430	7.10	50.80	39.55

PIGGY BACK TERMINAL

MATERIAL: BRASS (UNPLATED)

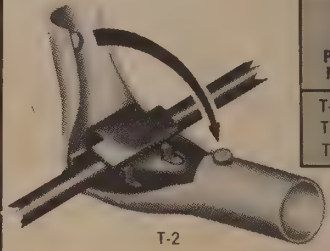


Part No.	Wire Range	NET PRICES: Pkg. of 100	Pkg. of 1000: 1-4	Pkg. of 1000: 5 or more
PB-1431	20-12	7.15	54.40	40.75

T—TAB TERMINAL

For attaching trailer lights to Towing Vehicle's Lighting System without cutting wires. The T-2 receptical consists of a brass insulation piercing terminal with a slipover, fold-over insulating sleeve. (Use ordinary plyers to crimp piercing portion of terminal to wire.)
The T-1 snap plug, with nylon insulating sleeve, allows easy, quick disconnecting of trailer wire. Wire range 16-14. Use CT-4050 crimping tool.

PART NO. (Male) T-1
PART NO. (Female) T-2
PART NO. (Complete Set) T-3


T-2


T-1

Part No.	Pkg. of 25	NET PRICES: Pkg. of 100	1000-4999 per M	5000 or more per M
T-3	4.75	15.70	139.10	112.50
T-2	3.75	12.25	108.55	87.80
T-1	1.65	5.50	48.45	39.15

Net

© United Technical Publications

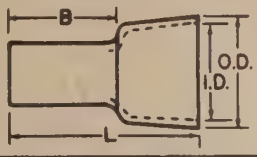
waldom

SOLDERLESS TERMINALS AND CONNECTORS

PERMANENT CONNECTORS

NYLON INSULATED CLOSED END CONNECTORS

Connectors are annealed, tin-plated, seamless brass for 22-14 wire range, and annealed tin-plated copper for 16-10 wire range. Insulation is natural-color translucent DuPont Nylon. Underwriters' Laboratories approved. UL temperature rating of 105°C maximum. 600 Volts maximum in building wire and 1,000 Volts inside a sign or fixture.



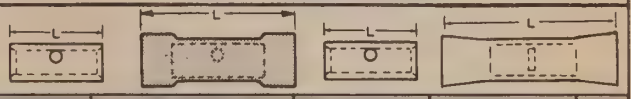
Wire Range	Part Number	Outside Diameter O.D.	Overall Length L	Barrel Length B	Inside Diameter I.D.	Circular Mil Area	Pkg. of 100	BULK 1000-4999, per M	BULK 5000 or more, per M
22-14	CE-2214	5/16	39/64	11/32	1/4	600- 5,180	4.30	30.75	24.05
16-10	CE-1610	7/16	23/32	3/8	3/8	2,400-13,000	6.30	45.00	35.15

PARALLEL CONNECTORS



Wire Range	KRIMPTITE* Part Number	KRIMPTITE* Length L	INSULKRIMP* Straight Ins. Dia. Pt. No.	INSULKRIMP* Flared Ins. Dia. Pt. No.	INSULKRIMP* Length L	VERSAKRIMP* Part Number	VERSAKRIMP* Length L	NYLAKRIMP* Part Number	NYLAKRIMP* Length L
22-18	S-1105	5/16	T-2105	T-2105X	11/16	†B-3105S	5/16	N-5105S	5/8
16-14	S-1063	5/16	T-2063	T-2063X	11/16	†B-3063S	5/16	N-5063S	5/8
12-10	S-1064	5/16	T-2064	T-2064X	25/32	†B-3064S	5/16	N-5064S	5/8
8			T-2260	T-2260X	1	B-3260	3/8	N-5260S	1
6			T-2261	T-2261X	1- 3/16	B-3261	7/16	N-5261S	1-13/16
4			T-2262	T-2262X	1-13/32	B-3262	17/32	N-5262S	1-13/32
2			T-2303	T-2303X	1- 5/8	B-3303	41/64	N-5303S	1- 5/8
1/0			The INSULKRIMP and NYLAKRIMP Parts in Wire Ranges 8 thru 2 have Brazed Barrels.			†B-3321	47/64	†N-5321S	1-61/64
2/0						†B-3336	47/64	†N-5336S	1-61/64
3/0						†B-3338S	3/4	†N-5338S	2-19/64
4/0						†B3340S	3/4	†N-5340S	2-19/64

BUTT CONNECTORS



Wire Range	KRIMPTITE* Part Number	KRIMPTITE* Length L	INSULKRIMP* Straight Ins. Dia. Pt. No.	INSULKRIMP* Flared Ins. Dia. Pt. No.	INSULKRIMP* Length L	VERSAKRIMP* Part Number	VERSAKRIMP* Length L	NYLAKRIMP* Part Number	NYLAKRIMP* Length L	Price Code Letter (see Below)
22-18	S-1019	9/16	T-2019	T-2019X	15/16	†B-3019S	21/32	N-5019S	1- 3/64	AH
16-14	S-1020	9/16	T-2020	T-2020X	15/16	†B-3020S	21/32	N-5020S	1- 3/64	AH
12-10	S-1046	9/16	T-2046	T-2046X	1- 1/16	†B-3046S	13/16	N-5046S	1- 3/64	AI
8			T-2263	T-2263X	1- 7/16	B-3263	53/64	N-5263S	1- 7/16	AJ
6			T-2264	T-2264X	1- 3/4	B-3264	1- 1/64	N-5264S	1- 3/4	AK
4			T-2265	T-2265X	2	B-3265	1- 1/8	N-5265S	2	AL
2			T-2304	T-2304X	2- 1/4	B-3304	1- 1/4	N-5304S	2- 1/4	AM
1/0			The INSULKRIMP and NYLAKRIMP Parts in Wire Ranges 8 thru 2 have Brazed Barrels.			†B-3320	1-27/64	†N-5320S	2-41/64	AN
2/0						†B-3337	1- 7/16	†N-5337S	2-41/64	AO
3/0						†B-3339S	1-31/64	†N-5339S	3	AP
4/0						†B-3341S	1-31/64	†N-5341S	3	AQ

To find Wire Range needed for Parallel Connectors, compute the total Circular Mil Area of Wires involved and consult Conversion and Wire Combination Charts at back of Solderless Terminal Listing. †Formed from solid copper tubing.

NET PRICES — PERMANENT CONNECTORS

WRITE FOR QUOTATIONS ON LARGER QUANTITIES

Wire Ranges 22-10

Type	Price Code Letter	KRIMPTITE* Pkg. of 100	KRIMPTITE* BULK 1000-4999, per M	KRIMPTITE* BULK 5000 or more, per M	INSULKRIMP* No Suffix Pkg. of 100	INSULKRIMP* No Suffix BULK 1000-4999, per M	INSULKRIMP* No Suffix BULK 5000 or more, per M	INSULKRIMP* Suffix (X) Pkg. of 100	INSULKRIMP* Suffix (X) BULK 1000-4999, per M	INSULKRIMP* Suffix (X) BULK 5000 or more, per M	VERSAKRIMP* Pkg. of 100	VERSAKRIMP* BULK 1000-4999, per M	VERSAKRIMP* BULK 5000 or more, per M	NYLAKRIMP* Pkg. of 100	NYLAKRIMP* BULK 1000-4999, per M	NYLAKRIMP* BULK 5000 or more, per M
Parallel Connectors	AH	2.40	17.10	13.35	4.60	33.85	26.45	4.60	33.85	26.45	3.50	27.70	20.80	4.50	37.35	33.65
	AI	3.20	22.70	17.70	6.15	45.20	35.30	6.15	45.20	35.30	4.90	38.70	29.05	6.00	53.10	45.15
Butt Connectors	AH	2.80	19.75	15.40	6.10	44.90	35.15	6.10	44.90	35.15	4.60	36.45	27.30	7.10	57.50	43.10
	AI	4.90	35.10	27.45	8.30	61.35	47.90	8.30	61.35	47.90	7.90	62.85	47.20	9.25	74.65	56.00

Wire Ranges 8 thru 2

Type	Price Code No.	INSULKRIMP* Straight Insulation Prefix (T) No Suffix Pkg. of (A)25 (B)20	100-999, per C	1000-4999, per M	5000 or more, per M	INSULKRIMP* Flared Insulation Prefix (T) Suffix (X) Pkg. of (A)25 (B)20	100-999, per C	1000-4999, per M	5000 or more, per M	VERSAKRIMP* Prefix (B) Pkg. of (A)25 (B)20	100-999, per C	1000-4999, per M	5000 or more, per M	NYLAKRIMP* Prefix (N) Pkg. of (A)25 (B)20	100-999, per C	1000-4999, per M	5000 or more, per M
Parallel Connectors	AJ	(A) 2.85	9.00	78.65	67.40	(A) 3.10	9.75	85.70	73.45	(A) 1.56	5.00	43.65	37.40	(A) 4.00	13.20	116.80	99.40
	AK	(A) 4.15	13.25	115.75	99.25	(A) 4.45	14.10	123.55	105.90	(A) 2.65	8.45	74.10	63.55	(A) 5.90	19.30	171.10	146.30
	AL	(B) 4.30	17.05	149.10	127.85	(B) 4.55	18.00	157.50	135.05	(B) 2.77	11.10	97.15	83.25	(B) 6.05	24.95	221.45	188.40
	AM	(B) 4.98	19.90	174.25	149.35	(B) 5.25	21.00	183.55	157.35	(B) 3.39	13.55	118.40	101.50	(B) 7.45	30.65	326.90	231.30
Butt Connectors	AJ	(A) 4.60	14.70	128.40	110.05	(A) 4.85	15.50	135.35	116.05	(A) 3.09	9.90	86.60	74.25	(A) 6.50	21.50	190.65	162.25
	AK	(A) 6.35	20.30	177.65	152.30	(A) 6.65	21.15	185.35	158.85	(A) 4.72	15.10	132.20	113.30	(A) 9.00	29.75	263.75	224.55
	AL	(B) 6.60	26.35	230.70	197.70	(B) 6.85	27.35	239.20	205.05	(B) 4.92	19.65	172.05	147.45	(B) 9.35	38.60	342.50	291.50
	AM	(B) 7.91	31.65	276.80	237.25	(B) 8.17	32.70	286.10	245.25	(B) 6.18	24.70	216.35	185.40	(B) 11.80	48.65	431.55	367.30

Wire Ranges 1/0 thru 4/0

Type	Price Code No.	VERSAKRIMP* Prefix (B) Pkg. of 20	100-999, per C	1000-4999, per M	5000 or more, per M	NYLAKRIMP* Prefix (N) Pkg. of 20	100-999, per C	1000-4999, per M	5000 or more, per M
Parallel Connectors	AN	4.05	16.10	141.05	120.90	7.25	29.80	264.40	225.00
	AO	3.86	15.45	135.20	115.90	7.00	28.90	256.40	218.20
	AP	5.30	21.20	185.20	159.00	9.10	37.60	333.25	283.60
	AQ	7.70	30.70	268.95	230.50	11.95	49.45	438.40	373.05
Butt Connectors	AN	8.10	32.40	285.40	244.65	17.50	72.30	640.90	545.55
	AO	9.65	38.55	338.50	290.15	17.15	70.95	628.95	535.30
	AP	12.09	48.35	424.40	363.80	19.45	80.45	713.55	607.25
	AQ	16.60	66.35	582.55	499.40	25.10	103.75	919.85	783.00

© United Technical Publications

waldom

SOLDERLESS TERMINALS AND CONNECTORS

MILITARY SPECIFICATION TERMINALS (MIL-T-7928F)

These terminals are produced to military specification. **MIL-T-7928F (ASG)** of the U. S. Army, Air Force, Army Ordnance, Coast Guard, Marine Corps and Navy.

Class 1 and Class 2 are designations for the two classes of Military Approvals. Class 1 Terminals and Splices are those which meet all performance requirements of their Military Standard specification when crimped with Military Specification crimping tools.

Class 2 Terminals and Splices are those which meet all performance characteristics of their Military Standard specification when crimped with the manufacturer's recommended crimping tools.

Type I and Type II designate insulated and non-insulated Terminals and Splices. Type I is un-insulated. Type II is insulated.

RING TONGUE TERMINALS

CLASS I TYPE I

MS PART NO.	WALDOM PART NO. 1/4" Barrel	5/32" Barrel
MS-20659-105	D-4001	SD-4001
-106	B-3101	
-128	B-3013	

CLASS I TYPE II

MS PART NO.	WALDOM PART NO. 1/4" Barrel	5/32" Barrel
MS25036-101	N-5001	SN-5001
-102	N-5002	SN-5002
-103	N-5003	SN-5003
-104		SN-5005
-105	N-5143	SN-5143
-106		SN-5006
-107		SN-5007
-108		SN-5094
-109		SN-5041
-110		SN-5147
-111	N-5049	
-112	N-5011	
-113	N-5101	
-114	N-5013	
-148	N-5047	SN-5047
-149	N-5021	SN-5021
-150		SN-5004
-152		SN-5048
-153		SN-5024
-154		SN-5009
-156	N-5050	
-157	N-5100	

CLASS I TYPE II

MS PART NO.	WALDOM PART NO. 1/4" Barrel	5/32" Barrel
MS-17143-1	N/A	SN-5555
-2	N/A	SN-5562
-3	N/A	SN-5569
-4	N/A	SN-5556
-5	N/A	SN-5563
-6	N/A	SN-5570
-7	N/A	SN-5557
-8	N/A	SN-5564
-9	N/A	SN-5577
-10	N/A	SN-5558
-11	N/A	SN-5565
-12	N/A	SN-5572
-13	N/A	SN-5559
-14	N/A	SN-5566
-15	N/A	SN-5573
-16	N/A	SN-5560
-17	N/A	SN-5567
-18	N/A	SN-5574
-19	N/A	SN-5561
-20	N/A	SN-5568
-21	N/A	SN-5573

N/A (Not Available)

SPLICE TERMINALS

CLASS I TYPE II

MS PART NO.	WIRE RANGE	PART NO.
MS-25181-1	22-18	A81-1
-2	16-14	B81-2
-3	12-10	C81-3
-4	26-24	M81-4

© United Technical Publications

waldom

SOLDERLESS TERMINALS AND CONNECTORS

HAND RATCHET AND MAINTENANCE TOOLS

RATCHET TOOL

A precision production tool. Lighter in weight and easier to use than any similar tool. Unique pin-action gives greater mechanical advantage. The tool crimps even the heavier wires and terminals (up through #10 AWG) with a light squeeze. Tamper-proof ratchet mechanism is safe for fingers. The ratchet mechanism will not release until the crimping cycle is complete, but no extra effort is required for release and handles then open automatically. Precision-calibrated and crimp-tested at the factory to give perfect electrical connections every time.



MAINTENANCE TOOL

An ideal inexpensive multi-purpose maintenance tool. Handles wire sizes #22 through #10 AWG. Cuts and strips wires, crimps insulated and non-insulated termials and connectors. Proper leverage is provided to assure uniformly reliable results. Edges stay sharp. Quality hardened steel. Insulated handles.

FOR KRIMPTITE* & VERSAKRIMP*
Terminals • Parallel Connectors • Butt Connectors

Crimp Section	Wire Size	Ratchet Tool Part No.		Maintenance Tool Part No.
		Full Barrel Terminals	Short Barrel Terminals	
	22-18 16-14 12-10	RHT-1000	RHT-1050	CT-4070
Price ea. Net		35.40	35.40	5.95

FOR INSULKRIMP* & AVIKRIMP*
Terminals • Parallel Connectors • Butt Connectors

Crimp Section	Wire Size	Ratchet Tool Part No.		Maintenance Tool Part No.
		Regular Terminals	Short Barrel Terminals	
	22-18	RHT-2000	RHT-2050	CT-4070
	16-14	RHT-2100	RHT-2150	
	16-14	RHT-2100	RHT-2150	
	12-10	RHT-2200		
Price ea. Net		39.60	39.60	5.95

FOR NYLON CLOSED-END CONNECTORS

Crimp Section	Wire Size	Ratchet Tool Part No.	Maintenance Tool Part No.
	22-14	RHT-8000	CT-4070
	16-10	RHT-9000	
Price ea. Net		36.60	5.95



UNIVERSAL CRIMPING TOOL and BOLT CUTTER

Crimps both insulated and non-insulated parts, both Standard (¼") and Short (5/32") Barrel Terminals — plus slices 6 Sizes of Bolts (4-40, 5-40, 6-32, 8-32, 10-32 and 10-24).

Part No. CT-4070 ..... Price $5.95 ea. Net

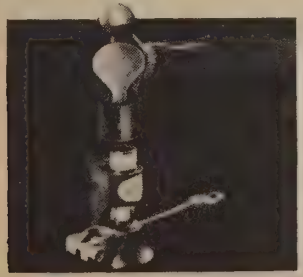
SELECTAKRIMP®

A New Tool for Crimping Both Small and Large Wire Range Terminal in Maintenance and Production Work

OUTSTANDING FEATURES

- Completely portable—easy to use
- Eliminates need for soldering large wires to terminals
- Replaces costly, permanently mounted crimping equipment
- "In-line" action assures uniform crimping
- Impossible to over- or under-crimp
- Low cost—yet lasts indefinitely

*Crimps #16 thru 4/0 wire range terminals



Here's the long-awaited answer to the problem of crimping large wire range terminals in maintenance and production work — without costly, permanently mounted equipment. The new Waldom "Selectakrimp" is a completely portable, easy-to-use tool. To operate, all you need is any conventional 2-lb. hammer to produce the closing pressure by striking the ram. An easy-to-read crimping scale prevents under-crimping. Over-crimping is prevented by unique design of the nest and indenter. Terminal being crimped is held securely in the nest by a strong, completely enclosed spring. Uniform, positive connection crimping is assuerd by the "in-line" ram action.

A single Selectakrimp tool can serve various departments, because its light weight (1¾ pounds) makes it easy to bring the tool to the work. Where production requirements call for simultaneous use in several locations, the low cost of Selectakrimp makes it economically feasible to have more than one in plant or shop.

Built to last indefinitely, the ram is made of specially heat-treated tool steel, and the base, of cast malleable iron. Base design prevents rocking of tool under closing pressures.

Part No. SKT-840 ..... each $15.54

* Trademark

waldom

SOLDERLESS TERMINALS AND CONNECTORS

SOLDERLESS TERMINAL & QUICK DISCONNECT ASSORTMENTS

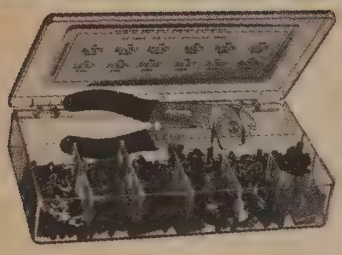


FIG. A
(Includes Crimping Tool No. CT4070)

Waldom offers a wide variety of terminals and connectors specially packaged for maintenance and repair work. Figure A illustrates a 13 compartment re-usable plastic box containing 12 different items, plus a universal crimping tool. Figure B illustrates a smaller box containing an assortment of 8 different items. No tool is included with this assortment. Following are the contents and description of various assortments available.

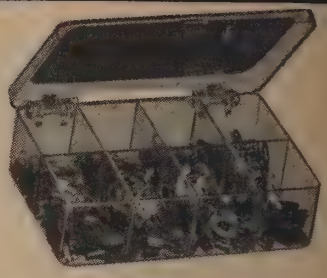


FIG. B

ELECTRONIC ASSORTMENTS
NON-INSULATED TERMINALS

Contains 215 pieces of most popular ring, spade, flanged spade, hook, quick disconnect terminals and butt connectors in wire ranges 22-18 through 12-10.

Part No. K-170 (Fig. A) ..... $10.85 ea.

INSULATED TERMINALS

Contains 138 pieces of most popular flanged spade, ring, spade, quick disconnect terminals and butt and closed-end connectors in wire ranges 22-18 through 12-10.

Part No. K-180 (Fig. A) ..... $13.90 ea.

ELECTRICAL ASSORTMENTS
NON-INSULATED TERMINALS

Contains 214 pieces of most popular flanged spade, ring, spade, hook, and quick disconnect terminals and butt connectors in wire ranges 22-18 through 12-10.

Part No. K-150 (Fig. A) ..... $10.85 ea

INSULATED TERMINALS

Contains 132 pieces of most popular flanged spade, ring, spade, quick disconnect terminals and butt and closed-end connectors in wire ranges 22-18 through 12-10.

Part No. K-160 (Fig. A) ..... $13.90 ea.

DELUXE ASSORTMENTS
NON-INSULATED TERMINALS

Contains 620 pieces of most popular ring, flanged spade, spade terminals and butt, quick disconnect and closed-end connectors in wire ranges 22-18 through 16-14.

Part No. K-120 (Fig. A) ..... $18.15 ea.

Insulated & Non-Insulated Terminals

Contains 630 pieces of most popular ring, flanged spade, spade terminals and butt, quick disconnect and closed-end connectors in wire ranges 22-18 through 16-10.

Part No. K-130 (Fig. A) ..... $26.55 ea.

INSULATED TERMINALS

Contains 640 pieces of most popular ring, flanged spade, spade terminals and butt, quick disconnect and closed-end connectors in wire ranges 22-18 through 16-10.

Part No. K-140 (Fig. A) ..... $34.15 ea.

SMALLER ASSORTMENTS
NON-INSULATED TERMINALS

Contains 176 pieces of most popular ring, spade, and hook terminals in wire ranges 22-18 through 16-14.

Part No. HD-4007 (Fig. B) ..... $4.40 ea.

INSULATED TERMINALS

Contains 80 pieces of most popular ring, spade, and hook terminals in wire ranges 22-18 through 16-14.

Part No. HD-4021 (Fig. B) ..... $4.60 ea.

QUICK DISCONNECT ASSORTMENTS

NON-INSULATED

Contains 176 pieces of most popular male and female disconnect devices in wire ranges 18-14 through 16-12.

Part No. HD-4022 (Fig. B) ..... $5.65 ea.

INSULATED

Contains 64 pieces of most popular male and female disconnect devices in wire ranges 18-14 through 16-12.

Part No. HD-4023 (Fig. B) ..... $4.50 ea.

DELUXE ASSORTMENT
NON-INSULATED & INSULATED

Contains 480 pieces of most popular male and female insulated and non-insulated quick disconnect terminals in wire ranges 18-14 through 16-12.

Part No. K-220 (Fig. A) ..... $26.20 ea.

ECONO-LINE ASSORTMENT
NON-INSULATED

Contains 104 pieces of most popular econo-line male and female disconnect devices in wire ranges 20-16 through 16-12.

Part No. HD-4025A (Fig. B) ..... $6.35 ea.

PERMANENT CONNECTOR ASSORTMENT

Contains 40 pieces of most popular butt, parallel, and closed-end insulated connectors in wire ranges 22-18 through 12-10.

Part No. HD-4024 (Fig. B) ..... $3.45 ea.

WIRE CONNECTOR ASSORTMENT



Contains 169 wire connectors in individually-compartmented, re-usable plastic box.

Part No. K-210 ..... $3.20 ea.

WIRE NUTS IN OTHER PACKAGING

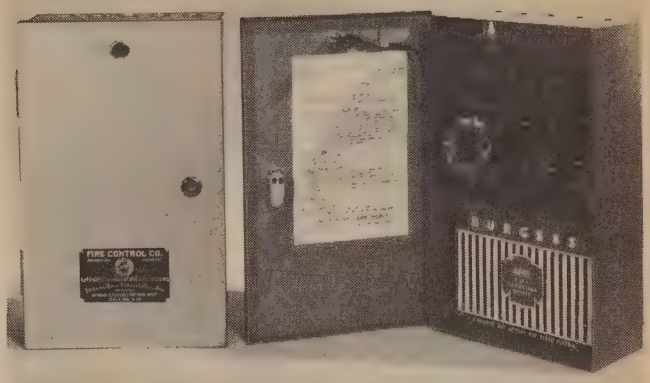
Part Number	Trade Equivalent	Wire Combinations Minimum	Wire Combinations Maximum	Rating	Pkg. of 25 (ea.)	100-999, per C	1000-4999, per M	5000 or more, per M
WN-18*	A0	2 #24	2 #18	300V	.40	1.15	9.65	8.75
WN-16A	A1	2 #18	1 #16 & 2 #18	300V	.40	1.15	9.65	8.75
WN-16	72B	2 #18	3 #16	300-600(a)	.70	2.15	18.30	16.85
WN-14	73B	1 #18 & 1 #16	5 #16	300-600(a)	.70	2.15	19.00	17.35
WN-12	74B	1 #14 & 1 #18	2 #12 & 1 #18	300V	.90	2.75	23.50	21.50
WN-10	76B	1 #14 & 1 #16	3 #10	300V	1.40	4.55	39.60	36.25

Net

© United Technical Publications

AUTOMATIC FIRE DETECTION & ALARM SYSTEMS

#SC-600R CONTROL UNIT



UNDERWRITERS' LABORATORIES APPROVED
COMMERCIAL, INDUSTRIAL & MILITARY BLDGS.

Warehouses, Factories, Shopping Centers, Motels, Schools, Churches, Bowling Alleys, Supermarkets, Stores, Restaurants, Taverns, Clubs, etc.

6 V/DC System. Electrically-Supervised Power, Detector Loop, Alarm. Emergency Circuits assure continued protection even with fault conditions! Test/Reset/Silence and Normal/Emergency Switches for simplified operation and maintenance.

#SC-600R CONTROL UNIT $220.00

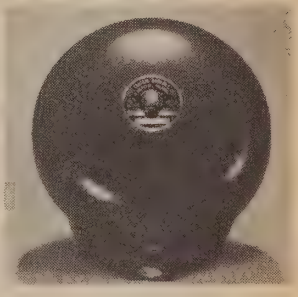


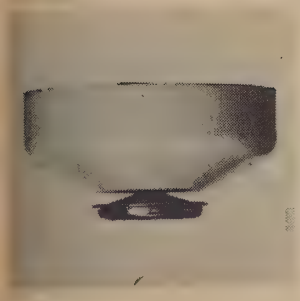
SPOT FIRE LOCATORS
UL APPROVED

Automatic Fire Detector. Dual Rate-of-Rise / Fixed-Temperature. Rated 50' x 50'.
#501 (136°): Offices, Showrooms, Halls, Closets, etc.
#502 (190°): Furnace Rooms, Attics, Kitchens, etc.
Spot Fire Locators $6.00

UNDERDOME FIREGONG
UL APPROVED

Finest quality inside firegong. Clear pitch, firm tone, low current. Easy - mount on all standard outlet boxes. Specify 115 V/AC; 6 V/DC; other. Add $4.00 for Weatherproof.
#A-6" (gong-size) $32.00
#A-8" $36.00
#A-10" $40.00





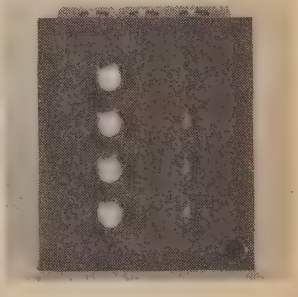
FYRGUARD DETECTORS
UL APPROVED

Small, unobstrusive and economical fire detector widely used in homes. Rated 30'x30'.
#2S (135°): Living Rooms, Bedrooms, Halls, Closets, etc.
#2H (175°): Furnace Rooms, Attics, Kitchens, etc.
Fyrguard Detectors $4.00

4-ZONE ANNUNCIATOR
UL APPROVED

For large installations which require quick identification of the fire area. Electrically-Supervised Detector Circuits. Easy-tie to #SC-600R Control unit.

#A-604 Annunciator ..$92.00



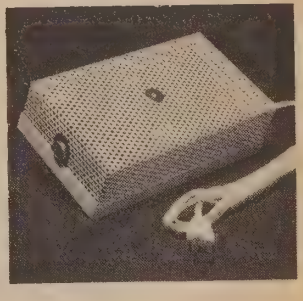


MANUAL PULL STATION
UL APPROVED

Modern Non-Coded Fire Station. Mounts on standard switch-box. Wire into the Detector Circuit exactly as an automatic fire detector. 2 spare discs and key. Specify #BB Back-Box for surface mount: add $4.00.
#529 Manual Station..$14.00

SMOKE/FIRE ALARM
UL APPROVED

Loud warning before Smoke & Fire reach danger levels. Protects against Slow-Smoldering Fires (Smoke & Poison Gas) and Fast Fires (Superheated Air). Hang up in hall to bedroom wing and plug into 115 V/AC outlet.
#SFA-2 Smoke Alarm $120.00



#FA-18/2 FIRE DETECTOR CABLE $18.40
UL Approved Low-Energy Cable specified for Detector Circuits. 1 Tinned & 1 Copper Conductor for quick polarity identification. Ivory plastic parallel cord. 250' spool.

#DSU DISCONNECT SWITCH UNIT $11.50
Required by Code. Includes Padlock with 2 keys; Adapter with Non-interchangeable Fuse & Spare.

#AR-2 ADAPTER PLATES $1.00
To easy-mount Spot Fire Locators on 3" or 4" outlet boxes in conduit installations.

HOW TO ORDER

1. Order #SC-600R Control Unit with #DSU Disconnect Switch.
2. Order #A-(6"; 8"; 10" gong size) Inside Firegongs. Specify Weatherproof for outside installation.
3. Order correct tally of Automatic Fire Detectors. Use Spot Fire Locators in industrial, commercial, military jobs. Use FyrGuard Detectors in homes.
4. Order #FA-18/2 Fire Detector Cable. A 250' spool will cover an average three bedroom ranch home.

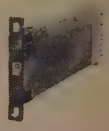
FIRE CONTROL CO.

© United Technical Publications

ELECTRICAL AND MECHANICAL COUNTERS AND NUMBERING DEVICES

INDICATING MODULE

Model U44 — Panel mount, indicating, up to 40 pulses per second, resettable by external switch using half wave rectified A.C. source with fixed plug and removable socket.
Dimensions: Front panel 1.680" high x ¼" wide; Overall length 4.216"; Body height 1.125".
Price each: $17.00
Also available with electrical readout, print wheels, high speed operation 80 pulses/second.



ELECTRICAL COUNTERS

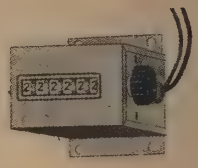


Model E2B—Economy electric counter, 6 digit, 110 V. 60 hz. 600 CPM, 12" leads, non-resettable, base mount, "L" shaped mounting holes. U.L. Recognized.
Dimensions: 2.340" long x 1.718" wide x 1.187" high
Price each: $5.25

BASE MOUNT



Model E2B7—Economy electric counter, 7 digit, 600 CPM, base mount. Available in a wide range of AC and DC voltages—U.L. Recognized.
Dimensions: 2.34" long x 1.72" wide x 1.19" high
Price each: $6.00



Model E3A—Basemount electrical impulse counter, standard speed (500 counts per min.), knob resettable 6 digits, 115 V. 60 hz. U.L. Recognized.
Dimensions: 2.63" long x 2.03" wide x 2.00" high
Price each: $16.00

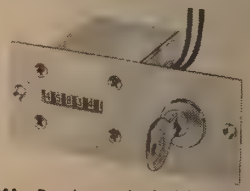


Model P2A—Panel mount electric counter, 6 digits, 115 V. 60 hz., (U.L. Recognized) 500 CPM, non-resettable.
Dimensions: 2.63" long x 2.75" wide x 1.87" high
Price each: $14.00

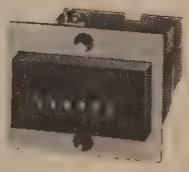
PANEL MOUNT



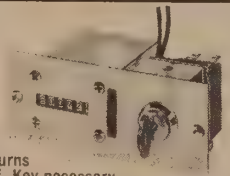
Model P3A—Panel mount electric counter, 6 digit, knob reset, 500 CPM, 115 V. 60 hz. (U.L. Recognized)
Dimensions: 2.63" long x 2.25" wide x 1.87" high
Price each: $20.00



Model P4A—Panel mount electric counter, 6 digit, key reset, 500 CPM, 115 V. 60 hz. (U.L. Recognized)
Dimensions: 2.63" long x 4.50" wide x 1.88" high
Price each: $29.00



Model P10E—High speed, electro-magnetic plug-in counter (shown in optional frame type panel), 6 digits, 1500 counts per minute, push button resettable, 115 V. 60 hz.
Dimensions: 1.14" high x 2.17" wide x 3.16" deep (optional frame type panel fits 1.34" x 2.36" opening).
Price each: $16.75

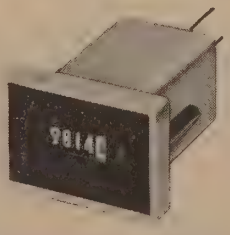


Model P7A—Panel mount electric resettable counter with an exclusive key switch which turns the equipment on or off. Key necessary for manually resetting to zero, 6 digit, 500 CPM, 115 V. 60 hz., switch D.P.S.T. standard 25 AMP, 120-250 V. A.C. (U.L. Recognized)
Dimensions: 2.63" long x 4.5" wide x 1.88" high
Price each: $36.00



Model 443—Panel mount electric impulse counter, high speed, add only, push button reset 6 digits, 24 V. D.C., also available with electric reset or add/subtract push button reset.
Dimensions: 3.98" long x 2.75" wide x 1.81" high.
Price each: $34.72.

ELAPSED TIME INDICATORS



Stock T4B — Miniature elapsed time indicator, 5 digit, non-reset, 115 V. 60 hz., scale 9999.9 hours, with tenths in red, panel mount.
Dimensions: 1.72" long x 1.59" wide x 1.03" high
Price each: $15.50



Stock T5B—Economy elapsed time indicator, 5 digit, non-reset, 110 V. 60 hz., scale 9999.9 hours, with tenths in red, mounting in 1.968 dia. hole or 1.781 square panel cutout.
Dimensions: 1.86" long x 2.05" wide x 2.05" high
Price each: $15.00



Model T5BB—Economy elapsed time indicator, 5 digit non-reset, 110 V. 60 hz., scale 9999.9 hours with tenths in red, mounting in 1.968 dia. hole.
Dimensions: 2.88" dia., 2.14" long.
Price each: $15.00



Model T8B—Panel mounted elapsed time indicator, records hours and minutes only in 6 V., 12 V. and 24 V. D.C. only, mounts in 2⅜" dia. hole.
Dimensions: 2.6" dia., 2.36" long.
Price each: $27.63

ENM Company, Inc.

Net

© United Technical Publications

ELECTRICAL AND MECHANICAL COUNTERS AND NUMBERING DEVICES

ELAPSED TIME INDICATORS



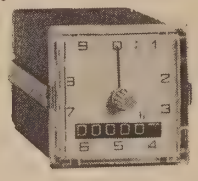
Model T10A — Low cost elapsed time indicator, 5 or 6 digit, hours or minutes scale with tenths in red, non-resettable, 115 V. 60 hz., other voltages available, universal bracket mount.
Dimensions: 2.25″ long x 3.0″ wide x 2.31″ high.
Price each: $12.50



Model P8C — Economy elapsed time indicator with security lock and key. Key actuates a standard D.P.S.T. switch 25 AMP, 120-250 V. A.C. to start equipment; thus true operating hours are recorded. 5 digit, non-reset, 110 V. 60 hz., scale 9999.9 hours with tenths in red, panel mount.
Dimensions: 1.828″ long x 5.505″ wide x 1.891″ high
Price each: $25.00



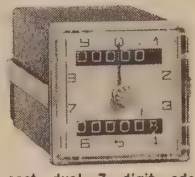
Model T20A — Elapsed time indicator, 5 or 6 digit, hours or minutes scale with tenths in red, knob resettable, 115 V. 60 hz., other voltages available, universal bracket mount.
Dimensions: 2.45″ long x 3.0″ wide x 2.31″ high.
Price each: $15.00



Model T2B — Low cost 7 digit elapsed time indicator, records hours, tenths and hundredths, tenths in red, hundredths with sweep hand, knob resettable, 110 voltage, 60 hz. panel mount.
Dimensions: 4″ long x 1.87″ wide x 1.87″ high
Price each: $22.00

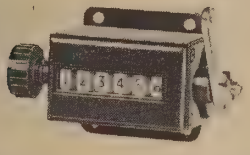


Model T30A — Elapsed time indicator, 4 or 5 digits, hours, minutes or seconds scale with tenths in red, push button resettable, 115 V. 60 hz., other voltages available, universal bracket mount.
Dimensions: 2.81″ long x 3.0″ wide x 2.31″ high.
Price each: $17.00

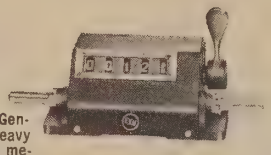


Model T3B — Low cost dual 7 digit odometer elapsed time indicator, records hours, tenths and hundredths, tenths in red, hundredths with sweep hand, one odometer knob resettable, other total time, 110 voltage, 60 hz., panel mount.
Dimensions: 4″ long x 1.87″ wide ″ 1.87″ high
Price each: $27.50

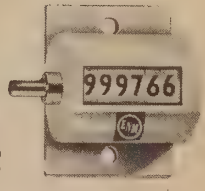
MECHANICAL COUNTERS



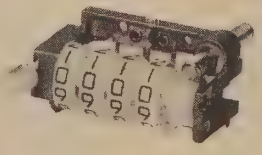
Model 426 — Small medium duty 6 digit mechanical stroke counter with resettable knob and operating lever, 1000 CPM, base mount.
Dimensions: 1.63″ long x 1.00″ wide x 1.045″ high
Price each: $7.22



Model 428 — General purpose heavy duty, 6 digit, mechanical double shaft counter, revolution drive, adds or subtracts one count for each complete revolution of input shaft, 10,000 CPM, base mount with resettable lever.
Dimensions: 3.094″ long x 2.250″ wide x 1.781″ high
Price each: $29.76



Model 421—Small medium duty 6 digit mechanical revolution counter, 3000 CPM, non-resettable, base mount.
Dimensions: .994″ long x 0.790″ wide x .838″ high
Price each: $4.86



Model 433 — Tape recorder counter with push button reset, worm drive, 1 count per input revolution, 4 digit, high speed, adds and subtracts.
Dimensions: 1.66″ long x 1.89″ wide x .87″ high
Price each: $7.50

PREDETERMING COUNTERS



Model M36 — Predetermining mechanical counter, 3 digit, 200 strokes per min. Predetermined contact is a single pole double throw switch, capacity 5 A., 250 V. A.C. Terminals on switch, panel mount, preset by 3 setting knobs.
Dimensions: 2.155″ long x 3.062″ wide x 2.312″ high
Price each: $20.50



Model PE 35 — A three digit 115 W. electrical predetermining counter 200 pulses per min. Predetermining contact is a single pole double throw switch, capacity 5A, 250 V. A.C. panel mount. Preset by three setting knobs. U.L. Recognized.
Dimensions: 3.580″ long x 3.062″ wide x 2.312″ high
Price each: $24.98, 2 figures; $26.53, 3 figures

ENM Company, Inc.

GENERAL TIME

Progress in the World of Time

INDUSTRIAL CONTROLS DIVISION

Full line of...

- **Electromagnetic and electronic timers**
- **Elapsed Time Indicators**

Series DA Time Delay Timers, Rear Mounting



Type DA11. Manually adjustable by knob. Apply wherever delay, interval or repeat cycle timing functions are required (repeat cycle requires two units). Internal clutch engages and disengages when motor is energized and de-energized. Resets to start position when power is removed. SPDT switch rated 20 amps. 125 or 250 VAC resistive; solder lug terminals. Min. setting 0 sec. Repeat accuracy ±¾ of 1% of total time range. 5 watt motor. 120 VAC, 60 Hz. U/L listed. Size: 3⅜″ W x 2¹³⁄₁₆″ D x 3⅛″ H. Weight: 1½ lbs.

Type DA21. Same as DA11 but with locknut adjustment to eliminate tampering.

When ordering, specify model number, voltage and frequency.

MFR'S MODEL NO.		MAX. TIME SETTING	MAX. RESET TIME
DA11-036		5.7 sec.	0.25 sec.
DA11-031	DA21-001	14 sec.	1.0 sec.
DA11-032	DA21-002	57 sec.	1.5 sec.
DA11-035	DA21-005	114 sec.	9.0 sec.
DA11-033	DA21-003	4.5 min.	15 sec.
DA11-034	DA21-004	9.5 min.	120 sec.

NET EACH, LOTS OF

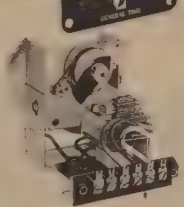
1-4	5-9	10-24	25-49	50-99	100-249	250 & over
$16.79	$15.95	$15.11	$14.27	$13.43	$12.59	$11.75

Series BN Adjustable Reset Timers — Built-in Relay

Panel or rear mounting; interval or delay timing. Built-in relay, adjustable time range. Apply to machine tools, production and processing equipment or other operations requiring a compact, dependable unit for direct control of electrical loads.



BN41 (Interval) and BN42 (Delay) Panel Mount Dial and setting knob with readout of elapsed time by pointer in center of knob. SPDT relay rated 10 amps at 125 or 250 VAC. Timing motor rated 5 watts max. 120 VAC, 60 Hz. Repeat accuracy ±¾ of 1% of total time range. Screw terminal block. Size: 3⁵⁄₁₆″ square x 4⅜″ deep; behind panel. Requires 3³⁄₁₆″ dia. mounting hole.



BN25 (Interval) and BN22 (Delay) Rear Mount Same specifications as BN41 and BN42 except have chassis or back panel mount. Locknut setting adjustment, where only occasional time period changes are required. Size: 3.375″ W x 4.202″ H x 3.750″ D.

PANEL MOUNTING

MFR'S MODEL NO.		TIME SETTING		MAX. RESET TIME	DIAL GRADS.	
INTERVAL	DELAY	MAX.	MIN.		MAJOR	MINOR
BN41-001	BN42-001	6 sec.	0.3 sec.	0.5 sec.	1 sec.	0.1 sec.
BN41-003	BN42-003	15 sec.	0.8 sec.	1.0 sec.	1 sec.	0.2 sec.
BN41-004	BN42-004	30 sec.	1.5 sec.	1.5 sec.	5 sec.	0.5 sec.
BN41-005	BN42-005	60 sec.	3.0 sec.	1.5 sec.	10 sec.	1.0 sec.
BN41-006	BN42-006	120 sec.	6.0 sec.	10 sec.	20 sec.	2.0 sec.
BN41-007	BN42-007	5 min.	0.2 min.	15 sec.	1 min.	0.1 min.
BN41-008	BN42-008	10 min.	0.4 min.	120 sec.	1 min.	0.2 min.

REAR MOUNTING

MFR'S MODEL NO.		TIME SETTING		MAX. RESET TIME	DIAL GRADS.	
INTERVAL	DELAY	MAX.	MIN.		MAJOR	MINOR
BN25-006	BN22-006	5.4 sec.	0.3 sec.	0.5 sec.	1 sec.	0.1 sec.
BN25-001	BN22-001	13.5 sec.	0.7 sec.	0.5 sec.	1 sec.	0.5 sec.
BN25-002	BN22-002	54 sec.	3.0 sec.	1.5 sec.	5 sec.	1.0 sec.
BN25-005	BN22-005	108 sec.	6.0 sec.	2.5 sec.	10 sec.	1.0 sec.
BN25-003	BN22-003	4.5 min.	15 sec.	5.0 sec.	1 min.	5.0 sec.
BN25-004	BN22-004	9.5 min.	30 sec.	120 sec.	1 min.	5.0 sec.

NET EACH, LOTS OF

MOUNTING	1-4	5-9	10-24	25-49	50-99	100-249	250 & over
Panel	$28.69	$27.25	$25.82	$24.38	$22.95	$21.52	$20.08
Rear	23.80	22.61	21.42	20.23	19.04	17.85	16.66

Series DP11 Panel Mounting Reset Timer



Adjustable time range by simple pointer knob. Apply wherever delay, interval or repeat cycle timing are needed (repeat cycle requires two timers). Readout of elapsed time by pointer in center of knob. Unit resets to start position when power is removed. SPDT switch rated 10 amps, 125 or 250 VAC resistive. Timing motor rated 5 watts max. 120 VAC, 60 Hz. Repeat accuracy ±1% of total time range. Screw terminals. Size: 3⅝ square x 3⁹⁄₃₂″ deep, behind panel. Requires 3³⁄₁₆″ dia. mounting hole cu When ordering, specify model number, voltage and frequency.

MFR'S MODEL NO.	TIME SETTING		MAX. RESET TIME	DIAL GRADS.	
	MAX.	MIN.		MAJOR	MINOR
DP11-007	6 sec.	0.3 sec.	0.5 sec.	1 sec.	1.0 sec.
DP11-001	15 sec.	0.8 sec.	1.0 sec.	1 sec.	0.2 sec.
DP11-006	30 sec.	1.5 sec.	1.5 sec.	5 sec.	0.5 sec.
DP11-002	60 sec.	3.0 sec.	1.5 sec.	10 sec.	1.0 sec.
DP11-005	120 sec.	6.0 sec.	10 sec.	20 sec.	2.0 sec.
DP11-003	5 min.	0.2 min.	15 sec.	1 min.	0.1 min.
DP11-004	10 min.	0.4 min.	120 sec.	1 min.	0.2 min.

NET EACH, LOTS OF

1-4	5-9	10-24	25-49	50-99	100-249	250 & ove
$20.40	$19.38	$18.36	$17.34	$16.32	$15.30	$14.28

Series BJ Push-Button Interval Timer



Dependable, rugged panel-mount timer. Timing interval is initiated by manually setting knob to selected position and manually depressing the push button. For control of mixers, ovens, tumbling and plating equipment, copy machines, photographic equipment, etc. Readout of elapsed time by pointer in center of setting knob. Instant reset to start position automatically. SPDT switch rated 15 amps, 125 or 250 VAC resistive. Timing motor rated 5 watts max. 120 VAC, 60 Hz. Repe accuracy ±½ of 1% of full scale. Combination spade and solder lugs. Size: 3½ square x 2²³⁄₃₂″ deep, behind panel. Requires 3³⁄₁₆″ dia. mounting hol Weight: 1½ lbs. When ordering, specify model number, voltage and frequenc

MFR'S MODEL NO.	TIME SETTING		DIAL GRADS.	
	MAX.	MIN.	MAJOR	MINOR
BJ12-004	30 sec.	1.5 sec.	5 sec.	0.5 sec.
BJ12-005	60 sec.	3.0 sec.	10 sec.	1.0 sec.
BJ12-006	120 sec.	6.0 sec.	20 sec.	2.0 sec.
BJ12-007	5 min.	0.2 min.	1 min.	0.1 min.
BJ12-008	10 min.	0.4 min.	1 min.	0.2 min.
BJ12-009	15 min.	0.8 min.	1 min.	0.2 min.
BJ12-010	30 min.	1.5 min.	5 min.	0.5 min.
BJ12-011	60 min.	3.0 min.	10 min.	1.0 min.

NET EACH, LOTS OF

1-4	5-9	10-24	25-49	50-99	100-249	250 & over
$19.13	$18.17	$17.21	$16.26	$15.30	$14.34	$13.39

Series RG21 Repeat Cycle Timers



Cam-actuated, single switch timers for rear mounting. Run continuously, repeating a set cycle of make-break switching operations as long as motor is energized. Also operates a single time cycle. Cam adjustable from 7° min. to 169° max. (±3%). SPDT switch rated 20 amps resistive. Timing motor 3.7 watts max., 120 VAC, 60 Hz. Solder lug terminals. 6″ leads. U/L listed. Size: 2⁵⁄₁₆″ W x 3⅛″ H x 2½″ D. Weight: 1 lb.

MFR'S MODEL NO.	TIME RANGE	MFR'S MODEL NO.	TIME RANGE
RG21-090	7½ sec.	RG21-095	10 min.
RG21-091	15 sec.	RG21-096	15 min.
RG21-092	30 sec.	RG21-097	30 min.
RG21-093	1 min.	RG21-098	60 min.
RG21-094	5 min.	RG21-099	4 hrs.

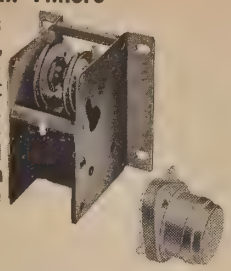
NET EACH, LOTS OF

1-4	5-9	10-24	25-49	50-99	100-249	250 & ove
$12.96	$12.31	$11.67	$11.02	$10.37	$ 9.72	$ 9.07

Net

© United Technical Publications

Series RE62 Repeat Cycle Multi-Cam Timers



ame specifications as RG21, except 2 to 6 switches ay be actuated during cycle. Run continuously, epeating set cycles of multiple switching operaons as long as motor is energized. Complete unit equires one motor and one or more switch stacks. panner wrench included to adjust cams. Two-witch unit size: 2 5/16" H x 3 5/32" W x 3 9/16" D; add 1/16" to depth for each additional switch. When rdering, specify switch stock model number, drive otor type-number, voltage and frequency.

SWITCH STACKS

MODEL NO.	SWITCH	1-4	5-9	10-24	25-49	50-99	100-249	250 & over
RE62-091	2	$12.03	$11.42	$10.83	$10.22	$ 9.62	$ 9.02	$ 8.42
RE63-092	3	16.06	15.26	14.66	13.66	12.85	12.04	11.25
RE64-093	4	20.10	19.09	18.10	17.09	16.08	15.07	14.08
RE65-094	5	24.56	23.33	22.11	20.88	19.65	18.42	17.20
RE66-095	6	28.60	27.17	25.75	24.31	22.88	21.45	20.03

DRIVE MOTORS — Order one with switch stacks for complete unit.

TYPE	TIME RANGE	TYPE	TIME RANGE
MP10-390	7½ sec.	MP10-395	10 min.
MP10-391	15 sec.	MP10-396	15 min.
MP10-392	30 sec.	MP10-397	30 min.
MP10-393	1 min.	MP10-398	1 hr.
MP10-394	5 min.	MP10-399	4 hrs.

NET EACH, LOTS OF

1-4	5-9	10-24	25-49	50-99	100-249	250 & over
$6.25	$5.94	$5.62	$5.31	$5.00	$4.69	$4.37

Series QT21 Solid State Rear-Mounting Timers



olid state construction includes moisture-resistant oated PC board. Knob-adjustable time periods. ear mounting. For applications where delay, interval r repeat cycle time functions are required (repeat ycle requires two units). SPDT relay 10 amps, 25 VAC resistive. Power input 117 volts, 60 Hz. epeat accuracy ±2% of set value under constant onditions of temperature and voltage. Power standng on this timer has no damaging effect. Maximum eset time 130 milliseconds. Dial accuracy 10% of full scale. ¼" male spade erminals. Size: 3⅜" x 2 57/64" x 3⅝". Two 3/16" x 5/16" slotted mounting holes n 2⅜" centers. Average weight: 1 lb. When ordering, specify model number.

Series QT52 Solid State Octal Plug Timers



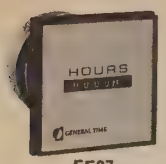
asically same specifications as QT21, except has ctal plug mounting and DPDT relay. Size: 4⅜" x 9/16" x 2⅛".

MFR'S MODEL NO.		RANGE
QT21-003	QT52-003	3 sec.
QT21-004	QT52-004	5 sec.
QT21-005	QT52-005	10 sec.
QT21-006	QT52-006	15 sec.
QT21-007	QT52-007	30 sec.
QT21-008	QT52-008	60 sec.

NET EACH, LOTS OF

	1-4	5-9	10-24	25-49	50-99	100-249	250 & over
QT21	$18.91	$17.97	$17.02	$16.08	$15.13	$14.18	$13.24
QT52	20.61	19.58	18.55	17.52	16.49	15.46	14.43

Elapsed Time Indicators



EF27



ED



EF13



ER30

Wide variety of meters available for any application where accurate time readings are required. All are synchronous motor driven. Round, square bezel, panel mount and rear mount available. Can be resettable or non-resettable, and readout is digital with a range of five figures plus tenths; in hours and tenths or minutes and tenths. All units operate at 120 VAC, 60 Hz. Operating temperature, −12° C to +55° C. Registers hours and tenths unless otherwise noted. U/L Recognized.

MFR'S MODEL NO.*	BEZEL	DEPTH	DIA. OF UNITS	MAX. MOTOR RATING W	LEADS OR TERMINALS
EF13 NR	2⅛" rd.	1 51/64"	2 17/64"	2.5	6" leads
EF27 NR	2⅜" sq.	1 23/32"	2.077"	5.0	6" leads
ED71 NR	1¾" sq.	2 37/64"	1 17/32"	2.5	11¼" leads
ED72 NR	1¾" sq.	2 37/64"	1 17/32"	2.5	Solder
EN30 NR	3" sq.	3 5/16"	1 17/32"	3.7	8-32 studs
ER30 R	3" sq.	3 5/16"	2 22/32"	3.7	8-32 studs
ER35 R	3½" rd.	3 5/16"	2 22/32"	3.7	8-32 studs
EN35 NR	3½" rd.	3 5/16"	2 22/32"	3.7	8-32 studs

*NR indicates non-reset; R, reset type.

NET EACH, LOTS OF

TYPE	1-4	5-9	10-24	25-49	50-99	100-249	250 UP
EF1333†	$ 9.56	$ 9.08	$ 8.61	$ 8.13	$ 7.65	$ 7.17	$ 6.69
EF1335	9.56	9.08	8.61	8.13	7.65	7.17	6.69
EF2733†	11.26	10.70	10.24	9.57	9.01	8.45	7.88
EF2735	11.26	10.70	10.24	9.57	9.01	8.45	7.88
ED7112	22.31	21.20	20.08	18.97	17.85	16.73	15.62
ED7212	24.23	23.01	21.80	20.59	19.38	18.17	16.96
EN3010†	17.00	16.15	15.30	14.45	13.60	12.75	11.90
EN3012	17.00	16.15	15.30	14.45	13.60	12.75	11.90
EN3510†	17.00	16.15	15.30	14.45	13.60	12.75	11.90
EN3512	17.00	16.15	15.30	14.45	13.60	12.75	11.90
ER3020†	24.65	23.42	22.19	20.95	19.72	18.49	17.26
ER3022	24.65	23.42	22.19	20.95	19.72	18.49	17.26
ER3520†	24.65	23.42	22.19	20.95	19.72	18.49	17.26
ER3522	24.65	23.42	22.19	20.95	19.72	18.49	17.26

†Registers minutes and tenths.

Hermetically Sealed Military Type Indicator



A very small, lightweight running time meter for wide application in military equipment. Meets Mil specification requirements per Mil-M-7793C and Mil-E-5272C. Life tested over 78,000 hours. Driven by synchronous hysteresis motor. Readout four digits plus tenths. Temperature range −55°C to +85°C. Round case 1¾" square bezel, 2 37/64" deep, barrel diameter 1½", four mounting holes on 1 5/16" centers. 115 volts, 400 Hz. Shock 50g, 11 milliseconds. Vibration to 1000 Hz at 10g. Altitude, sea level to 80,000 feet. Dielectric strength 500 volts, rms 60 Hz for one minute. Mil-Std-Ms-28053-5 solder terminals. Shipping weight: ¾ lb.

NET EACH, LOTS OF

TYPE	REGISTERS	1-4	5-9	10-24	25-49	50-99	100-249	250 & over
7010-004	hrs. & 10ths	$37.40	$35.53	$33.66	$31.79	$29.92	$28.05	$26.18

Prices Effective May 1, 1970

240 VAC units available; prices on request.

INDUSTRIAL CONTROLS DIVISION

GENERAL TIME

Progress in the World of Time

delay/interval timer

automatic reset / plug-in type



SERIES **GP**

An automatic reset, synchronous motor driven multi-purpose timing control that incorporates two sets of instantaneous contacts and two sets of delayed contacts. In its simplest application the series GP provides an adjustable time delay between the initiation of current to the timer and the subsequent operation of the timers internal load switches.

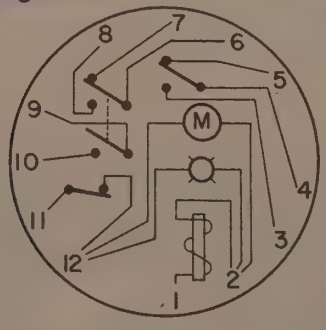
The timer can perform an interval function starting from a momentary switch closure because it is equipped with additional contacts. In this interval function a load is energized at the beginning of the time cycle and turned off at the end or when the timer reaches "zero."

dial, adjustment

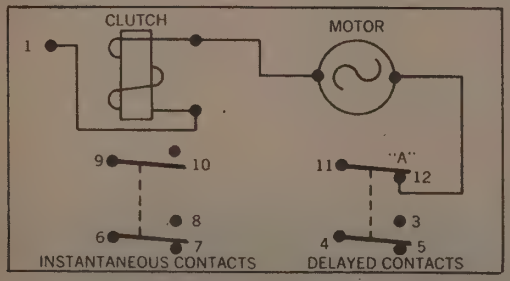
Time settings are made by rotating the knob and black pointer to the desired time setting. In operation a red pointer will move to "ZERO, thereby providing a visual indication of elapsed time. When power is removed from clutch of the timer the RED pointer resets to the position of the BLACK pointer, ready for another operation.

All dials, regardless of time cycle have 60 calibrations through 325° of rotation.

terminal diagram



schematic



"A" Terminal 11-12 opens slightly after 4-5

features

plug-in design

The Series GP is designed to be easy to install, and if necessary replac Quick change of time cycle is made simple through the plug-in featur All time cycles are interchangeable, instantly.

high accuracy

The Series GP features a new and unique concept in instrument clutch ing. This feature, called a Spider Clutch incorporates the high accurac of infinite engagement clutches with the mechanical integrity of toothe clutches. The Spider Clutch operates in atmospheres laden with rubbe lubricants without slipping, yet provides repeat accuracy of ±¼ of 1% unattainable with tooth clutches. Reset time is less than ½ second for fu scale.

time cycles

Model Number	Dial Division and Minimum Setting	Maximum Setting
GP-6S	1/10 sec.	6 seconds
GP-15S	1/4 sec.	15 seconds
GP-30S	1/2 sec.	30 seconds
GP-60S	1 sec.	60 seconds
GP-3M	3 sec.	3 minutes
GP-5M	5 sec.	5 minutes
GP-15M	15 sec.	15 minutes
GP-30M	30 sec.	30 minutes
GP-60M	60 sec.	60 minutes
GP-3H	180 sec.	3 hours

Note: Longer time cycles available on special order. Please consult factory for available time ranges.

$48.50 — 115/60

pilot light

Neon pilot lamp is built into dial to indicate that timer motor is receivin power.

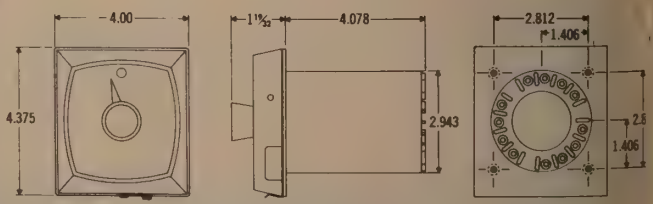
ratings

Load switches are rated at 10 amps non-inductive at 115v/60 Hz.
Voltage ratings are 115v, 60 or 50 Hz; 220 or 60 or 50 Hz.
115 volts 60 Hz is standard.

weight

2 lbs. 7 oz. including female housing
2 lbs. without housing

dimensions



© United Technical Publications

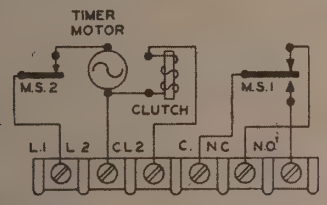
time delay timers

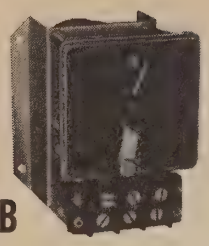
motor driven

Three basic methods are employed to generate a Time Delay: motor driven, thermal bi-metal and electronic. The Series GTD, MTD, CTD, CH, CSF, TDAB, and TDAF generate the Delay function from a motor. This delay is created by applying power to the timer motor/clutch circuit with a sustained switch closure (sustained is interpreted as simply being longer in length than the desired delay). When the timer receives power it begins a delay period, at the end of which occurs a switch operation. The load switch remains in the operated condition until power is removed from the timer, at which time the timer automatically resets. All units feature an external clutch to couple the motor to the timing mechanism during the time cycle.

The Series GTD, MTD, CTD, CH, CSF, TDAB and TDAF feature an external clutch to couple the motor to the timing mechanism during the time cycle. Operating circuit is illustrated below.

WIRING DIAGRAM:





* SERIES TDAB



SERIES TDAF

The Series TDAB is a back mounted delay timer featuring an external clutch, designed for the most demanding and accurate applications. This exclusive clutch enables the timer to be offered in a wide range of time cycles, ranging from 1 second to 3 hours in 12 individual models. The TDAB clutch also features an automatic reset which allows the complete timing/switching movement of the timer to reset in less than 0.2 of a second. Switch rating is 10 amps., SPDT, snap action contacts rated at 115/60 non-inductive.

The TDAB is also available in a steel knockout housing. Please specify if required.

The Series TDAF is a panel mounted, automatic reset timer employing the same rugged movement as the TDAB. It is commonly used in applications requiring high repetitive accuracy, fast reset, and heavy usage.

$43.00 — 115/60

TIME CYCLE CHART

Model Suffix	Max. Time Cycle	Dial Div.	Model Suffix	Max. Time Cycle	Dial Div.
1S	1 sec.	1/60 sec.	3M	3 min.	3 sec.
3S	3 sec.	1/20 sec.	5M	5 min.	5 sec.
6S	6 sec.	1/10 sec.	15M	15 min.	15 sec.
15S	15 sec.	¼ sec.	30M	30 min.	30 sec.
30S	30 sec.	½ sec.	60M	60 min.	60 sec.
60S	60 sec.	1 sec.	3H	3 hrs.	3 min.



SERIES MTD

The Series MTD Time Delay Timer represents a new appearance concept for timing controls. This new timer is designed to match modern panel instruments, so commonly found on the finest automatic machines. The MTD features a rugged plastic face which protects the setting and progress indicators from dust and damage. When used alone or in conjunction with other instruments, the Series MTD will contribute to equipment appearance as well as performing its control function.

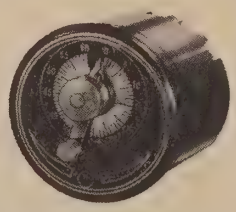
The control function of the Series MTD is one of providing a predetermined timed delay between the closing of one load circuit and the subsequent operation of the timer isolated load switch. The load contacts are 10 amp. SPDT snap action and are brought out to snap on terminals located at the rear of the timer. Mounting is through a 3" round hole in a panel and secured by means of a bracket screwed to the rear of the timer.

TIME CYCLE CHART

Model	Max. Time	Min. Time
MTD-6S	6 seconds	1/10 second
MTD-15S	15 seconds	1/4 second
MTD-30S	30 seconds	1/2 second
MTD-60S	60 seconds	1 second
MTD-3M	3 minutes	3 seconds
MTD-5M	5 minutes	5 seconds
MTD-15M	15 minutes	15 seconds
MTD-30M	30 minutes	30 seconds
MTD-60M	60 minutes	1 minute
MTD-3H	3 hours	3 minutes

Note: All dials have 60 calibrations regardless of time cycle.

$30.50 — 115/60



* SERIES CTD

The Series CTD is a cased time delay timer which mounts through a 3" hole in a panel. The timer is secured to the panel with a bracket which mounts to the rear of the timer and clamps the unit to the panel. The CTD offers 10 amp. SPDT snaps action load contacts, isolated from the timing movement. An external clutch is used to provide reset. Voltages of 115/60, 115/50, 220/60 or 220/50 are available.

$30.50 — 115/60



* SERIES CH

The Series CH time delay timer is designed for panel mounting with the dial of the timer fastened to the panel with four screws. Wiring is accomplished to a terminal strip at the rear of the unit. Load circuit rating is 10 amps., non-inductive 115/60 through SPDT snap action contacts. The Series CH has an external clutch for automatic reset. Voltages are 115/60, 115/50, 220/60 or 220/50.

$26.50 — 115/60

TIME CYCLE CHART FOR: SERIES CTD • CH • CSF

Model Number			Time Cycle	Dial Division
CTD-6S	CH-6S	CSF-6S	6 sec.	1/10 sec.
CTD-15S	CH-15S	CSF-15S	15 sec.	1/4 sec.
CTD-30S	CH-30S	CSF-30S	30 sec.	1/2 sec.
CTD-1M	CH-1M	CSF-1M	60 sec.	1 sec.
CTD-3M	CH-3M	CSF-3M	3 min.	3 sec.
CTD-5M	CH-5M	CSF-5M	5 min.	5 sec.

Note: For longer time cycles, consult factory



* SERIES CSF

The Series CSF is one of industry's most versatile compact time delay timers. The unit offers dial adjustability, automatic reset, external clutching and 10 amp. SPDT snap action load contacts. The Series CSF is a small, back mounted timer, designed for application where adjustment is infrequent but required. Voltages are 115/60, 115/50, 220/60, or 220/50.

$23.00 — 115/60

* UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

interval timers

An interval timer closes its load circuit immediately upon the start of the time period. This circuit is closed (or opened) during the time that the timer is running for the pre-selected period. When this is completed, the load circuit opens and the timer automatically resets. Interval timers are designed to start from a momentary pulse. However, a sustained start circuit can be used. If the start circuit is still closed at the end of the time cycle, the load circuit will return to its normal position, but the timer will not reset until the start circuit is broken. At this time, the reset will occur and the timer is again ready for another cycle.



SERIES PAB (PAF)*

The Series PAB Timer is an extremely accurate timing mechanism built to stand up under the hard usage and demanding standards that modern manufacturing processes require.

Due to the simplicity and reliability of a special clutching mechanism it is possible to offer the Series PAB with a range of timing from the PAB 1S with a 1 second overall range in 1/60 second increments, to the PAB 3H timer with a range of 3 minutes to 3 hours, calibrated in 3 minute steps.

*The series PAF is similar in construction but is panel mounted.

PAB — $55.00 — 115/60
PAF — $47.50 — 115/60



SERIES RS

The Series RS Interval timer is a manual s timer capable of handling a full 20 ampe load without the use of external relays. T Series RS is completely enclosed, silent in ope ation and has a simple knob for time setti and elapsed time indication. Available in t variety of time cycles shown on chart. Ava able in 115, or 230 volt, 25, 50, 60, or 4 cycle current. (Also 6-30 VDC) 18" col coded leads provided through back of housin Knockout housing available as optional equi ment.

Shipping weight: 2 pounds
in case: 3 pounds

$18.50 — 115/6



SERIES P

The Series P Timer is a multi-purpose interval timer, equipped with an A.C. input cord, built in manual start push button, and two receptacles. The RED receptacle is provided on the side of the case for REMOTE STARTING. The BLACK receptacle receives plug in LOAD circuits. Keyholes are provided in the back of the case for wall mounting. Load contact rating is 15 amps., non-inductive.

Available for 115, 230 volts, 60, 50, or 25 cycles.

Time cycles available from 6 seconds to 3 hours.

Overall dimensions: 5"x5"x3"

Shipping weight: 3 pounds

$33.50 — 115/60



SERIES M

Series M Timers follow the same description as the Series P except that they are not equipped with a remote start and have a load rating of 10 amps. 115, 230 volts, 60, 50, or 25 cycles and are equipped with an internal clutch motor with a mechanical push-button.

Time cycle: 1 minute in 1 second increments.

Overall dimensions: 5"x5"x3"

Shipping weight: 3 pounds

$26.50 — 115/60



SERIES S

The Series S Signaling timer is a multi-purpo process timer that provides an audible sign at the end of either a time interval or a tim delay. Two receptacles are provided on th side of the case: a black receptacle for a loa or remote signal to operatt at the end of th cycle, and a red receptacle to operate a loa circuit during the time cycle. Timer is als equipped with a line cord. Snap action co tacts are rated at 10 amps. 115, 230 volts, 6 50, or 25 cycles.

Overall dimensions: 5"x5"x3"

Shipping weight: 3 pounds

$29.00 — 115/6

***F suffix indicates flush panel mounting.**

Net

© United Technical Publicatio



SERIES SAR (F)*

automatic reset signalling

Timer provides an audible signal at the end of a pre-set time cycle. Load receptacles are provided for either a load to be operated during the time cycle or at the end. The time cycle is started by operating the toggle switch, the timer runs to the end of the time cycle at which time SPDT switching action occurs in addition to a loud buzzer sounding, The signal is turned off by operating the toggle switch to off, simultaneously causing the timer to instantly reset to the pre-set time cycle. SPDT load contacts are rated at 10 amperes. Available for 115, 230 volts, 60, 50 or 25 cycles. Overall dimensions are 5" x 5" x 3¾":

The Series SARF provides a six place terminal strip at the rear of the timer for electrical connections. Overall dimensions are 4⅝" x 4⅝" x 4".

$39.50 — 115.60

Shipping weight: 3 pounds

Model	Max. Time Cycle	Dial Division	Model
SAR-1M	1 min.	1 sec.	SARF-1M
SAR-5M	5 min.	5 sec.	SARF-5M
SAR-15M	15 min.	15 sec.	SARF-15M
SAR-30M	30 min.	30 sec.	SARF-30M
SAR-1H	1 hr.	1 min.	SARF-1H
SAR-3H	3 hrs.	3 min.	SARF-3H



SERIES PBM

pushbutton start

The Series PBM is an automatic reset, pushbutton operated Interval timer. The unit is panel mounted through a square hole, and secured with four screws. The PBM features extreme repeat accuracy and exceptional long life; both made possible through the use of a positive acting infinite engagement clutch which connects the switch actuator with the heavy duty synchronous motor. The unit also features an attractive plastic faced dial with adjustment knob and start button combined in one assembly. Time interval or progress indication is located in the dial with a moving red pointer.

Overall dimensions: 4⅜" x 4".

Requires 2⅞" square panel cut-out.

$19.25 — 115/60



SERIES UTF

The series UTF interval timer is a manual set timer of compact design and extreme accuracy. It is designed for panel mounting with the dial of the timer fastened to the panel (maximum thickness 3/32"). The timer makes one circuit and breaks another when it times out. Wiring is accomplished through a terminal strip at the rear of the unit. Load capacity is 10 amperes at 115 VAC resistive load.

Overall dimensions: 3⅛" x 4½"

Requires 2" diameter panel cutout.

FROM: $24.00 — 115/60

Model	Maximum Time Cycles	Dial Divisions
UTF 15M	15 minutes	1/4 second
UTF 60M	60 minutes	1 minute
UTF 15H	15 hours	15 minutes
UTF 60H	60 hours	1 hour



SERIES UTL

Our newest precision timer features a large 7" diameter dial and large hands for easy reading.

- Sets any combination of seconds and minutes from 1 sec. to 60 min. and 59 sec.
- Automatically controls the enlarger
- Starts, stops appliances at pre-selected times
- Operates up to 1000 watt electric circuit for time interval
- Provision for remote buzzer, light plug-ins or solenoid valves
- Serves as signalling timer or count-down clock too, loud built-in buzzer

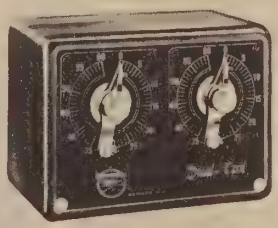
The UTL is a synchronous motor-driven manual set interval timer with a 3-way ON/OFF toggle switch which controls power supply to BLACK receptacle (to operate electric circuit during time interval) and to RED receptacle (to provide power after time interval).

Buzzer cut out switch provided.

Available for 115, 230 Volts, 50 or 60 cycles.

FROM: $30.00 — 115/60

recycling timers



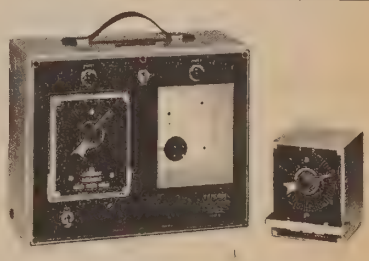
SERIES DUAL-TROL

The Series Dual-Trol is a compact recycling timer that provides two adjustable ON-OFF sequencing switch closures. Electrically, the Dual-Trol continuously closes and opens a SPDT 10 Amp. load switch. The unit consists of 2 TM modules, operating in sequence.

Example: An electric motor is to be life tested by operating it in a ON/OFF sequence of 10 seconds ON, 2 minutes OFF, continuously until failure. This program is controlled by a Dual-Trol equipped with a TM-15S and a TM-3M. The 2 minutes OFF period is controlled by the TM-3M set at 2 minutes, the 10 second ON time is controlled by the TM-15S set at 10 seconds.

$94.00 — 115/60

Model	Max. Time Cycles	Dial Divisions
TM-6S	6 sec.	1/10 sec.
TM-15S	15 sec.	1/4 sec.
TM-30S	30 sec.	1/2 sec.
TM-60S	60 sec.	1 sec.
TM-3M	3 min.	3 sec.
TM-5M	5 min.	5 sec.
TM-15M	15 min.	15 sec.
TM-30M	30 min.	30 sec.
TM-60M	60 min.	1 min.
TM-3H	3 hrs.	3 min.



Tandem/Type A

The Tandem Re-cycling Timer is a precise timing device that provides 2 adjustable and continuous time cycles. Any combination of 10 interchangeable timing elements are possible; for example: a 3 hour element and a 6 second element can be combined in the control cabinet and adjusted to provide a load circuit with a 1 second pulse every 3 hours. This cycle will continue in sequence until shut down or re-adjusted.

Control Cabinet . . . Incorporates an external "ON", "OFF" toggle switch, load control switch, pilot lamps, male load plugs, input line cord and element enclosures for two individual timing elements. The load circuit is carried by a SPDT relay, contact rating is 15 amps A.C. non-inductive. Control cabinets are available for 115, or 220 volt/60, 50, or 25 cycles. Cabinet dimensions are 9" x 11½" x 6⅛". Shipping weight of control cabinet is 11 lbs. Each ET element weighs 4 lbs.

$132.50 — 115/60

INDUSTRIAL TIMER CORPORATION

programming cam timers

series RA/RC/CM/MC

motors

Heavy duty synchronous motors, U/L and CSA approved. These motors are available in any of thirteen standard speeds. In cases where short time cycles are required of a higher torque motor is used. On the MC-O and RC-O Multi Cam Timers a High Torque motor is standard. These motors are built and guaranteed for long trouble-free performance.

switches

Single pole double throw snap action, U/L and CSA approved, totally enclosed. The switches are mounted on individual brackets, permitting removal of each switch without disassembling the entire switch bank. The switch contacts are rated at 10 amps non-inductive AC.

electrical characteristics

The Cam Timer Series can be supplied for 115 volt or 220 volt AC operation on 25, 50, 60 or 400 cycle frequencies. (As well as 6, 12, 24, & 30 volts DC)

gear rack assemblies

50 standard ratio gear and rack assemblies are stocked for changing overall time cycles on the Cam Timer Series. These assemblies may be changed by removing a 5/40 screw, setting the rack into the recess, and retightening the screw. Refer to chart for particular time cycle and gear rack assembly.

individual cam adjustment (series CM, MC, RC only)

Standard cam construction is such that the ON or OFF periods may be adjusted from 2% to 98% of the total time cycle. Cam adjustment consists of loosening the nut on the face of the plate, rotating the movable cam segment to the percentage of ON or OFF period desired, and then tightening the nut. The cams are made of corrosion resistant aluminum.

timing sequence (MC, RC only)

Each cam is individually mounted on the shaft by means of a heavy duty friction disc which allows easy finger adjustment of timing sequences. Individual positioning of the cam is also made possible without the use of set screws and wrenches, and permits rapid adjustment. On the Series MC and RC Multi Cam models a drum calibrated from 0% to 100% is mounted on each cam, this drum in conjunction with a mounted pointer acts as a guide when setting related programmed sequences; thus providing a reference point for use during the cycle.

ordering information

When ordering a Cam Timer please specify the following information:

1. Voltage and frequency of motor current.
2. Number of switches desired.
3. Time cycle selected from chart. (refer to motor number plus gear rack number. Example: MC4 Timer with C-12 Gear Rack.)

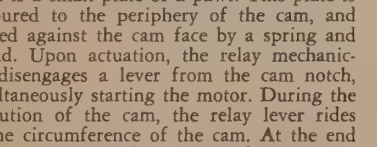


* SERIES **RA**

single cycle timer

The Series RA Timer is designed to provide a single timed electrical cycle upon momentary actuation from a remote position. The cam is a circular plate notched at one point in its circumference. Coincident with this notch is a small plate or a pawl. This plate is contoured to the periphery of the cam, and pressed against the cam face by a spring and a stud. Upon actuation, the relay mechanically disengages a lever from the cam notch, simultaneously starting the motor. During the revolution of the cam, the relay lever rides on the circumference of the cam. At the end of the revolution, the pawl guides the lever into the notch, stopping the motor after completing one revolution. The single switch handles the timer motor and the external load circuits, limited only by switch rating.

$30.50 — 115/60



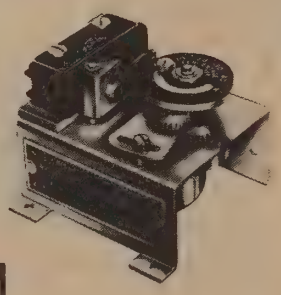
* SERIES **RC**

single cycle multi-cam timer

The RC Multi Cam Timer is identical to the RA, but operates from 1 to 20 additional circuits. This design enables the user to have all the advantages of the Series MC, plus the single cycle homing control of the RA.

FROM: $42.50 — 115/60

recycling timer

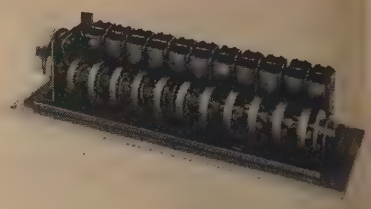


* SERIES **CM**

The Series CM Timer repeats a continuous, adjustable ON and OFF electrical cycle. This timer consists of a heavy duty synchronous motor, adjustable cam, and single pole, double throw snap action switch, assembled on a base mount chasis. The cam is coupled to the motor by means of a simple gear and rack assembly, which can be changed by the user. Standard cam construction is such that the ON-OFF cycle may be adjusted from 2% to 98% of the total time cycle. The cam is calibrated in percentage for quick accurate adjustment. 50 stocked gear and rack assemblies are available for time cycles from 40 cycles (2/3 of a second) to 1 rev. in 72 hours.

$20.50 — 115/60

multi-cam recycling timer



* SERIES **MC**

The MC Multi Cam Timer is identical in op eration to the CM timer but controls from 2 to 20 circuits. The cams are mounted on a single driving shaft, coupled to the motor by a gear and rack assembly. Each cam is inde pendently adjustable for 2% to 98% of the total time cycle. Individual cam adjustability enables the timer to be used as a programming device. The cams can be adjusted in any com bination of timed sequences rapidly and easily Total revolution time is determined by motor speed and the interchangeable gear and rack assembly.

FROM: $35.50 — 115/60

* UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

© United Technical Publication

programming cam timers concluded

gear rack chart

MODEL	RA 0	RA 1	RA 2	RA 3	RA 4	RA 5	RA 6	RA 7	RA 8	RA 9	RA 10	RA 11	RA 12
MODEL	CM 0	CM 1	CM 2	CM 3	CM 4	CM 5	CM 6	CM 7	CM 8	CM 9	CM 10	CM 11	CM 12
MODEL	MC 0	MC 1	MC 2	MC 3	MC 4	MC 5	MC 6	MC 7	MC 8	MC 9	MC 10	MC 11	MC 12
MODEL	RC 0	RC 1	RC 2	RC 3	RC 4	RC 5	RC 6	RC 7	RC 8	RC 9	RC 10	RC 11	RC 12
AR RACKS	SEE NOTE 2*												
E-12	40c	4 sec	10 sec	20s	40s	2m	3m20s	10m	20m	40m	2h	3h20m	8h
E-14	46.7c	4.67s	11.67s	23.33s	46.67s	2m20s	3m53s	11m40s	23m20s	46m40s	2h20s	3h53m	9h20m
D-12	48c	4.8s	12s	24s	48s	2m24s	4m	12m	24m	48m	2h24m	4h	9h36m
E-15	50c	5 sec	12.5s	25s	50s	2m30s	4m10s	12m30s	25m	50m	2h30m	4h10m	10h
E-16	53.3c	5.33s	13.33s	26.67s	53.3s	2m40s	4m27s	13m20s	26m40s	53m20s	2h40m	4h27m	10h40m
D-14	56c	5.6s	14s	28s	56s	2m48s	4m40s	14m	28m	56m	2h48m	4h40m	11h12m
C-12	1 sec	6 sec	15s	30s	60s	3m	5m	15m	30m	60m	3h	5h	12h
D-16	64c	6.4s	16s	32s	64s	3m12s	5m20s	16m	32m	64m	3h12m	5h20m	12h48m
E-20	66.7c	6.67s	16.67s	33.33s	66.67s	3m20s	5m33s	16m40s	33m20s	66m40s	3h20m	5h33m	13h20m
C-14	70c	7s	17.5s	35s	70s	3m30s	5m50s	17m30s	35m	70m	3h30m	5h50m	14h
D-18	72c	7.2s	18s	36s	72s	3m36s	6m	18m	36m	72m	3h36m	6h	14h24m
E-22	73.3c	7.33s	18.33s	36.67s	73.33s	3m40s	6m7s	18m20s	36m40s	73m20s	3h40m	6h7m	14h40m
C-15	75c	7.5s	18.75s	37.5s	75s	3m45s	6m15s	18m45s	37m30s	75m	3h45m	6h15m	15h
B-12	80c	8 sec	20s	40s	80s	4m	6m40s	20m	40m	80m	4h	6h40m	16h
E-26	86.7c	8.67s	21.67s	43.33s	86.67s	4m20s	7m13s	21m40s	43m20s	86m40s	4h20m	7h13m	17h20m
D-22	88c	8.8s	22s	44s	88s	4m24s	7m20s	22m	44m	88m	4h24m	7h20m	17h36m
C-18	90c	9 sec	22.5s	45s	90s	4m30s	7m30s	22m30s	45m	90m	4h30m	7h30m	18h
B-14	93.3c	9.33s	23.33s	46.67s	93.33s	4m40s	7m47s	23m20s	46m40s	93m20s	4h40m	7h47m	18h40m
D-24	96c	9.6s	24s	48s	96s	4m48s	8m	24m	48m	96m	4h48m	8h	19h12m
B-15	100c	10 sec	25s	50s	100s	5m	8m20s	25m	50m	100m	5h	8h20m	20h
D-26	104c	10.4s	26s	52s	104s	5m12s	8m40s	26m	52m	104m	5h12m	8h40m	20h48m
B-16	106.7c	10.67s	26.67s	53.33s	106.7s	5m20s	8m54s	26m40s	53m20s	106m40s	5h20m	8h54m	21h20m
C-22	110c	11 sec	27.5s	55s	100s	5m30s	9m10s	27m30s	55m	110m	5h30m	9h10m	22h
D-28	112c	11.2s	28s	56s	112s	5m36s	9m20s	28m	56m	112m	5h36m	9h20m	22h24m
E-34	113.3c	11.33s	28.33s	56.67s	113.3s	5m40s	9m27s	28m20s	56m40s	113m20s	5h40m	9h27m	22h40m
A-12	2 sec	12 sec	30s	60s	2m	6m	10m	30m	60m	2h	6h	10h	24h
D-32	2s8c	12.78s	32s	64s	128s	6m24s	10m40s	32m	64m	2h8m	6h24m	10h40m	25h36m
C-26	2s10c	13 sec	32.5s	65s	130s	6m30s	10m50s	32m30s	65m	2h10m	6h30m	10h50m	26h
B-20	2s12c	13.2s	33.33s	66.67s	133.3s	6m40s	11m7s	33m20s	66m40s	2h13m	6h40m	11h7m	26h40m
D-34	2s16c	13.56s	34s	68s	136s	6m48s	11m20s	34m	68m	2h16m	6h48m	11h20m	27h12m
A-14	2s20c	14 sec	35s	70s	140s	7m	11m40s	35m	70m	2h20m	7h	11h40m	28h
D-36	2s24c	14.4s	36s	72s	144s	7m12s	12m	36m	72m	2h24m	7h12m	12h	28h48m
B-22	2s27c	14.7s	36.67s	73.33s	146.7s	7m20s	12m13s	36m40s	73m20s	2h27m	7h20m	12h13m	29h20m
A-15	2s30c	15 sec	37.5s	75s	150s	7m30s	12m30s	37m30s	75m	2h30m	7h30m	12h30m	30h
A-16	2s40c	16 sec	40s	80s	160s	8m	13m20s	40m	80m	2h40m	8h	13h20m	32h
C-34	2s50c	17 sec	42.5s	85s	170s	8m30s	14m10s	42m30s	85m	2h50m	8h30m	14h10m	34h
B-26	2s52c	17.2s	43.33s	86.67s	173.3s	8m40s	14m27s	43m20s	86m40s	2h53m	8h40m	14h27m	34h40m
A-18	3 sec	18 sec	45s	90s	3m	9m	15m	45m	90m	3h	9h	15h	36h
B-28	3s7c	18.7s	46.67s	93.33s	186.7s	9m20s	15m33s	46m40s	93m20s	3h7m	9h20m	15h33m	37h20m
A-20	3s20c	20 sec	50s	100s	200s	10m	16m40s	50m	100m	3h20m	10h	16h40m	40h
B-32	3s33c	21.3s	53.33s	106.7s	213.4s	10m40s	17m47s	53m20s	106m40s	3h33m	10h40m	17h47m	42h40m
A-22	3s40c	22 sec	55s	110s	220s	11m	18m20s	55m	110m	3h40m	11h	18h20m	44h
B-34	3s47c	22.7s	56.67s	113.3s	226.7s	11m20s	18m53s	56m40s	113m20s	3h47m	11h20m	18h54m	45h20m
A-24	4 sec	24 sec	60s	2m	4m	12m	20m	60m	2h	4h	12h	20h	48h
A-26	3s20c	26 sec	65s	130s	260s	13m	21m40s	65m	2h10m	4h20m	13h	21h40m	52h
A-28	4s40c	28 sec	70s	140s	280s	14m	23m20s	70m	2h20m	4h40m	14h	23h20m	56h
A-30	5 sec	30 sec	75s	150s	5m	15m	25m	75m	2h30m	5h	15h	25h	60h
A-32	5s20c	32 sec	80s	160s	320s	16m	26m40s	80m	2h40m	5h20m	16h	26h40m	64h
A-34	5s40c	34 sec	85s	170s	340s	17m	28m20s	85m	2h50m	5h40m	17h	28h20m	68h
A-36	6 sec	36 sec	90s	3m	6m	18m	30m	90m	3h	6h	18h	30h	72h

c-cycles s-seconds m-minutes h-hours

. ORDERING INFORMATION—Model number selected from top of gear rack chart, gear rack, number of load switches, voltage and frequency.

ALTERNATE ORDERING INFORMATION—Required time cycle (one complete rotation of cam shaft), number of load switches, voltage and frequency. Since some time cycles are available in 3 model numbers, the use of the ALTERNATIVE ordering information may expedite delivery by allowing us to ship model in stock with required time cycle.

. Multi-switch cam timers requiring time cycles in shaded area may require high torque timing motor. This is due to increased torque encountered in rapid time cycles. To determine need of larger motor; multiply required time cycle in seconds by 2/3, the answer will be the maximum number of switches that can be operated with a standard timing motor. EXAMPLE: Time cycle 15 seconds. 2/3 x 15s=10. 10 switches can be operated at 15 seconds with a standard timing motor, more than 10 load switches requires the use of a high torque timing motor.

Price added for Hi-Torque motors:

	Motor Speed	115/220-60 Hz	115/220-50 Hz
#0	1 RPS	$35.50	$60.00
#1	⅙ RPS	$37.50	$60.00

time measurement devices

Running TIME meters and reset time totalizers are designed to record equipment operating time. The running time meter accumulates total time whereas the reset time totalizer can be reset to 0 at any time by means of an external knob.

stop clocks



MODELS SC-100 / SC-60

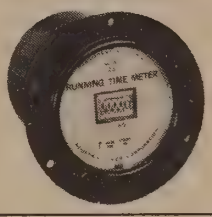
Two models, SC-100 with a range from 1/100 sec. to 60 seconds, and the SC-60 with a range from 1 second to 60 minutes. Both models used to measure time intervals, and can be started from a remote switch closure, (see wiring schematic). Pointer reset accomplished by built-in pushbutton or remote switch closure. Finish, baked enamel on formed steel housing. Available for 115, 220 volts/60 c 50 cycles only.

model designation chart

model number	minimum registration	maximum registration
SC-100	1/100 second	60 second
SC-60	1 second	60 minute

$68.50 — 115/6

running time meters



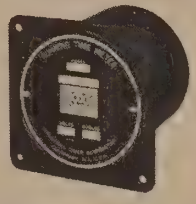
MODEL C-2 NON RESET TYPE

C-2 . . . Designed to harmonize with other instruments installed on a panel. The C-2 Running Time Meter is completely enclosed, moisture and dust resistant, insuring long life and operating efficiency. Screw terminals are located on the back of the case for wiring.

All models available for 115, 220 volts, 6 and 50 cycles. Six models available from 10,00 seconds to 100,000 hours.

models	count	range
C-2, C-25	1/10 hr.	10,000 hrs
C-2A, C-25A	1 hr.	100,000 hrs
C-2D, C-25D	1/10 min.	10,000 mi
C-2F, C-25F	1 min.	100,000 mi
C-2G, C-25G	1/10 sec.	10,000 se
C-2H, C-25H	1 sec.	100,000 se

$20.00 — 115/6



MODEL C-25 NON RESET TYPE

C-25 . . . The C-25 Running Time Meter follows the same description as the Model C-2 with the exception of its case and mounting provisions. The C-25 matches the C-5 Reset Time Totalizer in appearance and mounting.



MODEL C-5 RESET TYPE

C-5 . . . Mounted in a baked black finish steel housing. Reset wheel protrudes slightly out front of dial for thumb reset. Screw terminals on back of unit. Available for 115, 220 volt, 60 and 50 cycles.

Four ranges available from 10,000 minutes u to 100,000 hours.

model	count	range
C-5	1/10 hr.	10,000 hrs
C-5A	1 hr.	100,000 hrs
C-5D	1/10 min.	10,000 mi
C-5F	1 min.	100,000 mi

FROM: $42.50 — 115/6



MODELS C-8, C-8W, D.C. UNIT

The Series C-8 and C-8W Running Time Meters are heavy duty units featuring a rugged pulse wound clock movement. At the heart of this unique movement is a large winding solenoid that is pulsed from snap action contacts. These contacts operate every 40 to 60 seconds when the unit is energized. The unit is sealed against dust and moisture in a steel enclosure. The crystal over the di is made of shatterproof non-yellowing plast The readout of the C-8 is in minutes with sweep hand, and up to 99999 hours on t odometer. Mounting is by bracket on the Seri C-8W or by flange with the C-8. Wiring co nections are made on the back of the un 12-32 VDC. 12-32 VDC. $19.2

SINGER
INDUSTRIAL TIMER CORP.

 © United Technical Publication

OHMITE OHMITROL® solid state power and motor speed controls

AVE SPACE, SAVE POWER, SAVE $$
MALLEST 1 & 2 KW CONTROL
ONG LIFE
C & DC OUTPUT TYPES
ITEGRAL TRIMMER ADJUSTS CONTROL RANGE OR DIFFERENT APPLICATIONS
CORPORATES ON-OFF SWITCH

IT TO CONTROL

ER
PCA: AC Output
ed pole motors
anent split capacitor rs
rsal motors
rs—both resistive and red

MOTOR SPEED
MODEL PCD: DC Output
Shunt wound motors
Series wound motors
Permanent magnet motors
Magnetic clutches and brakes

Now, for the first time, a Solid State Power Control is available which is adaptable to a wide variety of applications by a simple turn of a screwdriver!

An internal trimmer allows the starting point of the control voltage of the Ohmitrol to be set anywhere within the stated trimmer voltage range. (This adjustment can be preset at the factory at small additional cost).

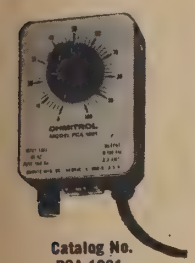
From the starting point to full line voltage, infinitely smooth control is obtained by means of the control knob. An "on-off" line switch actuated at the counterclockwise end of the control knob rotator is provided on all models.

Ohmite solid state power controls are the smallest 1 or 2 KW controls available and offer the advantages not only of convenient size, but also of power savings, long life and low initial cost.

Two styles are available: the component style for panel mounting in equipment, and the lightweight, self-contained portable style. Portable units are completely self contained with grounded line cord and standard grounded AC receptacle.

Ohmitrol Controls are available with AC output and with two kinds of DC output delivered simultaneously. One kind consists of rectified DC, at approximately full line voltage; the other is the variable or controlled DC. This double output is useful, for example, for controlling shunt wound motors. Two-way terminals at the rear of the controls accept quick-connectors (push-on connectors), or can be soldered.

PORTABLE STYLE



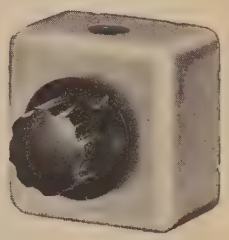
Catalog No.
PCA-1001
PCD-1001
PCA-1021
PCD-1021

SPECIFICATIONS AND ORDERING INFORMATION

	120 Volt Types	240 Volt Types
LOAD RATING PCA Models	1 KW, 8.3 Amps. AC	2 KW, 8.3 Amps
PCD Models	3.5 Amp DC-Motorload 6.0 Amp DC-Resistive	3.5 Amp DC-Motorload 6.0 Amp DC-Resistive
INPUT	120v AC, 60 Hz†	240v AC, 60 Hz†
OUTPUT	0-120v AC(PCA), DC(PCD)	0-240v AC(PCA), DC(PCD)
TRIMMER VOLTAGE RANGE	0-50 Volts	0-100 Volts

Mounting (Component Style) ⅜"-32 Bushing, Non-Turn Projection on ½" centers with shaft.
Knob (not included) Recommend Catalog No. 5150.
Terminals (Component Style) Two-way Accept ¼" Faston connectors or soldering.
† 50 Hz also available. Contact factory.

COMPONENT STYLE*

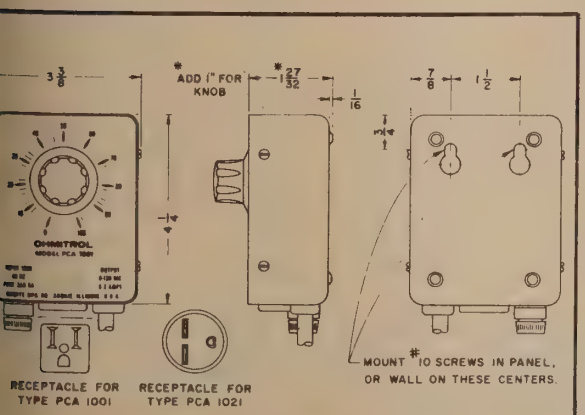


Catalog No.
PCD-1000
PCA-1000
PCA-1020
PCD-1020

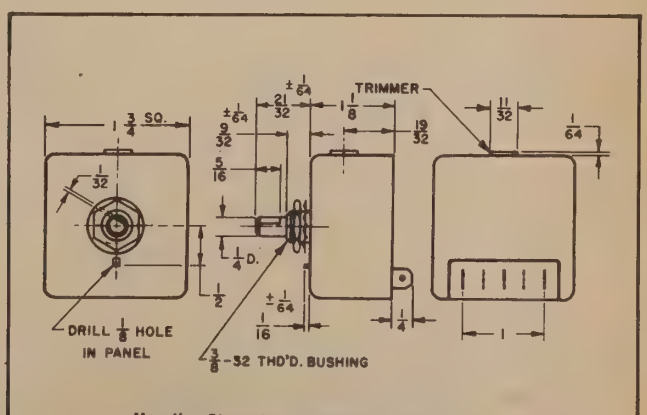
* Knob not included

Catalog No.	Input	Output
PCA-1001	120 VAC	0-120 VAC
PCD-1001	60 Hz	Pulsating 0-120 VDC and Full 120 VDC
PCA-1021	240 VAC	0-240 VAC
PCD-1021	60 Hz	Pulsating 0-240 VDC and Full 240 VDC

Catalog No.	Input	Output
PCA-1000	120 VAC	0-120 VAC
PCD-1000	60 Hz	Pulsating 0-120 VDC and Full 120 VDC
PCA-1020	240 VAC	0-240 VAC
PCD-1020	60 Hz	Pulsating 0-240 VDC and Full 240 VDC



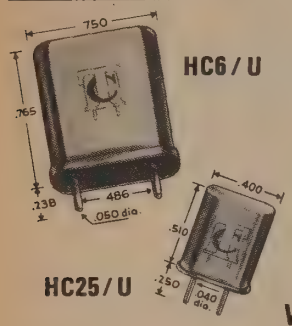
Mounting Dimensions Portable Style



Mounting Dimensions Component Style

PRICE LIST • Subject to Change without Notice • **MINIMUM ORDER $10.00**

CRYSTEK CRYSTALS... FOR EVERY PURPOSE



2.95 EACH

"THE ON CHANNEL CRYSTALS"

CLASS "D"

CITIZEN BAND CRYSTALS

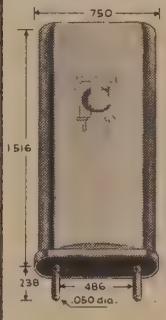
23 Frequencies – 3rd Overtone – ±.002% Tol.

All "Citizens Band" crystals supplied in Hermetically sealed holders for all 23 channels. When ordering, specify make and Model of UNIT and CHANNEL NUMBERS desired.

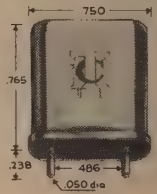
We supply crystals for every popular make of Citizen Band Transceiver

LOW FREQUENCY CRYSTALS 80 KHZ - 999 KHZ

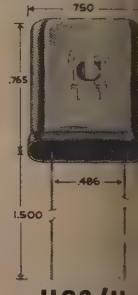
FREQUENCY NOTE: Below 80 KHz request quote from factory.	TYPE	
	STANDARD	SPECIAL
	CALIBRATION TOLERANCE ±.005%	CALIBRATION TOLERANCE ±.0025%
80- 99 KHZ	$10.00	$12.00
100-199 KHZ	8.00	10.00
200-799 KHZ	7.00	9.00
800-999 KHZ	12.00	13.00



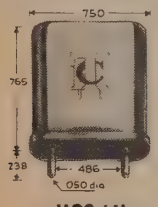
HC13/U
70 KHZ — 200 KHZ (70-99 KHZ is 2.5" in height)



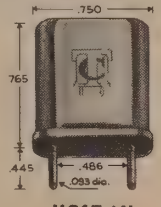
HC6/U
200 KHZ to 1000 KHZ



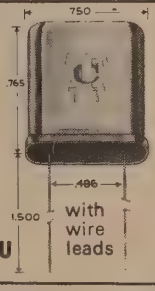
HC6/U
Also Availab
with Wire-lea



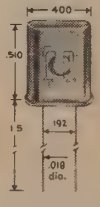
HC6/U



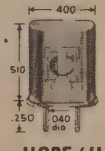
HC17/U



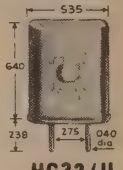
HC6/U



HC18/U



HC25/U



HC32/U

FUNDAMENTAL TYPE — 1000 KHZ - 22000 KHZ

FREQUENCY	TYPE		
	STANDARD	SPECIAL	OVEN 75°C/85°C
	CALIBRATION TOLERANCE ±.002%	CALIBRATION TOLERANCE ±.001%	CALIBRATION TOLERANCE ±.001%
1000- 1499 KHZ	$8.50	$10.50	$12.50
1500- 1999 KHZ	7.50	10.00	12.00
2000- 2999 KHZ	6.00	9.00	11.00
3000-10999 KHZ	4.50	7.00	9.00
11000-19999 KHZ	6.00	8.00	10.00
20000-22000 KHZ	8.00	10.00	12.00

OVERTONE TYPE — 10 MHZ - 125 MHZ

FREQUENCY	MODE	STANDARD	SPECIAL	OVEN 75°C/85°C
		CALIBRATION TOLERANCE ±.002%	CALIBRATION TOLERANCE ±.001%	CALIBRATION TOLERANCE ±.001%
10- 60 MHZ	(3rd)	$6.00	$ 8.00	$10.00
61- 75 MHZ	(5th)	7.50	11.00	13.00
76-125 MHZ	(5th)	9.00	13.00	15.00

AMATEUR CRYSTALS

Hermetically Sealed HC6/U Holder

Supplied In Following Freq.	±.005% Toleranc
3501 to 3999KC	$2.95 e
4667 to 4780KC	2.95 e
7000 to 7425KC	2.95 e
8001 to 8221KC	2.95 e
8334 to 8900KC	2.95 e

MARINE CRYSTALS

2000 — 5000 KHZ FOR ALL UNITS

Type HC6/U Marine 2000 KHZ thru 5000 KH

$5.50

Type HC17/U Marine 2000 KHZ thru 5000 KH

$5.50

THE ON CHANNEL CRYSTALS

CRYSTEK *formerly Texas Crystals Div. of Whitehall Electronics*

Net

© United Technical Publicatio

ALCOKNOB

DIV. OF ALCO ELECTRONIC PRODUCTS, INC.

ALUMINUM INSTRUMENT KNOBS

STANDARD SERIES

K" Series knobs are a completely matched family in four basic diameters to enhance equipment appearance. Each knob is machined from one-piece aluminum and then anodized in either natural, black or gold. ALCO's 1¼" dia. K-1250-S Spinner Knobs are part of this "K" Series family and have the addition of a knurled handle. The K-5700 matched knobs for concentric shaft controls consist of two separate knobs: an upper knob for the inner control shaft (⅛" dia.), and lower knob for the outer control shaft (¼" dia.)

Model	Finish — See Box Below	O.D.	One-99	100-249	250-499	500-999
K-500	A, B, G	.500"	.45	.41	.39	.36
K-700	A, B, G	.750"	.50	.45	.43	.40
K-900	A, B, G	.937"	.55	.50	.47	.44
K-1250	A, B, G	1.250"	.65	.59	.56	.52
K-1250( )-S	A, B	1.250"	1.55	1.40	1.32	1.24
K-5700	A, B	.500 & .750"	1.10	.99	.94	.88

SKIRTED ANODIZED KNOBS FOR ¼" SHAFTS

The "KS" and "KSP" Skirted Series offer an excellent matching knob group to the ALCO "K" Series described above. You may choose between a solid aluminum skirt (KS Series), or the clear acrylic plastic skirt (KSP Series). The "KS" Series is available in three body sizes, and the "KSP" Series is available in two sizes. These knobs have exceptional styling for the modern space-age technology, yet are reasonably priced for production use. The color grouping includes natural aluminum, and black anodizing.

Model	Finish — See Box Below	O.D.	Skirt Dia.	One-99	100-249	250-499	500-999
KS-500	A, B	.500"	.750"	.60	.54	.51	.48
KS-700	A, B	.750"	1.125"	.65	.59	.56	.52
KS-900	A, B	.937"	1.406"	.85	.77	.73	.68
KSP-700	A, B	.750"	1.125"	.60	.54	.51	.48
KSP-900	A, B	.937"	1.406"	.65	.59	.56	.52

KNURLED ALUMINUM KNOBS

DIAMOND KNURL SERIES

The conical top of this series adds a new dimension to knob styling. The nonslipping diamond knurl knobs feature precision machining, unbreakable strength, and uncompromizing anodized colors of natural, black or gold finish with hairline indicators. This fine diamond knurl knob combines the rich, anodized look in a metal knob, yet with all these quality features the ALCO "KD" Series costs far less than you would expect to pay. The diamond knurl family is available in four sizes.

Model	Finish — See Box Below	O.D.	One-99	100-249	250-499	500-999
KD-500	A, B, G	.500"	.55	.50	.47	.44
KD-700	A, B, G	.750"	.60	.54	.51	.48
KD-900	A, B, G	.937"	.70	.63	.60	.56
KD-1250	A, B, G	1.250"	.85	.77	.73	.68

STRAIGHT KNURL SERIES

ALCO's new "KN" Series of straight knurl knobs with hairline indicators includes the lustrous solid anodized color types and the decorative two-tone models. The straight knurl knobs have clean, precision serrations of the highest quality. The anodized two-tone knob is available in two variations: (AB) natural aluminum body with black top, or (BA) black anodized body with natural top. For the first time ALCO is proud to offer a mating one-piece aluminum pointer knob (KPN-700) — thus complementing this series.

Model	Finish — See Box Below	O.D.	One-99	100-249	250-499	500-999
KN-500	A, B	.500"	.55	.50	.47	.44
KN-700	A, B	.750"	.60	.54	.51	.48
KN-900	A, B	.937"	.70	.63	.60	.56
KN-1250	A, B	1.250"	.85	.77	.73	.68
KN-500	AB, BA**	.500"	.75	.68	.64	.60
KN-700	AB, BA**	.750"	.80	.72	.68	.64
KN-900	AB, BA**	.937"	.90	.81	.77	.72
KN-1250	AB, BA**	1.250"	1.10	.99	.94	.88
KPN-700	A, B	.750"	1.40	1.26	1.20	1.12
KPN-700	AB or BA**	.750"	1.60	1.44	1.36	1.28

ARROWHEAD INDICATOR KNOBS FOR ⅛" AND ¼" SHAFTS

Arrowhead indicator on top of straight knurl body. Black anodized body with natural top only.

Model	Finish — See Box Below	O.D.	One-99	100-249	250-499	500-999
KN-501	BA only	.500"	.80	.72	.68	.64
KN-701	BA only	.750"	.85	.77	.73	.68

SKIRTED KNURL KNOBS FOR ⅛" AND ¼" SHAFTS

Aluminum skirt is added to straight knurl body. Engraved ARROWHEAD indicator on skirt. Anodized two-tone.

Model	Finish — See Box Below	Knob O.D.	Skirt O.D.	One-99	100-249	250-499	500-999
KNS-501	BA only	.500"	.750"	1.00	.90	.85	.80
KNS-701	BA only	.750"	1.125"	1.15	1.04	.98	.92

ALUMINUM INSTRUMENT KNOBS

MINIATURE SERIES

With the development of solid state circuitry and the "squeeze" on the instrument panel, ALCO has created a mating series for miniature switches and controls having a ⅛" diameter shaft. The "KC" Series is designed for the MRA Series Alcoswitch, but usable with other components. "KCVS" Knobs provide the need for setting a predetermined stop position on controls or rotary switches with a ⅛" shaft. KC-500-10 has engraved numerals 0 through 9. KR-1 Knob Reducing Adapter can convert any knob having a ¼" shaft hole to fit a ⅛" size shaft.

Model	Finish—See Box Below	Description	One-99	100-249	250-499	500-999
K-500( )-⅛	A, B, G	Standard	.45	.41	.39	.36
KN-500( )-⅛	A, B	Straight Knurl	.55	.50	.47	.44
KN-500( )-⅛	AB, BA	Straight Knurl	.75	.68	.64	.60
KN-501( )-⅛	BA	Knurl-Arrowhead	.80	.72	.68	.64
KNS-501( )-⅛	BA	Knurl-Skirted	1.00	.90	.85	.80
KD-500( )-⅛	A, B, G	Diamond Knurl	.55	.50	.47	.44
KS-500( )-⅛	A, B	Skirted	.60	.54	.51	.48
KC-500( )	A, B	Skirted	.55	.50	.47	.44
KC-500( )-10	A, B	0-9 Numerals	.65	.59	.56	.52
KCVS-500( )	A, B	Adj. Stop	.10	.99	.94	.88
KR-1		Shaft Reducer ¼-⅛	.06	.045	.04	.036

DELUXE SERIES

These deluxe knobs are functionally styled to enhance the appearance and improve the operation of quality equipment. The unique, saw-cut indicator brings about the mod-trend in a complete family of knobs in four body sizes for use with ¼" shafts only; single set screws. More than any other component on your instrument panel, control knobs are in constant contact with the user. Customers first touch, twist, and use knobs (and are often influenced by this reaction) when purchasing hi-fi/stereo, tape recorder, test, lab and medical equipment. Model KHF-1250 is supplied with 2 set screws, and has 120° spacing.

Model	Finish*	O.D.	One-99	100-249	250-499	500-999
KHF-500	A, G	.500"	.45	.41	.39	.36
KHF-700	A, G	.750"	.50	.45	.43	.40
KHF-900	A, G	.937"	.55	.50	.47	.44
KHF-1250	A, G	1.250"	.65	.59	.56	.52

PLASTIC KNOBS WITH ALUMINUM TOPS

KNURLED KNOBS FOR ⅛" AND ¼" SHAFTS

Alco's new series of molded instrument knobs have been selected specifically for functional utility and attractive eye appeal. Designed to harmonize and enhance the appearance of any commercial and consumer electronic equipment. Available only in black plastic, each knob features an attractive spun aluminum cap plate thereby offering a pleasing two-tone effect. Equipped with molded-in brass bushing and standard 6/32 set screw. An indicating dot or hair line is provided on all knobs and is filled with white paint.

Model	Knob O.D.	Skirt O.D.	Shaft Dia.	One-99	100-249	250-499	500-999
PK-50B-⅛	.500"	.750"	⅛"	.25	.23	.22	.20
PK-50B	.500"	.750"	¼"	.25	.23	.22	.20
PK-70B	.750"	1.000"	¼"	.30	.27	.26	.24
PK-90B	.937"	1.250"	¼"	.35	.33	.30	.28

*KS dial skirt is natural anodized aluminum with or without numerals. The serrated knob body is of contrasting black with the aluminum spun plate on top. Available in the most popular size. Color: black. Indications: black arrow or 0 through 10 with 30° spacing. Brass insert and 6/32 set screw.

Model	Knob O.D.	Skirt O.D.	Shaft Dia.	One-99	100-249	250-499	500-999
PKS-90B	.937"	1.437"	¼"	.50	.45	.41	.40
PKS-90B-10	.937"	1.437"	¼"	.55	.50	.47	.44

STANDARD KNOBS FOR ⅛" AND ¼" SHAFTS

This new ALCO series has the advantage of slip-proof construction and still maintains maximum comfort which is important in the smaller size knobs. Extended plastic skirt and aluminum spun plate give this series a similar appearance to the other series listed. Color: black. Brass insert and 6/32 set screw.

Model	Knob O.D.	Skirt O.D.	Shaft Dia.	One-99	100-249	250-499	500-999
PKA-50B-⅛	.500"	.812"	⅛"	.30	.27	.26	.24
PKA-50B	.500"	.812"	¼"	.30	.27	.26	.24
PKA-70B	.750"	1.000"	¼"	.35	.32	.30	.28

FLUTED KNOBS FOR ¼" SHAFTS

The knob body has deep flutes, dial skirt, aluminum spun plate, and medium gloss finish that complements any panel design. The PKB is ideal for commercial and deluxe instruments. Color: black. White indicator. Brass insert and 6/32 screw.

Model	Knob O.D.	Skirt O.D.	Shaft Dia.	One-99	100-249	250-499	500-999
PKB-70B	.750"	1.125"	¼"	.35	.32	.30	.28
PKB-90B	.937"	1.500"	¼"	.40	.36	.34	.32

SPECIFY FINISH CODE FOR TYPES LISTED ABOVE

AB — Natural Body With Black Top; Black Indicator
BA — Black Body With Natural Top; White Indicator
A — Natural Aluminum; Black Indicator
B — Black; White Indicator
G — Gold; Red Indicator


K-500B


K-700B


K-900B


K-1250A-S


K-5700


KSP-700B


KD-900


KN-700B


KN-1250BA


KPN-700BA


KN-501BA


KNS-701BA


K-500A-⅛


KS-500B-⅛


KC-500A


KC-500B-10


KCVS-500A


KR-1
Shaft Reducer


KHF-700A


PK-70B


PKS-90B-10

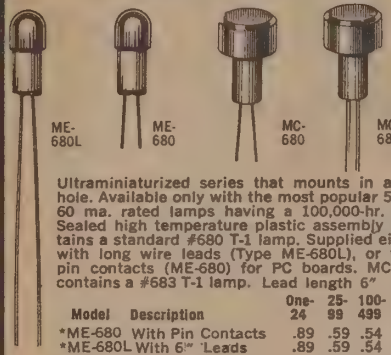

PKA-70B


PKB-70B

ALCOLITE

DIV. OF ALCO ELECTRONIC PRODUCTS, INC.

BRITE GLO® 5V PILOT LAMPS



Ultraminiaturized series that mounts in a ¼" hole. Available only with the most popular 5V @ 60 ma. rated lamps having a 100,000-hr. life. Sealed high temperature plastic assembly contains a standard #680 T-1 lamp. Supplied either with long wire leads (Type ME-680L), or with pin contacts (ME-680) for PC boards. MC-680 contains a #683 T-1 lamp. Lead length 6"

Model	Description	One- 24	25- 99	100- 499	500- 999
*ME-680	With Pin Contacts	.89	.59	.54	.45
*ME-680L	With 6" Leads	.89	.59	.54	.45
†MC-680	With Pin Contacts	.99	.67	.60	.49
†MC-680L	With 6" Leads	.99	.67	.60	.49

*Specify Choice — Red, White, Green, Blue, Yellow.
†Specify Choice — Red, White, Green, Blue, Amber

5V MINIATURE INCANDESCENT T-1 LAMPS



Commercial-MIL Grade Lamps produced to the needs of today's design engineers. The T-1 lamps listed below are for applications where space is at a premium and long life is a binding requirement. Each lamp in this series is subjected to a 16-hour aging period and is then selected as to shade, brightness, and current drain.

Model	Amps (±10%)	M.S.C.P. (±25%)	Average Hr. Life	One- 24	25- 99	100- 499	500- 999
680 AS25	.060	.032	100,000	.79	.53	.48	.40
683 AS25	.060	.053	100,000	.79	.53	.48	.40
713 AS25	.075	.088	60,000	.79	.53	.48	.40
715 AS25	.115	.147	40,000	.79	.53	.48	.40

5V MIL-GRADE T-1 LAMPS



Close Tolerance assures the user of the highest in reliability by an initial burn-in period of 16 hours minimum at or above the rated voltage. During this period, strains are relieved and early failures are detected. Each lamp is selected for close light output tolerance which assures predicted average life within very close limits.

Model	Amps (±10%)	M.S.C.P. (±15%)	Average Hr. Life	One- 24	25- 99	100- 499	500 999
680 AS15	.060	.032	100,000	1.29	.86	.78	.65
683 AS15	.060	.053	100,000	1.29	.86	.78	.65
713 AS15	.075	.088	60,000	1.29	.86	78	.65
715 AS15	.115	.147	40,000	1.29	.86	.78	.65

MINIATURE NEON T-1-1/8 LAMPS



Our smallest Neon Lamp is unique for its size and brilliance. Ignition voltage is 75 VAC or 95 VDC. Current should be limited to 800 μA. A series resistor of 150K is recommended for 115V operation or 180K for 220V. Light output variations are possible with changes in voltage or series resistance with resultant changes in life expectancy of 10,000 hours.

Model	Description	One- 24	25- 99	100- 499	500- 999
MNE-3	Standard	.69	.46	.41	.35
MNE-3H	High Intensity	.79	.53	.48	.40

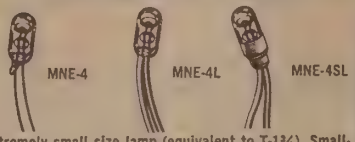
EXTRA LONG NEON LAMP



Special neon lamp replaces readout tubes in the "over range" position of digital voltmeters. Also usable as "+" or "−" display or where a longer illumination is needed and not available with a conventional NE-2. The lighted electrode is designed to mate with Alco MG-17 and MG-19 Elfin tube, or other comparable neon readouts. Breakdown: 90 VDC; Maintained V: 65 VDC; Design Current: 1.3 mA. Life: 2-8000 hrs. 1.0" overall length.

Model	Description	One- 24	25- 99	100- 499	500- 999
NE-211	Short Bare Leads	.39	.27	.24	.20

BRITE GLO® NEON LAMPS



Extremely small size lamp (equivalent to T-1¾). Smallest neon in the industry. Bullseye appearance gives the largest glow where needed on top. Rounded top places the illuminated area closer to the viewing point. Metal base (Model MNE-4SL) increases light output and protects lamp from damage. DC only.

Model	Description	One- 24	25- 99	100- 499	500- 999
MNE-4	With Short Bare Leads	.49	.33	.29	.24
MNE-4L	With 10" Insulated Leads	.53	.35	.31	.27
MNE-4SL	With 10" Insulated Leads and Metal Base	.59	.39	.35	.29

PANEL MOUNTED ASSEMBLIES

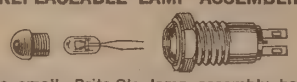


PLN-100 Neon — panel mounted neon Brite Glo lamp assembly incorporates the crater electrode T-1 ⅜ MNE-4L in a black phenolic case. It has 10" leads and mounts in a ¼" hole. DC only.

PL-105 Incandescent — panel mounted lamp assembly is ultraminiature in size. A mate to the Brite Glo panel mounting series (PLN-100 above) only with incandescent lamp that operates on 5V @ 60 ma. and having 100,000-hr. life. Mounts in ¼" hole; has 10" insulated leads.

Model	Panel Mtg. Lamp	One- 24	25- 99	100- 499	500- 999
PLN-100	10" Leads Neon	.89	.59	.54	.45
PL-105	10" Leads Incand.	.79	.53	.48	.40

REPLACEABLE LAMP ASSEMBLIES



Ultra small, Brite-Glo lamp assembly has a simple lamp replacement feature. The removable round dome lens unscrews and the tiny T-1 lamp is exposed for easy removal from the front of the panel, without tools. Standard #680 lamp rated 5 volts @ 60 ma, supplied installed. Mounts with 9/32-32 nut. Colors available: Red, Green, Blue, Yellow, or White — specify.

Model	Description*	One- 24	25- 99	100- 499	500- 999
BFK-5	Replaceable Lamp Assy.	1.29	.88	.77	.65

PILOT LIGHT ASSEMBLIES



BNE Series — featuring a 1-piece body construction, this miniature neon pilot is ideally suited to indicate toggle switch positions, or for other display configurations with space limitations. A particular characteristic of this model is the compact lens system protruding slightly above the panel. Operating voltage, 75 VAC without resistor; for 115 VAC operations use external resistors (150K for standard intensity, 33K for high intensity) not supplied. Single ⅝-32 mounting.

BNF Series — similar to the BNE Series except that the lens system extends a greater distance beyond the panel for a bright illumination. This model has a permanent built-in neon and operates on 75 VAC. An external resistor required for 115 VAC. Turret type lugs are used for simplified hookup. Single ⅝-32 mounting.

BND Series — combines an entirely new look in a space-saving pilot assembly. The neon protrudes beyond the panel to provide maximum light intensity. This model is available with or without built-in series resistor for 75 VAC or 115 VAC operation, and is also available as standard or high intensity. Single ⅜-32 mounting.

Model	Description* (Red, Amber, Clear, White.)	One- 24	25- 99	100- 499	500- 999
BNE-2	Standard, Less res.	.59	.39	.35	.29
BNE-3	Hi-Int., less res.	.69	.46	.41	.35
BNE-4R	With Int. Resistor	.79	.53	.48	.40
BNF-2	Standard, less res.	.59	.39	.35	.29
BNF-3	Hi-Int., less res.	.69	.46	.41	.35
BNF-4R	With Int. Resistor	.79	.53	.48	.40
BND-2	Standard, less res.	.59	.39	.35	.29
BND-2R	Std., with 150K res.	.69	.46	.41	.35
BND-3	Hi-Int., less res.	.69	.46	.41	.35
BND-3R	Hi-Int., with 33K res.	.79	.53	.48	.40

MINIATURE TRANSISTORIZED LOGILITE



LVN-ML-5V

ALCO FIRST — Created to provide a neon glow presentation operating from a low voltage supply source. Has a self-contained transistorized generator that provides the high voltage necessary to excite the neon. Design problems are thus simplified in computers, data processing and industrial control systems. Bushing length, ⅜" long. Dimensions behind panel, 1⅜" less terminals. ⅝" dia. LVN-ML-5V lens is flat cylindrical with internal fresnal ring; specify red or clear.

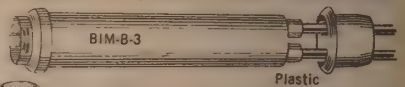
SPECIFICATIONS

	LVN-ML-5V
Normal Operating V.:	5 VDC
Normal Current:	30 mA
Max. Range:	6V @ 36 mA
Min. Range:	4V @ 21 mA
Mounting:	⅜-32 NEF-2A

Model	Mtg. Hole	One- 24	25- 99	100- 499	500- 999
*LVN-ML	⅜"	4.85	3.30	2.91	2.43

Specify lens color: red, or clear

BIM-B 110V NEON LIGHT INDICATORS





General purpose panel indicators have more versatility than similar models. 8 Lens Styles: Allow a greater variety to choose from (see below). **NE2H High Intensity Lamp** is incorporated and contains built-in series resistors for 110V operation. Flexible 6" leads, tinned conductors, high temperature insulation 105°C. Black wire size: solid 22 AWG. Polypropylene indicator housing (white) with acrylic lens — available in Red, Amber, and Clear — specify. Mounts ¾" dia. hole.

RETAINER — use of the mounting retainer supplied with each BIM indicator allows the installer to have 2 methods of panel installation. One choice is the conventional way where the retainer is pushed against the back of the panel and the indicator is placed through it. An optional choice of mounting is to fit the retainer on the front side of the panel, in a 1½" dia. hole.

BIM-R Metal Retainer (available separately) provides a snug-fit in a minimum of space. Used only with BIM Series having a ¾" hole mounting. Packaged, sold in multiples of 25.

Model	Description*	One- 24	25- 99	100- 499	500- 999
BIM-B-1	With Lens 1*	.59	.39	.35	.29
BIM-B-2	With Lens 2*	.59	.39	.35	.29
BIM-B-3	With Lens 3*	.59	.39	.35	.29
BIM-B-4	With Lens 4*	.69	.46	.41	.35
BIM-B-5	With Lens 5*	.69	.46	.41	.35
BIM-B-6	With Lens 6*	.69	.46	.41	.35
BIM-B-7	With Lens 7*	.69	.46	.41	.35
BIM-B-8	With Lens 8*	.69	.46	.41	.35
BIM-R	Metal Retainer	.03	.02	.018	.015

* Specify color: Red, Amber, or Clear.



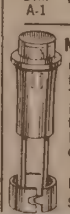
BIM-A SERIES NEON INDICATORS

These neon light indicators, with one lens style, are described in the BIM story (at left) but are fitted with solder lugs, and body lengths are shorter. BIM-A-1 has a NE2H lamp and is for use with an external resistor (not supplied); body length is 31/32". BIM/4A has a NE2H lamp and contains a built-in series resistor for 110V operation; body length is 1". Colors available for both types: Red, Amber, Clear — specify. Retainer is included.

Model	Description*	One- 24	25- 99	100- 499	500- 999
BIM-A-1	Without Resistor	.69	.46	.41	.35
BIM-A-4	With Resistor	.79	.53	.48	.40

* Specify color: Red, Amber, or Clear.

MINIATURE NEON PANEL INDICATORS



General purpose sub-miniature panel indicator for use with an external series resistor. The 1-piece body houses a sub-miniature high intensity neon lamp. The metal mounting retainer push fits into a ¼" dia. hole. Wire leads, metal retainer included. Choice of colors: Red, Amber, or Clear — specify.

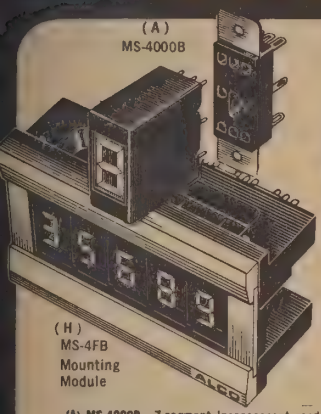
Model	Description*	One- 24	25- 99	100- 499	500- 999
SM-1	Less Resistor	.89	.59	.54	.45

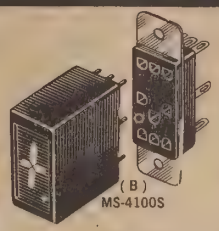
ALCO ELECTRONIC PRODUCTS, INC.

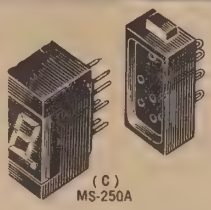
© United Technical Publications

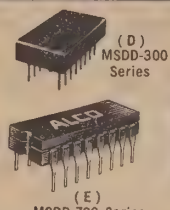
ALCO-DISPLAY

DIV. OF ALCO ELECTRONIC PRODUCTS, INC.

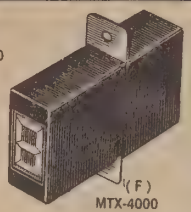

(A) MS-4000B


(B) MS-4100S


(C) MS-250A


(D) MSDD-300 Series

(E) MSDD-700 Series


(F) MTX-4000


(G) MTX-250

(H) MS-4FB Mounting Module

	4000 Series	250 Series
Lamps:	3-5 @ 40-60 ma. per segment	2.5V @ 20 ma. per segment
Current Drain:	80 ma (min.)	40 ma (min.)
Consumption:	420 ma (max.)	160 ma (max.)
Power:	.24 watt (min.) 2.1 watt (max.)	0.1 watt (min.) 0.4 watt (max.)
Weight:	15 grams	5.6 grams
Size:	.522x1.18x1.18″	

(A) MS-4000B—7-segment incandescent readout has a bright display that is clearly read under all ambient lighting conditions. The flat, single-plane display allows a wide-angle viewing without distortion. Large character size (.325″ x .600″) relative to case size (.552″ x 1.18″). Makes use of high temperature material housed in a one-piece, black matte metal case. Terminal pins are nickel-plated brass. Lamps are closely fitted into a compartmented block with short leads virtually eliminating vibration problems. Vibration test: 2000 c/s. Lamps are separately lit to form any numeral as desired by use of an external decoder/driver. High reliability, long life #683 T-1 subminiature lamps have a life expectancy of 100,000 hours.

MS-4100—as above, but with decimal and a slightly smaller figure. External dimensions same as above.

(B) MS4100S—symbol indicator with +, −, 1, and decimal, to match either the MS-4000 or MS-4100 readout.

(C) MS-250A—smaller version of 7-segment display. 0-to-9 characters. Snap-mount socket. Plastic housing.
MS-250S—symbol indicator (+, −, 1, and decimal) mates with MS-250A.

(D) MSDD Series 7-Segment Decoder-Drivers are monolithic MSI integrated circuits which decode BCD (8-4-2-1 code) inputs to 7-line outputs representing a decimal number from 0 to 9 on 7-segment incandescent display devices. 30 mA-per-line devices are: **MSDD-700** with decimal point, and **MSDD-701** with ripple blanking; both are for use with Alco MS-250 series. 80 mA-per-line devices are: **MSDD-702** with decimal point, and **MSDD-703** with ripple blanking; both are for use with Alco MS-4000, MS-4100, MS-6 and MSM-5 series. These devices are supplied in 16-lead dual in-line plastic packages which can be used over the operating temp. range of 0°C to +75°C.

(D) MSDD-300 Series are hybrid BCD to 7-output decoder/power drivers with active low outputs. Each is designed to drive the MS-4000B, MS-4100B, MS-250A, MS-6, MS-14 and SM-5A.

(E) DDM Series Plug-in decoder drivers mate with Alco incandescent devices. **DDM-702** has a MSDD-702 80 mA-per-output device with a decimal point output. Operates on 5V; used with MS-4100B. **DDM-703** same as above, except with ripple blanking. Use with MS-4000B.

(F, G) MTX Series Decimal-to-7 Segment Decoder Drivers consist of an integrated circuit using a diode matrix which drives the Alco Readouts. **MTX-4000** mates with MS-4000B Readout and displays 0-to-9. Vcc voltage to ground, 5.7V; lamp terminal voltage, 5.0V; current, 420 mA. MTX-4000 Decoder and MS-4000B Readout can be installed in the MS-4FB bezel and mount assembly that provides up to 5 modular digits. **MTX-250** mates with MS-250A readout and displays 0-to-9 and decimal point. Vcc voltage to ground, 3.2V; lamp terminal voltage, 2.5V; current 160 mA.

(H) MS-4FB — provides custom look to MS-4000 or MS-4100 readouts. Bezel has a top and bottom aluminum extrusion. Assembly provides a maximum of 5 modular digits. Rear blocks accept the sockets generally supplied with readouts. Assembly comes complete with red filter; less sockets and 1″ mounting screws. Use with clear readouts.

Model	Description	Filter	One-24	25-99	100-499	500-999
MS-4000BR	Numeric Readout	Red	6.45	5.48	4.84	4.19
MS-4000BC	Numeric Readout	Clear	6.45	5.48	4.84	4.19
MS-4100BR	Numeric Readout	Red	7.45	6.33	5.59	4.84
MS-4100BC	Numeric Readout	Clear	7.45	6.33	5.59	4.84
MS-4100SR	Symbol Readout	Red	7.45	6.33	5.59	4.84
MS-4100SC	Symbol Readout	Clear	7.45	6.33	5.59	4.84
MS-250AR	Numeric Readout*	Red	8.25	7.01	6.19	5.36
MS-250AC	Numeric Readout*	Clear	8.25	7.01	6.19	5.36
MS-250SR	Symbol Readout*	Red	8.25	7.01	6.19	5.36
MS-250SC	Symbol Readout*	Clear	8.25	7.01	6.19	5.36
MSDD-700	Decoder 30 mA/seg., w/decimal point		10.99	10.99	8.09	8.09
MSDD-701	Decoder 30 mA/seg., w/ripple blanking		10.99	10.99	8.09	8.09
MSDD-702	Decoder 80 mA/seg., w/decimal point		11.49	11.49	9.59	9.59
MSDD-703	Decoder 80 mA/seg., w/ripple blanking		11.49	11.49	9.59	9.59
MSDD-321	Decoder-Driver, 120 mA/seg.		14.60	12.41	10.95	9.49
MSDD-322	Decoder-Driver With Memory		19.95	16.96	14.96	12.97
MSDD-323	Decoder-Driver With Decade Counter		19.95	16.96	14.96	12.97
MSDD-324	Decoder-Driver With Memory & Counter		24.95	21.21	18.71	16.22
DDM-702	Plug-in Decoder-Driver, w/Dec. Pt.		23.00	19.55	17.25	14.95
DDM-703	Plug-in Decoder-Driver, w/Ripple		23.00	19.55	17.25	14.95
MTX-4000	Plug-in Decoder-Driver for MS-4000B		12.85	10.92	9.64	8.35
MTX-250	Plug-in Decoder-Driver for MS-250A		12.85	10.92	9.64	8.35
MS-4FBA	Module Section Kit, Natural		4.95	4.21	3.71	3.22
MS-4FBB	Module Section Kit, Black		4.95	4.21	3.71	3.22
MS-4BA	Bezel Only, Natural, pr.		1.25	1.06	.94	.81
MS-4BB	Bezel Only, Black, pr.		1.25	1.06	.94	.81
SKT-4B	Socket for MS-4000		.48	.41	.36	.32
SKT-41B	Socket for MS-4100		.48	.41	.36	.32

* Supplied with socket.


MS MOSAIC


MSM MOSAIC

MS Series Incandescent Mosaic—single plane 0 to 9 and some alphabet is displayed through diode-matrix (not supplied). Decimal points used as colon. Segmented bars are closely linked. Symbols with a +, —, figure "one" are available separately. Figures: .800″ high. Body Size: .834″ w. x 1.750″ h. x 2.104″ d. Lamp life: 20,000 hrs. Plug-in at rear of case. **MSM Series (miniature)**—as above, except smaller. Lamps: 5V 60 mA. Figures: .475″ h. Body: .475″ w. x .985″. Lamp life: 50,000 hrs.

Model	Volt	Description	One-24	25-99	100-499	500-999
MS-6A	6.3	Mosaic, Numeric	8.25	7.01	6.19	5.36
MS-6S	6.3	Mosaic, (+, −, 1)	8.25	7.01	6.19	5.36
MS-14A	14.00	Mosaic, Numeric	8.25	7.01	6.19	5.36
MS-14S	14.00	Mosaic, (+, −, 1)	8.25	7.01	6.19	5.36
MSM-5A	5.0	Mini Mosaic, Numeric	8.25	7.01	6.19	5.36
MSM-5AL	—	Mini Mosaic, with Wire Leads	9.95	8.46	7.46	6.47
MSM-5S	5.0	Mini Mosaic, (+, −, 1)	8.25	7.01	6.19	5.36
MS-MTX	—	49 Diode Matrix	12.45	10.58	9.34	8.09
MS-SK-R	—	Right Angle Socket (MS)	1.55	1.32	1.16	1.01
MS-SKT	—	Socket (MS)	1.15	.98	.92	.92
MSM-SK	—	Socket (MSM)	.85	.72	.64	.55
MS-FLV	—	Filter, Violet	.40	.34	.30	.26
MS-FLR	—	Filter, Red	.40	.34	.30	.26
MS-FLG	—	Filter, Green	.40	.34	.30	.26

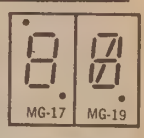


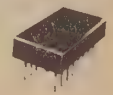
RK Series—precision machined from 1-piece aluminum which also serves as a heat sink for the bulbs. Front and rear tapped holes for mounting on a panel or on RKA-2-8 brackets. RK-FLV violet filter reduces reflected lighting for a better contrast. Unique in-line design provides clear displays without focusing problems. Compact size. Long life bulbs—20,000 hrs. Engraved acrylic plates are tightly-packed, edge-lit. **RKP Series**—plug-in readout indicators are designed for ease of use. **RKF Series**—has a larger 1-piece aluminum body with 1″ high numerals, along with 2 long-life bulbs per numeral for increased brightness. Numeral Size: 55″ h. (RK, RKP, RKF). Bulbs Used (T-1¾): #2181 (6.3V), 2182 (14V), A-24 (24V). Current Drain: 6.3V @ 200 ma., 14V @ 80 ma., 24V @ 50 ma. (RK, RKP). 6.3V @ 400 ma., 14V @ 160 ma., 24V @ 100 ma. (RKF). Body Size: 2.56 x .78 x 83″ (RK, RKP). 3.30 x 1.18 x 1.18″ (RKF).

ELFIN® NEON INDICATORS



Elfin is a single plane cold cathode neon indicator. 0.413″ dia. allows more figures for panel space. Character 0.433″ h. 9-Segmented MG-19 displays 0 to 9, +, −, decimal, some alpha. MG-17 has 7 segments, 2 decimals. Suitable for DC or pulsed operation. **MSDD-720** Series are hybrid BCD to 7-Output Decoder/Drivers with active high voltage outputs designed to drive segmented displays or other devices requiring high voltages and medium current sinking capabilities. **PS-51-117** Power Supply for MGDL-200 provides unregulated +200 VDC for the readout and regulated +5V for the circuit requirements.


MG-17 MG-19


MSDD-300 Series


PS-117

Model	Description	One-24	25-99	100-499	500-999
MG-17G	Elfin 7 Segments, 1 Decimal	4.95	4.21	3.71	3.22
MG-17F	Elfin 7 Segments, 2 Decimals	4.95	4.21	3.71	3.22
MG-19B	Elfin 9 Segments, 1 Decimal	4.95	4.21	3.71	3.22
MSDD-721	Decoder-Driver	14.60	12.41	10.95	9.49
MSDD-722	Decoder-Driver With Memory	19.95	16.96	14.96	12.97
MSDD-723	Decoder-Driver With Counter	19.95	16.96	14.96	12.97
MSDD-724	Decoder-Driver With Memory and Counter	24.95	21.21	18.71	16.22
PS-51-117	Logic Power Supply	39.95	33.96	29.96	25.97

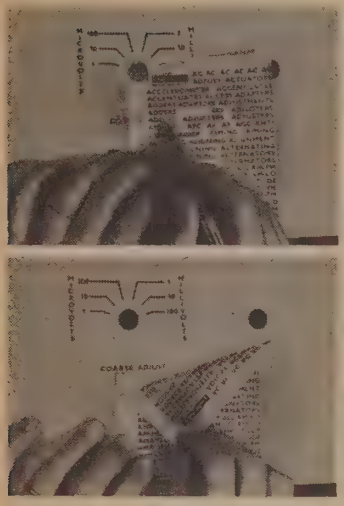
Model	Volt	Description	One-24	25-99	100-499	500-999
RK-6	6.3	Edgelighted, Numeric & Period	8.25	7.01	6.19	5.36
RK-14	14.0	Edgelighted, Numeric & Period	8.25	7.01	6.19	5.36
RK-24	24.0	Edgelighted, Numeric & Period	8.75	7.44	6.56	5.69
RK-6S	6.3	Edgelighted, Symbol (+, −, V, Ω, %)	8.25	7.01	6.19	5.36
RK-14S	14.0	Edgelighted, Symbol (+, −, V, Ω, %)	8.25	7.01	6.19	5.36
RK-24S	24.0	Edgelighted, Symbol (+, −, V, Ω, %)	8.75	7.44	6.56	5.69
RKP-6	6.3	Edgelighted, Numeric & Period	8.25	7.01	6.19	5.36
RKP-14	14.0	Edgelighted, Numeric & Period	8.25	7.01	6.19	5.36
RKP-24	24.0	Edgelighted, Numeric & Period	8.75	7.44	6.56	5.69
RKP-6S	6.3	Edgelighted, Symbol (+, −, V, Ω, %)	8.25	7.01	6.19	5.36
RKP-14S	14.0	Edgelighted, Symbol (+, −, V, Ω, %)	8.25	7.01	6.19	5.36
RKP-24S	24.0	Edgelighted, Symbol (+, −, V, Ω, %)	8.75	7.44	6.56	5.69
RFK-6	6.3	Edgelighted, Numeric & Period	15.75	13.39	11.81	10.24
RFK-14	14.0	Edgelighted, Numeric & Period	15.75	13.39	11.81	10.24
RKF-6S	6.3	Edgelighted, Symbol (+, −, V, Ω, %)	15.75	13.39	11.81	10.24
RKF-14S	14.0	Edgelighted, Symbol (+, −, V, Ω, %)	15.75	13.39	11.81	10.24
RKA-2-8	—	Bracket (RK, RKP)	1.65	1.40	1.24	1.07
RK-FLV	—	Violet Filter (RK, RKP)	.40	.34	.30	.26
RKF-FLV	—	Violet Filter (RKF)	.50	.43	.38	.33
RK-SKT	—	Pr. Sockets (RKPRKF)	1.65	1.40	1.24	1.07
RK-SKT-C	—	Pr. Sockets w/cover (RKP, RKF)	2.45	2.08	1.84	1.59

ALCO® ELECTRONIC PRODUCTS, INC.

instant lettering

THE REVOLUTIONARY METHOD FOR MARKING ELECTRONIC EQUIPMENT

JUST RUB and it's PRINTED!



Sharp • Clean • Fast

Not a Decal

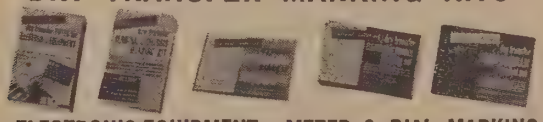
No Water • No Tapes

INSTANT LETTERING® marking kits bring you all the necessary elements for completely marking electronic equipment, prototypes, drawings, etc. in this fast new easy-to-use form. There's even a new drafting symbol kit for better more readable schematics.

Words, letters, numerals, switch patterns, arcs, drafting symbols, etc. are printed on a special transparent carrier film. Rubbing over one of these elements with a ballpoint pen releases it from the carrier film and adheres it to your working surface.

INSTANT LETTERING® words and symbols transfer to almost any surface including glass, plastic, even painted and bare metals. Now you can quickly mark all panels, even especially calibrated two-color nomenclatures, pilot light jewels, sub-assemblies, circuit boards, etc. Reproduction quality **INSTANT LETTERING®** transfers are clean and sharp, leave no background haze or film, make prototypes look like finished production equipment and give all equipment and drawings a professional look.

DRY TRANSFER MARKING KITS



TITLES for ELECTRONIC EQUIPMENT

NEW, REVISED; Now 20% more titles in a new easy-to-read typeface. Researched to give up to 95% of all electronic marking. For labeling, marking, titling all electronic control panels, drawings, prototypes, etc.

No. 9581—Complete Set (black).....$5.95
No. 9591—Complete Set (white).....$5.95
REFILL SETS—12 sheets per set
No. 9601—Alphabets (black) $3.00
No. 9611—Alphabets (white) $3.00
No. 9621—Numerals (black) $3.00
No. 9631—Numerals (white) $3.00

TERMINAL & CHASSIS MARKING KIT

All the necessary letters, letter combinations and numerals for marking chassis, printed circuit and terminal boards, rotating components, etc.

No. 966—Black $5.95
No. 967—White $5.95

DATAMARK KITS

Low cost dry transfer marking kits designed to provide useful preset words, symbols and alphabets for specific uses.

K58B—Audio, TV & HiFi (black) $1.50
K58W—Audio, TV & Hi-Fi (white).....$1.50
K59B—Amateur Radio & CB (black)...$1.50
K59W—Amateur Radio & CB (white)..$1.50
K60B—Experimenter, Home & Intercom (black) $1.50
K60W—Experimenter, Home & Intercom (white) $1.50
K61B—Test & Industrial Equipment (black) $1.50
K61W—Test & Industrial Equipment (white) $1.50
K62—Marks & Switch Patterns $1.50
K63—Alphabets & Numerals (⅛″)....$1.50
K64—Alphabets & Numerals (¼″)....$1.50
K65—Alphabets & Numerals (½″)....$1.50

METER & DIAL MARKING KIT

Arcs, dial patterns, lines, wedges, graduation lines, switch symbols alphabets and numerals in black, white and red for marking standard and special rotary tap switches, potentiometers and prototype and specially calibrated meter dials. colors provide contrast on scales and switches, simplifying usage of complex instruments.

No. 968—Complete Set $5.95
REFILL SHEETS—set of four identical sheets
No. 968R—(specify sheet number)....$2.00

ELECTRONIC SYMBOL DRAFTING SET

The quick way to more readable schematics. Contains 40 sheets of electronic symbols plus letters and numerals. Symbols designed to conform with MIL-STD-15-1A. Sheets have heat resistant adhesive for perfect reproduction in any blue- or white-printer. Also included is a complete guide to drawing with dry transfer symbols.

No. 970—Complete Set $19.15
REFILL SHEETS—set of four identical sheets
No. 970R—(specify sheet number) ...$2.00

LOGIC DIAGRAM SYMBOL SET

NEW! The most modern and effective aid to drawing logic diagrams. Symbols transfer to your drawing in seconds. All you need do is add the connecting leads. Heat resistant adhesive allows perfect reproduction even in diazo and other high speed printers. Symbols conform fully to MIL-STD-806B and ASA-Y32.14.

No. 971—Complete Set $4.20
REFILL SHEETS—set of four identical sheets
No. 971R—(specify sheet number)... $2.00

PRINTED CIRCUIT

. . . the Dry Transfer Way

etch resistant instant lettering

DATAMARI

PRINTED CIRCUIT KIT

. . . with Dry Transfer Etch Resi

Our tough dry transfer inks do double duty as etch resists in this new series of kits for maki printed circuit boards. Use them to make brea boards, one-of-a-kind prototypes and to hand those small modifications that used to requi artwork and photos.

PRINTED CIRCUIT ETCH KIT

Designed with the experimenter and technicia in mind, this set includes everything needed begin etching precision circuit boards. Contains:

- 4 copper clad phenolic boards
- 8 sheets of assorted etch resist patte (see ER-2 for more complete descriptic
- 2 120 in. rolls of etch resist tape (o each in 1/16 in. and 1/32 in. widths.)
- 1/4 lb. concentrated etchant
- A combination storage box and etch tray

ER-1—Complete Set .....**$4.95** Eac

DRY TRANSFER ETCH RESIST REFILL KIT



Contains 8 sheets of dry transfer etch resis patterns that include 1/16 in. lines, universa nesting circles, jogs, squeeze-throughs, univer sal flatpack and dual inline patterns, TO-9 (8 pin) and TO-100 (10 pin) microcircuits a well as TO-5 and plastic transistor pad patterns Also included are two 120 in. rolls of etc resist tape (one each in 1/32 in. and 1/16 in widths.) These transfers and tapes will with stand rapid-acting ferric chloride and man other fast-acting chemical etch systems.

ER-2—Etch Resist Refill Kit.....**$2.75** Eac

DRY CONCENTRATED ETCHANT REFILL KIT

Concentrated ferric chloride type etchant in a handy vapor-tight ¼ lb. package.

ER-3—Concentrated Etchant Refill Kit .....**$.89 Eac**

THE **DATAK** CORPORATION

Net

© United Technical Publication

DIALCO® INDICATOR LIGHTS

DIALIGHT CORPORATION
A NORTH AMERICAN PHILIPS COMPANY
MANUFACTURERS OF VISUAL INDICATORS

(Illustrations are approx. actual size.)

DATALITES® – Ultra-Miniature Indicator Lights

INCANDESCENT Datalites — For use on 1.35V - 28V Circuits



8-8738-504 w/507-3909-1471-600



0-8738-14-504 w/507-3909-1471-600

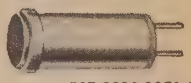
DATALAMP HOLDER



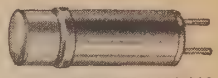
508-8738-504

TERMINAL TYPE*	DATALAMP HOLDER WITH COLLAR	DATALAMP HOLDER WITHOUT COLLAR
Turret	508–8738–504	250–8738–14–504

*To obtain Datalmp Holder with other than turret terminals change "87" in catalog No. to "75" (solder cup terminals). For amp "53" taper pin receptacles, change to "90". Example: 508–9038–504.



507-3909-0371-600



507-3909-1471-600

DATALAMP CARTRIDGES

CATALOG NOS. SHORT CYLINDRICAL+ LENS SHAPE *(TRANSLUCENT)	CATALOG NOS. FLAT + LENS SHAPE * (TRANSLUCENT)	VOLTS	MA.	C.P.**	LIFE HOURS
LONG LIFE—HIGH RELIABILITY					
507–3907–1471–600	507–3907–0371–600	6.3	40	.03	50,000
507–3909–1471–600	507–3909–0371–600	6.3	200	.40	50,000
507–3914–1471–600	507–3914–0371–600	14.0	80	.30	50,000
507–3918–1471–600	507–3918–0371–600	28.0	40	.30	25,000
STANDARD RATINGS					
507–3906–1471–600	507–3906–0371–600	6.0	200	.60	1,000
507–3913–1471–600	507–3913–0371–600	14.0	80	.50	750
507–3917–1471–600	507–3917–0371–600	28.0	40	.34	1,000

*If transparent lens is desired, change "7" in the catalog number to "3". Examples: 507–3909–1431–600; 507–3909–0331–600.

+ Other voltages available on request.

** C.P. is the mean spherical candle power of the lamp used. Values are useful for relative effectiveness.

Mount in 3/8" Clearance Hole

ıcandescent **DATALITE** Indicator Lights consist of:

) **Datalamp Cartridges** — a plug-in, replaceable light source, ith either short cylindrical or flat lens shape (see chart at ght); accommodated by (2) **Datalamp Holders** — with or ithout collar (see chart above).

tandard Finish: Aluminum, black anodize finish. To obtain ptional clear anodize finish, change the first digit in the cata- ıg number suffix from **-5** to **-6**. Example: 508-8738-**6**04.

ENS COLOR: See listing below.

NEON Datalites — For use on 105-125V AC-DC or 110-125V AC Circuits

Mount in 3/8" Clearance Hole

eon Datalite Indicator Lights consist of:

) **Datalamp Cartridges** — a plug-in, re- taceable light source, with either stove- ipe or long cylindrical lens shape — **ith or without** built-in current limiting esistor (see recommended resistance alues and appropriate code nos. below).

2) accommodated by **Datalamp Holders** f shorter length when cartridge **without** uilt-in resistor is used; by Datalamp Holders of longer length when cartridges **ith** built-in resistor are used. See charts t right for available selections.

tandard Finish: Black anodize. To obtain ptional clear anodize finish, change the rst digit in the catalog number suffix rom **-5** to **-6**.

Example: 508-8745-**6**04.

LENS COLOR: The digit **before** the last lash in the catalog number indicates that he color of the Datalamp Cartridge is RED. When color other than red is lesired, change this digit to a figure from he listing below.

Red—1; Green—2; Yellow (Amber)—3; Blue—4; White Translucent—5; Yellow—6; Clear (Colorless)—7.

Examples: 507-3901-1432-600 (green). 507-4538-1533-610 (yellow amber)

Note: **Blue** or **green** lens colors are not available for use with Neon light sources.

TERMINAL TYPE*	DATALAMP HOLDER WITH COLLAR	DATALAMP HOLDER WITHOUT COLLAR
Turret	508–8745–504	250–8745–14–504

*To obtain Datalamp Holder with other than turret terminals change "87" in catalog No. to "75" (solder cup terminals). For amp "53" taper pin receptacles, change to "90". Example: 508–9045–504.



508-8745-504 w/507-4538-0931-610

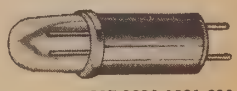
NEON DATALAMP CARTRIDGES		
LENS SHAPE	BUILT-IN RESISTOR HIGH BRIGHTNESS	BUILT-IN RESISTOR STANDARD BRIGHTNESS
Stovepipe	507–4538–0931–610	507–4537–0931–640
Long Cylindrical	507–4538–1531–610	507–4537–1531–640



250-8745-14-504 w/507-4538-0931-610

▲ NEON DATALAMP CARTRIDGES		
	WITHOUT BUILT-IN RESISTOR	
LENS SHAPE	HIGH BRIGHTNESS	STANDARD BRIGHTNESS
Stovepipe	507–3836–0931–600	507–3835–0931–600
Long Cylindrical	507–3836–1531–600	507–3835–1531–600

▲ These Datalamp Cartridges are accommodated by Datalamp Holders listed in table for Incandescent Datalites.



507-3836-0931-600 (without built-in resistor)

NEON LAMPS and RESISTOR VALUES					
		Bright Light		Long Life	
Neon Lamp	Volts Applied to Terminals	Resistor and Approx. Life		Resistor and Approx. Life	
Standard Brightness	105–125 AC or DC	56K	3000 hrs.	100K	15,000 hrs.
High Brightness	110–125 AC only	22K	5000 hrs.	33K	25,000 hrs.

Change 2nd digit in code no. suffix as follows: (56K)—640; (22K—610; (100K)—670; (33K)—630; Example: 507–4538–0931–630.



507-4538-1531-610 (with built-in resistor)

REQUEST CATALOG L-160

© United Technical Publications

(Illustrations are approx. actual size.)

DATALITES® — Ultra-Miniature Indicator Lights with Data Caps

REQUEST CAT. L-160

MOUNT IN 3/8" CLEARANCE HOLE

DIALCO



250-8738-1471-504

INCANDESCENT

INCANDESCENT ■ COMPLETE ASSEMBLIES WITH TURRET TERMINALS		
▲ DATA CAP LENS COLOR	SHORT CYLINDRICAL FOR USE WITH HOT-STAMPED LEGENDS (TRANSLUCENT)	SHORT CYLINDRICAL WITH DIFFUSING RINGS (TRANSPARENT)
Red	250–8738–1471–504	250–8738–3331–504

■ To obtain solder cup terminals change "87" in catalog number to "75". For amp "53" taper pin receptacles, change to "90". Example: 250–9038–1471–504.

DATALAMP CARTRIDGES

INCANDESCENT DATALAMP CARTRIDGES FOR USE IN DATA CAP ASSEMBLIES				
CATALOG NOS. SHORT CYLINDRICAL LENS SHAPE TRANSPARENT–COLORLESS	VOLTS	MA.	C.P.*	LIFE HOURS
LONG LIFE—HIGH RELIABILITY				
507–3907–1437–600	6.3	40	.03	50,000
507–3909–1437–600	6.3	200	.40	50,000
507–3914–1437–600	14.0	80	.30	50,000
507–3918–1437–600	28.0	40	.30	25,000
STANDARD RATINGS				
507–3906–1437–600	6.0	200	.60	1,000
507–3913–1437–600	14.0	80	.50	750
507–3917–1437–600	28.0	40	.34	1,000

*C.P. is the mean spherical candle power of the lamp used. Values are useful for relative effectiveness.

▲LENS COLOR:

To obtain Data Cap (or lens cap) with color other than red, change digit before last dash in catalog number (-1471-) to: Green-2; Amber-3; White Translucent-5; Clear Colorless-7.

Example: 250-8738-1473-504 (Amber)

Note: Blue and Green are not recommended for use with Neon Lamps.

NEON



250-8745-1631-50



250-8745-1531-50

FEATURES

A **DATALITE** Indicator consists of three parts: (a) the main body or **Datalamp Holder** which is adapted for permanent mounting on the panel: (b) the **Datalamp cartridge** which telescopes into the Datalamp Holder and makes electrical contact as the pins enter the receptacle in the holder; and (c) the screw-on **Data Cap.** The Data Cap secures the Datalamp and its lens controls the light emission.

NEON DATALAMP CARTRIDGES		
LAMP BRIGHTNESS	CARTRIDGES WITH BUILT-IN RESISTOR	CARTRIDGES WITH NO RESISTOR
HIGH	507–4538–0937–610	507–3836–0937–600
STANDARD	507–4537–0937–640	507–3835–0937–600

NEON ■ COMPLETE ASSEMBLIES WITH TURRET TERMINALS			
DATA CAP LENS SHAPE	▲ LENS COLOR	ACCOMMODATES CARTRIDGES WITH BUILT-IN RESISTOR	ACCOMMODATES CARTRIDGES WITH NO RESISTOR
Long Cylindrical Diffusing Rings	Red	250–8745–1631–504	250–8738–1631–504
Long Cylindrical W/O Diffusing Rings	Red	250–8745–1531–504	250–8738–1531–504

■ To obtain solder cup terminals change "87" in catalog number to "75". For amp "53" taper pin receptacles, change to "90". Example: 250–9038–3331–504.

▲ See LENS COLOR data at left.

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact

Sub-Min. Indicator Lights for T-2 Bulb with midget flanged base — NEON

C7A (NE–2D)—Standard Brightness
C9A (NE–2J)—High Brightness

TWO TERMINALS — FULLY INSULATED . . . Meet or exceed environmental and operational requirements of MIL-L-6723 and MIL-L-3661.

MOUNT IN 15/32" CLEARANCE HOLE FRONT OF PANEL INSERTION WITH FIXED FLANGE



137-8836-0931-552

With Built-in Resistor

(A patented DIALCO feature— U.S. Pat No. 2,421,321)

Conform to MS25257

Accommodates a T-2 Neon Glow Lamp: C7A (NE-2D) (MS25252) for 105-125 Volts A.C. or D.C.; **for Catalog Numbers see below... C9A (NE-2J)** (High Brightness) for 110-125 Volts — A.C. only.

CATALOG NO. WITHOUT LAMP	MS NO. WITHOUT LAMP	MS NO. WITH LAMP MS25252- C7A (NE–2D)	LENS COLOR
137–8836–0933–552	MS25257–2	MS25257–1	Aviation Yellow
137–8836–0931–552	MS25257–4	MS25257–3	Identification Red
137–8836–0937–552	MS25257–6	MS25257–5	Clear (Colorless)

LIGHT SOURCE: TINY NEON GLOW LAMPS

C7A (NE–2D) — Standard Brightness
C9A (NE–2J) — High Brightness



RECOMMENDED RESISTOR VALUES:	
FOR C7A (NE–2D) AT 105–125 VOLTS AC OR DC	
Bright Light ■62,000 ohms	Long Life 100,000 ohms
FOR C9A (NE–2J)–HIGH BRIGHTNESS–AT 110–125 VOLTS AC ONLY	
Bright Light ■22,000 ohms	Long Life 33,000 ohms

■ Standard values of patented built-in resistors; other values optional.

OPTIONAL FEATURES:



137-8836-1531-552

These assemblies are similar in every respect to the MS assemblies (137-8836-0931-552 Series) above, except that they offer **optional** features not covered by MS. Finishes: Standard—black anodize; **optional** — clear anodize. **Lamps — C7A (NE-2D)** (standard brightness) for 105-125 volts A.C. or D.C.; **C9A (NE-2J)** (high brightness) for 110-125 Volts — A.C. only.

	COMPLETE ASSEMBLIES			
	ACCOMMODATE C7A (NE–2D) LAMP		ACCOMMODATE C9A (NE–2J) LAMP	
LENS COLOR	STOVEPIPE	CYLINDRICAL	STOVEPIPE	CYLINDRICAL
Identification Red	137–8836–0931–552	137–8836–1531–552	137–8864–0931–512	137–8864–1531–512
Aviation Yellow	137–8836–0933–552	137–8836–1533–552	137–8864–0933–512	137–8864–1533–512
White	137–8836–0935–552	137–8836–1535–552	137–8864–0935–512	137–8864–1535–512
Light Yellow	137–8836–0936–552	137–8836–1536–552	137–8864–0936–512	137–8864–1536–512
Clear (Colorless)	137–8836–0937–552	137–8836–1537–552	137–8864–0937–512	137–8864–1537–512

WATER-TIGHT NEON INDICATOR LIGHTS with RETAINED O-RING SEALS

MOUNT IN 15/32" CLEARANCE HOLE FRONT OF PANEL INSERTION WITH FIXED FLANGE With Built-in Resistor



181-8836-0931-553

	COMPLETE ASSEMBLIES		
	WITH BUILT-IN RESISTOR		WITHOUT BUILT-IN RESISTOR
LENS COLOR	ACCOMMODATE C7A (NE–2D) LAMP	ACCOMMODATE C9A (NE–2J) LAMP	
Red	181–8836–0931–553	181–8864–0931–513	181–8536–0931–503
Yellow (Amber)	181–8836–0933–553	181–8864–0933–513	181–8536–0933–503
White (Translucent)	181–8836–0935–553	181–8864–0935–513	181–8536–0935–503
Light Yellow	181–8836–0936–553	181–8864–0936–513	181–8536–0936–503
Clear (Colorless)	181–8836–0937–553	181–8864–0937–513	181–8536–0937–503

LENS COLOR: See above left.

© United Technical Publications

DIALCO®

INDICATOR LIGHTS

DIALIGHT CORPORATION
A NORTH AMERICAN PHILIPS COMPANY
MANUFACTURERS OF VISUAL INDICATORS

(Illustrations are approx. actual size.)

Sub-Miniature Indicator Lights for T-1¾ Bulbs

With Midget Flanged Base — INCANDESCENT

MOUNT IN 15/32" CLEARANCE HOLE FRONT OR BACK OF PANEL INSERTION WITH MOVABLE FLANGE



101-3830-0931-201

MOUNT IN 15/32" CLEARANCE HOLE FRONT OF PANEL INSERTION WITH FIXED FLANGE



140-8430-1471-201

TYPE MOUNTING	LENS SURFACE	CATALOG NUMBER STOVEPIPE LENS SHAPE	CATALOG NUMBER CYLINDRICAL LENS SHAPE
Front or Back Mtg. in 15/32" Clearance Hole	Transparent	101-3830-0931-201	140-3830-1431-201
	Translucent	101-3830-0971-201	140-3830-1471-201
Front Mtg. in 17/32" Clearance Hole	Transparent	101-5030-0931-201	140-5030-1431-201
	Translucent	101-5030-0971-201	140-5030-1471-201
Front Mtg. in 15/32" Clearance Hole	Transparent	101-8430-0931-201	140-8430-1431-201
	Translucent	101-8430-0971-201	140-8430-1471-201

MOUNT IN 15/32" CLEARANCE HOLE • FRONT OF PANEL INSERTION WITH FIXED FLANGE • PER MIL-L-3661B



359-8430-0931-502

On 26 May 1969 Revision F canceled Drawing MS25256. This drawing has been superseded by part numbers listed in the table below.

NEW * DIALIGHT CATALOG NO. TO MIL-L-3661 DWG.	CONSISTING OF		LENS DESCRIPTION	
	LAMPHOLDER	LENS	FINISH	COLOR
359-8430-0933-502	LH73/1	LC12YN2	Non-diff.	Aviation Yellow
359-8430-0932-502	LH73/1	LC12GN2	Non-diff.	Identification Green
359-8430-0931-502	LH73/1	LC12RN2	Non-diff.	Identification Red
359-8430-0937-502	LH73/1	LC12CN2	Non-diff.	Colorless
359-8430-0975-502	LH73/1	LC12WT2	Translucent	Aviation White
359-8430-0934-502	LH73/1	LC12BN2	Non-diff.	Aviation Blue

To specify translucent stovepipe or cylindrical; or transparent cylindrical lens cap (not covered by MIL-L-3661B) write for Catalog L-178.

The new MIL-L-3661 number permits ordering either complete assembly or separate lampholder and lens cap.

* The lamp must be ordered separately.

Two Terminals — Fully Insulated

Meet or exceed environmental and operational requirements of MIL-L-6723 and MIL-L-3661.

RUGGED CONSTRUCTION

Lamp, socket, and all connections are completely insulated from the bushing and panel to which it is attached. The use of phenolic material for military specification grade assures permanent isolation from ground. These assemblies are solidly made to withstand usual vibration and corrosion resistance tests.

Order Complete with Lamp. Specify Lamp Number.

MANUFACTURER'S RATINGS (Values given are approx.)

LAMP NO.	VOLTS	AMPERES	HOURS	CANDLE-POWER
▲331	1.35	06	5,000	006
▲338	2.7	06	6,000	04
▲375	3.0	.015	20,000	004
*328	6.0	.20	1,000	63
345	6.0	04	1,000	.03
349	6.3	.20	5,000	55
380	6.3	04	20,000	.02
381	6.3	20	20,000	.40
▲344	10.0	014	25,000	002
367×	10.0	04	10,000	08
330	14.0	08	1,500	50
382	14.0	08	15,000	30
370	18.0	04	10,000	.15
*327	28.0	04	4,000	.34
**387	28.0	.04	7,000	30

▲ These lamps only are for use with transparent lens caps without legends

*Conforms to MS25237 **MS18209 (BuShips)

WATER-TIGHT ASSEMBLIES

Water-tight construction: These Sub-Miniature Lights are completely water-tight on the face of the panel. Water-tightness is achieved by means of **retained O-ring seals.** One **O-ring** is retained within the back of the lens cap, the other behind the flange on the mounting bushing.

MOUNT IN 15/32" CLEARANCE HOLE. FRONT OF PANEL INSERTION WITH FIXED FLANGE



177-8430-0931-503

WATER-TIGHT DIMMERS

On the Dimmer type assembly, a third **O-ring** is mounted within the dimmer cap — so positioned as to assure absolutely no leakage through the dimmer slot. For data, request Catalog L-178.

LENS COLOR	COMPLETE ASSEMBLIES	
	TRANSPARENT COLORS	TRANSLUCENT COLORS
Red	177-8430-0931-503	177-8430-0971-503
Green	177-8430-0932-503	177-8430-0972-503
Yellow (Amber)	177-8430-0933-503	177-8430-0973-503
Blue	177-8430-0934-503	177-8430-0974-503
White (Translucent)	177-8430-0935-503	177-8430-0975-503
Light Yellow	177-8430-0936-503	177-8430-0976-503
Clear (Colorless)	177-8430-0937-503	———

LENS COLOR: The figure before the last dash in the catalog number indicates that the lens is RED. When a color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

RED—1 . . . Green—2 . . . Yellow (Amber)—3 . . . Blue—4 . . .
White Translucent—5 . . . Light Yellow—6 . . . Clear (Colorless)—7.

Example: 101-3830-0932-201 (Green)

Use 1/2" or 3/4" Round or Square Friction-Fit Plastic Lens Caps

MOUNT IN 15/32" CLEARANCE HOLE FRONT OF PANEL INSERTION WITH FIXED FLANGE



183-9730-1471-602

The lens cap is effectively lighted by T-1¾ bulb with midget flanged base, which extends completely into the luminous portion. Fine solid color effects are obtained. The two-part construction permits opaque sides with lighted colored faces.

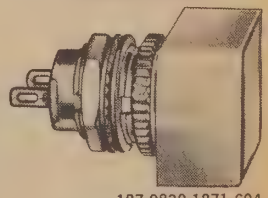
Lens caps may be rotated, permitting legends or cap edges to be easily brought into alignment after installation of the assembly; or they may be keyed, thus permitting them to be pushed into place only in a **predetermined** position.

Unique anti-rotation (locked) construction provides for secure keyed mounting of mounting bushing on panels.

LENS FACE COLOR: See listing — LENS COLOR — above. See lamp listing and range of voltages above.

To obtain ½" caps with non-rotatable feature, change catalog number prefix from: 183 to **186**; 185 to **184**; ¾" caps with rotatable feature: 188 to **191**; 187 to **190**.

MOUNT IN ½" CLEARANCE HOLE FRONT OR BACK OF PANEL INSERTION WITH MOVABLE FLANGE



187-9830-1871-604

WITH 1/2" FRICTION FIT LENS CAP - ROTATABLE

CAP COLOR COMBINATION	CAP SHAPE	FRONT MOUNTING 15/32" CLEARANCE HOLE	FRONT OR REAR MTG. 1/2" CLEARANCE HOLE
Solid Color, Translucent Face and Sides	Round	183-9730-1471-602	183-9830-1471-604
	Square	185-9730-1871-602	185-9830-1871-604
Translucent Colored Face, Black Opaque Sides	Round	183-9730-5071-602	183-9830-5071-604
	Square	185-9730-5071-602	185-9830-5071-604
Translucent Colored Face, Gray Opaque Sides	Round	183-9730-5171-602	183-9830-5171-604
	Square	185-9730-5171-602	185-9830-5171-604

WITH 3/4" FRICTION FIT LENS CAP - KEYED (NON-ROTATABLE)

CAP COLOR COMBINATION	CAP SHAPE	FRONT MOUNTING 15/32" CLEARANCE HOLE	FRONT OR REAR MTG. 1/2" CLEARANCE HOLE
Solid Color, Translucent Face and Sides	Round	188-9730-1471-602	188-9830-1471-604
	Square	187-9730-1871-602	187-9830-1871-604
Translucent Colored Face, Black Opaque Sides	Round	188-9730-5071-602	188-9830-5071-604
	Square	187-9730-5071-602	187-9830-5071-604
Translucent Colored Face, Gray Opaque Sides	Round	188-9730-5171-602	188-9830-5171-604
	Square	187-9730-5171-602	187-9830-5171-604



Sub-Sub-Miniatures

Series 252-9951-0971

Conforms to Drawing MS25446 2-7 . . . Requires only .193" Panel Mounting Clearance Hole . . . For complete data, refer to Catalog L-168.

Translucent Lens Cap Color	DIALCO Catalog No.	Military Number
Blue	252-9951-0974	MS25446-2
Green	252-9951-0972	MS25446-3
Red	252-9951-0971	MS25446-4

Translucent Color Lens Cap	Catalog No. DIALCO	Number Military
White	252-9951-0975	MS25446-5
Yellow (Amber)	252-9951-0973	MS25446-6
Clear (Transparent)	252-9951-0937	MS25446-7

DIALCO® INDICATOR LIGHTS

DIALIGHT CORPORATION
A NORTH AMERICAN PHILIPS COMPANY
MANUFACTURERS OF VISUAL INDICATORS

(Illustrations are approx. 75% actual size.)

For details, refer to Catalog L-161.

ASSEMBLIES For T-3-1/4 BULB with MIN. BAYONET BASE - INCANDESCENT - 2 to 55 V and T-3 Bulb with Min. Bayonet Base for 120V.

Mount in 11/16" Clearance Hole — *For Front Panel Insertion*

LENS STYLE	LENS FINISH	CATALOG NO. WITH SCREW TERMINALS	CATALOG NO. WITH SOLDER TERMINALS	CATALOG NO. WITH QUICK CONNECT TERMINALS
STOVEPIPE	Transparent	95-1310-0931-301	95-0410-0931-301	95-5710-0931-301
	Translucent	95-1310-0971-301	95-0410-0971-301	95-5710-0971-301
STOVEPIPE	Internal Fluting	52-1310-0991-301	52-0410-0991-301	52-5710-0991-301
CYLINDRICAL▲	Transparent	135-1310-1431-301	135-0410-1431-301	135-5710-1431-301
CONVEX *	Unfrosted	81-1310-0131-301	81-0410-0131-301	81-5710-0131-301
	Back Frosted	81-1310-0111-301	81-0410-0111-301	81-5710-0111-301
FLAT *	Back Frosted	81-1310-0211-301	81-0410-0211-301	81-5710-0211-301
	Unfrosted	81-1310-0231-301	81-0410-0231-301	81-5710-0231-301
FLAT▲	Translucent	■81-1310-0351-301	■81-0410-0351-301	■81-5710-0351-301
	Transparent	81-1310-0331-301	81-0410-0331-301	81-5710-0331-301
STOVEPIPE *	Transparent	169-1310-1131-301	169-0410-1131-301	169-5710-1131-301
	Internal Fluting	169-1310-1191-301	169-0410-1191-301	169-5710-1191-301

Recognized under the component program of Underwriters' Laboratories Inc.
75W., 125V



120 MB—(3W) T-3 Bulb with Miniature Bayonet Base—Incandescent for 120 Volts.



T-3 1/4 Bulb with Miniature Bayonet Base—Incandescent 2 to 55V.

* These assemblies should be specified when lamps **rated over 2 watts** are used.

■ Specify **translucent** colors as follows: Red — 0351; Green — 0352; Yellow (Amber) — 0373; Blue — 0374; Light Yellow — 0376. Example: 81-1310-**0374**-301.

▲ **LEGENDS:** Hot-stamped or engraved letters, number or symbols can be supplied **only** on these lenses.

LENS COLOR: The **final figure before the last dash** in the above numbers indicates that the lens has RED color. When color other red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted. Red — 1; Green — 2; Yellow Amber) — 3; Blue — 4; White Translucent — 5; Light Yellow — 6; Clear (Colorless) — 7.

NOTE: Blue and green not recommended for use with Neon lamps.



169-0410-1191-301
Screw-on lens cap



81-0410-0111-301
Screw-in lens cap

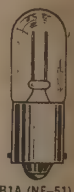
When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact

ASSEMBLIES with BUILT-IN RESISTORS (U. S. Patent No. 2,421,321)

For T-3-1/4 BULB with MIN. BAYONET BASE - NEON

MOUNT IN 11/16" CLEARANCE HOLE from FRONT OF PANEL

For operation on 105-125V AC-DC . . . 110-125V AC . . . 210-250V AC-DC



B1A (NE-51)
B2A (NE-51H)
(High Bright.)



95-0408-0931-341
Screw-in lens cap



169-0408-1191-341
Screw-on lens cap



135-0408-1431-341
Screw-in lens cap

BUILT-IN RESISTOR VALUES (in ohms) for NEON GLOW LAMPS

B2A (NE-51H)—High Brightness			B1A (NE-51)—Standard Brightness	
Circuit volts applied to terminals	110-125 AC	210-250 AC-DC	Circuit volts applied to terminals	105-125 AC-DC
BRIGHT LIGHT	■ 22,000	68,000	BRIGHT LIGHT	■ 56,000
LONG LAMP LIFE	33,000	100,000	LONG LAMP LIFE	100,000

■ **Standard values of patented built-in resistors.**

Recognized under the component program of Underwriters' Laboratories Inc.
75W., 125V
75W., 250V

LENS HOLDER AND PLASTIC LENS STYLE	LENS FINISH	FOR B2A (NE-51H)—110-125V. AC		FOR B1A (NE-51)—105-125V. AC-DC	
		CATALOG NO. WITH SCREW TERMINALS	CATALOG NO. WITH SOLDER TERMINALS	CATALOG NO. WITH SCREW TERMINALS	CATALOG NO. WITH SOLDER TERMINALS
STOVEPIPE (Screw-in)	Internal Fluting	52-1363-0991-311	52-0463-0991-311	52-1308-0991-341	52-0408-0991-341
CYLINDRICAL (Screw-in)	Transparent	135-1363-1431-311	135-0463-1431-311	135-1308-1431-341	135-0408-1431-341
FLAT (Screw-in)	Transparent	81-1363-0331-311	81-0463-0331-311	81-1308-0331-341	81-0408-0331-341
STOVEPIPE (Screw-in)	Transparent	95-1363-0931-311	95-0463-0931-311	95-1308-0931-341	95-0408-0931-341
STOVEPIPE (Screw-on)	Internal Fluting +	169-1363-1191-311	169-0463-1191-311	169-1308-1191-341	169-0408-1191-341
	Transparent +	169-1363-1131-311	169-0463-1131-311	169-1308-1131-341	169-0408-1131-341

+ To specify white translucent color, change so much of the catalog number that reads **-1231-** to **-0835-**; from **-1131-** to **-0935-**; from **-1191-** to **-0995-**. Example: 169-1363-**0935**-311.

HOW TO DESIGNATE THE THREE DIGIT CATALOG NUMBER SUFFIX (-XXX)

FINISH	RESISTOR	HARDWARE
-1 white nickel	1 - 22K	1 - brass
-2 black nickel	3 - 33K	3 - water-tight
-3 polished chrome	4 - 56K	on the face
-4 satin chrome	6 - 68K	of the panel.
	7 - 100K	

WATER-TIGHT CONSTRUCTION: The assemblies on this page may be made **water-tight** on the face of the panel. To specify, change the last digit in the catalog number suffix to **3**. Example: **95-1308-0931-343**.

NOTE: The part numbers given in this catalog indicate **standard** indicator lights. The table at left provides the standard and optional designations for **Finish, Resistor** and **Hardware** where appropriate. Example: 52-1308-1231-**273** (black nickel finish, 100K resistor, water-tight construction). **LENS COLOR:** See listing above.

© United Technical Publication

Illustrations are approx. 75% actual size.)

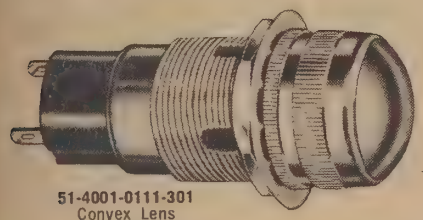
ASSEMBLIES for INCANDESCENT LAMPS

DIALCO®

with Candelabra Screw Base

Mount in 1" Clearance Hole • Range of Voltage 6 to 145V • Refer to Cat. L-161

Recognized under the component program of Underwriters' Laboratories Inc.
75W., 125V



51-4001-0111-301
Convex Lens

Standard Finish — Polished Chrome. To specify **optional finish** change the **first digit** of the catlog number suffix to **-2** (black nickel finish) or **-4** (satin chrome finish). Example: 51-0901-0231-201.

LENS COLORS: See listing on facing page.

Accommodate S-6 Bulb with Candelabra Screw Base

Similar assemblies are available to accommodate S-6 Bulb with Double Contact Bayonet Base.

LENS STYLE	LENS FINISH	CATALOG NO. WITH SCREW TERMINALS (SIDE POSITION)	CATALOG NO. WITH SCREW TERMINALS (PROTRUDING)	CATALOG NO. WITH SOLDER TERMINALS
CONVEX	Unfrosted	51-0901-0131-301	51-3101-0131-301	51-4001-0131-301
	Back Frosted	51-0901-0111-301	51-3101-0111-301	51-4001-0111-301
FLAT	Unfrosted	51-0901-0231-301	51-3101-0231-301	51-4001-0231-301
	Back Frosted	51-0901-0211-301	51-3101-0211-301	51-4001-0211-301
TORPEDO	Unfrosted	80-0901-0531-301	80-3101-0531-301	80-4001-0531-301
	Back Frosted	80-0901-0511-301	80-3101-0511-301	80-4001-0511-301
DOME	Unfrosted	80-0901-1231-301	80-3101-1231-301	80-4001-1231-301
	Back Frosted	80-0901-1211-301	80-3101-1211-301	80-4001-1211-301
TORPEDO FACETED	Unfrosted	80-0901-1331-301	80-3101-1331-301	80-4001-1331-301
FACETED	Unfrosted	51-0901-0431-301	51-3101-0431-301	51-4001-0431-301

* The assemblies in this chart have **screw-on** cap. For similar assemblies with **friction-fit** cap, change catalog number prefix to **31-**.

Example: **31**-0901-0131-301.

Assemblies for Incandescent Lamps (**S6 Bulb** with **Candelabra Screw Base**)

LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals in protruding position	CATALOG NO. with SCREW terminals in side position	CATALOG NO. with SOLDERING terminals
FLAT	back frosted	104-3101-0211-403	104-901-0211-403	104-4001-0211-403
TORPEDO	unfrosted	103-3101-0531-403	103-901-0531-403	103-4001-0531-403
	back frosted	103-3101-0511-403	103-901-0511-403	103-4001-0511-403
TORPEDO FACETED	unfrosted	103-3101-1331-403	103-901-1331-403	103-4001-1331-403
DOME	unfrosted	103-3101-1231-403	103-901-1231-403	103-4001-1231-403
	back frosted	103-3101-1211-403	103-901-1211-403	103-4001-1211-403

Recognized under the component program of Underwriters' Laboratories Inc.
75W., 125V

Assemblies for Incandescent Lamps (**S6 Bulb** with **Double Contact Bayonet Base**)

LENS TYPE	LENS SURFACE	CATALOG NO. with MOVABLE SCREW terminals	CATALOG NO. with FIXED SCREW terminals	CATALOG NO. with MOVABLE SOLDER. terminals	CATALOG NO. with FIXED SOLDER. terminals
FLAT	back frosted	104-3502-0211-403	104-3202-0211-403	104-3602-0211-403	104-3402-0211-403
TORPEDO	unfrosted	103-3502-0531-403	103-3202-0531-403	103-3602-0531-403	103-3402-0531-403
	back frosted	103-3502-0511-403	103-3202-0511-403	103-3602-0511-403	103-3402-0511-403
TORPEDO FACETED	unfrosted	103-3502-1331-403	103-3202-1331-403	103-3602-1331-403	103-3402-1331-403
DOME	unfrosted	103-3502-1231-403	103-3202-1231-403	103-3602-1231-403	103-3402-1231-403
	back frosted	103-3502-1211-403	103-3202-1211-403	103-3602-1211-403	103-3402-1211-403

OIL-TIGHT INDICATOR LIGHTS

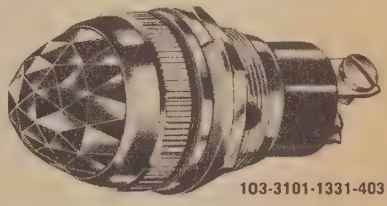
OIL-TIGHT • WATER-TIGHT • DUST-TIGHT

MOUNT IN 1" CLEARANCE HOLE

With Retained "O" Ring Seal Construction

Rugged, designed for severe vibration conditions. 3 types of Incandescent Lamps may be used: S-6 with Candelabra Screw Base or with Double Contact Bayonet Base; or C-7 bulb with Double Contact Bayonet Base. The latter is designed to withstand severe vibration and shock. Consult factory for data on latter.

Assemblies feature: 3 retained oil-proof elastometer seals (1 gasket and 2 "O" rings); high impact phenolic insulation.



103-3101-1331-403

ASSEMBLIES for T-3¼ BULB with MIN. BAYONET BASE INCANDESCENT or NEON

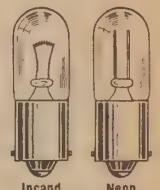
MOUNT IN 11/16" CLEARANCE HOLE

Dome Lens



123-5710-1231-403

In these Oil-Tight Indicator Lights, a high degree of resistance to shock and vibration is achieved by the use of the rugged *Neon* lamps on 120 and 240 V; and by choosing low voltage *Incandescent* lamps with short filaments, such as No. 44 or No. 1866 for circuits powered by transformers stepping down to 6.3 V.



Incand. Neon B1A (NE-51) B2A (NE-51H) (High Bright.)

Assemblies for the T-3¼ BULB with Miniature Bayonet Base—INCANDESCENT

LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals	CATALOG NO. with SOLDER terminals	CATALOG NO. with QUICK CONNECT terminals
DOME	unfrosted	123-1310-1231-403	123-0410-1231-403	123-5710-1231-403
	back frosted	123-1310-1211-403	123-0410-1211-403	123-5710-1211-403
STOVEPIPE	unfrosted	125-1310-1131-403	125-0410-1131-403	125-5710-1131-403
	back frosted	125-1310-1111-403	125-0410-1111-403	125-5710-1111-403
	inside fluted	125-1310-1191-403	125-0410-1191-403	125-5710-1191-403

		ASSEMBLIES FOR USE WITH B2A (NE-51H) NEON GLOW LAMP		
LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals (210-250V. AC-DC)	CATALOG NO. with SOLDER terminals (210-250V. AC-DC)	CATALOG NO. with QUICK CONNECT terminals (210-250V. AC-DC)
DOME	unfrosted	123-9363-1231-463	123-9463-1231-463	123-5863-1231-463
STOVEPIPE	unfrosted	125-9363-1131-463	125-9463-1131-463	125-5863-1131-463
	inside fluted	125-9363-1191-463	125-9463-1191-463	125-5863-1191-463

Exclusive Features: Assemblies for use with B1A(NE51) Neon Glow Lamps have "built-in" resistors — an exclusive Dialco feature (U.S. Pat. No. 2,421,321). **Options include:** binding screw, soldering or quick connect terminals. 7 lens colors are available; see facing page to specify lens color.

OPTIONAL FINISHES

The part numbers given indicate **standard** satin chrome finish. To specify optional finish, change the first digit in the catalog number suffix to **-2** black nickel finish; or **-3** polished chrome finish. Examples: 103-3502-1231-203; 125-9363-1191-363.

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact).

Stovepipe —fluted



125-1310-1191-403

Stovepipe —plain



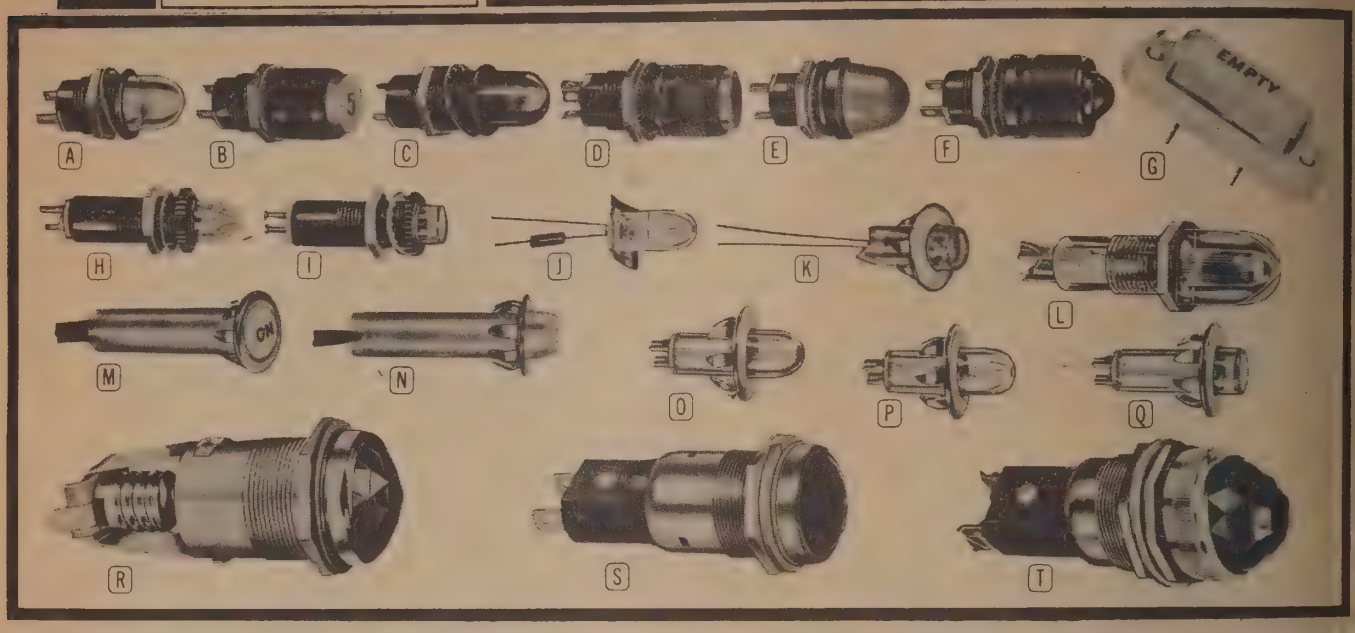
125-0410-1131-403

		ASSEMBLIES FOR USE WITH B2A (NE-51H) NEON GLOW LAMP			ASSEMBLIES FOR USE WITH B1A (NE-51) NEON GLOW LAMP		
LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals (110-125V. AC)	CATALOG NO. with SOLDER terminals (110-125V. AC,	CATALOG NO. with QUICK CONNECT terminals (110-125V. AC)	CATALOG NO. with SCREW terminals (105-125V. AC-DC)	CATALOG NO. with SOLDER terminals (105-125V. AC-DC)	CATALOG NO. with QUICK CONNECT terminals (105-125V. AC-DC)
DOME	unfrosted	123-1363-1231-413	123-0463-1231-413	123-5763-1231-413	123-1308-1231-443	123-0408-1231-443	123-5708-1231-443
	unfrosted	125-1363-1131-413	125-0463-1131-413	125-5763-1131-413	125-1308-1131-443	125-0408-1131-443	125-5708-1131-443
STOVEPIPE	inside fluted	125-1363-1191-413	125-0463-1191-413	125-5763-1191-413	125-1308-1191-443	125-0408-1191-443	125-5708-1191-443

© United Technical Publications

DRAKE

INDICATOR LIGHTS, LAMPHOLDERS & LENSES



"MF" SERIES INDICATOR LIGHTS

MIDGET FLANGE BASE UNITS

Incandescent except for neon -703. Front mounted in 15/32" hole; aluminum body. Both lugs insulated from mounting. Threaded shank lens. Commercial units, clear finish; MIL units, black anodized: †LH-73/1-LC12+N2, ‡LH73/1-LC11+T2, §LH74/1-LC13+T2 respectively.

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
5131-038-303†	A	3/16"	29/64"	3/4"	$1.10	$0.99	$0.92
5132-038-544‡	B	15/32"	29/64"	3/4"	1.60	1.44	1.33
5133-048-703§*	C	7/16"	17/32"	63/64"	1.65	1.49	1.38

*Built-in 62K-ohm resistor. Max. panel th., 15/32"; others, 9/32".
"+" represents one of letters used for color.

"MF" PRESS-TO-TEST UNITS

Provides reliable, instantaneous check of lamp condition. Maximum panel thickness, 3/16".

5132-636-503	D	15/32"	37/64"	13/16"	$2.27	$2.05	$1.90

"MF" OIL-TITE/WATER-TITE UNITS

Recessed rubber "O" rings will withstand up to 25 p.s.i. pressure. Type 5150 has salt shaker dimmer in lens assembly. Maximum panel thickness, 3/16". Per MIL drawing: #D5-15-3217; •SM-B-450166; •SM-C-415155; •ONO20148.

5139-038-404#	E	37/64"	15/32"	25/32"	$1.35	$1.22	$1.13
5150-038-101•	F	15/32"	21/32"	25/32"	2.08	1.87	1.73

NEON INDICATOR LIGHTS — 115 VOLTS

"FLUSHLITE" — U/L AND CSA APPROVED

"One-of-a-kind". Built-in neon lamp and 25K ohm resistor. To be flush with face of panel, mount from rear in panel, up to 11/32" thick, on 5/8" or 1 3/4" centers; or, may be mounted on panel top.

Drake Number	Fig.	Lens Size	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
110-025	G	13/32" x 1 1/4"	11/64" or 5/16"	17/32 or 3/16"	$0.55	$0.49	$0.46

"MINEON"

Similar to "Econoglo"; mounted in black-anodized aluminum body with two turret or solder (*) lugs (specify on order). Mount from rear of panel, up to 3/8" thick, in 3/8" dia. hole on 5/4" centers. Hi-Brite, built-in neon lamp with 22K-ohm resistor; 115 v. AC.

HR118-323*	H	13/32"	15/32"	13/16"	$1.02	$0.92	$0.85
HR118T-323	—	13/32"	15/32"	13/16"	1.15	1.04	.96
HR118T-603	I	13/32"	5/32"	13/16"	1.15	1.04	.96

"POSTLITE"

Extremely decorative. Built-in series resistor, 25K ohms, and neon lamp for 110-125 v. AC. Mount from front of panel, up to 5/16" thick, in 1/2" dia. hole on 7/8" centers. Hi-Brite lamp.

105-025	L	5/8" sq.	3/4"	1 5/16"	$0.87	$0.78	$0.72

"GLO-LITES"

One-piece nylon body and lens with built-in Hi-Brite neon lamp. With two lead terminations, 22 ga. plastic-insulated wire. Mount from front of panel, up to .080" thick, in 1/2" dia. hole on 1 1/16" centers. Built-in resistor: 25K for 115 V; 100K for 250 V (*).

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
6073-001-544	M	27/64"	1/8"	1 13/32"	$.68	$0.61	$0.57
6073-001-634	N	27/64"	3/16"	1 9/32"	.56	.50	.46
6075-001-544	M	27/64"	1/8"	1 13/32"	.68	.61	.57
6075-001-634	N	27/64"	3/16"	1 9/32"	.56	.50	.46

***PRICES LESS LAMPS UNLESS BUILT-IN.**

WRITE FOR O.E.M. DISCOUNTS ON LARGER QUANTITY ORDERS.

NEON INDICATOR LIGHTS (CONT'D)

"ECONOGLO" — WIRE LEADS

Mount from front of panel. For type 116, mount in 3/16" hole on panel up to 3/16" thick (fastened with tinnerman nut). For type 117, mount in 1/2" hole on panel up to 1/16" thick (chrome snap-in). Lens shapes (last 3 digits) interchangeable on types 116 and 117. Termination: two-wire leads. Built-in 22K-ohm resistor (*); others require external resistors, not supplied. Built-in neon lamp. Low cost 115 v. AC indicator lights.

Drake Number	Fig.	Lens Size	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
116-603		11/32"	3/8"	15/32"	$0.26	$0.23	$0.21
HR116-323*	J	11/32"	3/16"	11/16"	.32	.28	.26
117-603	K	11/32"	1/4"	5/8"	.33	.30	.28
HR117-323*	....	11/32"	7/16"	13/32"	.40	.36	.33

NEW "ECONOGLO" WITH LUGS

TINNERMAN NUT OR PLUG BUTTON MOUNTING

Mount from front of panel. For type 6140, mounts in 3/8" D hole on panel up to 3/16" thick (fasten with Tinnerman nut). For type 6150, mounts in 1/2" D hole on panel up to 1/8" thick (chrome snap-in plug button). Lens shapes (last three digits) interchangeable on type 6140 and 6150. Termination: Two lugs. Incandescent built-in lamp: Low-cost 28 v. AC—lamp rating .04A (6148 or 6158 types) Also 6.3 v. AC lamp rating .04A (6146 or 6156 types).

Drake Number	Fig.	Lens Size	Projection Front	Projection Rear	Selling Prices Per Each 1-9	10-24	25-99
6146-000-307		11/32"	3/8"	45/64"	$0.99	$0.89	$0.83
6146-000-607		11/32"	3/16"	55/64"	.99	.89	.83
6148-000-307		11/32"	3/8"	45/64"	.90	.81	.75
6148-000-607		11/32"	3/16"	55/64"	.90	.81	.75
6156-000-303	O	11/32"	7/16"	41/64"	1.07	.97	.90
6156-000-323	P	11/32"	1/16"	41/64"	1.07	.97	.90
6156-000-603	Q	11/32"	1/4"	51/64"	1.07	.97	.90
6158-000-307	O	11/32"	7/16"	41/64"	.98	.89	.82
6158-000-607	Q	11/32"	1/4"	51/64"	.98	.89	.75

1" LENS INDICATOR LIGHTS

CANDELABRA SCRE[illegible] S-6 — 115 VOLTS MONEY-SAVER — U/L [illegible]ND CSA APPROVED

Polished chrome lens holder. Lamps [illegible]eplaceable from front or rear. Mount from front of panel, up to 1/2" thick, in 1" dia. hole on 1 3/8" centers. Slip-fit bezel (*).

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
75-110*	R	1"	7/16"	2 1/4"	$1.31	$1.18	$1.09

STANDARD — U/L AND CSA APPROVED

Easy front replacement of lamps. Snap-in lens assembly.

5756-522-110	S	1"	7/16"	2 9/16"	$1.57	$1.41	$1.31

* Same as: 75AP-110 or B1476L-1SE-110

"TITELITE"

Neoprene gaskets seal out oil, water, dust and dirt.

5796-523-410	T	1"	1 3/16"	1 27/32"	$2.51	$2.26	$2.09

• Same as: B1479L-1BE-410.

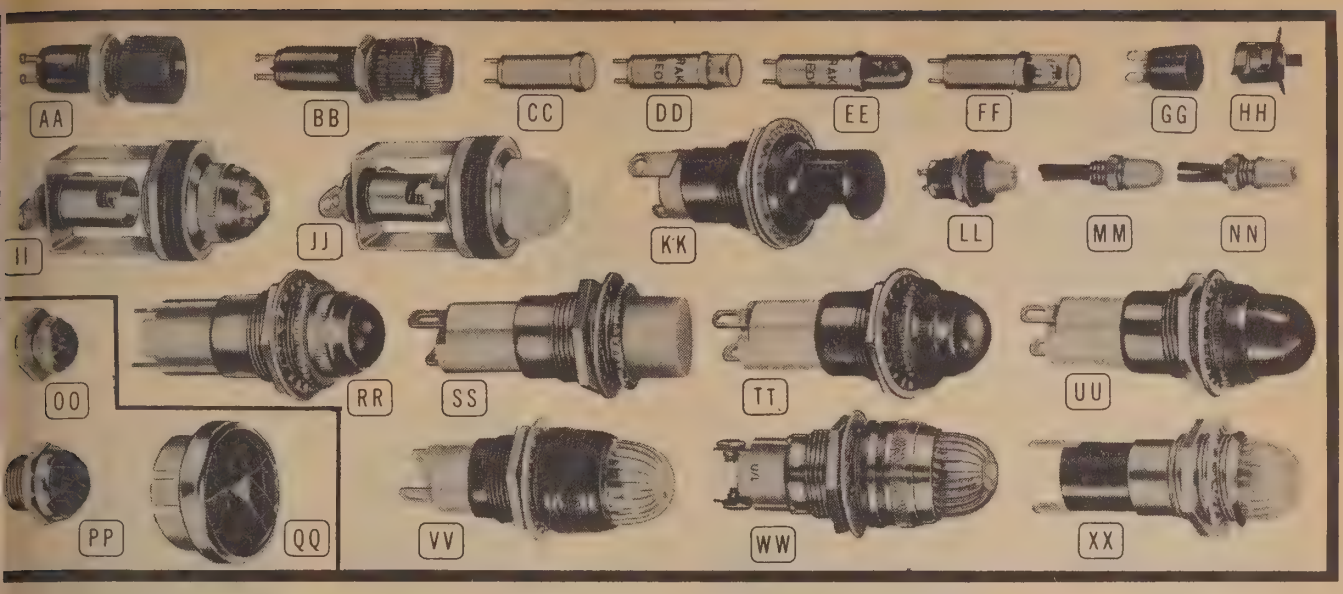
SPECIFY COLOR ON ORDER: Incandescent and Neon—Red, Yellow (Amber), White or Colorless. Incandescent Only—Green or Blue.

Lenses 503, 504, 603 and 604 may be Imprinted; change 0 (2nd digit) to 4 (e.g., 543). Prices on Request.

ALL DRAKE PRICES subject to CHANGE WITHOUT NOTICE — check "United Pricing Reports" at your DISTRIBUTOR

Net

© United Technical Publication



BI-PIN CARTRIDGE LAMPHOLDER

Lampholder has lamp cartridge replaceable from front. Mount from rear of panel, up to 1/64" thick, in 3/8" dia. hole on 31/32" centers. Two tinned turret lugs.

Drake Number	Fig.	Projection Front	Projection Rear	Resis., Ohms	Net Each, Lots of* 1-9	10-24	25-99
4428-001	AA	3/8"	5/64"	None	$0.97	$0.87	$0.81

NEW MIDGET BI-PIN CARTRIDGE — 120 VOLTS INCANDESCENT INDICATOR LIGHTS

Relamped from front. Rear mounted in 3/4" dia. "D" hole. Black anodized body and lens holder. Two turret lugs. Translucent (*) or transparent refracting lenses. Maximum panel thickness, 5/16".

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
5300-428-507*	BB	13/32"	23/64"	15/32"	$1.25	$1.13	$1.04
5300-428-596	BB	13/32"	23/64"	15/32"	1.25	1.13	1.04

"BI-PIN CARTRIDGE LAMPS"

Small size, easy-plug-in neon or incandescent lamp sealed into aluminum casing. Stainless steel pins. Neon cartridges require a series resistor. Nos. 5-(*) have built-in 22K ohm resistor.

NEON

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Volts	Net Each, Lots of* 1-9	10-24	25-99
1-603	DD	3/32"	17/64"	53/64"	115	$0.81	$0.73	$0.67
5-703*	EE	3/32"	15/32"	53/64"	115	1.23	1.10	1.02
5-803*	FF	3/32"	31/64"	53/64"	115	1.23	1.10	1.02

INCANDESCENT

6-607	DD	3/32"	17/64"	53/64"	6	$0.96	$0.86	$0.80
7-503	CC	3/32"	7/64"	53/64"	10	1.30	1.17	1.09
11-607	DD	3/32"	17/64"	53/64"	28	.89	.80	.75

CONNECTORS AND FASTENERS

Drake No. 300-058 Connector (Fig. GG)—Used with 763 fastener to mount "Bi-Pin Cartridge Lamps" where conventional method is impractical; or, to save money. Net Each, Lots 1-9 ..... $ .14
Lots 10-24 ..... $ .13 Lots 25-99 ..... $ .12
Drake No. 763 Fastener (Fig. HH)—Net Each, Lots 1-9 ..... $ .04
Lots 10-24 ..... $ .04 Lots 25-99 ..... $ .03

"MONEY-SAVER" INDICATOR LIGHTS

MINIATURE BAYONET BASE T-3 1/4 — 6 TO 28 VOLTS

Nickel-plated lens holder. Lamps replaceable from front. Mount from front of panel, up to 1/4" thick, in 1/16" dia. hole on 1" centers. Rated 2 watts.

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
50-113	II	1/2"	17/32"	13/32"	$0.58	$0.52	$0.49
51-304	JJ	5/8"	1/2"	17/32"	.49	.44	.41

INSTRUMENT LIGHT

MINIATURE BAYONET BASE T-3 1/4 — 6 TO 28 VOLTS

Threaded hood. Lamps replaceable from front. Mount from front of panel, to 13/32" th., in 1/16" dia. hole on 31/32" ctrs.; 2 solder lugs.

168E	KK	..	11/16"	1 3/8"	$1.50	$1.35	$1.25

NEW "GEMLITE"

Replaceable, long-life, sub-midget incandescent lamp T-1, 5 V. Front mounted in 3/16" hole. Brass body; two lugs insulated from ground. Meets MIL applications. Max. panel thickness, 1/32".

5160-458-604	.....	1/4"	1/4"	15/32"	$2.02	$1.82	$1.68
5160-458-644	LL	1/4"	1/4"	15/32"	2.12	1.90	1.76

NEW "ASTROLITE"

Built-in T-1 incandescent lamp with 60,000 hours life, 5 V. Mounts in .191" dia. "D" hole. Stainless steel body. Two Teflon® insulated, 6" leads. Translucent, butyrate lens per MS25446. Maximum panel thickness, 3/16". ®Registered DuPont trademark.

6026-001-704	MM	7/32"	9/32"	17/64"	$2.71	$2.44	$2.26
6026-001-844	NN	7/32"	7/16"	17/64"	2.83	2.55	2.36

DRAKE LENSES

The last three digits of most Drake numbers identify lens shapes and other variations. Below are three popular lenses.

Drake Number	Fig.	Lens Dia.	Shank O.D.	Shank I.D.	Shank Lgth.	Net Each, Lots* 1-9	10-24	25-99
14-15-113	OO	3/16"	3/16"-32 thd.	15/64"	1/4"	$.17	$.15	$.14
16-17-113	PP	1/2"	3/16"-27 thd.	13/32"	3/8"	.20	.18	.17
75A-110	QQ	1"	.887/.889	53/64"	5/16"	.64	.58	.54

"DELUXE MOLDED" INDICATOR LIGHTS

MINIATURE BAYONET BASE T-3 1/4 — 6 TO 28 VOLTS
NEON B2A — 115 & 250 V. — U/L & CSA APPROVED

Polished chrome finish. Assured dependability; fine appearance. Feature E-Z-Tite flange for quick assembly with Drake No. 32 wrench. Lamp replaceable from front. Mount from front of panel, up to 13/32" thick, in 1/16" dia. hole on 31/32" centers. Neon lamps have built-in series resistor. Two solder lugs.

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Resis., Ohms	Net Each, Lots* 1-9	10-24	25-99
5200-222-101‡	RR	1/2"	17/32"	15/8"	.....	$1.24	$1.11	$1.03
5200-222-604	SS	5/8"	1/2"	15/8"	.....	.98	.89	.82
5201-228-101*	TT	1/2"	17/32"	15/8"	.....	1.47	1.33	1.23
5201-228-301*	UU	5/8"	11/16"	15/8"	.....	1.81	1.63	1.51
5200-232-623	....	5/8"	1/2"	15/8"	22K	1.17	1.05	.98
5200-242-603	SS	5/8"	1/2"	15/8"	100K	1.17	1.05	.98
5202-222-301‡	....	5/8"	11/16"	11/16"	.....	1.57	1.41	1.31

MAXIMUM VISIBILITY SERIES

Female thread in lens holder permits neon lamp to project into macrodome lens for maximum visibility. U/L and CSA Approved.

5204-238-320*	VV	5/8"	23/32"	1 3/32"	27K	$2.06	$1.85	$1.72

*MIL unit (black anodized) 5201-228-101 (LH 76/3-LC 14+D1) 5201-228-301 (LH 76/3-LC 15+D1), or 5204-238-320 (LH 77/2-LC 20+N1) "+" represents one of letters used for color. Ordering Drake components specify color. **"TITELITE" SERIES**

Neoprene gasket seals out oil, water and dust. Front or rear panel mount.

5204-223-320WP‡	WW	5/8"	23/32"	1 1/32"	.....	$1.99	$1.79	$1.66

STANDARD SERIES INDICATOR LIGHTS

MINIATURE BAYONET T-3 1/4 — 6 TO 28 VOLTS
NEON NE-51H — 115 & 250 V. — U/L & CSA APPROVED

Nickel-plated lens holder and flange. Replace lamps from front. Front-mount in 1/16" hole on 31/32" centers in panel up to 13/32" thick. Two solder lugs.

5100-182-110‡	....	1/2"	17/32"	1 21/32"	.....	$0.96	$0.86	$0.80
5100-182-304	....	5/8"	1/2"	1 21/32"	.....	.73	.66	.61
5100-192-323	XX	5/8"	1/2"	1 23/32"	25K	.83	.75	.70
5100-202-323	XX	5/8"	1/2"	1 23/32"	100K	.83	.75	.70

‡These Drake units can use 120 V min. bay. incandescent lamp; 3 watts, T-2 bulb, 1500 ft.-candles, life 3000 hrs. (twice cand. screws). Lamp prices on request.

"TINYLITE" SERIES INDICATOR LIGHTS



MIDGET SCREW BASE LAMPS G-2 7 TO 28 VOLTS INCANDESCENT

Lamps replaceable from front. Mount from front of panel, up to 9/32" thick, in 7/16" dia. hole on 13/32" centers. Lamps built-in: 7 V in 121-7; 28 V in 121-28.

Drake Number	Fig.	Lens Dia.	Projection Front	Projection Rear	Net Each, Lots of* 1-9	10-24	25-99
5126-022-204	YY	7/16"	21/64"	13/16"	$0.84	$0.76	$0.70
5126-022-604†	....	3/8"	21/64"	13/16"	.84	.76	.70
5126-022-644	ZZ	3/8"	21/64"	13/16"	.97	.87	.81
5128-022-204	YY	7/16"	21/64"	25/32"	.98	.88	.82
5128-022-604†	....	3/8"	21/64"	25/32"	.98	.88	.82
5128-022-644	ZZ	3/8"	21/64"	25/32"	1.10	.99	.92

†Same as -644 type, but unprinted.

***PRICES LESS LAMPS UNLESS BUILT-IN.**

WRITE FOR O.E.M. DISCOUNTS ON LARGER QUANTITY ORDERS.

Lenses 503, 504, 603 and 604 may be Imprinted; change 0 (2nd digit) to 4 (e.g., 543). Prices on Request.

SPECIFY COLOR ON ORDER: Incandescent and Neon—Red, Yellow (Amber), White or Colorless. Incandescent Only—Green or Blue.

ALL DRAKE PRICES subject to CHANGE WITHOUT NOTICE — check "United Pricing Reports" at your DISTRIBUTOR


100 Series Round Dial


Low-Profile Concentrics


100 Series Large Lever


Miniature Binding Post

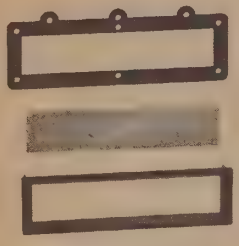

100 Series Small Thumbscrew


100 Series Small Pointer


Color Coding Cap System



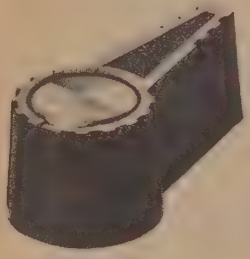
500 Series Numbered Dial


Model 920 Digibezel


Standard Binding Post


500 Series Large Thumbscrew


Model 940 Digibezel


500 Series Small Lever


500 Series 2-Bar


500 Series Miniature 2-Bar Dial


Model 875 Instrument Case

For the widest selection of high-quality front-panel components, ask your distributor for Nobex

NOBEX control knobs are available in 72 different sizes, including low-profile concentrics and miniatures, with snap-in color caps in 9 standard colors, and bodies in 3 standard and 25 special-order colors.

NOBEX binding posts are made in standard and miniature sizes in 6 colors to match NOBEX control knobs.

NOBEX unbreakable instrument cases are injection molded in 9 colors.

For digital displays, specify the low-cost DIGIBEZEL®—the numeric display tube bezel with built-in Polaroid* filter. DIGIBEZEL is designed to enhance your instrument's lines while providing maximum contrast and readability in high ambient light levels. DIGIBEZEL installs in seconds with hidden mounting hardware.



Next time you talk to your distributor about front-panel components, talk about NOBEX. If he doesn't carry NOBEX, phone or write directly to NOBEX DIVISION GRIFFITH PLASTIC PRODUCTS COMPANY.

Write today for a free, full-color catalog containing complete NOBEX specifications, dimensions and ordering information.

*A trademark of Polaroid Corporation

NOBEX DIVISION

GRIFFITH PLASTICS CORPORATION

© United Technical Publications

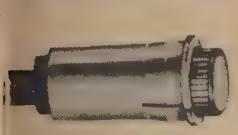
Leecraft MANUFACTURING CO., INC.

WRITE FOR PRODUCT LIGHTING GUIDE. PROTOTYPE SAMPLES AVAILABLE ON REQUEST.

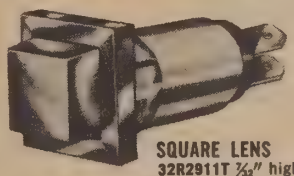
INDICATOR LIGHTS

SNAPLITE INDICATOR LIGHTS

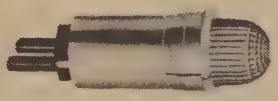
With long-life lamps, high brightness types. Built-in resistors — when neon lamps — to suit applied circuit voltage, provide required lamp life, eliminating replacement need. Features: Snap into place in ½" hole with no additional hardware. Wide variety of lens and housing colors. Tab or solder terminals; or wire leads. AVAILABLE WITH CHROME RINGS. To specify Chrome Rings add R after 1st 2 Digits, i.e., 32-2111 becomes 32R2111.



FLAT CYLINDRICAL LENS
32-2111 ¾" high



SQUARE LENS
32R2911T 7/32" high



DOME LENS
32-2211 13/32" high

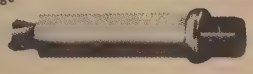
TINEON INDICATOR LIGHTS

Long Life, High Brightness Lamps — Press fit into 5/16" hole — For neon types rated 110-250V — Nylon housing in colors (white standard) — Speed nut furnished — Plastic lens in colors — Legends — Built-in Resistor — Insulated Leads.
All Tineons are available with Incandescent Lamp.



4100 Series (with neon less resistor or incandescent)

4600 Series (with built-in resistor) available in 3 flange dimensions



TINEONS
45 Series (Blade Terminals)
No. 45R2111T8



46 Series (Pin Type Terminals)
No. 46N2311



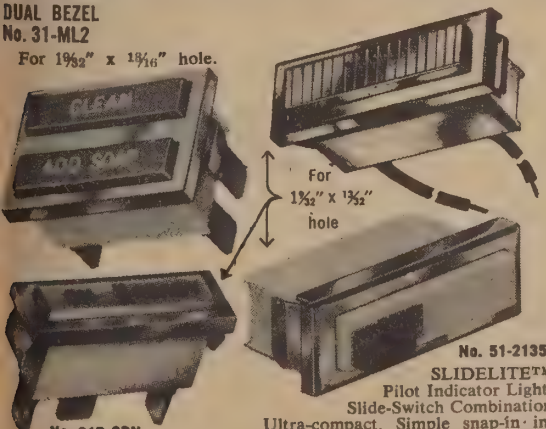
WITH ALUMINUM BEZEL
All Tineons may be furnished with aluminum bezel. Please specify when ordering.

No. 36EN2111 (Hi-Hat red lens)
With aluminum bezel

RECTANGULAR INDICATOR LIGHTS

Long Life High Brightness Neon Lamps — Snap into panel securely without additional hardware — Choice of lens colors — Series 3100 has chrome bezel and plastic lens — Series 47 has one-piece plastic lens and body — Complete range of voltages — UL and CSA listed.

DUAL BEZEL
No. 31-ML2
For 1 9/32" x 1 5/16" hole.



No. 31D-ORN
Dual Message Lights
Barrier separates light into two separate message areas. Individual or simultaneous operation.

No. 51-2135T
SLIDELITE™
Pilot Indicator Light, Slide-Switch Combination
Ultra-compact. Simple snap-in installation. Wide voltage range, choice of lights. May be message stamped. Lens colors: red, amber, clear, white, blue, green, others on request. Leads or terminals. 1 5/64" x 15/32" x 2 1/32". Rating: 125 V, 6 Amps.

LAMPHOLDERS

MIDGET SCREW

16-00 SERIES SOLDER, TERM.
•
16-200 SERIES WIRE LEADS



16-08

MIDGET GROOVED

25-200 SERIES WIRE LEADS

25-00 SERIES SOLDERING TERMINALS
Used in data processing and automation fields with Lens-End Lamp Nos. 253, 253X, and 261.



25-35

WEDGE BASE

23-00 SERIES | 23-200 SERIES | 24-00 SERIES



23-24 | 23-223 | 24-07A

23-00 SERIES — Molded housing, terminal.
23-200 SERIES — Molded housing with wire leads.
24-00 SERIES — Wafer type terminals.

MINIATURE SCREW

5-00 SERIES SOLDER TERMINALS or WIRE LEADS



5-03

MINIATURE BAYONET

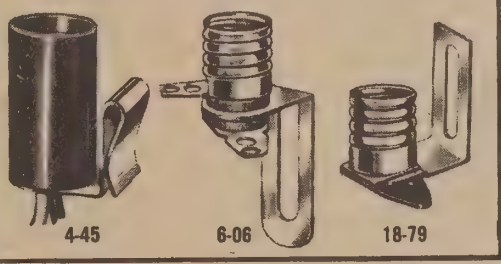
3-00 SERIES | 2-00 SERIES | 7-00 SERIES



3-05 | 2-15 | 7-01 | 7-35 7-35XP11

CANDELABRA SCREW

4-00 SERIES | 6-00 SERIES | 18-00 SERIES



4-45 | 6-06 | 18-79

INTERMEDIATE SCREW

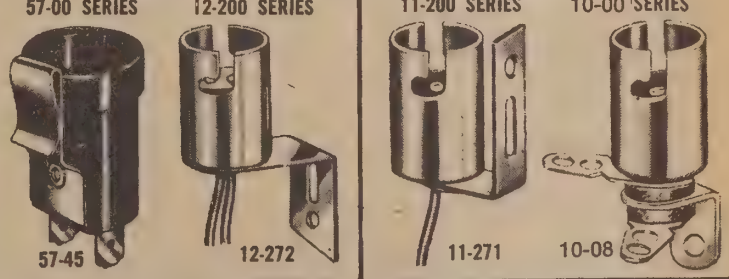
14-00 SERIES



14-71

CANDELABRA BAYONET

DOUBLE CONTACT: 57-00 SERIES, 12-200 SERIES
SINGLE CONTACT: 11-200 SERIES, 10-00 SERIES



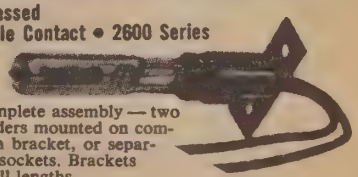
57-45 | 12-272 | 11-271 | 10-08

LAMPHOLDERS FOR SINGLE-ENDED and DOUBLE-ENDED QUARTZ IODINE LAMPS

Double Contact • 2200 Series
Positions lamp more accurately, prevents shaking loose from vibration.



Recessed Single Contact • 2600 Series

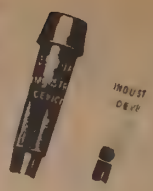


Complete assembly — two holders mounted on common bracket, or separate sockets. Brackets in all lengths.

© United Technical Publications

GLO-DOT B2990D Series

Low-cost, one-piece lens body indicator lights with 4½", 24 AWG insulated leads and built-in incandescent lamps. Available 6 volts or 12 volts. Push-on speednut mounting.



Mounting hole — 5/16" diameter

STOCK MODELS AVAILABLE

Red	White	Green	Blue	Yellow
B2990D1__*v	B2990D4__*v	B2990D5__*v	B2990D6__*v	B2990D7__*v

*Specify 6V or 12V.

luma switch

VERSATILE • NEW • LIGHTED ON-OFF PUSHBUTTON SWITCH

Add smart styling and pushbutton convenience with this indicator light and switch in one unit—LUMA SWITCH.

- **Small—neat—space saving**
- **Easy installation and connection**
- **IDI assured reliability and long life**
- **Wide choice of colors**



STOCK MODEL SPECIFICATIONS

SWITCH TYPE: SPST alternate action push-button (push-on, push-off)

SWITCH RATING: 10 Amps, 125VAC

LAMP: High brightness neon with built-in resistor for 105-125 VAC

MOUNTING HARDWARE: Black panel adapter (bezel) and speed clip supplied.

PACKAGING: Blister packaged on card with mounting hardware and instruction sheet.

MODELS AVAILABLE	SQUARE LENS	ROUND LENS
RED	B3300A1	B3300B1
CLEAR	B3300A2	B3300B2
AMBER	B3300A3	B3300B3
WHITE	B3300A4	B3300B4

voltage testers

Rugged, long-lasting. Completely eliminates conventional (and delicate meter movements — test lamps ruggedized for toolbox use.

MINI-VOLT VOLTMETER Model # B400B



"Abuseproof" voltmeter, sufficiently accurate to indicate a 2 or 3 volt drop on 110 volt line.

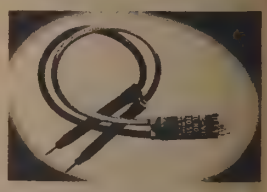
(U.S. Pat. 2,644,134)

In addition to measuring the exact voltage over the range from 65 to 660 volts, Model #400B is used to identify AC or DC lines, check rectifiers, filter capacitors, chokes; test for blown fuses, grounded components, DC polarity, measure voltage drops with load, and 1001 other uses.

For use on AC (any frequency) or DC, MINI-VOLT, with an impedance of approximately ½ megohm, draws negligible current and can therefore provide dependable voltage readings even on circuits used in electronic apparatus.

Provides lifetime of service — glow lamp is guaranteed for 25,000 hours of actual operation. Furnished complete with extra-heavy insulated 12-inch flexible test leads and test prods.

LINE-VOLT TEST LITE Model #B1310



LINE-VOLT Model No. 1310 is a rugged, compact test light covering the wide range of 55-550 VAC or 90-600 VDC.

LINE-VOLT tells immediately whether there is power in the line, checks fuses, can identify AC or DC lines, grounded components, continuity of line circuits.

Leads are 8" long overall and are heavy-duty flexible wire terminating in 3½" insulated prods with really sharp points — able to pierce insulation, paint, or oxidation. Bright lamp provides immediate positive indication.

LO-VOLT TEST LITE Model #B1300



LO-VOLT Test Lite No. 1300 is a compact test light for ready use in many applications.

Operating over a wide range of 3-28 volts AC or DC, LO-VOLT supplies the instant answer to whether there is an available power supply for thermostatic controls, model train equipment, other stepped-down AC voltages as well as battery supplies such as automotive.

LO-VOLT is supplied with flexible leads terminating spring clips

INDUSTRIAL DEVICES, INC.

© United Technical Publication

INDUSTRIAL DEVICES, INC.
stock items...off the shelf

neon pilot lights

■ Enhance as well as beautify any product ■ Complement and highlight design ■ Invite attention
■ Rugged and long lived — 10,000 hour life unaffected by vibration or shock ■ Tamper proof housings
■ Mount quickly, securely ■ UL recognized*, CSA approved

GLO — DOT Mounting hole— 5/16" diameter.

Series 2110A Series 2120A Series 2150A

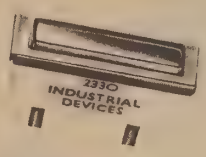


STOCK MODELS AVAILABLE

B2110A1 Red	B2120A1 Red	B2150A1 Red
B2110A2 Clear	—	—
B2110A3 Amber	B2120A3 Amber	B2154A3 Amber
B2110A4 White	B2120A4 White	B2150A4 White
Net Price .98	.58	.59

LINE-O-LITE *Mounting hole— 1 5/32" x .395/.400".

Series 2330D



STOCK MODELS AVAILABLE

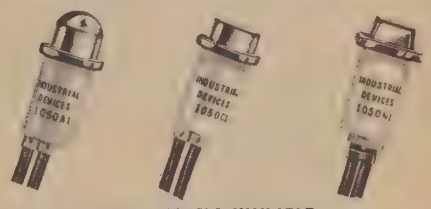
MODEL NO.	LENS COLOR
B2330D1	Red
B2330D3	Amber
B2330D4	White

*Will snap-fit into panels .055—.070" thick without speednut

.65

OMNI — GLOW Mounting hole— 1/2" diameter.

Series 1050A Series 1050C Series 1050N



STOCK MODELS AVAILABLE

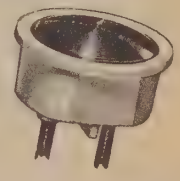
B1050A1 Red	B1050C1 Red	B1050N1 Red
B1050A2 Clear	—	—
B1050A3 Amber	B1050C3 Amber	B1050N3 Amber
B1050A4 White	B1050C4 White	B1050N4 White
.59	.59	.59

OMNI-GLOW Series 2600 Mounting hole— 7/8" diameter.

STOCK MODELS AVAILABLE

MODEL NO.	LENS COLOR
B2620K1	Red
B2620K3	Amber
B2620K4	White

.59



SPECIFICATIONS (COMMON TO ALL STOCK NEON PILOT LIGHTS)

Voltage: 105—125 A.C.
Leads: 4½" 105°C plastic stripped ½" 22AWG
Lamp: High brightness neon with built-in resistor.
Speednut: Hardened spring steel, rust-resistant finish.

MINI-SLIDE pilot light assemblies

■ Bright, highly visible ■ Long-lived — rated 5000 hours ■ Available complete with lamps from 6 to 120 volts ■ Variety of colors ■ Utilize miniature slide base incandescent lamps ■ Foolproof installation ■ UL recognized, CSA approved

Model 2800 Series			Model 3060 Series	
Black Bezel	Stainless Bezel	Lens Color	Round Lens	Square Lens
B2800A1 •_v	B2801A1 •_v	Red	B3060C1 •_v	B3060D1 •_v
B2800A2 •_v	B2801A2 •_v	Clear	B3060C2 •_v	B3060D2 •_v
B2800A3 •_v	B2801A3 •_v	Amber	B3060C3 •_v	B3060D3 •_v
B2800A4 •_v	B2801A4 •_v	White	B3060C4 •_v	B3060D4 •_v
B2800A5 •_v	B2801A5 •_v	Green	B3060C5 •_v	B3060D5 •_v
B2800A6 •_v	B2801A6 •_v	Blue	B3060C6 •_v	B3060D6 •_v
B2800A7 •_v	B2801A7 •_v	Yellow	B3060C7 •_v	B3060D7 •_v
1.24	1.29		.88	.88

*Important — These units shipped complete with lamp, specify voltage when ordering. See lamps listing below.



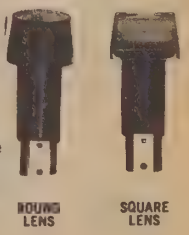
SPECIFICATIONS

Model 2800 Series

Mounting nut: Nylon, self-locking, torque limiting (U.S. Patent 3352194)
Mtg. Hole: 11/16" Diameter
Lens: Molded polycarbonate, screw in (for easy relamping)

Model 3060 Series

Mounting nut: Speednut, hardened spring steel, rust resistant finish
Mtg. Hole: ½" Diameter
Lens: Molded polycarbonate snap-on for easy front panel relamping



short slide base "pilot" lamps

FOR USE WITH MINI-SLIDE

Design Volts	Lamp Number	Design AMPS	Approx. Hrs. Life	Wattage at Design Volts	Rated End Foot Candles
6	6 PSB	.140	5,000	.8	800
12	12 PSB	.170	5,000	2.0	2400
24	24 PSB	.073	5,000	1.7	2200
28	28 PSB	.040	5,000	1.1	1900
48	48 PSB	.053	5,000	2.5	1500
60	60 PSB	.050	5,000	3.0	2400
120	120 PSB	.025	5,000	3.0	1600

■ Complete line
■ Rugged-long life
■ Miniature up to 120 volts ratings to 3 watts

*Recognized under the component program of Underwriters' Laboratories, Inc.

INSTRUMENT KNOBS



MODERN KNOBS
Black Styrene, 1/4" Brass Insert, Slotted Set Screw

Part No.	Diam.	Height	Skirt or Pointer Size	Net Ea.	100-Up, Ea.
6126	5/8"	7/16"		.40	.30
6126 Red	5/8"	7/16"		.45	.35
6129	7/8"	19/32"		.60	.45



BAR KNOB

BK-1B	11/16"	1/2"		.45	.35



INSTRUMENT KNOBS—Full-Fluted Type
Black Bakelite, 1/4" Brass Insert, Slotted Set Screw

WA-4100	1-1/8"	5/8"		.55	.45
WA-4101	1-3/8"	11/16"		.55	.45
WA-4102	1-5/8"	3/4"		.70	.55
WA-4103	2-3/8"	7/8"		.95	.70

The above knobs supplied drilled and tapped for mounting skirts, pointers, or dials. Add Suffix (D) — Net + $.08 Ea.



W/SKIRT

WA-4104	1-1/8"	51/64"	1-1/2"	.90	.70
WA-4107	1-3/8"	55/64"	1-3/4"	1.05	.80
WA-4108	1-5/8"	7/8"	2-1/16"	1.20	.90
WA-4109	2-3/8"	1"	3"	1.55	1.20

W/WHITE OPAQUE PLASTIC POINTER

WA-4100Q	1-1/8"	11/16"	3/4"	.85	.65
WA-4101J	1-3/8"	3/4"	7/8"	.85	.65
WA-4102Q	1-5/8"	13/16"	1-1/4"	.85	.65
WA-4103W	2-3/8"	15/16"	1-9/16"	1.15	.90



W/TRANSPARENT, LINED PLASTECELE POINTER

6566-P	1-1/8"	5/8"	25/32"	.90	.70
6571-P	1-3/8"	11/16"	1-1/32"	1.00	.75
6570-P	1-5/8"	3/4"	1-9/32"	1.05	.85
6559-P	2-3/8"	7/8"	1-11/16"	1.40	1.10



LATEST SERIES INSTRUMENT KNOBS
Black Bakelite, slotted set screw, white marker line on skirt.

INSTRUMENT KNOBS WITH DECORATIVE SILVER INLAY. All Instrument Knobs are available with a spun aluminum inlay for decorative purposes. Write for quotation.

Part No.	Diam.	Height	Figure	Net Ea.	100-Up, Ea.
WA-101	3/4"	1/2"	A	.40	.25
WA-101B*	3/4"	1/2"	A	1.20	1.05
WA-101C†	3/4"	1/2"	A	.31	.20
WA-102	1-1/8"	5/8"	A	.45	.25
WA-102B*	1-1/8"	5/8"	A	.60	.45
WA-103	1-1/4"	3/4"	A	.45	.40
WA-103B*	1-1/4"	3/4"	A	.60	.45
WA-104	1-1/2"	7/8"	A	.50	.40
WA-104B*	1-1/2"	7/8"	A	.65	.50
WA-105	2"	15/16"	A	.70	.55
WA-105B*	2"	15/16"	A	.90	.65
WA-106S	1-1/4"	3/4"	B	.70	.60
WA-106AG	1-1/4"	3/4"	B	.70	.60
WA-109	1-1/4"	5/8"	C	.50	.40
WA-109B*	1-1/4"	5/8"	C	.65	.50





* 1/4" Brass Insert; † 1/8" Molded Hole; All others have 1/4" Molded Hole. S w/Silver Inlay. G w/Gold Inlay.



DUO CONCENTRIC KNOB
Small Knob WA-101-C—Large Knob for 1/4" Shaft.

WA-107	1-1/4"	1-3/16"	D	.80	.60



BAR KNOBS
Black Bakelite, 1/4" Molded Hole, Slotted Set Screw, White Indicator Knob.

WA-1510	3/4"	9/16"		.40	.35
WA-1500	1-1/8"	9/16"		.30	.20
WA-1520	1-1/2"	3/4"		.65	.50

Knobs above are available in other colors than black, with more than one set screw, with socket type set screws, and with special hot-stamped markings. Write for quotation.



STANDARD KNOBS—Pointer Knobs
Molded Black Bakelite, Slotted Set Screw
11/16" Diam., 13/32" High

Part No.	Description	Net Ea.	100-Up, Ea.
WA-1400	1/4" Molded Hole	.20	.10
WA-1400W	1/4" Brass Insert	.45	.35
WA-1400R	1/8" Molded Hole	.25	.15
	1" Diam., 1/2" High		
WA-1470	1/4" Molded Hole	.35	.20
WA-1470C	1/4" Brass Insert	.45	.40



ROUND KNOBS
11/16" Diam., 13/32" High

WA-1450	1/4" Molded Hole	.20	.10
WA-1450W	1/4" Brass Insert	.45	.35
WA-1450G	1/8" Molded Hole	.25	.15
	1" Diam., 1/2" High		
WA-1475	1/4" Molded Hole	.25	.15
WA-1475C	1/4" Brass Insert	.40	.35



SKIRTED KNOBS
Molded Black Bakelite, Slotted Set Screw
1-1/2" Diam. x 3/4" High

WA-1600	1/4" Molded Hole	.40	.25
WA-1600A	1/4" Brass Insert	.45	.35
	7/8" Diam. x 9/16" High		
WA-1610	1/4" Molded Hole	.30	.20
WA-1610A	1/4" Brass Insert	.45	.35



LEVER KNOBS
Black Bakelite. For use on Intercoms, appliances, electronic equipment. 1/4" Brass Insert, Slotted Set Screw

Part No.	Diam.	Height	Net Ea.	100-Up, Ea.
WA-2110A	1-5/8"	19/32"	.50	.40
WA-2100A	2-1/2"	5/8"	.45	.35



POINTER KNOBS
Black Bakelite, White Filled Pointer, for 1/4" Shaft, Set Screw

Part No.	Diam.	Height	Figure	Net Ea.	100-Up, Ea.
WA-2300	1-1/4"	5/8"	A	.25	.15
WA-2300A*	1-1/4"	5/8"	A	.35	.25
WA-2350	2"	5/8"	A	.45	.35
WA-2350A*	2"	5/8"	A	.55	.40
*Brass Insert					
WA-2150	1-1/4"	9/16"	B	.30	.20



PUSH BUTTON KNOBS
Self-locating Friction fit for use on Flat Wire Shaft, .050 x .187. Black Bakelite

WA-201	1/2"	51/64"	A	.20	.10
WA-202	31/64"	9/16"	B	.15	.10
WA-203	7/16"	1"	C	.20	.10



UTILITY KNOBS
Black Bakelite w/8-32 Threaded Female Insert

WA-204	31/64"	1/2"	D	.15	.10
WA-205	3/4"	1/2"	E	.20	.10



BALL KNOBS
Black Bakelite. WA-301 has 1/4-20 Threaded hole. WA-302 and WA-303 have 3/8-24 Threaded Female Insert.

WA-301	1- 1/4"	1"	F	.35	.25
WA-302	1-15/16"	1-27/32"	F	.60	.50
WA-303	2"	1- 9/16"	G	.65	.50



POINTER KNOB

WA-1550	1-1/8"	9/16"		.25	.20

© United Technical Publications

INSTRUMENT KNOBS (Continued)

WING TYPE KNOBS



Figure A



Figure B

Part No.	Dia.	Height	Figure	Net Ea.	100-Up, Ea.
WA-401	1-1/4″	19/32″	A	1.15	.95
WA-402	1-1/4″	19/32″	B	1.55	1.25

Supplied with 1/4″ brass insert and two #8-32 slotted head set screws, .35° apart.

BAR TYPE KNOBS



Figure C



Figure D



Figure E

Part No.	Dia.	Height	Figure	Net Ea.	100-Up, Ea.
WA-1560	1-1/8″	5/8″	C	.35	.30
WA-1580	1-1/8″	5/8″	D	.53	.45
WA-1590	1-1/8″	11/16″	E	.47	.40

MILITARY KNOBS PER MIL SPEC MS91531 SERIES

Dash No.	Part No.	Figure	Net Ea.	Dash No.	Part No.	Figure	Net Ea.
—2N2B	WA-2NB	1	1.55	—3F2M	WA-3FM	2	1.85
—2N2M	WA-2NM	1	1.10	—4F2B	WA-4FB	2	3.60
—3N2B	WA-3NB	1	1.85	—4F2M	WA-4FM	2	2.30
—3N2M	WA-3NM	1	1.35	—2P2B	WA-2PB	3	1.75
—4N2B	WA-4NB	1	2.30	—2P2M	WA-2PM	3	1.25
—4N2M	WA-4NM	1	1.60	—3P2B	WA-3PB	3	2.00
—2F2B	WA-2FB	2	2.40	—3P2M	WA-3PM	3	1.45
—2F2M	WA-2FM	2	1.50	—4P2B	WA-4PB	3	2.50
—3B2B	WA-3FB	2	2.95	—4P2M	WA-4PM	3	1.85

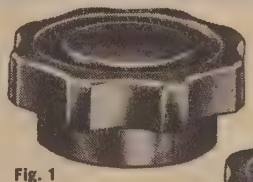


Fig. 1



Fig. 3

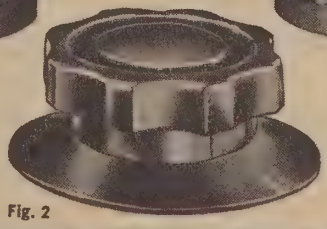


Fig. 2

DECORATIVE ALUMINUM KNOBS

Stocked standard with clear anodized finish, one slotted-head setscrew and black inlays, with or without indicator lines. Can be supplied with various anodized colors and inlays on special order.



Figure G



Figure F

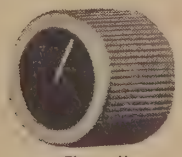


Figure H



Figure I

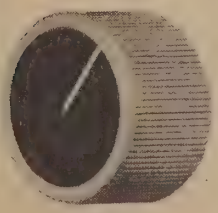


Figure J

Part No.	Figure	Inlay	Dia.	Height	Shaft Hole	Net Ea.	100-Up, Ea.
WA-1000A	F	w/o Indicator	7/16″	5/8″	1/8″	.85	.70
WA-1001A	F	w/ Indicator	7/16″	5/8″	1/8″	1.05	.85
WA-1002A	G	w/o Indicator	3/4″	9/16″	1/8″	1.05	.85
WA-1003A	G	w/ Indicator	3/4″	9/16″	1/8″	1.25	1.00
WA-1004A	G	w/o Indicator	3/4″	9/16″	1/4″	1.05	.85
WA-1005A	G	w/ Indicator	3/4″	9/16″	1/4″	1.25	1.00
WA-1006A	H	w/o Indicator	1″	11/16″	1/4″	1.25	1.00
WA-1007A	H	w/ Indicator	1″	11/16″	1/4″	1.45	1.20
WA-1008A	I	w/o Indicator	1-1/4″	3/4″	1/4″	1.60	1.30
WA-1009A	I	w/ Indicator	1-1/4″	3/4″	1/4″	1.80	1.45
WA-1010A	J	w/o Indicator	1-1/2″	13/16″	1/4″	2.10	1.70
WA-1011A	J	w/ Indicator	1-1/2″	13/16″	1/4″	2.30	1.85

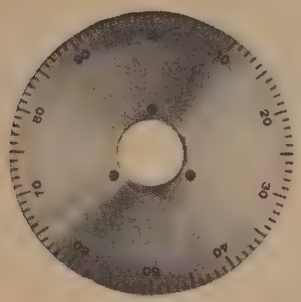
© United Technical Publications

waldom DIALS & ASSEMBLIES

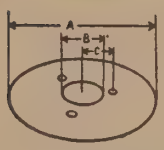
DIALS, INDICATORS & DIAL ASSEMBLIES

Material: Heavy aluminum with hand spun finish. Calibration lines etched and filled with black enamel

DIALS



DO-8



CALIBRATION			DIMENSIONS				
Clockwise 0-100 Part No.	Counter-clockwise 100-0 Part No.	DEGREES	A	B	C	NET EA.	100 OR MORE EA.
DO-15	DO-15R	180°	1-1/8″	3/8″	7/32″	.65	.50
DO-16	DO-16R	270°	1-1/8″	3/8″	7/32″	.65	.50
DO-17	DO-17R	325°	1-1/8″	3/8″	7/32″	.65	.50
DO-18	DO-18R	360°	1-1/8″	3/8″	7/32″	.65	.50
DO-1	DO-1R	180°	1-3/4″	31/64″	9/32″	.70	.60
DO-2	DO-2R	270°	1-3/4″	31/64″	9/32″	.70	.60
DO-19	DO-19R	325°	1-3/4″	31/64″	9/32″	.80	.65
DO-20	DO-20R	360°	1-3/4″	31/64″	9/32″	.80	.65
DO-3	DO-3R	180°	2-3/4″	3/4″	13/32″	.83	.65
DO-4	DO-4R	270°	2-3/4″	3/4″	13/32″	1.05	.80
DO-21	DO-21R	325°	2-3/4″	3/4″	13/32″	1.05	.80
DO-5	DO-5R	360°	2-3/4″	3/4″	13/32″	1.05	.80
DO-6	DO-6R	180°	4″	15/16″	5/8″	1.32	1.05
DO-7	DO-7R	270°	4″	15/16″	5/8″	1.32	1.05
DO-22	DO-22R	325°	4″	15/16″	5/8″	1.32	1.05
DO-8	DO-8R	360°	4″	15/16″	5/8″	1.32	1.05
0-360 DO-8A	360-0 DO-8AR	360°	4″	15/16″	5/8″	1.32	1.05

DIAL INDICATORS

1-1/8″ and 1-3/4″ Dials use the single line indicator SL-1. The numbers on the verniers (VI-3 etc.) are the same as the numbers of the dials they are to be used with (DO-3 etc.), Verniers are heavy, etched aluminum with a single mounting bracket complete with mounting hardware.



Vernier



SL-1

PART NO.	USED WITH DIAL NO.	NET EA.	100 OR MORE EA.	PART NO.	USED WITH DIAL NO.	NET EA.	100 OR MORE EA.
SL-1	All 1-1/8″ & 1-3/4″ dials	.15	.10	VI-6	DO-6	.45	.35
				VI-6R	DO-6R	.45	.35
VI-3	DO-3	.45	.35	VI-7	DO-7	.45	.35
VI-3R	DO-3R	.45	.35	VI-7R	DO-7R	.45	.35
VI-4	DO-4	.45	.35	VI-22	DO-22	.45	.35
VI-4R	DO-4R	.45	.35	VI-22R	DO-22R	.45	.35
VI-21	DO-21	.45	.35	VI-8	DO-8	.45	.35
VI-21R	DO-21R	.45	.35	VI-8R	DO-8R	.45	.35
VI-5	DO-5	.45	.35	VI-8A	DO-8A	.45	.35
VI-5R	DO-5R	.45	.35	VI-8AR	DO-8AR	.45	.35

DIRECT DRIVE DIAL AND KNOB ASSEMBLIES

Direct Drive Dial assemblies in 1-1/8″ and 1-3/4″ sizes have knobs only—all others have knob and skirt. All knobs have brass inserts for 1/4″ shafts. Complete with appropriate indicator or vernier.



302

CALIBRATION						
Clockwise 0-100 Part No.	Counter-clockwise 100-0 Part No.	DEGREES	O.D.	KNOB USED (See Pg. 34)	NET EA.	100 OR MORE EA.
27084	27084-R	180°	1-1/8″	WA-1450-W	1.75	1.40
27085	27085-R	270°	1-1/8″	WA-1450-W	1.75	1.40
27086	27086-R	325°	1-1/8″	WA-1450-W	1.75	1.40
27087	27087-R	360°	1-1/8″	WA-1450-W	1.75	1.40
27068	27068-R	180°	1-3/4″	WA-4100	1.90	1.50
27069	27069-R	270°	1-3/4″	WA-4100	1.90	1.50
27080	27080-R	325°	1-3/4″	WA-4100	1.90	1.50
27081	27081-R	360°	1-3/4″	WA-4100	1.90	1.50
294	294-R	180°	2-3/4″	WA-4108	3.20	2.55
295	295-R	270°	2-3/4″	WA-4108	3.20	2.55
27082	27082-R	325°	2-3/4″	WA-4108	3.05	2.40
303	303-R	360°	2-3/4″	WA-4108	3.20	2.55
292	292-R	180°	4″	WA-4109	3.80	3.05
293	293-R	270°	4″	WA-4109	3.80	3.05
27083	27083-R	325°	4″	WA-4109	4.00	3.20
302	302-R	360°	4″	WA-4109	3.80	3.05
0-360 302-A	360-0 302-AR	360°	4″	WA-4109	3.80	3.05

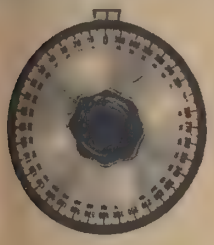
Net

© United Technical Publications

DIALS (Continued) & DIAL PLATES

AZIMUTH DIALS

Precision Test Dial. For laboratory use on instruments requiring a dial of extreme accuracy in calibration. Calibrated through full 360°. Outer numerals read 0 to 360° in counter-clockwise direction. Inner numerals read 0 to 360 in a clockwise direction. Etched on heavy aluminum with black graduations and figures on handspun background.



Part No. KD-12

Part No.	Fits Shaft Diam.	Net ea.	100 or more ea.
27010	3/8"	5.95	4.75
27011	1/4"	5.95	4.75

6" diameter dial with bakelite knob and skirt and single line indicator.

KD-12	1/4"	4.00	3.10

4" diameter dial with bakelite knob and single line indicator.

ROUND DIALS

Made of black anodized aluminum and have embossed beaded edges for greater stiffness and better appearance. Highly polished backgrounds and silvery white figures and borders. Diameter of center hole is 13/32".



Part No. 550

Part No. 260

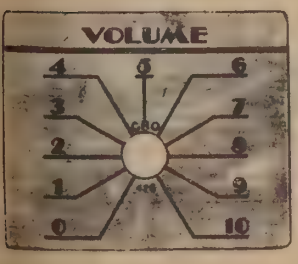
Part No.	Diameter	Calibration	Net Ea.	100 or more ea.
550	1-7/8"	0-100 in 180°	1.55	1.30
551	1-7/8"	0-100 in 270°	1.55	1.30
651	1-7/8"	0-100 in 325°	.54	.45
552	2-7/8"	0-100 in 180°	1.02	.80
553	2-7/8"	0-100 in 270°	1.02	.80
654	2-7/8"	0-100 in 325°	1.02	.80

Dials below are made of Aluminum with a dull black-background. Have three mounting holes. Center hole is 1/2".

262	1-7/8"	0-100 in 180°	.52	.40
263	1-7/8"	0-100 in 270°	.52	.40
663	1-7/8"	0-100 in 325°	.52	.40
260	3"	0-100 in 180°	1.02	.80
261	3"	0-100 in 270°	1.02	.80
662	3"	0-100 in 325°	1.02	.80
264*	2-1/4"	0-100 in 300°	1.02	.80

* Titled "Gain"

LITHOGRAPHED ALUMINUM DIAL PLATES



These are high quality lithographed aluminum plates particularly designed for amplifiers and public address equipment. The black figures and letters are protected by a heavy varnish finish to assure long-lasting service.

Horizontal 2 3/16" high x 2 5/8" wide.

Part No. 426A

Part No.	Title and Calibration	Part No.	Title and Calibration	Net ea.	100 or more ea.
410A	Without Title 0-10	426A	Volume 0-10	.50	.35

ROUND CONTROL PLATES



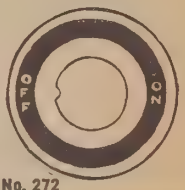
1-3/4" Diam. Black Anodized Aluminum with natural razed letters. Center hole is 13/32" diam.

Part No. 25

Part No.	Title of Calibration	Net ea.	100 or more ea.
25	Volume	.34	.25
26	Off-tone Control	.34	.25
569	0-100 in 180°	.34	.25
905	0-100 in 270°	.34	.25

CIRCULAR PLATES FOR TOGGLE SWITCHES

1-1/8" in diameter with 15/32" hole. Polished aluminum with black-background. Locking lug fits groove in switch.



Part No. 272

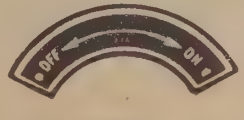
Part No.	Title	Net ea.	100 or more ea.
272	Off-On	.20	.15
589	Off-On (Vert.)	.20	.15
573	Micro-Phono	.20	.15
581	Lo-Hi	.20	.15
582	Monitor	.20	.15

Plates below are 1" x 1-1/4" Polished Aluminum with black background. 15/32" hole. Two mounting holes.

584	Off-On	.28	.20
274	1-2	.40	.25
564	1-2-3	.85	.60



Part No. 278



Part No. 275

HORIZONTAL SWITCH PLATES

Two styles "Off-On" Switch Plates made of etched aluminum with black background and polished aluminum letters and border with two mounting holes.

Part No.	Size	Net ea.	100 or more ea.
278	11/16" x 1-11/16"	.20	.15
275	5/8" x 1-1/2"	.22	.20

waldom

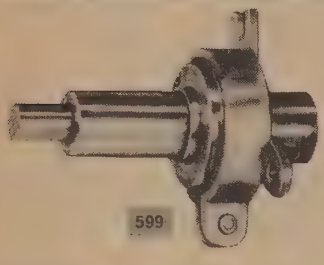
INSTRUMENT CASES & COVERS



Molded Plastic 1/8" Thick w/Highly Polished Finish. Will withstand rugged usage. Cases suffixed BI have 6-32 brass inserts. Others have molded hole.

Part No.	DESCRIPTION	Net Ea.	100-up Ea.
BC-136	3-25/32"L x 2-21/32"W x 1-15/32" Deep	.60	.40
BP-135	Flat Panel for above	.40	.30
BC-138	6"L x 3-1/2"W x 1-7/8"D	1.01	.70
BC-138BI	W/Brass Inserts in 6 corners	1.13	.80
BP-137	Flat Panel for above	.75	.50
BP-137A	Molded Cover for above	.80	.50
BC-140	6-1/2"L x 4-31/32"W x 2-5/32" Deep	1.34	.95
BC-140BI	W/Brass Inserts in 4 corners	1.65	1.15
BP-139	Flat Panel for above	1.00	.70
BP-139A	Molded Cover for above	1.05	.75
BC-142	5-7/8"L x 3-1/16"W x 2-1/4" Deep	.95	.65
BC-141BI	8-3/8"L x 7-3/8"H x 3" Deep	3.08	2.15
BP-141	Flat Panel for above	1.68	1.35

PLANETARY DRIVES



599



6665

Two ball-type planetary drive units are useful whenever a compact device i needed for reduced-speed operation of light mechanisms. These units depend o the action of steel balls that rotate between the knob shaft and a concentri sleeve that is attached to the driven instrument. The units are adjustable so tha the pressure on the balls can be varied to match the operating load, this assure maximum smoothness while maintaining adequate torque. Maximum torque is 1 inch ounces; minimum torque is 10 inch ounces. The ratio is approximately 5 to 1 and two units may be used in tandem to produce a 25 to 1 ratio. These are prec sion devices for both military and commercial applications.

TWO-SPEED PLANETARY DRIVE

Permits slow speed operation at approximately 5 to 1; high speed at 1 to 1. The 6665 Dual Concentric Knob below fits this unit. Complete with mounting accessories.

Part No. 599 Net Ea. 12.80 25 to 99, Ea. 12.00 100 or more, Ea. 10.05

SINGLE SPEED PLANETARY DRIVE

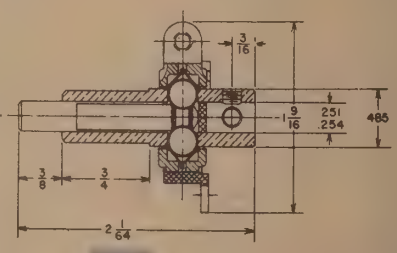
Same as above unit, except that the sleeve for the high-speed knob has been omitted. In its place is a threaded sleeve with shoulder, so an indicating dial or pointer may be installed. Clamping nut, clamping washers and planetary anchor stud are included.

Part No. 27067 Net Ea. 12.15 25 to 99, Ea. 11.45 100 or more, Ea. 9.30

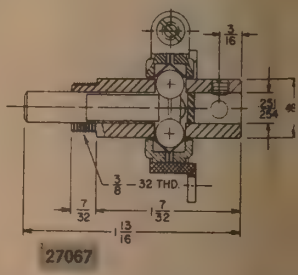
ACCESSORY DUAL CONCENTRIC KNOB

Fits 599 Planetary Drive. Larger knob is aluminum. 1-3/16" diameter drilled 7/16" to fit high-speed sleeve on planetary. Smaller knob is molded black styrene with 1/4" brass insert to fit low-speed planetary shaft. Both with set screws.

Part No. 6665 Net Ea. 1.40 100 or more, Ea. 1.00



599



27067

JACK COVERS

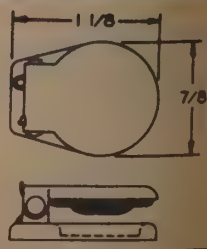


J-106

Have high-torque springs for positive self-closing action. Used for protecting jacks against entrance of dust and moisture.

Steel with smooth black finish. Use with standard 3/8"-32 threaded bushing type phone jack.

Part No. J-106 Net Ea., .75



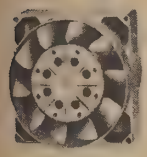
 © United Technical Publications



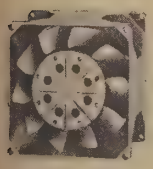
PENTAFLOW™

The PREMIUM-GRADE ALL-METAL FANS with UNCONDITIONAL 5-YEAR WARRANTIES

PENTAFLOW premium grade miniature fans are the quietest, most efficient, longest-lived — in short, the most reliable — fans in a wide range of air-cooling systems — in equipments for instrumentation, communications, data-processing, recording, hospitals, laboratories, studios, and industrial control.



Series 1000A



Series 2000



Series 4700



Series 4800



Series 3000



Series 7500

PENTAFLOW MODEL	CFM*	SIL**	Dimensions		Notes
			Inches	Weight	
4500P	115	37.5 dB	4½ x 4½ x 1½	1 lb., 4 oz.	Low noise. High volume air flow.
4600P	130	37 dB	4½ x 4½ x 1½	1 lb., 4 oz.	Ball-thrust bearing design. Handles 30% higher back pressure than conventional 4½" design.
8500P	43	28.8 dB	$3\frac{1}{8}$ x $3\frac{1}{8}$ x 1½	18½ oz.	Ultra-Compact. 3 times the air flow of nearest competitive designs.

All **PENTAFLOW** models use special silicone-base lubricant for longest life. ™ **PENTAFLOW** is a trademark of the William J. Purdy Company.

ALL PAMOTOR FANS HAVE THESE SUPERIOR CHARACTERISTICS

• ALL-METAL CONSTRUCTION • FAR GREATER RELIABILITY
• LOWER NOISE • IMPROVED SHAPE FACTOR • REDUCED ELECTROMAGNETIC FIELD
• LOWER OPERATING TEMPERATURE • LOWEST COST

STANDARD PAMOTOR FANS & BLOWERS

	Series	CFM*	SIL**	Dimensions		Notes
				Inches	Weight	
Induction-Motor Types	1000A; 1300	125	43 dB	4½ x 4½ x 2	2 lb., 10 oz.	For laboratory and office machines, communications and industrial control equipment, sound systems.
	1410	110	50 dB	4½ x 4½ x 2	2 lb., 8 oz.	400 Hz axial des. for airborne equip.– adaptable for duct applications.
	2000/2050	130	42 dB	4½ x 4½ x 2	2 lb., 1 oz.	Highest free air delivery available in 4½" package.
	2110	135	50 dB	4½ x 4½ x 2	2 lb., 1 oz.	400 Hz, ball bearing design for airborne equipment.
	3000/3050	65	Adjustable	3½ x 3½ x 2	1 lb., 2 oz.	Double the air flow of other 3½" fans. Noise level varies with adjustable speed.
Shaded-Pole-Motor Types	1500/1550	105	39.6 dB	4½ x 4½ x 2	1 lb., 10 oz.	General purpose fan. High performance, low noise, low cost.
	2500/2550	115	43 dB	4½ x 4½ x 2	2 lb., 1 oz.	High volume delivery. Low cost. Broad range of applications.
	4500/4550	115	37.5 dB	4½ x 4½ x 1½	1 lb., 4 oz.	Low cost, low noise, high volume air flow.
	4506/4556	115	37.5 dB	4½ x 4½ x 1½	1 lb., 4 oz.	Ball bearing design – 20,000 hours operation at 85°C.
	4600	130	37 dB	4½ x 4½ x 1½	1 lb., 4 oz.	Handles 30% higher back pressure than conventional 4½" designs.
	4700/4750	65	37 dB	$4\frac{1}{8}$ diam. x 1½	1 lb.	Saves space and weight where venturi housing is not required.
	4800	70	18 dB	4½ x 4½ x 1½	1 lb., 4 oz.	Low speed. Virtually noiseless. Ideal for HI/Fi, Stereo, TV, medical, and office equipment.
	7500/7550	250	40.6 dB	6 diam. x 2	2 lb., 7 oz.	For large enclosures with high resistance to air flow. Replaces 2 smaller fans or one 7" or 10" conventional design†.
	7506/7556	250	40.6 dB	6 diam. x 2	2 lb., 7 oz.	Ball bearing versions. 20,000 hours operation at 85°C.
	8500/8550	43	28.8 dB	$3\frac{1}{8}$ x $3\frac{1}{8}$ x 1½	18½ oz.	Ultra-compact, 3 times the air flow of nearest competitive designs.
	8506/8556	43	28.8 dB	$3\frac{1}{8}$ x $3\frac{1}{8}$ x 1½	18½ oz.	Ball bearing versions. 20,000 hours operation at 85°C.
	8700	35	22 dB	3 diam. x 1½	13 oz.	For use where venturi housing not required. Mounts on 4" bracket.

* CFM, Cubic Feet Per Minute ** SIL, "Speech Interference Level"
† Series 7500 will deliver 200 CFM at 0.2" water back-pressure. Flanges available for replacing conventional 7" or 10" conventional designs with these superior fans.

ACCESSORIES AVAILABLE:

• lubrication kits (specify fan model) • multi-layer oil-treated filters • metal screen and frame • finger guards (specify fan model) • air straightener • plug and 24" line cord • adapter flanges • cadmium plated steel mounting brackets for filter assembly.

PAMOTOR
ONE OF THE **PURDY** GROUP OF COMPANIES

© United Technical Publications

R. L. DRAKE COMPANY

RADIO COMMUNICATIONS EQUIPMENT

FILTERS TVI MAY BE ELIMINATED WITH THESE UNITS

TV-300-HP HIGH PASS FILTER



provides more than 40 db attenuation at 52 MC and lower. Protects the TV set from amateur transmitters 6 thru 160 meters.

$4.95

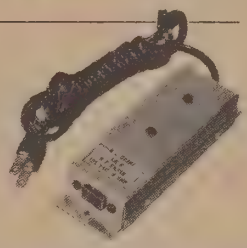
TV-CB-LP CITIZENS BAND LOW PASS FILTER



is a four section filter designed with 43.2 MC cut-off and extremely high attenuation in all TV channels for citizens band and other transmitters 30 MC and lower. Rated 100 watts input. SO-239 connectors built-in.

$7.65

LN-4 LINE FILTER



Isolates transmitter or TV set from RF on power line. Attenuates 500 KHz to over 200 MHz. 125 VAC, 6 amps max.

$8.00

88 TO 108 MHz FM FILTERS



FM broadcast xmtrs cause much TVI, often blamed on radio amateurs. A Drake TV-300-FMS installed in TV antenna lead will clear up entire FM band; no adjustment. TV-300-FMI adjustable for superior attenuation of one frequency.

TV-300-FMS Band Stop **$4.95**



TV-300-FMI Tunable Filter **$4.95**

DRAKE AMATEUR LOW PASS FILTERS

...have four pi sections for sharp cut-off between 6 meters and channel 2, and to attenuate xmtr harmonics falling in any TV channel and the FM band. 52-ohm.

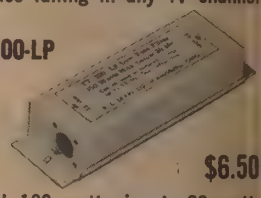
TV-1000-LP



$18.75

rated 1000 watts input, 200 watts on 6 meters. SO-239 connectors built-in.

TV-100-LP



$6.50

rated 100 watts input, 20 watts on 6. Solder it in or use your own SO-239's.

RECEIVERS

SPR-4 *NEW!* SOLID-STATE PROGRAMMABLE RECEIVER

$449.00 net



Drake engineering and the recent development of the dual gate FET make possible the first no-compromise, solid-state receiver.

Unlike receivers with bipolar transistors which have poor crossmodulation, intermodulation, AGC, and overload performance; the SPR-4 has signal handling capabilities superior to the best tube receiver. In addition, the SPR-4 has all of the advantage of a solid-state design such as low power consumption, mechanical and thermal stability, reliability, etc.

The Spr-4 can be programmed for short wave listening, amateur radio, laboratory, broadcasting, marine radio, etc.

FEATURES:

- Dual gate FET RF amplifier.
- FETs in signal path for low cross modulation and overload.
- FET linear PTO with 1 kHz readout.
- Frequency coverage: 150-500 kHz plus any 23 ranges between .500 and 30 MHz. Each range is 500 kHz wide with large overtravel.
- Normally supplied with xtals for: .5-1.0, 1.0-1.5, 6.0-6.5, 7.0-7.5, 9.5-10.0, 11.5-12.0, 15.0-15.5, 17.5-18.0, and 21.5-22.0 MHz.
- Coverage may easily be changed by adding or changing xtals and range selector dial.
- 4 pole xtal filter in first IF (5645 kHz).
- 4 pole LC filter in second IF (50 kHz).
- 3 bandwidths: 0.4 kHz, 2.4 kHz, and 4.8 kHz for CW, SSB, and AM.
- AVC: Fast attack and slow release for SSB, fast release for AM, fast or slow release for CW.
- Built-in speaker.
- Power: 115 VAC, 220 VAC, or 12 VDC.
- Built-in notch filter.

ACCESSORIES

	NET
• Noise Blanker	$65.00
• 100 MHz Calibrator	20.00
• AL-4 Loop Antenna for .15-1.6 MHz	22.00
• Transceiver Adaptor (T-4XB)	$15.00
• MS-4 Speaker	22.00
• DC Power Cord	5.00
• Extra Crystals per 500 kHz range	5.00

SW-4A INTERNATIONAL SHORT WAVE BROADCAST RECEIVER

DIRECT FREQUENCY DIALING $299.00



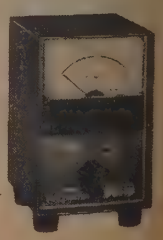
• Ultra-precision tuning dial accuracy • Also accurately tunes standard AM Broadcast • Crystal lattice filter for adjacent station rejection and good audio frequency response • Dual conversion • Solid state AF output gives low distortion good frequency response • S-meter for signal strength indication • Preselector gives superior sensitivity by peaking antenna and RF stages • Crystal H. F. Oscillator for exceptional stability on all ranges • Amplified AVC — gives constant AF output for all signal strengths.

FREQUENCY COVERAGE — .15-.5, .5-1.0, 1.0-1.5, 6.0-6.5, 7.0-7.5, 9.5-10.0, 11.5-12.0, 15.0-15.5, 17.5-18.0, 21.5-22.0, and 25.5-26.0 megacycles with crystals supplied. These frequencies cover European LF, American MF and International SW Broadcast Bands. **SIZE** — 5½" high, 10¾" wide. Cabinet depth 11⅝", overall 12¼". **WEIGHT** — 16 lbs.

ACCESSORIES — **Models MS-4** Speaker **$22.00** and **AL-4** Shielded Directional Loop Antenna for .5-1.5 MC **$22.00. Model AN-5** SW Antenna Kit **$8.80.**

RF WATTMETER

Reads forward and reflected power directly in watts (VSWR from nomogram). Two scales in each direction. **Size:** 5½" H x 3¾" W x 4" D.



Model	Full Scale	Calibration Accuracy	Price
W-4 (1.8-54 MHz)	200 watts 2000 watts	±(5% of reading +2 watts) ±(5% of reading +20 watts)	$61.95
WV-4 (20-200 MHz)	100 watts 1000 watts	±(5% of reading +1 watt) ±(5% of reading +10 watts)	$73.50
CBW	10 watts	±(5% of reading +.1 watt)	$49.50

Net

© United Technical Publications

SPRAGUE FILTERS

HYPASS® CAPACITORS



- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

μF	Amps.	WVDC	Dia. x Length	Cat. No.
.5	40	50	1 x 1 3/16	*48P18
.5	60	50	1 x 1 3/16	48P100
.25	20	200	3/4 x 1 3/16	*48P10
.5	20	200	1 x 1 3/16	*48P14
1	20	250(VAC)	1 1/16 x 1 3/16	*48P9
1	20	400	1 1/16 x 1 3/16	*48P6
1	20	400	1 1/16 x 1 3/16	†80P1
.002	15	600	1/4 x 1 3/8	46P12
.005	15	600	1/4 x 1 5/8	46P8
.01	20	600	7/16 x 1 1/4	47P6
.02	20	600	7/16 x 1 1/2	47P8
.1	20	600	1 1/16 x 1 3/16	*48P8
.1	20	600	1 1/16 x 1 3/16	*†80P3
.25	20	600	1 x 1 3/16	*48P12
.5	20	600	1 x 2 1/4	*48P16
.005	20	1000	7/16 x 1 1/4	47P12
.01	20	1000	7/16 x 1 1/2	47P13
.005	20	2500	1 x 1 9/16	47P14
.01	20	2500	1 x 1 9/16	47P15
.002	20	5000	1 x 1 9/16	47P16

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES

Has female screw terminals †Bulkhead mounting

TYPE F-400 MIRACLE FILTEROL®





A LINE FILTER THAT REALLY WORKS

- Effectively Suppresses Radio Interference by Filtering Power Lines of Receivers and Appliances
- Maximum Noise Eliminating Efficiency because of Practically Zero Length of Ground Lead
- Plugs into Standard Duplex Wall Outlet — Captive Screw Fastens Filterol F-400 to Outlet for Safe, Secure Mounting
- Direct Wall-Mounting Provides Neat Installation — No Unsightly Cord — Receiver or Appliance Plugs into Standard Outlet on Face of F-400
- Will Also Operate at Slightly Reduced Efficiency in Older Homes where Wiring is of Knob and Tube or 2-Conductor Non-Metallic Sheathed Cable Type by Using the External Grounding Post Provided for this Purpose
- Handsomely Finished in Tan Hammerloid Baked Enamel
- Rated at 5 Amperes, 125 Volts AC or DC

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES

TYPE IF FILTERS



IF-15 IF-11 IF-21 IF-S1 IF-37

IF-15 — TRIPLE-SECTION FILTER for small motor-operated devices such as fans, drills, etc. designed to prevent shocks from discharge of filter capacitors.

IF-11 — DUAL HIGH-CAPACITY FILTER designed for use on motors over 1 hp up to 220 volts ac-dc. Also used on high-current arcing devices.

IF-21 — COMPACT DUAL FILTER for use on fractional horsepower motors with case grounded to motor frame. Also used across line terminals of motors.

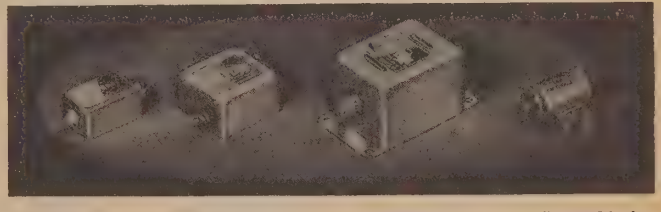
IF-S1 — SINGLE SECTION 2-LEAD FILTER for use across make-and-break contacts, such as thermostats, circuit breakers, etc.

IF-37 — 3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Also used on governor-type motors.

Underwriters' Laboratories, Inc. listed.

Cat. No.	Volts AC or DC	Dia. x Length
IF-15	220	1 x 2 3/16
IF-11	220	1 3/8 x 5 1/4
IF-21	220	1 x 2 3/16
IF-S1	220	3/4 x 2 1/16
IF-37	220	1 x 2"

FILTEROL® FILTERS



FILTEROL 1 FILTEROL 2 FILTEROL 3 FILTEROL 4

Filterol Types 1, 2, and 3 — Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4 — A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size
Filterol 1	1	115	7/8 x 1 1/4 x 1 3/4
Filterol 2	10	115	1 1/8 x 2 x 2
Filterol 3	35	115	1 7/8 x 2 7/8 x 3 1/8
Filterol 4	20	115	1" dia. x 1 13/16" long

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES

Copyright 1963, Sprague Products Company
IND-REM-46-6726
All sizes subject to change without notice.

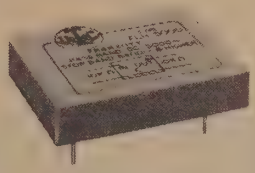
© United Technical Publications

ELECTRIC WAVE FILTERS

Manufactured and Guaranteed to MIL-F-18327C

See UTC High-Q Coils in inductor section 1800 and Transformers in transformer section 5600.

NEW UTC "FLATS"* ELECTRIC WAVE FILTERS



Designed, Manufactured and Successfully Tested to Complete MIL-F-18327C Specifications

These filters meet today's need for flat component configurations, have excellent attenuation characteristics and are ruggedized to Grade 6, MIL-F-18372C. Straight pin terminals and flat construction make these units ideally suited for printed circuit applications. These filters are hermetically sealed in flat metal cases shielded to reduce hum pickup. FP-A case: 2 x 2 x ½" h., 2.5 oz. FP-B case: 2 x 1½ x ⅜" h., 2 oz.

FHH-200: Flat package high pass filter, source and load 10K ohms. Units are within 1 db up to 300 Hz 3 db ±1 db at 200 Hz, and have an attenuation of at least 40 db at frequencies below 140 Hz. FP-A case. Mil Type: FR6RX33YY1.

FLH-600: Flat package low pass filter, source and load 10K ohms. Units are within 1 db from DC to 450 Hz, 3 db ±1 db at 600 Hz, and have an attenuation of at least 40 db at frequencies above 800 Hz. FP-A case. Mil Type: FR6RX11YY1.

FLH-5000: Flat package low pass filter, source and load 10K ohms. Units are within 1 db from DC to 4.2 kHz, 3 db ±1 db at 5 kHz, and have an attenuation of at least 43 db at frequencies above 6400 Hz. FP-B case. Mil Type: FR6RX11YY1.

FLL-3500: Flat package low pass filter, source and load 600 ohms. Units are within 1 db from DC to 3 kHz, 3 db ±1 db at 3500 Hz, and have an attenuation of at least 40 db at frequencies above 4500 Hz. FP-A case. Mil Type: FR6RX33YY1.

FLL-18000: Flat package low pass filter, source and load 600 ohms. Units are within 1 db from DC to 15 kHz, 3 db ±1 db at 18 kHz, and have an attenuation of at least 43 db at frequencies above 23 kHz. FP-A case. Mil Type: FR6RX11YY1.

FLL-50000: Flat package low pass filter, source and load 600 ohms. Units are within 1 db from DC to 42 kHz, 3 db ±1 db at 50 kHz, and have an attenuation of at least 43 db above 64 kHz. FP-B case. Mil Type: FR6RX11YY1.

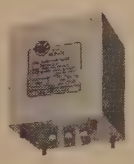
NEW, LLP-10 & LLP-15, STANDARD LOW FREQUENCY LOW PASS FILTER



Designed, Manufactured and Successfully Tested to Complete MIL-F-18327C

The LLP-10 low frequency low pass filter has a loss of less than 3 db at 10 Hz and attenuation of more than 40 db at 20 Hz. The LLP-15 low frequency low pass filter has a loss of less than 3 db at 15 Hz and attenuation of more than 40 db at 30 Hz. Both filters have a source and load impedance of 100K ohms. Both are MIL Type FR6RX11FA1. Dim: 2 1/16 x 2 5/16 x 3 1/16" h., 1½ lbs.

NEW 400-CYCLE 115 V. LINE FILTERS



Intended for use on 115 v., 400 cps line to eliminate harmonic distortion.

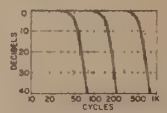
UTC No. PLF-25 — Gives 150 v. output into 500 ohm load with ±1 db, 375-425 Hz. Will attenuate 800 Hz by 30 db; 1200 Hz and higher by at least 50 db. MIL type, **FR4RX11NB1.** Meets MIL-F-18327C. Size 4 5/16" w x 5 1/4" d. x 5½" h. Weight, 10 lbs.

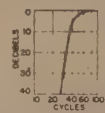
UTC No. PLP-13 — Eliminates harmonic distortion, rejects 60 and 120 Hz, and gives zero phase shift at 400 Hz. Operating into 1000 ohm load, provides 115 v. output at 400 Hz, within ±1 db, 375-425 Hz. Attenuates 800 Hz by 15 db; 1200 Hz by 45 db; above 1200 Hz by at least 35 db; 120 Hz by 20 db; and, 60 Hz by 30 db. MIL type **FR4RX22-LB1**; meets MIL-F-18327C specifications. Size, 3 11/14" w x 4 5/16" d. x 4½" h. Weight, 6½ lbs.

FOR FULL LINE OF STANDARD FILTERS, SEE UTC PAGE F-2.

ELECTRIC WAVE FILTERS

NEW STANDARD FILTERS





Base .....1 3/16 x 1 11/16"
LMI-150 .....1⅝" h., wt. 6 oz.
LMI-50, LML-500, HML-40 .....2½" h., wt. 9 oz.

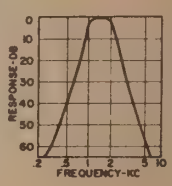


All UTC filters are designed, manufactured and successfully tested to MI 18327C environmental requirements. The **LMI-50 & LMI-150** are Low Pass Int stage Filters with source and load impedance of 10,000 ohms. Cutoff frequ cies: LMI-50 at 50 Hz; LMI-150 at 150 Hz. The **LML-500** is a Low Pass Fil with a source and load impedance of 500/600 ohms, cutoff frequency is 5 Hz. **HML-40** is a High Pass Filter with a source and load impedance of 500/6 ohms, cutoff frequency is 40 Hz. **MIL designations:** LMI-50 & LMI-1 FR6RX11YY1; LML-500, FR6RX11YY1; HML-40, FR6RX33YY1.

BROAD BAND FILTER



The **FBH-1** — Flat package Broad Band Pass Filter has a source and load of 10K ohms. Units are within 3 db from 1 kHz to 2 kHz, and have an attenuation of at least 36 db at frequencies below 500 cps and above 4 kHz. FP-C Case. MIL type FR6RX22YY1.

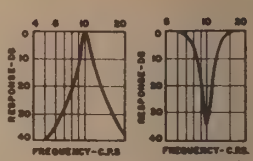


FBH-10 — Same as FBH-1, except less than 3 db from 10 kHz to 20 kHz, attenuation of at least 36 db below 5 kHz and above 40 kHz.



FP-C CASE
Height ....½", wt. 2.2 o

LOW FREQUENCY FILTER (BAND PASS & BAND REJECT)





The **LBP-10** Low Frequency Band Pass Filter has a 10 Hz center frequency. The filter has 4 terminals so that it can be used as a band pass filter with a 10K ohm load or with a high impedance load, and in addition as a band reject filter As a Band Pass Filter, the unit is within 3 db at 9.6 and 10.4 Hz. Attenuation a 5 & 20 Hz is at least 30 db with the 10K ohms output load and 35 db with the 3.3 Megohm load. As a Band Reject Filter, the unit attenuates 10 Hz by minimum of 30 db and varies less than 3 db from DC to 7 Hz, and from 14 H to 36 kHz. This filter is MIL type FR6RX22FB1.

For size and weight, see FB, UTC Page T-12 Section 5600.

HIGH Q PRECISION INDUCTANCE DECADE



Invaluable instruments for design and experimental work with tuned circuits, wave filters, and equalizers. The low hum pickup toroid coils employ a new permalloy dust core which, combined with special winding methods, provides very high Q, excellent voltage and temperature stability, and high self resonance frequency. The inductance values are laboratory adjusted to better than 1% precision, with calibration noted on base. Not to Mil specs.

DI CASE
Length .....4½"
Width .....4⅜"
Height .....2⅜"
Weight .....2 lbs.

Type No.	Induct. Henries	Optimum Range	Max. Q	Max. ACma	Ins. Test Volts RMS
DI-1	10 x .01	2-60 KC	200	500	500
DI-2	10 x .1	.25-20 KC	200	150	500
DI-3	10 x 1	.25-10 KC	200	50	500
DI-4	10 x 10	.2-1.5 KC	100	15	500

UNITED® TRANSFORMER CO. **TRW®**

UTC PAGE F-1

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

ELECTRIC WAVE FILTERS

Designed, Manufactured and Successfully Tested to Complete MIL-F-18327C Specifications.

SPECIAL FREQUENCY FILTERS

INTERMEDIATE FREQUENCIES OTHER THAN THOSE SHOWN, SUGGESTED NET $90.00 EACH. CHECK YOUR LOCAL DISTRIBUTOR FOR QUANTITY DISCOUNTS.



BM & LM Series



HM Series

INTERSTAGE AND LINE FILTERS

Available in stock frequencies listed below (numerical part of type —number is cutoff frequency in Hz). Compact shielded cases hermetically sealed to MIL-F-18327C specs. BMI, LMI, BML cases: 1 3/16" x 1 11/16" x 1 5/8" h.; wt., 6 oz. HMI, HML, LML cases: 1 3/16" x 1 11/16" x 2 1/2" h.; wt., 9 oz. The BMI filters are band pass interstage units designed to operate between a vacuum tube plate (or 10,000 ohms) and a grid. They provide a gain of 2 at center frequency.
BTI units are same as BMI, but 10,000 ohms output.
BML band pass filters, similarly, work into a grid, but have an input impedance of 500/600 ohms. They provide a gain of 9.
HMI filters are high pass interstage units.
LMI filters are low pass interstage units.
HML filters are high pass with input and output impedance of 500/600 ohms.
LML filters are low pass filters with input and output impedance of 500/600 ohms.
LLP low frequency low pass filter, loss of less than 40 db at 20 Hz. Source & load 100K ohms.

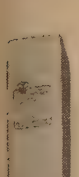
UTC Type	UTC Type	UTC Type
BMI-30	BML-1000	LMI-200
BMI-50	BTI-60	LMI-400
BMI-60	BTI-100	LMI-500
BMI-90	BTI-120	LMI-800
BMI-100	HMI-50	LMI-1000
BMI-120	HMI-100	LMI-1500
BMI-150	HMI-200	LMI-2000
BMI-200	HMI-300	LMI-2500
BMI-240	HMI-400	LMI-3000
BMI-300	HMI-500	LMI-4000
BMI-400	HMI-800	LMI-5000
BMI-500	HMI-1000	LMI-10000
BMI-750	HMI-2000	LML-500
BMI-800	HMI-3000	LML-1000
BMI-1000	HML-40	LML-1500
BMI-1500	HML-200	LML-2000
BMI-2000	HML-300	LML-2500
BMI-3000	HML-500	LML-3000
BMI-4000	HML-1000	LML-4000
BMI-5000	LMI-50	LML-8000
BMI-10000	LMI-100	LML-10000
BML-400	LMI-150	LML-12000

IMMEDIATE DELIVERY ON ALL ITEMS
CONTACT YOUR LOCAL DISTRIBUTOR FOR CURRENT PRICES & DISCOUNTS

TELEGRAPH TONE CHANNEL FILTERS



TGT CASE
1 1/2 x 1 1/2 x 2 1/2
Mtg 1 1/16 x 1 1/16"
Screws 6-32
Weight .....8 oz.



TGR CASE
1 1/2 x 1 1/2 x 4 1/4
Mtg 1 1/16 x 1 1/16"
Screws 6-32
Weight ....15 oz.

UTC band pass filters for mutiplex transmitting and receiving provide maximum stability in miniature sizes. Stock filters cover all standarc transmit and receive bands. All units employ 7 terminal header matching subminiature 7 pin socket.
TGR (receiving) & TGT (transmitting) filters are 600 ohms in and out. They are down less than 3 db at ± 42.5 Hz from center frequency. TGR units are down more than 30 db at ± 170 Hz. Attenuation is greater than 15 db at adjacent channel crossover.
TGT units are down more than 16 db at ± 170 Hz. Attenuation is greater than 7.5 db at adjacent channel crossover.
All units are MIL type FR6RX-22YY1.

UTC Type	Center Frequency (Hz)	UTC Type
TGT-425	425	TGR-425
TGT-595	595	TGR-595
TGT-765	765	TGR-765
TGT-935	935	TGR-935
TGT-1105	1105	TGR-1105
TGT-1275	1275	TGR-1275
TGT-1445	1445	TGR-1445
TGT-1615	1615	TGR-1615
TGT-1785	1785	TGR-1785
TGT-1955	1955	TGR-1955
TGT-2125	2125	TGR-2125
TGT-2295	2295	TGR-2295
TGT-2465	2465	TGR-2465
TGT-2635	2635	TGR-2635
TGT-2805	2805	TGR-2805
TGT-2975	2975	TGR-2975
TGT-3145	3145	TGR-3145
TGT-3315	3315	TGR-3315



BPM



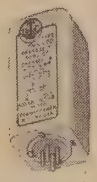
HPM & LPM

MINIFILTERS*

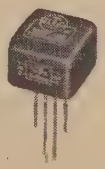
These units provide almost the same characteristics as the standard interstage units listed to the left, although extremely miniaturized. Hermetically sealed to MIL-F-18327C specs. B type case: 3/4" x 3/4" x 1 1/8" h.; wt., 1 oz. H and L cases: 1" x 1" x 1 3/8" h.; wt., 2 1/4 oz. Cutoff frequencies in Hz indicated by type number.
BPM units (BAND PASS) have 2:1 gain. Attenuation is approximately 2 db ±3% from center frequency, and 35 db per octave as shown. Input 10,000 ohms, output to grid, tapped for 10,000 ohms to provide for transistor circuits. For tube circuits continuity is on grid side, for transistor use continuity is on input side.
BPH units (BAND PASS) attenuation less than 3 db ±5% from center frequency, and 40 db per octave. Source and load 500 ohms.
HPM units (HIGH PASS) are down less than 6 db at cutoff frequency, and more than 30 db at .67 cutoff frequency, 40 db at .6 cutoff frequency. Input and output 10,000 ohms.
LPM units (LOW PASS) are down less than 6 db at cutoff frequency, and more than 30 db at 1.5 cutoff frequency, 40 db at 1.65 cutoff frequency. Input and output 10,000 ohms.

UTC Type	UTC Type	UTC Type
BPH-50000	BPM-2500	HPM-1500
BPH-100000	BPM-3000	HPM-4000
BPM-400	BPM-3200	LPM-200
BPM-440		LPM-300
BPM-500	BPM-4000	LPM-500
BPM-600	BPM-4800	LPM-1000
BPM-750	BPM-5000	LPM-1500
BPM-800	BPM-6000	LPM-2000
BPM-1000	BPM-6400	LPM-3000
BPM-1200	BPM-8000	LPM-5000
BPM-1500	BPM-10000	LPM-6000
BPM-1600	BPM-20000	LPM-8000
BPM-1800	HPM-500	LPM-10000
BPM-2000	HPM-1000	LPM-15000

TELEMETERING BAND PASS FILTERS



TMN-.4 thru TMN-1.7
1 1/16 x 1 9/32 x 2"
Weight 3.5 oz.
TMN-2.3 thru TMW-70
23/32 x 23/32 x 1 3/8"
Weight 1.2 oz.



MNF-.4 thru MNF-5.4
1 3/16" Sq. x 1/2" high
Weight 1 oz.
MNF-7.35 thru MWF-70
23/32" Sq. x 1/2" high
Weight 1/3 oz.

Both TMN and TMW types are designed for 100 K input and output impedance and have an insertion loss of less than 6 db. Four pin hermetic header matches small Winchester socket.
TMN filters are down less than 3 db at ± 7.5% of center frequency. They are down more than 18 db at ± 25% of center frequency. Attenuation is greater than 40 db beyond 1.75 Fc and .58 Fc.
TMW filters are down less than 3 db at ± 15% of center frequency. They are down more than 20 db at ± 50% of center frequency. Attenuation is greater than 40 db beyond 2.5 Fc and .4 Fc.
MNF and MWF (Minifilter) provide same performance as filters described above but are extremely miniaturized. Slanted toward use with transistors. Pin terminals ideally suited for printed circuits.

UTC Type	Center Frequ'cy kHz	Band Width±	UTC Type
TMN- .4	.4	7½%	MNF- .4
TMN- .56	.56	7½%	MNF- .56
TMN- .73	.73	7½%	MNF- .73
TMN- .96	.96	7½%	MNF- .96
TMN-1.3	1.3	7½%	MNF-1.3
TMN-1.7	1.7	7½%	MNF-1.7
TMN-2.3	2.3	7½%	MNF-2.3
TMN-3.0	3.0	7½%	MNF-3.0
TMN-3.9	3.9	7½%	MNF-3.9
TMN-5.4	5.4	7½%	MNF-5.4
TMN-7.35	7.35	7½%	MNF-7.35
TMN-10.5	10.5	7½%	MNF-10.5
TMN-14.5	14.5	7½%	MNF-14.5
TMN-22	22	7½%	MNF-22
TMN-30	30	7½%	MNF-30
TMN-40	40	7½%	MNF-40
TMN-52.5	52.5	7½%	MNF-52.5
TMN-70	70	7½%	MNF-70
TMW-22	22	15%	MWF-22
TMW-30	30	15%	MWF-30
TMW-40	40	15%	MWF-40
TMW-52.5	52.5	15%	MWF-52.5
TMW-70	70	15%	MWF-70

UNITED® TRANSFORMER CO. **TRW®**

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

FASTENINGS, NYLON-FIBRE WASHERS, SPACERS, SCREWS, NUTS, SPAGHETTI PACKS, ALL-WAVE KITS, FIBERGLASS GUY WIRE, HOT AIR GUN

DABURN NYLON FASTENINGS ZYTEL 101 PER MIL-P-17019B AND MIL-P-20693A



Has outstanding insulation specs. hi-resistance to heat, shock, vibration, chemical. Is light in weight, superior torque streng.h. Corrosion resistant, non magnetic. Continuous service temperature to 300°F. All parts made to American thread standards to Class 2A or 2B fit. B18.2 (hex nuts), B18.6 (machine screws), B1.1 (thread specs.).

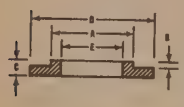
DABURN No.	Size	Type	DABURN No.	Size	Type
14-40	2-56 x ¼″	Rd. Hd.	14-48B	6-32 x ½″	Fill. Hd.
14-40A	2-56 x ¼″	Fill. Hd.	14-48C	6-32 x ½″	Flat. Hd.
14-40B	2-56 x ¼″	Bind. Hd.	14-49	6-32 x ¾″	Rd.Hd.
14-41	2-56 x ⅜″	Rd. Hd.	14-49A	6-32 x ¾″	Fill. Hd.
14-41A	2-56 x ⅜″	Fill. Hd.	14-49B	6-32 x ¾″	Bind. Hd.
14-41B	2-56 x ⅜″	Bind. Hd.	14-50	6-32 x 1″	Rd. Hd.
14-42	2-56 x ½″	Rd. Hd.	14-50C	6-32 x 1	Flat. Hd.
14-42A	2-56 x ½″	Fill. Hd.	14-51	8-32 x ¼″	Rd. Hd.
14-42B	2-56 x ½″	Bind. Hd.	14-51A	8-32 x ¼″	Fill. Hd.
14-43	4-40 x ¼″	Rd. Hd.	14-51B	8-32 x ¼″	Bind. Hd.
14-43A	4-40 x ¼″	Fill. Hd.	14-52	8-32 x ½″	Rd. Hd.
14-43B	4-40 x ¼″	Bind. Hd.	14-52A	8-32 x ½″	Fill. Hd.
14-44	4-40 x ⅜″	Rd. Hd.	14-52B	8-32 x ½″	Bd. Hd.
14-44A	4-40 x ⅜″	Fill Hd.	14-52C	8-32 x ½″	Flat Hd.
14-44B	4-40 x ⅜″	Bind. Hd.	14-54	8-32 x ⅝″	Rd. Hd.
14-45	4-40 x ½″	Rd. Hd.	14-54A	8-32 x ⅝″	Fill. Hd.
14-45A	4-40 x ½″	Fill. Hd.	14-55	8-32 x ¾″	Rd. Hd.
14-45B	4-40 x ½″	Bind. Hd.	14-55A	8-32 x ¾″	Fill. Hd.
14-46	6-32 x ¼″	Rd. Hd.	14-55B	8-32 x ¾″	Bd. Hd.
14-46A	6-32 x ¼″	Fill. Hd.	14-56A	8-32 x 1″	Fill. Hd.
14-46B	6-32 x ¼″	Bind. Hd.	14-56C	8-32 x 1″	Flat. Hd.
14-47	6-32 x ⅜″	Rd. Hd.	14-57	10-32 x ⅜″	Rd. Hd.
14-47A	6-32 x ⅜″	Bind. Hd.	14-58	10-32 x ½″	Rd. Hd.
14-47B	6-32 x ⅜″	Fill. Hd.	14-58C	10-32 x ½″	Flat. Hd.
14-47C	6-32 x ⅜″	Flat. Hd.	14-59	10-32 x ⅝″	Rd. Hd.
14-48	6-32 x ½″	Rd. Hd.	14-60	10-32 x 1″	Rd. Hd.
14-48A	6-32 x ½″	Bind. Hd.	14-60C	10-32 x 1″	Flat Hd.

STOCK COLOR: Natural — Std. Pkg.: 100, 1000

Additional sizes available to order.

DABURN NYLON SHOULDER WASHERS

Natural Nylon Per MIL-P-20693A
Standard Package 1000





Catalog No.	E	Hole Size	D	C	B	A
14-540	.140	6	.375	.093	.031	.237
14-541	.110	4	.250	.062	.031	.187
14-542	.136	6	.250	.093	.031	.187
14-543	.136	6	.312	.093	.031	.187
14-544	.250	¼″	.500	.068	.028	.312
14-545	.172	8	.375	.093	.031	.246
14-546	.196	10	.375	.093	.031	.308
14-547	.265	17/64″	.500	.097	.031	.365
14-548	.375	⅜″	.750	.093	.031	.500
14-549	.385	⅜″	.625	.093	.031	.500

FIBRE SHOULDER WASHERS

Fibre Material Per NEMA Standard and ASTM Spec. D-710





Catalog No.	E	Hole Size	D	C	B	A
14-530	.140	6	.375	.093	.031	.237
14-531	.110	4	.250	.062	.031	.187
14-532	.136	6	.250	.093	.031	.187
14-533	.136	6	.312	.093	.031	.187
14-534	.250	¼″	.500	.068	.028	.312
14-535	.172	8	.375	.093	.031	.308
14-536	.196	10	.375	.093	.031	.308
14-537	.265	17/64″	.500	.097	.031	.365
14-538	.375	⅜″	.750	.093	.031	.500
14-539	.385	⅜″	.625	.093	.031	.500

Standard Package 1000

FLAT FIBRE WASHERS

NEMA STANDARD ASTM SPEC D-710

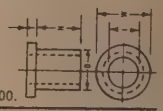




Cat. No.	Hole Size	I.D.	O.D.	Thickness
14-510	6	.136	.250	1/16
14-511	4	.110	.250	1/16
14-512	6	.140	.375	1/16
14-513	8	.172	.375	1/16
14-514	10	.196	.345	1/16
14-515	¼″	.250	.500	1/16
14-516	¼″	.250	.500	3/32
14-517	5/16″	.312	.500	1/16
14-518	⅜″	.385	.625	1/16
14-519	⅜″	.375	.750	1/16

Standard Package 1000

DABURN NYLON SPACER/BUSHINGS



Wide flanges isolates screw from mounting surface. Has hi-tensile and torque strength.
COLOR: Natural. MIL-P-20693A. Std., Pkg.: 100, 1000.

Daburn No.	Screw Size I.D.	W	T	H	D
14-79	# 4 (.115″)	.235″	3/64″	¼″	.146″
14-79A	# 6 (.140″)	.290″	3/64″	¼″	.170″
14-79B	# 8 (.173″)	.344″	1/16″	⅜″	.205″
14-79C	#10 (200″)	.399″	1/16″	⅜″	.260″
14-79D	¼″ (.260″)	.513″	1/16″	⅜″	.312″

DABURN NYLON HEX NUTS



Daburn No.	Size	Daburn No.	Size
14-85	2-56	14-88	8-32
14-86	4-40	14-89	10-32
14-87	6-32	14-90	¼-20

COLOR: Natural. MIL-P-20693A. Std. Pkg.: 100, 1000

DABURN NYLON FLAT WASHERS



Daburn No.	For Screw Size	I.D.	O.D.	Thickness
14-92	2	3/32″	¼″	.016″
14-93	4	⅛″	¼″	.016″
14-94	6	5/32″	5/16″	.031″
14-95	8	.170″	⅜″	.031″
14-96	10	.195″	⅜″	.031″
14-97	¼	9/32″	⅝″	.063″

COLOR: Natural — Std. Pkg.: 100, 1000

NOTE: See Sections 2100, 3100 for additional Daburn Hardware Products. Section 6000, for our Insulated Tubing - Wire - Cable — including Heat Shrinkable Tubing.

DABURN ASSORTED SPAGHETTI PACKS

25-9″ lengths per pack consists of varnished sleeving of assorted sizes and colors.



DABURN Cat. No.		Standard Package
9-07	Pack	25
9-08	25 Packs in Display Carton	1

HOT AIR GUN AND ACCESSORIES FOR DAFLEX SHRINKABLE TUBING



Daburn No.
HG1 — For SH265, SH275 & SH290 Series
HG2 — For SH400 & SH621 Series

A flameless heat source; light in weight; portable and/or permanent mounting.

ADAPTOR HGA-02



Concentrates heat and allows use of baffle.

BAFFLE PLATE HGB-01

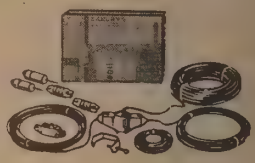
For tubing up to 1¼″ O.D. Made to concentrate hot air.



DABURN ALL-WAVE ASSEMBLED ANTENNA KIT

Designed for reception of overseas radio signals & programs. Utilizes the Hertz principle — balanced line consists of:

- 2—30′ coils 7/24 copper wire (2366/16)
- 1—40′ coil transmission cable (2779)
- 1—Center insulator (10-68)
- 2—Porcelain insulators (10-06)
- 2—Lead-in strips
- 1—Ground clamp
- 2—Nail-on knobs (10-09)



DABURN Cat. No.		Standard Package
9-09	All Wave Kit	42
10-09	Nail-on Knob, Glazed	100



DABURN FIBERGLASS GUY WIRE



Gives complete isolation for any antenna system. Non-radiating, non-absorbing, no rot, no shrink, no sag. This non metallic guy wire has an overall (PVC) polyvinylchloride jacket.

DABURN No.	Put-Up	Tensile Strength	Color	Nom. O.D.
10-01	100′, 500′, 1000′	500 lbs.	Green	.125″
10-02	100′, 500′, 1000′	1000 lbs.	Gray	.218″
10-03	100′, 500′, 1000′	2500 lbs.	White	.313″

Doubling the cable will double the strength.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

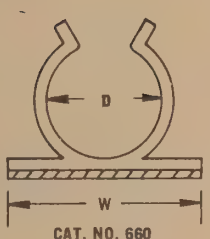
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

DABURN FASTENING DEVICES

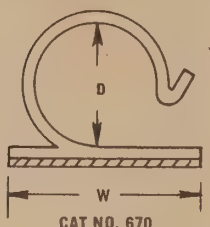
STIK KLIPS™ • TENSION CLIPS • SCREWS • NUTS • WASHERS

DABURN STIK KLIPS™

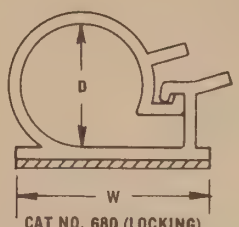
NEW



CAT. NO. 660



CAT NO. 670



CAT NO. 680 (LOCKING)

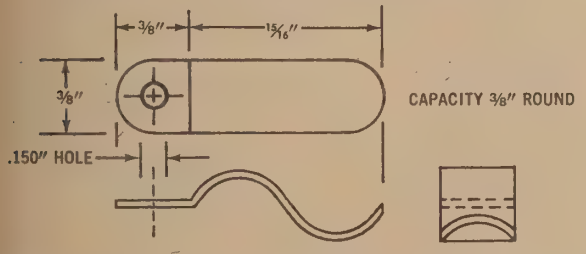
For fast secure mounting on smooth surfaces. No need to screw, nail or staple in place. Fastens in a flash — just peel off the protective backing and press in place on a clean, dry surface.

These plastic clips are insulating, strong and elastic. They have many uses, such as keeping telephone wires off the floor, holding wire, cable, tubing, rods, etc. in position.

Material: PVC
Color: Gray
Temp. Range: −10°F to +175°F

DABURN Cat. No.	D	W	Std. Pkg.
660-⅛	⅛″	¾″	100, 1000
660-¼	¼″	¾″	100, 1000
660-⅜	⅜″	¾″	100, 1000
660-½	½″	1″	100, 1000
660-¾	¾″	1″	100, 1000
670-⅛	⅛″	¾″	100, 1000
670-¼	¼″	¾″	100, 1000
670-⅜	⅜″	¾″	100, 1000
670-½	½″	1″	100, 1000
670-¾	¾″	1″	100, 1000
680-¼	¼″	¾″	100, 1000
680-½	½″	1″	100, 1000
680-¾	¾″	1″	100, 1000

DABURN NYLON TENSION CLIPS



Holds Cable - Wire - Tubing - Pipe - Panels. Many other varied uses. DABURN nylon tension clips are made of strong, durable nylon. They are insulating, non-corrosive and weather resistant. DABURN tension clips are easily fastened, easily removed, strong and elastic.

DABURN CAT. NO.: 641 STD. PKG.: 100, 1000
COLOR: Natural

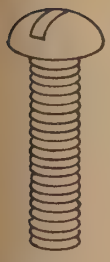
DABURN BRASS NICKEL PLATED FLAT WASHERS



DABURN Cat. No.	Fits Screw Size	Hole Size	O.D.	Thickness
14-232	6	.145″	⅜″	1/32″
14-233	8	.172″	⅜″	1/32″
14-234	10	.203″	7/16″	1/32″
14-235	¼-20	.265″	9/16″	1/32″

Standard Package: 1000. Additional Sizes Available.

DABURN ROUND HEAD BRASS NICKEL PLATED MACHINE SCREWS

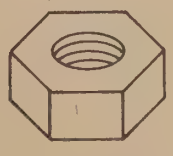


DABURN Cat. No.	Size	Std. Pkg.
14-240	6-32 x ¼″	1000
14-241	8-32 x 5/16″	1000
14-242	8-32 x ½″	1000
14-243	10-32 x ⅜″	1000
14-244	10-32 x ¾″	1000
14-245	10-32 x ⅞″	1000
14-246	10-32 x 1″	1000

Additional Sizes Available.

See other DABURN products in Section 2100, Pages 372-376; Section 3100, Pages 726-727; Section 5100, Pages 1032-1033; Section 6000, Pages 1396-1419.

DABURN HEXAGON BRASS NICKEL PLATED MACHINE SCREW NUTS



DABURN Cat. No.	Size	Width	Thickness	Std. Pkg.
14-221	4-40	¼″	3/32″	1000
14-222	6-32	¼″	3/32″	1000
14-224	8-32	11/32″	⅛″	1000
14-225	10-32	⅜″	⅛″	1000
14-226	¼-20	7/16″	⅛″	1000

Additional Sizes Available.

© United Technical Publications

GC ELECTRONICS

ELECTRONIC HARDWARE

SOLDERING LUGS



Description & Specifications	Fig. No.	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Hole Size #6, Length — 13/32"	A1	8466-C	$2.00	8466-M	$15.95
Hole Size #6, Length — 23/32"	A	8467-C	3.59	8467-M	28.69
Hole Size #8, Length — 23/32"	A	8468-C	3.38	8468-M	27.01
Hole Size #6, Length — 21/32"	B	1021-BC	1.35	1021-BM	10.77
Hole Size #8, Length — 5/8"	B	7445-C	1.53	7445-M	12.18
Hole Size #10, Length — 11/16"	B	8473-C	1.49	8473-M	11.90
Hole Size #6, Length — 9/16"	C	5703-C	1.14	5703-M	9.09
Hole Size #8, Length — 9/16"	C	5704-C	2.14	5704-M	17.07
Hole Size #10, Length — 13/16"	C	5705-C	2.14	5705-M	17.07
Hole Size #6, Length — 11/16"	C	1021-CC	1.18	1021-CM	9.38
Hole Size #6, Length — 3/16"	F	1021-FC	1.18	1021-FM	9.38
Hole Size #8, Length — 3/16"	F	7451-C	1.12	7451-M	8.96
Hole Size #6, Length — 7/8"	F	7454-C	.84	7454-M	6.72
Hole Size #8, Length — 7/8"	H	7455-C	1.10	7455-M	8.82
Hole Size #10, Length — 7/8"	H	7456-C	1.10	7456-M	8.82
Hole Size #4, Length — 25/32"	K	7458-C	2.34	7458-M	18.74
Hole Size #8, Length — 25/32"	K	7460-C	2.38	7460-M	19.04
Hole Size #10, Length — 13/16"	K	7461-C	2.38	7461-M	19.04
Hole Size #6, Length — 5/8"	L	7462-C	1.37	7462-M	10.92
Hole Size #8, Length — 5/8"	L	7463-C	1.37	7463-M	10.92
Hole Size #4, Length — 3/16"	F	5706-C	2.13	5706-M	17.07
Hole Size #8, Length — 13/16"	F	5707-C	2.13	5707-M	17.07
Hole Size #6, Length — 13/16"	F	5708-C	2.13	5708-M	17.07
Hole Size #6, Length — 11/16"	M	7441-C	1.50	7441-M	12.03
Hole Size #8, Length — 11/16"	M	7442-C	1.42	7442-M	11.34
Hole Size #10, Length — 11/16"	M	1021-AC	1.42	1021-AM	11.34
Solderless TV Line Luge	O	8633-C	2.10	8633-M	16.79
Hole Size #6	AA	7116-C	1.55	7116-M	12.45
Hole Size #8	AA	7118-CW	1.65	7118-MW	13.16
Hole Size #6, Length — 7/16"	BB	7126-C	1.23	7126-M	9.80
Hole Size #8, Length — 5/8"	BB	7128-C	1.61	7128-M	12.87
Hole Size #6	CC	7156-C	1.37	7156-M	10.92
Hole Size #8, Length — 13/16"	CC	7158-CW	1.37	7158-MW	10.92
Hole Size #6, Length — 1/2"	FF	7166-C	1.26	7166-M	10.08
Hole Size #10, Length — 11/16"	FF	7169-C	1.07	7169-M	8.54
Hole Size #10	HH	7179-C	1.34	7179-M	10.77
Hole Size #10	KK	7189-C	2.15	7189-M	17.21

ROUND HEAD MACHINE SCREWS

STEEL — NICKEL PLATED



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
2-56 x 3/16"	8021-CW	$ .55	8021-MW	$ 4.34
2-56 x 1/4"	7130-C	.60	7130-M	4.76
2-56 x 3/8	8023-C	.60	8023-M	4.76
2-56 x 1/2"	7131-C	.63	7131-M	5.04
2-56 x 3/4"	7132-C	.76	7132-M	6.02
3-48 x 3/4"	7124-C	.76	7124-M	6.02
4-36 x 1/4" Phono Cartridge Mounting Screw	6005-C	.63	6005-M	5.04
4-36 x 3/8"	7138-C	.68	7138-M	5.46
4-36 x 1/2"	6006-C	.70	6006-M	5.60
4-36 x 3/4"	6007-C	.89	6007-M	7.14
4-40 x 1/4" Phono Cartridge Mounting Screw	6005-AC	.63	6005-AM	5.04
4-40 x 3/8"	8043-C	.63	8043-M	5.04
4-40 x 1/2"	6005-BC	.70	6005-BM	5.60
4-40 x 5/8"	5652-C	.74	5652-M	5.88
4-40 x 3/4"	6005-CC	.83	6005-CM	6.57
4-40 x 1"			8048-M	
6-32 x 1/4"	6008-C	.68	6008-M	5.46
6-32 x 3/8"	8063-C	.68	8063-M	5.46
6-32 x 1/2"	6009-C	.79	6009-M	6.30
6-32 x 5/8"	5653-C	.87	5653-M	6.99
6-32 x 3/4"	6010-C	.92	6010-M	7.41
6-32 x 1"	6011-C	1.07	6011-M	8.54
6-32 x 1 1/4"	7141-C	1.30	7141-M	10.35
6-32 x 2"	7148-C	1.93	7148-M	15.39
8-32 x 1/4"	6013-C	.91	6013-M	7.28
8-32 x 3/8"	6014-C	1.00	6014-M	7.98
8-32 x 1/2"	6015-C	1.07	6015-M	8.54
8-32 x 5/8"	5654-C	1.12	5654-M	8.96
8-32 x 3/4"	6016-C	1.19	6016-M	9.51
8-32 x 1"	6017-C	1.37	6017-M	10.92
8-32 x 1 1/4"	7142-C	1.58	7142-M	12.60
10-32 x 1/2"	6020-C	1.21	6020-M	9.66
10-32 x 5/8"	5655-C	1.33	5655-M	10.64
10-32 x 3/4"	6021-C	1.46	6021-M	11.61
10-32 x 1"	6022-C	1.60	6022-M	12.74
10-32 x 1 1/2"	7143-C	2.12	7143-M	16.94

ROUND HEAD MACHINE SCREWS

BRASS — NOT PLATED



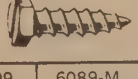
Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
2-56 x 1/4"	5657-C	$ .91	5657-M	$ 7.28
2-56 x 1/2"	5658-C	1.02	5658-M	8.12
2-56 x 3/4"	5660-C	1.19	5660-M	9.51
3-48 x 3/4"	5661-C	1.34	5661-M	10.77
4-36 x 1/4"	5662-C	1.02	5662-M	8.12
4-36 x 1/2"	5663-C	1.46	5663-M	11.61
4-36 x 5/8"	5664-C	1.54	5664-M	12.32
4-36 x 3/4"	5665-C	1.65	5665-M	13.16
4-40 x 1/4"	5666-C	1.02	5666-M	8.12
4-40 x 1/2"	5667-C	1.31	5667-M	10.50
4-40 x 5/8"	5668-C	1.54	5668-M	12.32
4-40 x 3/4"	5669-C	1.65	5669-M	13.16
6-32 x 1/4"	8501-C	1.39	8501-M	11.06
6-32 x 3/8"	5670-C	1.54	5670-M	12.32
6-32 x 1/2"	8502-C	1.68	8502-M	13.43
6-32 x 5/8"	5671-C	1.94	5671-M	5.53
6-32 x 3/4"	8503-C	2.03	8503-M	16.23
6-32 x 1"	8504-C	2.42	8504-M	19.31
6-32 x 1 1/4"	5672-C	2.80	5672-M	22.39
6-32 x 2"	5673-C	4.73	5673-M	37.79
8-32 x 1/4"	8505-C	2.17	8505-M	17.36
8-32 x 3/8"	5674-C	2.15	5674-M	17.21
8-32 x 1/2"	8506-C	2.47	8506-M	19.73
8-32 x 5/8"	5675-C	2.88	5675-M	22.95
8-32 x 3/4"	8507-C	3.03	8507-M	24.21
8-32 x 1"	8508-C	3.60	8508-M	28.83
8-32 x 1 1/4"	5676-C	4.22	5676-M	33.73
10-32 x 1/2"	5677-C	3.12	5677-M	24.91
10-32 x 5/8"	5678-C	3.47	5678-M	27.71
10-32 x 3/4"	5679-C	3.80	5679-M	30.37
10-32 x 1"	5680-C	4.54	5680-M	36.25
10-32 x 1 1/2"	5681-C	6.38	5681-M	51.08

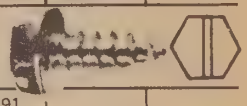
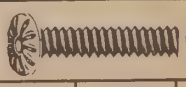
WRITE FOR #FR-71 FOR COMPLETE LISTINGS

Net

© United Technical Publications

GC ELECTRONICS — ELECTRONIC HARDWARE

Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
PHILLIPS HEAD ROUND HEAD MACHINE SCREWS  				
STEEL — NICKEL PLATED				
6-32 x 1/4"	8511-C	$1.52	8511-M	$12.18
6-32 x 1/2"	8512-C	1.37	8512-M	10.92
6-32 x 3/4"	8513-C	1.55	8513-M	12.45
6-32 x 1"	8514-C	1.75	8514-M	14.00
8-32 x 5/16"	8515-C	1.31	8515-M	10.50
8-32 x 1/2"	8516-C	1.55	8516-M	12.45
8-32 x 3/4"	8517-C	1.71	8517-M	13.71
8-32 x 1"	8518-C	1.91	8518-M	15.26
BINDING HEAD MACHINE SCREWS  				
STEEL — NICKEL PLATED				
2-56 x 1/4"	7160-C	.65	7160-M	5.18
2-56 x 1/2"	7161-C	.71	7161-M	5.73
2-56 x 3/4"	7162-C	.79	7162-M	6.30
4-36 x 1/4"	7163-C	.79	7163-M	6.30
4-36 x 1/2"	7164-C	.79	7164-M	6.30
4-36 x 3/4"	7165-C	.79	7165-M	6.30
4-40 x 1/4"	7170-C	.67	7170-M	5.31
4-40 x 1/2"	7171-C	.70	7171-M	5.60
4-40 x 3/4"	7172-C	.83	7172-M	6.57
5-36 x 1/4"	7154-C	.68	7154-M	5.46
6-32 x 3/16"	7151-C	.71	7151-M	5.73
6-32 x 1/4"	7152-C	.68	7152-M	5.46
6-32 x 3/8"	7153-C	.74	7153-M	5.88
6-32 x 1/2"	7118-C	.79	7118-M	6.30
6-32 x 3/4"	7173-C	.92	7173-M	7.41
7-32 x 3/8"	7155-C	2.00	7155-M	15.95
8-32 x 1/4"	7174-C	.91	7174-M	7.28
8-32 x 5/16"	7158-C	1.00	7158-M	7.98
8-32 x 3/8"	7119-C	1.00	7119-M	7.98
8-32 x 1/2"	7120-C	1.07	7120-M	8.54
8-32 x 3/4"	7175-C	1.19	7175-M	9.51
10-32 x 1/2"	7176-C	1.21	7176-M	9.66
10-32 x 3/4"	7177-C	1.46	7177-M	11.61
BINDING HEAD MACHINE SCREWS  				
BRASS — NICKEL PLATED				
2-56 x 1/4"	7160-1-C	1.12	7160-1-M	8.96
2-56 x 1/2"	7161-1-C	1.30	7161-1-M	10.35
2-56 x 3/4"	7162-1-C	1.49	7162-1-M	11.90
4-36 x 1/4"	7163-1-C	1.30	7163-1-M	10.35
4-36 x 1/2"	7164-1-C	1.60	7164-1-M	12.74
4-36 x 3/4"	7165-1-C	1.87	7165-1-M	14.97
4-40 x 1/4"	7170-1-C	1.30	7170-1-M	10.35
4-40 x 1/2"	7171-1-C	1.45	7171-1-M	11.61
4-40 x 3/4"	7172-1-C	1.70	7172-1-M	13.58
6-32 x 3/16"	7151-1-C	1.79	7151-1-M	14.27
6-32 x 1/4"	7152-1-C	1.39	7152-1-M	11.06
6-32 x 3/8"	7153-1-C	1.49	7153-1-M	11.90
6-32 x 1/2"	7118-1-C	1.68	7118-1-M	13.43
6-32 x 3/4"	7173-1-C	2.03	7173-1-M	16.23
8-32 x 1/4"	7174-1-C	2.07	7174-1-M	16.52
8-32 x 3/8"	7119-1-C	2.15	7119-1-M	17.21
8-32 x 1/2"	7120-1-C	2.47	7120-1-M	19.73
8-32 x 5/16"	7158-1-C	2.50	7158-1-M	20.01
8-32 x 3/4"	7175-1-C	3.03	7175-1-M	24.21
10-32 x 1/2"	7176-1-C	3.39	7176-1-M	27.15
10-32 x 3/4"	7177-1-C	4.59	7177-1-M	36.67
ESCUTCHEON PLATE SCREWS  				
ROUND HEAD — SLOTTED — BRONZE PLATED				
#2 x 1/4"	1091-C	1.12	1091-M	8.96
SHEET METAL SCREWS  				
HEX HEAD — SLOTTED SELF-TAPPING — NICKEL PLATED				
#4 x 3/8"	6089-C	.99	6089-M	7.83
#4 x 1/2"	6090-C	1.07	6090-M	8.54
#6 x 1/4"	6091-C	1.12	6091-M	8.96
#6 x 3/8"	6092-C	1.14	6092-M	9.09
#6 x 1/2"	6093-C	1.21	6093-M	9.66
#6 x 3/4"	6094-C	1.30	6094-M	10.35
#6 x 1"				

Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
SHEET METAL SCREWS (cont'd)				
#8 x 1/4"	8102-C	$1.30	8102-M	$10.35
#8 x 3/8"	6095-C	1.34	6095-M	10.77
#8 x 1/2"	6096-C	1.39	6096-M	11.06
#8 x 3/4"	8386-C	1.68	8386-M	13.43
#8 x 1"	6097-C	1.77	6097-M	14.13
#10 x 3/8"	6098-C	1.50	6098-M	12.03
#10 x 1/2"	6099-C	1.65	6099-M	13.16
#10 x 3/4"	6100-C	1.79	6100-M	14.27
#8 x 5/8"	5696-C	1.40	5696-M	11.19
TV BACK COVER SCREWS 				
CADMIUM PLATED				
Assorted	9329-C	.91		
#6 x 5/8", Cadmium Plated	9330-C	.95		
#8 x 3/4", Cadmium Plated	9332-C	1.49		
SPADE BOLTS or MOUNTING SCREWS 				
STEEL — NICKEL PLATED				
A—3/4", B—5/8", C—11/32", D—6-32, E—#6, F—1/4"	6081-C	3.62	6081-M	28.97
A—7/8", B—11/16", C—13/32" D—6-32, E—#6, F—1/4"	6082-C	3.62	6082-M	28.97
A—1 3/32", B—15/16", C—7/16", D—8-32, E—#8, F—11/32"	6084-C	8.39	6084-M	67.03
Offset Spade Bolts A—3/4", B—9/16", C—5/16", D—6-32, E—#6, F—15/64"	8573-C	4.62	8573-M	36.96
WOOD SCREWS  				
4 x 1/2" Round Head Steel, Nickel Plated	6114-C	1.00	6114-M	7.98
4 x 5/8" Round Head Steel, Nickel Plated	5694-C	1.13	5694-M	9.09
4 x 3/4" Round Head Steel, Nickel Plated	6115-C	1.16	6115-M	9.24
6 x 3/4" Round Head Steel, Nickel Plated	6116-C	1.23	6116-M	9.80
6 x 1" Round Head Steel, Nickel Plated	6117-C	1.54	6117-M	12.32
8 x 3/4" Round Head Steel, Nickel Plated	6118-C	1.49	6118-M	11.90
8 x 1 1/4" Round Head Steel, Nickel Plated	8071-C	2.54	8071-M	20.30
#10 x 1 1/2" Round Head Steel, Nickel Plated	8073-C	2.72	8073-M	21.69
#12 x 1 1/2" Round Head Steel, Nickel Plated	8075-C	3.43	8075-M	27.43
#14 x 1 3/4" Round Head Steel, Nickel Plated	8076-C	4.86	8076-M	39.26
#2 x 3/8" Oval Head Statuary Bronze	8523-C	1.18	8523-M	9.38
#2 x 1/2" Round Head Bronze Finish	8524-C	1.23	8524-M	9.77
ORNAMENTAL HEAD SCREWS  				
STEEL — STATUARY BRONZE PLATED				
6-32 x 1"	1098-C	1.79	1098-M	14.27
OVAL HEAD RACK AND CABINET SCREWS  				
STEEL — NICKEL PLATED				
6-32 x 1/2"	6540-C	.79	6540-M	6.30
6-32 x 5/8"	5691-C	1.12	5691-M	8.96
6-32 x 3/4"	6541-C	.92	6541-M	7.41
8-32 x 5/8"	5692-C	1.21	5692-M	9.66
8-32 x 3/4"	6542-C	1.19	6542-M	9.69
10-32 x 1/2"	8848-C	1.21	8848-M	9.66
10-32 x 5/8"	5693-C	1.31	5693-M	10.50
10-32 x 3/4"	6543-C	1.42	6543-M	11.34
12-24 x 5/8"	8278-C	1.82	8278-M	14.50

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

© United Technical Publications

Net

GC ELECTRONICS

ELECTRONIC HARDWARE

ALLEN HEX SET SCREWS

HARDENED STEEL — HEADLESS



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
4-40 x 1/4"	7200-C	$6.38	7200-M	$51.08
6-32 x 1/8"	7196-C	6.27	7196-M	50.10
6-32 x 3/16"	7197-C	6.27	7197-M	50.10
8-32 x 1/8"	7201-C	6.27	7201-M	50.10
8-32 x 3/16"	7202-C	6.27	7202-M	50.10

HEXAGON NUTS

STEEL — NICKEL PLATED



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Thread 2-56, Width 3/16", Thickness 1/16"	7225-C	.87	7225-M	6.99
Thread 3-48, Width 3/16", Thickness 1/16"	7226-C	.87	7226-M	6.99
Thread 4-36, Width 1/4", Thickness 3/32"	6041-C	.87	6041-M	6.99
Thread 4-40, Width 1/4", Thickness 3/32"	6041-AC	.87	6041-AM	6.99
Thread 6-32, Width 1/4", Thickness 3/32"	6042-C	.87	6042-M	6.99
Thread 6-32, Width 3/16", Thickness 7/64"	7230-C	.95	7230-M	7.56
Thread 8-32, Width 1/4", Thickness 3/32"	6043-C	.87	6043-M	6.99
Thread 8-32, Width 3/16", Thickness 7/64"	7232-C	.95	7232-M	7.56
Thread 8-32, Width 11/32", Thickness 1/8"	7233-C	.92	7233-M	7.41
Thread 10-32, Width 3/8", Thickness 3/64"	6044-C	1.23	6044-M	9.80
Thread 10-32, Width 3/8", Thickness 1/8"	6049-C	1.12	6049-M	8.96
Thread 1/4-20, Width 7/16", Thickness 3/16"	7235-C	1.55	7235-M	12.45
Thread 11/32-32, Width 7/16", Thickness 1/16"	7236-C	2.49	7236-M	19.88
Thread 3/8-32, Width 3/16", Thickness 3/32"	6050-AC	1.87	6050-AM	14.97
Thread 7/16-27, Width 3/16", Thickness 1/8"	7238-C	4.20	7238-M	33.59
Thread 15/32-32, Width 3/16", Thickness 5/64"	6050-BC	2.29	6050-BM	18.33
Thread 1/4-32, Width 3/8", Thickness 3/32"	7715-C	1.70	7715-M	13.58
Thread 5-40, Width 3/16", Thickness 7/64"	6045-BC	.92	6045-BM	7.41
Thread 10-32, Width 3/16", Thickness 7/64"	8810-C	1.23	8810-M	9.80
Thread 4-40, Width 3/16", Thickness 1/16"	8804-C	.84	8804-M	6.72
Thread 2-56, Width 3/16", Thickness 1/16"	7241-C	1.26	7241-M	10.08
Thread 4-36, Width 1/4", Thickness 3/32"	7243-C	1.52	7243-M	12.18
Thread 4-40, Width 1/4", Thickness 3/32"	7244-C	1.50	7244-M	12.03
Thread 4-40, Width 3/16", Thickness 7/64"	7246-C	1.55	7246-M	12.45
Thread 5-40, Width 1/4", Thickness 3/32"	7247-C	1.55	7247-M	12.45
Thread 6-32, Width 1/4", Thickness 3/32"	7245-C	1.49	7245-M	11.90
Thread 6-32, Width 3/16", Thickness 7/64"	5697-C	1.79	5697-M	14.27
Thread 8-32, Width 1/4", Thickness 3/32"	5698-C	1.49	5698-M	11.90
Thread 8-32, Width 3/16", Thickness 7/64"	7248-C	1.79	7248-M	14.27
Thread 10-32, Width 3/8", Thickness 1/8"	7249-C	1.96	7249-M	15.68
Thread 1/4-20, Width 3/16", Thickness 3/16"	5699-C	4.18	5699-M	33.44
Thread 3-48, Width 3/16", Thickness 1/16"	7242-C	1.14	7242-M	9.09

MOUNTING NUTS

STEEL — NICKEL PLATED



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Thread 11/32-32, Width 7/16", Thickness 1/16", Rotary Switch Size—Hex	7236-C	$2.49	7236-M	$19.88
Thread 3/8-32, Width 3/16", Thickness 3/32", Volume Control Size—Hex	6050-AC	1.87	6050-AM	14.97
Thread 7/16-27, Width 3/16", Thickness 1/8", Pilot Light Size—Hex	7238-C	4.20	7238-M	33.59
Thread 15/32-32, Width 3/16", Thickness 5/64", Toggle Switch Size—Hex	6050-BC	2.28	6050-BM	18.33
Thread 15/32-32, Width 19/32", Thickness 1/16", Round Ring Nut Knurled—Toggle Switch Size	6050-CC	4.41	6050-CM	35.27
Thread 3/8-32, Width 1/2", Thickness 3/32", Volume Control Switch—Hex	8923-C	2.80	8923-M	22.39
Thread 15/32-32, Width 19/32", Thickness 3/32", Round Ring Nut Knurled—Toggle Switch Size	8926-C	5.99	8926-M	47.86

RIVETS

NICKEL PLATED



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Shank: Dia. .059", Length 5/32"	7276-C	1.12	7276-M	8.96
Shank: Dia. .059", Length 3/16"	7277-C	1.12	7277-M	8.96
Shank: Dia. .060", Length 1/4"	7278-C	.74	7278-M	5.88
Shank: Dia. .088", Length 3/16"	7280-C	1.21	7280-M	9.66
Shank: Dia. .098", Length 3/16"	7283-C	1.26	7283-M	10.08
Shank: Dia. .121", Length 1/8"	7286-C	.98	7286-M	7.83
Shank: Dia. .121", Length 3/16"	7288-C	.77	7288-M	6.75
Shank: Dia. .121", Length 1/4"	7290-C	.89	7290-M	7.14
Shank: Dia. .121", Length 1/2"	7293-C	.82	7293-M	6.57
Shank: Dia. .146", Length 5/16"	7296-C	1.04	7296-M	8.25

EYELETS

BRASS



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Shank Dia. .087", Length 1/8", Head Dia. .145"	7251-C	.37	7251-M	2.94
Shank Dia. .087", Length 3/32", Head Dia. .145"	7252-C	.49	7252-M	3.92
Shank Dia. .087", Length 7/32", Head Dia. .145"	7253-C	.61	7253-M	4.89
Shank Dia. .087", Length 11/32", Head Dia. .180"	7254-C	1.42	7254-M	11.34
Shank Dia. .123", Length 5/32", Head Dia. .197"	7257-C	.68	7257-M	5.46
Shank Dia. .123", Length 7/32", Head Dia. .195"	7259-C	.55	7259-M	4.34
Shank Dia. .123", Length 1/4", Head Dia. .195"	7260-C	.71	7260-M	5.73
Shank Dia. .123", Length 5/32", Head Dia. .195"	7261-C	.71	7261-M	5.73
Shank Dia. .125", Length 3/16", Head Dia. .289"	7264-C	1.23	7264-M	9.80
Shank Dia. .127", Length 13/32", Head Dia. .222"	7265-C	1.50	7265-M	12.03
Shank Dia. .182", Length .145", Head Dia. .315"	7269-C	.42	7269-M	3.36

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

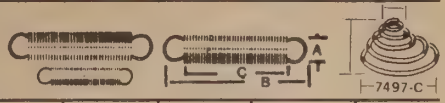
© United Technical Publications

GC ELECTRONICS

ELECTRONIC HARDWARE

SPRINGS

SPRING STEEL — CADMIUM PLATED



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
A—1/8", wire size .016", B—1/2", C—1/4"	6450-C	$6.38	6450-M	$51.08
A—1/8", wire size .016", B—1", C—3/4"	6451-C	4.81	6451-M	38.48
A—3/16", wire size .020", B—1", C—5/8"	6452-C	5.37	6452-M	42.97
A—3/16", wire size .020", B—1 3/8", C—1"	6453-C	5.51	6453-M	44.08
A—1/4", wire size .026", B—1 1/2", C—1"	6454-C	7.12	6454-M	56.95
A—1/4", wire size .026", B—2", C—1 1/2"	6455-C	8.80	6455-M	70.39
A—5/32", wire size .018", B—5/8"	7405-C	4.23	7405-M	33.86
A—3/16", wire size .020", B—9/16"	7407-C	5.81	7407-M	29.67
A—1/8", wire size .016", B—3/4"	7409-C	4.31	7409-M	34.41
A—5/32", wire size .020", B—3/4"	7411-C	4.44	7411-M	35.54
A—1", wire size .0625", B—5/8", C—15/16"				

PULLEYS

BRASS



A—3/8", B—.125", C—1/8", D—3/32"	6057-AC	5.88	6057-AM	47.02
A—7/16", B—.067", C—13/64", D—1/8"				
A—.620", B—.128", C—.165", D—1/16"	6057-CC	11.88	6057-CM	95.03
A—1/2", B—.128", C—3/16", D—3/32"	6057-GC	10.77	6057-GM	86.21
A—.860", B—.128", C—5/32", D—.050"	6057-FC	20.40	6057-FM	163.17

FAHNESTOCK CLIPS



A Length 1/2", Width 7/32", Mtg. hole #4, Mtg. wire 16 ga.	6301-C	1.91	6301-M	15.26
B Length 3/4", Width 5/16", Mtg. hole #6, Mtg. wire 14 ga.	6302-C	2.18	6302-M	17.49
C Length 1", Width 3/8", Mtg. hole #8, Mtg. wire 10 ga.	6303-C	3.78	6303-M	30.23
D Length 1 1/2", Width 5/16", Mtg. hole #6, Mtg. wire 10 ga.	6304-C	14.00	6304-M	111.95
E Length 3/4", Width 5/16", Mtg. hole #6, Mtg. wire 14 ga.	6306-C	6.30	6306-M	50.40

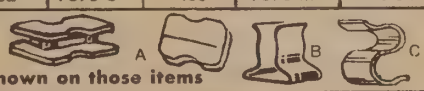
HAIR PIN COTTERS



A—5/32", B—1/16", C—.026"				
A—3/8", B—1/16", C—.026"	7376-C	.55	7376-M	4.34
A—13/32", B—3/32", C—.026"	7377-C	.60	7377-M	4.76
A—1/2", B—5/32", C—.026"	7378-C	.61	7378-M	4.89
A—21/32", B—3/16", C—.032"	7379-C	.63	7379-M	5.04

FUSE CLIPS

Prices per quantity shown on those items



For 1/4" Glass Fuses, Mtg. Hole #6	B	6311-C	2.67	6311-M	21.27
TV Fuse Clip Box of 100	A	8618-C	18.90		
TV Fuse Clip Box of 500	A	8618-5C	70.35		
TV Fuse Clip Bag of 24	A	8618	.29		
S-Type Fuse Clip Bag of 20	C	8619	.49		
S-Type Fuse Clip Bag of 200	C	8619-2C	2.63		

SNAP-IN TRIMOUNTS

CADMIUM PLATED



Hole Size 1/8", A—9/32", B—13/64" No. 2	1722-C	$1.52	1722-M	$12.18
Hole Size .136", A—23/64", B—9/32" No. 4	1724-C	1.86	1724-M	14.84
Hole Size 5/32", A—3/16" x 11/32", B—25/64" No. 5	1726-C	2.26	1726-M	18.05
Hole Size 5/32", A—3/16" x 11/32", B—21/32" No. 6	1727-C	2.26	1727-M	18.05

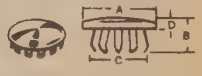
SNAP-IN VENTILATING PLUGS



1" dia. Snap-in type punched holes, nickel plated	1709-C	10.30	1709-M	82.43
1" dia. Snap-in type screen vent, steel nickel plated	1708-C	27.15	1708-M	217.19
19/32" dia. eyelet type screen vent, brass not plated	7332-CW	6.00	7332-MW	48.01
3/4" dia. eyelet type screen vent, brass not plated	7333-CW	8.57	7333-MW	68.01

SNAP BUTTON HOLE PLUGS

STEEL — NICKEL PLATED



For Hole Size 1/4" A—13/32", B—1/4", C—17/64", D—5/64"	1711-AC	2.84	1711-AM	22.67
For Hole Size 5/16" A—7/16", B—1/4" C—21/64", D—1/16"	1711-BC	3.05	1711-BM	24.35
For Hole Size 3/8" A—17/32", B—3/8", C—25/64", D—5/64"	1711-C	3.22	1711-M	25.75
For Hole Size 1/2" A—21/32", B—17/64", C—17/32", D—5/64"	1712-C	3.91	1712-M	31.21
For Hole Size 5/8" A—51/64", B—9/32", C—41/64", D—5/64"	1713-C	4.20	1713-M	33.59
For Hole Size 3/4" A—13/16", B—19/64", C—49/64", D—3/32"	1714-C	4.23	1714-M	33.86
For Hole Size 7/8". Fits switch box knockout holes	1714-AC	5.88	1714-AM	47.02
For Hole Size 1 1/8" A—1 5/16", B—11/32", C—1 9/64", D—3/32"	1715-BC	7.52	1715-BM	60.18
For Hole Size 1 1/4" A—1 7/16", B—15/16", C—1 17/64", D—3/32"	1715-C	8.20	1715-M	65.64
For Hole Size 1 3/8" A—1 9/16", B—13/32", C—1 13/32", D—3/32"	5700-C	9.04	5700-M	72.36
For Hole Size 1 7/16" A—1 3/4", B—27/64", C—1 15/32", D—7/64"	5701-C	9.24	5701-M	73.89
For Hole Size 1 1/2" A—1-41/64", B—13/32", C—1 17/32", D—3/32"	5702-C	11.92	5702-M	95.30
For Hole Size 1" A—1 5/32", B—19/64", C—1 1/32", D—5/64"	1715-AC	5.63	1715-AM	45.07
For Hole Size 1/8" A—5/16", B—15/64", C—9/64", D—1/32"	7302-C	4.07	7302-M	32.57
For Hole Size 3/16" A—11/32", B—7/64", C—7/32", D—9/32"	7304-C	3.86	7304-MW	29.50

TERMINAL STRIP ASSORTMENT



1 Lug	1781-C	3.43		
2 Lugs	1782-C	3.43		
3 Lugs	1783-C	3.59		
4 Lugs	1784-C	4.96		
5 Lugs	1785-C	5.72		
6 Lugs	1786-C	6.10		
7 Lugs	1787-C	11.04		
8 Lugs	1788-C	12.19		

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

© United Technical Publications

Net

GC ELECTRONICS

ELECTRONIC HARDWARE

C-WASHERS & RETAINING RINGS

CADMIUM PLATED STEEL



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Shaft dia. 3/16" A—.171", B—.125", C—.062", D—.031"	6182-C	$1.21	6182-M	$ 9.66
Shaft dia. 1/32" A—.234", B—.156", C—.046", D—.031"	6183-C	1.37	6183-M	10.92
Shaft dia. 1/4" A—.260", B—.187", C—.062", D—.031"	6184-C	1.40	6184-M	11.19
Shaft dia. 1/4", O.D. 3/32", Wire Ring Thickness .029"	6185-C	.60	6185-M	4.76

CUP FINISHING WASHERS

NICKEL PLATED



#6 (7/16" O.D.)	6161-C	.60	6161-M	4.76
#8 (1/2" O.D.)	6162-C	.63	6162-M	5.04
#10 (9/16" O.D.)	6163-C	.71	6163-M	5.73
#12 (5/8" O.D.)				

SPLIT TYPE LOCK WASHE

CADMIUM PLATED STEEL



Screw Size #4, O.D. 3/16", Thickness 1/32"	6503-C	.74	6503-M	5.88
Screw Size #6, O.D. 13/64", Thickness 1/32"	6504-C	.60	6504-M	4.76
Screw Size #8, O.D. 11/32", Thickness 1/32"	6505-C	.60	6505-M	4.76
Screw Size #10, O.D. 3/16", Thickness 3/64"	6506-C	.68	6506-M	5.46
Screw Size #1/4, O.D. 7/16", Thickness 5/64"	6507-C	1.02	6507-M	8.12

EXTERNAL LOCK WASHERS

CADMIUM PLATED STEEL



Screw Size #4	7354-C	.56	7354-M	4.47
Screw Size #6	7356-C	.56	7356-M	4.47
Screw Size #8	7358-C	.61	7358-M	4.89
Screw Size #10	7360-C	.61	7360-M	4.89
Screw Size 1/4", O.D. 1/2"	7361-C	.81	7361-M	6.44
Screw Size 3/8", O.D. 11/16"	7363-C	1.21	7363-M	9.66

INTERNAL LOCK WASHERS

CADMIUM PLATED STEEL



Screw Size #2	7322-C	.91	7322-M	7.28
Screw Size #3	7323-C	.79	7323-M	6.30
Screw Size #4	7324-C	.58	7324-M	4.62
Screw Size #6, O.D. 5/32"	7326-C	.56	7326-M	4.47
Screw Size #8, O.D. 21/64"	7328-C	.61	7328-M	4.89
Screw Size #10	7330-C	.61	7330-M	4.89
Screw Size 1/4", O.D. 15/32"	7332-C	.81	7332-M	6.44
Screw Size 5/16", O.D. 19/32"	7333-C	1.03	7333-M	8.25
Screw Size 3/8", O.D. 11/16"	7334-C	1.21	7334-M	9.66
Screw Size 3/8", O.D. 5/8"	7335-C	1.60	7335-M	12.74
Screw Size 15/32", O.D. 19/32"	7338-C	2.00	7338-M	15.95
Screw Size 7/16", O.D. .430"	7933-C	1.03	7933-M	8.30

FLAT METAL WASHERS

NICKEL PLATED STEEL



Screw Size #4, Hole Size 1/8", O.D. 5/32", Thickness .025"*	6153-C	.63	6153-M	5.04
Screw Size #4, Hole Size 1/8", O.D. 5/32", Thickness 1/32"	6154-C	.58	6154-M	4.62
Screw Size #6, Hole Size 5/32", O.D. 3/8", Thickness 1/32"	6155-C	.58	6155-M	4.62
Screw Size #8, Hole Size 3/16", O.D. 7/16", Thickness 1/32"	6156-C	.63	6156-M	5.04
Screw Size #10, Hole Size 13/64", O.D. 3/8", Thickness 1/32"	7306-C	.60	7306-M	4.76
Screw Size #10, Hole Size 13/64", O.D. 7/16", Thickness 1/32"	7307-C	.60	7307-M	4.76

* Brass

FLAT METAL WASHERS (cont'd)

Screw Size #10, Hole Size 13/64", O.D. 1/2", Thickness .049"	6157-C	$ .63	6157-M	$ 5.04
Screw Size #12, Hole Size .228", O.D. 7/16", Thickness .021"	7308-C	.60	7308-M	4.76
Screw Size 1/4", Hole Size 17/64", O.D. 5/8", Thickness 1/16"	6158-C	.87	6158-M	6.99
Screw Size 1/4", Hole Size 11/32", O.D. 1/2", Thickness 1/16"	7311-C	.79	7311-M	6.30
Screw Size 5/16", Hole Size 11/32", O.D. 11/16", Thickness 1/16"	7312-C	.74	7312-M	5.88
Screw Size #8, Hole Size 11/32", O.D. 11/16", Thickness 1/32"	7878-C	.63	7878-M	5.04

WING NUTS

NICKEL PLATED STEEL



6-32	6658-C	3.38	6658-M	27.01
8-32	6659-C	3.38	6659-M	27.01
10-32	6660-C	3.38	6660-M	27.01

KNURLED THUMB NUTS

BRASS — NICKEL PLATED



6-32	6655-C	2.89	6655-M	23.09
8-32	6656-C	2.89	6656-M	23.09
10-32	6657-C	6.33	6657-M	50.66

ACORN NUTS

SOLID METAL — NICKEL PLATED



6-32	6031-C	3.52	6031-M	28.13
8-32	6032-C	3.73	6032-M	29.81
10-32	6033-C	4.54	6033-M	36.25

TINNERMAN SPEED NUTS



#4	6051-C	.92	6051-M	7.41
#6	6052-C	1.00	6052-M	7.98
#8	6053-C	1.00	6053-M	7.98
#10	8965-C	1.13	8965-M	9.04
1/4"	8966-C	1.52	8966-M	12.19

CORD STRAIN RELIEFS



Rubber Type Fits Standard Line Cord	6675-C	6.70	6675-M	53.60
Plastic Clamping Type For Wire Size: 0.120 x 0.220 For UL Wire Types: SP1, SPT-1, POSJ, POT Chassis Hole Size: 7/16"	6676-C	4.87	6676-M	38.98
Plastic Clamping Type For Wire Size: 0.15 x 0.28 thru 0.16 x 0.30 For UL Wire Types: SP, SPT-2-18/2 SP, SPT-2-16/2 HPN-16, HPN-18 Chassis Hole Size: 1/2"	6677-C	4.87	6677-M	38.98
Plastic Clamping Type For Wire Size: 0.330 thru 0.410 For UL Wire Types: SJ, SJT, SJD-18/3 SJ, SJT, SJD-16/2 SJ, SJT, SJD-16/3 SJ, SJT, SJD-18/4 Chassis Hole Size 5/8"	6678-C	7.38	6678-M	59.04

RUBBER TACK BUMPERS



3/8" O.D.	1075-C	2.36	1075-M	18.89

RUBBER FEET SCREW TYPE



O.D. 3/8", Height 3/16"	1075-BC	1.68	1075-BM	13.43
O.D. 1/2", Height 1/4"	1075-CC	2.23	1075-CM	17.78
O.D. 5/8", Height 5/16"	1075-FC	3.13	1075-FM	25.05
O.D. 3/4", Height 3/16"	7058-C	3.59	7058-M	28.69

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

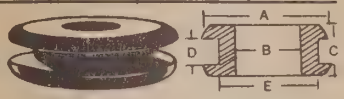
Net

© United Technical Publications

GC ELECTRONICS

ELECTRONIC HARDWARE

RUBBER GROMMETS



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
A—11/32", B—7/64", C—3/16", D—1/16", E—13/64"	1038-C	$1.35	1038-M	$10.80
A—11/32", B—1/8", C—3/16", D—1/16", E—3/16"	1039-C	1.50	1039-M	12.00
A—11/32", B—1/8", C—3/16", D—1/16", E—1/4"	1041-2C	1.42	1041-2M	11.34
A—7/16", B—3/16", C—7/32", D—1/16", E—3/16"	1041-C	1.62	1041-M	12.87
A—1/2", B—3/16", C—7/32", D—1/16", E—3/16"	1040-C	2.25	1040-M	18.00
A—1/2", B—3/16", C—1/4", D—1/16", E—3/16"	5710-C	4.83	5710-M	38.62
A—1/2", B—1/4", C—5/32", D—1/32", E—3/16"	1044-C	2.24	1044-M	17.86
A—1/2", B—1/4", C—5/16", D—1/8", E—3/8"	7566-C	3.12	7566-M	24.91
A—5/16", B—1/4", C—1/4", D—1/16", E—3/8"	1042-C	2.12	1042-M	16.94
A—5/16", B—5/32", C—1/4", D—1/16", E—3/16"	1045-C	2.85	1045-M	22.80
A—5/8", B—1/4", C—3/8", D—1/8", E—3/8"	5720-C	4.50	5720-M	36.00
A—5/8", B—5/16", C—1/4", D—1/16", E—1/16"	1046-C	4.35	1046-M	34.80
A—5/8", B—3/8", C—1/4", D—1/16", E—1/2"	1043-C	2.42	1043-M	19.31
A—5/8", B—3/8", C—11/32", D—1/16", E—17/32"	1047-C	2.85	1047-M	22.80
A—3/4", B—1/4", C—11/64", D—1/16", E—3/16"	5721-C	3.90	5721-M	31.20
A—3/4", B—5/16", C—11/32", D—3/32", E—15/32"	5715-C	5.00	5715-M	40.00
A—3/4", B—3/8", C—1/2", D—1/8", E—17/32"	1048-C	4.95	1048-M	39.60
A—3/4", B—7/16", C—1/4", D—1/16", E—9/16"	5712-C	6.54	5712-M	52.34
A—13/16", B—1/2", C—9/32", D—1/16", E—5/8"	1043-1C	3.65	1043-1M	29.25
A—7/8", B—9/16", C—15/64", D—1/16", E—3/4"	5711-C	4.48	5711-M	35.83
A—1 1/16", B—3/8", C—5/16", D—1/16", E—13/16"	7569-C	7.31	7569-M	58.50
A—1 1/16", B—7/16", C—5/16", D—1/16", E—29/32"	5718-C	8.33	5718-M	66.64
A—1 1/16", B—1/2", C—5/16", D—1/16", E—13/16"	5719-C	7.05	5719-M	56.40
A—1 1/16", B—1/2", C—11/32", D—1/8", E—13/16"	5722-C	7.05	5722-M	56.40
A—1 1/8", B—5/8", C—5/16", D—1/16", E—7/8"	5716-C	7.28	5716-M	58.22
A—1 1/8", B—13/16", C—1/4", D—3/4", E—15/16"	5723-C	10.50	5723-M	84.00
A—1 5/16", B—1 1/16", C—3/8", D—1/16", E—1"	5717-C	14.66	5717-M	117.27
A—2 1/8", B—1 1/2", C—7/16", D—1/16", E—1 3/4"	5724-C	21.90	5724-M	175.20

RUBBER MACHINE SCREW BUMPERS



A—1/2", B—1/4", C—1/4" Screw Size 8-32	5764-C	4.07	5764-M	32.52
A—5/8", B—5/16", C—1/4" Screw Size 8-32	5765-C	5.06	5765-M	40.38
A—3/4", B—3/8", C—1/4" Screw Size 8-32	5766-C	6.33	5766-M	50.65
A—7/8", B—1/2", C—1/2" Screw Size 10-32	5767-C	7.12	5767-M	56.91
A—1", B—1/2", C—1/2" Screw Size 10-32	5768-C	7.55	5768-M	60.38
A—1 1/8", B—1/2", C—1/2" Screw Size 10-32	5769-C	11.70	5769-M	93.56

RECESSED BUMPERS



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
A—3/8", B—1/4", C—3/16", D—1/16", E—1/2", F—3/32"	5780-C	$2.22	5780-M	$17.73
A—5/8", B—1/2", C—1/4", D—1/4", E—5/16", F—5/32"	5781-C	2.56	5781-M	20.39
A—5/8", B—5/8", C—7/16", D—3/16", E—5/16", F—.147"	5783-C	3.47	5783-M	27.72
A—3/4", B—15/64", C—3/16", D—7/64", E—1 1/32", F—1/8"	5785-C	3.59	5785-M	28.66
A—3/4", B—7/16", C—1/4", D—3/16", E—7/16", F—3/16"	5787-C	3.39	5787-M	27.06
A—15/16", B—5/8", C—7/16", D—3/16", E—7/16", F—7/32"	5789-C	6.67	5789-M	53.31
A—3/8", B—3/16", C—3/32", D—3/32", E—3/16", F—5/64"	5790-C	1.24	5790-M	9.86
A—7/16", B—5/32", C—3/32", D—1/16", E—1/4", F—5/32"	5791-C	1.66	5791-M	13.19
A—1/2", B—1/4", C—1/8", D—1/8", E—1/4", F—1/8"	5792-C	1.79	5792-M	14.26
A—5/8", B—5/16", C—3/16", D—1/8", E—1/4", F—1/8"	5795-C	2.11	5795-M	16.79
A—3/4", B—3/8", C—3/16", D—3/16", E—5/16", F—5/32"	5796-C	3.14	5796-M	25.06
A—13/16", B—1/2", C—1/4", D—1/4", E—5/16", F—5/32"	5798-C	3.92	5798-M	31.32
A—1", B—1", C—5/8", D—3/8", E—5/16", F—5/32"	5799-C	7.95	5799-M	63.57

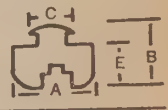
RECESSED BUMPERS WITH STEEL WASHER INSERTS



A—5/8", B—1/2", C—1/4", D—1/4", E—5/16", F—5/32"	5782-C	3.71	5782-M	29.59
A—5/8", B—5/8", C—7/16", D—3/16", E—5/16", F—.147"	5784-C	5.07	5784-M	40.52
A—3/4", B—15/64", C—3/16", D—7/64", E—1 1/32", F—1/8"	5786-C	6.07	5786-M	48.51
A—3/4", B—.716", C—1/4", D—3/16", E—7/16", F—3/16"	5788-C	5.60	5788-M	44.78
A—15/16", B—5/8", C—7/16", D—3/16", E—7/16", F—7/32"	5800-C	9.90	5800-M	79.17
A—1/2", B—1/4", C—1/8", D—1/8", E—1/4", F—1/8"	5793-C	3.07	5793-M	24.52
A—5/8", B—5/16", C—3/16", D—1/8", E—1/4", F—3/16"	5794-C	3.69	5794-M	29.46
A—3/4", B—3/8", C—3/16", D—3/16", E—5/16", F—5/32"	5797-C	5.00	5797-M	39.98
A—1", B—1", C—5/8", D—3/8", E—5/16", F—5/32"	5801-C	10.25	5801-M	81.97

RUBBER BUTTON BUMPERS





A—3/8", B—7/16", C—3/16", D—5/32"	7596-C	1.81	7596-M	14.42
A—1/2", B—7/16", C—1/4", D—1/4"	7597-C	2.70	7597-M	21.56
A—5/8", B—9/16", C—3/8", D—5/16"	7598-C	4.34	7598-M	34.70

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

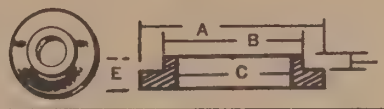
© United Technical Publications

Net

GC ELECTRONICS

ELECTRONIC HARDWARE

EXTRUDED FIBRE WASHERS



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
Screw Size #4 A—9/32", B—13/64", C—1/8", D—1/32", E—1/16"	6524-C	$1.12	6524-M	$ 8.96
Screw Size #6 A—5/16", B—3/16", C—3/64", D—1/32", E—1/16"	6525-C	1.12	6525-M	8.96
Screw Size #8 A—3/8", B—1/4", C—11/64", D—1/32", E—1/16"	6526-C	1.12	6526-M	8.96
Screw Size #10 A—7/16", B—1/4", C—13/64", D—1/32", E—1/16"	6527-C	1.21	6527-M	9.66
Screw Size 1/4" A—1/2", B—3/8", C—1/4", D—1/32", E—1/16"	6528-C	1.21	6528-M	9.66
Screw Size 3/8" A—5/8", B—7/16", C—3/8", D—1/32", E—1/16"	6529-C	1.26	6529-M	10.08
Screw Size #6 A—5/16", B—3/16", D—3/64", D—1/32", E—3/32"	7856-C	1.12	7856-M	8.96
Screw Size #10 A—3/8", B—3/16", C—13/64", D—1/32", E—3/32"	7860-C	1.21	7860-M	9.66
Screw Size 1/4" A—1/2", B—11/32", C—1/4", D—1/32", E—3/32"	7862-C	1.21	7862-M	9.66
Screw Size 3/8" A—5/8", B—1/2", C—3/8", D—1/32", E—3/32"	7864-C	1.26	7864-M	10.08
Screw Size #8 A—3/8", B—1/2", C—3/16", D—1/32", E—3/32"	7858-C	1.12	7858-M	8.96

FLAT FIBRE WASHERS



Screw Size #4; I.D. .120"; O.D. 1/4"; Thickness 1/32"	6512-C	.63	6512-M	5.04
Screw Size #6; I.D. 9/64"; O.D. 1/4"; Thickness 1/32"	6513-C	.63	6513-M	5.04
Screw Size #8; I.D. 11/64"; O.D. 3/8"; Thickness 1/32"	6514-C	.63	6514-M	5.04
Screw Size #10; I.D. .196"; O.D. 3/8"; Thickness 1/32"	6515-C	.63	6515-M	5.04
Screw Size 1/4"; I.D. 1/4"; O.D. 1/2"; Thickness 3/64"	6516-C	.68	6516-M	5.46
Screw Size 3/8"; I.D. 25/64"; O.D. 35/64"; Thickness 3/64"	6517-C	.99	6517-M	7.83
Screw Size 7/16"; I.D. .440"; O.D. 3/4"; Thickness 1/32"	6519-C	1.07	6519-M	8.54
Screw Size 13/32"; I.D. 15/32"; O.D. 3/4"; Thickness 1/32"	6518-C	.99	6518-M	7.83
Screw Size #6; I.D. 9/64"; O.D. 5/16"; Thickness 1/32"	7836-C	.55	7836-M	4.34

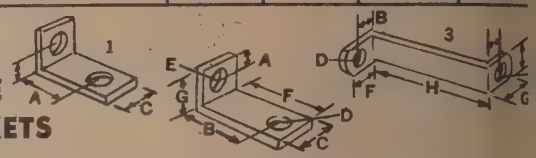
SPRING FRICTION WASHERS

SPRING STEEL



A—5/32" Metal, B—5/16" Thickness .012", C—3/4"	7385-C	2.49	7385-M	19.88
A—3/16" Metal, B—3/8" Thickness .008", C—3/4"	7386-C	2.10	7386-M	16.79
A—3/16" Metal, B—7/16" Thickness .010", C—1/2"	7387-C	2.07	7387-M	16.52
A—17/64" Metal, B—5/16" Thickness .016", C—1/16"	7389-C	2.38	7389-M	19.04
A—1/4" Metal, B—5/16" Thickness .010"	7754-C	1.12	7754-M	8.96
A—1/8" Metal, B—1/4" Thickness .008"				

ANGLE BRACKETS



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
A—1/4", B—3/16", C—3/32", Hole Size #6 Fig. No. 1	6261-C	$1.42	6251-M	$11.34
A—3/8", B—1/4", C—3/32", Hole Size #6 Fig. No. 1	6262-C	1.77	6262-M	14.13
A—1/2", B—7/16", C—3/8", Hole Size #6 Fig. No. 1	6263-C	2.00	6263-M	15.95
Material: brass, cad. plated A—7/32", B—.120", C—11/32", D—1/4", E—1/4", G—11/32" Fig. No. 2				
Material: steel, cad. plated A—1/4", B—5/16", C—.144", D—3/8", E—5/8", F—.144", G—23/32" Fig. No. 2	7572-C	1.42	7572-M	11.34
Material: brass, K1 Hole tagged 6-32 A—15/64", B—5/16", C—.144", D—1/4", E—6-32, F—27/64", G—5/8" Fig. No. 3	7575-C	2.94	7575-M	23.51
Material: steel hot tinned A—15/64", B—5/16", C—.144", D—1/2", E—7/32", F—.144", G—13/32", H—1/2" Fig. No. 2	7574-C	2.57	7574-M	20.57

SET SCREWS

HARDENED STEEL — SLOTTED — HEADLESS



6-32 x 1/8"	6071-C	2.29	6071-M	18.33
6-32 x 3/16"	6072-C	2.29	6072-M	18.33
6-32 x 1/4"	6073-C	2.29	6073-M	18.33
8-32 x 3/16"	6075-C	2.29	6075-M	18.33
8-32 x 1/4"	6076-C	2.29	6076-M	18.33
10-32 x 1/4"	6079-C	2.29	6079-M	18.33

SPACERS

ALUMINUM — ROUND TAPPED HOLE



O.D. .250", Length 1.000", For Screw Size 6-32	13-700-C	18.00		
O.D. .250", Length 1.500", For Screw Size 6-32	13-704-C	20.25		
O.D. .250", Length 2.000", For Screw Size 6-32	13-708-C	21.75		
O.D. .250", Length 2.500", For Screw Size 6-32	13-712-C	24.00		

SPACERS

CADMIUM PLATED BRASS — ROUND NON-THREADED



O.D. 1/4", Length 1/4", For Screw Size 4	13-500-C	3.30		
O.D. 1/4", Length 3/8", For Screw Size 4	13-502-C	4.35		
O.D. 1/4", Length 1/2", For Screw Size 4	13-504-C	5.28		
O.D. 1/4", Length 3/4", For Screw Size 4	13-506-C	6.30		
O.D. 1/4", Length 1", For Screw Size 4	13-508-C	7.20		
O.D. 1/4", Length 1/4", For Screw Size 6	13-516-C	3.30		
O.D. 1/4", Length 3/8", For Screw Size 6	13-518-C	4.35		
O.D. 1/4", Length 1/2", For Screw Size 6	13-520-C	5.28		

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

© United Technical Publications

GC ELECTRONICS — ELECTRONIC HARDWARE

SPACERS (cont'd)



Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
O.D. ¼", Length ¾", For Screw Size 6	13-522-C	$6.30		
O.D. ¼", Length 1", For Screw Size 6	13-524-C	7.20		
O.D. ¼", Length ¼", For Screw Size 8	13-532-C	3.30		
O.D. ¼", Length ⅜", For Screw Size 8	13-534-C	4.35		
O.D. ¼", Length ½", For Screw Size 8	13-536-C	5.28		
O.D. ¼", Length ¾", For Screw Size 8	13-538-C	6.30		
O.D. ¼", Length 1", For Screw Size 8	13-540-C	7.20		
O.D. ⅜", Length ¼", For Screw Size 10	6769-C	8.40		
O.D. ⅜", Length ½", For Screw Size 10	6770-C	9.60		
O.D. ⅜", Length ¾", For Screw Size 10	6771-C	12.00		

SPACERS
CADMIUM PLATED BRASS — ROUND THREADED



O.D. ¼", Length ¼", For Screw Size 4-40	13-600-C	3.90		
O.D. ¼", Length ⅜", For Screw Size 4-40	13-602-C	4.95		
O.D. ¼", Length ½", For Screw Size 4-40	13-604-C	6.00		
O.D. ¼", Length ¾", For Screw Size 4-40	13-606-C	8.40		
O.D. ¼", Length 1", For Screw Size 4-40	13-608-C	10.40		
O.D. ¼", Length ¼", For Screw Size 6-32	13-616-C	3.90		
O.D. ¼", Length ⅜", For Screw Size 6-32	13-618-C	4.95		
O.D. ¼", Length ½", For Screw Size 6-32	13-620-C	6.00		
O.D. ¼", Length ¾", For Screw Size 6-32	13-622-C	8.40		
O.D. ¼", Length 1", For Screw Size 6-32	13-624-C	10.40		
O.D. ¼", Length ¼", For Screw Size 8-32	13-632-C	3.90		
O.D. ¼", Length ⅜", For Screw Size 8-32	13-634-C	4.95		
O.D. ¼", Length ½", For Screw Size 8-32	13-636-C	6.00		
O.D. ¼", Length ¾", For Screw Size 8-32	13,638-C	8.40		
O.D. ¼", Length 1", For Screw Size 8-32	13-640-C	10.40		

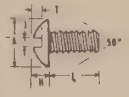
SPACERS
INSULATED BLACK FIBRE



O.D. ¼", Length ¼", For Screw Size 8	6775-C	6.00	6775-M	54.00
O.D. ¼", Length ⅜", For Screw Size 8	6776-C	6.00	6776-M	54.00
O.D. ¼", Length ½", For Screw Size 8	6777-C	6.00	6777-M	54.00
O.D. ¼", Length ¾", For Screw Size 8	6778-C	8.40	6778-M	67.10
O.D. ⅜", Length ¼", For Screw Size 12	6779-C	6.00	6779-M	54.00
O.D. ⅜", Length ½", For Screw Size 12	6780-C	6.00	6780-M	54.00
O.D. ⅜", Length ¾", For Screw Size 12	6781-C	6.00	6781-M	54.00

NYLON ROUND HEAD MACHINE SCREWS

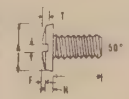




Description & Specifications	GC Part No.	Net Per 100	GC Part No.	Net Per 1000
2-56, ¼"	9900-C	$3.69	9900-M	$33.30
2-56, ½"	9901-C	3.69	9901-M	33.00
4-40, ¼"	9902-C	3.69	9902-M	33.30
4-40, ½"	9903-C	3.69	9903-M	33.30
4-40, ¾"	9904-C	3.79	9904-M	34.50
6-32, ¼"	9905-C	3.69	9905-M	33.30
6-32, ⅜"	9906-C	3.79	9906-M	34.50
6-32, ½"	9907-C	3.79	9907-M	34.50
6-32, ⅝"	9908-C	3.79	9908-M	34.50
6-32, ¾"	9909-C	3.79	9909-M	34.50
8-32, ⅜"	9910-C	3.86	9910-M	35.30
8-32, ½"	9911-C	3.86	9911-M	35.30
8-32, ¾"	9912-C	3.86	9912-M	35.30
10-32, ½"	9913-C	3.86	9913-M	35.30
10-32, 1"	9914-C	4.02	9914-M	37.30

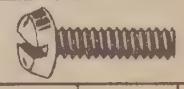
NYLON BINDING HEAD MACHINE SCREWS

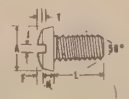




2-56, ¼"	9915-C	3.69	9915-M	33.30
2-56, ½"	9916-C	3.69	9916-M	33.30
4-40, ¼"	9917-C	3.69	9917-M	33.30
4-40, ½"	9918-C	3.69	9918-M	33.30
4-40, ¾"	9919-C	3.79	9919-M	34.50
6-32, ¼"	9920-C	3.69	9920-M	33.30
6-32, ⅜"	9921-C	3.79	9921-M	34.50
6-32, ½"	9922-C	3.79	9922-M	34.50
6-32, ⅝"	9923-C	3.79	9923-M	34.50
6-32, ¾"	9924-C	3.79	9924-M	34.50
8-32, ⅜"	9925-C	3.86	9925-M	35.30
8-32, ¼"	9926-C	3.86	9926-M	35.30
8-32, ¾"	9927-C	3.86	9927-M	35.30
10-32, ½"	9928-C	3.86	9928-M	35.30
10-32, 1"	9929-C	4.02	9929-M	37.30

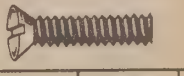
NYLON FILLISTER HEAD MACHINE SCREWS

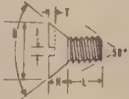




2-56, ¼"	9930-C	3.69	9930-M	33.30
2-56, ½"	9931-C	3.69	9931-M	33.30
4-40, ¼"	9932-C	3.69	9932-M	33.30
4-40, ½"	9933-C	3.69	9933-M	33.30
4-40, ¾"	9934-C	3.79	9934-M	34.50
6-32, ¼"	9935-C	3.69	9935-M	33.30
6-32, ⅜"	9936-C	3.79	9936-M	34.50
6-32, ½"	9937-C	3.79	9937-M	34.50
6-32, ⅝"	9938-C	3.79	9938-M	34.50
6-32, ¾"	9939-C	3.79	9939-M	34.50
8-32, ⅜"	9940-C	3.86	9940-M	35.30
8-32, ½"	9941-C	3.86	9941-M	35.30
8-32, ¾"	9942-C	3.86	9942-M	35.30
10-32, ½"	9943-C	3.86	9943-M	35.30
10-32, 1"	9944-C	4.02	9944-M	37.30

NYLON FLAT HEAD MACHINE SCREWS





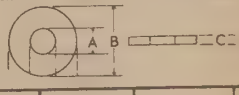
4-40, ½"	9945-C	3.69	9945-M	33.30
6-32, ⅜"	9946-C	3.79	9946-M	34.50
4-32, ½"	9947-C	3.79	9947-M	34.50
6-32, ⅝"	9948-C	3.79	9948-M	34.50
8-32, ½"	9949-C	3.86	9949-M	35.30
8-32, ¾"	9950-C	3.86	9950-M	35.30
10-32, ½"	9951-C	4.01	9951-M	37.30
10-32, 1"	9952-C	4.31	9952-M	40.00

NYLON HEX NUTS



2-56, A—3/16", B—1/16"	9953-C	6.13	9953-M	57.12
4-40, A—¼", B—3/32"	9954-C	6.26	9954-M	58.07
6-32, A—5/16", B—7/64"	9955-C	6.37	9955-M	59.33
8-32, A—15/32", B—⅛"	9956-C	6.49	9956-M	60.38
10-32, A—⅜", B—⅛"	9957-C	6.57	9957-M	61.32

NYLON WASHERS



#4, A—.120", B—1/32", C—.050"	9958-C	.70	9958-M	6.51
#6, A—.150", B—5/64", C—.050"	9959-C	.78	9959-M	6.13
#8, A—.170", B—⅜", C—.050"	9960-C	1.04	9960-M	9.45
#10, A—.195", B—7/64", C—.060"	9961-C	1.20	9961-M	11.03

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

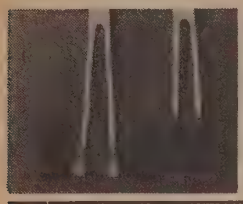
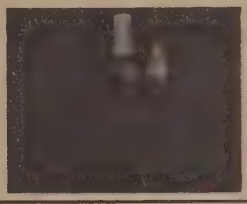
© United Technical Publications

russell industries, inc.

IRRADIATED HEAT SHRINKABLE TUBING (STANDARD PRE-CUT LENGTHS ¼" TO 2")

HUG-P SERIES

HEAT SHRINKABLE/IRRADIATED FLEXIBLE POLYOLEFIN TUBING


SHRINKS 50% (2:1 RATIO) WITH ONL 5% LONGITUDINAL SHRINKAGE

Stock Colors: Black, White, Red, Blue, Yellow (a sizes) — self extinguishing. Clear (all sizes) — no flame retarded.

- Ideal for insulation, jacketing, bundling, con ductor identification
- Is easily marked by cor ventional hot stamp or ink-wheel marking technique
- Covers the diameter range from .023 to 2 inche with only 12 sizes.

Expanded I.D. Size	Part No.	STANDARD CUT LENGTHS ¼"	⅜"	½"	⅝"	¾"	⅞"	1"	1⅛"	1¼"	1½"	2"	ADD SUFFIX BELOW Black	White	Red	Blue	Yellow	Clear
3/64"	HUG-364	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
1/16"	HUG-116	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
3/32"	HUG-332	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
1/8"	HUG-18	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
5/16"	HUG-316	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
1/4"	HUG-14	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
3/8"	HUG-38	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
1/2"	HUG-12	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
3/4"	HUG-34	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
1"	HUG-1	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
1½"	HUG-112	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C
2"	HUG-2	-P14	-P38	-P12	-P58	-P34	-P78	-P1	-P118	-P114	-P112	-P2	-K	-W	-R	-X	-Y	-C

I.D. sizes other than those shown are availble on special request. Lengths ather than those shown are available on special request. Marked pieces are available based on quantity and number of lines required on special request.

HUG-E SERIES

HEAT SHRINKABLE/IRRADIATED FLEXIBLE POLYOLEFIN END CAPS

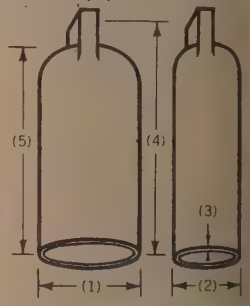



SHRINKS 50% (2:1 RATIO) WITH ONL 5% LONGITUDINAL SHRINKAGE

Stock Colors: White, Red, Grey, Brown, Black (eac diameter color coded).

- Strong, lightweight, space saving, vibration proc
- Insulates dead-end electrical cables, fixture connectors and electrical equipment
- 5 standar color-coded sizes.

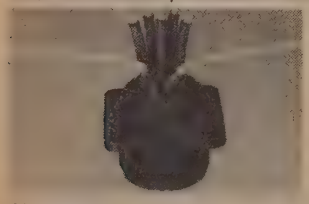
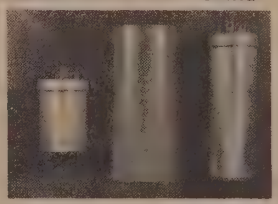
Expanded I.D.[1] Size	Part No.	STANDARD CUT LENGTHS ¾"	1"	1⅛"	1 3/16"	1½"	Suffix Below Indicates Color For I.D. Size White	Red	Grey	Brown	Black	R'cov. I.D.[2] Size	Nom.[3] R'cov. Wall	Overall Expanded Length[4]	Min.[5] Barrel Length
1/16"	HUG-116	-E34	—	—	—	—	-W	—	—	—	—	.025	.016	.750	.656
1/8"	HUG-18	—	-E1	—	—	—	—	-R	—	—	—	.050	.025	1.000	.810
1/4"	HUG-14	—	—	-E118	—	—	—	—	-G	—	—	.100	.027	1.125	.915
7/32"	HUG-720	—	—	—	-E131	—	—	—	—	-Z	—	.175	.035	1.300	1.000
½"	HUG-12	—	—	—	—	-E112	—	—	—	—	-K	.250	.040	1.500	1.075



Both the **HUG P** and **HUG E** series shown above • Exhibit high dielectric strength • Possess excellent chemical and solvent resistance • Do not split when shrunk over sharp or irregularly shaped objects • Operate continuously from −55°C to +135°C — up to 300°C for a short period • Shrink at 135°C (275°F) or above to predetermined sizes.

HUG-C SERIES

HEAT SHRINKABLE/IRRADIATED SEMI-RIGID POLYOLEFIN TUBING

SHRINKS 50% (2:1 RATIO) WITH ONLY 5% LONGITUDINAL SHRINKAG

Stock Colors: Yellow, White, Blue, Red, Green, Slate, Brown, White (each diameter coi coded) — self extinguishing. Clear (all sizes) — not flame-retarded.

- High mechanical strength for strain relief applications and protection of delica components
- Is easily marked by conventional hot stamp or ink-wheel marki techniques.
- Exhibits high dielectric strength.
- Possesses excellent chemical a solvent resistance
- Does not split when shrunk over sharp or irregularly shap objects
- Shrinks at 135°C (275°F) or above to pretedermined sizes
- Covers t diameter range from .023 to 1 inch with only 10 sizes.

Expanded I.D. Size	Part No.	STANDARD CUT LENGTHS ¼"	⅜"	½"	⅝"	¾"	⅞"	1"	1⅛"	1¼"	1½"	2"	ADD SUFFIX BELOW FOR COLOR DESIRED Yel.	Whi.	Bl.	Red	Grn.	Sla.	Brn.	Whi.	Cl
3/64"	HUG-364	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	-Y	—	—	—	—	—	—	—	
1/16"	HUG-116	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	-W	—	—	—	—	—	—	
3/32"	HUG-332	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	-X	—	—	—	—	—	
1/8"	HUG-18	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	-R	—	—	—	—	
5/16"	HUG-316	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	—	-N	—	—	—	
1/4"	HUG-14	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	—	—	-S	—	—	
3/8"	HUG-38	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	—	—	—	-Z	—	
1/2"	HUG-12	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	—	—	—	—	-W	
3/4"	HUG-34	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	—	—	—	—	—	
1"	HUG-1	-C14	-C38	-C12	-C58	-C34	-C78	-C1	-C118	-C114	-C112	-C2	—	—	—	—	—	—	—	—	

Lengths other than those shown are available on special request. Marked pieces are available based on quantity and number of lines required on special request.

HUG-TH SERIES

HEAT SHRINKABLE/HEAT TUNNEL

SHRINKS TUBING IN SECONDS TO PROTECT AND INSULATE PARTS & COMPONENTS

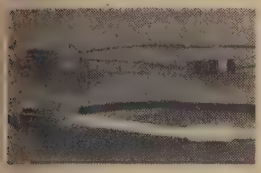



© United Technical Publications

russell industries, inc.

UG-V SERIES

EAT SHRINKABLE/IRRADIATED FLEXIBLE POLYVINYL CHLORIDE TUBING





HRINKS 50% (2:1 RATIO) WITH ONLY
0% LONGITUDINAL SHRINKAGE

tock Color: Black only (self extinguishing)

High mechanical strength for jacketing of cable harness and insula-on and protection of components • Is easily marked by conventional ot stamp or ink-wheel marking techniques • Exhibits high dielectric trength • Possesses excellent chemical and solvert resistance Does not split when shrunk over sharp or irregularly shaped objects.

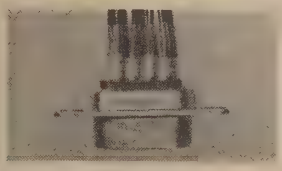
Expanded I.D. Size	Part No.	STANDARD CUT LENGTHS 1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	2"	Color Black
3/64"	HUG-364	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
1/16"	HUG-116	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
3/32"	HUG-332	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
1/8"	HUG-18	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
3/16"	HUG-316	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
1/4"	HUG-14	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
3/8"	HUG-38	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
1/2"	HUG-12	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
3/4"	HUG-34	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
1"	HUG-1	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
1 1/2"	HUG-112	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K
2"	HUG-2	-V14	-V38	-V12	-V58	-V34	-V78	-V1	-V118	-V114	-V112	-V2	-K

Lengths other than those shown are available on special request. Marked pieces are available based on quantity and number of lines required on special request.

IUG-K SERIES

IEAT SHRINKABLE/IRRADIATED SEMI-RIGID HIGH TEMP. POLYVINYLIDENE FLUORIDE TUBING





HRINKS 50% (2:1 RATIO) WITH ONLY
0% LONGITUDINAL SHRINKAGE

tock Color: Clear only (does not support combustion)

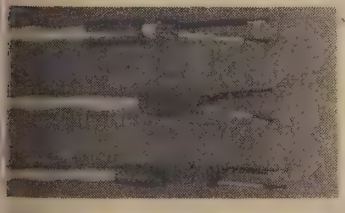
Tough, high strength, semi-rigid material of very high strength with utstanding resistance to abrasion and cut-through. Ideal for strain elief and protection of delicate components • Is easily marked by onventional hot stamp or ink-wheel marking techniques • Exhibits igh dielectric strength • Possesses excellent chemical and solvent esistance • Transparent for easy inspection and identification of objects covered • Does not split when shrunk over sharp or irregularly shaped objects • Generates no orrosive by-products during heat aging • Shrinks at 175°C (347°F) or above to predetermined sizes • Covers the diameter range from .023 to 1 inch with only 10 sizes.

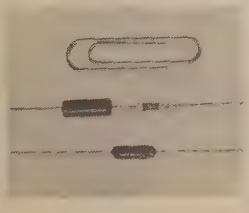
Expanded I.D. Size	Part No.	STANDARD CUT LENGTHS 1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	2"	Color Clear
3/64"	HUG-364	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
1/16"	HUG-116	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
3/32"	HUG-332	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
1/8"	HUG-18	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
3/16"	HUG-316	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
1/4"	HUG-14	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
3/8"	HUG-38	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
1/2"	HUG-12	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
3/4"	HUG-34	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C
1"	HUG-1	-K14	-K38	-K12	-K58	-K34	-K78	-K1	-K118	-K114	-K112	-K2	-C

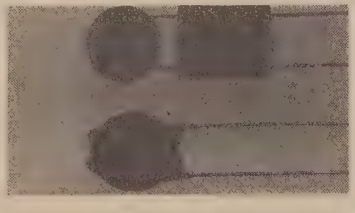
Lengths other than those shown are available on special request. Marked pieces are available based on quantity and number of lines required on special request.

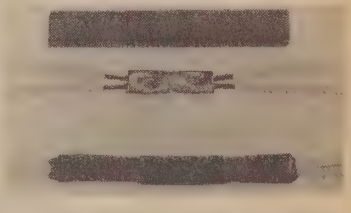
IUG-S SERIES

IEAT SHRINKABLE/RIGID DUAL-WALL POLYOLEFIN TUBING WITH MELTABLE INNER WALL









SHRINKS UP TO 42% WITH ONLY
10% LONGITUDINAL SHRINKAGE

Stock Colors: Brown, Gray, White, Red, Blue, Yellow, Black (each diameter is color coded)

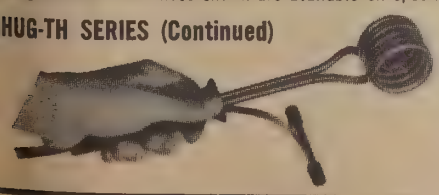
• Is the ideal encapsulating tubing for delicate components because of its rigidity, meltable inner wall and its ability to seal out moisture. Upon cooling the entire mass becomes a homogeneous molding • Covers the diameter range from .023 to 1 inch with only 8 standard sizes • Exhibits good dielectric strength and low dielectric constant • Possesses excellent chemical and solvent resistance • Is easily marked by conventional hot stamp or ink-wheel marking techniques.

Expanded Size I.D.	Inside Diameter Expanded — As supplied (Inches, Min.)	Recovered — After Heating (Inches, Max.)	Recovered Total Wall (Inches)	Nominal Wall Thickness Meltable Wall (Inches)
1/8"	.125	.023	.035	.020
3/16"	.187	.060	.040	.025
1/4"	.250	.080	.042	.027
3/8"	.375	.135	.045	.030
1/2"	.500	.195	.050	.035
3/4"	.750	.313	.060	.040
1"	1.000	.400	.070	.040

Expanded I.D. Size	Part No.	STANDARD CUT LENGTHS 1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	2"	SUFFIX BELOW INDICATES COLOR Brown	Gray	White	Red	Blue	Yellow	Black
1/8"	HUG-18	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	-Z	—	—	—	—	—	—
3/16"	HUG-316	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	—	-G	—	—	—	—	—
1/4"	HUG-14	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	—	—	-W	—	—	—	—
3/8"	HUG-38	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	—	—	—	-R	—	—	—
1/2"	HUG-12	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	—	—	—	—	-X	—	—
3/4"	HUG-34	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	—	—	—	—	—	-Y	—
1"	HUG-1	-S14	-S38	-S12	-S58	-S34	-S78	-S1	-S118	-S114	-S112	-S2	—	—	—	—	—	—	-K

Lengths other than those shown are available on special request. Marked pieces are available based on quantity and number of lines required on special request.

HUG-TH SERIES (Continued)



• Lightweight • Molded handle • Portable • Shrinks tubing up to 1½ inches in diameter and larger • 700°F • 350 Watts • Shrinks tubing in 5 to 7 seconds to 50% of supplied diameter • 3 wire grounded • Spring clip stand permanently affixed • **CAUTION:** Voltages in excess of 110 VAC or rough handling may impair or permanently damage HEAT TUNNEL.

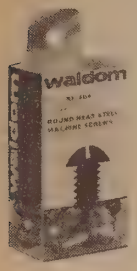
© United Technical Publications

waldom

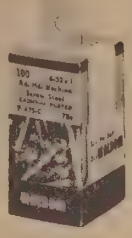
HARDWARE AND FASTENING DEVICES

PACKAGED HARDWARE

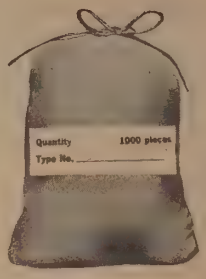
PACKAGED 3 WAYS—TO MEET ALL YOUR REQUIREMENTS



SHOW OFF PACKAGE
All packages are .59 Net. Quantity varies with item. (See listings.)



BLUE-LINE
All packages contain 100 pieces each, unless shown otherwise. Price varies with item. (See listings.)



BULK PACK
Offers greatest economy. Each bag contains 1000 pieces. Price varies with item. (See listings.)

HOW TO ORDER: Simply use correct PART NO. for quantity desired.

ROUND HEAD STEEL MACHINE SCREWS Nickel Plated	SHOW OFF .59 per Pkg.		BLUE LINE Pkg. of 100		BULK PACK Bag of 1000		
	Part No.	Quan.	Part No.	Per Pkg.	Part No.	1-4 Per Bag	5-9 Per Bag
2-56 x 1/8"	KF-579	60	F-579-C	.85	F-579-M	5.95	4.55
2-56 x 1/4"	KF-461	60	F-461-C	.65	F-461-M	4.50	3.40
2-56 x 1/2"	KF-462	60	F-462-C	.65	F-462-M	4.90	3.75
2-56 x 3/4"	KF-463	60	F-463-C	.75	F-463-M	5.65	4.35
3-48 x 3/4"	KF-464	60	F-464-C	.75	F-464-M	5.65	4.35
4-36 x 1/4"	KF-465	60	F-465-C	.65	F-465-M	4.90	3.75
4-36 x 3/8"	KF-466	50	F-466-C	.70	F-466-M	5.10	3.90
4-36 x 1/2"	KF-467	50	F-467-C	.70	F-467-M	5.35	4.05
4-36 x 5/8"	KF-580	50	F-580-C	.75	F-580-M	5.70	4.40
4-36 x 3/4"	KF-468	50	F-468-C	.85	F-468-M	6.40	4.85
4-40 x 1/4"	KF-469	50	F-469-C	.65	F-469-M	4.90	3.75
4-40 x 3/8"	KF-581	50	F-581-C	.70	F-581-M	5.10	3.90
4-40 x 1/2"	KF-470	50	F-470-C	.70	F-470-M	5.35	4.05
4-40 x 5/8"	KF-582	50	F-582-C	.75	F-582-M	5.80	4.40
4-40 x 3/4"	KF-471	50	F-471-C	.85	F-471-M	6.40	4.85
6-32 x 1/4"	KF-472	50	F-472-C	.70	F-472-M	5.45	4.15
6-32 x 3/8"	KF-583	45	F-583-C	.75	F-583-M	5.70	4.35
6-32 x 1/2"	KF-473	45	F-473-C	.80	F-473-M	6.20	4.80
6-32 x 5/8"	KF-584	45	F-584-C	.90	F-584-M	6.90	5.30
6-32 x 3/4"	KF-474	45	F-474-C	.95	F-474-M	7.45	5.70
6-32 x 1"	KF-475	45	F-475-C	1.10	F-475-M	8.40	6.50
6-32 x 1-1/4"	KF-476	45	F-476-C	1.30	F-476-M	10.25	7.80
6-32 x 2"	KF-477	30	F-477-C	1.95	F-477-M	15.30	11.65
8-32 x 1/4"	KF-478	45	F-478-C	.90	F-478-M	7.10	5.45
8-32 x 3/8"	KF-479	35	F-479-C	1.00	F-479-M	7.80	5.95
8-32 x 1/2"	KF-480	35	F-480-C	1.10	F-480-M	8.30	6.40
8-32 x 5/8"	KF-585	35	F-585-C	1.15	F-585-M	8.85	6.75
8-32 x 3/4"	KF-481	35	F-481-C	1.20	F-481-M	9.35	7.15
8-32 x 1"	KF-482	30	F-482-C	1.40	F-482-M	10.80	8.25
8-32 x 1-1/4"	KF-483	30	F-483-C	1.60	F-483-M	12.65	9.65
10-32 x 1/2"	KF-484	30	F-484-C	1.25	F-484-M	9.55	7.30
10-32 x 5/8"	KF-586	30	F-586-C	1.35	F-586-M	10.40	8.00
10-32 x 3/4"	KF-485	30	F-485-C	1.45	F-485-M	11.45	8.75
10-32 x 1"	KF-486	25	F-486-C	1.65	F-486-M	12.60	9.65
10-32 x 1-1/2"	KF-487	20	F-487-C	2.15	F-487-M	16.65	12.70
12-24 x 3/4"			F-587-C	1.90	F-587-M	15.50	11.85
12-24 x 1"			F-588-C	2.25	F-588-M	18.55	14.15
12-24 x 1-1/2"			F-589-C	2.95	F-589-M	24.10	18.30
12-24 x 2"			F-590-C	3.45	F-590-M	28.20	21.55
1/4-20 x 1/2"			F-488-C	2.35	F-488-M	18.80	14.35
1/4-20 x 3/4"			F-489-C	2.65	F-489-M	21.50	16.35
1/4-20 x 1"			F-490-C	3.00	F-490-M	24.50	18.65
1/4-20 x 1-1/4"			F-491-C	3.45	F-491-M	27.85	21.20
1/4-20 x 1-3/4"			F-492-C	4.15	F-492-M	33.75	25.75

ROUND HEAD BRASS MACHINE SCREWS Nickel Plated	SHOW OFF .59 per Pkg.		BLUE LINE Pkg. of 100		BULK PACK Bag of 1000		
	Part No.	Quan.	Part No.	Per Pkg.	Part No.	1-4 Per Bag	5-9 Per Bag
2-56 x 1/4"			F-461B-C	.90	F-461B-M	7.00	5.35
2-56 x 1/2"			F-462B-C	1.05	F-462B-M	8.20	6.20
2-56 x 3/4"			F-463B-C	1.20	F-463B-M	9.70	7.35
3-48 x 3/4"			F-464B-C	1.35	F-464B-M	10.90	8.35
4-36 x 1/4"			F-465B-C	1.05	F-465B-M	8.20	6.20
4-36 x 3/8"			F-466B-C	1.35	F-466B-M	10.30	7.85
4-36 x 1/2"			F-467B-C	1.45	F-467B-M	10.60	8.10
4-36 x 5/8"			F-580B-C	1.55	F-580B-M	11.45	8.75
4-36 x 3/4"			F-468B-C	1.65	F-468B-M	12.50	9.50
4-40 x 1/4"			F-469B-C	1.05	F-469B-M	8.20	6.20
4-40 x 1/2"			F-470B-C	1.35	F-470B-M	10.30	7.85
4-40 x 5/8"			F-582B-C	1.55	F-582B-M	11.45	8.75
4-40 x 3/4"			F-471B-C	1.65	F-471B-M	12.50	9.50
6-32 x 1/4"			F-472B-C	1.40	F-472B-M	11.00	8.35
6-32 x 3/8"			F-583B-C	1.50	F-583B-M	11.70	8.95
6-32 x 1/2"			F-473B-C	1.70	F-473B-M	13.15	10.05
6-32 x 5/8"			F-584B-C	1.95	F-584B-M	14.60	11.15
6-32 x 3/4"			F-474B-C	2.05	F-474B-M	16.25	12.30
6-32 x 1"			F-475B-C	2.40	F-475B-M	19.10	14.60
6-32 x 1-1/4"			F-476B-C	2.80	F-476B-M	22.65	16.80
6-32 x 2"			F-477B-C	4.70	F-477B-M	37.35	28.50
8-32 x 1/4"			F-478B-C	2.20	F-478B-M	16.65	12.70
8-32 x 3/8"			F-479B-C	2.15	F-479B-M	17.05	13.05
8-32 x 1/2"			F-480B-C	2.45	F-480B-M	19.55	14.90
8-32 x 5/8"			F-585B-C	2.85	F-585B-M	22.05	16.90
8-32 x 3/4"			F-481B-C	3.00	F-481B-M	23.85	18.20
8-32 x 1"			F-482B-C	3.60	F-482B-M	28.45	21.65
8-32 x 1-1/4"			F-483B-C	4.20	F-483B-M	33.40	25.45
10-32 x 1/2"			F-484B-C	3.10	F-484B-M	24.75	18.85
10-32 x 5/8"			F-586B-C	3.45	F-586B-M	27.55	21.00
10-32 x 3/4"			F-485B-C	3.80	F-485B-M	29.90	22.85
10-32 x 1"			F-486B-C	4.50	F-486B-M	35.70	27.25
OVAL HEAD STEEL MACHINE SCREWS Nickel Plated							
6-32 x 1/2"	KF-506	45	F-506-C	.80	F-506-M	6.20	4.80
6-32 x 3/4"	KF-507	45	F-507-C	.95	F-507-M	7.45	5.70
8-32 x 3/4"	KF-508	35	F-508-C	1.20	F-508-M	9.35	7.15
10-32 x 1/2"	KF-509	30	F-509-C	1.25	F-509-M	9.55	7.30
10-32 x 3/4"	KF-510	30	F-510-C	1.45	F-510-M	11.45	8.75

Net

© United Technical Publication

HARDWARE AND FASTENING DEVICES

waldom

PACKAGED HARDWARE (Continued)

BINDER HEAD STEEL MACHINE SCREWS Nickel Plated



	SHOW OFF .59 per Pkg.		BLUE LINE Pkg. of 100		BULK PACK Bag of 1000		
	Part No.	Quan.	Part No.	Per Pkg.	Part No.	1-4 Per Bag	5-9 Per Bag
2-56 x 1/8"	KF-591	60	F-591-C	.85	F-591-M	5.95	4.55
2-56 x 1/4"	KF-592	60	F-592-C	.65	F-592-M	4.50	3.40
2-56 x 1/2"	KF-593	60	F-593-C	.65	F-593-M	4.90	3.75
2-56 x 5/8"	KF-594	60	F-594-C	.75	F-594-M	5.60	4.30
4-40 x 1/4"	KF-020	50	F-020-C	.65	F-020-M	4.90	3.75
4-40 x 1/2"	KF-021	50	F-021-C	.70	F-021-M	5.35	4.05
4-40 x 3/4"	KF-022	50	F-022-C	.85	F-022-M	6.40	4.85
6-32 x 3/16"	KF-502	60	F-502-C	.75	F-502-M	5.45	4.20
6-32 x 1/4"	KF-503	50	F-503-C	.70	F-503-M	5.45	4.15
6-32 x 3/8"	KF-504	50	F-504-C	.75	F-504-M	5.70	4.35
6-32 x 1/2"	KF-014	45	F-014-C	.80	F-014-M	6.20	4.80
6-32 x 5/8"	KF-621	45	F-621-C	.90	F-621-M	6.90	5.30
6-32 x 3/4"	KF-015	45	F-015-C	.95	F-015-M	7.45	5.70
8-32 x 1/4"	KF-023	45	F-023-C	.90	F-023-M	7.05	5.40
8-32 x 5/16"	KF-505	45	F-505-C	1.00	F-505-M	7.80	5.95
8-32 x 3/8"	KF-024	35	F-024-C	1.00	F-024-M	7.80	5.95
8-32 x 1/2"	KF-025	35	F-025-C	1.10	F-025-M	8.30	6.40
8-32 x 3/4"	KF-026	35	F-026-C	1.20	F-026-M	9.35	7.15
10-32 x 1/2"	KF-577	30	F-577-C	1.25	F-577-M	9.55	7.30
10-32 x 3/4"	KF-578	30	F-578-C	1.45	F-578-M	11.45	8.75

BINDER HEAD BRASS MACHINE SCREWS Nickel Plated



4-40 x 1/4"			F-020B-C	1.05	F-020B-M	8.20	6.20
4-40 x 1/2"			F-021B-C	1.35	F-021B-M	10.30	7.85
4-40 x 3/4"			F-022B-C	1.65	F-022B-M	12.50	9.50
6-32 x 1/4"			F-503B-C	1.40	F-503B-M	11.00	8.35
6-32 x 3/8"			F-504B-C	1.50	F-504B-M	11.70	8.95
6-32 x 1/2"			F-014B-C	1.70	F-014B-M	13.15	10.05
6-32 x 3/4"			F-015B-C	2.05	F-015B-M	16.10	12.30
8-32 x 1/4"			F-023B-C	2.05	F-023B-M	16.65	12.70
8-32 x 3/8"			F-024B-C	2.15	F-024B-M	17.05	13.05
8-32 x 1/2"			F-025B-C	2.45	F-025B-M	19.55	14.90
8-32 x 3/4"			F-026B-C	3.00	F-026B-M	23.85	18.20

FILLISTER HEAD STEEL MACHINE SCREWS Nickel Plated



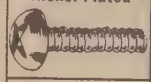
2-56 x 1/4"	KF-606	50	F-606-C	.65	F-606-M	4.50	3.40
2-56 x 1/2"	KF-607	50	F-607-C	.65	F-607-M	4.90	3.75
4-40 x 1/4"	KF-608	50	F-608-C	.65	F-608-M	4.90	3.75
4-40 x 1/2"	KF-609	45	F-609-C	.70	F-609-M	5.35	4.05
4-40 x 3/4"	KF-610	45	F-610-C	.85	F-610-M	6.40	4.85
6-32 x 1/4"	KF-611	45	F-611-C	.70	F-611-M	5.45	4.15
6-32 x 1/2"	KF-612	40	F-612-C	.80	F-612-M	6.20	4.80
6-32 x 3/4"	KF-613	40	F-613-C	.95	F-613-M	7.45	5.70
8-32 x 3/8"	KF-614	35	F-614-C	1.00	F-614-M	7.80	5.95
8-32 x 1/2"	KF-615	35	F-615-C	1.10	F-615-M	8.30	6.40
8-32 x 3/4"	KF-616	35	F-616-C	1.20	F-616-M	9.35	7.15
10-32 x 1/2"	KF-617	30	F-617-C	1.25	F-617-M	9.55	7.30

FLAT HEAD STEEL MACHINE SCREWS Nickel Plated



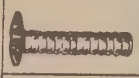
4-40 x 1/4"	KF-622	60	F-622-C	.65	F-622-M	4.90	3.75
4-40 x 3/8"	KF-623	50	F-623-C	.70	F-623-M	5.10	3.90
4-40 x 1/2"	KF-624	50	F-624-C	.70	F-624-M	5.35	4.05
6-32 x 1/4"	KF-625	50	F-625-C	.70	F-625-M	5.45	4.15
6-32 x 3/8"	KF-626	50	F-626-C	.75	F-626-M	5.70	4.35
6-32 x 1/2"	KF-627	45	F-627-C	.80	F-627-M	6.20	4.80
6-32 x 3/4"	KF-628	45	F-628-C	.95	F-628-M	7.45	5.70
8-32 x 3/8"	KF-629	35	F-629-C	1.00	F-629-M	7.80	5.95
8-32 x 1/2"	KF-630	35	F-630-C	1.10	F-630-M	8.30	6.40
8-32 x 3/4"	KF-631	35	F-631-C	1.20	F-631-M	9.35	7.15
10-32 x 1/2"	KF-632	30	F-632-C	1.25	F-632-M	9.55	7.30

PHILLIPS HEAD ROUND STEEL MACHINE SCREWS Nickel Plated



	SHOW OFF .59 per Pkg.		BLUE LINE Pkg. of 100		BULK PACK Bag of 1000		
	Part No.	Quan.	Part No.	Per Pkg.	Part No.	1-4 Per Bag	5-9 Per Bag
6-32 x 1/4"	KF-494	30	F-494-C	1.55	F-494-M	11.90	9.10
6-32 x 5/16"	KF-018	30	F-018-C	1.55	F-018-M	12.05	9.25
6-32 x 1/2"	KF-495	25	F-495-C	1.40	F-495-M	10.90	8.35
6-32 x 3/4"	KF-496	25	F-496-C	1.60	F-496-M	12.30	9.40
6-32 x 1"	KF-497	25	F-497-C	1.80	F-497-M	13.85	10.55
8-32 x 1/4"	KF-019	25	F-019-C	1.70	F-019-M	13.60	10.35
8-32 x 1/2"	KF-499	25	F-499-C	1.60	F-499-M	12.45	9.45
8-32 x 3/4"	KF-500	20	F-500-C	1.70	F-500-M	13.50	10.30
8-32 x 1"	KF-501	20	F-501-C	1.90	F-501-M	15.40	11.75

ORNAMENTAL HEAD STEEL MACHINE SCREWS Statuary Bronze Plated



6-32 x 3/4"	KF-511	35	F-511-C	1.65	F-511-M	13.35	10.20
6-32 x 1"	KF-512	30	F-512-C	1.80	F-512-M	14.65	11.15
6-32 x 1-1/4"	KF-513	20	F-513-C	2.45	F-513-M	19.95	15.25

HEX STEEL NUTS Nickel Plated



Thrd. Width Thk.							
2-56x3/16x1/16"	KF-554	60	F-554-C	.90	F-554-M	6.90	5.30
3-48x3/16x1/16"	KF-555	60	F-555-C	.90	F-555-M	6.90	5.30
4-36x1/4x3/32"	KF-556	60	F-556-C	.90	F-556-M	6.75	5.25
4-40x1/4x3/32"	KF-557	60	F-557-C	.90	F-557-M	6.75	5.25
6-32x1/4x3/32"	KF-559	60	F-559-C	.90	F-559-M	6.75	5.25
6-32x5/16x7/64"	KF-560	50	F-560-C	.95	F-560-M	7.35	5.65
8-32x1/4x3/32"	KF-561	50	F-561-C	.90	F-561-M	6.75	5.25
8-32x5/16x7/64"	KF-562	50	F-562-C	.95	F-562-M	7.35	5.65
10-32x3/8x1/8"	KF-563	45	F-563-C	1.10	F-563-M	8.70	6.60
12-24x7/16x5/32"	KF-619	35	F-619-C	1.45	F-619-M	11.75	9.00
1/4-20x7/16x3/16"	KF-564	35	F-564-C	1.60	F-564-M	12.45	9.45

HEX BRASS NUTS Nickel Plated



Thrd. Width Thk.							
2-56x3/16x1/16"			F-554B-C	1.25	F-554B-M	10.00	7.65
3-48x3/16x1/18"			F-555B-C	1.15	F-555B-M	9.15	7.00
4-36x1/4x2/32"	KF-556B	50	F-556B-C	1.55	F-556B-M	12.00	9.20
4-40x1/4x3/32"	KF-557B	35	F-557B-C	1.50	F-557B-M	11.90	9.10
6-32x1/4x3/32"	KF-559B	35	F-559B-C	1.50	F-559B-M	11.85	9.10
6-32x5/16x7/64"			F-560B-C	1.80	F-560B-M	14.30	10.90
8-32x1/4x3/32"			F-561B-C	1.50	F-561B-M	11.85	9.10
8-32x5/16x7/64"	KF-562B	20	F-562B-C	1.80	F-562B-M	14.30	10.90
10-32x3/8x1/8"	KF-563B	15	F-563B-C	1.95	F-563B-M	15.70	11.95

VOLUME CONTROL AND TOGGLE SWITCH MOUNTING NUTS Nickel Plated



(For Volume Control) 3/8-32x1/2x3/32"	KF-565	20	F-565-C	1.90	F-565-M	15.30	11.65
(For Toggle Switch) 15/32-32x9/16x5/64"	KF-566	15	F-566-C	2.30	F-566-M	18.75	14.30
.475-32x19/32x1/16"	KF-567	*10	F-567-C	4.35	F-567-M	34.60	26.40

*Knurled Ring Nut—Brass Nickel

WING NUTS Nickel Plated



6-32	KF-571	15	F-571-C	3.35	F-571-M	27.80	21.20
8-32	KF-572	15	F-572-C	3.35	F-572-M	27.80	21.20
10-32	KF-573	15	F-573-C	3.35	F-573-M	27.80	21.20

© United Technical Publications

waldom

HARDWARE AND FASTENING DEVICES

PACKAGED HARDWARE (Continued)

SLOTTED HEX HEAD SHEET METAL SCREWS (Type A) Nick. Pl.

	SHOW OFF .59 per Pkg.		BLUE LINE Pkg. of 100		BULK PACK Bag of 1000		
	Part No.	Quan.	Part No.	Per Pkg.	Part No.	1-4 Per Bag	5-9 Per Bag
4 x 3/8"	KF-016	50	F-016-C	1.00	F-016-M	8.00	6.05
4 x 1/2"	KF-523	50	F-523-C	1.10	F-523-M	8.55	6.55
6 x 1/4"	KF-524	45	F-524-C	1.15	F-524-M	9.25	7.05
6 x 3/8"	KF-525	35	F-525-C	1.15	F-525-M	9.30	7.10
6 x 1/2"	KF-526	35	F-526-C	1.20	F-526-M	9.90	7.55
6 x 5/8"	KF-595	35	F-595-C	1.25	F-595-M	9.95	7.60
6 x 3/4"	KF-527	30	F-527-C	1.30	F-527-M	10.10	7.70
8 x 1/4"	KF-528	30	F-528-C	1.30	F-528-M	10.10	7.70
8 x 3/8"	KF-529	30	F-529-C	1.35	F-529-M	10.60	8.10
8 x 1/2"	KF-530	30	F-530-C	1.40	F-530-M	10.90	8.35
8 x 5/8"	KF-017	25	F-017-C	1.45	F-017-M	11.15	8.45
8 x 1"	KF-531	20	F-531-C	1.80	F-531-M	14.15	10.80
10 x 3/8"	KF-532	20	F-532-C	1.50	F-532-M	11.90	9.10
10 x 1/2"	KF-533	20	F-533-C	1.65	F-533-M	12.80	9.75
10 x 3/4"	KF-534	15	F-534-C	1.80	F-534-M	14.15	10.80

HEX WASHER HEAD SHEET METAL SCREWS (Type A) Steel-Indented Slotted Head Nickel Plated

6 x 1/4"	KF-056	35	F-056-C	1.20	F-056-M	9.35	7.10
6 x 3/8"	KF-057	35	F-057-C	1.20	F-057-M	9.90	7.55
6 x 1/2"	KF-050	35	F-050-C	1.30	F-050-M	10.05	7.65
6 x 5/8"	KF-058	30	F-058-C	1.35	F-058-M	10.60	8.10
6 x 3/4"	KF-054	25	F-054-C	1.40	F-054-M	11.15	8.45
8 x 1/4"	KF-051	25	F-051-C	1.40	F-051-M	11.15	8.45
8 x 3/8"	KF-052	25	F-052-C	1.45	F-052-M	11.65	8.90
8 x 1/2"	KF-053	25	F-053-C	1.50	F-053-M	10.80	8.25
8 x 5/8"	KF-055	25	F-055-C	1.55	F-055-M	12.30	9.40
8 x 3/4"	KF-059	25	F-059-C	1.70	F-059-M	13.75	10.50

PAN HEAD SHEET METAL SCREWS (TYPE A) Nickel Plated

4 x 1/2"	KF-596	45	F-596-C	1.00	F-596-M	8.00	6.05
6 x 1/4"	KF-033	45	F-033-C	1.10	F-033-M	8.55	6.55
6 x 3/8"	KF-597	35	F-597-C	1.10	F-597-M	8.80	6.70
6 x 1/2"	KF-034	35	F-034-C	1.15	F-034-M	9.30	7.10
6 x 3/4"	KF-035	30	F-035-C	1.25	F-035-M	10.00	7.65
8 x 1/4"	KF-036	30	F-036-C	1.25	F-036-M	10.00	7.65
8 x 3/8"	KF-598	30	F-598-C	1.35	F-598-M	10.50	8.00
8 x 1/2"	KF-037	30	F-037-C	1.35	F-037-M	10.60	8.10
8 x 1"	KF-038	25	F-038-C	1.70	F-038-M	13.95	10.60

ROUND HEAD STEEL WOOD SCREWS Nickel Plated

4 x 1/2"	KF-514	35	F-514-C	1.00	F-514-M	8.00	6.05
4 x 3/4"	KF-515	35	F-515-C	1.15	F-515-M	9.20	7.00
6 x 3/4"	KF-516	30	F-516-C	1.25	F-516-M	9.90	7.55
6 x 1"	KF-517	30	F-517-C	1.55	F-517-M	12.20	9.30
8 x 3/4"	KF-518	25	F-518-C	1.50	F-518-M	11.65	8.90
8 x 1"	KF-047	25	F-047-C	1.70	F-047-M	14.10	10.75
8 x 1-1/4"	KF-519	15	F-519-C	2.05	F-519-M	16.15	12.30
10 x 1-1/2"	KF-520	15	F-520-C	2.75	F-520-M	21.60	16.45
12 x 1-1/2"	KF-521	10	F-521-C	3.45	F-521-M	27.55	21.00
14 x 1-3/4"	KF-522	10	F-522-C	4.85	F-522-M	38.85	29.60

FLAT HEAD STEEL WOOD SCREWS Nickel Plated

8 x 1/2"	KF-027	35	F-027-C	1.00	F-027-M	8.00	6.05
8 x 1"	KF-048	25	F-048-C	1.75	F-048-M	14.10	10.75
8 x 1-1/4"	KF-032	15	F-032-C	2.05	F-032-M	16.15	12.30
10 x 1-1/2"	KF-044	15	F-044-C	2.75	F-044-M	21.60	16.45

STEEL SPADE BOLT Nickel Plated

7/8" #6

6-32 x 5/16"	KF-620	15	F-620-C	1.45	F-620-M	11.60	8.90

FLAT STEEL WASHERS Nickel Plated

				SHOW OFF .59 per Pkg.		BLUE LINE Pkg. of 100		BULK PACK Bag of 1000		
Screw Size	I. D. In.	O. D. In.	Thk. In.	Part No.	Quan.	Part No.	Per Pkg.	Part No.	1-4 Per Bag	5-9 Per Bag
2	.092	7/32	.018	KMW-400	150	MW-400-C	.55	MW-400-M	4.50	3.45
4	.125	9/32	.025	KMW-401	150	MW-401-C	.45	MW-401-M	3.50	2.65
6	.150	3/8	.032	KMW-402	150	MW-402-C	.45	MW-402-M	3.50	2.65
8	.170	3/8	.032	KMW-403	150	MW-403-C	.45	MW-403-M	3.50	2.65
10	.204	7/16	.032	KMW-404	140	MW-404-C	.50	MW-404-M	3.95	3.05
1/4	.281	5/8	.050	KMW-408	90	MW-408-C	.90	MW-408-M	6.75	5.25
3/8	.392	11/16	.050	KMW-410	60	MW-410-C	.90	MW-410-M	7.15	5.50

FLAT BRASS WASHERS Nickel Plated

2	.092	7/32	.018			MW-400B-C	.60	MW-400B-M	4.70	3.60
4	.125	9/32	.025			MW-401B-C	.65	MW-401B-M	4.90	3.75
6	.150	3/8	.032			MW-402B-C	.80	MW-402B-M	6.20	4.80
8	.170	3/8	.032			MW-403B-C	.80	MW-403B-M	6.20	4.80
10	.204	7/16	.032			MW-404B-C	.90	MW-404B-M	6.75	5.25

FLAT FIBER WASHERS

4	.120	1/4	1/32	KFW-374	50	FW-374-C	.55	FW-374-M	4.35	3.35
6	.145	1/4	1/32	KFW-375	45	FW-375-C	.55	FW-375-M	4.35	3.35
8	3/16	3/8	1/32	KFW-376	45	FW-376-C	.60	FW-376-M	4.70	3.60
10	.192	3/8	1/32	KFW-377	45	FW-377-C	.60	FW-377-M	4.70	3.60
1/4	.255	1/2	1/32	KFW-378	35	FW-378-C	.65	FW-378-M	4.90	3.75
3/8	3/8	5/8	1/32	KFW-379	30	FW-379-C	.95	FW-379-M	7.45	5.65
7/16	.440	3/4	1/32	KFW-380	25	FW-380-C	1.05	FW-380-M	8.20	6.20

EXTRUDED FIBER WASHERS

4	1/8	9/32	5/64	KFW-384	35	FW-384-C	1.10	FW-384-M	8.35	6.40
6	9/64	5/16	5/64	KFW-385	35	FW-385-C	1.10	FW-385-M	8.35	6.40
8	11/64	3/8	3/32	KFW-386	30	FW-386-C	1.10	FW-386-M	8.35	6.40
10	13/64	7/16	3/32	KFW-387	30	FW-387-C	1.20	FW-387-M	9.15	7.00
1/4	.256	1/2	3/32	KFW-388	30	FW-388-C	1.20	FW-388-M	9.15	7.00
3/8	.375	5/8	3/32	KFW-389	30	FW-389-C	1.20	FW-389-M	9.40	7.20

STEEL CUP WASHERS Nickel Plated

6				KCW-6	60	CW-6-C	.65	CW-6-M	5.25	3.95
8				KCW-6	60	CW-8-C	.70	CW-8-M	5.65	4.30
10				KCW-10	50	CW-10-C	.75	CW-10-M	5.85	4.40

STEEL SPLIT LOCK WASHERS Zinc Plated

#4 Screw				KMW-411	120	MW-411-C	.75	MW-411-M	5.70	4.40
#6 Screw				KMW-412	120	MW-412-C	.65	MW-412-M	4.90	3.75
#8 Screw				KMW-413	120	MW-413-C	.60	MW-413-M	4.80	3.65
#10 Screw				KMW-414	100	MW-414-C	.70	MW-414-M	5.45	4.15
#1/4 Screw				KMW-415	75	MW-415-C	1.05	MW-415-M	8.10	6.15

METAL CABLE CLAMPS Cadmium Plated

Mtl. In.	Ht. In.	W. In.	Wire Hold Area							
.020B	7/16	1/4	3/32	KC-201	30	C-201-C	1.00	C-201-M	8.05	6.15
.032S	5/8	3/8	10/64	KC-202	30	C-202-C	1.12	C-202-M	9.20	7.00
.032S	11/16	3/8	1/4	KC-203	25	C-203-C	1.29	C-203-M	10.55	8.05
.032S	15/16	3/8	10/32	KC-204	15	C-204-C	1.43	C-204-M	11.70	8.95

SPRING CLIPS Brass, Nickel Plated

Thick-ness	Ht. In.	W. In.	Mtg. Hole In.							
.016	45/64	7/32	.130	KC-101	20	C-101-C	1.66	C-101-M	13.15	10.00
.020	25/32	5/16	.144	KC-102	20	C-102-C	2.20	C-102-M	17.40	13.25
.022	1	3/8	.144	KC-103	10	C-103-C	3.23	C-103-M	26.90	20.50

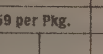
© United Technical Publications

PACKAGED HARDWARE (Continued)



ACORN NUTS (Nickel Plated Brass)

Size	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
6-32	KF-574	15	F-574-C	3.50	F-574-M	28.55	21.80
8-32	KF-575	15	F-575-C	3.75	F-575 M	30.30	23.15
10-32	KF-576	10	F-576-C	4.50	F-576-M	36.70	27.95



SNAP BUTTON HOLE PLUGS Nickel Plated

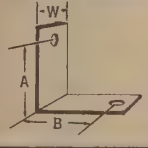
Hole Size	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
1/4"	KHP-1	12	HP-1-C	2.70	HP-1-M	21.85	16.65
3/8"	KHP-2	12	HP-2-C	3.05	HP-2-M	24.80	18.90
1/2"	KHP-3	8	HP-3-C	2.95	HP-3-M	23.80	18.15
3/4"	KHP-4	5	HP-4-C (50)*	2.10	HP-4-M	32.75	24.95
1"	KHP-5	5	HP-5-C (25)*	1.45	HP-5-M	43.65	33.30

*Where quantities are shown in brackets ( ) in front of "Pkg. of 100" prices, this quantity, rather than 100 pieces, applies.



RUBBER HEADED TACK BUMPERS

Dia. Hd.	Ht. Hd.	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PARK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
3/8"	1/4"	KB-350	10	B-350-C	2.12	B-350-M	17.45	13.30
5/8"	5/16"	KB-352	7	B-352-C	3.65	B-352-M	29.95	22.85



ANGLE BRACKETS

.032 Thk. Material: Steel (S), Brass (B). Plating: Cadmium (C), Nickel (N), Hot-tin dipped (HT).

Mtl.	Plg.	Hole Size	W	A	B	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
B	C	#6	9/32	13/64	9/32	A-100-C	1.70	A-100-M	13.85	10.55
B	N	#6	3/8	15/64	19/64	A-101-C	2.25	A-101-M	18.05	13.80
B	N	#8	5/16	9/32	9/32	A-102-C	2.25	A-102-M	18.20	13.85
S	HT	#6	3/8	15/32	15/32	A-103-C	1.80	A-103-M	14.35	11.00
S	HT	#8	3/8	7/8	3/8	A-104-C	1.95	A-104-M	15.95	12.15

SPACERS — (Brass & Fibre) — 1/4" O.D.



For use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate #6 or #8 screw.

Length	Unthreaded For #6 Screw Part No.	For #8 Screw Part No.	Price Pkg. of 100	Threaded For #6 Screw Part No.	For #8 Screw Part No.	Price Pkg. of 100
ROUND TYPE (Brass — Cadmium Plated)						
1/4"	RS-614	RS-814	4.75	RST-146	RST-148	4.75
3/8"	RS-638	RS-838	5.30	RST-386	RST-388	6.05
1/2"	RS-612	RS-812	6.40	RST-126	RST-128	7.30
3/4"	RS-634	RS-834	7.65	RST-346	RST-348	8.75
1"	RS-610	RS-810	8.75	RST-106	RST-108	10.00
HEX TYPE (Brass — Cadmium Plated)						
1/4"	HS-614	HS-814	4.40	HST-146	HST-148	5.10
3/8"	HS-638	HS-838	5.65	HST-386	HST-388	6.40
1/2"	HS-612	HS-812	6.80	HST-126	HST-128	7.65
3/4"	HS-634	HS-834	8.20	HST-346	HST-348	9.30
1"	HS-610	HS-810	9.45	HST-106	HST-108	10.40
ROUND TYPE (Fibre)*						
1/4"	FS-614	FS-814	4.75	Not available threaded.		
3/8"	FS-638	FS-838	6.05			
1/2"	FS-612	FS-812	7.30			
3/4"	FS-634	FS-834	8.75			
1"	FS-610	FS-810	10.00			

TERMINAL AND SPADE LUGS

Supplied with hot-tin dipping in brass (B), or copper (C) as specified in Material (Mtl.) column

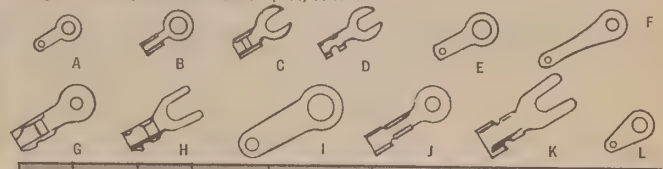
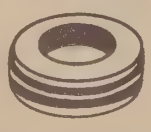
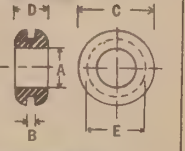


Fig.	Mtl., Thickness	Hole Size	Length In.	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
A	.015C	#2	21/64			T-251-C	1.05	T-251-M	8.45	6.40
A	.020B	#6	1/2	KT-151	60	T-151-C	1.05	T-151-M	8.30	6.40
A	.020B	#8	13/16	KT-152	60	T-152-C	1.10	T-152-M	8.95	6.80
A	.020B	#10	13/16	KT-153	60	T-153-C	1.10	T-153-M	8.95	6.80
B	.020C	#4	9/16			T-226-C	1.25	T-226-M	10.30	7.80
B	.032C	#6	1/2	KT-156	45	T-156-C	1.25	T-156-M	10.30	7.80
B	.020B	#8	21/32			T-227-C	1.25	T-227-M	10.30	7.80
B	.020B	#10	21/32			T-228-C	1.25	T-228-M	10.30	7.80
C	.020B	#8	41/64	KT-157	45	T-157-C	1.10	T-157-M	8.70	6.65
D	.020B	#6	21/32	KT-158	45	T-158-C	1.20	T-158-M	9.65	7.30
D	.020B	#8	21/32	KT-159	45	T-159-C	1.20	T-159-M	9.65	7.30
D	.020B	#10	47/64			T-225-C	1.55	T-225-M	12.15	9.25
E	.015B	#8	47/64	KT-162	45	T-162 C	1.20	T-162-M	9.40	7.15
F	.025B	#6	1	KT-163	45	T-163-C	1.35	T-163-M	10.75	8.20
F	.025B	#8	1	KT-164	45	T-164-C	1.35	T-164-M	10.75	8.20
G	.020C	#6	15/16	KT-166	25	T-166-C	2.20	T-166-M	17.65	13.50
G	.020C	#8	15/16	KT-167	25	T-167-C	2.20	T-167-M	17.65	13.50
G	.020C	#10	15/16	KT-168	25	T-168-C	2.20	T-168-M	17.65	13.50
H	.020B	3/16"	25/32	KT-170	25	T-170-C	1.35	T-170-M	10.75	8.15
I	.020B	#10	1-5/32	KT-173	20	T-173-C	2.20	T-173-M	17.50	13.35
J	.032B	#8	15/16	KT-187	15	T-187-C	3.95	T-187-M	32.10	24.50
J	.032B	#10	15/16	KT-188	10	T-188-C	4.35	T-188-M	35.35	27.05
K	.032B	#8	1	KT-193	10	T-193-C	5.70	T-193-M	46.40	35.40
L	.020B	#6	9/16	KT-154	45	T-154-C	1.20	T-154-M	9.65	7.30
L	.015C	#8	17/32			T-224-C	1.35	T-224-M	10.60	8.10



VINYL GROMMETS

- Exceptional Aging Qualities*
- High Dielectric Properties
- Oil Resistant
- Durometer Hardness 45 1045
- Cost Less Than Rubber
- Will Not Stain Most Surfaces



A	B	C	D	E							
1/8	1/16	11/32	3/16	1/4	KG-401	25	G-401-C	1.10	G-401-M	8.95	6.80
3/16	1/16	7/16	7/32	5/16	KG-402	20	G-402-C	1.25	G-402-M	10.00	7.60
1/4	1/16	9/16	1/4	3/8	KG-403	18	G-403-C	1.65	G-403-M	11.50	8.80
5/16	1/16	5/8	1/4	7/16	KG-494	15	G-404-C	1.75	G-404-M	12.30	9.40
3/8	1/16	5/8	1/4	1/2	KG-405	15	G-405-C	1.75	G-405-M	12.30	9.40
1/2	1/16	13/16	9/32	5/8	KG-406	10	G-406-C*	1.45	G-406-M	21.45	16.35
5/8	1/16	1-1/8	9/32	7/8			G-407-C*	1.45	G-407-M	36.80	28.45
							*(50) **(25)				

These grommets were tested by Underwriters Laboratories in a circulating air oven at 212°F. for seven days with no visible change.

RUBBER GROMMETS

A	B	C	D	E							
1/8	1/16	11/32	3/16	1/4	KG-300	16	G-300-C	1.65	G-300-M	13.10	10.00
5/16	1/16	9/16	3/16	15/32			G-301-C	2.15	G-301-M	17.45	13.30
3/8	1/16	11/32	9/32	1/2	KG-302	10	G-302-C	2.75	G-302-M	22.45	17.10
3/16	1/16	7/16	7/32	5/16	KG-305	14	G-305-C	2.30	G-305-M	18.65	14.20
7/16	3/64	3/4	1/4	19/32			G-307-C*	1.65	G-307-M	24.80	18.90
11/32	1/16	5/8	5/16	15/32	KG-309	8	G-309-C	2.35	G-309-M	19.00	14.45
5/8	1/16	1-1/8	5/16	7/8			G-311-C**	2.00	G-311-M	54.95	41.90
							*(50) **(25)				

RUBBER BUMPERS

Recess Screw Type



For mounting on all types of Electronic Equipment. Prevents vibration and protects surfaces under equipment from being marred.

A	B	C	D	E	BLUE LINE		BULK PACK	
1/2	1/4	5/32	1/4	1/8	B-321-C	2.37	B-321-M	19.45	14.80
3/4	1/4	1/8	1/4	1/8	B-322-C*	1.65	B-322-M	56.25	42.90
5/8	3/8	7/32	1/4	1/8	B-323-C*	1.31	B-323-M	44.80	34.20
3/4	3/8	7/32	1/4	1/8	B-324-C*	1.84	B-324-M	62.55	47.65
					*(25)				

Button Type



A	B	C	D	E	BLUE LINE		BULK PACK	
3/8	3/8	17/64	3/16	.040	B-361-C	1.65	B-361-M	13.30	10.15
1/2	7/16	11/32	1/4	.040	B-362-C	2.43	B-362-M	19.50	14.85
5/8	9/16	15/32	5/16	.040	B-363-C	4.70	B-363-M	37.55	28.70

waldom

HARDWARE AND FASTENING DEVICES

PACKAGED HARDWARE (SHAKEPROOF PRODUCTS)

LIVE-ACTION INTERNAL LOCKWASHERS



Spring-steel cadmium-plated

Bite on both sides, to lock tight, stay tight, where others fail.

Screw Size	Shakeproof® Part No.	O.D.	Material Thickness	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
2	1202	.185-.175	.013	KMW-428	70	MW-428-C	.95	MW-428-M	5.70	3.95
4	1204	.265-.255	.015	KMW-416	90	MW-416-C	.60	MW-416-M	3.65	2.55
6	1206	.288-.278	.018	KMW-417	90	MW-417-C	.60	MW-417-M	3.65	2.55
8	1208	.336-.325	.020	KMW-418	80	MW-418-C	.65	MW-418-M	3.80	2.65
10	1210	.381-.370	.022	KMW-419	80	MW-419-C	.65	MW-419-M	3.80	2.65
1/4	1214	.478-.466	.025	KMW-420	50	MW-420-C	.80	MW-420-M	5.10	3.60
3/8	1220	.692-.678	.035	KMW-421	35	MW-421-C	1.20	MW-421-M	9.00	6.20

LIVE-ACTION EXTERNAL LOCKWASHERS



Spring-steel, cadmium-plated.

Bite on both sides, to lock tight, stay tight, where others fail.

Screw Size	Shakeproof® Part No.	O.D.	Material Thickness	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
4	1104	.255-.245	.015	KMW-422	90	MW-422-C	.60	MW-422-M	3.65	2.55
6	1106	.317-.306	.020	KMW-423	90	MW-423-C	.60	MW-423-M	3.65	2.55
8	1108	.381-.370	.020	KMW-424	80	MW-424-C	.65	MW-424-M	3.80	2.65
10	1110	.406-.395	.022	KMW-425	80	MW-425-C	.65	MW-425-M	3.80	2.65
1/4	1114	.506-.494	.025	KMW-426	50	MW-426-C	.80	MW-426-M	5.10	3.60
3/8	1120	.695-.680	.035	KMW-427	35	MW-427-C	1.20	MW-427-M	9.00	6.20

LOCKING TERMINALS Bronze hot tin-dipped, .018 thickness

Provide the economy and efficiency of a combination wire terminal and Shakeproof® lockwasher.



Style 4



Style 7



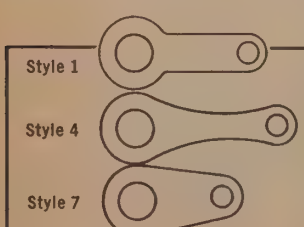
Style 9



Style 11

Screw Size	Shakeproof® Part No.	Length	Form 1. —— 2. ⟋	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
4	2101-04-00	7/8	1	KT-196	30	T-196-C	1.60	T-196-M	10.75	8.65
6	2101-06-00	7/8	1	KT-197	30	T-197-C	1.60	T-197-M	10.75	8.65
8	2101-08-00	7/8	1	KT-198	30	T-198-C	1.60	T-198-M	10.75	8.65
10	2101-10-00	57/64	1	KT-223	30	T-223-C	1.60	T-223-M	10.85	8.80
4	2103-04-00	13/16	2			T-247-C	1.60	T-247-M	10.75	8.65
6	2103-06-00	13/16	2			T-248-C	1.60	T-248-M	10.75	8.65
8	2103-08-00	13/16	2			T-249-C	1.60	T-249-M	10.75	8.65
10	2103-10-00	53/64	2			T-250-C	1.75	T-250-M	11.40	9.20
4	2106-04-00	5/8	1			T-229-C	1.50	T-229-M	10.50	8.55
6	2106-06-00	5/8	1	KT-194	30	T-194-C	1.50	T-194-M	10.50	8.55
8	2106-08-00	5/8	1	KT-195	30	T-195-C	1.50	T-195-M	10.50	8.55
4	2102-04-00	23/32	1			T-230-C	1.50	T-230-M	10.50	8.55
6	2102-06-00	23/32	1			T-231-C	1.50	T-231-M	10.50	8.55
8	2102-08-00	23/32	1			T-232-C	1.50	T-232-M	10.50	8.55
4	2104-04-00	5/8	2			T-233-C	1.50	T-233-M	10.50	8.55
6	2104-06-00	5/8	2			T-234-C	1.50	T-234-M	10.50	8.55
8	2104-08-00	5/8	2			T-235-C	1.50	T-235-M	10.50	8.55
10	2104-10-00	41/64	2			T-236-C	1.60	T-236-M	10.85	8.80
6	2108-06-00	25/32	1			T-237-C	1.75	T-237-M	11.35	9.20
10	2108-10-00	51/64	1			T-238-C	1.80	T-238-M	11.55	9.40

PLAIN TERMINALS Brass hot tin-dipped, .018 thickness



Style 1

Style 4

Style 7

Screw Size	Shakeproof® Part No.	Length	Form 1. —— 2. ⟋	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
4	2522-04-00	21/32	1			T-239-C	.95	T-239-M	6.75	5.50
6	2522-06-00	21/32	1			T-240-C	.95	T-240-M	6.75	5.50
6	2501-06-00	7/8	1			T-241-C	1.00	T-241-M	7.20	5.90
8	2501-08-00	7/8	1			T-242-C	1.00	T-242-M	7.20	5.90
10	2501-10-00	57/64	1			T-243-C	1.00	T-243-M	7.20	5.90
6	2506-06-00	5/8	1			T-244-C	1.00	T-244-M	7.20	5.90
8	2506-08-00	5/8	1			T-245-C	1.00	T-245-M	7.20	5.90
10	2506-10-00	5/8	1			T-246-C	1.00	T-246-M	7.20	5.90

EXTERNAL LOCKWASHER KEPS®—STANDARD SIZES



American Standard Machine Screw Nut Series, Nut, SAE20 steel; Washer, spring steel, cadmium-plated. Lockwasher and nut are pre-assembled. Reusable, free-spinning, they drive easily, cut assembly time, lock securely.

Diameter and Thread	Shakeproof® Part No.	Across Flats	Nut Thickness	SHOW OFF .59 per Pkg. Part No.	Quan.	BLUE LINE Pkg. of 100 Part No.	Per Pkg.	BULK PACK Bag of 1000 Part No.	1-4 Per Bag	5-9 Per Bag
4-40	511-041800-00	1/4	3/32			511-041800-00-C	3.20	511-041800-00-M	23.25	18.85
6-32	511-061800-00	5/16	7/64			511-061800-00-C	2.55	511-061800-00-M	18.45	14.90
8-32	511-081800-00	11/32	1/8			511-081800-00-C	2.60	511-081800-00-M	18.85	15.40
10-32	511-101800-50	3/8	1/8			511-101800-50-C	2.75	511-101800-50-M	19.80	16.15
1/4-20	511-251800-00	7/16	3/16			511-251800-00-C	3.45	511-251800-00-M	24.95	20.35

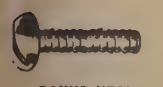
*TRADEMA

© United Technical Publicatio

waldom HARDWARE AND FASTENING DEVICES

MOLDED NYLON HARDWARE

YLON SCREWS


ROUND HEAD


BINDER HEAD

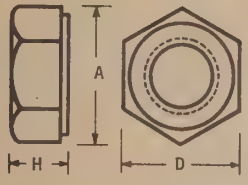

FILLISTER HEAD


FLAT HEAD

Description	Part No. Round Head	Binder Head	Fillister Head	Flat Head	Net Prices Pkg. of 100	Bulk 1000 or More, Per M
2-56 x 1/4″	FN-800	FN-815	FN-830		3.65	28.45
2-56 x 1/2″	FN-801	FN-816	FN-831		3.65	28.45
4-40 x 1/4″	FN-802	FN-817	FN-832		3.65	28.75
4-40 x 1/2″	FN-803	FN-818	FN-833	FN-845	3.65	28.90
4-40 x 3/4″	FN-804	FN-819	FN-834		3.75	29.30
6-32 x 1/4″	FN-805	FN-820	FN-835		3.65	28.95
6-32 x 3/8″	FN-806	FN-821	FN-836	FN-846	3.75	29.20
6-32 x 1/2″	FN-807	FN-822	FN-837	FN-847	3.75	29.50
6-32 x 5/8″	FN-808	FN-823	FN-838	FN-848	3.75	29.75
6-32 x 3/4″	FN-809	FN-824	FN-839		3.85	30.05
8-32 x 3/8″	FN-810	FN-825	FN-840		3.85	30.05
8-32 x 1/2″	FN-811	FN-826	FN-841	FN-849	3.85	30.45
8-32 x 3/4″	FN-812	FN-827	FN-842	FN-850	3.85	30.85
10-32 x 1/2″	FN-813	FN-828	FN-843	FN-851	4.00	31.65
10-32 x 1″	FN-814	FN-829	FN-844	FN-852	4.30	33.85

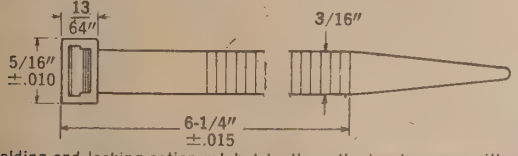
YLON HEX NUTS





Part No.	Thread	D Max.	D Min.	A Max.	A Min.	H Max.	H Min.	Net Prices Pkg. of 100	Bulk 1000 or More, Per M
FN-853	2-56	3/16	.180	.214	.208	.090	.086	5.85	46.90
FN-854	4-40	1/4	.240	.279	.272	.124	.120	5.95	47.35
FN-855	6-32	5/16	.300	.350	.343	.146	.138	6.05	48.60
FN-856	8-32	11/32	.331	.386	.379	.170	.162	6.15	49.30
FN-857	10-32	3/8	.360	.420	.412	.196	.188	6.20	50.00

'EDGE LOCKING NYLON WIRE CLAMP



ositive holding and locking action ratchet teeth on the band engage with match-g teeth inside the clamp loop. A small, floating wedge, which cannot fall out, cks the teeth together. Slip clamp around cable, insert tongue, pull tight, push wedge, and cut off extra material. It's a permanently locked, neat cable clamp. ccommodates from 1/8″ to 1-3/4″ diameter wire bundles. Natural color.

Part No.	Pkg. of 100	1000 or more Per M
BCN-25	9.90	76.55

NYLON FINISHING WASHERS



hese Molded Nylon Finishing Washers are made to be used with No. 6, o. 8, No. 10 and 1/4″ countersunk metal or nylon screws. They prevent utting and scratching of instrument and control panels, cover misaligned oles, can be used as glides, protective feet, bumpers, insulators, spacers. mooth glossy finish. Natural nylon; special quotations for color coding.

Part No.	I.D.	O.D.	Thick-ness	NET PRICES Pkg. of 100	Bulk 1000 or More, Per M
NW-879	#6(.143)	.437	.100	4.45	35.30
NW-890	#8(.171)	.515	.115	4.70	37.25
NW-891	#10(.191)	.580	.152	5.00	39.80

SEPARATE NYLON MOUNTING TABS



For clamp at left. May be pre-mounted at support points, with band clamps inserted later, or slipped on band clamp when bundling wires and mounted later. Never in the way when not needed.

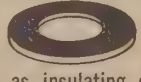
Part No. BCN-12 Pkg. of 100—$3.30 1000 or more, per M—$24.75

FORKED TOOL FOR WEDGING BAND CLAMP



Part No. FT-27 Net Ea. $2.45

NYLON FLAT WASHERS



Stamped from extruded nylon strip. Use as insulating or cushioning washers, spacers, thrust washers. Natural color from stock, color coding at slight additional cost.

Part No.	I.D.	O.D	Thick-ness	NET PRICES Pkg. of 100	Bulk 1000 or More, Per M
NW-875	#4(.120)	9/32	.050	.65	5.30
NW-876	#6(.150)	5/16	.050	.75	5.80
NW-877	#8(.170)	3/8	.060	1.00	7.85
NW-878	#10(.195)	7/16	.060	1.10	8.90

AMPROBE INSTRUMENT®
DIVISION OF SOS CONSOLIDATED INC

Their compactness, versatility and wide range of measuring capability have made these units the most widely used clamp-on instruments available. Applications include checking running currents, balancing circuits, checking for overloads, checking voltage and with models noted checking resistance and continuity.

AMPROBE® ROTARY SCALE MODELS





G Case



A Case

Feature multi-range capability for greater measurement flexibility and reading accuracy. Fit either hand comfortably, permitting one hand operation of jaw trigger, pointer lock and rotary scale selector. Pointer lock "freezes" pointer at reading. Only selected voltage or current scale (plus ohmmeter scale on units with ohmmeter) is visible at one time in the unbreakable, magnifying window. Accuracy ±3% F.S.

MODEL	RANGES VOLTS, AC	AMPS, AC	PRICE
RS-1A	0-150/600	0-6/15/40/100	$51.85
RS-2A	0-150/300	0-6/15/40/100	51.85
RS-3A	0-150/300/600	0-6/15/40/100/300	64.85
RS-300A	0-150/300/600	0-6/15/40/100/300	60.85

RS-3A OHMMETER RANGE: 25 Ohms Mid-Scale

Price includes Extendo-Lead Pack VLK-311 and special "A" Case with space for Amprobe Energizer A-45L.

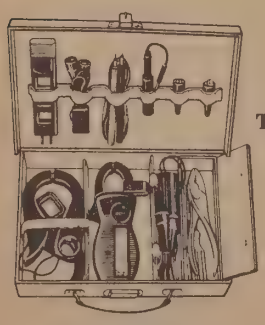
MODEL	RANGES VOLTS, AC	AMPS, AC	PRICE
RS-1	0-150/600	0-6/15/40/100	$46.85
RS-2	0-150/300	0-6/15/40/100	46.85
RS-3	0-150/300/600	0-6/15/40/100/300	59.85
*RS-3 400 Hz	0-150/300/600	0-6/15/40/100/300	83.50
RS-300	0-150/300/600	0-6/15/40/100/300	55.85
RS-1000	0-150/300/600	0-15/40/100/300/1000	79.85
RS-1007	0-150/300/750	0-15/40/100/300/1000	79.85

Models RS-3, RS-3 400 Hz, RS-1000 and RS-1007 OHMMETER RANGE: 25 Ohms Mid-Scale

Price includes "G" carrying case (RS-1000 and RS-1007 include "E" case) and Test Leads VL-11.

*Model RS-3 400 Hz—Calibrated for 400 Hz (cycles) for Use in Aircraft and Maritime Industries.

AMPROBE® TEST MASTER KITS



TM-43A

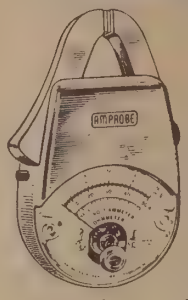


TM-63

Choice of models lets you select the "electrical test shop in a kit" to meet your specific testing requirements. All kits (except TM-60) are built around the famous model RS-3A with Extendo-Leads. Measure voltage up to 600 VAC. Check low currents on a 0-0.6 ampere range or high currents up to 1200 amps by using A45-L Energizer or A50-1 Deca Tran. Model PSA-1 in the TM-43A permits you to determine phase sequence of three phase circuits. The good-looking, rugged, compact cases are truly the sign of the professional.

CONTAINS:	RS-3A	Extendo Leads	PSA-1	Energizer	Deca Tran	A Case	U Case	Price
TM-33A	one	one	—	one	one	—	one	$106.50
TM-43A	one	one	one	one	one	—	one	117.85
TM-60	—	one	—	one	—	one	—	17.35
TM-63	one	one	—	one	—	one	—	71.85

AMPROBE® JUNIOR MODELS



Junior models are the economical way:
- to get started in electrical testing
- to have a spare instrument
- to equip a number of servicemen

These pocket-size instruments are available in a variety of voltage, current and resistance range combinations. This permits you to select the model that will satisfy your immediate job requirements. Readings are taken on a calibrated scale. Accuracy ±3% F.S. Junior model instruments are smaller and weigh less than most popular voltage testers. Handy "B" Case with space for Extendo-Leads VLK-355 and Energizer A45-L is available for all Junior models.

YTO MODEL

2 current ranges, 2 voltage ranges, 25 ohms mid-scale. **Price** w/test leads **$35.85.**

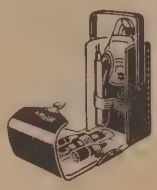
MODEL	AMPS, AC	VOLTS, AC
YTO525/100	0-25/100	0-150/600

YT MODELS

2 current ranges, 2 voltage ranges. **Price** with test leads **$30.85.**

MODEL	AMPS, AC	VOLTS, AC
YT10/25	0-10/25	0-150/300
YT25/100	0-25/100	0-150/300
YT525/100	0-25/100	0-150/600

YTB MODELS



Versatile YT Jr. and Extendo-Lead Pack VLK-355 in handy "B" case, with space for Energizer A-45L. **Price $36.85.**

MODEL	AMPS, AC	VOLTS, AC
YTB10/25	0-10/25	0-150/300
YTB25/100	0-25/100	0-150/300

YO MODELS

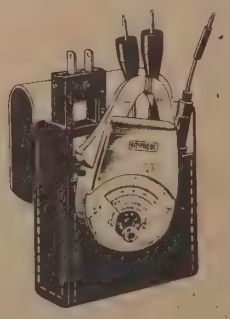
1 current range, 2 voltage ranges, 25 Ohms Mid-Scale. **Price** w/test leads **$30.85.**

MODEL	AMPS, AC	VOLTS, AC
YO "525"	0-25	0-150/600
YO "550"	0-50	0-150/600
YO "500"	0-100	0-150/600

Y MODELS

1 current range, 2 voltage ranges. **Price** w/test leads **$25.85.**

MODEL	AMPS, AC	VOLTS, AC
Y25	0-25	0-125/250
Y500	0-100	0-150/600
Y550	0-50	0-150/600



AMPROBE® JUNIOR TEST MASTER KITS

The Junior Test-Master Kits combine one of the popular YO Models and the A45-L Energizer in a compact case. Energizer multiplies current measuring sensitivity by five or ten times for precise readings on small appliances and fractional h.p. motors. Measure current, voltage and resistance. Price: **$41.85.**

MODEL	2 VOLTAGE RANGES	AMMETER RANGES (full scale) BASIC INST.
TM-YO "525"	0-150/600	0-25
TM-YO "550"	0-150/600	0-50
TM-YO "500"	0-150/600	0-100

OHMMETER RANGE: 25 Ohms Mid-Scale

All prices, specifications and models are subject to change without notice.

Net

© United Technical Publicatio

AMPROBE INSTRUMENT
DIVISION OF SOS CONSOLIDATED INC.

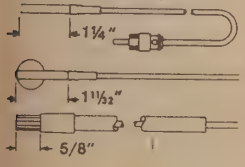
AMPROBE® FASTEMP® THERMOMETERS



Dual range, battery powered thermometer measures temperatures in seconds. Tapered shape fits either hand comfortably. Accommodates 3 probes that can be checked in quick succession by means of a selector switch. "Press to Read" button extends battery life—"locks in" for continuous readings. Range overlap permits monitoring of fluctuating temperature in that area without frequent switching of ranges. Supplied with one Universal Probe model RBT-12 for non-corrosive gaseous, liquid and surface temperatures. Also available are Immersion and Air Probes and a carrying case that permits use of Thermometer while in the case. Up to 3 probes can be stored in case.

MODEL	RANGES	PRICE
T-150	−50° to + 50°F +40° to +150°F	$44.85
T-150C	−45° to + 10°C +6° to + 65°C	44.85

Accuracy ±2°F; ±1°C. Weighs only 10 ozs. 4 13/16" x 2 11/16" x 1 7/8"



RBT-11	Immersion Probe	$8.95
RBT-12	Universal Probe	8.95
RBT-13	Air Probe	8.95
FTC	Carrying Case	9.85
915	Set of 4 "AA" batteries	.80

AMPROBE® JUNIOR LINE PROBE



Unique, versatile...traces up to 10 circuits at one time, measures voltage and current without interrupting service, checks for continuity. Complete with all required accessories including carrying case. **Price $45.85.**

MODEL	VOLTS, AC	AMPS, AC
ALP550	0-150/600	0-50

AMPROBE® VOLTPROBE® VOLTAGE TESTER



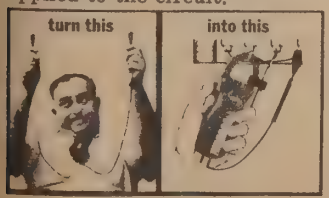
Unique design makes VOLTPROBE virtually the ONLY Votage Tester that FITS IN A SHIRT POCKET. Voltage levels are shown "Thermometer Style" by a series of LIT windows corresponding to each voltage level. Visual readout ends guesswork and wrong interpretation. Operates over a frequency range of 25 to 800 cycles. Model VT-100 indicates AC and DC (including polarity). Model VT-124 indicates AC including 24 and 48 volts. Model VC carrying case optional at extra cost.

MODEL NO.	RANGES VOLTS, AC	VOLTS, DC	PRICE
VT-100	115/220/277/440/550	115/220/400/600/750	$9.50
VT-124	24/48/115/220/277/440/550	None	14.85

Helpful accessories for Amprobe instruments

AMPROBE® EXTENDO LEADS

Extendo leads give you a "Third Hand" for easier, safer and faster voltage readings. No more wishing for someone or something to hold the instrument while test probes are applied to the circuit.



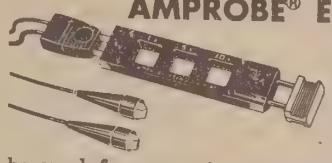
Furnished with jaw adaptor, extension probe leads, and insulated alligator clips. Model VLK-311 for all AMPROBE RS models, except RS-1000 and RS-1007. Model VLK-355 for all AMPROBE Juniors. **Price $4.25.**

AMPROBE® DECA-TRAN

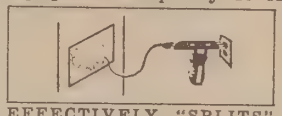


The Model A-50-1 Deca-Tran can be used with any AMPROBE model to extend the current ranges 10 times up to 1200 amps maximum, intermittent duty, 600 amps continuous duty. With 2' Line Cord for remote readings. Accommodates round conductors—2 1/16" (5.33 cm) in diameter and bus bar 3/4" (1.80 cm) x 2½" (6.35 cm). With carrying case. **Price $34.85.**

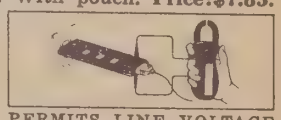
AMPROBE® ENERGIZER



Model A-45L increases the current measuring sensitivity of the instrument by five or ten times. Permits taking of voltage readings at outlet under load. Can be used for current measurements of permanently wired equipment. Capacity 10 Amps. With pouch. **Price:$7.85.**



EFFECTIVELY "SPLITS" DOUBLE CONDUCTOR LINE CORDS FOR QUICK READING AT OUTLET.



PERMITS LINE VOLTAGE MEASUREMENT AT OUTLET UNDER ACTUAL LOAD CONDITIONS.

AMPROBE® PHASE SEQUENCE ADAPTOR



When used in conjunction with any AMPROBE snap-around model (or other voltmeter with appropriate AC range), the model PSA-1 Phase Sequence Adaptor permits you to determine phase sequence of electrical equipment using three phase lines up to 50 volts. With Case. **Price: $15.85.**

AMPROBE® VOLTAGE MULTIPLIER LEAD

High voltage multiplier lead permits readings up to 750 volts AC on all RS models with 0-150 volt scale. Cat. No. VL-750. **Price: $3.95.**

AMPROBE® STAT-CLEAN

Anti-static cleaning kit for cleaning window on AMPROBE recorders and clamp-on instruments. Static charge can build up on an instrument affecting accuracy. The SCK-100 Cleaning Kit reduces or eliminates static charge. **Price: $1.50.**

AMPROBE® CARRYING CASES

AMPROBE cases are sturdy, light weight, compact and are designed for easy access to the instruments and accessories they hold. Any AMPROBE case can be ordered separately. Shown are cases for RS instruments, Juniors, VOLTPROBE, and TM-63 Test Master Kit. There is a handy carrying case for every AMPROBE instrument.



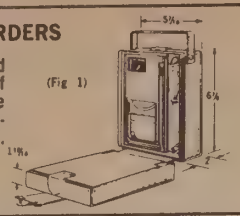
AMPROBE INSTRUMENT® SERVICE & INDUSTRIAL RECORDERS

DIVISION OF SOS CONSOLIDATED INC

PORTABLE-CASED RECORDERS

Supplied with permanently attached motor line cord and one roll each of necessary strip charts. Meter line cord, extensions, adaptors, transducers, etc. supplied when indicated.

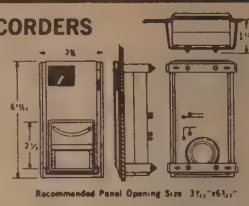
(Fig. 1)



FLUSH-MOUNTING RECORDERS

Supplied with one roll each of necessary strip charts and mounting hardware. Transducers, probes, etc. supplied when indicated. Motor leads not furnished.

(Fig. 2)



Recommended Panel Opening Size 3⅞"x6⅛"

*Indicates the availability of this model in flush-mount version. Ranges and Specifications same as Portable cased models. See fig. 2 for configuration First prefix letter "L" of model number indicates Portable Cased. Prefix letter "F" indicates Flush-Mounting.

Model No.	Description	Range	Price
AC VOLTMETERS			
LAV2X*	Dual Range, Expanded Scale AC Voltmeter.	95-130 Volts AC 190-260 Volts AC	$109.85
LAV3X*	Three Range, Expanded Scale AC Voltmeter.	95-130 Volts AC 190-260 Volts AC 380-520 Volts AC	130.85
LAV4X*	Dual Range, Expanded Scale 220 volt, 50 cycles only	165-245 Volts AC 330-490 Volts AC	114.85
LAV8600*	Three Range, AC Voltmeter. 1380Ω/V	0-150/300/600 Volts AC	114.85
AC AMMETERS			
LAA81*	With A-70FL Transducer	0-10/50/250/500 Amps AC	$120.85
LAA82*	With A-60FL Transducer	0-5/25/100/250 Amps AC	115.85
LAA1500*	With A-50FL Transducer	0-800/1500 Amps AC	149.85
LAA830*	For use with external current transformer 2VA (Not supplied).	0-5 Amps AC Scale: 0-150/300/600	113.85
LAA840*		0-5 Amps AC Scale: 0-200/400/800	113.85
LAA850*		0-5 Amps AC Scale: 0-100/250/500	113.85
AC VOLT/AMMETERS			
LAVA81*	With A-70FL Transducer	Volts: 95-130; 190-260 Amps: 0-10/50/250/500	$164.85
LAVA82*	With A-60FL Transducer	Volts: 95-130; 190-260 Amps: 0-5/25/100/250	159.85
LAVA83*	With A-70FL Transducer	Volts: 95-130; 190-260; 380-520 Amps: 0-10/50/250/500	180.85
LAVA84*	With A-60FL Transducer	Volts: 95-130; 190-260; 380-520 Amps: 0-5/25/100/250	175.85
LAVA85*	With A-75FL Transducer 220 volt, 50 cycles only	Volts: 165-245/330-490 Amps: 0-10/50/250/500	165.85
LAVA86*	With A-65FL Transducer 220 volt, 50 cycles only	Volts: 165-245/330-490 Amps: 0-5/25/100/250	160.85
LAVA87	With A70FL Transducer	Volts: 0-150/300/600 Amps: 0-10/50/250/500	168.85
TEMPERATURE RECORDERS			
LT8100*	Dual Range with FL-RBT-1 Probe	−50° to +100°F +50° to +250°F	$125.85
LT8101*	Dual Range with FL-RBT-1 Probe	−45 to + 40°C +10 to +120°C	125.85
LT8650	Incremental Recorder	50°F Span Probes Not Included	148.85
RBT-5	Probe for LT8650	−50° to 0°F	20.50
RBT-6	Probe for LT8650	0° to +50°F	20.50
RBT-7	Probe for LT8650	+50° to +100°F	20.50
RBT-8	Probe for LT8650	+100° to +150°F	20.50
RBT-9	Probe for LT8650	+150° to +200°F	20.50
RBT-10	Probe for LT8650	+200° to +250°F	20.50
DC MICROAMMETERS			
LDC850*	(Tautband Movement). Resistance: 900Ω	0-50ua DC	$109.85
LDC8100*	DC Microammeter. Resistance: 550Ω	0-100ua DC	101.85
LDC8500*	DC Microammeter. Resistance: 45Ω	0-500ua DC	95.85
DC MILLIAMMETERS			
LDB81*	Resistance: 25Ω	0-1 ma DC	95.85
DC AMMETERS For use with 50 mv shunts. Furnished with calibrated (0.065Ω) five foot leads.			
LDM830*	DC Millivoltmeter. Resistance: 940Ω	0-50 mv DC Scale 0-30 Amps DC	101.85
LDM840*		0-50 mv DC Scale: 0-40 Amps DC	101.85
LDM850*		0-50 mv DC Scale: 0-50 Amps DC	101.85
PYROMETERS Not supplied with Thermocouples.			
LP8400*	Three Range Pyrometer. (External Resistance: 3.50Ω) Uses Iron-Constantan Type J Thermocouples.	0° to 400°F 0° to 800°F 0° to 1200°F	159.85
LP8601*	(External Resistance: Adjustable up to 10.5 Ohms approx.) Uses Iron-Constantan Type J Thermocouples	0-600°F	159.85
LP81001*	(External Resistance: Adjustable up to 25 Ohms approx.) Uses Iron-Constantan Type J Thermocouples.	0° to 1000°F 0° to 530°C	159.85
LP82001*	(External Resistance: Adjustable up to 40 Ohms approx.) Uses Chromel Alumel Type K Thermocouples.	0° to 2000°F 0° to 1080°C	159.85

Model No.	Description	Range	Price
EVENTS RECORDERS Designed to monitor and document from one to 10 separate operations.			
LEV10*	Events Recorder, 10 channel operation.		130.85
LDL10	DIRECT-O-LOG® Recorder. Features 10 self-clearing channel selector buttons with lights.		185.85
DC VOLTMETERS			
LDV8600*	Three Range DC Voltmeter 0-150/300/600 Volts DC 20,000Ω/v		114.85

AMPROBE® RECORDER STRIP CHARTS

Individually packaged 30' chart rolls packed six (6) to a box. Sold in multiples of six (6) only.
Price $1.95 per roll except where indicated *$1.70.

Type	Cat. No.	Description	For Use with Model No.
Voltage	835X3A*	Marked: 95-130/190-260/380-520 Volts AC	LAV2X, FAV2X, LAV3X, FAV3X, LAVA81, FAVA81, FAVA82, LAVA82, FAVA83, LAVA83, FAVA84, LAVA84
	830AV600*	Marked: 0-150/300/600 Volts AC	LAV8600, FAV8600, LAVA87
	840X2	Marked: 165-245/330-490 Volts AC	LAV4X, FAV4X, LAVA85, FAVA85, LAVA86, FAVA86
Current	850A*	Marked: 0-5/25/100/250 Amps AC	LAA81, FAA81, LAA82, FAA82, LAVA81, FAVA81, FAVA82, LAVA82, LAVA83, FAVA83, LAVA84, FAVA84, LAVA85, FAVA85, LAVA86, FAVA86, LAVA87
	800AA*	0-800 Amps AC	LAA1500, FAA1500
	1500AA*	0-1500 Amps AC	LAA1500, FAA1500
	830AA	30 Division for AC Amperes. Marked: 0-150/300/600/1200	LAA830, FAA830
	840AA	40 Division for AC Amperes. Marked: 0-200/400/800	LAA840, FAA840
	850AA	50 Division for AC Amperes. Marked: 0-100/250/500	LAA850, FAA850
DC Variable	850D	50 Division for DC variables, (Millivolts, Milliamperes, Microamps), Marked: 0-1/5/25; 25-0-25	LDM850, FDM850, LDC850, FDC850, LDC8100, FDC8100, LDC8500, FDC8500, LDB81, FDB81
	840D	40 Division for DC variables. (Millivolts, Milliamperes, Microamps). Marked: 0-20/40/80; 20-0-20	LDM840, FDM840
	830D	30 Division for DC variables. (Millivolts, Milliamperes, Microamps). Marked: 0-15/30/60; 15-0-15	LDM830, FDM830 LDV8600, FDV8600
Pyrometer	601F	Marked: 0°F to 600°F	LP-8601, FP-8601
	840F	Marked: 0°F to 400°F; 0°F to 800°F; 0°F to 1200°F	LP8400, FP8400
	850P1&2	Marked: 0°F to 1000°F 0°F to 2000°F	LP81000, FP81000, LP82000, FP82000 LP81001, FP81001 LP82001, FP82001
	856C1	Marked: 0 to 530°C	LP81000, FP81000 LP81001, FP81001
	857C2	Marked: 0 to 1080°C	LP82000, FP82000 LP82001, FP82001
Temperature	823T1*	Marked: −50°F to +100°F	LT8100, FT8100
	833T2*	Marked: +50°F to +250°F	LT8100, FT8100
	828T3	Marked: −45 to + 40°C	LT8101, FT8101
	822T4	Marked: +10 to +120°C	LT8101, FT8101
	850T6*	Marked: −50° to 0°F 0° to +50°F +50° to +100°F +100° to +150°F +150° to +200°F +200° to +250°F	LT8650
Events	EV10	Marked from 0 to 10	LEV10, FEV10, LDL10

SPECIFICATIONS

Strip Chart Size: 2½" wide x 30' long.

Standard Chart Speeds: 1 inch or 12 inches per hour. (Other speeds available.) Unless otherwise specified 12 inches per hour chart speed will be shipped.

Impression Rate: Once every 5 seconds at 12 inches per hour. Once every 1 minute at 1 inch per hour.

Power Requirements: 115v AC, 60 cycles, 2.5 Watts.

Other frequencies and voltages including 12 volts DC available at extra charge.

Accuracy:
DC Microammeter, Milliammeter and Millivoltmeter: ±2% FS.
AC ⊙ and DC Voltmeters: ± 3% on other than expanded scales.
AC Ammeters: All models EXCEPT LAA/FAA-1500: ±3% on current recorders using transducer furnished,⊙ ±5% if using transducer other than furnished.⊙

LAA/FAA-1500: ±4% using transducer furnished which has the same serial number as the recorder.⊙
Other transducers cannot be used.
Expanded Range AC Voltmeters: ±1.25% FS⊙.
Pyrometers: ±3%FS

Model LT8100:
−50 to + 20°F: ±4°F.
+20 to +100°F: ±3°F.
+50 to +250°F: ±5°F.

Model LT8650: ±1.5°F

Model LT8101:
−45 To — 10°C: ± 2°C
−10 To + 40°C: ±1.5°C
+10 To +120°C: ±2.5°C
⊙ On sinusoidal wave form

Net

© United Technical Publication

Fast, accurate point to point circuit testing

PARAGON PRO-GLO Circuit Testers are simple, inexpensive, easy-to-use instruments for checking non-energized circuits. This little pen-size unit accurately checks for polarity, shorts and opens and continuity in circuits with resistance up to 10 ohms.

The PARAGON PRO-GLO tester consists simply of a plastic case containing two AA penlight batteries and a #222 lamp, a pointed probe and a three-ft. lead wire with alligator. The lead wire holds a new probe protector.



Servicemen and home repairmen appreciate the ease of use of this simple tester. Signal light at point of contact eliminates necessity for shifting eyes to read meter. Speed and accuracy of testing is increased. Low cost of device makes it practical for mass distribution in large service centers. Long operating life is assured — probe and battery contact spring are tin-plated beryllium copper, case is high-impact plastic and wire is heavy-duty, flexible test lead.

Paragon Electric Company, Inc.
Subsidiary of AMF Incorporated

DEALER NET PRICE $1.66

• FOR SERVICE SHOPS • HOME TESTING • GARAGES • HOBBYISTS • FARM USES

Probe-Protector Included



New! Vinyl extrusion Probe - Protector glides easily on the cord—can't be mislaid. Slips over Probe when circuit tester is not being used. This prevents accidental contact with metal that could create a circuit thus minimizing unnecessary battery burn-out.

AMF
PARAGON

It's so easy to order from this catalog . . .

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

Tracks 'em Down Dead or Alive

ONLY THE VERSATILE DESCO* Circuitracer*



MODEL CT1-1
Weighs only 2½ ozs. LIST $5.95

GIVES YOU A 3-IN-1 ELECTRICAL TEST LABORATORY

Satisfaction Unconditionally Guaranteed

DON'T SEND A MAN TO DO A BOY'S JOB!

Are the technicians in your laboratories and shops using expensive meters and instruments for sample continuity and voltage checks? Speed up production through the use of the tool specifically designed for this application. A meter should be used only when the value of voltage, resistance or current must be known. Under any other conditions a Circuitracer will provide the required information faster and easier than expensive, bulky meters.

CIRCUIT TESTING WITH A CIRCUITRACER IS FASTER because the signal light is in the tip at the point of contact. This makes it possible to determine the existence of a circuit or voltage without removing the eyes from the test point to read a meter.

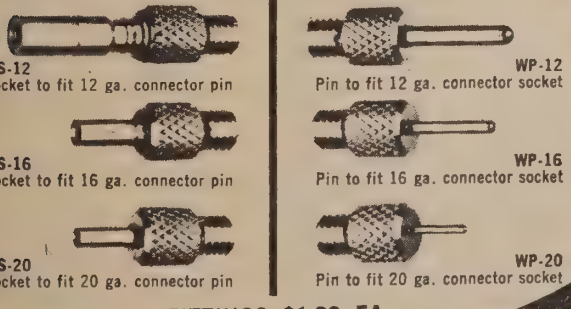
SAVE METER REPAIR MONEY BY USING DESCO CIRCUITRACERS. An overvoltage across a meter usually results in extensive damage which takes the meter out of service until repaired or replaced. The worst that can happen to your Circuitracer is a burned out lamp that can be replaced by the operator in less than a minute. Total cost, ten or fifteen cents for the lamp!

*T.M. Reg.

The CIRCUITRACER is the only electrical tester (other than expensive meters) that can test dead circuits, low voltage live circuits AND high voltage live circuits. It is made of the finest materials available and is designed for long life.

DESCO TEST PROBE ADAPTERS

ORDER DESCO CIRCUITRACER* MODEL CT2-2 OR CT2-1 FOR USE WITH THESE FITTINGS



WS-12 Socket to fit 12 ga. connector pin
WP-12 Pin to fit 12 ga. connector socket
WS-16 Socket to fit 16 ga. connector pin
WP-16 Pin to fit 16 ga. connector socket
WS-20 Socket to fit 20 ga. connector pin
WP-20 Pin to fit 20 ga. connector socket

FITTINGS $1.00 EA.

INSURE CONNECTOR RELIABILITY

Manual probing of harness connectors while circuit testing can damage connectors and impair reliability. Desco Test Probe Adapters were developed to provide a test fitting identical to the pins and sockets in "AN" connectors being tested. They make the same electrical and mechanical contact as the mating connector, and insure against scratching, bending and warping.

The adapters are made in three sizes to fit connectors using #12, #16 and #20 wire gauges. The sockets are gold plated copper with a brass sheath which retains a beryllium copper spring. The pins are stainless steel to insure long life. All are made to rigid MIL-SPECS. The adapters will fit Desco Jumper Wires and the Desco Circuitracer* Tester interchangeably.

THE ULTRA LOW CURRENT Trantracer*

A SAFE, FAST, INEXPENSIVE "GO" – "NO GO" TESTER OF ULTRA LOW CURRENT SENSITIVE CIRCUITS

MODEL TR200 LIST $12.75

The Trantracer* checks continuity by sending less than 50 micro amperes through the circuits to prevent damage to solid state junctions and micro watt sensitive elements. Continuity is established as Go — No Go through circuit resistances of up to 400,000 ohms.

Maximum voltage applied to very high resistance circuits is 2 volts, low resistance circuits normally see millivolts and micro amperes.

*T.M. Reg.

DESCO MFG. CO.



PRECISION

the Recognized Leader . .

ELECTRO-MECHANICAL INSTRUMENT CO., INC.

PRICE LIST

PRICES — Prices listed are net and include all hardware and individual boxin
Resistance approximate. If important request factory engineering confirmatio

DC AMMETERS

Range	Approximate Resist. Ohms	MODEL NF2C Catalog Number	MODEL RF2C Catalog Number	MODEL RF2C Dealer's Net Price	MODEL RF2-¼C Catalog Number	MODEL RF2-¼C Dealer's Net Price	MODEL RF2-¼C For Skin Packing Add Suffix "S" to Catalog No. Dealer's Net Price	MODEL 13 Catalog Number	MODEL 13 Dealer's Net Pr
0-1	.15	2101	2201	$2.55	2301	$3.00	$3.15		
0-3	.032	2101-A	2201-A	2.55	2301-A	3.00	3.15		
0-5	.016	2102	2202	2.55	2302	3.00	3.15		
0-10	.00115	2103	2203	2.55	2303	3.00	3.15	2403	$3.0
0-15	.00115	2103-A	2203-A	2.55	2303-A	3.00	3.15	2403-A	3.0
0-20	.00115	2104	2204	2.55	2304	3.00	3.15		
0-25	.00115	2104-A	2204-A	2.55	2304-A	3.00	3.15		
0-30	.00115	2105	2205	2.55	2305	3.00	3.15	2405	3.0
0-60	.000116	2106-A	2206-A	3.25	2306A	3.50	3.65		
1-0-1	.08	2109	2209	2.55	2309	3.00	3.15		
3-0-3	.00115	2110	2210	2.55	2310	3.00	3.15		
6-0-6	.00115	2111	2211	2.55	2311	3.00	3.15		
10-0-10	.00115	2112	2212	2.55	2312	3.00	3.15		
15-0-15	.00115	2113	2213	2.55	2313	3.00	3.15		
20-0-20	.00115	2114	2214	2.55	2314	3.00	3.15	2414	3.0
30-0-30	.00115	2115	2215	2.55	2315	3.00	3.15	2415	3.0
75-0-75	.000116	2116-A	2216-A	3.70	2316-A	4.10	4.25		

DC MILLIAMMETERS

0-1	850	2120	2220	$4.25	2320	$4.45	$4.60	2420	$4.2
0-3	425	2121	2221	3.40	2321	3.60	3.75		
0-5	925	2125	2225	3.15	2325	3.30	3.45	2425	3.4
0-10	300	2126	2226	3.00	2326	3.15	3.30	2426	3.2
0-20	95	2127	2227	2.65	2327	2.90	3.05	2427	3.0
0-25	65	2127-A	2227-A	2.65	2327-A	2.90	3.05		
0-30	37	2128	2228	2.65	2328	2.90	3.05	2428	3.0
0-50	14.5	2129	2229	2.65	2329	2.90	3.05	2429	3.0
0-100	7.0	2130	2230	2.65	2330	2.90	3.05	2430	3.0
0-150	1.8	2130-A	2230-A	2.65	2330-A	2.90	3.05	2430-A	3.0
0-200	1.5	2130-B	2230-B	2.65	2330-B	2.90	3.05	2430-B	3.0
0-300	.61	2131	2231	2.65	2331	2.90	3.05	2431	3.0
0-500	.21	2132	2232	2.65	2332	2.90	3.05	2432	3.0

DC VOLTMETERS (High Resistance)

0-10	1050	2140	2240	$3.40	2340	$3.75	$3.90		
0-30	2800	2141	2241	3.40	2341	3.75	3.90		
0-50	4000	2142	2242	3.70	2342	4.10	4.25		
0-150	28000	2143	2243	3.80	2343	4.20	4.35		
0-300	55000	2144	2244	3.90	2344	4.35	4.50		

DC VOLTMETERS (Low Resistance)

0-1	33	2134	2234	$2.65	2334	$2.90	$3.05		
0-3	100	2135	2235	2.65	2335	2.90	3.05	2435	$3.0
3-0-3	30	2136	2236	2.65	2336	2.90	3.05		
0-5	140	2136-A	2236-A	2.65	2336-A	2.90	3.05		
0-8	225	2136-B	2236-B	2.65	2336-B	2.90	3.05		
0-10	280	2137	2237	2.65	2337	2.90	3.05	2437	3.0
0-15	450	2137-A	2237-A	2.65	2337-A	2.90	3.05	2437-A	3.0
0-20	600	2137-B	2237-B	2.65	2337-B	2.90	3.05	2437-B	3.0
0-30	1000	2137-C	2237-C	2.65	2337-C	2.90	3.05	2437-C	3.0
0-50	1400	2138	2238	2.65	2338	2.90	3.05	2438	3.0

AC AMMETER

0-1	.365	6101	6201	$3.90	6301	$4.10	$4.25		
0-3	.078	6102	6202	3.90	6302	4.10	4.25		
0-5	.023	6103	6203	3.90	6303	4.10	4.25	6403	$4.2
0-10	.013	6104	6204	3.90	6304	4.10	4.25		

AC MILLIAMMETER

0-25	750	6125	6225	$3.90	6325	$4.10	$4.25		
0-50	175	6126	6226	3.90	6326	4.10	4.25		
0-100	58	6127	6227	3.90	6327	4.10	4.25		
0-250	12	6128	6228	3.90	6328	4.10	4.25		
0-500	1.75	6129	6229	3.90	6329	4.10	4.25	6429	$4.2

AC VOLTMETER

0-5	50	6135	6235	$3.90	6335	$4.10	$4.25		
0-10	175	6136	6236	3.90	6336	4.10	4.25		
0-15	300	6137	6237	3.90	6337	4.10	4.25	6437	$4.2
0-25	920	6137-A	6237-A	3.90	6337-A	4.10	4.25		
0-50	1800	6138	6238	3.90	6338	4.10	4.25		
0-150	9530	6139	6239	4.50	6339	4.85	5.00	6439	4.9
0-300	32000	6140	6240	5.05	6340	5.35	5.50	6440	5.2

Net

© United Technical Publication

METERS

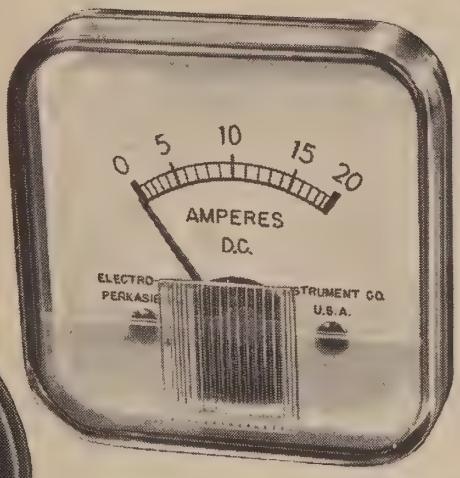
in Precision Products

EMICO

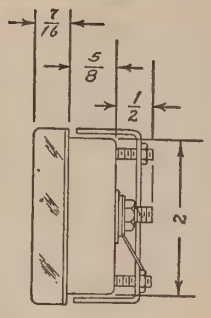
PRECISION-PLUS

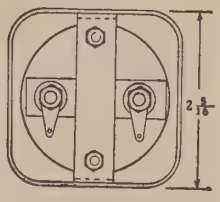


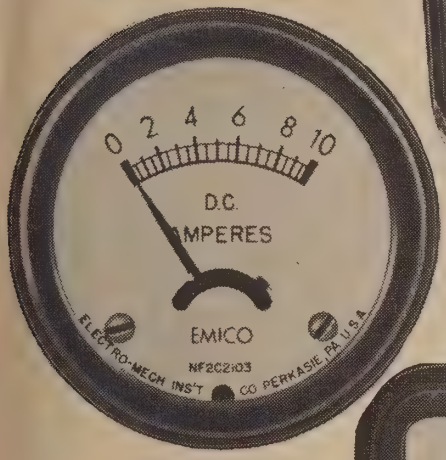
MODEL 13
Edge Reading Type



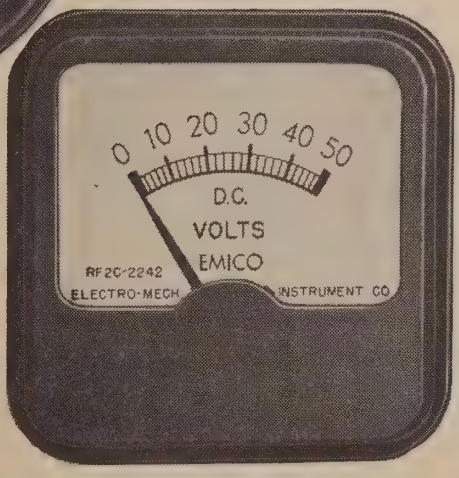
MODEL RF2¼C



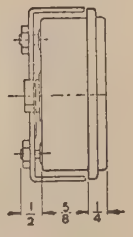


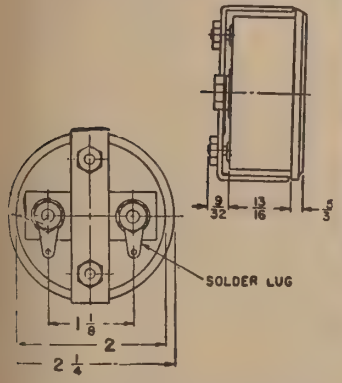


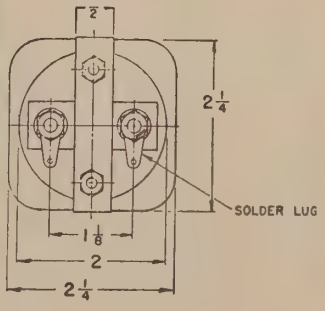
MODEL NF2C



MODEL RF2C







Precision instruments engineered for

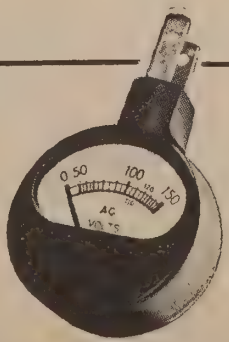
- accuracy
- long life
- economy

ELECTRO-MECHANICAL INSTRUMENT CO., INC.

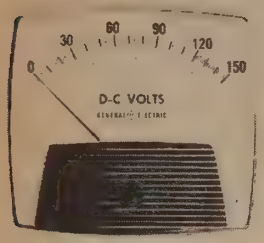
EMICO A.C. Voltage Tester

Accurate, precision mechanism plug-in type with damped meter movement. Convenient 90° swivel prongs for ease of reading from any position.

Dealer's Net $4.55



PANEL METERS



BIG LOOK¶

Handsome, easy-to-read meters in two styles for all panel and control applications. All DC meters have self-shielded movement with pivot and jewel or taut-band suspension. Taut-band designs give great resistance to shock and increased sensitivity. Zener-diode, expanded-scale voltmeters available for improved narrow-range accuracy on 3½" and 4½" sizes. Snap-on, snap-off covers on meters. All types meet ASA Specification C-39.1.

Accuracy: ±2% FS, all DC and AC iron vane; ±3% FS, AC rectifier type (with 60-cycle sine wave at 25° C); ±0.5% of midspan, expanded-scale types. **Overload:** 20% momentary and sustained, voltmeters; 10 times rated current for 10 consecutive intervals of ½-sec. with 1-min. interval between successive applications, momentary; 20% for 8 hours, sustained, ammeters. **Scale:** Pivot and jewel, 90° rotation; taut-band, 100°.

Insulation: 2600 V rms hi-pot for all but 1½" models (1600 V rms). **Response Time:** Meet or exceed ASA requirements: 3 sec. max. for microammeters; 2 sec. max. all other DC ratings; 2.5 sec. max. AC ratings. **Damping:** 40% max. overshoot; 2.5 min. damping factor. **Burden:** 5 amps, 0.5 VA, 0.5 power factor for AC ammeter; unity power factor, AC voltmeter.



HORIZON LINE¶

BIG LOOK PANEL METERS

Accurate, qick reading with wide, border-to-border scales; free from shadows. Most popular meter design with low-profile, easy-to-read sense. Aluminum frame holds reflections to a minimum. Big, bold numerals over cleanly marked divisions for fast reading. Tapered pointers assure high accuracy. Taut-band suspension provided on all models except 1½" size. Standard 2½" and 3½" models come with sealed cases to protect against hair, dust, chemicals or other foreign particles. Shelf-shielded DC mechanisms; snap-on, snap-off covers.

Meter Size	Type	Scale Length: Pivot Jewel	Scale Length: Taut-band	Max. Meter Dimensions, Inches: Face Size H. x W.	Cutout O.D.	Back* Depth	Front* Depth
1½"	188	1.400"	.....	1.750 x 1.750	1.530	1.230	0.375
2½"	152	2.100"	2.300"	2.702 x 2.702	2.195	2.002	0.478
3½"	162	2.900"	3.200"	3.512 x 3.512	2.786	2.002	0.478
4½"	171	3.930"	4.360"	4.408 x 4.846	2.786	1.965	0.573

¶Trade-mark of General Electric Co. *Back-of-panel and front of panel, respectively.

HORIZON LINE PANEL METERS

Distinctive, low profile design for sophisticated styling. Best readabili with swept-back windows to deflect light from line of sight. Both 3½" an 4½" meters may be mounted semi-flush or back-of-panel, recessed wi face silhouetted by half-bezel frame to conserve space and improv readability. DC types have core-magnet d'Arsonval movement with piv and jewel, or taut-band suspensions; self-shielded for use on any pane Zener-diode, expanded-scale voltmeters available. Snap-on, snap-off cove supplied on 4½" size.

G. E. No.1012K11702 Bezel For flush mtg. 2½" size Sugg. Net ea, 1-9 **$1.5**
G. E. No.1012K11700 Bezel For flush mtg. 3½" size Sugg. Net ea, 1-9 **1.7**
G. E. No.1012K11701 Bezel For flush mtg. 4½" size Sugg. Net ea, 1-9 **1.7**

Meter Size and Type	Scale Length: Pivot Jewel	Scale Length: Taut-band	Max. Meter Dimensions, Inches: Face Size H. x W.	Cutout O.D.	Back* Depth	Front Depth
2½" NO. 157	2.013"	2.284"	2.256 x 2.892	2.031	2.048	0.545
3½" NO. 167	2.725"	3.060"	3.006 x 3.756	2.781	1.963	0.740
4½" NO. 178	3.502"	3.800"	3.756 x 4.632	2.781	1.963	0.831

*Back-of-panel and front-of-panel, respectively.

DC VOLTMETERS

ZERO-LEFT, SELF CONTAINED

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Prefix: 50-188 011§	2½" DW-91 Prefix: 50-152 011§	3½" DO-91 Prefix: 50-162 011§	4½" DO-92 Prefix: 50-171 011§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Prefix: 50-157 011§	3½" No. 167 Prefix: 50-167 011§	4½" No. 178 Prefix: 50-178 011§
0-1	50		LALA	$20.88	$20.88	$22.62	$24.36	$20.88	$22.62	$24.36
0-1.5	75†		LCLC	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-3	60		LJLJ	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-5	50		LSLS	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-8	40		MJMJ	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-10	50		MTMT	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-15	75†	1000	NDND	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-30	60	ohms	NLNL	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-50	50	per	NTNT	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-80	40	volt	PDPD	20.88	20.88	22.62	24.36	20.88	22.62	24.36
0-100	50		PKPK	20.88	20.88	22.62	26.10	20.88	22.62	26.10
0-150	75†		PZPZ	20.88	20.88	22.62	26.10	20.88	22.62	26.10
0-200	40		RLRL	20.88	20.88	22.62	26.10	20.88	22.62	26.10
0-250	50		RSRS	20.88	20.88	22.62	26.10	20.88	22.62	26.10
0-300	60		RXRX	22.62	22.62	23.49	26.97	22.62	23.49	26.97
0-500	50		SFSF	.....	.....	24.36	27.84	.....	24.36	27.84
0-600	60		SJSJ	.....	.....	24.36	27.84	.....	24.36	27.84
				50-188 111§	50-152 111§	50-162 111§	50-171 111§	50-157 111§	50-167 111§	50-178 111§
0-500*	50	125	FASF	20.01	20.01	.....	.....	20.01	.....	.....
0-600*	60	125	FASJ	20.01	20.01	.....	.....	20.01	.....	.....
0-750*	75†	125	FASM	20.01	20.01	20.88	23.49	20.01	20.88	23.49

ZERO-CENTER, SELF CONTAINED

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Prefix: 50-188 012§	2½" DW-91 Prefix: 50-152 012§	3½" DO-91 Prefix: 50-162 012§	4½" DO-92 Prefix: 50-171 012§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Prefix: 50-157 012§	3½" No. 167 Prefix: 50-167 012§	4½" No. 178 Prefix: 50-178 012§
5-0-5	50		LSLS	$20.88	$20.88	$22.62	$24.36	$20.88	$22.62	$24.36
10-0-10	40		MTMT	20.88	20.88	22.62	24.36	20.88	22.62	24.36
30-0-30	60	1000	NLNL	20.88	20.88	22.62	24.36	20.88	22.62	24.36
50-0-50	50	ohms	NTNT	20.88	20.88	22.62	24.36	20.88	22.62	24.36
80-0-80	40	per	PDPD	20.88	20.88	22.62	24.36	20.88	22.62	24.36
150-0-150	60	volt	PZPZ	20.88	20.88	22.62	26.10	20.88	22.62	26.10
300-0-300	60		RXRX	22.62	22.62	23.49	26.97	22.62	23.49	26.97
500-0-500	50		SFSF	.....	.....	24.36	27.84	.....	24.36	27.84
600-0-600	60		SJSJ	.....	.....	24.36	27.84	.....	24.36	27.84
				50-188 112§	50-152 112§	50-162 112§	50-171 112§	50-157 112§	50-167 112§	50-178 112§
500-0-500*	50	64	FASF	20.01	20.01	.....	.....	20.01	.....	.....
600-0-600*	60	64	FASJ	20.01	20.01	.....	.....	20.01	.....	.....
750-0-750*	60	64	FASM	20.01	20.01	20.88	23.49	20.01	20.88	23.49

EXPANDED-SCALE, SELF CONTAINED

Zener-diode type. Accuracy ±0.5% of mid-span.

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Not Available	2½" DW-91 Not Available	3½" DO-91 Prefix: 50-162 091§	4½" DO-92 Prefix: 50-171 091§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Not Available	3½" No. 167 Prefix: 50-167 091§	4½" No. 178 Prefix: 50-178 091§
24-30	60	100	NNNN	.....	.....	$60.90	$64.38	.....	$60.90	$64.38
110-130	40	ohms/	PNPN	.....	.....	60.90	64.38	.....	60.90	64.38
220-260	40	volt	RTRT	.....	.....	60.90	64.38	.....	60.90	64.38

*Not self contained, for use with external resistor, not supplied; rated 0-1 mADC (or 1-0-1 mADC, center scale types).
†75 divisions on all 3½" and 4½" meters; 30 divisions on 2½" and 1½".
§When ordering show complete number, prefix plus suffix; example: **50-157 012 LSLS** for 5-0-5 self contained 2½" HORIZON LINE DC voltmeter.

Net
© United Technical Publication

PANEL METERS

DC MICROAMMETERS

ZERO-LEFT, PIVOT AND JEWEL TYPE

Scale μA	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9 1½" DW-90 Prefix: 50-188 111§	2½" DW-91 Prefix: 50-152 111§	3½" DO-91 Prefix: 50-162 111§	4½" DO-92 Prefix: 50-171 111§	HORIZON LINE Suggested Net Each, 1-9 2½" No. 157 Prefix: 50-157 111§	3½" No. 167 Prefix: 50-167 111§	4½" No. 178 Prefix: 50-178 111§
0-20	40	3400	CFCF	$35.67	$35.67	$36.54	.....	$35.67	$36.54	.....
0-50	50	1600	CYCY	27.84	27.84	29.58	$33.06	27.84	29.58	$33.06
0-100	50	1525	DRDR	23.49	23.49	24.36	27.84	23.49	24.36	27.84
0-200	40	690	EAEA	20.88	20.88	22.62	26.10	20.88	22.62	26.10
0-500	50	220	EMEM	20.01	20.01	20.88	23.49	20.01	20.88	23.49

ZERO-LEFT, TAUT-BAND TYPE

Taut-band suspension is also available in other DC ratings; prices on request.

Scale μA	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9 1½" DW-90 Not Available	2½" DW-91 Prefix: 50-156 111§	3½" DO-91 Prefix: 50-166 111§	4½" DO-92 Prefix: 50-173 111§	HORIZON LINE Suggested Net Each, 1-9 2½" No. 157 Prefix: 50-192 111§	3½" No. 167 Prefix: 50-193 111§	4½" No. 178 Prefix: 50-194 111§
0-20	40	3400	CFCF	.....	$39.15	$40.02	$43.50	$39.15	$40.02	$43.50
0-50	50	2600	CYCY	.....	31.32	33.06	36.54	31.32	33.06	36.54
0-100	50	1170	DRDR	.....	26.97	27.84	31.32	26.97	27.84	31.32

ZERO-CENTER, PIVOT AND JEWEL TYPE

Scale μA	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9 1½" DW-90 Prefix: 50-188 112§	2½" DW-91 Prefix: 50-152 112§	3½" DO-91 Prefix: 50-162 112§	4½" DO-92 Prefix: 50-171 112§	HORIZON LINE Suggested Net Each, 1-9 2½" No. 157 Prefix: 50-157 112§	3½" No. 167 Prefix: 50-167 112§	4½" No. 178 Prefix: 50-178 112§
20-0-20	40	3330	CFCF	$31.32	$31.32	$33.06	.....	$31.32	$33.06	.....
50-0-50	50	1525	CYCY	23.49	23.49	24.36	$27.84	23.49	24.36	$27.84
100-0-100	40	690	DRDR	20.88	20.88	22.62	26.10	20.88	22.62	26.10
200-0-200	40	221	EAEA	20.01	20.01	20.88	24.36	20.01	20.88	24.36
500-0-500	50	64	EMEM	20.01	20.01	20.88	23.49	20.01	20.88	23.49

DC MILLIAMMETERS

ZERO-LEFT, PIVOT AND JEWEL TYPE

Scale mA	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9 1½" DW-90 Prefix: 50-188 111§	2½" DW-91 Prefix: 50-152 111§	3½" DO-91 Prefix: 50-162 111§	4½" DO-92 Prefix: 50-171 111§	HORIZON LINE Suggested Net Each, 1-9 2½" No. 157 Prefix: 50-157 111§	3½" No. 167 Prefix: 50-167 111§	4½" No. 178 Prefix: 50-178 111§
0-1	50	64	FAFA	$20.01	$20.01	$20.88	$23.49	$20.01	$20.88	$23.49
0-1.5	75†	64	FDFD	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-3	60	2.5	FNFN	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-5	50	2.5	FXFX	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-10	50	1.8	GZGZ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-20	40	1.5	HFHF	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-25	50	2.0	HJHJ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-30	60	1.67	HMHM	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-50	50	1.00	HYHY	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-80	40	0.62	JJJJ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-100	50	0.50	JRJR	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-150	75†	0.33	JXJX	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-200	40	0.25	KAKA	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-250	50	0.20	KDKD	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-300	60	0.167	KGKG	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-500	50	0.100	KMKM	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-800	40	0.062	KWKW	20.01	20.01	20.88	23.49	20.01	20.88	23.49

ZERO-CENTER, PIVOT AND JEWEL TYPE

Scale mA	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9 1½" DW-90 Prefix: 50-188 112§	2½" DW-91 Prefix: 50-152 112§	3½" DO-91 Prefix: 50-162 112§	4½" DO-92 Prefix: 50-171 112§	HORIZON LINE Suggested Net Each, 1-9 2½" No. 157 Prefix: 50-157 112§	3½" No. 167 Prefix: 50-167 112§	4½" No. 178 Prefix: 50-178 112§
1-0-1	40	64	FAFA	$20.01	$20.01	$20.88	$23.49	$20.01	$20.88	$23.49
3-0-3	60	2.6	FNFN	20.01	20.01	20.88	23.49	20.01	20.88	23.49
5-0-5	50	1.8	FXFX	20.01	20.01	20.88	23.49	20.01	20.88	23.49
10-0-10	40	1.5	GZGZ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
20-0-20	40	1.25	HFHF	20.01	20.01	20.88	23.49	20.01	20.88	23.49
25-0-25	50	1.0	HJHJ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
30-0-30	60	0.83	HMHM	20.01	20.01	20.88	23.49	20.01	20.88	23.49
50-0-50	50	0.50	HYHY	20.01	20.01	20.88	23.49	20.01	20.88	23.49
100-0-100	40	0.25	JRJR	20.01	20.01	20.88	23.49	20.01	20.88	23.49
150-0-150	60	0.167	JXJX	20.01	20.01	20.88	23.49	20.01	20.88	23.49
200-0-200	40	0.125	KAKA	20.01	20.01	20.88	23.49	20.01	20.88	23.49
250-0-250	50	0.100	KDKD	20.01	20.01	20.88	23.49	20.01	20.88	23.49
300-0-300	60	0.083	KGKG	20.01	20.01	20.88	23.49	20.01	20.88	23.49
500-0-500	50	0.050	KMKM	20.01	20.01	20.88	23.49	20.01	20.88	23.49

DC AMMETERS

ZERO-LEFT, SELF-CONTAINED

Scale Amps	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9 1½" DW-90 Prefix: 50-188 111§	2½" DW-91 Prefix: 50-152 111§	3½" DO-91 Prefix: 50-162 111§	4½" DO-92 Prefix: 50-171 111§	HORIZON LINE Suggested Net Each, 1-9 2½" No. 157 Prefix: 50-157 111§	3½" No. 167 Prefix: 50-167 111§	4½" No. 178 Prefix: 50-178 111§
0-1	50	.0500	LALA	$20.01	$20.01	$20.88	$23.49	$20.01	$20.88	$23.49
0-1.5	75†	.0333	LCLC	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-2	40	.0250	LELE	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-3	60	.0167	LJLJ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-5	50	.0100	LSLS	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-10	50	.0050	MTMT	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-15	75†	.0033	NDND	.....	20.01	20.88	23.09	20.01	20.88	23.09
0-20	40	.0025	NGNG	.....	20.01	20.88	23.09	20.01	20.88	23.09
0-30	60	.00167	NLNL	.....	20.01	20.88	23.09	20.01	20.88	23.09
0-50	50	.00100	NTNT	.....	.....	20.88	23.49	.....	20.88	23.49

75 divisions on 3½" and 4½" sizes; 30 divisions on 1½" and 2½" sizes.
When ordering show complete number, prefix plus suffix; example: **50-188 111 LALA** for BIG LOOK 1½" DW-90 zero-left, self-contained DC ammeter with 0-1 scale.
Trade-mark of General Electric Co.

GENERAL ELECTRIC

PANEL METERS

DC AMMETERS (CONT'D)

ZERO-LEFT, SHUNT-RATED

For use with 2-way shunt-lead resistance .065 ohm. Does not include shunt or shunt leads.

Scale Amps	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9				HORIZON LINE Suggested Net Each, 1-9		
				1½" DW-90 Prefix: 50-188 121§	2½" DW-91 Prefix: 50-152 121§	3½" DO-91 Prefix: 50-162 121§	4½" DO-92 Prefix: 50-171 121§	2½" No. 157 Prefix: 50-157 121§	3½" No. 167 Prefix: 50-167 121§	4½" No. 178 Prefix: 50-178 121§
0-20	40		ECNG	$20.01	$20.01	$20.88	.....	$20.01	$20.88	$23.49
0-30	60		ECNL	20.01	20.01	20.88	.....	20.01	20.88	23.49
0-50	50		ECNT	20.01	20.01	20.88	$23.49	20.01	20.88	23.49
0-75	75†		ECPB	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-100	50		ECPK	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-150	75†	50 mV	ECPZ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-200	40	shunt-	ECRL	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-250	50	rated	ECRS	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-300	60	12.5	ECRX	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-400	40	ohms	ECSC	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-500	50		ECSF	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-600	60		ECSJ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-800	40		ECSN	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-1000	50		ECVA	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-1500	75†		ECVC	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-2000	40		ECVE	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-20	40		GBNG	20.01	20.01	20.88	.....	20.01	20.88	23.49
0-40	40		GBNP	20.01	20.01	20.88	.....	20.01	20.88	23.49
0-50	50		GBNT	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-75	75†		GBPB	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-100	50		GBPK	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-150	75†	100 mV	GBPZ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-200	40	shunt-	GBRL	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-250	50	rated	GBRS	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-300	60	25	GBRX	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-400	40	ohms	GBSC	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-500	50		GBSF	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-600	60		GBSJ	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-800	40		GBSN	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-1000	50		GBVA	20.01	20.01	20.88	23.49	20.01	20.88	23.49
0-2000	40		GBVE	20.01	20.01	20.88	23.49	20.01	20.88	23.49

ZERO-CENTER, SELF CONTAINED

Scale Amps	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9				HORIZON LINE Suggested Net Each, 1-9		
				1½" DW-90 Prefix: 50-188 112§	2½" DW-91 Prefix: 50-152 112§	3½" DO-91 Prefix: 50-162 112§	4½" DO-92 Prefix: 50-171 112§	2½" No. 157 Prefix: 50-157 112§	3½" No. 167 Prefix: 50-167 112§	4½" No. 178 Prefix: 50-178 112§
1-0-1	40	.0500	LALA	$20.01	$20.01	$20.88	$23.49	$20.01	$20.88	$23.49
2-0-2	40	.0250	LELE	20.01	20.01	20.88	23.49	20.01	20.88	23.49
5-0-5	50	.010	LSLS	20.01	20.01	20.88	23.49	20.01	20.88	23.49
10-0-10	40	.0050	MTMT	20.01	20.01	20.88	23.49	20.01	20.88	23.49
15-0-15	60	.0033	NDND	.....	20.01	20.88	23.49	20.01	20.88	23.49
20-0-20	40	.0025	NGNG	.....	20.01	20.88	23.49	20.01	20.88	23.49
30-0-30	60	.00167	NLNL	.....	20.01	20.88	23.49	20.01	20.88	23.49
50-0-50	50	.00100	NTNT	.....	.....	20.88	23.49	20.01	20.88	23.49

ZERO-CENTER, 50 mV SHUNT-RATED

For use with 2-way shunt-lead resistance of .065 ohm. Does not include shunt or shunt leads.

Scale Amps	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9				HORIZON LINE Suggested Net Each, 1-9		
				1½" DW-90 Prefix: 50-188 122§	2½" DW-91 Prefix: 50-152 122§	3½" DO-91 Prefix: 50-162 122§	4½" DO-92 Prefix: 50-171 122§	2½" No. 157 Prefix: 50-157 122§	3½" No. 167 Prefix: 50-167 122§	4½" No. 178 Prefix: 50-178 122§
20-0-20	40		ECNG	$20.01	.....	.....	.....	.....	.....	.....
50-0-50	50	25	ECNT	20.01	$20.01	$20.88	$23.49	$20.01	$20.88	$23.49
75-0-75	60	ohms	ECPB	20.01	20.01	20.88	23.49	20.01	20.88	23.49
100-0-100	40		ECPK	20.01	20.01	20.88	23.49	20.01	20.88	23.49
150-0-150	60		ECPZ	20.01	20.01	20.88	23.49	20.01	20.88	23.49

AC VOLTMETERS

SELF CONTAINED, IRON VANE

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9				HORIZON LINE Suggested Net Each, 1-9		
				1½" DW-90 Not Available	2½" AW-91 Prefix: 50-152 031§	3½" AO-91 Prefix: 50-162 031§	4½" AO-92 Prefix: 50-171 031§	2½" No. 157 Prefix: 50-157 031§	3½" No. 167 Prefix: 50-167 031§	4½" No. 178 Prefix: 50-178 031§
0-3	60	11.1	LJLJ	.....	$19.14	$20.01	$23.49	$19.14	$20.01	$23.49
0-5	50‡	29	LSLS	.....	19.14	20.01	23.49	19.14	20.01	23.49
0-10	50	110	MTMT	.....	19.14	20.01	23.49	19.14	20.01	23.49
0-15	75†	251	NDND	.....	19.14	20.01	23.49	19.14	20.01	23.49
0-30	60	779	NLNL	.....	19.14	20.01	23.49	19.14	20.01	23.49
0-50	50	2,500	NTNT	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-150	75†	15,000	PZPZ	.....	20.88	22.62	26.10	20.88	22.62	26.10
0-300	60	70,260	RXRX	.....	23.49	24.36	27.84	23.49	24.36	27.84
0-500	50	117,260	SFSF	.....	.....	30.45	33.93	.....	30.45	33.93
0-600	60	140,000	SJSJ	.....	.....	30.45	33.93	.....	30.45	33.93

SELF CONTAINED, 400 CYCLES

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9				HORIZON LINE Suggested Net Each, 1-9		
				1½" DW-90 Not Available	2½" AW-91 Prefix: 50-152 061§	3½" AO-91 Prefix: 50-162 061§	4½" AO-92 Prefix: 50-171 061§	2½" No. 157 Prefix: 50-157 061§	3½" No. 167 Prefix: 50-167 061§	4½" No. 178 Prefix: 50-178 061§
0-150	75†	15,000	PZPZ	.....	$20.88	$22.62	$26.10	$20.88	$22.62	$26.10
0-300	60	70,260	RXRX	.....	23.49	24.36	27.84	23.49	24.36	27.84

†75 divisions, 3½" and 4½" sizes; 30 divisions, 1½" and 2½" sizes.

‡50 divisions, 3½" and 4½" sizes; 25 divisions, 2½" size.

§**When ordering show complete number, prefix plus suffix**; example: **50-171 031 LJLJ** for 4½" BIG LOOK 0-3 voltmeter.

¶Trade-mark of General Electric Co.

PANEL METERS

AC VOLTMETERS (CONT'D)

TRANSFORMER-RATED, 0-150 VOLTS

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Not Available	2½" AW-91 Prefix: 50-152 031§	3½" AO-91 Prefix: 50-162 031§	4½" AO-92 Prefix: 50-171 031§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Prefix: 50-157 031§	3½" No. 167 Prefix: 50-167 031§	4½" No. 178 Prefix: 50-178 031§
0-600	60	15,000	PZSJ	.....	$20.88	$22.62	$26.10	$20.88	$22.62	$26.10
0-750	75†	15,000	PZSM	.....	20.88	22.62	26.10	20.88	22.62	26.10
0-3000	60	15,000	PZVJ	.....	20.88	22.62	26.10	20.88	22.62	26.10

SELF CONTAINED, RECTIFIER TYPE

Accuracy ±3% (60-cycle sine wave, 25°C).

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Prefix: 50-188 051§	2½" AW-91 Prefix: 50-152 051§	3½" AO-91 Prefix: 50-162 051§	4½" AO-92 Prefix: 50-171 051§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Prefix: 50-157 051§	3½" No. 167 Prefix: 50-167 051§	4½" No. 178 Prefix: 50-178 051§
0-10	50		MTMT	$26.97	$26.97	$27.84	$31.32	$26.97	$27.84	$31.32
0-15	75†		NDND	26.97	26.97	27.84	31.32	26.97	27.84	31.32
0-20	40		NGNG	26.97	26.97	27.84	31.32	26.97	27.84	31.32
0-25	50		NJNJ	26.97	26.97	27.84	31.32	26.97	27.84	31.32
0-30	60	1000	NLNL	26.97	26.97	27.84	31.32	26.97	27.84	31.32
0-50	50	ohms	NTNT	26.97	26.97	27.84	31.32	26.97	27.84	31.32
0-80	40	per	PDPD	26.97	26.97	27.84	31.32	26.97	27.84	31.32
0-100	50	volt	PKPK	27.84	27.84	29.58	33.06	27.84	29.58	33.06
0-150	75†		PZPZ	27.84	27.84	29.58	33.06	27.84	29.58	33.06
0-200	40		RLRL	.....	.....	29.58	33.06	.....	29.58	33.06
0-250	50		RSRS	.....	.....	29.58	33.06	.....	29.58	33.06
0-300	60		RXRX	.....	.....	30.45	33.93	.....	30.45	33.93

Accuracy ±0.5% of mid-span.

EXPANDED SCALE

Scale Volts	Scale Div.	Term. Resis., Ohms	§ Add Suffix	Not Available	Not Available	Prefix: 50-162 071§	Prefix: 50-171 071§	Not Available	Prefix: 50-167 071§	Prefix: 50-178 071§
110-130	40	100	PNPN	.....	.....	$60.90	$64.38	.....	$60.90	$64.38
105-125	40	ohms/V	PTPT	.....	.....	60.90	64.38	.....	60.90	64.38

AC AMMETERS (SELF CONTAINED, 25-400 CYCLES)

Scale Amps	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Not Available	2½" AW-91 Prefix: 50-152 141§	3½" AO-91 Prefix: 50-162 141§	4½" AO-92 Prefix: 50-171 141§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Prefix: 50-157 141§	3½" No. 167 Prefix: 50-167 141§	4½" No. 178 Prefix: 50-178 141§
0-1	50	0.16	LALA	.....	$20.01	$20.83	$20.88	$20.01	$20.88	$24.36
0-3	60	0.015	LJLJ	.....	20.01	20.83	20.88	20.01	20.88	24.36
0-5	50‡	0.007	LSLS	.....	20.01	20.83	20.88	20.01	20.88	24.36
0-8	40	0.003	MJMJ	.....	20.01	20.83	20.88	20.01	20.88	24.36
0-10	50	0.0024	MTMT	.....	20.01	20.83	20.88	20.01	20.88	24.36
0-15	75†	0.0016	NDND	.....	20.01	20.83	20.88	20.01	20.88	24.36
0-20	40	0.001	NGNG	.....	20.88	22.62	26.10■	20.88■	22.62■	26.10■
0-30	60	0.0006	NLNL	.....	20.88	22.62	26.10■	20.88■	22.62■	26.10■
0-50*	50	0.0004	NTNT	.....	.....	24.36	27.84■	.....	24.36■	27.84■
0-80*	.....	0.0004	PDPD	.....	.....	27.84	31.32■	.....	27.84■	31.32■

TRANSFORMER-RATED, 0-5 AMPERES, 25-400 CYCLES

0-10	50		LSM1	.....	$20.01	$20.88	$24.36	$20.01	$20.88	$24.36
0-15	75†		LSND	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-20	40		LSNG	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-30	60		LSNL	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-40	40		LSNP	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-50	50		LSNT	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-75	75†		LSPB	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-80	40		LSPD	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-100	50		LSPK	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-150	75†		LSPZ	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-200	40	0.007	LSRL	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-300	60		LSRX	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-400	40		LSSC	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-500	50		LSSF	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-600	60		LSSJ	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-800	40		LSSN	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-1000	50		LSVA	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-1200	60		LSVB	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-1500	75†		LSVC	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-2000	40		LSVE	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-3000	60		LSVJ	.....	20.01	20.88	24.36	20.01	20.88	24.36

AC MILLIAMMETERS (SELF CONTAINED, 25-400 CYCLES)

0-10 mA	50	2158	GZGZ	.....	$20.01	$20.88	$24.36	$20.01	$20.88	$24.36
0-25 mA	50	341	HJHJ	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-50 mA	50	84	HYHY	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-100 mA	50	21	JRJR	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-200 mA	40	4.1	KAKA	.....	20.01	20.88	24.36	20.01	20.88	24.36
0-500 mA	50	0.7	KMKM	.....	20.01	20.88	24.36	20.01	20.88	24.36

AC MILLIAMMETERS AND MICROAMMETERS (RECTIFIER TYPE)

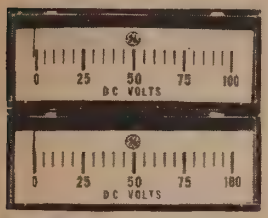
Accuracy ±3% (60-cycle sine wave, 25°C).

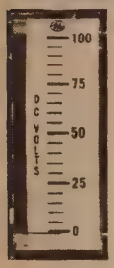
Scale mA	Scale Div.	Term. Resis., Ohms	§ Add Suffix	BIG LOOK Suggested Net Each, 1-9: 1½" DW-90 Prefix: 50-188 151§	2½" AW-91 Prefix: 50-152 151§	3½" AO-91 Prefix: 50-162 151§	4½" AO-92 Prefix: 50-171 151§	HORIZON LINE Suggested Net Each, 1-9: 2½" No. 157 Prefix: 50-157 151§	3½" No. 167 Prefix: 50-167 151§	4½" No. 178 Prefix: 50-178 151§
0-1 mA	50	570	FAFA	$26.10	$26.10	$26.97	$30.45	$26.10	$26.97	$30.45
0-1.5 mA	75†	375	FDFD	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-2 mA	40	325	FGFG	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-3 mA	60	197	FNFN	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-5 mA	50	139	FXFX	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-10 mA	50	90	GZGZ	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-20 mA	40	62	HFHF	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-500 μA	50	985	EMEM	26.10	26.10	26.97	30.45	26.10	26.97	30.45
0-800 μA	40	655	EWEW	26.10	26.10	26.97	30.45	26.10	26.97	30.45

† 75 divisions, except 30 on 1½" and 2½" sizes.
‡ 50 divisions, except 25 on 2½" size.
§ **When ordering show complete number, prefix plus suffix;** example: **50-171 151 EMEM** for μA 4" BIG LOOK AC ammeter.
¶ Trade-mark of General Electric Co.
• Do not have sealed terminal studs.
■ With external magnetic shield assembled to meter base.

GENERAL ELECTRIC

PANEL METERS





NEW 185 SERIES EDGEWISE METERS

Slim, miniature design can be mounted individually or in space-saving clusters. Choice of horizontal or vertical placement. Flush sides assure tight, case-to-case stacking without mechanism bulge. Magnetically shielded to prevent interaction between meters; no need for special calibration. Optional bezel and mounting brackets available for one, two or three-unit stacking. Meet applicable portions of ASA C-39.1. **Accuracy:** ±2% of full scale, DC meters; ±3% with 60-cycle sine wave at 25°C, AC rectifier-type meters. **Overload:** 20% momentary and sustained, voltmeter; 1000% momentary and 20% sustained, ammeter. **Insulation:** 1800 V rms hi-pot. **Scale:** 1.785" long, 53° rotation. **Response Time and Damping:** Meet or exceed ASA requirements. Response time 3 sec. max., μA meters; 2 sec. max., all other DC ratings; 2.5 sec. max., AC ratings. Damping 40% max. overshoot; damping factor, 2.5 minimum. **Size:** 0.92" w. x 2.258" lg. x 3.44" D., overall. Bezel 1.255" w. x 3.005" lg., single; 2.155" w., double; 3.055" w., triple-unit mounting.

DC VOLTMETERS (SELF CONTAINED)

Scale Range	Term. Resis., Ohms	Horizontal Zero-Left* Number	Vertical Zero-Bottom* Number	Sugg. Net Each, 1-9
0-10		50-185 011 MTMT	50-185 013 MTMT	$22.62
0-15		50-185 011 NDND	50-185 013 NDND	22.62
0-30	1000	50-185 011 NLNL	50-185 013 NLNL	22.62
0-50	ohms/	50-185 011 NTNT	50-185 013 NTNT	22.62
0-100	volt	50-185 011 PKPK	50-185 013 PKPK	22.62
0-150		50-185 011 PZPZ	50-185 013 PZPZ	22.62
0-300		50-185 011 RXRX	50-185 013 RXRX	23.49
15-0-15	2000	50-185 012 NDND	50-185 014 NDND	22.62
50-0-50	ohms/	50-185 012 NTNT	50-185 014 NTNT	22.62
150-0-150	volt	50-185 012 PZPZ	50-185 014 PZPZ	23.49

DC VOLTMETERS (FOR EXTERNAL RESISTORS)

Rated 0-1 mA for use with external resistor, not supplied.

0-500	40	50-185 171 FASF	50-185 173 FASF	$20.88
0-600	40	50-185 171 FASJ	50-185 173 FASJ	20.88
0-750	40	50-185-171 FASM	50-185 173 FASM	20.88

DC MICROAMMETERS (SELF CONTAINED)

0-20	2030	50-185 111 CFCF	50-185 113 CFCF	$36.54
0-50	1625	50-185 111 CYCY	50-185 113 CYCY	29.58
0-100	1350	50-185 111 DRDR	50-185 113 DRDR	24.36
0-500	200	50-185 111 EMEM	50-185 113 EMEM	20.88
50-0-50	1350	50-185 112 CYCY	50-185 114 CYCY	24.36
500-0-500	40	50-185 112 EMEM	50-185 114 EMEM	20.88

DC MILLIAMMETERS (SELF CONTAINED)

0-1	40	50-185 111 FAFA	50-185 113 FAFA	$20.88
0-5	2.0	50-185 111 FXFX	50-185 113 FXFX	20.88
0-10	1.0	50-185 111 GZGZ	50-185 113 GZGZ	20.88
0-20	0.5	50-185 111 HFHF	50-185 113 HFHF	20.88
0-50	1.0	50-185 111 HYHY	50-185 113 HYHY	20.88
0-100	0.5	50-185 111 JRJR	50-185 113 JRJR	20.88
0-300	0.167	50-185 111 KGKG	50-185 113 KGKG	20.88
0-500	0.099	50-185 111 KMKM	50-185 113 KMKM	20.88
5-0-5	1.0	50-185 112 FXFX	50-185 114 FXFX	20.88
10-0-10	0.5	50-185 112 GZGZ	50-185 114 GZGZ	20.88
50-0-50	0.5	50-185 112 HYHY	50-185 114 HYHY	20.88
500-0-500	0.049	50-185 112 KMKM	50-185 113 KMKM	20.88

DC AMMETERS (SELF CONTAINED)

0-1	0.049	50-185 111 LALA	50-185 113 LALA	$20.88
0-5	0.0099	50-185 111 LSLS	50-185 113 LSLS	20.88
0-10	0.0049	50-185 111 MTMT	50-185 113 MTMT	20.88
5-0-5	0.0049	50-185 112 LSLS	50-185 114 LSLS	20.88

DC AMMETERS (50 mV SHUNT-RATED)

Shunt not supplied. Calibrated for use with 2-way shunt-lead resistance of 0.065 ohm.

0-20	12.5	50-185 121 ECNG	50-185 123 ECNG	$20.88
0-50	12.5	50-185 121 ECNT	50-185 123 ECNT	20.88
0-300	12.5	50-185 121 ECRX	50-185 123 ECRX	20.88
0-500	12.5	50-185 121 ECSF	50-185 123 ECSF	20.88

AC RECTIFIER TYPE INSTRUMENTS

Self-contained with linear scale. Accuracy, ±3%.

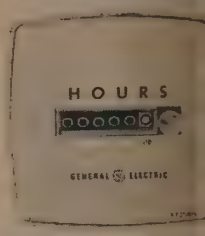
0-10 V		50-185 051 MTMT	50-185 053 MTMT	$27.89
0-15 V		50-185 051 NDND	50-185 053 NDND	27.89
0-30 V	1000	50-185 051 NLNL	50-185 053 NLNL	27.89
0-50 V	ohms/	50-185 051 NTNT	50-185 053 NTNT	27.89
0-100 V	volt	50-185 051 PKPK	50-185 053 PKPK	29.58
0-150 V		50-185 051 PZPZ	50-185 053 PZPZ	29.58
0-50 μA	985	50-185 151 EMEM	50-185 153 EMEM	26.97
0-1 mA	570	50-185 151 FAFA	50-185 153 FAFA	26.97
0-5 mA	139	50-185 151 FXFX	50-185 153 FXFX	26.97
0-10 mA	90	50-185 151 GZGZ	50-185 153 GZGZ	26.97
0-20 mA	62	50-185 151 HFHF	50-185 153 HFHF	26.97

*Zero-center as listed.

¶ Trade-mark of General Electric Co.

TYPE 236 BIG LOOK¶ ELAPSED TIME METERS

Offers distinctive appearance and excellent readability; designed to match ammeters and voltmeters with "Big Look" styling. Models are available for every time-measuring application. Both 2½" and 3½" sizes for panel mounting, plus 2½" size for use with conduit type case or portable stand. All panel mounted timers meet requirements of ASA specification C39.1 for four-stud mounting. Available in reset and non-reset types, measuring either minutes or hours. Types listed are 60 cps operation, for 50 cps, add **$2.49** to price shown. For 208-volt type specify model desired and add **$1.66** to price shown for 240-volt model.



NONRESET TYPE — COMMERCIAL CASE

G.E. Model Number Minutes	G.E. Model Number Hours	Size In.	Voltage VAC	Sugg. N Each, 1
50-236401AAAA1	50-236402AAAA1	2½	120	$25.7
50-236401ABAA1	50-236402ABAA1	2½	240	26.5
50-236401ACAA1	50-236402ACAA1	2½	480	28.2
50-236301AAAA1	50-236302AAAA1	3½	120	25.7
50-236301ABAA1	50-236302ABAA1	3½	240	26.5
50-236301ACAA1	50-236302ACAA1	3½	480	28.2

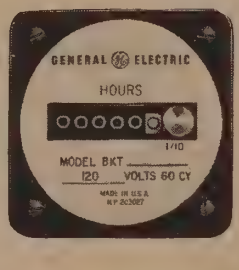
SEALED CASE

50-236421AAAA1	50-236422AAAA1	2½	120	$29.0
50-236421ABAA1	50-236422ABAA1	2½	240	29.8
50-236421ACAA1	50-236422ACAA1	2½	480	31.5
50-236321AAAA1	50-236322AAAA1	3½	120	29.0
50-236321ABAA1	50-236322ABAA1	3½	240	29.8
50-236321ACAA1	50-236322ACAA1	3½	480	31.5

RESET KNOB TYPE — COMMERCIAL CASE

50-236411AAAA1	50-236412AAAA1	2½	120	$34.8
50-236411ABAA1	50-236412ABAA1	2½	240	35.6
50-236411ACAA1	50-236412ACAA1	2½	480	37.3
50-236311AAAA1	50-236312AAAA1	3½	120	34.8
50-236311ABAA1	50-236312ABAA1	3½	240	35.6
50-236311ACAA1	50-236132ACAA1	3½	480	37.3

TYPE KT-11 TIME METERS



Ideal indicator for proper servicing and p ventive maintenance in industry or for in cating component life. Available in 2½" a 3½" sizes, round or square cases, for flu mounting on panel board or in equipm case. Diecast zinc bezel with aluminized d face. Wide temperature operating range w 6-digit register. Extra large counter numbe white on black background for excell readability. Last digit in contrasting color indicate tenths. Bezel and plastic case p vide dust-resistant enclosure for mechanis Available with or without reset knob. M ASA panel mounting specifications. For cps operation. For 50 cps operation, a **$2.49** to price shown.

NON-RESET TYPE — ROUND CASE

G.E. Model Number Minutes	G.E. Model Number Hours	Size In.	Voltage VAC	Sugg. N Each, 1
50-235011AAAA1	50-235012AAAA1	2½	120	$29.0
50-235011ABAA1	50-235012ABAA1	2½	240	29.8
50-235011ACAA1	50-235012ACAA1	2½	480	31.5
50-235091AAAA1	50-235092AAAA1	3½	120	29.0
50-235091ABAA1	50-235092ABAA1	3½	240	29.8
50-235091ACAA1	50-235092ACAA1	3½	480	31.5

SQUARE CASE

50-235051AAAA1	50-235052AAAA1	2½	120	$29.0
50-235051ABAA1	50-235052ABAA1	2½	240	29.8
50-235051ACAA1	50-235052ACAA1	2½	480	31.5
50-235131AAAA1	50-235132AAAA1	3½	120	29.0
50-235131ABAA1	50-235132ABAA1	3½	240	29.8
50-235131ACAA1	50-235132ACAA1	3½	480	31.5

RESET KNOB TYPE — ROUND CASE

50-235021AAAA1	50-235022AAAA1	2½	120	$38.1
50-235021ABAA1	50-125022ABAA1	2½	240	39.0
50-235021ACAA1	50-235022ACAA1	2½	480	40.6
50-235101AAAA1	50-235102AAAA1	3½	120	38.1
50-235101ABAA1	50-235102ABAA1	3½	240	39.0
50-235101ACAA1	50-235102ACAA1	3½	480	40.6

SQUARE CASE

50-235061AAAA1	50-235062AAAA1	2½	120	$38.1
50-235061ABAA1	50-235062ABAA1	2½	240	39.0
50-235061ACAA1	50-235062ACAA1	2½	480	40.6
50-235141AAAA1	50-235142AAAA1	3½	120	38.1
50-235141ABAA1	50-235142ABAA1	3½	240	39.0
50-235141ACAA1	50-235142ACAA1	3½	480	40.6

Net

© United Technical Publication

METER RELAYS

TYPE 195 AND 196 METER RELAYS



TYPE 195

New General Electric Meter Relays feature a **solid-state, light-sensitive switch** for optimum control simplicity and reliability. This switch controls the load relay directly; no amplifiers, no pointer contacts . . . no mechanical interference with meter movement. Pointer travel is unrestricted across the entire scale . . . you get **continuous indication** above and below the setpoints! Control action is dependable and repeatable over entire range!

Unique **piggy-back control modules** on 3½-inch and 4½-inch models, eliminate mounting and wiring of separate components . . . speed up and simplify installation. Control mounts directly on rear of indicator; no soldering, no complicated connections . . . just plug-in and they're mated! Control module may be removed without interrupting measurement circuit.

Other features include **ON-OFF** (automatic reset) **or Alarm** (manual reset) **Control . . . 120-volt A-C Operation!** No special power supply needed . . . **Long Lamp Life!** Conservatively estimated at 5 years . . . **Fail-safe Operation.**



TYPE 196

Rating and Scale	Meter Size 2½-inch*	3½-inch	4½-inch
	Sugg. Net Each, 1-9 (With Single Set-point)†		
D-C VOLTMETERS, ZERO-CENTER For use with external resistors. (Resistors **not** included.)			
500-0-500 Volts	$131.37	.....	.....
600-0-600 Volts	131.37	.....	.....
750-0-750 Volts	131.37	$127.02	$129.63
D-C MICROAMMETERS, ZERO-LEFT			
20 ua	$144.42	.....	.....
50 ua	140.07	$134.85	.....
100 ua	134.85	130.50	$133.98
200 ua	133.11	127.89	131.37
500 ua	131.37	127.02	129.63
D-C MICROAMMETERS, ZERO-CENTER			
50-0-50 ua	$134.85	$130.50	$133.98
100-0-100 ua	133.11	127.89	131.37
200-0-200 ua	131.37	127.02	129.63
500-0-500 ua	131.37	127.02	129.63
D-C MILLIAMMETERS, ZERO-LEFT			
1 Ma	$131.37	$127.02	$129.63
1.5 Ma	131.37	127.02	129.63
3 Ma	131.37	127.02	129.63
5 Ma	131.37	127.02	129.63
10 Ma	131.37	127.02	129.63
20 Ma	131.37	127.02	129.63
25 Ma	131.37	127.02	129.63
30 Ma	131.37	127.02	129.63
50 Ma	131.37	127.02	129.63
80 Ma	131.37	127.02	129.63
100 Ma	131.37	127.02	129.63
150 Ma	131.37	127.02	129.63
200 Ma	131.37	127.02	129.63
250 Ma	131.37	127.02	129.63
300 Ma	131.37	127.02	129.63
500 Ma	131.37	127.02	129.63
800 Ma	131.37	127.02	129.63
D-C VOLTMETERS, ZERO-LEFT			
1.0 Volts	$133.11	$127.89	$130.50
1.5 Volts	133.11	127.89	130.50
3 Volts	133.11	127.89	130.50
5 Volts	133.11	127.89	130.50
8 Volts	133.11	127.89	130.50
10 Volts	133.11	127.89	130.50
15 Volts	133.11	127.89	130.50
30 Volts	133.11	127.89	130.50
50 Volts	133.11	127.89	130.50
80 Volts	133.11	127.89	130.50
100 Volts	133.11	127.89	131.37
150 Volts	133.11	127.89	131.37
200 Volts	133.11	127.89	131.37
250 Volts	133.11	127.89	131.37
300 Volts	133.98	129.63	133.11
500 Volts	.....	130.50	133.98
600 Volts	.....	130.50	133.98
D-C VOLTMETERS, ZERO-LEFT For use with external resistors. (Resistors **not** included.)			
500 Volts	$131.37	.....	.....
600 Volts	131.37	.....	.....
750 Volts	131.37	$127.02	$129.63
D-C VOLTMETERS, ZERO-CENTER			
5-0-5 Volts	$133.11	$127.89	$130.50
10-0-10 Volts	133.11	127.89	130.50
30-0-30 Volts	133.11	127.89	130.50
50-0-50 Volts	133.11	127.89	130.50
80-0-80 Volts	133.11	127.89	130.50
150-0-150 Volts	133.11	127.89	131.37
300-0-300 Volts	133.98	129.63	133.11
500-0-500 Volts	.....	130.50	133.98
600-0-600 Volts	.....	130.50	133.98

Rating and Scale	Meter Size 2½-inch*	3½-inch	4½-inch
	Sugg. Net Each, 1-9 (With Single Set-point)†		
D-C MILLIAMMETERS, ZERO-CENTER			
1-0-1 Ma	$131.37	$127.02	$129.63
3-0-3 Ma	.....	.....	129.63
5-0-5 Ma	131.37	127.02	129.63
10-0-10 Ma	131.37	127.02	129.63
20-0-20 Ma	131.37	127.02	129.63
25-0-25 Ma	131.37	127.02	129.63
30-0-30 Ma	131.37	127.02	129.63
50-0-50 Ma	131.37	127.02	129.63
100-0-100 Ma	131.37	127.02	129.63
150-0-150 Ma	131.37	127.02	129.63
200-0-200 Ma	131.37	127.02	129.63
250-0-250 Ma	131.37	127.02	129.63
300-0-300 Ma	131.37	127.02	129.63
500-0-500 Ma	131.37	127.02	129.63
D-C AMMETERS, ZERO-LEFT			
1 Amp	$131.37	$127.02	$129.63
1.5 Amp	131.37	127.02	129.63
2 Amp	131.37	127.02	129.63
3 Amp	131.37	127.02	129.63
5 Amp	131.37	127.02	129.63
10 Amp	131.37	127.02	129.63
15 Amp	131.37	127.02	129.63
20 Amp	131.37	127.02	129.63
30 Amp	131.37	127.02	129.63
50 Amp	.....	127.02	129.63
D-C AMMETERS, 50-MV SHUNT-RATED, ZERO-LEFT (Shunt and leads **not** included)			
20 Amp	$131.37	$127.02	.....
30 Amp	131.37	127.02	.....
50 Amp	131.37	127.02	$129.63
75 Amp	131.37	127.02	129.63
100 Amp	131.37	127.02	129.63
150 Amp	131.37	127.02	129.63
200 Amp	131.37	127.02	129.63
250 Amp	131.37	127.02	129.63
300 Amp	131.37	127.02	129.63
400 Amp	131.37	127.02	129.63
500 Amp	131.37	127.02	129.63
600 Amp	131.37	127.02	129.63
800 Amp	131.37	127.02	129.63
1 KA	131.37	127.02	129.63
1.5 KA	131.37	127.02	129.63
2.0 Ka	131.37	127.02	129.63
D-C AMMETERS, 100-MV SHUNT-RATED, ZERO-LEFT (Shunt and leads **not** included)			
20 Amp	$131.37	$127.02	$129.63
40 Amp	131.37	127.02	129.63
50 Amp	131.37	127.02	129.63
75 Amp	131.37	127.02	129.63
100 Amp	131.37	127.02	129.63
150 Amp	131.37	127.02	129.63
200 Amp	131.37	127.02	129.63
250 Amp	131.37	127.02	129.63
300 Amp	131.37	127.02	129.63
400 Amp	131.37	127.02	129.63
500 Amp	131.37	127.02	129.63
600 Amp	131.37	127.02	129.63
800 Amp	131.37	127.02	129.63
1 Ka	131.37	127.02	129.63
2 Ka	131.37	127.02	129.63
D-C AMMETERS, ZERO-CENTER			
1-0-1 Amp	$131.37	$127.02	$129.63
2-0-2 Amp	131.37	127.02	129.63
5-0-5 Amp	131.37	127.02	129.63
10-0-10 Amp	131.37	127.02	129.63
15-0-15 Amp	131.37	127.02	129.63
20-0-20 Amp	131.37	127.02	129.63
30-0-30 Amp	131.37	127.02	129.63
50-0-50 Amp	.....	127.02	129.63

Rating and Scale	Meter Size 2½-inch*	3½-inch	4½-inch
	Sugg. Net Each, 1-9 (With Single Set-point)†		
D-C AMMETERS, 50-MV SHUNT-RATED, ZERO-CENTER (Shunt & leads **not** included)			
50-0-50 Amp	$131.37	$127.02	$129.63
75-0-75 Amp	131.37	127.02	129.63
100-0-100 Amp	131.37	127.02	129.63
150-0-150 Amp	131.37	127.02	129.63
A-C VOLTMETERS, RECTIFIER-TYPE			
10 Volts	$138.33	$133.98	$137.46
15 Volts	138.33	133.98	137.46
20 Volts	138.33	133.98	137.46
25 Volts	138.33	133.98	137.46
30 Volts	138.33	133.98	137.46
50 Volts	138.33	133.98	137.46
80 Volts	138.33	133.98	137.46
100 Volts	140.07	134.85	138.33
150 Volts	140.07	134.85	138.33
200 Volts	.....	134.85	138.33
250 Volts	.....	136.59	140.07
300 Volts	.....	136.59	140.07
A-C MICROAMMETERS, RECTIFIER-TYPE			
500 ua	$137.46	$133.11	$136.59
800 ua	137.46	133.11	136.59
A-C MILLIAMMETERS, RECTIFIER-TYPE			
1 Ma	$137.46	$133.11	$136.59
1.5 Ma	137.46	133.11	136.59
2 Ma	137.46	133.11	136.59
3 Ma	137.46	133.11	136.59
5 Ma	137.46	133.11	136.59
10 Ma	137.46	133.11	136.59
20 Ma	137.46	133.11	136.59
A-C AMMETERS, RECTIFIER-TYPE (Rectifier-type milliammeter with external 5A/20 ma transformer **included**)			
Combined Rating 5 Amp	$151.38	$147.03	$150.51
TRANSFORMER-RATED AMMETERS (Same as above except scales marked as follows:)			
10 Amp	$151.38	$147.03	$150.51
15 Amp	151.38	147.03	150.51
20 Amp	151.38	147.03	150.51
30 Amp	151.38	147.03	150.51
40 Amp	151.38	147.03	150.51
50 Amp	151.38	147.03	150.51
75 Amp	151.38	147.03	150.51
80 Amp	151.38	147.03	150.51
100 Amp	151.38	147.03	150.51
150 Amp	151.38	147.03	150.51
200 Amp	151.38	147.03	150.51
300 Amp	151.38	147.03	150.51
400 Amp	151.38	147.03	150.51
500 Amp	151.38	147.03	150.51
600 Amp	151.38	147.03	150.51
800 Amp	151.38	147.03	150.51
1 Ka	151.38	147.03	150.51
1.2 Ka	151.38	147.03	150.51
1.5 Ka	151.38	147.03	150.51
2.0 Ka	151.38	147.03	150.51
3.0 Ka	151.38	147.03	150.51

* Two and one-half-inch meter relays are available in Type 195 styling only, and include mounting bracket and six-foot plug-in lead — accessory kit 1012K10G701.

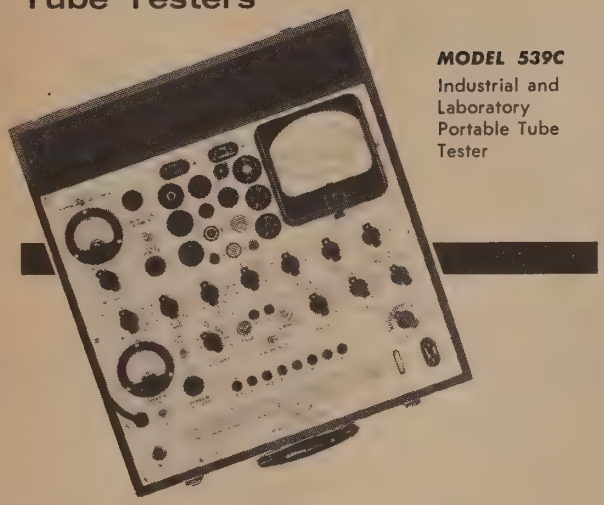
† Prices listed are for meter relays with single set-point For double set-point, add $21.75 to price shown.

GENERAL ELECTRIC

HICKOK SERVICE TEST INSTRUMENTS

- Tube Testers
- Transistor Testers
- Oscilloscopes
- Signal Generators

Tube Testers



MODEL 539C
Industrial and Laboratory Portable Tube Tester

FEATURES:

- Tests complete to handbook specifications.
- Six micromho ranges.
- Complete check of voltage regulator types.
- Four ac signal voltages.
- Dual tube leakage readings, directly on meter or by neon short indicator.
- Provides for plate current and heater current measurement.

SPECIFICATIONS:

TUBE SOCKETS: 4, 5, 6, 7-pin octal, loctal, 7, 9, and 10-pin miniature, 7-pin in-line and 8-pin round sub-miniature, Compactron, Novar, 5 and 7-pin Nuvistor. Socket Savers furnished for 7-pin, 9-pin and octal sockets.

SIX Gm RANGES: 600 to 60,000 μmhos, plus rectifier diode and voltage regulator (VR) ranges.

INTERELEMENT LEAKAGE: to 50 MΩ.

TEST VOLTAGES: Filament: 0-117 V ac (in 20 steps). Signal: 0.25, 0.5, 1.0 or 2.5 V rms. Plate: 66 and 150 V dc. Screen: 56 and 130 V dc. Bias: Fixed, thru terminal arrangement, 0 to −40 V dc, continuously variable; self-bias.

BUILT-IN ROLL CHART: Contains test data for latest industrial and entertainment type tubes. Roll chart subscriptions available.

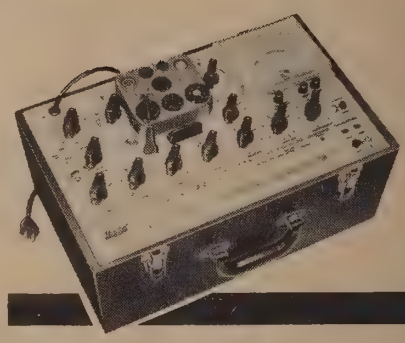
METERS: 1% accuracy; Gm meter with 6 ranges; scales to 200 V for VR and 50 MΩ for leakage testing; ac line voltage meter; dc voltmeter (0-10, 0-50) to adjust negative grid bias.

POWER REQUIREMENTS: 105-125 V, 50-400∼, 40 W.

CASE: Black leatherette, portable, with lead compartment, detachable lid.

DIMENSIONS: 16¾"W, 7½"H, 18⅜"D, 28 lbs.

PRICE: $625.00, with instruction book, leads.



MODEL 6000A
Service Technicians' High Speed Portable Tube Tester

FEATURES:

- Sensitive instantaneous inter-element leakage and shorts test.
- Constant indication of line voltage.
- Filament continuity test.
- Replaceable socket plate for obsolescence protection.

SPECIFICATIONS:

TUBE SOCKETS: Furnished with type RSP-5, 8-socket removable plate to accommodate octal, loctal, 7, 9 and 10-pin miniature, Compactron, Novar, 5 and 7-pin Nuvistors. Worn tube sockets replaceable. Adapters available: Type SA-1 for 7-pin in-line and 8-pin round sub-miniature types. Adapter RSP-4C for 4, 5, 6, 7-pin octal, loctal, and 7 and 9-pin miniature tubes.

Gm RANGES: 0-3,000, 6,000, 15,000 μmhos, read directly on 3-scale meter.

INTER-ELEMENT LEAKAGE: Registers instantly on 5 neon lamps, identifying elements involved. Sensitivity in excess of 3 megohms.

FILAMENT VOLTAGES: 0.6-117 V in 18 steps.

GRID CURRENT (GAS) TEST: Measured in μa of grid current on meter when button is pressed; discloses presence of gas.

FILAMENT CONTINUITY TEST: Open filaments can be discovered immediately after tube is inserted in socket by pressing control button.

TRANSISTOR AND DIODE CHECKS: Provides "Good-Bad" quality test for NPN and PNP transistors and forward conduction efficiency test on semiconductor diodes.

METER: Hickok 5-inch with multi-colored scales.

LINE VOLTAGE INDICATION: Constantly shown.

BUILT-IN ROLL CHART: Contains test data for more than 1,000 tubes. Most frequently used entertainment tube types grouped in separate section of chart. Roll chart subscriptions available.

POWER REQUIREMENTS: 105-125 V, 50-70∼, 40 W.

CASE: Red leatherette, portable, with detachable lid.

DIMENSIONS: 16¾"W, 7½"H, 11¾"D, 16 lbs.

PRICE: $297.50, with instruction book, test leads.

© United Technical Publicatio

HICKOK

Tube Testers



MODEL 752A
Industrial and Communications Portable Tube Tester

FEATURES:
- Dual section tubes tested without set-up change.
- Speed-engineered selector switch layout.
- Simplified Gm scale with multiplier ranges.

SPECIFICATIONS:

TUBE SOCKETS: 4, 5, 6, 7-pin, octal, loctal, 7, 9 and 10-pin miniature, 7-pin in-line and 8-pin round subminiature, acorn, Compactron, Novar, 5 and 7-pin Nuvistor.

Gm RANGES: 0-1500, 3,000, 6,000, 15,000, 30,000 μmhos.

TEST VOLTAGES: Filament: 0-117 V ac (18 steps). Signal: 0.25, 0.5, 1.25, 4.5 V, 60∼ac. Plate: 75′ and 150 V dc. Screen: 56 and 130 V dc. Grid Bias: 0 to −40 V dc, continuously variable. Extra Negative Supply: −40 V dc. Diode Test: 20 V rms. OZ4 Test: 287 V rms.

VR TUBE TEST: To handbook specifications on 2-meter scales; 0-200 V, 0-100 ma.

CATHODE ACTIVITY/LIFE TEST: Switch reduces filament voltage 10% to evaluate cathode condition, estimate future life.

METER: Single Gm Scale. Leakage and VR test scales.

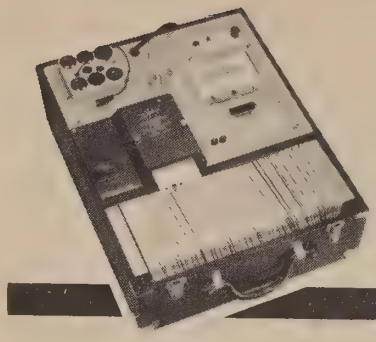
BUILT-IN ROLL CHART: Test data for 1200 tubes.

POWER REQUIREMENTS: 105-125 V, 50-60∼, 40-70 W.

CASE: Black leatherette, portable, built-in lead compartment, detachable lid.

DIMENSIONS: 18⅜″W, 7½″H, 16¾″D, 25 lbs.

PRICE: $475.00, with leads, instruction books.



MODEL 123R
Industrial and Laboratory Model Cardmatic® Automatic Tube Tester

FEATURES:
- Card-programmed testing to handbook standards.
- Custom-programmed cards determine tube performance in special purpose circuits.
- Exclusive "fringe," saturation, cut-off, standard Gm tests.
- Sensitive instantaneous shorts and leakage test.

SPECIFICATIONS:

TUBE SOCKETS: 4, 5, 6, 7-pin octal, loctal, 7 and 9-pin in-line and octal sub-miniature, 5 and 7-pin Nuvistors and Novars. Compactrons, 10-pin, European rimlock tubes need adapter.

Gm RANGES: From 500 to 26,000 μmhos. Accuracy, 3-5%.

CURRENT RANGES: 100 μa to 510 ma full scale.

TEST VOLTAGES: Filament: 0.1 to 119.9 V in 1/10 V steps. Signal: 220 mV rms. Plate: 12 to 160 V, fully regulated, standardized at 50, 100, 150 V. Screen: 12 to 160 V, fully regulated, standardized at 50, 100, 150 V. Grid Bias: 0-124 V, in 7, 110 steps.

POWER REQUIREMENTS: 105-125 V, 50-60∼, 55 W.

CASE: Black leatherette, portable, with detachable lid.

DIMENSIONS: 16½″W, 9¼″H, 19½″D, 49 lbs.

PRICE: $795.00, with 500 calibration cards.

MODEL CA-5
Universal Adapter



SPECIFICATIONS:

SELECTOR SWITCHES: 14 point switches give flexibility for multi-section tubes.

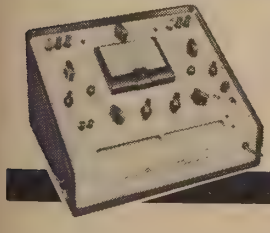
APPLICATION: Older Hickok testers, except Models 510-539A, 540-600.

CASE: Steel, grey crackle baked finish.

DIMENSIONS: 7½″W, 1½″H, 4″D, 1½ lbs.

PRICE: $59.50.

Transistor Testers



MODEL 870
Dynamic Beta Transistor Tester

FEATURES:
- Tests at specified I_c, V_{ce} and I_b.
- Checks Collector Saturation Voltage (V_{ce}-SAT).
- Provides low voltage, high current tests.
- Roll chart with test data for over 1150 transistors.

SPECIFICATIONS:

I CBO MEASUREMENTS: Three ranges: 0-100 μa, 0-1 ma, 0-10 ma, with variable V_{cb} 0-100 V.

BETA RANGES: 0-100, 0-300, extends to 600 by reducing ac test signal to 2½ μa.

BATTERY POWER SUPPLY: Two nicad batteries.

POWER REQUIREMENTS: 115 V, 60∼, 40 W.

CASE: Black leatherette, portable.

DIMENSIONS: 14⅝″W, 7⅞″H, 11¾″D, 15 lbs.

PRICE: $425.00, with test cable, instruction book.



MODEL 890A
Dynamic Beta In-Circuit Transistor Tester

FEATURES:
- Unique impedance neutralizing circuit (patent applied for) measures ac Beta accurately in or out of circuit.
- Measures ac Beta; R_{in} (transistor input resistance); Z Ohms (base-emitter circuit impedance); I_c. Measures ac Beta, I_c and I_{cbo} MEASUREMENT RANGE: 0-50 μa.

SPECIFICATIONS:

BETA RANGES: 0-50, 0-100, 0-200.

COLLECTOR TEST CURRENT: Variable, 0-10 ma.

BATTERY POWER SUPPLY: One 22.5 volt battery. Four 1.5 volt batteries.

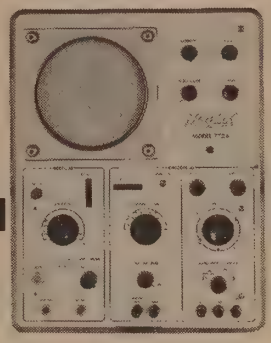
CASE: Steel, portable.

DIMENSIONS: 10¾″W, 6½″H, 9″D, 7¾ lbs.

PRICE: $235.00, with test cable, instruction book.

HICKOK

Oscilloscopes



MODEL 770A
4 MHz General Purpose Oscilloscope

FEATURES:

- 5" CRT.
- 4 MHz dc vertical amplifier has Gaussian roll-off for optimum pulse response.
- Eight-step calibrated vertical attenuator with ranges from 0.01 V to 50 V/div, accurate to within 5%.
- Built-in square wave calibrator accurate to ±3%.
- Time base provides 18 calibrated sweep speeds from 0.2 μsec/div to 1.5 sec/div at ±3% accuracy.
- 5X horizontal sweep magnifier.
- Flat-face, post-accelerated 3.5 KV CRT, illuminated graticule.

SPECIFICATIONS:

POWER REQUIREMENTS: 105-125 V or 220 V, 50/60 cycle, 130 watts.

CASE: Steel, grey crackle finish, portable.

DIMENSIONS: 11"W, 13¾"H, 17½"D, 57 lbs.

PRICE: $375.00, with application and instruction book, test leads (10:1 probe; 10 megohm, 6 pf, input impedance #16970-88 — **$38.00**).



MODEL 677
Wide Band Service Technician's Oscilloscope

FEATURES:

- 5" CRT.
- 5 Hz to 4.5 MHz within 3 dB.
- New 1-2-3 graticule simplifies peak-to-peak measurements.
- Pre-set horizontal and vertical sweep positions.
- Sharp, bright trace with astigmatic correction, facilitates detailed observations of TV sync wave forms, including 3.58 MHz color burst.

SPECIFICATIONS:

POWER REQUIREMENTS: 115 V, 50/60~, 90 W, fused. All critical voltages electronically regulated.

CASE: Steel, grey crackle finish.

DIMENSIONS: 9½"W, 14"H, 18½"D, 26 lbs.

PRICE: $269.50, with application and instruction book, test leads.

Signal Generators



MODEL 288AX
Crystal Controlled, High Output AM-FM Sweep and Marker Generator

FEATURES:

- A complete alignment instrument.
- Built-in decibel meter.
- Crystal-controlled frequency standard.
- 8 bands from 35 KHz-160 MHz.

SPECIFICATIONS:

AMPLITUDE MODULATED RANGES: 35 KHz-110 MHz in 8 bands. Choice of unmodulated 400~ modulation, or external modulation.

FREQUENCY MODULATED RANGES: 35 KHz-100 MHz in 8 bands (0-30 GHz sweep); 1 MHz-160 MHz (0-150 and 0-450 KHz sweep); 1 MHz — Fixed (0-30 KHz sweep); 50 MHz — Fixed (0-150 KHz and 0-450 KHz sweep).

MODULATION: Choice of external or internal modulation on AM and FM ranges. Internal FM sweep width continuously variable to 450 KHz. Choice of 60~ or 400~ sweep rate. Sweep synchronizing voltage brought out to front panel.

CRYSTAL OUTPUT: Choice of 100 KHz or 1000 KHz unmodulated or modulated at 400~. 100 KHz output provides useful harmonics to 15 MHz; 1000 KHz output useful to 125 MHz.

POWER REQUIREMENTS: 110 V, 50-70~, 30 W.

CASE: Steel, grey crackle finish, portable.

DIMENSIONS: 16"W, 13"H, 7"D, 33 lbs.

PRICE: $415.00, with crystals, cable assembly meter lead, instruction book.



MODEL 615
Sweep and Marker Alignment Generator

FEATURES:

- Provides complete TV IF and RF alignment.
- Provides harmonic output on UHF.
- All-electronic sweep with no moving parts.

SPECIFICATIONS:

MARKER FREQUENCY: 2.5-5.5 MHz, 19-50 MHz, 54-108 MHz and 108-216 MHz harmonic.

MARKER AMPLITUDE: 0.25 rms, attenuation to 0.3 μV.

SWEEP FREQUENCY: 0-50 MHz, 50-100 MHz, 175-225 MHz.

SWEEP WIDTH: Variable, 0-15 MHz, linear within 0.1 dB/MHz.

RETRACE BLANKING: Built-in and controllable from front panel, provides zero-reference base line.

EXTERNAL SWEEP PHASING CONTROL: External sweep variable phasing (170°) is controllable from the front panel for use with 'scopes that do not have variable sweep phasing control.

BUILT-IN CRYSTAL: 4.5 MHz crystal provides dual markers for IF or RF alignment and accurate 4.5 MHz signal for inter-carrier sound alignment.

POWER REQUIREMENTS: 110-120 V, 60~, 40 W.

CASE: Steel, grey crackle finish, portable.

DIMENSIONS: 16¼"W, 13¼"H, 8"D, 31 lbs.

PRICE: $479.50, with leads, instruction books.

Net

© United Technical Publicati

HICKOK

Signal Generators



MODEL 860
Combination Signal Tracer, Generator and Power Supply

FEATURES:

- Injects and detects a tracing signal.
- Light loading signal tracer, 240 KC to 1750 KC.
- Low-impedance generator, 240 KC to 1750 KC plus 10.7 MC FM IF.
- Regulated, metered high-current power supply.
- Solid-state design.

SPECIFICATIONS:

SIGNAL GENERATOR: 1000 cycles audio, RF 240 KC to 1750 KC, two overlapping ranges. RF unmodulated or modulated at 1000 cycles. High output, low impedance drive for transistor circuits.

SIGNAL TRACER: Audio, 240 KC — 1750 KC, two overlapping RF ranges; sensitive, light-loading (emitter-follower) pick-up probe, 2 MΩ at 15 pf.

FM OUTPUT: 10.7 MC IF signal, fixed, unmodulated or modulated at 1000 cycles.

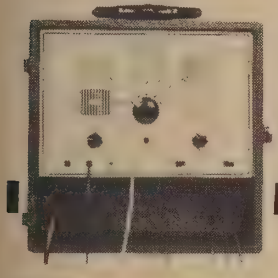
SOLID-STATE

POWER REQUIREMENTS: 105-125 V, 50/60~, 3 W.

CASE: Steel, grey crackle finish, portable.

DIMENSIONS: 11"W. 8½"H, 5½"D, 9½ lbs.

PRICE: $149.50.



MODEL GC660
Dot/Bar/Crosshatch Color Generator

FEATURES:

- Unequalled stability under wide operating and temperature conditions.
- More dots, smaller dots than any other generator, low-flicker crosshatch.

SPECIFICATIONS:

COLOR BARS: Gated 10-bar pattern for all color alignment signals. Gun-killer permits use of picture tube for color alignment. Level variable 0 to 200% to check color sync, ACC, etc.

CHROMA SIGNAL: Crystal-controlled at RF or video, 0-200%, referenced to zero for correct color phase adjustment.

CROSSHATCH: Crosshatch or 18 separate vertical or horizontal bars. "Thin-line" bars, at 60 cycles, for minimum flicker.

DOT PATTERN: 324 dots, 0.1 μsec duration, for maximum convergence accuracy, full-screen coverage.

VIDEO OUTPUT: 2 V p-p with ± polarity. −2 V p-p sync output for Zenith and similar sets.

RF OUTPUT: Front panel tuning to channels 3, 4 or 5, matched to 300Ω load.

SOUND CARRIER: 4.5 MC crystal-controlled sound carrier.

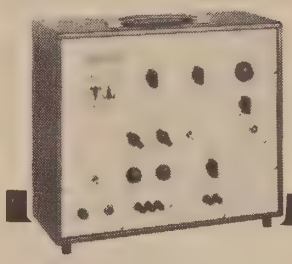
SOLID-STATE

POWER REQUIREMENTS: 105/125 V, 60~, 3 W.

CASE: Black leatherette, portable, removable lid.

DIMENSIONS: 10⅜"W, 10¾"H, 5"D, 6¼ lbs.

PRICE: $179.50.



MODEL 725
FM Multiplex Generator

FEATURES:

- Composite FM multiplex signal to FCC specifications.
- For service and demonstration of FM stereo multiplex receivers and adapters.
- Completely self-contained; needs only oscilloscope or ac voltmeter for complete stereo multiplex alignment.

SPECIFICATIONS:

COMPOSITE OUTPUT: (1) L + R, by self-contained 400 Hz, 1200 Hz oscillators. (2) L − R, by double balanced modulator. Contains sidebands of L − R suppressed 38 KHz subcarrier. (3) 19 KHz Pilot Carrier, for 5% or 10% of composite level, or 10% shifted 45° (for phase check). (4) Additional outputs: 19 KHz CW signal variable 0-0.4 V p-p, or RF carrier 19% modulated with 19 KHz; 38 KHz CW signal variable 0-2 V p-p, or RF carrier modulated 50% with 38 KHz. Separate 19 KHz CW signal at rear for external pilot phase test or signal injection into FM multiplex converter.

EXTERNAL MODULATION: Accepts external signals, e.g. stereo tape player or record player (1 volt p-p min.). Compensated for correct L − R vs L + R delay. Permits on-floor demo of FM stereo sets.

PILOT PHASE CHECK: Assures generator produces accurate composite signal for maximum separation.

SEPARATION: 35 dB or better; distortion less than 2%.

SCA COVERAGE: 67 KHz signal to adjust SCA trap in FM multiplex receivers and adapters.

RF OUTPUT: Tuneable 92-104 MC modulated with Composite Stereo signal. Output variable 2-1000 μV. RF input into Ant. terminals of FM receiver determines bandpass is adequate for FM Multiplex Stereo reception.

POWER REQUIREMENTS: 105-125 V, 50-70~, 75 W.

CASE: Steel, grey crackle finish, portable.

DIMENSIONS: 16¼"W, 13¼"H, 7"D, 23 lbs.

PRICE: $225.00, with instruction book, cables.

ROLL CHART SUBSCRIPTION PLAN

Keep up-to-date on all recently released tubes. New editions of the Hickok Roll Charts are published semi-annually and are mailed automatically to subscribers of the Hickok Roll Chart Subscription Plan. Write for information on the surest way of keeping your test data up-to-date.

HICKOK

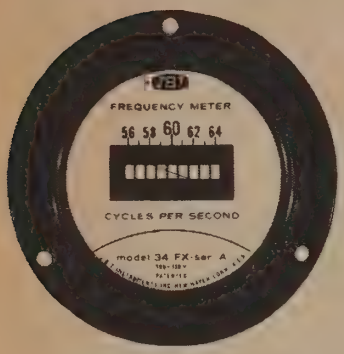
Prices are f.o.b. our plant. Specifications and prices subject to change without notice.

J-B-T®

32nd Year

VIBRATING REED FREQUENCY METERS

J-B-T INSTRUMENTS, INC.



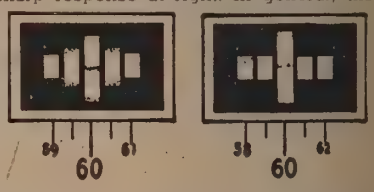
MODEL 34-FX-ser. A, a popular 9 reed meter, shown half actual size.

• **USES, Commercial and Military** — J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, television, and radar service, on engine-generator sets and standby equipment, in laboratories, in many types of aviation and electronic equipment, on panel and control boards, in inspection setups, and in high-cycle power sources — wherever constant or known frequency is important to accurate and efficient operation of equipment. Superior performance for commercial and military applications is assured by more than 30 years of continuous experience and know-how covering the design and complete manufacturing of hundreds of thousands of these instruments in our Connecticut plant. Current production incorporates several innovations covered by recent J-B-T patents.

• **ADVANTAGES** — At reference temperature of 77°F most models have guaranteed accuracy of 0.3% or better of the frequency being measured, but the tables that follow indicate that certain models may be ordered with accuracy of ±0.1%. Accuracy on interrupted DC may be somewhat less. High fatigue strength provides a safety factor for continuous operation. Temperature compensations are not required as frequency change per °F is only .0075%, negative. For example, a 50°F temperature rise causes a 60 cps reed to read only 0.2 cps lower than at reference temperature.

• **OPERATING PRINCIPLE** — The patented, simplified design used in the J-B-T meter operates on AC or interrupted DC. Each reed is adjusted to respond by resonance to the frequency shown on the dial. As the current excites the driving coil, the reed "in tune" with the frequency in the coil will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. To determine frequency, simply read the reed.

• **RESPONSE PATTERNS** — Breadth of actuation differs with the increments of frequency between reeds. For example, at 60 cycles, half-cycle steps give the broad response shown below at left, whereas full cycle steps bring the sharp response at right. In general, the lower the frequency the greater the amplitude, the higher the frequency the less the amplitude. Thus a 25 cycle reed normally will have substantially greater amplitude than a 400 cycle or a 1000 cycle reed.

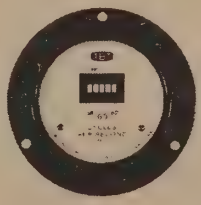


• **STABILITY** — All meters are permanently calibrated at the factory and do not require subsequent adjustment. J-B-T reeds have relatively high Q characteristics, an especially desirable factor in electronic circuits. Wave form or external fields do not ordinarily have an adverse effect. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

• **TRUST THE METER** — If a meter plugged in on a 60-cycle AC power line does not indicate exactly 60 cycles, trust the meter. Power supply may momentarily be off-frequency due to changing load conditions. All J-B-T Frequency Meters are meticulously calibrated at the factory, entirely independent of frequency of power supply. Production and inspection equipment are checked regularly against National Bureau of Standards frequency signals.



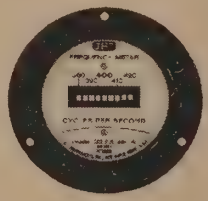
MODEL 21-FX, 5 reeds, matches other 2½" panel instruments.



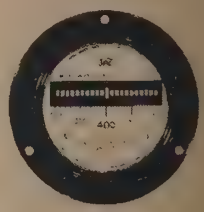
MODEL 31-FX, 5 reeds, standard. For appearance when operating, see "RESPONSE PATTERNS," above.



MODEL 30-FX, 5 reeds in each of two frequency ranges.



MODEL 33-FX-ser. A, 9 reeds for measuring frequency of high-cycle power sources.



MODEL 36-FX-21, 21 reeds for close reading over 380-420 cycle band Shown operating at 400 cy.

3½" and 2½" ROUND MOLDED CASE REED METERS

Model	Range, cps (Hz)	No. of Reeds	CPS Between Reeds	Standard Voltage	Ohms Per Volt‡	Power Consumed Watts‡	Accuracy # ± %	Case	Drawing No.	Table of Dimens.	Price Net, Each
*30-FX	48-52 & 58-62	10	1	100-130	140	0.9	0.3	3½"	SK-154	Line 5	$32.00
30-FX-18	46-54 & 56-64	18	1	100-130	180	0.7	0.3	3½"	SK-154	Line 5	52.30
*31-FX	58-62**	5	1	100-130	120	1.0	0.3	3½"	SK-50	Line 5	27.40
*31-FX-7	57-63	7	1	100-130	140	0.9	0.3	3½"	SK-154	Line 5	30.00
*33-FX	380-420	9	5	100-130	130	0.7	0.3	3½"	SK-156	Line 5	39.50
33-FX-11	360-440***	11	***	100-130	130	0.7	0.3	3½"	SK-156	Line 5	41.90
*34-FX	56-64	9	1	100-130	140	0.9	0.3	3½"	SK-154	Line 5	31.60
*34-FX-Z	58-62	9	½	100-130	140	0.9	0.2	3½"	SK-154	Line 5	33.60
34-FX-11	55-65	11	1	100-130	140	0.9	0.3	3½"	SK-154	Line 5	34.25
34-FX-Z-11	57.5-62.5	11	½	100-130	140	0.9	0.2	3½"	SK-154	Line 5	37.25
34-FX-21	45-65	21	1	100-130	180	0.7	0.3	3½"	SK-154	Line 5	44.60
36-FX-21	380-420	21	2	28	40	0.4	0.3†	3½"	SK-156	Line 5	49.25
*36-FX-21-115	380-420	21	2	100-130	130	0.7	0.3†	3½"	SK-156	Line 5	49.60
21-FX	58-62**	5	1	100-130	525	0.25	0.3	2½"	MD-20	Line 2	26.25
21-FX	116-124	5	2	100-130	525	0.7	0.3	2½"	MD-20	Line 2	29.30
23-FX	380-420	5	10	100-130	175	0.52	0.3	2½"	MD-20	Line 2	31.90
23-FX-54	390-410	5	5	100-130	175	0.52	0.3	2½"	MD-20	Line 2	31.90

†Accuracy of 0.1% at reference temperature available at necessarily higher cost. Quotation on request.
*Most popular models — normally stocked.
**Also available 48-52 or 59-63, but furnished 58-62 unless otherwise specified.
***360-370-380-390-395-400-405-410-420-430-440
‡Approximate values; reflect minor changes based on most recent design.
#At reference temperature, see paragraph "ADVANTAGES."

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

VIBRATING REED FREQUENCY METERS

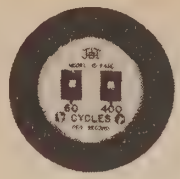
J-B-T INSTRUMENTS, INC.

J-B-T 32nd Year

SEALED FREQUENCY METERS

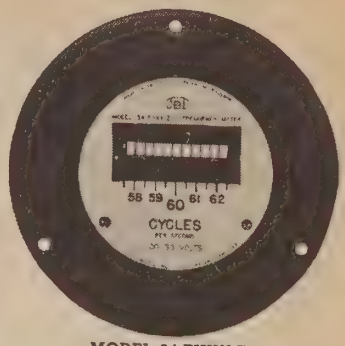
FHXX TYPE Sealed meters, glass-to-metal construction, with solder terminals and detachable flange, supersede the former FHX sealed meters. While JAN-I-6, MIL-M-6B, and MIL-M-10304B (Type MR36) do not refer specifically to frequency indicators, the FHXX series uses the front mounting dimensions of these specifications, and meets or exceeds the sealing requirements, and for 3½" meters, electrical requirements, including 3000 volt breakdown. (1½" and 2½" meters meet 1000 volt breakdown.‡‡) Electrical characteristics and accuracy are the same as for corresponding F models without the HXX designation. Sampling procedure includes a test in water where the absolute pressure of the air above the water is reduced to 2.5 inches of mercury (approx. 57,000 ft. altitude) and is maintained for one minute. Available in 3½", 2½" and 1½" cases. For dimensions, see Table, Lines 1, 3 and 8. Standard voltage is 100-130.

MODEL 15-FHAC, 1½"; widely used as frequency standard for cathode follower circuit.



MODEL 21-FHXX, 2½"; 5 reeds, cased to match other 2½" panel meters.





MODEL 34-FHXX-Z-11, shown half size. Accuracy, ±0.2%

3½", 2½" AND 1½" SEALED ROUND METAL CASE REED METERS

Model	Range, cps (Hz)	No. of Reeds	CPS Between Reeds	Standard Voltage	Ohms Per Volt‡	Power Consumed, Watts‡	Accuracy # ± %	Case	Drawing No.	Table of Dimens.	Price Net, Each
30-FHXX	48-52 & 58-62	10	1	100-130	140	0.9	0.3	3½"	SK-153	Line 8	$37.80
30-FHXX-14	47-53 & 57-63	14	1	100-130	140	0.9	0.3	3½"	SK-153	Line 8	42.50
*31-FHXX	58-62	5	1	100-130	120	1.0	0.3	3½"	SK-51	Line 8	33.50
*31-FHXX-7	57-63	7	1	100-130	140	0.9	0.3	3½"	SK-153	Line 8	36.00
*33-FHXX	380-420	9	5	100-130	130	0.7	0.3	3½"	SK-155	Line 8	45.00
33-FHXX-11-LL	360-440	11**	**	100-130	130	0.7	0.3	3½"	SK-165	Line 8	56.00
*34-FHXX	56-64	9	1	100-130	140	0.9	0.3	3½"	SK-153	Line 8	37.50
34-FHXX-11	55-65	11	1	100-130	140	0.9	0.3	3½"	SK-153	Line 8	39.90
34-FHXX-Z-11	57.5-62.5	11	½	100-130	140	0.9	0.2	3½"	SK-153	Line 8	41.80
36-FHXX-21	380-420	21	2	28	40	0.4	0.3†	3½"	SK-155	Line 8	55.75
*36-FHXX-21-115	380-420	21	2	100-130	130	0.7	0.3†	3½"	SK-155	Line 8	57.10
21-FHXX	58-62	5	1	100-130	525	0.25	0.3	2½"	SK-67	Line 3	38.50
*23-FHXX	380-420	5	10	100-130	125	0.55	0.3	2½"	SK-67	Line 3	43.90
*15-FHAC ‡‡	60 & 400	2	—	8-10	270	0.04	0.5	1½"	SK-39	Line 1	22.50
15-FH-54	390-410	5	5	100-130	115	1.25	0.3	1½"	SK-55	Line 1	28.50
15-FH-56	58-62	5	1	100-130	540	0.25	0.3	1½"	SK-55	Line 1	23.60
*15-FH-400	380-420	5	10	100-130	115	1.25	0.3	1½"	SK-55	Line 1	27.90

‡‡Model 15-FHAC meets 800 volt breakdown.

3¼" ROUND METAL CASE REED METERS (NOT SEALED)

Model	Range, cps (Hz)	No. of Reeds	CPS Between Reeds	Standard Voltage	Ohms Per Volt	Power Consumed, Watts	Accuracy # ± %	Case	Dwg. No.	Table of Dimens.	Price Net, Each
*30-F	48-52 & 58-62	10	1	100-130	140	0.9	0.3	3¼"	MD-40	Line 4	35.25
31-F	58-62	5	1	100-130	115	1.0	0.3	3¼"	MD-40	Line 4	29.25
33-F	380-420	9	5	100-130	130	1.0	0.3	3¼"	MD-40	Line 4	40.75
*34-F	56-64	9	1	100-130	140	0.9	0.3	3¼"	MD-40	Line 4	33.25
34-F-Z	58-62	9	½	100-130	140	0.9	0.2	3¼"	MD-40	Line 4	35.20

*Most popular models — normally stocked.

**360-370-380-390-395-400-405-410-420-430-440

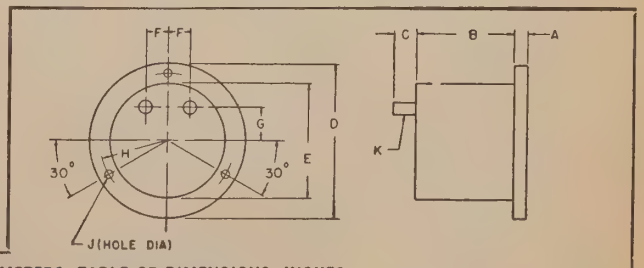
†Accuracy of ±0.1% at reference temperature available at necessarily higher cost. Quotation on request.

‡Approximate values; reflect minor changes based on most recent design.

#At reference temperature, see paragraph "ADVANTAGES."

REVISED DIAL APPEARANCE

Shipments during the life of this catalog may include meters with dials somewhat different from those pictured here. Dials are being steadily modified to use the revised trademark as adopted during J-B-T's Silver Anniversary Year. Many 3½" frequency meters also are carrying the designation Series A after the model number (as in the 34-FX-ser. A on preceding page). Such instruments have additional ruggedness and sensitivity, and unusually uniform amplitude over the entire span of the meter. However Series A are otherwise interchangeable as to mounting dimensions and circuit characteristics with other meters bearing the same model number.



FREQUENCY METERS AND FREQUENCY — TIME METERS, TABLE OF DIMENSIONS, INCHES

	Model	MIL-M-6B* Mounting	A	B	C	D	E	F	G	H	J	K	Terminal Description
Line 1	15-FH Series	—	3/32†	1 5/16	3/8	2 3/32 ‡	1 1/2	3/16	3/8	0.875	0.125		Solder, 1/16" dia. hole
Line 2	21-FX and 23-FX Series	MR24, MR25	13/64	1 3/8	23/32	2 11/16	2 5/32	7/16	9/16	1.220	0.116		10-32 NF-2A studs
Line 3	21-FHXX, 23-FHXX Series	MR26**	3/32†	1 27/32	11/16	2 11/16 ‡	2 1/8	1/2	1/2	1.220	0.125		Solder, 3/32 dia. hole
Line 4	30-F to 34-F Series	—	7/64	2 3/32	25/32	3 1/4	2 5/16	7/16	7/8	1.453	0.150		10-32 NF-2A studs
Line 5	30-FX to 36-FX Series	MR34, MR35	19/64	2	23/32	3 1/2	2 11/16	7/16	7/8	1.580	0.150		10-32 NF-2A studs
Line 6	31-FE Series	—	7/64	3 7/8	23/32	3 1/4	2 5/16	7/16	7/8	1.453	0.150		10-32 NF-2A studs
Line 7	31-FEX-1 Series	MR34, MR35	5/32	3 7/8	23/32	3 1/2	2 5/16	7/16	7/8	1.580	1.150		10-32 NF-2A studs
Line 8	30-FHXX to 36-FHXX Series	MR36**	3/32†	2 1/4	5/8	3 1/2 ‡	2 11/16	1/2	3/4	1.580	0.150		Solder, 3/32 dia. hole

*Also JAN-I-6 and ASA C39.1-1951 Mounting

**Also MIL-M-10304B Mounting

†Not including neoprene cushioning gasket supplied with meter, but with detachable flange.

‡Including detachable flange.

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

J-B-T

32nd Year

VIBRATING REED FREQUENCY METERS

J-B-T INSTRUMENTS, INC.

3" SQUARE-CASED FREQUENCY METERS



FS SERIES. Matching other 3" x 3" meters on a panel with square black molded cases, these meters are otherwise the same as the FX Series. For instance, 33-FS is the same as 33-FX except for the case. See Table of Dimensions, Line 10.

33-FS, 380-420 cps, 9 reeds, 3" square molded case **$40.60**

34-FS, 56-64 cps, 9 reeds, 3" square molded case **$32.70**

PORTABLE FREQ. TESTERS



FP SERIES, METAL OR MOLDED CASE. Accuracy of ±0.3% meets the exacting test requirements of aviation, signal, and communication equipment. **M-Types** use anodized gray aluminum case, 6¾" long x 4" wide x 3-9/32" deep. Leads permanently attached. See Print SK-63-10. With pertinent name plate, **33-FP-9M** is known as **TS-328 A/U. L-Types,** sturdy molded case within top grain leather carrying case 6-3/32" x 4¼" x 2¾"; 4' leads with 5" test picks and banana plugs.

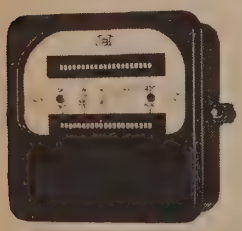
33-FP-9M, (illustrated) 380-420 cy., 9 reeds, 100-130 volts, 130 ohms per volt, 1.0 watts power consumption; coml. quality and packing .. **$54.60**

34-FP-9M, 56-64 cy., 9 reeds, 100-130 volts, 140 ohms per volt, 0.9 watt power consumption, coml. quality and packing **$46.75**

33-FP-9L, 380-420 cy., 9 reeds, 100-130 volts **$52.50**

34-FP-9L, 56-64 cy., 9 reeds, 100-130 volts **$44.90**

42- AND 50-REED 400 CYCLE INDICATORS



MODEL 41-FX-42 and **41-FX-50.** Both are widely used in commercial and military testing especially in aviation-electronic trouble-shooting. Model 41-FX-42 (supersedes Model 41-FX) has two banks of 21 reeds: one for 300-500 cps in 10 cycle steps, and for vernier effect, one for 380-420 cps in 2 cycle steps. Model 41-FX-50 has two banks of 25 reeds giving a continuous coverage from 355-600 cps in 5 cycle steps. Black molded case, flush front is 4-3/64" x 4-3/64" x 2-17/32" deep behind panel over studs. Power consumption is .45 watts at 30 volts, 2.7 watts at 115 volts, and 5.0 watts at 200 volts. For 41-FX-42, see Print MD-38-11; for 41-FX-50, Print SK-79.

41-FX-42, 100-130 volts only **$137.95**

41-FX-42, 3 voltages: 200-240; 115; and 30; 4 studs (without switch) **$154.40**

41-FX-50, 3 voltages: 200-240; 115; and 30; 4 studs (without switch) **$198.50**

RUGGEDIZED AND ILLUMINATED METERS

Model with "RUG" — Sealed vibrating reed frequency meters and sealed elapsed time meters are available, when so ordered, to the intent of MIL-M-10304B, covering ruggedization of other kinds of meters, and usually are specified only for extra-severe shock and vibration.

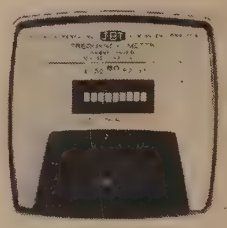
LL Construction — Requirements for lighted meter dials have led to illuminating the 3½" FHXX Series of sealed meters. Light from a source behind the panel is admitted through a sealed window built into the meter case. Inquiries are invited.

400 CYCLES, IN 1 CYCLE STEPS; 800 CYCLES

Among the variations which J-B-T produces on special order, are 21-reed, 390-410 cycles in 3½" case; and 11-reed; 780-820 cycles with 4-cycle increments. Quotations on request.

New

FB SERIES FREQUENCY METERS to Match "Big Look" Panel Meters



SERIES FB METERS. Newest Match Makers, combine the GE "Big Look" case design with the time-tested accuracy of J-B-T vibrating reed frequency meters, at realistic prices. Typical 3½" models for 100-130 volts follow and others are cataloged in Bulletin B-419. Line 11 in Table of Dimensions below gives mounting details. Groupings of 5 to 21 reeds and voltages of 28 to 230 are available on order. For further details: 60 cycle models, Drawing SK-182 (A); 400 cycle, Drawing SK-183 (A).

30-FB, 10 reeds, dual range, 48-52 and 58-62 cps **$34.70**

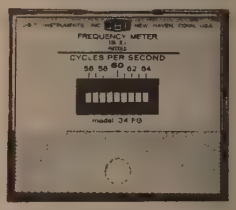
33-FB, 9 reeds, 380-420 cps **41.80**

34-FB, 9 reeds, 56-64 cps **34.30**

New

FG SERIES for Modern Design; Picture Window Frame Optional

FG FREQUENCY METERS. The sparkling clear-plastic front and bright textured metal insert below the dial add zest to any panel. FG meters not only match the 3½" wide x 3" high front of the New EG elapsed time meters on the next page, but are interchangeable as to mounting with Triplett and other brands of panel meters. Standard voltage is 100-130 volts; accuracy and electrical characteristics equal corresponding FX frequency meters in the table on preceding page. For example, Model 30-FG differs from Model 30-FX only in the case. FG mounting details appear in line 9 of the Table of Dimensions below and in Prints SK-160 and SK-164. For picture window mounting diagram, use the half-bezel adapter sketched on the next page. Listed below are typical 3½" FG models and others are cataloged in Bulletin G-109. Groupings of 5 to 21 reeds and voltages of 28 to 230 are available on order. Inquiries are invited on a 2½" FG series.



MODEL 34-FG for standard flush-type mounting (match makers) →



Same model with 13A-234 molded half-bezel

30-FG, 48-52 and 58-62 cps, 10 reeds **$34.10**

33-FG, 380-420 cps, 9 reeds ... **41.20**

34-FG, (illus.) 56-64 cps, 9 reeds **33.90**

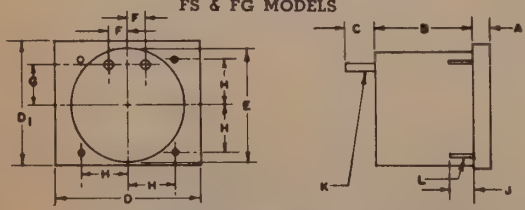
13A-234 Half-bezel adapter, separate black **molded** frame and hardware for picture window appearance on any 3½" FG or EG meter **$2.75**

13A-239 Half-bezel adapter, separate black **metal** frame particularly recommended for all 3½" FG frequency meters and EG elapsed time meters; with hardware **$2.75**

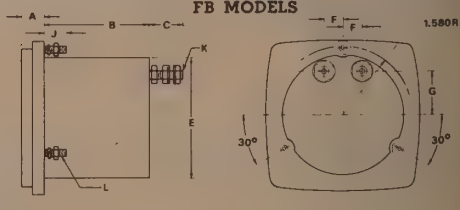
NOTE ON METER VOLTAGE

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made for the purpose of using at two or more voltages, not additional phases.

FS & FG MODELS



FB MODELS



FREQUENCY METERS, TABLE OF DIMENSIONS, INCHES

Model	A	B	C	D	D_1	E	F	G	H	J	K	L
Line 9 **30-FG to 36-FG**	13/32	2 11/32	23/32	3½	3*	2¾	7/16	1	1⅛	7/16*	10-32NF-2A	4-40NC-2A
Line 10 **30-FS to 36-FS**	¼	2 3/64	23/32	3	3	2¾	7/16	⅞	1⅛	7/16	10-32NF-2A	4-40NC-2A
Line 11 **30-FB to 36-FB**	13/32	2 11/32	23/32	3½	—	2¾	7/16	1	—	½	10-32NF-2A	6-32NC-2A

*Centerline of FG meter barrel is 1.558" below top of case and 1.442" above bottom of case.

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

ELAPSED TIME & FREQUENCY TIME METERS

J-B-T INSTRUMENTS, INC.

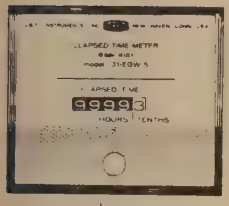
J-B-T

32nd Year

• USES AND ADVANTAGES OF ELAPSED (OR RUNNING) TIME METERS

To record operating time of AC electrical and electronic equipment, these self-starting synchronous instruments normally register in 1/10th hour steps to 9,999.9 or 99,999.9 hours, then automatically reset. They are widely used for tube life, TV equipment, punch presses, conveyors, oil burners, ground support equipment, maintenance schedules, etc. J-B-T engineers recommend the AC type of elapsed time meter for superior accuracy, especially where voltage or ambient temperature vary widely.

New EG SERIES for High Visibility; Modern Picture Window Optional



MODEL 31-EGW-5 for standard flush type mounting.



Same model with 13A-239 metal half-bezel.

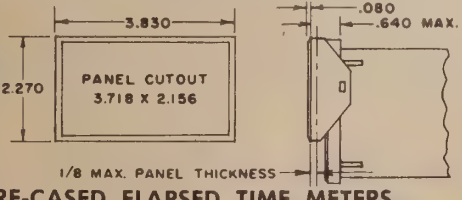
EG ELAPSED TIME METERS. These are designed to give a bright, jewel-like look to panels when used alone, in multiples, or in conjunction with other instruments such as the matching new FG series of frequency meters. A gleaming textured metal shroud below the dial and a clear-plastic case front 3½" wide x 3" high give high visibility to the numeral read out. Dimensions are same as line 9 for FG meters on opposite page. For optional picture window frame effect, on panel area 3.83" wide x 2.27" high, add preferred 13A-239 metal, or 13A-234 molded half-bezel adapter. (See panel cut-out and mounting detail drawing below.) The quiet, sturdy motors and extensively field-tested mechanisms of other J-B-T elapsed time meters are used in the EG series. Two models are catalogued. Other voltages, frequencies, numerals and 2½" EG Series will be quoted.

31-EGW-5, (illus. at top) 5 wide digits, 0-9,999.9 hours, 60 cps, 110-125 volts .. **$22.60**

31-EGW 6 wide digits, 0-99,-999.9 hours, 60 cps, 110-125 volts **$23.10**

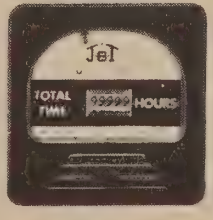
13A-239 and 13A-234 half-bezel adapters, see opposite page.

Panel dimensions for picture window mounting of FG and EG meters.



3" SQUARE-CASED ELAPSED TIME METERS

MODEL 31-ES. The square black molded case matches the appearance of other 3"x3" panel meters including **FS** series of frequency meters described on the preceding page. Unlike line 10 of the table shown there, depth behind panel (b) is 2$^{3}/_{32}$", and terminals are located on horizontal center line, each spaced ½" from center (G). Variations can be made for 99,999 hours (suffix U), 230 volts, matte finish or 50 cycles. Now supplied with tenths in red on white, and units in white on black.



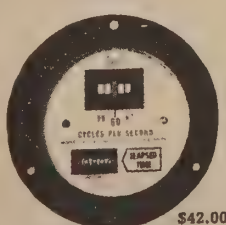
31-ES, 60 cy., 110-125 volts, 0-9,999.9 hours **$19.75**

CLEAR PLASTIC ELAPSED TIME METERS

EPL TYPE. See Print SK-102 (C) for 2½" rectangular Model 21-EPL and SK-108 (C) for 3½" rectangular Model 31-EPL. Both types are made to order. The EG Series above is recommended for new designs.

ELAPSED TIME — FREQUENCY METERS

31-FE SERIES. Conserves panel space and centralizes information by combining elapsed time meter with frequency reeds. A separate exciting coil for the reeds achieves close control of reed amplitude and frequency. Reads 0-9,999.9 hours and 58-62 cy. with 5 reeds, at 100-130 volts; self starting. Tenths, red on white; other numerals, white on black. Black metal case with front mounting per Table of Dimensions, line 6. Power consumption, 4.7 watts. For variations with 7, 9, or 11 reeds, not regularly stocked, such as Model 34-FE, see print SK-45 (D).

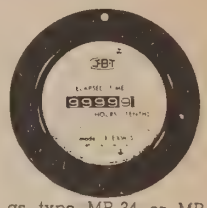


31-FE, 3¼" metal case 4-19/32" deep **$42.00**

31-FEX-1, (per print SK-44 Rev. F—not regularly stocked) like Model 31-FE, except with 3½" metal flange permanently attached for MIL-M-6B front mounting per line 7, Table of Dimensions **$43.75**

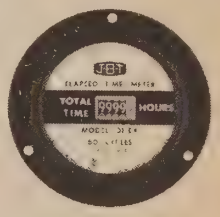
BASIC 3½" ELAPSED TIME METERS

New 5-DIGIT WIDE NUMERAL ELAPSED TIME METERS



MODEL 31-EXW-5. Newest in the J-B-T line of elapsed time meters is Model 31-EXW-5 with 5 wide, easy to read numerals. This model is particularly recommended for **new** equipment because, with superior visibility, rugged construction and attractive price, it is expected to supplant the 31-EX. The meter registers to 9,999.9 hours and automatically resets. Tenths are shown in red on white, units in white on black. Model 31-EXW-5 is interchangeable electrically and mechanically with both 31-EX (below) and 31-EXW shown below. Mounting, which is the same as type MR-34 or MR-35 to MIL-M-6B, also JAN-I-6, and terminal location are per print SK-125 Rev. C.

31-EXW-5, 5 digits, 0-9,999.9 hours, 60 cy., 110-125 volts..... **$18.25**



Model 31-EX. This instrument has been the most widely used of any J-B-T elapsed time meters and continues to be available where parts lists or production runs call for style of numeral and dial appearance, as illustrated. The black molded case, which mounts according to Print SK-80 Rev. E, is interchangeable with the new wide-numeral meters, 5-digit 31-EXW-5 and 6-digit 31-EXW.

31-EX, 5 digits, 0-9,999.9 hours, 60 cy., 110-125 volts **$19.10**

31-EX-200, same except 200-240 volts. (Not regularly stocked) **$20.25**

ELAPSED TIME METERS — Tenths of Minutes

MODEL 31-EXM, 60 cycles, 110-125 volts, reading 0-9,999.9 **minutes;** for short-run applications or readings at closer intervals than 31-EX. Tenths of minutes in red on white, minutes in white on black numerals otherwise identical with 31-EX **$24.15**

6-DIGIT WIDE-NUMERAL ELAPSED TIME METERS



MODEL 31-EXW. One of the most easily-read and most versatile of J-B-T elapsed time meters is Model 31-EXW, illustrated. Easy-to-read, wide numerals register to 99,999.9 hours then automatically reset. Distinctive contemporary dial shows tenths in red on white and units in white on black. This model is interchangeable, electrically and mechanically with Models 31-EXW-5 and 31-EX. The black molded case is also interchangeable with all 3½" FX types of frequency meter. Print SK-125 Rev. E gives mounting information.

31-EXW, 6-digits, 0-99,999.9 hours, 60 cy., 110-125 volts **$19.50**

3½" SEALED ELAPSED TIME METERS — 60 Cycles



MODEL 31-EHXX. Where rugged requirements make a completely sealed elapsed time meter desirable, this glass-to-metal construction with flat glass front and 3½" diameter separable flange, often is specified. Heavy-duty solder terminals are supplied. Every instrument is checked in a vacuum chamber. Overall dimensions and appearances match the FHXX series sealed frequency meters. Maximum voltage between terminals and case, 1,000 volts, R.M.S. The meter registers in 1/10 hour steps to 9,999.9 hours, then automatically resets. Tenths indicator is red on white, all others in white on black. Mount according to SK-85, Rev. C.

31-EHXX, 60 cy., 110-125 volts ... **$25.00**

3½" SEALED ELAPSED TIME METERS — 400 Cycles



MODEL 33-EHXX. This stable, self-starting 400-cycle elapsed time meter is extensively used for preventive maintenance and for reliability testing and checking in a wide variety of equipment. The instrument is entirely enclosed in a 3½" flanged case, glass-to-metal sealed construction with separable flange; heavy-duty solder terminals; flat glass front. 1/10 hours are shown in red on white, all other numerals white on black. The external appearance matches FHXX frequency meter series. For dimensional details see SK-61, Rev. B.

33-EHXX, 400 cy., 0-9,999.9 hours, 1/10 hour steps, 110-125 volts **$80.00**

2½" SEALED ELAPSED TIME METERS

MODEL 21-EHXX. A full size counter reading 9,999.9 hours in 1/10 hour steps and a rugged self-starting synchronous motor are built into this 2½" sealed meter. Its front mounting dimensions are the same as Type MR26 electrical indicating instruments in MIL-M-6B. Glass-to-metal seal makes the instrument completely tamper-proof. Ask for Print SK-68. Rev. G. (2½" 400-cycle meter. **Model 23-EHXX** also is made on special order per Print SK-178.)

21-EHXX, 60 cy., 110-125 volts **$34.00**

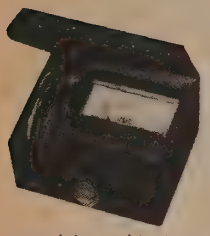
Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

J-B-T
32nd Year

TEMPERATURE TESTERS AND ACCESSORIES

J-B-T INSTRUMENTS, INC.

FOR APPLIANCE SERVICING, QUALITY INSPECTION, AND LABORATORY SET-UPS

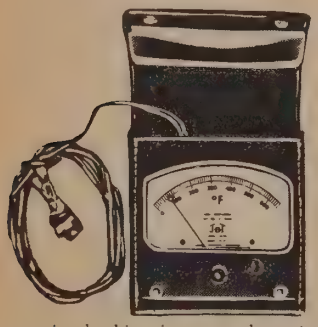


OVEN OR HEAT CHAMBER TESTERS

MODEL 23-JP-1. This new edition of a long-time favorite portable indicating pyrometer saves time and furnishes reliable information in temperature testing. For instance, when servicing and setting thermostats, the 23-JP-1 continuously reads appliance temperatures as they change. The 0-650°F. dial, with 2.48" scale arc has 10° divisions, readable to 3°. The pocket-sized, scuff-resistant, black vinyl carrying case measures 4½"x2⅞"x4¼". Characteristic of more expensive pyrometers, this model is automatically compensated for ambient temperature. Thus, the Tester eliminates calculations, avoids likelihood of serious error, as temperature changes inside the instrument itself, and gives reliable direct readings. Supplied with attached SA-116, 5½' calibrated thermocouple, clip, and convection shield **$33.00**



MODEL 32-JP-3. This time-tested model has an instrument-type carrying case of natural finished mahogany 6⅛" x 3⅞" x 4½" over hardware. The glass-covered indicator shows 0-650°F. range in 10° divisions readable to 2½° on a 2⅜" scale arc. Exceptionally fast, continuous response. Automatic compensation for ambient temperature is a valuable feature whether the tester is used for service work, sales demonstrations, or inspection. Attached SA-116, 5½' thermocouple, clip for affixing to grill and convection shield included **$36.00**



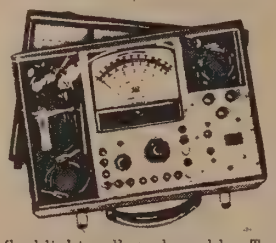
MODEL 32-JP-7. This model is recommended as the most versatile and easiest to read of this J-B-T series. The 0-650°F. scale is more than 4" long. Automatic compensation for ambient temperature is included, so that temperatures are read directly and without calculations. The 32-JP-7 also provides color-coded external binding posts. These permit quick attachment or interchanging of various J-B-T thermocouples placed in one or more of the heat zones to be checked. An SA-116 5½' thermocouple with attachment clip and convection shield is supplied and is left attached when the tester is carried. For maximum usefulness in checking irons, washers, toasters, clothes dryers, etc., use appropriate accessory thermocouples. Tester price includes stitched Ever ready case, 5" wide x 5½" high x 2¾" deep, of sturdy, scuff resistant black vinyl. **$40.00**

IRON TESTER



MODEL 32-JIT. Self-contained bench-type tester; checks all makes of irons; measures thermostat temperatures; shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal base; overall size 10" x 12" x 5½", scale 0-650°F, 15 amp fuse, 6' cord, 110 volt, 50-60 cycles. **$42.50**

MULTI-PURPOSE TESTER



MODEL 61-JRT. A 9-in-1 tester to speed accurate temperature adjustment and electrical analysis of ranges, refrigerators, test apparatus, etc. Rapidly reads four cold zones —100°F, +80°F, up to 14' distant; two heat zones 0-600°F. up to 5½' distant; one voltage range 0-300 AC; and, with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case, 15½" x 10-3/16" x 4¾". Two color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flashlight cell replaceable. Temperature accuracy ±2% of full scale; rectified AC readings ±5%. Accessories as listed may be added for testing appliances. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, electrical leads, and AS-TR-2 built-in transformer. **$142.00**

MODEL 61-JRT (LESS TRANSFORMER). Same unit, same scales except no reading in amperes; AS-TR-2 transformer omitted. **$126.00**

AS-TR-2 Transformers for use with Model 61-JRT to provide readings of two current ranges: 0-30 and 0-60 amp. AC **$19.00**

HEAT INDICATORS



MODEL 32-JG PYROMETER IN SN-10 STAND. Mounted in sloping front black unbreakable molded stand, 4¼"h. x 4¼"d. x 3⅞"w., with 5-way binding posts. Automatically compensated for ambient temperature. Medium resistance system, damped for quick reading on 3.16" scale, assures ruggedness and pointer stability. For ±2% accuracy, use only the type and resistance of thermocouple provided; if extra length — coil it — to maintain calibration. For convenience, an extra thermocouple and lead are suggested.

MODEL 32-JG IN SN-10 STAND (Supersedes SN-3 and SN-7 Stands)§
0°-650°F.-350°C, includes SA-91, SA-84, and CB-1 ..... **$39.00**
0°-1200°F-650°C. includes SA-87, SA-82, and CB-1 ..... **$39.00**
0°-2000°F-1100°C, includes SA-87, SA-82, and CB-1 ..... **$39.00**

MODEL 32-JG IN SN-11 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations. 0°-650°F including SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible leads and thermocouple **$43.00**

§For certain applications, metal stand, SN-7 with Model 32-J pyrometer is preferred; quotation on request.

TEMPERATURE TESTER ACCESSORIES

Model No.	Range F°	CONDUCTORS Length	Wire Gage Size	Positive	Negative	Typically Used With	Construction	Price
LEAD WIRES†								
SA-82	194°	6'	14 Ga. Stranded	Red-Copper	Yellow-Const.	32-J in SN-7; 32-JG in SN-10; 60-JP; 60-JPS 70-J	Compensating Lead for use with chromel-alumel thermocouples; flexible duplex with moisture and flameproof outer braid.	$3.30
SA-83	194°	26'	14 Ga. Stranded	Red-Copper	Yellow-Const.			10.50
SA-84	392°	6'	14 Ga. Stranded	White-Iron*	Red-Const.	32-J in SN-7; 32-JG in SN-10 or SN-11; 70-J	Extension lead for use with iron-constantan thermocouples; flexible duplex with moisture and flame-proof outer braid.	3.30
SA-85	392°	26'	14 Ga. Stranded	White-Iron*	Red-Const.			6.00
THERMOCOUPLES†								
AS-TH-1	0-1200	30"	20 Ga. Solid	Iron-Black*	Const.-Yellow	31-JPP; 31-JPP-C	Welded inside seamless steel tube ¼" O.D. for immersion in molten metal.	On Appl.
IT-1	0-650	—	—	—	—	32-JP-7; 61-JRT	Accessory Iron Tester, same as 32-JIT except there is no meter.	20.00
SA-86	0-650	7'	20 Solid	Iron-Black*	Const.-Yellow	32-JG in SN-11; 60-JP; 60-JPS	General purpose combination thermocouple and lead.	2.50
SA-87	0-1200, 0-2000	12"	14 Solid	Chromel	Alumel	32-J in SN-7; 32-JG in SN-10; 60-JP; 60-JPS	For high temperatures, insulated and protected with 2-hole ceramic beads; fits 3/16" hole.	3.75
SA-88	0-1200, 0-2000	24"	14 Solid	Chromel	Alumel			4.75
SA-91	0-650, 0-1200	12"	14 Solid	Iron-Black*	Const.-Yellow	32-J in SN-7; 32-JG in SN-10; 70-J	For intermediate temperatures, insulated and protected with 2-hole ceramic beads; fits 3/16" hole.	3.50
SA-92	0-650, 0-1200	24"	14 Solid	Iron-Black*	Const.-Yellow			4.25
SA-113	0-650	35'	20 Ga. Solid	Iron-Black*	Const.-Yellow	Former Model 32-J	Disc-type junction for attachment flush to surface.	6.75
SA-114	0-650	35'	20 Ga. Solid	Iron-Black*	Const.-Yellow	Former Model 32-J	Needle-type junction for soft material or crevices.	6.50
SA-115	0-650	35'	20 Ga. Solid	Iron-Black*	Const.-Yellow	Former Model 32-J	Ball-type, all-purpose junction.	6.25
SA-116	0-650	5½'	22 Ga. Solid	Iron-Black*	Const.-Yellow	23-JP-1; 32-JP-3; 32-JP-7 60-JRT; 61-JRT	Connection shield & clip for attachment. (asbestos-insulated twisted pair)	5.00 #
SA-175	0-650	5½'	22 Ga. Solid	Iron-Black*	Const.-Yellow		Ball-type tip, for roasters, waffle irons, etc.	2.75
SA-176	0-650	5½'	22 Ga. Solid	Iron-Black*	Const.-Yellow		Disc-type tip, for toasters, etc.	3.50
SA-188	0-650	5½'	22 Ga. Solid	Iron-Black*	Const.-Yellow		Copper tube enclosed tip, for automatic washers, etc.	5.00
SA-199	0-650	5½'	22 Ga. Solid	Iron-Black*	Const.-Yellow		Shield and clip, duplex nonfraying glass braid, for frequent use above 400°F.	6.00 #
SA-300	0-650	5'	22 Ga. Solid	Iron-Black*	Const.-Yellow		Spring type in transite tip with handle, for rapid reading of surfaces.	8.00
SA-304	0-650	25'	20 Ga. Solid	Iron-Black*	Const.-Yellow	32-JD in SN-7	Disc-type junction for attachment flush to surface. (asbestos-insulated twisted pair)	6.00
SA-305	0-650	25'	20 Ga. Solid	Iron-Black*	Const.-Yellow	32-JD in SN-7	Needle-type junction for soft material or crevices.	6.00
SA-306	0-650	25'	20 Ga. Solid	Iron-Black*	Const.-Yellow	32-JD in SN-7	Ball-type, all-purpose junction.	5.75
RESISTANCE BULBS								
SA-142	—100 to +160	14'	Polyethylene Ribbon Lead	No Polarity		60-JRT only	Thin, flat, copper clad bulb 3x1 3/32x1/8"; with polyethylene ribbon lead. Doors of appliances may be closed without damaging it.	7.00
SA-162	—100 to +160	14'				61-JRT		7.00
SA-190**	—100 to +160	8'				Custom		6.85
SA-308	—100 to +160	8'				Custom		6.00
SA-309	—100 to +160	8'				Custom	Thin, fast-responding, plastic-sheathed bulb.	5.00
CONNECTOR BLOCKS								
CB-1	0-2000	1½"lg. x 1⅜"Dia.		As marked	As marked	All ceramic bead type thermocouples	Lava block, includes heavy brass connectors for low contact resistance.	2.25

NOTE: *Iron constantan is RP1080 calibration. **Has plug terminals; all other accessories have spade terminals.
†For best results thermocouples and leads should be as stated on instrument dials. #Price includes two in standard package.

J-B-T INSTRUMENTS, INC. Electrical Instruments, Testers, Switches and Other Components

For other J-B-T Products, see Sec. 5100

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

Net

© United Technical Publications

Kurz-Kasch, Inc. Electronic Test Equipment

New...4 Logic Probe Integrated Circuit Systems Testers



Now... you can check logic levels in virtually any (DTL, RTL, TTL) IC system quickly and accurately. The small shirt pocket size Logic Probes indicate "True", "Zero" and "Infinity" readings precisely through two, color-coded readouts in the probe end or tip.

All units are rugged, solid-state instruments in attractive chrome-finished steel cases. An Input impedance of greater than 150 K ohms at the Logic "1" level prevents excessive loading of the circuit under test. Power is derived from the equipment being tested.

Use Logic Probes for field service, inspection, monitoring, production line checkout, or Engineering lab circuit designing.

LOGIC INSTRUMENTS



LOGIC PROBE MODEL LP-500 FOR 4.75 - 5VDC LOGIC SYSTEMS



SPECIFICATIONS

Probe Power Requirements: 4.75 to 5.5 vdc

Voltage: all logic voltage levels from 4.75 vdc to Vc compatible with DTL, TTL, RTL and similar families

Input Impedance: greater than 150,000 ohms for logic "1" level

Logic Voltage Level Response:
0-1 vdc = logic "0" window (white) readout
1-2.2 vdc = no readout in either window
2.2-Vc = logic "1" window (red) readout
Infinity = no readout in either window (as in the case of a missing pin or unconnected wire)

Size: 5/16" dia., 5¼" long, 26¾" leads with pin terminals .....User Net $39.90

LOGIC PROBE MODEL LP-510 FOR 4.75 - 5VDC LOGIC SYSTEMS OVERLOAD PROTECTED



Model LP-510 features overload protection on input to +50 V DC, or intermittent to −20 V DC. If the probe tip accidentally touches voltages higher than the logic level source it prevents damage to the probe circuits.

SPECIFICATIONS

Probe Power Requirements: 4.75 to 5.5 vdc

Voltage: all logic voltage levels from 4.75 vdc to Vc compatible with DTL, TTL, RTL and similar families

Note: overload input protection—continuous plus 50 vdc, intermittent minus 20 vdc

Input Impedance: greater than 150,000 ohms for logic "1" level

Logic Voltage Level Response:
0.1 vdc = logic "0" readout (white) at tip
1-2.2 vdc = no readout
2.2-Vc = logic "1" readout (red) at tip
Infinity = no readout (as in case of missing pin or unconnected wire)

Size: 5/16" dia., 6" long, 26¾" leads with pin terminals .....User Net $44.95

LOGIC PROBE MODEL LP-520 FOR COMPLETE ADVANCED TESTING OF 4.75 - 5VDC LOGIC



This advanced Model LP-520 offers full logic reading capability, input overload protection, plus high speed pulse detection with separate readout, and power lead reversal protection.

Three color-coded readouts located at the probe tip for fast, easy testing. Pulse readout illuminates to display high speed pulse trains, or single cycle (− or +) going away pulse of less than 50 nanoseconds width. LP-520 is the only test instrument that will perform all necessary IC Logic test functions at an economical price.

SPECIFICATIONS

Probe Power Requirements: 4.75 to 5.5 vdc

Voltage: all logic voltage from 4.75 vdc to Vc compatible with DTL, TTL, RTL and similar families

Note: overload input protection—continuous plus 50 vdc, intermittent minus 20 vdc

Input Impedance: greater than 150,000 ohms for logic "1" level

Logic Voltage Level Response:
0-1 vdc = logic "0" readout (white) at tip
1-2.2 vdc = no readout
2.2-Vc = logic "1" readout (red) at tip
Infinity = no readout at tip (as in the case of missing pin or unconnected wire)

Pulse Detection Response: High-speed pulse trains, or single cycle (negative or positive going pulse, of nominally 50 nanoseconds width)

Size: 5/16" dia., 6" long, 26¾" leads with pin terminals .....Uset Net $69.95

LOGIC PROBE MODEL LP-530 FOR ADVANCED TESTING OF 12 - 15VDC LOGIC



All the features for advanced testing as with Model 510 above but for use with 12 - 15 V DC logic circuits.

SPECIFICATIONS

Probe Power Requirements: 12 to 15 vdc

Voltage: all logic voltage levels in the 12 - 15 vdc range compatible with DTL, TTL, RTL and similar families

Note: overload input protection—continuous +50 vdc, intermittent −20 vdc

Input Impedance: greater than 150,000 ohms for logic "1" level

Logic Voltage Level Response:
0-1.5 vdc = logic "0" readout (white) at tip
1.5-10 vdc = no readout
10-Vc = logic "1" readout (red) at tip
Infinity = no readout (as in case of missing pin or unconnected wire)

Size: 5/16" dia., 6" long, 26¾" leads with pin terminals .....User Net $44.95

LOGIC GENERATOR MODEL LG-580 FOR DIGITAL CIRCUITRY



Model LG-580 is a new shirt pocket size, all solid-state logic (square wave) generator for trouble-shooting, testing, or inspection of digital circuitry. Simply rotating the switch on the end of the probe selects 10 Hz, 100 Hz, 1K Hz, 10K Hz signals or, a single pulse can be generated by pushbutton on the side of the case. Signal injection is made through the metal probe tip to the IC under test. Power is provided by the system under test.

SPECIFICATIONS

Power Requirements: 4.5 to 6.5 vdc (built-in power regulator)

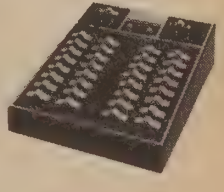
Voltage: all logic systems from 4.75 to Vc compatible with DTL, TTL, RTL and similar families (cannot be damaged by hooking up power leads backwards)

Output: greater than 2.5 volts into 600 ohms (5.5 volt power)

Generator Response: Symmetrical wave output (fast rise times in the nanosecond region) Frequency stability better than 5% over a 4.5 - 6.5 vdc power source variance.
10, 100, 1K, 10K Hz or a single pulse (one shot mode)

Size: 5/16" dia., 6½" long, 26¾" dual leads with pin terminals .....User Net $79.95

INTEGRATED CIRCUIT TESTER MODEL IC-590



A new completely portable, battery powered (power supply optional), economically priced tester for static and dynamic logic levels in ranges of 5 and 15 volt IC families (TTL and DTL). Model IC-590 accommodates all 14 and 16 pin dual in-line devices and adapts to all flat-packs.

Simple operation simulates the operating conditions for both static and dynamic performance. Color coded visual readout for static logic test to each pin position, white readout for logic "0", red for logic true or "1". Built-in clock provides low (2 pps) and high (20K pps) test ratings. Use for servicing, incoming inspection, production, quality control and engineering labs. Ideal for teaching truth table logic relationships.

SPECIFICATIONS

Internal Power Requirements: "C" cell batteries

Voltage: all 5 and 15 volt logic systems.

Logic Level Responses: visual, color-coded readout built-in to unit
Logic "0" readout (white)
Logic "1" readout (red)

Clock Frequency:
low range: 2 pps
high range: 20K pps

5-way binding posts provided to scope monitor input and output simultaneously.

External loads may be applied to IC under test.

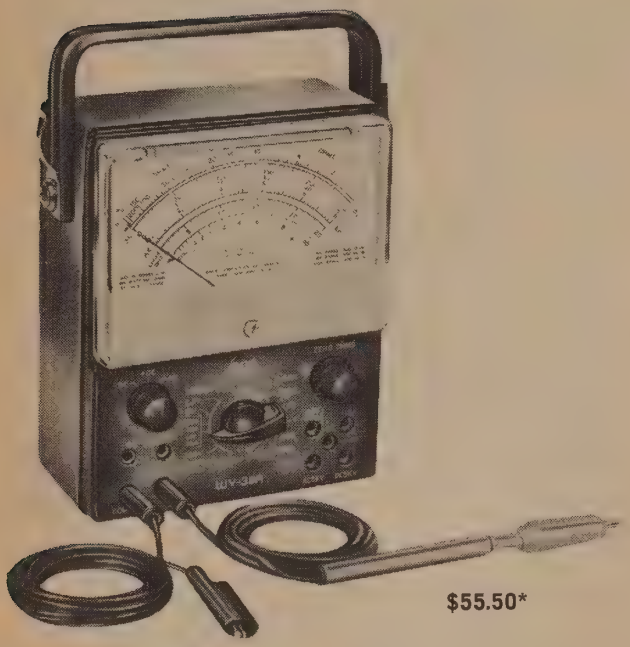
Size: 8" wide, 10" deep .....User Net $169.95

Volt-Ohm-Milliammeter

Type WV-38A

RCA

Test Equipment and Accessories



$55.50*

Features

- **Measures ohms, DC volts, AC volts, direct current, audio signals in dB units**
- **39 total ranges of measurement; easy to read 2-color meter scales**
- **Special 0.25- and 1.0-volt DC ranges**
- **Meter movement protected against burnout**
- **Full-scale accuracy ±3% on DC volts and current; ±5% on AC volts**
- **Fuse protection for ohms divider network**
- **2-color markings on front-panel for simplified operation**
- **Large 5-inch meter with 50 ua sensitivity**
- **Polarity Reversal Switch**
- **20,000 ohms/volt DC input resistance**

Description

The RCA WV-38A Volt-Ohm-Milliammeter is a rugged, accurate, and extremely versatile instrument designed for service calls, industrial applications, and all-around shop and lab use. The extra-low 0.25 and 1.0 volt DC ranges are specially useful for servicing all types of low-voltage circuits. The wide range current scales are of value in adjusting color TV receivers, TV cameras, and power-supply drains. The ohms scale can be used for trouble-shooting all types of circuits and electronic parts. The special dB scales are ideal for high fidelity and broadcast-audio tests.

A convenient function switch is provided with AC, +DC, and —DC positions. The +DC and —DC positions of this switch reverse the polarity of the test leads — a feature that is also helpful in checking the front-to-back resistance ration of electrolytic capacitors and many types of semiconductor device

Two special silicon diodes are used to protect the meter movement against burnout due to accidental overload. A fuse protects the precision multiplier in the ohms network.

The WV-38A is completely portable, requiring no external power source. Five internal batteries (not provided) are used fo the ohms function (4 penlight cells and 1 "D" flashlight cell).

Specifications

DC Voltmeter (at full scale):
- Ranges ..... 0 to .25, 1.0, 2.5, 10, 50, 250, 1000, 5000 V
- Input Resistance ..... 20,000 Ω/V
- Accuracy ..... ±3%

AC Voltmeter (at full scale):
- Ranges ..... 0 to 2.5, 10, 50, 250, 1000, 5000 V
- Input Resistance ..... 5000 Ω/V
- Accuracy ..... ±5%

Frequency response (reference 1000 Hz) flat within 0.5 dB from 10 Hz to 50 kHz on the 2.5, 10, and 50 V ranges.

DC Current (at full scale):
- Ranges ..... 0 to 50 uA, 1 mA, 10 mA, 100 mA, 500 mA, 10 A
- Insertion Loss ..... 0.25 V
- Accuracy ..... ±3%

Ohms:
- Ranges ..... RX 1, RX 100, RX 10,000

±3 of pointer position for exact value

AF Output (at full scale):
- Ranges ..... 0 to 2.5, 10, 50, 250

An internally connected 0.1 μF DC blocking capacitor permits output measurements in presence of DC voltages.

Decibel Levels (Zero dB is 1 mW in 600 Ω) ..... —20 to +50 d

Dimensions

Height 5⅞", Width 5¼", Depth 3⅛", Weight 3½ lbs.

Equipment Supplied

Red test lead and probe, Slip-on Alligator Clip and Red Insula ing Boot, Black Test Lead with Alligator Clip and Black Insula ing Boot, Instruction Book. (Batteries not supplied.)

Accessories Available

WG-297 High Voltage Probe, less resistor, WG-210 900 m Resistor for H.V. Probe (10 x multiplier for 5000 V. range WG-211 495 mΩ Resistor for H.V. Probe (100 x multiplie for 250 V. range), WG-352A RF Diode, WG-270A Vinyl Carryin Case (includes convenient storage compartment for test leads

* Optional User Price

© United Technical Publications

VoltOhmyst®

Type WV-77E

RCA

Test Equipment and Accessories



$63.00*

Features

- **Seven overlapping measurement ranges for:**
  - **Ohms — 0.2 ohm to 1000 megohms**
  - **DC volts — 0.02-volt to 1500-volts**
  - **RMS AC volts — 0.1-volt to 1500-volts**
  - **Peak-to-peak AC volts — 0.2-volt to 4200-volts measured on separate red scales**
- **Zero-center DC volts**
- **Burn-out proof meter circuit**
- **Precision-ohms-measurement network fused against accidental burnout**
- **Separate low-voltage AC scale for accuracy**
- **Color-coded scales, switch settings**
- **Pilot light**

Description

The RCA VoltOhmyst® WV-77E is designed to measure AC rms sine-wave voltages from 0.1 volt to 1500 volts, DC voltages from 0.02 volt to 1500 volts, peak-to-peak voltages from 0.2 volt to 4000 volts, and resistance values from 0.2 ohm to 1000 megohms. The AC voltmeter portion of the WV-77E features an electron tube as a full-wave signal rectifier. The meter reading in AC-voltage measurements is a function of the full peak-to-peak value of the measured waveform. The WV-77E has a high input impedance on all DC- and AC-voltage ranges. This high input impedance allows the use of the WV-77E in circuits where instruments with a lower input impedance would result in loading of the circuit under test, and a resultant error in reading the operating voltage.

The VoltOhmyst utilizes a push-pull balanced DC-bridge circuit with the meter in the plate circuit. This circuit affords excellent linearity of response, good stability, and very high input impedance.

Additional features of the WV-77E include provision for zero-center indication, useful in discriminator and bias measurements; separate scales for low AC-voltage measurements to assure accurate readings; a circuit design which allows measurement of AC in the presence of DC; a separate DC probe with a 1-megohm resistor which minimizes capacitance-loading effects; and electronic protection against meter burn-out. In addition, the resistors in the resistance divider network are protected by a separate fuse.

Specifications

Performance figures are for line voltage of 120 volts, 60 Hz

DC Voltmeter:
- Range ..... 0 to 1.5, 5, 15, 50, 150, 500, 1500 V
- Input Resistance with DC Probe (1 mΩ inside probe)
  - All Ranges ..... 11 mΩ
  - Accuracy ..... ±3% of full scale

AC Voltmeter:
- Ranges
  - RMS Values of Sine Waves ... 0 to 1.5 volts on separate scale; 0 to 5, 15, 50, 150, 500, 1500 V
  - Peak-to-Peak Values of Sine Waves ..... 0 to 4 volts on separate scale; 0 to 14, 40, 140, 400, 1400, 4000 V
- Accuracy ..... ±5% of full scale
- Frequency Response ..... ±5% 40 Hz to 5 MHz On 1.5, 5, 15 rms, or 4, 14, 40, p-p ranges

Maximum Input Voltages:
- When Instrument is set up to measure DC:
  - DC ..... 1500 V
  - DC plus AC (peak) ..... 1800 V
- When Instrument is set up to measure AC:
  - Maximum AC (rms) ..... 1500 V
  - Maximum AC (peak-to-peak) ..... 4000 V
  - NOTE: When AC is being measured, no more than 400 volts DC shall be present in circuit being tested.

Power Supply
- Voltage Rating ..... 105 to 125 V
- Frequency Rating ..... 50 to 60 Hz

Battery:
- 1.5-volt "C" cell ..... RCA-VSO35A or equiv.

Dimensions
Height 7¾", Width 5⅝", Depth 4¾", Weight 5 lbs.

Equipment Supplied
1 DC Probe and Cable, 1 AC-Ohms Probe and Cable, 1 Ground Cable, 1 Instruction Book.

Accessories Available
WG-297 High Voltage Probe, WG-206 Multiplier Resistor for use with WG-297, WG-351A Demodulator Probe, WG-270A Vinyl Carrying Case (includes convenient storage compartment for test leads).

*** Optional User Price**

© United Technical Publications

Senior VoltOhmyst®

Type WV-98C

RCA Test Equipment and Accessories



$99.00*

Features

- **Seven resistance ranges — measures 0.2 ohm to 1000 megohms**
- **Eight DC-voltage ranges — measures 0.01 volt to 1500 volts**
- **0.5 DC-volt scale for transistor circuits**
- **Seven AC ranges — measures 0.05 to 1500 rms volts**
- **Measures peak-to-peak sine, complex waveforms to 4200 volts**
- **Response to 3 MHz**
- **200-microampere meter**
- **Big, readable, 6½″ color-coded meter with mirrored scale**
- **Combination, shielded DC/AC/OHMS probe with switch**

Description

The RCA WV-98C incorporates all the time-tested VoltOhmyst features in a deluxe precision instrument with countless uses in audio, radio, TV, and industrial servicing applications. Accurate, dependable, and extremely versatile, it will measure resistance, DC volts, and both rms and peak-to-peak values of sine waves and complex waves.

An input resistance of 11 megohms on all DC-voltage ranges reduces loading of the test circuit.

The WV-98C has convenient mid-scale values of 10, 100, 1000, 10,000 and 100,000 ohms, and 1 and 10 megohms.

All measurements are made with a single-unit probe, the WG-299E DC/AC-OHMS Probe and Cable. The probe is quickly adapted to either DC measurements or AC and resistance measurements by means of a built-in switch.

Included, also, are a zero-center scale, two separate scales for low-voltage AC measurements; a pilot light; and circuit design which permits measurements of the ac component of a DC voltage or the DC component of an AC signal.

Specifications

At line voltage of 120 V, 60 Hz

DC Voltmeter:
- Range ..... 0 to .5, 1.5, 15, 50, 150, 500, 1500 V
- Input Resistance All Ranges ..... 11 mΩ
- Over-all Accuracy ..... ±3% of full scale

AC Voltmeter:
- Ranges:
  - RMS Values of Sine-Waves ..... 0 to 1.5, 5, 15, 50, 150, 500, 1500 V
  - Peak-to-peak Values of Sine-Waves and Complex Waves ..... 0 to 4, 14, 42, 140, 420, 1400, 4200 V
  - Overall Accuracy ..... ±3% of full scale
    (Accuracy of rms ranges based on use of sine-wave signals having less than 0.5% total harmonic content)
  - Frequency Response
    (1.5, 5, 0, and 15 V AC Ranges ..... ±1 dB
    30 Hz to 3 MHz

Ohmmeter:
- Ranges, Seven ..... 0 to 1000 mΩ

Power Supply:
- 110-130 V, 50-60 Hz
- Power Consumption (Approx.) 6 W; Battery 1 RCA VSO36 1½ V "D" cell.

Dimensions

Height 6½″, Width 7″, Depth 3¾″, Weight 6 lbs.

Equipment Supplied

DC/AC-OHMS Probe and Cable (Type WG-299E), 1.5-volt Battery (Type VSO36), Slip-on Alligator Clip, Insulator, Instruction Book.

Accessories Available

WG-301A Crystal-Diode slip-on probe for measuring RF from 50 kHz to 250 MHz; WG-411A High-Voltage slip-on probe for measuring up to 50,000 DC volts; WG-206 Multiplier Resistor.

*** Optional User Price**

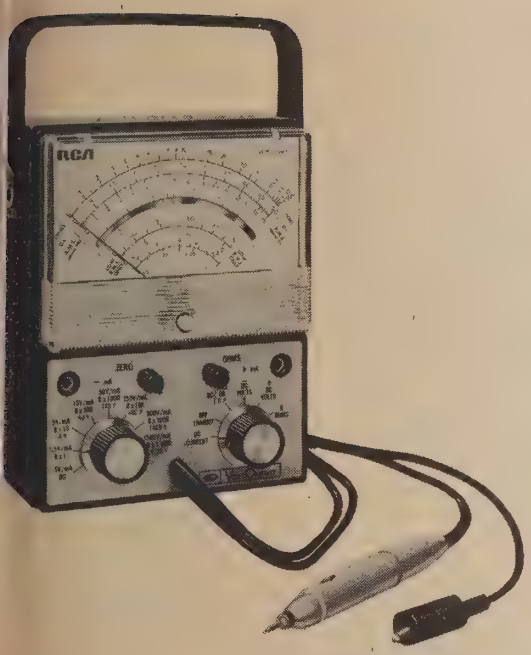
© United Technical Publications

Solid-State, Battery-Operated VoltOhmyst®

Type WV-500B

RCA

Test Equipment and Accessories



$88.00*

Features

- **Excellent stability**
- **Measures from 2 microamperes to 1.5 Amperes in 8 ranges**
- **Measures from 0.2 ohm to 1000 megohms in 7 ranges**
- **Measures from 0.02 volt to 1500 volts in 8 ranges**
- **Measures from 0.1 to 1500 rms AC volts in 7 ranges plus peak-to-peak voltages of complex waveforms**
- **11 megohm resistance on all DC ranges**
- **Supplied with DC/AC Ohms probe with shielded input cable**
- **Mirror scale meter—movement electrically protected against burnout**

Description

The WV-500B VoltOhmyst is a solid-state, battery-operated electronic voltmeter. The instrument measured DC voltages from 0.01 to 1500 volts, DC current from 2 microamperes to 1500 milliamperes, AC (rms) voltages from 0.1 to 1500 volts, AC peak-to-peak voltages from 0.5 volts to 4200 volts, and resistance values from 0.2 ohms to 1000 megohms.

Seven overlapping ranges are provided for AC rms and resistance measurements, and eight ranges are provided for DC voltage and current measurement. Accuracy for the DC and AC rms functions is ±3% (of full scale reading).

The WV-500B has an input resistance of 11 megohms on all DC ranges to prevent overloading the circuit under test.

Special solid-state circuitry is used in the WV-500B to assure stable, drift-free operation with minimum effect due to temperature variation. Advantages of solid-state construction include the elimination of warm-up time and a reduction in zero-shift that can occur in tube-operated voltmeters.

Since the WV-500B is battery-operated, the measuring circuit is completely isolated from the ac power line. The instrument can be used to make measurements on equipment with high ground potentials, an important feature in many industrial and laboratory applications.

Additional features include zero-centering of the meter pointer, and a circuit design that permits measurement of the ac component of an ac signal. The meter movement of the WV-500B is electrically protected against burnout.

Specifications

DC Voltmeter:
- Ranges ..... 0 to .5, 1.5, 5, 15, 50, 150, 500, 1500 V
- Input Resistance
  - All Ranges ..... 11 mΩ
- Accuracy ..... ±3% of full scale

AC Voltmeter:
- Ranges:
  - rms Values of Sine-Waves ..... 0 to 1.5, 5, 15, 50, 150 500, 1500 V
  - Peak-to-Peak Values of Sine Waves and Complex Waves ..... 0 to 14, 42, 140, 420, 1400, 4200 V
- Accuracy ..... ±3% of full scale
  (Accuracy of rms ranges based on use of sine wave signals having less than ½ of 1.0% total harmonic content.)
- Frequency Response
  (1.5 and 5.0 V AC Ranges) ..... ±1 dB 30 Hz to 3 MHz

DC Current:
- Ranges ..... 0 to .5, 1.5, 5, 15, 50, 150, 500 and 1500 mA
- Accuracy ..... ±3%

Ohmmeter:
- Ranges, Seven ..... 0 to 1000 mΩ

Batteries:
- Ohms ..... 1 1.5 volt "C" cell RCA VSO35A or equivalent
- Metering Circuit ..... 3 9 volt batteries (RCA VS323 or equivalent)

Dimensions

Height 6⅞", Width 5¼", Depth 3⅛", Weight 3½ lbs.

Equipment Supplied

DC/AC Ohms Probe and Cable WG-410B, Slip-On Alligator Clip, 2 current leads 1 RCA VSO35A Battery, 3 RCA VS323 Batteries, Instruction Book.

Accessories Available

WG-301A Crystal-Diode slip-on probe for measuring RF from 50 kHz to 250 MHz; WG-411A High-Voltage slip-on probe for measuring up to 50,000 DC volts; WG-206 Multiplier Resistor.

* Optional User Price

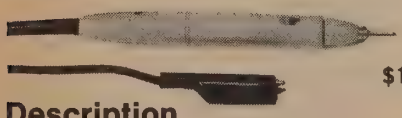
© United Technical Publications

Solid-State, Battery/AC Operated Master VoltOhmyst®

Type WV-510A

RCA Test Equipment and Accessories





$128.00*

Features

- **Excellent stability**
- **Battery or AC operation**
- **Measures from 0.01 milliampere to 1.5 amperes in 7 ranges**
- **Measures from 0.2 ohms to 1000 megohms in 7 ranges**
- **Measures from 0.01 volt to 1500 volts DC in 8 ranges**
- **Measures from 0.2 to 1500 rms AC volts in 7 ranges**
- **Measures peak-to-peak voltages of complex waveforms from 0.5 to 4200 volts in 7 ranges**
- **21-megohm resistance on all DC ranges**
- **Supplied with DC/AC Ohms probe with flexible shielded input cable (BNC connector), and current test loads.**
- **Mirror scale meter—movement electrically protected against burnout**

Description

The RCA WV-510A Master VoltOhmyst is a high-quality, solid-state electronic voltmeter especially designed for stable, drift-free operation. The instrument can be operated either from internal batteries (not included) or from a 120-volt AC power line. On battery operation, the power cord can be removed for complete portability. The many features of this VoltOhmyst make it ideally suited to service, industrial, and laboratory applications.

The WV-510A measures DC voltage from 0.01 to 1500 volts, direct current from 0.01 milliamperes to 1.5 amperes, AC voltage from 0.2 to 1500 volts, AC peak-to-peak voltage of complex waveforms from 0.5 to 4200 volts, and resistance values from 0.2 ohms to 1000 megohms.

Seven overlapping ranges are provided for AC, resistance, and current measurements, and eight ranges are provided for DC voltage measurement. Accuracy for all voltage and current functions is ±3% of full-scale reading.

The solid-state measuring circuit in the WV-510A features excellent zero stability and linearity. Current drain is very low, assuring long battery life. Accuracy is maintained throughout the usable life of the batteries. A convenient battery test function is provided.

An input resistance of 21 megohms on all DC ranges permits accurate test results on even the most critical low impedance circuits.

The Master VoltOhmyst has a large, easy-to-read, two-color meter. A mirror scale is included to prevent inaccurate readings due to parallax.

Specifications

DC Voltmeter
- Ranges: 0 to .5, 1.5, 5, 15, 50, 150, 500, 1500 V
- Input Resistance (With switch on WG-401A set to "DC"):
  - All Ranges: 21 MΩ
  - Accuracy*: ±3% of full scale reading

DC Current
- Ranges: 0 to .5, 1.5, 5, 15, 50, 500, and 1500 mA
- Accuracy*: ±3% of full scale reading

AC Voltmeter
- Ranges:
  - RMS: 0 to 1.5, 5, 15, 50, 150, 500, and 1500 V
  - Peak-to-Peak: 0 to 14, 42, 140, 420, 1400, 4200 V
- Accuracy*: ±3% of full scale reading (Accuracy of rms ranges based on use of sine wave signals having less than ½ of 1.0% total harmonic content.)
- Input Resistance and Capacitance (With WG-401A switch set to "AC-OHMS"):
  - 1.5, 5, 50, 150 V Ranges: 0.83 MΩ, shunted by 70 pF
  - 500 V Range: 1.3 MΩ, shunted by 60 pF
  - 1500 V Range: 1.5 MΩ, shunted by 60 pF
- Frequency Response (at 1.5 and 5.0 V AC): ±1 dB 30 Hz to 3 MHz
- Maximum Input Voltages
  - DC Voltages with no ac voltage present: 1500 V
  - AC Voltages with no dc voltage present:
    - RMS for Sine Waves: 1500 V
    - Peak-to-Peak for Complex Waves: 2000 V
    - Peak-to-Peak for Sine Waves: 4200 V
  - Combined AC and DC Voltages:
    - Sum of DC Voltage and AC Peak Voltage: 2000 V

Ohmmeter
- Ranges, Seven: 0 to 1000 MΩ
- Accuracy*: ±3% of center scale reading

Meter Movement
- DC Current for Full-Scale Deflection: 200 uA

Power Required
- AC Operation:
  - Voltage†: 110-135 V
  - Frequency: 50/60 Hz
  - Power Consumption: less than 5 W
- Battery Operation: four 9 volt batteries RCA VS323 or equiv. (NEDA 1604) (Not included)
- Ohms Circuit: one 1.5 volt "D" cell RCA VS036 or equiv.

Dimensions (less handle)
- Height 6⅞", Width 5¼", Depth 3⅛"
- Weight (With batteries) 3½ lbs.

Equipment supplied
- DC/AC-OHMS Probe and Cable (Type WG-401A) with BNC connector, Slip-On Alligator Clip, 2 Current Leads, 1 RCA VS036 Battery, Instruction Book.

Accessories available
- WG-301A Crystal-Diode Slip-On Probe for measuring RF from 50 kHz to 250 MHz; WG-411A High-Voltage Slip-On Probe for measuring up to 50,000 V DC, WG-436A Multiplier Resistor.

*On battery operation, batteries must test good.

†Instrument can be rewired to operate from 240 V AC. See instruction book.

*** Optional User Price**

© United Technical Publications

Volt-Ohm-Milliammeters

Types WV-516A, WV-517A, WV-518A, WV-519A, WV-520A

RCA

Test Equipment and Accessories

FEATURES

- **Meter movements protected against burnout**
- **Precision resistors for all ranges**
- **Attractively styled in dark blue cases**
- **3-color meter scales**

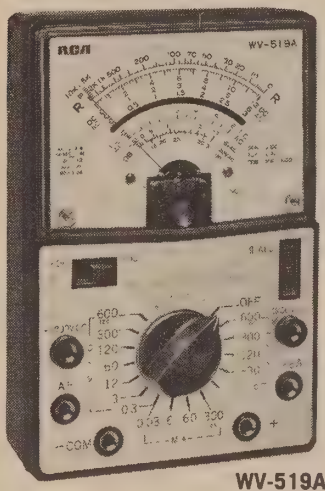


WV-520A

$48.00*

Extremely high-sensitivity DC: 100 K ohms/volt, AC: 10 K ohms/volt. Has three-color aluminum panel and three-color meter with mirror scale. Measures DC voltages from 10 mV to 1500 V in eight ranges, AC voltages (rms) from .01 to 1500 V in six ranges; DC current from .05 μA to 5 A in six ranges; resistance from .5 ohms to 20 megohms in four ranges; and decibels from −20 to +55.5 dB in five ranges.

Accuracy: DC ±3% AC ±4%
Supplied complete with test leads and two 1.5 volt batteries.
Dimensions: 5¼" x 7½" x 2⅜"
Shipping Weight: 3 lbs.



WV-519A

$36.00*

Three-color aluminum panel; three-color meter with mirror scale. Has DC polarity switch. High-sensitivity, DC: 50 K ohms/volt, AC: 10 K ohms/volt. Measures DC voltages from 5 mV to 1200 V in eight ranges, AC voltages (rms) from .01 to 1200 V in six ranges; DC current from 5 μA to 6 A in five ranges; resistance from 1 ohm to 100 megohms in four ranges; and decibels from −20 to +57 dB in five ranges.

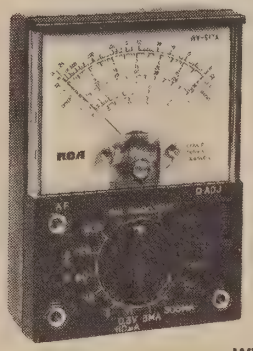
Accuracy: DC ±3% AC ±4%
Supplied complete with test leads and one 22.5 V and two 1.5 V batteries.
Dimensions: 4¼" x 6⅜" x 1⅞"
Shipping Weight: 2 lbs.



WV-516A

Compact, lightweight, economical — measures DC or AC rms volts from 0.1 to 1000 V in four ranges; DC current from 10 μA to 250 mA in three ranges; resistance from 2 ohms to 200 K ohms in two ranges. Pin-jack connectors used for all functions and ranges. Three-color meter scales.

Accuracy: DC ±3% AC ±4%
Supplied complete with test leads and 1.5 volt battery
Sensitivity: AC/DC 2000 ohms/volt
Dimensions: 2¾" x 4⅝" x 1⅜".
Shipping Weight: 1 lb. **$9.95***



WV-517A

Has convenient panel switch for selection of all functions and ranges; measures DC voltages from .01 to 600 volts in four ranges; AC voltages (rms) from 0.2 to 600 V in four ranges; DC current from 10 μA to 300 mA in three ranges; resistance from 1 ohm to 5 megohms in three ranges; and decibels from −20 dB to +37 dB. Three-color meter scales.

Accuracy: DC ±3% AC ±4%
Sensitivity: DC: 20 K ohms/volt
AC: 10 K ohms/volt
Supplied complete with test leads and two 1.5 volt batteries.
Dimensions: 4¾" x 3¼" x 1⅛"
Shipping Weight: 1 lb. **$18.00***



WV-518A

Special feature — panel mounted fuse to protect ohms-divider resistors. Has three-color meter with mirror scale. Measures DC voltages from .01 to 500 V in four ranges, AC voltages (rms) from .05 to 500 V in four ranges; DC current from 10 μA to 500 mA in four ranges; resistance from 1 ohm to 2 megohms.

Accuracy: DC ±3% AC ±4%
Sensitivity: DC: 20 K ohms/volt
AC: 10 K ohms/volt
Supplied complete with test leads and two 1.5 volt batteries.
Dimensions: 5⅛" x 3½" x 1⅞"
Shipping Weight: 1½ lbs. **$28.50***

*** Optional User Price**

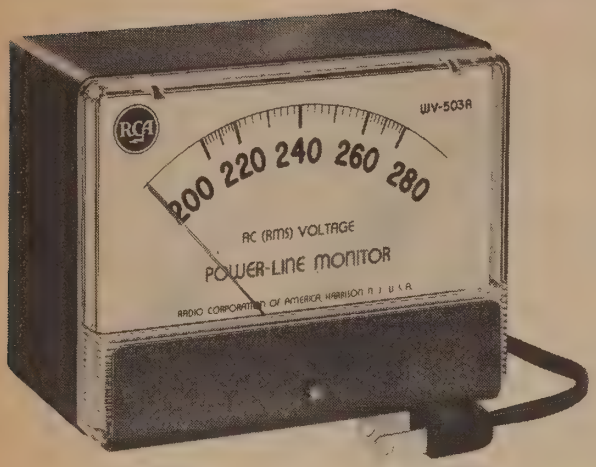
© United Technical Publications

Power Line Monitor

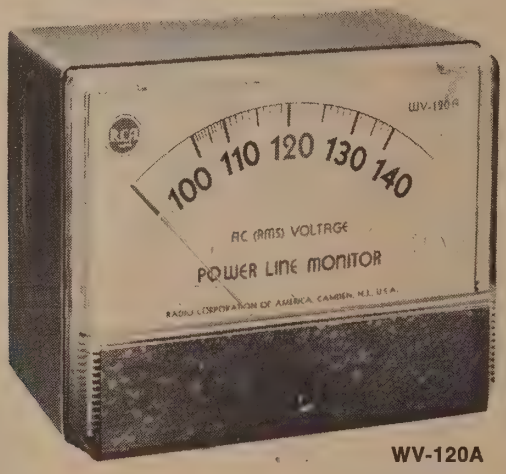
Type WV-120A and WV-503A

RCA

Test Equipment and Accessories



$19.50* WV-503A



$19.50* WV-120A

Features

- **Expanded 2-color scale — from 100 to 140 volts (WV-120A) and 200 to 280 volts (WV-503A)**
- **High accuracy — ±2% center scale; ±3% at both ends**
- **True rms reading — moving vane type meter gives accurate rms readings, even when line voltage is not pure sine wave**
- **Fast meter action — reveals "bounces" and fluctuations in line voltage**
- **Wide frequency range — From 25 Hz to 400 Hz**
- **Large numerals, large pointer, large scale — provides easy readability from distance of 10 feet or more**
- **Convenient wall mounting — holes are provided in rear of case for easy wall mounting**

Description

The RCA WV-120A and WV-503A Power-Line Monitors are designed for use by industries, laboratories, and radio-TV and appliance repair shops where it is important to know the power-line voltage at all times. These instruments provide a continuous, accurate indication of the AC line voltage at a glance, without the inconvenience of handling probes and switches or the necessity of selecting one of several scales to determine the proper meter reading.

Usd in conjunction with a variable isolation transformer, an RCA Power Line Monitor is a valuable aid in selecting line voltages for such applications as TV servicing, test instrument calibration, and the operation of electronic equipment that requires a known line-voltage supply.

The RCA WV-120A and WV-503A Power-Line Monitors provide a continuous, accurate indication of the AC line voltage at a glance.

Both instruments can be used on AC power-line sources with frequencies of 25 Hz to 400 Hz. They feature accuracy of ±2% at 120 and 240 volts, ±3% at scale ends. The meter has a special expanded scale with large, easy-to-read voltage designations. Also, the tip of the meter pointer is made wide enough to be seen clearly at a considerable distance from the instruments. As a convenient means of reference, the nominal AC line-voltage standard of 120 or 240 volts is printed in red.

The meter movement is a moving-vane type. This type of meter indicates rms values even when the waveform of the power-supply voltage is distorted. (Peak reading and peak-to-peak reading AC voltage measuring circuits, such as used in conventional VTVM's are calibrated on the basis of pure sine-wave voltages, and such meters do NOT indicate the true rms value of distorted waveforms.) The meter movement is only slightly damped and therefore has fast response. This feature is highly desirable because it permits the meter to indicate the presence of line-voltage "bounce" or fluctuations.

Specifications

Frequency Range	25 Hz to 400 Hz
Input Voltage Range	100 to 400 V (WV-120A) 200 to 280 V (WV-503A)
Meter Accuracy	±2% at center scale, ±3% at both ends
Dimensions	
Height 3 15/16", Width 5", Depth 3⅛", Weight 1½ lbs.	

* Optional User Price

© United Technical Publication

Super-Portable 3-Inch Oscilloscope

Type WO-33A

RCA

Test Equipment and Accessories



$180.00*

Features

- **Flat response to 5.5 MHz handles 3.58 MHz color TV signals with ease**
- **Exceptional sensitivity — .003 rms volt-per-inch for working with extremely low-level input signals**
- **Built-in calibration circuit and graph screen for direct reading of peak-to-peak voltages — as easily as with a VTVM**
- **Frequency compensated 3-to-1 vertical attenuators**
- **Supplied with shielded direct/low capacitance probe and cable**

Description

The RCA Super-Portable 3-Inch Oscilloscope will help you solve virtually any electronics servicing problem you may encounter inside or outside the shop. The low cost and high performance of the RCA WO-33A have made it popular as a monitor and trouble-shooting 'scope in black-and-white and color TV broadcasting studios, and in professional service shops.

High gain and exceptional bandwidth make this instrument ideal for general servicing and alignment work in black-and-white and color TV trouble-shooting, signal tracing, and measurement; for audio high-fidelity and stereo work; for all types of sweep alignment; and in all types of computer and industrial applications.

A novel feature of the WO-33A is the Vertical Input Attenuator which automatically switches the amplifier from Wide Band to Narrow Band when in the three highest gain positions.

A phase control is provided for varying the phase of the internal sweep voltage when the "LINE" position of the H/SWEEP SEL control is used, enabling the WO-33A to be phased with an external line-frequency sweep oscillator.

The WO-33A is equipped with a specially designed, single-unit Direct/Low-Capacitance probe and cable (WG-349A). When the Low-Capacitance input is used a special high-impedance circuit in the probe is connected in series with the test point and the 'scope, reducing circuit-loading effects and permitting the WO-33A to be used in circuits which would not function properly if loaded down by a conventional oscilloscope.

Specifications

Note: Performance figures are for a line voltage of 117 V, 60 Hz.

Frequency Response:
- Vertical Amplifier:
  - Wide-Band Positions (5.5 Hz to 5.5 MHz) ..flat within —3 dB
  - High-Sensitivity positions:
    - 20 Hz to 150 kMz .....flat within —3 dB
    - 3 Hz to 1.5 MHz .....flat within —6 dB
- Horizontal Amplifier (3.5 Hz to 350 kHz) .....flat within —6 dB

Deflection Sensitivity: Vertical Amplifier	(Wide-Band) position		(High-Sensitivity) position	
	rms	p-p	rms	p-p
At V INPUT connector	0.10	0.3	.003	0.01 V/in
With WG-349A (Direct)	0.10	0.3	.003	0.01 V/in
With WG-349A (Low-Cap)	1.0	3.0	.03	0.1 V/in
Horizontal Amplifier (at H INPUT terminal)				0.9 rms V/in

Rise Time (Vertical Amplifier)
- Wide Band MHz Positions .....0.1 μs

Input Resistance and Capacitance:
- Vertical Amplifier:
  - At V INPUT Connector .....1 mΩ shunted by approx. 50 pF
  - With WG-349A
    - (Direct) .....1 mΩ shunted by approx. 90 pF
    - (Low-Cap) .....10 mΩ shunted by approx. 10 pF
  - Horizontal Amplifier (at H INPUT terminal) .....10 mΩ
  - EXT SYNC Input Terminal .....250 KΩ to 55 KΩ
- Sweep Oscillator:
  - Frequency Range (continuously adjustable) . 15 Hz to 75 kHz
  - Sync ..... External, Positive and Negative Internal
- Maximum AC Input Voltage (at Lo-Cap Probe):
  - (In presence of 400 V dc) .....600 p-p V
- Phase-Control Range ..... 0 to 160 degrees
- Power Requirements:
  - Voltage .....105-125 V, 50-60 Hz
  - Average Power Consumption .....50 W

Dimensions

Height 8¾", Width 6½", Depth 10¼", Weight 14 lbs.

Equipment Supplied

WG-349A Direct/Low Capacitance Probe and Cable

Accessories Available

WG-350A Demodulator Probe for RF application from 500 kHz to 250 MHz; WG-271A Adaptor for using WG-300B Direct/Low-Capacitance Probe; WG-300B Direct/Low Capacitance Probe and Cable.

* Optional User Price

© United Technical Publications

5 Inch Solid-State Oscilloscope

Type WO-505A

RCA

Test Equipment and Accessories



$298.50*

Features

- **All solid-state circuitry**
- **Flat-face 5″ CRT**
- **Return-trace blanking**
- **Illuminated graph screen calibrated directly in volts**
- **Provision for connection to vertical deflection plates of CRT**
- **Regulated power supply prevents trace bounce; excellent stability**
- **Camera mounting studs**
- **DC vertical amplifier; DC/AC input**
- **High-frequency horizontal sweep; solid lock in on 5-MHz**
- **Useable response to 8 MHz**
- **Preset TV "V" and "H" frequencies for instant lock in**
- **Phase control**
- **Trace polarity reversal switch**
- **Built in square wave signal for calibrating P-P voltage measurements**
- **BNC "V" input connector**
- **High Sensitivity (.05 V range)**

Description

The WO-505A is a solid-state, high-performance oscilloscope designed for general purpose use. Features such as a flat-face cathode-ray tube, return-trace blanking, illuminated graph screen, and camera mounting studs make this oscilloscope ideally suited to industrial, laboratory, and servicing applications.

Frequency response of the vertical amplifier is flat, ±1 dB, from DC to 5 MHz, and is usable up to 10 MHz. The oscilloscope has exceptionally high gain of 15 millivolts peak-to-peak per inch on the high-sensitivity range.

The sweep frequency is adjustable up to 1 MHz in 6 ranges, permitting lock-in of signals up to 10 MHz. The level of sync signal applied to the sweep oscillator is adjustable, so that synchronization is stable throughout the sweep range. Pre-set TV V and H sweep positions are provided for convenient television servicing. These positions insure automatic lock-in on vertical and horizontal sync and blanking pulses. A separat phase control varies the phase of the sweep voltage when th "LINE" position of the sync or H amplifier switch is used. Thi control is used in TV alignment for phasing the oscilloscop sweep with the output of a sweep generator.

The vertical input attenuator and the graph screen ar calibrated directly in volts so that the WO-505A can be use as a visual voltmeter. An internal calibrated voltage source i provided.

Terminals are located on the back of the case for direc connection through internal capacitors to the vertical deflectio plates of the cathode-ray tube. This feature makes it possibl to observe rf waveforms with frequencies higher than th bandwidth of the vertical amplifier.

The power supply of the WO-505A is regulated, preventin trace bounce due to line voltage fluctuations.

Specifications

Note: Performance figures are for a line voltage of 120 V, 60 Hz.

Frequency Response
- Vertical Amplifier
  - DC function ..... DC to 5 MHz, ±1 dB useable to 8 MHz
  - AC function ..... 5 Hz to 5 MHz, ±1 dB useable 5 Hz to 8 MHz
- Horizontal Amplifier ..... 3.5 Hz to 2 MHz

Deflection Sensitivity
- Vertical Amplifier
  - Direct Probe ..... 15 mV P-P per inch
  - Lo-Cap Probe ..... 150 mV P-P per inch
- Horizontal Amplifier ..... 0.4 V P-P per inch
- Vertical Deflection Plate
  - Terminals ..... 40 V P-P per inch

Rise Time
- Vertical Amplifier ..... 0.1 μS

Input Resistance and Capacitance
- Vertical Amplifier
  - At V INPUT connector ..... 1 MΩ shunted by 25 pF
  - With probe on "direct" ..... 1 MΩ shunted by 75 pF
  - With probe on "Lo-Cap" ..... 10 MΩ shunted by 14 pF
- Horizontal Amplifier ..... 1 MΩ shunted by 20 pF
- Sunc Input Terminal ..... 1 MΩ shunted by 20 pF

Sweep Oscillator
- Frequency Range ..... 10 Hz to 1 MH
- Preset Positions ..... 30 Hz (TV V 7875 Hz (TV H

Maximum AC Input Voltage ..... 600 V P- (in presence of 400 V DC

Phase Control Range ..... 0 to 180

Z-Axis Input
- Minimum input voltage for blanking ..... 12 V rm
- Frequency Response ..... 3 Hz-500 kH

Power Requirements
- Voltage 105-130
- Frequency ..... 50-60 H
- Average Power Consumption ..... 30 V

DIMENSIONS:
Height 11⅜ in., Length 15½ in., Width 9 in., Weight 25 lbs.

Equipment Supplied:
WG-400A Direct/Low Capacitance Probe and Cable, Alligato Clip, Clip Insulator, Instruction Book.

Accessories Available
WG 302A RF-IF-VF Signal Tracing Probe for RF application from 500 kHz to 250 MHz.
WG-354A Capacitance-Type Voltage-Divider Slip-On Prob for use with WG-400A to extend the range so that signal puls amplitudes up to 5,000 Volts can be observed.

* Optional User Price

© United Technical Publicatio

RF Signal Generator with Sweep Features

Type WR-50B

RCA

Test Equipment and Accessories



$72.00*

Features

- **Continuous coverage 85 kHz to 40 MHz in 6 overlapping ranges**
- **Built-in crystal calibrating oscillator circuit with front panel crystal socket**
- **Internal 400 Hz audio oscillator**
- **Sweep output at 10.7 MHz and 455 kHz with return trace blanking for sweep alignment of radio receivers**
- **Permanently attached shielded RF output cable with built-in DC blocking capacitors**
- **Modulation level control**
- **Two-step RF attenuator switch plus a continuously variable attenuator control**
- **Additional switch for further attenuation of the crystal oscillator output**
- **Audio output level control**
- **Easy-to-read dial scale**

escription

e RCA WR-50B RF Signal Generator is a highly versatile, adily portable test instrument designed for use in the shop or the field for general television and radio servicing and ner applications.

The unit is particularly well suited for such applications as gnment and signal tracing of AM, FM, High-Fidelity and tizens' Band receivers, alignment of low-frequency IF plifiers in television receivers, and signal tracing and trouble-ooting in nearly all sections of television receivers.

The 455 kHz and 10.7 MHz sweep positions make the WR-50B rticularly useful for sweep alignment of both AM and FM ceivers, especially since the introduction of several new M-FM transistor radios in which sweep alignment of both rcuits is recommended.

The variable oscillator covers the fundamental frequencies from 85 kHz to 40 MHz in six ranges. For higher frequencies, harmonics of the high range can be used. A vernier tuning control permits precise setting of the output frequency. The RF output can be modulated with the internal 400 Hz oscillator, or with an external audia signal. The modulation level is adjustable.

A two-position attenuator switch, together with a variable attenuator control provide complete adjustment of the RF ouput level.

The crystal oscillator circuit in the WR-50B enables the instrument to be used as a crystal calibrator. A convenient crystal socket is provided on the panel. This crystal oscillator can be used as a frequency calibration reference for the variable oscillator, or can be used directly as a crystal-controlled signal source.

pecifications

rformance figure with line voltage at 120 volts, 60 Hz)

veep Output:
455 kHz and 10.1 MHz, center-frequencies
Sweep width approximately 10% of center frequency

riable Oscillator:
Six Ranges (fundamental frequencies) ..... 85 kHz to 40 MHz
Output (all ranges)[1] .....0.05 V rms (minimum)
al Calibration Accuracy .....±2%
ernal Modulating Frequency ..... Approx. 400 Hz
rcent Modulation ..... Adjustable up to 30%
dio Output .....At least 8 V rms across 15 kΩ load
ternal Modulation .....Modulating frequency, 15 kHz max.

Crystal Oscillator[2]
Maximum Output .....0.02 V rms
Internal Mod. Percentage ..... Approx. 20%
Frequency Range .....100 kHz to 15 MHz (Fundamental)

Attenuator
VFO and Sweep Output ..... 2-step 10-to-1 attenuator swich with potentiometer for fine adjustment
Crystal Oscillator Output .. Additional 7-to-1 attenuator switch

Power Supply
Voltage Rating .....105-130 V 50/60 Hz
Power Consumption .....15 W

Dimensions
Height 7¾", Width 5⅜", Depth 4¾", Weight 5 lbs.

[1]Open-circuit value
[2]Varies with crystal cut and activity.

* Optional User Price

Sine/Square-Wave Audio Signal Generator

Type WA-44C

RCA

Test Equipment and Accessories



$98.50*

Features

- **Sine-wave or square-wave output from 20 Hz to 200,000 Hz**
- **High output voltages — 8 volts rms or more with rated load**
- **Separate 60 Hz output for intermodulation distortion measurements**
- **10-to-1 step attenuator and continuously adjustable output control**
- **Durable, attractive brushed aluminum dial with etched lettering, and sturdy metal cabinet**

Description

Precision engineered and factory calibrated, the RCA WA-44C Sine/Square-Wave Audio Signal Generator is a compact, high-quality instrument designed for use in audio, high-fidelity and general electronic applications as well as in electronics training, demonstrations, and laboratory work. Covering a range from 20 Hz to 200,000 Hz, the WA-44C is also useful in testing ultra sonic equipment.

Application for this versatile instrument include measuring frequency response of amplifiers determining resonant frequencies of loudspeakers, tuning loud-speaker enclosures, finding input and output impedances, determining values of unknown inductors and capacitors, and measuring intermodulation distortion.

Operation of the WA-44C is straightforward. The desired frequency is selected by means of the continuous, single-sca frequency dial, together with the appropriate multiplier indicated on the "FREQ RANGE" switch. The type of wave ar the amplitude are selected by means of the "SINE-SQUARE" attenuator switch. The output voltages can be adjusted furthe with the continuously adjustable "OUTPUT" control. A separate output at line frequency is also provided, and output voltage is adjustable up to 6 volts.

Specifications

Note: Performance figures are for a line voltage of 117 V, 60 Hz.

Frequency Range ..... 20 Hz to 200 kHz

Amplitude Variation of Output Voltage:
(30 Hz to 100 kHz) ..... ±1.5 dB

Frequency Stability:
(105 to 125 volts AC line) ..... ±2%

Dial Calibration Accuracy:
(20 Hz to 20 kHz) ..... ±5%

Sine Wave:
Output Voltage:
(*100 KΩ and 75 pF load) ..... 8 rms V or more
Maximum Total Harmonic Distortion:
(30 Hz to 15 kHz) 0.5
Maximum Hum:
(Percent of rated output voltage) ..... Less than 0.1

Square Wave:
Output Voltage:
(*100 KΩ and 75 pF load) ..... 10 p-p V or mo

Power Supply:
Voltage ..... 105-125 V, 50-60
Power Consumption ..... Approx. 40

Dimensions:
Height 7″, Width 10 1/16″, Depth 6⅛″, Weight 10½ lbs.

*A lower impedance may decrease the output voltage and slightly increa distortion.

* Optional User Price

© United Technical Publicatio

Transistorized Sine/Square Wave Audio Signal Generator

Type WA-504A

RCA

Test Equipment and Accessories



$95.00*

Features

- **All solid-state — including MOSFET oscillator stage**
- **Switch selection of sine-wave or square-wave output**
- **Wide frequency range — 20 Hz to 200,000 Hz**
- **High output voltages — 10 volts rms or more with rated load**
- **Low distortion — 0.25% or less over the audio frequency range**
- **Essentially flat output voltage — ±1.5 dB from 30 Hz to 100,000 Hz**
- **Attached, shielded output cable**
- **10-to-1 step attenuator and continuously adjustable output control**

escription

recision engineered and factory calibrated, the RCA WA-504A ansistorized Sine/Square-Wave Audio Signal Generator a compact, high-quality instrument designed for use in audio, gh-fidelity and general electronic applications as well as electronic training, demonstrations, and laboratory work. overing a range from 20 Hz to 200,000 Hz, the WA-504A also useful in testing ultrasonic equipment.

Applications for this versatile instrument include the easurement of frequency response characteristics of nplifiers, determining resonant frequencies of loudspeakers, ning loudspeaker enclosures, finding input and output pedances, determining values of unknown inductors and pacitors, and determining the frequency or speed of vibrating rotating objects. The WA-504A facilitates the testing and servicing of any equipment employing audio or ultrasonic signals.

The RCA WA-504A Sine/Square Wave Audio Generator provides a tunable sine or square wave audio-frequency signal ideally suited for service, industrial, and educational applications. The frequency range extends from 20 Hz to 200,000 Hz.

New solid-state circuit design using six transistors, including an MOS transistor, and two diodes produces a stable signal with an amplitude variation not exceeding ±1.5 dB from 30 Hz. Total harmonic distortion of the sine wave is less than 0.25% from 30 Hz to 15,000 Hz.

The generator has an attached shielded output cable.

pecifications

rformance figures for line voltage of 120 V, 60 Hz

eneral

equency Range ..... 20 Hz to 200 kHz (four ranges)
nplitude Variation of Output Voltage
(30 Hz to 100 kHz) ..... ±1.5 dB
equency Stability (105 to 130 volts AC line) ..... ±0.5%
al Calibration Accuracy (20 Hz to 20 kHz) ..... ±5%, or 2 Hz, whichever is greater

ne Wave

tput Voltage (100kΩ,75 pF load) ..... 10 V rms or more
ximum Total Harmonic Distortion
(30 Hz to 15 kHz) 0.25%

Square Wave

Rise and Fall Time (Maximum output) ..... less than 1.0 μs
Maximum Tilt ..... less than 5.0%
Output Voltage ..... 10 V p-p or more

Power Supply

Voltage 105-130 V, 50-60 Hz, Average Power Consumption Approx. 8 watts.

Dimensions

Height 7¾", Width 5⅜", Depth 4¾", Weight 3 lbs.

* Optional User Price

Chro-Bar Solid-State Color-Bar Generator

Type WR-502A

RCA Test Equipment and Accessories



$148.50*

Features

- **All solid-state circuitry**
- **Sound carrier, pattern, RF output, and color subcarrier all crystal controlled**
- **Rock-solid stability**
- **AC line or battery operated — completely portable**
- **Provision for spare battery with selection switch**
- **Battery test meter**
- **Gun killer switches**

Description

The RCA WR-502A CHRO-BAR is a solid-state, battery operated color-bar generator, designed to provide the test signals required for adjusting convergence, color-phasing, matrixing, purity, and linearity of color television receivers. Patterns generated by the CHRO-BAR include color bars, dots, crosshatch, vertical lines, horizontal lines, and blank raster.

The instrument includes slide switches for shorting out the control grids of the color picture tube. This feature enables the red, blue, or green color guns to be "killed," as required in convergence and purity adjustments. Leads are provided for connection to the control-grid leads of the color picture tube socket.

The color-bar pattern provides ten bars simultaneously, including R-Y, B-Y, I and Q signals, spaced at 30 degree phase intervals. This pattern is for use in checking color phase and matrixing circuits, and adjusting the automatic frequency phase control. (AFPC). Narrow brightness pulses are added at the edges of each color bar to aid in checking the "fit" or registration of the brightness and color signals.

A crystal-controlled 4.5 MHz sound carrier is added to the color-bar pattern in the "PATTERN & SOUND CARRIER" function. This sound carrier produces beats in the color-bar signal to permit making an accurate fine tuning adjustment.

The dot pattern provided by the WR-502A is used primarily convergence adjustment. The crosshatch, vertical line, and horizontal line patterns are for use in adjusting linearity in both black and white and color receivers, and as an alternate pattern for adjusting convergence. The crosshatch pattern, consisting of a fixed number of vertical and horizontal lines, can also be used to check receiver overscan adjustment.

The blank raster function is useful for both purity and color temperature adjustments.

Crystal-controlled RF output is provided on channel 3 (WR-502A), or channel 4 (WR-502AVI). The output cable connects directly to the antenna input terminals on the receive

The WR-502A is powered by a 4.2 Volt mercury battery. As convenience, the instrument has provision for an alternate battery that can be switched in easily when the first battery becomes weak. A meter is provided on the panel to indicate the condition of the batteries. For AC line operation, a separat AC adaptor is included.

Specifications

Output*

Frequencies	Picture carrier 61.25 MHz (Channel 3) Sound carrier 65.75 MHz (Channel 3), unmodulated
Voltage	Picture carrier 10,000 MV (approx.)
Horizontal Sync	15804 Hz
Color Subcarrier	3,563,741 kHz, ±20 Hz, keyed at 189 kHz
Sound Oscillator	4.5 MHz
Output Impedance	Approximately 300 Ω
Test Patterns	Color bars (variable chroma level)/dots crosshatch (H+V)/horizontal lines vertical lines/blank raste
Battery	Unit powered by a 4.2V mercury battery RCA VS13 or equiv. Includes provision for alternate batter with selector switc
Meter	Indicates condition of batterie
Dimensions	Width 7½", height 6½", depth 4", weight 4 lb

*Note: All output signals crystal-controlled.

*** Optional User Price**

© United Technical Publicatio

TV Sweep Chanalyst

Type WR-514A

RCA Test Equipment and Accessories



$375.00*

Features

- **Fundamental sweep output on all VHF TV channels**
- **Video and IF sweep output for IF amplifiers, video, and chroma circuits**
- **New ChromAlign chroma sweep signal**
- **Seven crystal IF markers for checking IF picture, sound, video, and color bandpass**
- **Built-in solid-state marker-adder for clean displays. Distortion-free sweep/marker displays**
- **High, flat sweep output voltage at least 10 MHz wide on VHF channels**
- **On-off blanking control**
- **Balanced, 300-ohm RF output from low-leakage piston attenuator**
- **Sweep output on FM band from 88 to 108 MHz**

Description

The WR-514A TV Sweep Chanalyst has the combined features of a sweep generator, marker generator, and marker adder. RF, IF, video and ChromAlign output sweep signals permit alignment of VHF tuners, IF amplifiers, video amplifiers, and color bandpass amplifiers.

Seven crystal-controlled, IF markers are provided to identify points on the sweep curve. Marker frequencies are 4.5 MHz, 41.25 MHz, 41.67 MHz, 42.17 MHz, 42.67 MHz, 45.75 MHz, and 47.25 MHz. If desired, an external marker generator can be used to provide markers at other frequencies. A "spare" marker function can be used to provide another marker at any frequency from 39 to 50 MHz when a crystal of the desired frequency is inserted. This system of adding the markers prevents distortion of the sweep curve caused by marker overload. The marker signals are also available directly through a panel connector. Audio modulation can be applied to the signals when the signal is used separately for applications such as trap alignment.

RCA's special ChromAlign chroma sweep signal, combining a 45.75 MHz carrier and an IF sweep signal is provided for aligning color bandpass amplifiers. Both the sweep level and carrier level are adjustable, so that the circuit can be aligned at the signal levels specified in the receiver manufacturer's service data.

RF sweep output is provided for each of the 12 VHF television channels. The sweep width of the RF, IF, and video sweep signal is continuously adjustable.

Output voltage of all sweep signals at the maximum setting of the attenuator is at least 0.1 volt RMS. Maximum variation of output amplitude is 0.1 dB/MHz over any 10 MHz portion of the sweep signal, assuring an accurate display of circuit bandpass characteristics.

The WR-514A also provides FM sweep output from 88 to 108 MHz in two ranges. The sweep width is adjustable up to 20 MHz. A sweep signal in the 10.7 MHz FM IF range is also available. Markers in this frequency range can be applied using an external RF signal generator.

Return-trace blanking is included in the WR-514A to provide a zero-reference line during alignment. A trace reverse switch is provided for selection of horizontal sweep direction so that frequency markers are in proper sequence as illustrated in TV service manuals.

A switch is also provided for bypassing the demodulated signal amplifier, connecting the signal directly to the oscilloscope. This permits the vertical gain of the sweep trace to be calibrated.

Specifications

(Measured at 120 V, 60 Hz line)

Sweep Output Frequency
- TV Channels ..... 2 through 13
- IF/Video ..... approx. 50 kHz-50 MHz
- FM ..... 88-108 MHz
- ChromAlign Chroma Sweep Signal ..... 45.75 MHz crystal-controlled carrier with IF sweep signal

Marker Frequencies 4.5 MHz sound IF; 41.25 MHz sound carrier; 41.67 MHz chroma bandpass; 42.17 MHz color subcarrier; 42.67 MHz chroma bandpass; 45.75 MHz picture carrier; 47.25 MHz adjacent sound.

39-50 MHz spare (internal crystal must be added)

External Marker Input Frequencies ..... from 1 MHz to 250 MHz (from separate source)

IF Modulation ..... approx. 400 Hz

Maximum Output Voltage
- TV, IF/Video, FM ..... 0.1 V or more

Attenuator Range
- RF/IF/Video ..... 60 dB

Maximum Variation of Output Voltage
- All TV Channels ..... 0.1 dB/MHz over any 10 MHz portion of sweep range.

Sweep Width (continuously adjustable)
- TV Channels, IF/Video and FM ..... greater than 10 MHz

Output Cable Terminations
- RF Output Cable ..... 300 ohms balanced
- IF Video-Adapter ..... 75 ohms

Equipment Supplied
1 RF Output Cable, type WG-426A;
3 Direct Cables, type WG-427A;
1 Connector Adapter, type WG-428A;
1 VF/IF 75-ohm Adapter, type WG-429A;
2 Direct Cable Adapters, type WG-430A.

Dimensions:
Width 13⅝"; Height 10"; Depth 7".

Weight (approx.) ..... 17 lbs. net.

* Optional User Price

Crystal-Calibrated Marker Generator

Type WR-99A

RCA

Test Equipment and Accessories



$256.50*

Features

- **Continuous tuning, 19 to 260 MHz in 8 ranges**
- **Matched-impedance pad-type attenuator**
- **Highly stable, fundamental output — no beat frequencies o harmonics used**
- **Provision for external marker crystals or LC circuits**
- **Separate crystal check points at 1 MHz or 10 MHz intervals provide accurate calibrating beats throughout entire frequency range**
- **Internal modulation frequencies — 1 MHz or 10 MHz, 4.5 MH a combination of 4.5 MHz and 600 Hz, and 600 Hz**
- **Most-used television IF and RF frequencies specially marke on dial scale**
- **Dual sound-and-picture-carrier markers**

Description

The RCA WR-99A Crystal-Calibrated Marker Generator combines in one compact instrument the functions of a multiple-marker generator, crystal calibrator and a heterodyne frequency meter. Featuring extreme accuracy and stability over a wide frequency range, the WR-99A is ideal for servicing and aligning color and black-and-white TV receivers, communications and other equipment operating in the frequency range of 19 to 260 MHz.

When used as a heterodyne frequency meter, the frequency of an unknown signal can be quickly measured by feeding it into the instrument and reading the frequency directly from the dial.

The WR-99A includes crystal-controlled 10 MHz and 1 MHz oscillators for calibrated accuracy. The VFO frequency as well as the frequency of an external signal may then be checked against internal calibrating beats at 1 or 10 MHz intervals throughout the tuning range.

A switch-type attenuator in the WR-99A provides attenuatio in continuous steps over a range of 60 dB on all frequencies. Double shielding of the oscillator reduces leakage to well belo the full attenuated signal; permitting control of marker amplitude right down to the noise level of TV receivers. A special coaxial cable is provided with the unit for coupling into the test circuit.

The VFO signal also may be modulated internally with both 4.5 MHz and 600 Hz, a useful feature for adjustment and alignment of sound-IF amplifiers and detectors. The 4.5 MHz signal produces dual sound and picture markers; the 600 Hz modulation will produce a horizontal-bar pattern when the output signal is set to the frequency of the picture carrier or picture intermediate frequency. The 4.5 MHz output signal may be modulated with 600 Hz for visual alignment of the detector.

Specifications

RF-Output Frequencies (fundamentals) ... 19-260 MHz (8 ranges)

Crystal-Controlled ... 1 MHz
4.5 MHz
10 MHz

Output Voltages:
VFO Ranges ... At least 0.1 V rms

Output Cable Impedance ... 90 Ω

10-MHz Crystal Calibrator:
Accuracy ... ±0.01%
Number of 10-MHz Check Points ... 242

1-MHz Calibrator:
Accuracy ... ±0.01%
Number of 1-MHz Check Points ... 2

4.5 MHz Crystal Oscillator:
Accuracy ... ±0.02%

Internal Modulation ... 1, 10, 4.5 MHz and 600 H

Power Supply

Voltage 105-125 V, Frequency 50-60 Hz, Power Consumptio 45 W.

Dimensions

Height 10", Width 13½", Depth 7", Weight 17 lbs.

Equipment Supplied

1 Output cable, 1 red and 1 black phone tip, instruction boo

* Optional User Price

© United Technical Publication

In-Circuit/Out-of-Circuit Transistor Tester

Type WT-501A

RCA

Test Equipment and Accessories



$66.75*

Features

- **Battery Operated — completely portable**
- **Tests both high-power and low-power transistors**
- **Measures NPN and PNP Transistors (Icbo), (Iceo), and DC Seta**
- **Adjustable collector current permits most transistors to be tested at their rated current level**
- **Front panel NPN and PNP sockets for convenient matching in complementary symmetry applications**
- **Reliable in-circuit testing of transistor current gain**
- **Includes zero control to cancel the effect of leakage on in-circuit current gain reading**
- **Tests relative front-to-back ratio of diodes at appropriate current levels**
- **Mirrored scale**

Description

Completely portable and requiring no external power source, RCA's WT-501A tests transistors both in-circuit and out-of-circuit, tests both low and high-power transitors, and has both NPN and PNP sockets to allow convenient transistor matching for complementary symmetry applications. Three color-coded test leads are provided for in-circuit testing. Special low-impedance circuitry assures reliable in-circuit testing.

The instrument is designed to test transistor for dc beta from 20 to 1000, collector-to-base leakage (Icbo) as low as two-microamperes, and collector-to-emitter leakage (Iceo) from 0 microamperes to one-ampere. Collector current is adjustable from 20 microamperes to one-ampere in four ranges, permitting most transistors to be tested at their rated current level.

Power transistors can be tested with Ic up to one-ampere. A DC forward current transfer ratio curve can be plotted. The instrument can also test the relative in-circuit DC current gain of a transistor.

A 100 microampere meter movement is used in the measuring circuits for the various test functions, and precision resistors are used to insure accurate test results. Normal maintenance includes only replacing the batteries as neccessary.

The WT-501A is also a convenient instrument for making a check of the relative front-to-back ratio of diodes. An important feature is the ability to check the diode at an appropriate current level.

Specifications

DC Beta (hFE)
Range ..... 1 to 1000
Accuracy ..... ±5%
Collector Current (Ic) ..... 100 uA to 1 Amp. in four ranges
Collector-to-Base Leakage (Icbo) ..... 0 to 100 uA
Collector-to-Emitter (Iceo) ..... 0 to 1 Amp.
Battery Voltage ..... two 1½ V "D" cells, RCA VSO36 or equiv.

Dimensions
Height 6⅞", Width 5¼", Depth 3⅛", Weight 2¾ lbs.

*** Optional User Price**

Color/Black-and-White Picture-Tube Tester

Type WT-509A

RCA

Test Equipment and Accessories



$118.00*

Features

- **Tests over 1,000 color and B&W picture tubes for emissio quality, interelectrode leakage, and shorted elements**
- **Includes "activate" function to improve performance of som low-emission tubes**
- **Supplied with five test sockets including unique "universal test adaptor which can be used with any type of tube or socket arrangement**
- **Includes sensitive adjustment to establish proper cut-off point for each tube**
- **All solid-state — triac device controls internal voltage for accurate testing regardless of variations of line voltage**
- **Input jack for high voltage probe — measures picture tube anode voltage up to 50,000 volts**
- **Includes 1500 volt input to measure picture tube grid and cathode voltages**
- **Comes complete with sturdy, luggage type carrying case with convenient storage compartment**

Description

The WT-509A is a precision instrument that tests both color and black-and-white picture tubes for emission quality, inter-electrode leakage, and shorted elements. Complete solid-state circuitry is used, including a triac device for controlling internal voltages. Test data is provided for testing more than 1000 picture tube types.

Five socket adaptors are supplied, including a versatile "universal" adaptor that can be connected to the base of any picture tube.

A sensitive cut-off adjustment establishes the proper cut-o point for testing each tube. The internal B+ and bias voltages of the Tester are regulated to assure an accurate and reliable test of picture tube performance.

A special "activate" function is provided to improve the performance of some low-emission tubes. Additional features of the WT-509A include a 50,000 DC volt range for use with an RCA WG-297 High-Voltage Probe to measure picture tube anode voltage. A 1500 volt input is also provided for measuring picture tube electrode voltages.

Socket Adaptors

Five socket adaptors are provided with the WT-509A, permitting most tubes commonly found in both black and white and color TV receivers to be tested. The socket to use for a particular tube is noted in the Test Data Booklet. The sockets are identified by a number, Sockets 1, 2, 3, 4, and 7 are provided with the Tester. Sockets 5 and 6 are available as accessories, and can be ordered from your local RCA Test Equipment Distributor, using the stock numbers listed at right (use socket specified in test data chart E1 255, supplied with instrument).

Socket	Stock N
1	WG-421 V
2	WG-421 V
3	WG-421 V
4	WG-421 V
5	WG-421 V
6	WG-421 V
7	WG-421 V7 (Universal Socket Adaptc

* Optional User Price

© United Technical Publicatio

Solid-State Regulated DC Power Supplies

Type WP-700A, WP-702A, WP-703A, WP-704A

RCA

Test Equipment and Accessories



WP-700A

1 TO 4 $48.00*
5 & UP $40.00*



WP-703A
WP-704A

1 TO 4 $58.50*
5 & UP $49.00*



WP-702A

1 TO 4 $87.00*
5 & UP $73.00*

Features

- **All solid-state circuitry**
- **Continuously adjustable voltage output down to 0 volts**
- **Electronic short-circuit protection — short across the output terminals won't harm the supplies**
- **Front-panel overload-indicator lamp signals when maximum current condition is approached**
- **Negative feedback regulator circuit maintains constant output voltage with low ripple**
- **Compact and lightweight**

)escription

ıe WP-700A, 702A, 703A, and 704A are solid-state, constant ɔltage dc power supplies. These versatile bench-type supplies re ideally suited for use in circuit design, servicing, dustrial, and educational applications. Typical applications clude developmental transistor or integrated circuit rojects, production line testing of dc operated equipment, dustrial maintenance, life testing of devices that require dc supply, and classroom use.

The WP-700A and WP-702A circuits are identical, except that e WP-702A is a dual unit, with separate controls, output rminals, and meters for each section. The two sections of the P-702A are electrically isolated from each other.

Output voltage of the WP-700A and WP-702A is continuously djustable from 0 to 20 volts, at current levels up to 200 illiamperes.

Output voltage of the WP-703A is continuously adjustable ɔm 0 to 20 volts at current levels up to 500 milliamperes.

The output voltage of the WP-704A is adjustable from 0 to 40 volts at current levels up to 250 mA.

Overload current is limited to prevent damage to the power supplies. No damage will occur even if connected to an external short circuit. A special overload indicator panel lamp will begin to glow when the current approaches the maximum rated level.

A meter is provided to indicate either output voltage or current level. The meter function is selected by a convenient panel switch

All silicon transistors and diodes are used in the four supplies. Circuit design features include a negative feedback circuit to maintain constant output voltage with low ripple regardless of varying line.

Three convenient output terminals (+DC, —DC, and GND) are provided. The units are equipped with a three-wire ac power cord to permit connecting the external circuit to the power line ground, using the "GND" terminal.

pecifications

	WP-700A WP-702A	WP-703A	WP-704A
ıtput	0 to 20V 0 to 200 mA	0 to 20V 0 to 500 mA	0 to 40V 0 to 250 mA
ıe			
egulation (Max. change in output with power-line variation of 110 to 135 V ac)	30 mV	7 mV	15 mV
ad			
egulation (Max. change at rated load)	less than 50 mV	less than 10 mV	less than 20 mV
pple	less than 500 uV rms	less than 200 uV rms	less than 200 uV rms
eter			
nctions (Function selected with panel switch)	0 to 20V 0 to 200 mA	0 to 20V 0 to 500 mA	0 to 40V 0 to 250 mA

Controls ..... Continuously variable voltage
Power on/off
Meter selector V/mA

Output Terminals ..... DC+, DC—, GND, (Pos. or neg. output)

Short Circuit Protection ..... Protected from damage due to external short circuit

Overload Indicator ..... Panel lamp glows when current approaches max. level

Power Cord ..... Three-wire type

Dimensions
WP-700A ..... 4 in. x 6½ in. x 3 in., weight 2 lbs., 11 oz.
WP-702A ..... 6 in. x 12 in. x 3 in., weight 4 lbs., 13 oz.
WP-703A and
WP-704A ..... 5¼ in. x 8¼ in. x 3¼ in., weight 5 lbs., 13 oz.

*** Optional User Price**

TV Isotap Isolation and Autotransformers

Type WP-26A and WP-25A

RCA

Test Equipment and Accessories



WP-26A

$42.00*



WP-25A

$28.50*

Features

- **Provides instant high-low-medium line-voltage testing**
- **Speeds up servicing . . . cuts down cos returns**
- **Minimizes shock hazards . . . prevents damage to test equipment**
- **Delivers 500 volt-amperes from autotransformer winding; 400-volt amperes from isolated secondary windi (A less expensive model, WP-25A, is a available. It delivers 275 volt-amperes max. from isolated secondary winding**
- **Heavy duty rotary switch adjusts prim to match line voltage over range of 105 130 volts in 5-volt steps**

Description

The RCA WP-26A and WP-25A Isotaps are designed for use as either an adjustable isolation transformer or as an adjustable autotransformer to facilitate testing and trouble-shooting of radio and television receivers, and other electronic equipment. A seven-position selector switch permits adjustment of the Isotap in five-volt steps to operate from any 50 to 60 Hz supply-line voltage from 105 to 130 volts. Output voltages of approximately 105, 115 and 130 volts are provided throughout the supply-line voltage range.

Three outlets, marked DIRECT, are connected to the autotransformer or primary winding, and three outlets, marked ISOLATED, are connected to the secondary winding.

The three receptacles marked ISOLATED provide isolation from the supply-line for any connected equipment, minimizing shock hazard usually associated with the chassis, and other exposed parts of transformerless equipment.

Specifications

(All voltages with ±5%)*

Supply Line:

- Voltage range ..... 105-130 V
- Frequency ..... 50-60 Hz

Output Voltages

DIRECT receptacles (with 500 max. VA load and selector set to value of supply-line voltage):

- LOW ..... 105 V
- MED ..... 115 V
- HIGH ..... 130 V

ISOLATED receptacle (with resistive load of 400 max. VA and selector set to value of supply-line voltage):

- LOW ..... 105 V
- MED ..... 115 V
- HIGH ..... 130 V

Load Rating:

Continuous operation:	WP-26A	WP-25A
DIRECT receptacles	500 VA max.	500 VA max
ISOLATED receptacles	400 VA max.	275 VA max
Intermittent operation:		
DIRECT receptacles	750 VA max.	750 VA max
ISOLATED receptacles	450 VA max.	450 VA max

Dimensions

Height 5¾", Width 5", Depth 4⅜".

Weight ..... 15 lbs. 12 lbs.

*** Optional User Price**

Transistor/Diode Checker & Resistance-Capacitance Circuit Box

Type WC-506A WG-412A, anr WG-412A(K)

RCA **Test Equipment and Accessories**



WG-506A

$18.00*

Features

- **Fast relative gain and leakage measurements of NPN and PNP transistors**
- **Forward and reverse diode-current checks**
- **Panel socket and test leads for out-of-circuit measurements**
- **Battery operated**
- **Small, compact, inexpensive**
- **Panel switch for high-and-low leakage transistors**
- **Quick-connect diode test terminals**

Description

The RCA WC-506A is a compact, battery-operated instrument especially designed to provide a quick, simple check of relative gain and leakage levels of out-of-circuit transistors. All measurements are indicated on an easy-to-read meter with an single red/green scale.

Both NPN and PNP transistors can be checked on the WC-506A. A panel switch is provided to adapt the circuit to accommodate checking high-leakage transistors, such as most germanium power types. The checker includes a transistor socket, and color-coded test leads.

The relative front-to-back current ratios of diodes can also be checked on the WC-506A. Special spring terminals for connecting diodes are located on the panel.

The WC-506A weighs 14 ounces and measures 3¾ inches x 6¼ inches x 2 inches. Power is supplied by two 1.5 volt penlite batteries (not included). The unit is contained in a sturdy bakelite case.



WG-412A

$30.00*

Features

- **Available in wired (WG-412A) or kit form (WG-412A(K))**
- **36 resistors in standard values from 15 ohms to 10 megohms (1 watt power rating, tolerance ±10%)**
- **18 capacitors from 100 pF to 0.22 uF (600V rating, tolerance ±10%)**
- **Simplified switching for separate R or C, or series or parallel RC**
- **Standard ¾" terminal-jacks — accommodates dual banana-plug**
- **Complete with plug-in test leads and alligator-clip connectors**

Description

he RCA WG-412A provides a convenient selection of standard esistors and capacitor values available either separately or series or parallel RC combinations. The unit includes 36 esistors ranging in value from 15 ohms to 10 megohms nd 18 capacitors from 100 picofarads to .22 microfarads. Some uses of the R-C Circuit Box include component ubstitution in servicing and circuit design applications and tablshing R-C circuits for checking impedance, reactance, and frequency characteristics. The unit is also useful for classroom applications to demonstrate Ohm's Law, capacitive reactance, and other circuit effects caused by introducing various resistance and capacitance combinations.

The RC Circuit Box is provided with plug-in test leads with convenient alligator clip connectors (WG-413A). The unit measures 6⅞ inches by 5⅜ inches by 2⅜ inches and weighs approximately one pound, 12 ounces.

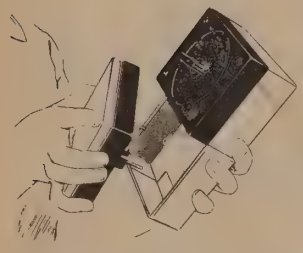
*** Optional User Price**

SANWA

NEW B-45TRd
MODULAR CONSTRUCTION, EASIER TO USE, GREATER CONVENIENCE

The new Sanwa B-45TRd multitester is made of three detachable components — a plug-in meter, a plug-in separate control panel, and a base. The meter block can be plugged in above or below in the base case, whichever is most convenient for operation.

Should a meter or control panel need calibration or repair when damaged, replacement with a spare plug in part will immediately put the instrument back into use. A



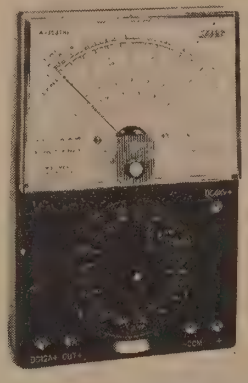
remarkable new concept from Sanwa! Plug-in meter blocks and control panels are available from stock.

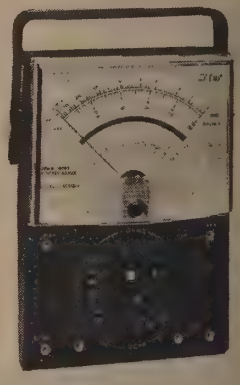
thirty years and eighty countries later, we're ready for the U.S.A.

TR SERIES MULTITESTERS

Besides performing as wide range circuit testers, the Sanwa TR Series Multitesters serve as simplified semiconductor checkers. The LI and LV scales indicate characteristics of semiconductors like transistors, diodes, thermistors, etc. ■ Sensitive movements from 35 to 100 microamperes, and low DC voltage ranges (0.25V ~ 2.5V) efficiently check transistor circuits. High input impedance obtains accurate measurement. ■ The DC ranges of 50 μA ~ 100 μA read the reverse current and I_{co} of semiconductors. Forward and back current, and resistance I_c and I_{ceo} of in circuit transistors are checked on the LI scale.







SPECIFICATIONS	B 45 TR$_D$ $39.95	A-303TR$_D$ $27.95	501-ZTR$_D$ $46.95
Sensitivity	20,000Ω/VDC; 8,000Ω/VAC	20,000Ω/VDC; 8,000Ω/VAC	20,000Ω/VDC; 4,000Ω/VAC
Accuracy	DC(±)1% at full scale AC(±)2% at full scale Ω:(±)3%	DC ± 2.5%; AC ± 3%; Resistance ± 3%	DC ± 2%; AC ± 3%; Resistance ± 3%
Measurement Ranges			
DC Volts	0.25; 1; 2.5; 10; 50; 250; 1kV; 25kV*	0.3V; 1.2V; 3V; 12V; 30V; 120V; 300V; 1.2KV; 6KV	0.25V; 0.5V; 2.5V; 10V; 50V; 250V; 500V; 1KV; 5KV; 25KV Complete with 25 KV Probe
AC Volts	2.5; 10; 50; 250; 1kV	6V; 30V; 120V; 300V; 1.2KV	2.5V; 10V; 50V; 250V; 1KV
DC Amperes	50μA; 2.5ma; 25ma; 250ma; 10A	60μA; 3mA; 30mA; 300mA; 12A	50μA; 1mA; 10mA; 100mA; 250mA;10A
Resistance Range	X1 X10 X100 X1k X10k	Rx1 Rx100 Rx1K Rx10K	Rx1 Rx10 Rx100 Rx1K Rx10K
Midscale	25Ω 250Ω 2.5kΩ 25kΩ 250kΩ	25Ω 2.5KΩ 25KΩ 250KΩ	34Ω 340Ω 3.4KΩ 34KΩ 340KΩ
Maximum	5kΩ 50kΩ 500kΩ 5MΩ 50MΩ	5KΩ 500KΩ 5MΩ 50MΩ	5KΩ 50KΩ 500KΩ 5MΩ 50MΩ
Special Transistor Scales For Load Current & Voltage	LI 60mA 6mA 600μA 60μA (100μA) LV 1.5V 1.5V 1.5V 1.5V (24V)	LI 600mA 600μA 60μA LV 1.5V 1.5V 1.5V	LI 85mA 8.5mA 850μA 85μA LV 3V 3V 3V 3V
dB Scale	−20~+62dB	−10~+17~+63dB (OdB=0.775V/600Ω)	−10~+22dB on AC 10V range & up to 62dB
Frequency Coverage	20 Hz~100 KHz	50Hz ~ 100KHz below 30 VAC (±3%) Below 10KHz for other ranges	50 Hz~100 KHz below 30 VAC (± 3%) Below 10 KHz for other ranges
Internal Batteries	One each 1.5V (Eveready 935 or equiv.); 22.5V (Eveready 412 or equiv.)	One each 1.5V (Eveready 935 or equiv.); 22.5V (Eveready 412 or equiv.)	Two 1.5V (Eveready 935 or equiv.) One 22.5V (Eveready 412 or equiv.) Polarity Reversing Switch
Size	7 X 4.7 X 2.9 in.	7 x 4.52 x 2.22 in.	7.14 x 5.24 x 3.24 in.

*with optional external 480 MΩ probe

SANWA Corporation of America . . .

© United Technical Publicatio

SANWA

Thirty years of experience supplying 80 countries taught us the value of effective design engineering and precision manufacturing. Sanwa pioneered many new concepts in multitesters. We believe a VOM should deliver the performance promised in the specifications. Sanwa gives more.

These better instruments are now available in the United States, backed by the effective sales and service facilities of Sanwa Corporation of America.

Sanwa gives you greater versatility, greater range, guaranteed dependability, new ideas — and cost savings.

All meter movements are protected against kinetic shock by either spring backed jewels or taut-band suspension. Instrument movements are diode-protected to minimize electrical overload damage. Precision-aged higher wattage multiplier resistors contribute to rugged, dependable Sanwa performance. Every instrument has a single knob range selector.

Design leadership, quality, value and we back every one with the unprecedented Sanwa 2-year guarantee.

THE UNPRECEDENTED SANWA WARRANTY

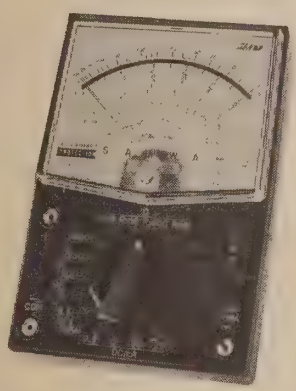
Sanwa products are warranted to be of good workmanship and quality, and free from defects. Our products will be repaired or replaced (except batteries and lamps) if our examination shall disclose them to have been defective under proper and normal use — provided they be returned prepaid to Sanwa Corporation of America (or one of its authorized service centers) within two years after the date of purchase. Sales invoice or other proof of purchase must accompany instruments returned under this warranty.

In the event of misuse during the warranty period, an instrument may be replaced at 60% of the suggested list price. The customer will have the option of repairing or replacing if the cost of repair exceeds 25% of the suggested list price. In every case, the instrument must be returned (prepaid) to the Sanwa Corporation of America.

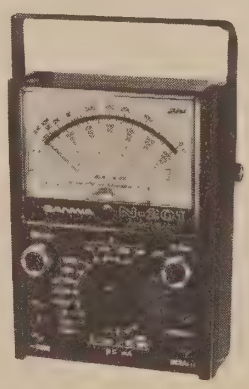
COMPACT WITHOUT COMPROMISE! POCKET-SIZE U-50Dn VOM

20,000 ohms per volt meter movement is zener diode safeguarded against overload damage. Special low voltage and low current ranges for semiconductor circuit evaluation. 22 ranges self-contained!

Ideal instrument for servicing and maintenance. The U-50Dn is standard equipment with many national field service organizations.



ELECTRONIC MULTITESTER (N-201)



DUAL RANGE MULTITESTER (N-101)

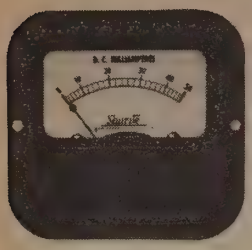


SPECIFICATIONS	U-50DN $19.95	N-201	N-101 $46.95
Sensitivity	20,000Ω/VDC; 8,000Ω/VAC	200,000Ω/VDC (to 120V; 20,000Ω/V 600-3000VDC); 10,000Ω/VAC	50,000/25,000Ω/VDC; 10,000/5,000Ω/VAC
Accuracy	DC ± 3%; AC ± 4%; Resistance ± 3%	DC ± 3%; AC ± 4% Ω ± 3% of scale length	DC ± 3%; AC ± 4% Ω ± 3% of scale length
Measurement Ranges			
DC Volts	0.1V; 0.5V; 5V; 50V; 250V; 1KV	0.3; 1.2; 3; 12; 30; 120; 600; 1200; 3000	0.3; 1.2; 6; 30; 120; 600 (50kΩ/V) 0.6; 2.4; 12; 60; 240; 1200 (25kΩ/V)
AC Volts	2.5V; 10V; 50V; 250V; 1000V	3; 12; 120; 300; 600	6; 30; 120; 600 (10kΩ/V) 12; 60; 240; 1200 (5kΩ/V)
DC Amperes	50μA; 0.5mA; 5mA; 50mA; 250mA	6μA; 0.12ma; 3ma; 30ma; 600ma; 3A	30μA 3ma 30ma 300ma 6A 60μA 6ma 60ma 600ma 12A
Resistance Range	Rx1 Rx10 Rx100 Rx1K	X0.1 X10 X100 X1k	X1 X10 X100 X10k
Midscale	50Ω 500Ω 5KΩ 50KΩ	50Ω 5KΩ 50KΩ 500KΩ	43Ω 430Ω 4.3KΩ 430KΩ
Maximum	5KΩ 50KΩ 500KΩ 5MΩ	5k 500k 5M 50M	5k 50k 500k 50M
Special Transistor Scales For Load Current & Voltage			LI 35mA 3.5mA 0.35mA LV 1.5V 1.5V 1.5V
dB Scale	−20~+62dB	−20~+57	−20~+57
Frequency Coverage		30 Hz ~ 100KHz	30 Hz~20 KHz
Internal Batteries	Two 1.5V (Eveready 915 or equiv.)	Four 1.5V (Eveready 935 or equiv.)	Three 1.5V AA (Eveready 935 or equiv.) One 9V (Eveready 216 or equiv.)
Size	5.2 x 3.5 x 1.5 in.	6.2 X 4.7 X 1.9 in.	5.9 X 4.1 X 2 in.

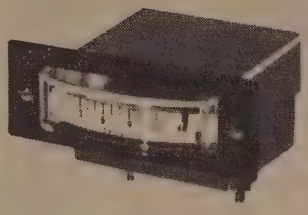
Hand Crafted in Japan

... for people who know the difference SANWA

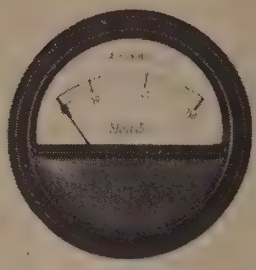
Shurite® PANEL METERS



MODEL 950 SERIES
(metal case)
ZERO ADJUSTER
OPTIONAL ON DC



MODEL 350 SERIES
(crystal clear front)
EDGEWISE METER



MODEL 550 SERIES
(metal case)
RIMLESS ROUND TYPE



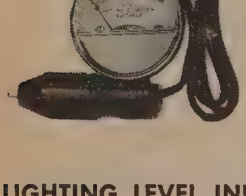
MODEL 850 (actual size) ZERO ADJUSTER OPTIONA

● Manufactured in SHURITE'S new Connecticut plant, these meters are attractive, rugged, dependable indicators with accuracy well within ±5%, and the ability to duplicate readings. DC meters are polarized-vane solenoid type (moving-magnet or bridge-type construction where indicated); AC meters are double-vane repulsion type with jeweled bearing. The jewel construction costs more to build, but it pays off in continuing accuracy during a longer useful life. Models 550 and 950 fit 2-5/32" hole; Model 850 fits 2-5/32" to 2-1/32" hole.

FEATURES

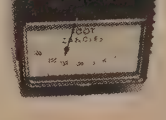
GUARANTEE: One year to user if returned to factory prepaid with 50c handling charge . . . **ALL METAL DIALS** — age and moisture resistant . . . **HIGH RATIO TORQUE-TO-WEIGHT** — gives fast pointer response . . . **VISCOSITY DAMPING** — effectively damps pointer overtravel . . . **CLEAR-PLASTIC 850 CASE** — crystal-clear, high-temperature, high-impact polystyrene case brings light to longest scale arc in its field; case back same material except black . . . **WIDE SELECTION** — Shurite offers the broadest line of standard meters in the economy-priced field. Distributor stocks are backed by an extensive factory inventory.

NEW AUTO BATTERY CONDITION TESTER



STOCK NO. 4153 — Four-color dial shows condition of 12 volt battery for starting and running, also charging rate of generator as too low or too high. May be left connected permanently, if desired, as it draws less current than an auto clock. Attractively blister-packed, with cigarette lighter plug, 24" cord, and mounting material **$4.95**

LIGHTING LEVEL INDICATOR



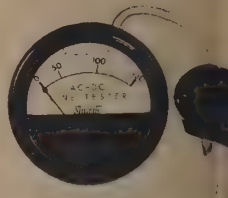
STOCK NO. 7902-FC — Simply place this pocket-size meter (molded case 3¼"x 2⅛"x1⅛") on bench, desk, or other work surface and read illumination value in foot candles on a 300-fc scale. Shielded to minimize the effect of external magnetic influences. Developed for utilities in Edison Electric Institute for training in providing suitable lighting. Individually boxed **$9.75**



COLD-ZONE TESTER MODERATELY PRICED

STOCK NO. 8380-RT — Place the thin," flat resistance bulb inside a refrigerator, deep freezer, air conditioner or other cooling equipment, close the door on the polyethylene ribbon lead, allow the bulb temperature to stabilize, and get a direct reading from —40 to +120°F. Saves time, builds customer confidence. Red pointer; 2⅛" scale arc, readable to ±2°; accuracy well within commercially accepted standards of ±5° (±3%). For further details, ask for Bulletin CT-1. Tester comes in gray vinyl case 5" x 5" x 4½", complete with 8 ft. Model SA-309 thin, fast responding bulb and 7½ volt standard battery **$24.00**

AC-DC LINE VOLTAGE TESTER



Stock No. 5406-LT — Plug-in to read line voltage, then demonstrate voltage drop or inadequate wiring by plugging in TV set, iron, toaster, washer, air-conditioner, shop equipment, etc. Features of this handy tester: a) attached plug receptacle permits continuous reading while loads are changed; b) reads to 150 volts AC or DC; c) cord allows convenient angle for reading; d) jewel bearing construction provides continuing accuracy **$5.20**

VU, S, and FIELD STRENGTH METERS

VU METERS — Reed volume levels in audio transmission circuits scale —20 to +3 VU, red and black. AC rectifier type; pointer n mally at —20 VU; 1400 ohms ±5% int. res. See Bulletin **VUS-70** application circuitry. High-temperature clear-plastic cases.
STOCK NO. 8801Z—850 Series, zero adjuster included; as illustrated **$5.**
STOCK NO. 3801—Edgewise case, zero adjuster not available .... **$5.**

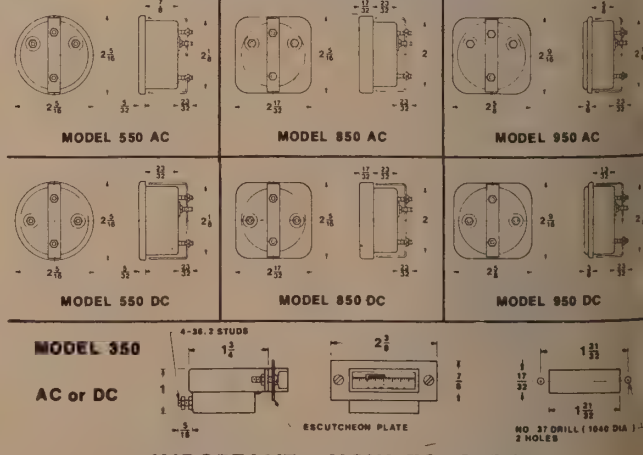
S METERS — To measure relative signal strength; black and red sca basic movement 0-5 Ma. DC with 1000 ohms int. res. ±5%; for appli tion notes and circuits, see Bulletin **VUS-70.** High-temperature cle plastic cases.
STOCK NO. 3333 — 350 Series, 0-40 db, shown above, pointer n mally at 40 ..... **$3**
STOCK NO. 8333* — 850 Series; 0-60 db, pointer normally at 60.... **$3**
*For zero adjuster, add 35c to price and Z to stock number.

FIELD STRENGTH METER — When this meter — a variation of D.C. Milliammeter — is built into an elementary circuit (supplied on quest), antenna systems may be easily checked, tuned, phased, matched to transmission lines.
STOCK NO. 8903Z — 850 Series case; top scale marked .1, .5, 1, 2, 3, 5, 7, 10; bottom scale marked 2, 4, 6, 8, 10; zero adjuster include meter only ..... **$4.**

3-HOLE MOUNTING ADAPTER

MODEL 5-A — 2¾" black flange attaches from front, converts Model 5 (round) meter to 3-hole flange type ..... **$0.**

MOUNTING DIMENSIONS



IMPORTANT — HOW TO ORDER

Give (1) Model Number, (2) Range, (3) Stock Number.
ZERO ADJUSTER (Z) 35c extra; see footnotes as to availability.
PANEL CALIBRATION (S) Normally for non-magnetic panels. If ste panel mounting, give thickness and size; add S to stock number.
SEE YOUR DISTRIBUTOR Authorized Shurite distributors carry m models and can obtain your other needs promptly.

Prices Effective Nov. 1, 1970; F.O.B. Factory; Individually Boxed; (Subject to Change.)

Trade Discount Applies To List Prices Only
© United Technical Publicatio

SHURITE METERS

DC MICROAMMETERS

RANGE Ua.	RESIST. Approx. Ohms	Model 550* Stock No.	Model 950* Stock No.	Model 950* Net Each	Model 850* Stock No.	Model 850* Net Each
0-500**	1000	5902	9902	$4.70	8902	$4.80

*For zero adjuster, add 35c to price and Z to stock number.
**Sensitive type, note internal resistance. DC bridge-type construction.

DC MILLIAMMETERS

RANGE Ma.	RESIST. Approx. Ohms	Model 550* Stock No.	Model 950* Stock No.	Model 950* Net Each	Model 850* Stock No.	Model 850* Net Each
0-1†	1000	5336	9336	$4.25	8336	$4.35
0-2†	500	—	—	—	8335	4.35
0-3	4460	5301	9301	3.55	8301	3.65
0-5	3740	5302	9302	3.25	8302	3.35
0-10	1380	5303	9303	3.10	8303	3.20
0-15	600	5304	9304	3.10	8304	3.20
0-25	230	5305	9305	3.10	8305	3.20
0-50	58	5306	9306	3.10	8306	3.20
0-100	14.7	5307	9307	3.10	8307	3.20
0-150	7.0	5308	9308	3.10	8308	3.20
0-200	4.7	5309	9309	3.10	8309	3.20
0-300	1.7	5310	9310	3.10	8310	3.20
0-400	.84	5311	9311	3.10	8311	3.20
0-500	.7	5312	9312	3.10	8312	3.20

For zero adjuster add 35c to price and Z to stock number.
Bridge-type construction; internal magnet design minimizes effects of external magnetic forces. Price does not include zero adjuster.

AC MILLIAMMETERS

RANGE Ma.	RESIST. Approx. Ohms	Model 550 Stock No.	Model 950 Stock No.	Model 950 Net Each	Model 850* Stock No.	Model 850* Net Each
0-10	4800	5607	9607	$4.60	8607	$4.70
0-25	750	5601	9601	4.60	8601	4.70
0-50	150	5602	9602	4.60	8602	4.70
0-100	37	5603	9603	4.60	8603	4.70
0-250	5.4	5604	9604	4.60	8604	4.70
0-500	1.34	5605	9605	4.60	8605	4.70

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.
For zero adjuster add 35c to price and Z to stock number.

DC AMMETERS

RANGE Amps	RESIST. Approx. Ohms	Model 550* Stock No.	Model 950* Stock No.	Model 950* Net Each	Model 850* Stock No.	Model 850* Net Each
0-1	.105	5201	9201	$3.10	8201	$3.20
0-3	.02 Max.	5202	9202	3.10	8202	3.20
0-5	.02 Max.	5203	9203	3.10	8203	3.20
0-8	.02 Max.	5204	9204	3.10	8204	3.20
0-10	.02 Max.	5205	9205	3.10	8205	3.20
0-15	.02 Max.	5206	9206	3.10	8206	3.20
0-25	.02 Max.	5207	9207	3.50	8207	3.60
0-50	.02 Max.	5208	9208	3.50	8208	3.60
3-0-3	.02 Max.	5210	9210	3.20	—	—
5-0-5	.022	5211	9211	3.20	—	—
5-0-6	.02 Max.	5212	9212	3.20	—	—
10-0-10	.02 Max.	5213	9213	3.50	8213	3.60
20-0-20	.02 Max.	5214	9214	3.50	8214	3.60
30-0-30	.02 Max.	5215	9215	3.50	8215	3.60
50-0-50	.02 Max.	5216	9216	3.70	8216	3.80

For zero adjuster add 35c to price and Z to stock number.

AC AMMETERS

RANGE Amps	RESIST. Approx. Ohms	Model 550 Stock No.	Model 950 Stock No.	Model 950 Net Each	Model 850* Stock No.	Model 850* Net Each
0-1	.42 Max.	5501	9501	$4.40	8501	$4.50
0-3	.072 Max.	5502	9502	4.40	8502	4.50
0-5	.041 Max.	5503	9503	4.40	8503	4.50
0-10	.02 Max.	5504	9504	4.40	8504	4.50
0-15	.02 Max.	5508	9508	4.40	8508	4.50
0-30	.02 Max.	5505	9505	4.50	8505	4.60
0-50	.02 Max.	5506	9506	4.75	8506	4.85
0-80	.02 Max.	—	—	—	8507	5.00

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.
For zero adjuster, add 35c to price and Z to stock number.

RESISTANCE METERS

RANGE Ohms	Volts	Model 550* Stock No.	Model 950* Stock No.	Model 950* Net Each	Model 850* Stock No.	Model 850* Net Each
0-10,000	4.5**	5701	9701	$3.50	8701	$3.60

For zero adjuster, add 35c to price and Z to stock number.
Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.

DC VOLTMETERS

RANGE Volts	RESIST. Approx. Ohms	Model 550* Stock No.	Model 950* Stock No.	Model 950* Net Each	Model 850* Stock No.	Model 850* Net Each
0-1	10	5101	9101	$3.10	—	—
0-3	93	5102	9102	3.10	8102	$3.20
3-0-3	250	5103	9103	3.10	—	—
0-5	300	5104	9104	3.10	8104	3.20
0-6	390	5105	9105	3.10	—	—
0-8	600	5106	9106	3.10	8106	3.20
0-10	880	5107	9107	3.10	8107	3.20
0-15	2370	5108	9108	3.10	8108	3.20
0-20	3500	5121	9121	3.10	8121	3.20
0-25	1420	5109	9109	3.30	8109	3.40
0-25H**	5000	5110	9110	3.55	8110	3.65
0-50	2920	5122	9122	3.20	8122	3.30
0-50H**	10000	5111	9111	3.80	8111	3.90
0-75	4280	5112	9112	3.30	—	—
0-100	5740	5113	9113	3.30	—	—
0-100H**	20000	5114	9114	3.80	—	—
0-150	8500	5115	9115	3.50	8115	3.60
0-150H**	30000	5116	9116	3.80	8116	3.90
0-300H**†	60000	5117	9117	4.00	8117	4.10
0-500H**†	100000	5118	9118	4.15	8118	4.25

*For zero adjuster add 35c to price and Z to stock number.
**H denotes high resistance.
†Supplied with external resistors.

AC VOLTMETERS

RANGE Volts	RESIST. Approx. Ohms/ Volt	Model 550 Stock No.	Model 950 Stock No.	Model 950 Net Each	Model 850* Stock No.	Model 850* Net Each
0-4	11	5401	9401	$4.50	—	—
0-6	15.8	5402	9402	4.50	—	—
0-10	27	5403	9403	4.50	8403	$4.60
0-15	35	5404	9404	4.50	8404	4.60
0-20	44	5413	9413	4.50	8413	4.60
0-25	53	5412	9412	4.50	8412	4.60
0-50	96	5405	9405	4.50	8405	4.60
0-150	100	5406	9406	4.70	8406	4.80
0-300**	100	5407	9407	4.95	8407	5.05
0-500**	100	5414	9414	5.55	8414	5.65

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.
*For zero adjuster add 35c to price and Z to stock number.
**Supplied with external resistors.

EDGEWISE METERS — MODEL 350 SERIES

High-temperature crystal polystyrene front adds beauty to panel designs and 1.2" scale length offers easy reading. Uses less than half the panel space of other Shurite meters. Horizontal mounting; weight under 2 ozs.; accuracy well within ±5%; black escutcheon plate supplied. Case back normally black; available in light-transmitting frosted polystyrene on special order.

RANGE	Approx. Typical RESIST. (ohms)	Stock No.	Net Each
DC MILLIAMMETERS			
0-1*	500	3300	$4.20
0-5*	100	3302	3.60
0-10*	50	3303	3.60
0-25*	20	3305	3.60
0-50*	10	3306	3.60
0-100*	5	3307	3.60
0-200*	2.5	3309	3.60
0-300*	1.7	3310	3.60
0-500*	1	3312	3.60
DC AMMETERS			
0-3*	.02 Max.	3202	3.60
0-10*	.02 Max.	3205	3.60
0-15*	.02 Max.	3206	3.60
10-0-10*	.02 Max.	3213	3.70
DC VOLTMETERS			
0-5*	1000	3104	3.70
0-10*	2000	3107	3.70
0-15*	3000	3108	3.70
AC VOLTMETERS			
0-15*	1200	3404	4.60
0-150*	48000	3406	4.80
VU Meter —20 +3 VU*	1400	3801	5.25
S Meter 0-40 db*	1000	3333	3.90

*Bridge-type construction; internal magnet design minimizes effects of external magnetic forces.

POCKET TYPE METERS

Please ask for General Catalog 100 which describes 13 types of battery testers (pocket meters). Their stock numbers begin with the digit 4. Typical is **Stock No. 4151,** 0-7 DC volts, approx. res. 670 ohms **$3.80**

Prices Effective Nov. 1, 1970; F.O.B. Factory; Individually Boxed; (Subject to Change.)

Simpson
INSTRUMENTATION PRODUCTS

DIGITAL INSTRUMENTS

■ 2700 DIGITAL SYSTEM

Integrated circuit design for compactness and reliability. Plug-in function modules are available for DC voltage, DC current, and resistance measurements. Has 4 full-time digits plus automatic overrange and polarity indications.

2700 complete with DC voltage range module, test leads, and operator's manual **$615.00**

SPECIFICATIONS

Ranges (with DC voltage module): 1, 10, 100, 1,000 DC volts.
Accuracy: ±0.05%, ±1 digit.
Input Impedance: 10.2 MegΩ.
Overrange: Linear to 10%.
Polarity Selection: Automatic, with indication.
Response Time: 5 seconds, maximum.
Sampling Rate: Variable, from 20 milliseconds to "hold."
Power Required: 115 or 220 VAC (±10%), 50-60 Hz., at 11.5 watts.



■ OPTIONAL PLUG-IN FUNCTION MODULES

System designed plug-in modules take just seconds to change. New function and ranges are shown on dial plate carried by module.

Resistance Module: 1 kΩ, 10 kΩ, 100 kΩ, 10 MegΩ. Cat. No. 22901 .....**$100.00**

DC Current Module: 1 mA, 10 mA, 100 mA, 1 Amp. Cat. No. 22903 .....**$100.00**

AC Voltage Module: 10, 100, 1000 volts. Cat. No. 22902 .....**$100.00**

SPECIFICATIONS

Accuracy: ±0.05% of reading (except 10 MegΩ range of resistance module: ±1.0% of reading).
Accuracy of 2700 system after interchanging modules: ±0.1% of reading (without recalibration). ±0.05% of reading (with recalibration).



■ *NEW!* 2726 ELECTRONIC COUNTER

New six-digit counter measures frequency from 5 Hz to 32 MHz, plus frequency ratios, time periods, time intervals, and totalization. Front panel "self test" position. Also features new multiple period/ratio control and new switch selectable sensitivity control. New ±0.001% accuracy.

2726 complete with probe and operator's manual **$575.00**

SPECIFICATIONS

Ranges:
Average Frequency: 5 Hz to 32 MHz.
Frequency Ratio: 0.001 to 1,999999 x 10^6
Time Interval: 100 μ seconds to 1.999999 x 10^6 seconds.
Time Periods: 100 nanoseconds to 0.2 seconds.
Totalization: 0 to 1.999999 x 10^6 counts.
Accuracy: ±0.001%, ±1 digit.
Input Impedance: 1 Meg Ω on channel "A", 500 k Ω on channel "B".
Time Bases: 7 bases, crystal controlled.
Overrange: Automatic indication.
Power Required: 115 or 230 VAC (±10%), 50-60 Hz, at approximately 20 watts.



■ *NEW!* 2725A ELECTRONIC COUNTER

Same features as the model 2726 shown above, but with 5-digit resolution.

2725A complete with probe and operator's manual **$525.00**

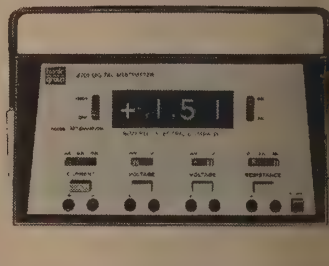
■ 2701 DIGITAL MULTIMETER

Complete digital VOM has AC-DC voltage, AC-DC current, and resistance ranges. Fast and accurate: simply set magnatude switch and press a button. Reading appears as a 3-digit number complete with polarity sign and decimal point. Decimal point automatically switches over three decade ranges. No errors from scale interpolation — even when used by unskilled personnel.

2701 complete with test leads and operator's manual **$835.00**

SPECIFICATIONS

Ranges:
AC/DC mV: 10, 100, 1,000.
AC/DC Volts: 10, 100, 600
AC/DC nA: 1,000
AC/DC uA: 10, 100, 1,000
AC/DC mA: 10, 100, 1,000
Ohms: 100, 1,000
k-Ohms: 10, 100, 1,000
Megohms: 10, 100, 1,000
Accuracy:
DC: ±1.0% of reading.
AC: ±1.5% of reading.
Resistance up to 1,000 kΩ: ±0.5% of reading. (Accuracy on all ranges limited to ±0.2% of full scale).
Power Required: 105-130 VAC, 60 Hz, at 60 watts.



NEW! R-L-C BRIDGE

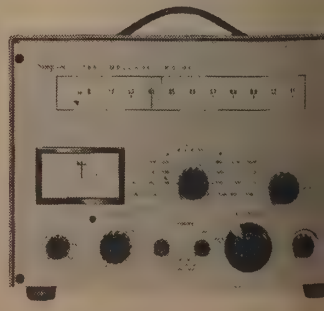
■ MODEL 2785

Multi-purpose bridge measures capacitance, inductance, resistance, and "Q". Powered by two long-life 9-volt batteries, a built-in generator operates at the standard test frequency of 1 kHz. DC is used for all resistance measurements. Long slide-rule dial and sensitive galvanometer make it simple and fast to use.

2785 complete with batteries, test leads and operator's manual **$350.00**

SPECIFICATIONS

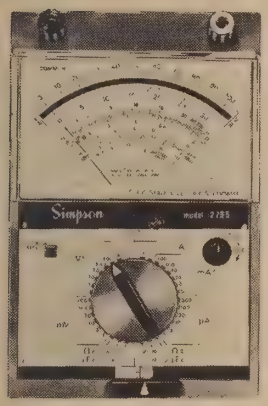
Ranges:
0.05Ω to 11 MegΩ in 8 ranges.
0.5 μ-Henrys to 110 Henrys in 8 ranges.
5 p-Farads to 1100 μ-Farads in 8 ranges.
Qx1, tan-d x 0.01, tan-d x 1.
Accuracy:
R, L, C: ±1.0% (except 1Ω, 10 MegΩ, 10 μH, 100H, and 1,000 μF ranges: ±2.5%).
Q: ±5%.
Power Required: Two 9-volt batteries (NEDA type 1603).
Rated Life: 150 hours.



Available from authorized Simpson Instrumentation Products distributors

Simpson PRECISON MULTIMETER—RECORDERS

NEW! 68-RANGE MOS-FET LAB-ACCURACY MULTIMETER



MODEL 2795

New high precision solid-state multimeter has lab accuracy VOM functions **plus** AC current, capacitance, and temperature ranges! Advanced design offers high input impedance, negligible voltage drop, ±1% DC and AC accuracy — all in a portable, battery operated instrument. Built-in circuit breaker protects the entire tester from overloads — works even if batteries are dead — resets with push-button.

Model 2795 .....**$230.00**

SPECIFICATIONS

Accuracy: ±1.0% of full scale, AC and DC.

Ranges:

AC/DC Voltage: 0-1 mV to 0-1 kV in 13 ranges.
AC/DC Current: 0-1 μA to 0-3 Amps in 14 ranges.
Resistance: 10 Ω to 1 Meg Ω (mid-scale values) in 6 ranges.
Capacitance: 100 μF to 1 nF (mid-scale values) in 6 ranges.
Temperature: ±18°C and ±180°C from ambient.

Input Impedance: 1 Meg Ω @ 1 Volt (AC and DC).

Voltage Drop: 3 mV @ 1 mA (AC and DC).

Temperature Probe: I/C ≤ 30 Ω thermocouple (optional accessory).

Other Accessories Available

MULTI-RANGE MULTICORDERS



Dependable inkless recording system. Single switch selects range desired, with both range and measured value being recorded. High torque taut band movement cannot develop friction from shock or vibration. Model 604 has 22 ranges. Model 605 has 27 ranges. Both offer recording at less than $10 per range.

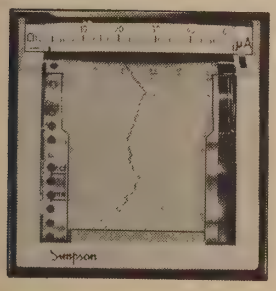
Model 604 MULTICORDER **$200.00**
Model 605 MULTICORDER **215.00**

SPECIFICATIONS

Accuracy: ±2.5% of full scale.
Chart Speeds: 1, 3, 12 inches/hr.
Power Required: 115 VAC, 60 Hz.
MODEL 604 RANGES:
(at 20 kΩV DC, 5 kΩV AC sensitivity)
DC mV: 100, 500
DC Volts: 2.5, 10, 25, 100, 250, 500
AC Volts: 10, 25, 100, 250, 500
DC μA: 50, 250
DC mA: 1, 5, 25, 100, 250
DC Amperes: 1
AC μA: 200

MODEL 605 RANGES:
(at 666 Ω/V AC and DC sensitivity)
DC mV: 12, 30, 60
DC Volts: 3, 15, 60, 300, 600
AC Volts: 6, 30, 150, 300, 600
DC μA: 600
DC mA: 1.5, 3, 6, 30, 150
DC Amperes: 1.2, 6
AC mA: 3, 15, 60, 300
AC Amperes: 1.2, 6.

PRECISION LONG-TERM RECORDERS



- **SINGLE & DUAL CHANNEL**

Record for up to a month without changing chart paper. Inkless recording system never needs refills. Quick-change gearboxes provide chart speeds from 20 to 600 mm/hr. (20/120 mm/hr. supplied with recorder). Compact — mount in just 3¾"-square of panel space. Available in models for recording electrical values, temperature, or event channels.

SPECIFICATIONS

Accuracy: ±1.5% of full scale for electrical values. ±2°F. for temperature (±3°F. with model 2761 outside of 0-120°F. range).
2755: 10 millisecond response time on event recorder solenoids. Chart speeds to 3600 mm/per hour. 10 channels of information in just 3¾" panel cutout.
Chart Speeds: 20/120 mm/hr. (switch selectable). Gearboxes for other speeds available.
Panel Mounting: Bracket supplied. Requires just one 3.6 x 3.6 inch cutout.
Portable Operation: Carrying handle available.
Paper Take-Up: Built-in. Automatic.
Power Required: 115 VAC, 60 Hz.

DEL 2750 — Electrical Ranges

Range	Terminal Resistance	Catalog No.	Price
10 DC Microamperes	1,500Ω	22000	$167.00
50 DC Microamperes	1,100Ω	22002	153.00
100 DC Microamperes	970Ω	22003	147.50
500 DC Microamperes	280Ω	22004	142.00
1 DC Milliampere	20Ω	22005	140.00
1/0-1 DC Milliampere (Dual Channel)	20Ω	22024	165.00
0.4 . . . 25 DC Millivolts (Adjustable)	>50 MegΩ	22030	250.00
50 DC Millivolts	1,000Ω/v	22008	142.00
5 AC Amperes	†0.014Ω	22113	153.00
150 AC Volts	†1,000Ω/v	22110	148.00
3.5-126.5 AC Volts (Segmental Scale)	†1,000Ω/v	22115	175.00
300 AC Volts	†1,000Ω/v	22116	148.00

†Impedance at 60 Hz

MODELS 2761/2762 — Temperature Ranges

Model 2761 — Range	Cat. No.	Price
−50° to +50°F, +50° to +150°F, +150° to +250°F (3 ranges, switch selectable)	23151	$190.00
Model 2762 — Range		
−40° to +60°F, +50° to +150°F (2 ranges, switch selectable). Dual channel (same range recorded on both channels, 2 inputs).	23152	210.00

MODEL 2755 — Event Channels

Voltage	Power Per Solenoid	Catalog No.	Price
10 Channels, 6 Volts DC	1.2 Watts	22203	$175.00
10 Channels, 12 Volts DC	1.2 Watts	22202	175.00
10 Channels, 24, Volts DC	1.2 Watts	22201	175.00
10 Channels, 115 Volts AC, 60 Hz	2.2 VA	22200	175.00

Available from authorized Simpson Instrumentation Products distributors

Simpson WIDE-VUE PANEL INSTRUMENTS

CALIBRATION — All DC Wide-Vue meters listed below have the Simpson self-shielded movem (calibration not affected by stray magnetic fields or magnetic mounting). All AC Wide-Vue meters h the Simpson Iron-vane type movement. AC Milliammeters and Ammeters are calibrated for use on through 800 Hz. All AC Voltmeters are calibrated for use on 25 through 125 Hz. Calibration at frequenc up to 800 Hz can be made. Contact your local Distributor for prices.



1½" Models



2½" Models



3½" Models



4½" Models



8" Models

SPECIFICATIONS

Size	Type and Model Number: DC	AC: Rectifier	AC: Iron Vane	RF	Watt	Accuracy	Scale Length	Pointer
1½"	1212, 1212T	1214	—	—	—	DC; RF; AC Iron Vane; Wattmeters* ±2%	1.50" (38.1 mm)	Lance, Blac
2½"	1227, 1227T	1247	1257	—	—		2.30" (58.4 mm)	Spade, Black
3½"	1327, 1327T	1347	1357	1337	—		3.14" (79.7 mm)	
4½"	1329, 1329T	1349	1359	1339	1379	AC Rectifier Meters ±3%	3.93" (100.0 mm)	
8"	728T	—	—	—	—		6.9" (174.2 mm)	

*Compensated Wattmeters ±3%.

DC VOLTMETERS Self-Shielding Meter Movement

Range	Approx. Resistance (ohms)	1½" Case Style Cat. No.	1½" Price	2½" Case Style Cat. No.	2½" Price	3½" Case Style Cat. No.	3½" Price	4½" Case Style Cat. No.	4½" Price
Range	**Approx. Ω**	**Model 1212**		**Model 1227**		**Model 1327**		**Model 1329**	
0-5	1000 ohms per volt	9540	$18.75	9550	$20.10	9720	$20.85	9870	$22.80
0-8		—	—	—	—	9730	20.85	9880	22.80
0-10		9541	18.75	9560	20.10	9740	20.85	9890	22.80
0-15		9542	18.75	9570	20.10	9750	20.85	9900	22.80
0-25		9543	18.75	9580	20.10	9760	20.85	9910	22.80
0-30		9544	18.75	9590	20.10	9770	20.85	9920	22.80
0-50		9545	18.75	9600	20.10	9780	20.85	9930	22.80
0-100		9546	18.75	9610	20.10	9790	20.85	9940	22.80
0-150		9547	18.75	9620	20.10	9800	20.85	9950	22.80
0-200		—	—	9622	20.10	9810	20.85	9960	22.80
0 250		—	—	9623	20.10	9820	20.85	9970	22.80
0-300		—	—	9630	20.10	9830	20.85	9980	22.80
0-300		9548	18.75	—	—	—	—	—	—
0-500	2000 ohms per volt	9549*	23.40	9640	20.85	9840	21.75	9990	23.55
0-750		—	—	9650*	25.35	9850	21.75	10000	23.55
0-1000		—	—	9660*	26.10	9860*	27.00	10010*	28.80

DC AMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1212		Model 1227		Model 1327		Model 1329	
0-1	.050	2431	$18.75	2122	$19.20	2640	$20.10	2820	$21.75
0-1.5	.033	—	—	2450	19.20	2650	20.10	2830	21.75
0-2	.025	2432	18.75	2460	19.20	2660	20.10	2840	21.75
0-3	.0166	2433	18.75	2470	19.20	2670	20.10	2850	21.75
0-5	.010	2434	18.75	2480	19.20	2680	20.10	2860	21.75
0-10	.005	2435	18.75	2490	19.20	2690	20.10	2870	21.75
0-15	.0033	2436†	18.75	2500	19.20	2700	20.10	2880	21.75
0-25	.0020	2437†	18.75	2510	19.20	2710	20.10	2890	21.75
0-30	.0017	—	—	2520	19.20	2720	20.10	2900	21.75
0-50	.001	2438†	18.75	2530†	19.20	2730	20.10	2910	21.75
0-100	10.0	—	—	2540†	19.20	2740†	20.10	2920†	21.75
0-150	10.0	—	—	2550†	19.20	2750†	20.10	2930†	21.75
0-200	10.0	—	—	2552†	19.20	2760†	20.10	2940†	21,75
0-300	10.0	—	—	2554†	19.20	2770†	20.10	2950†	21.75
0-500	10.0	—	—	—	—	2780†	20.10	2960†	21.75
15-0-15	.0033	—	—	—	—	2790	21.15	—	—
30-0-30	.0017	—	—	—	—	2800	21.15	—	—
50-0-50	.001	—	—	—	—	2810	21.15	—	—

*External Multipliers, Model 183, are furnished on 1½" DC meters 500 volts or higher; on 2½" DC meters 750 v or higher; and on 3½" and 4½" DC meters 1000 volts or higher. All others are self-contained.
†1½" DC Ammeters are self-contained through 10 amps. 15 amps and higher are supplied as 50 MV meters to used with external shunts. 2½", 3½" and 4½" DC ammeters are self-contained through 50 amps. Higher range ammeters are 50 MV meters to be used with external shunts. Shunt listings are on page 19.



NEW WIDE-VUE MOUNTING BEZEL AND ILLUMINATION KITS

For that modern, streamlined appearance — Mounting Bezels, made for wide-vue panel meters and in changeable with flush and recess type meters of many popular styles. Designed for behind panel mount on material thickness of ⅛" to 3/16". Groove and flange style construction. Each bezel of die cast metal has an attractive black enamel satin finish and is supplied with mounting hardware and template.

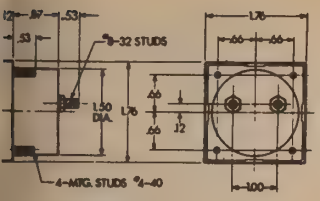
Bezel Mount Kit consists of bezel brackets and screws and installation instructions.

WIDE VUE BEZEL KITS

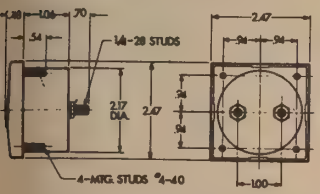
Meter Size	For Models	Part No.	Price
3½"	1327, 1337, 1347, 1357	1253	$2.25
4½"	1329, 1339, 1349 1359, 1379	1123	2.25
	Illumination Kit	1165	2.10

© United Technical Publicati

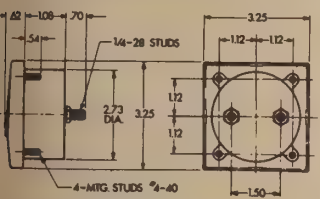
Simpson WIDE-VUE PANEL INSTRUMENTS



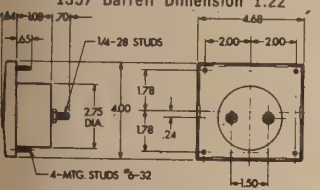
1½" Models 1212, 1212T, 1214



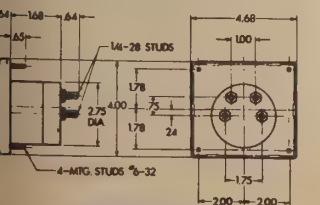
2½" Mod. 1227, 1227T, 1237, 1247, 1257
*1257 Barrel Dimension 1.15



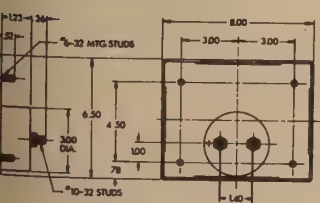
3½" Mod. 1327, 1327T, 1337, 1347, 1357
* 1357 Barrell Dimension 1.22



4½" Mod. 1329, 1329T, 1339, 1349, 1359
*1359 Barrel Dimension 1.20



4½" Model 1379



8" Model 728T

1½", 2½", 3½", 4½", 8" WIDE-VUE PANEL INSTRUMENTS

DC MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Resistance (ohms)	1½" Case Style Cat. No.	1½" Case Style Price	2½" Case Style Cat. No.	2½" Case Style Price	3½" Case Style Cat. No.	3½" Case Style Price	4½" Case Style Cat. No.	4½" Case Style Price
0-1	43	6163	$18.00	6175	$18.90	6310	$19.50	6470	$20.85
0-3	2.0	—	—	6180	18.90	6320	19.50	6480	20.85
0-5	2.0 (20†)	6164	18.00	6190	18.90	6330	19.50	6490	20.85
0-10	10.0 (2.2†)	6165	18.00	6200	18.90	6340	19.50	6495	20.85
0-15	6.6 (2.2†)	6166	18.00	6210	18.90	6350	19.50	6502	20.85
0-20	5.0	—	—	6215	18.90	6360	19.50	6524	20.85
0-25	4.0 (6.0†)	6167	18.75	6220	19.20	6370	20.10	6530	21.75
0-50	2.0 (3.0†)	6168	18.75	6230	19.20	6380	20.10	6540	21.75
0-100	1.0 (1.5†)	6169	18.75	6240	19.20	6390	20.10	6550	21.75
0-150	.66 (1.0†)	6170	18.75	6250	19.20	6400	20.10	6560	21.75
0-200	.50 (.75†)	6171	18.75	6260	19.20	6410	20.10	6570	21.75
0-250	.40 (.60†)	6172	18.75	6270	19.20	6420	20.10	6580	21.75
0-300	.33 (.50†)	6173	18.75	6280	19.20	6430	20.10	6590	21.75
0-500	.20 (.30†)	6174	18.75	6290	19.20	6440	20.10	6600	21.75
0-750	.13	—	—	—	—	6450	20.10	6610	21.75
0-1000	.05	—	—	6292	19.20	6460	20.10	6620	21.75

DC MICROAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1212		Model 1227		Model 1327		Model 1329	
0-50	1800 (5500†)	4294	$25.35	4310	$24.30	4380	$24.75	4480	$26.85
0-100	1800	4295	21.00	4320	21.75	4390	22.80	4490	25.35
0-200	1100	4296	19.05	4330	19.80	4400	20.85	4500	22.80
0-500	90 (190†)	4297	18.75	4340	19.50	4410	20.55	4510	22.20
25-0-25	1800 (5500†)	4298	23.70	—	—	4420	25.05	4520	27.00
50-0-50	1800	4302	21.15	4350	22.20	4430	22.80	4530	25.50
100-0-100	1100	4300	19.20	4351	20.10	4440	21.00	4540	23.10
500-0-500	43	4301	18.15	4352	19.05	4450	19.80	4550	21.00

DC MILLIVOLTMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1212		Model 1227		Model 1327		Model 1329	
0-50	10	7005	$18.75	7010	$19.20	7020	$20.10	7030	$21.75
50-0-50	20	—	—	—	—	7021	20.10	7031	21.75

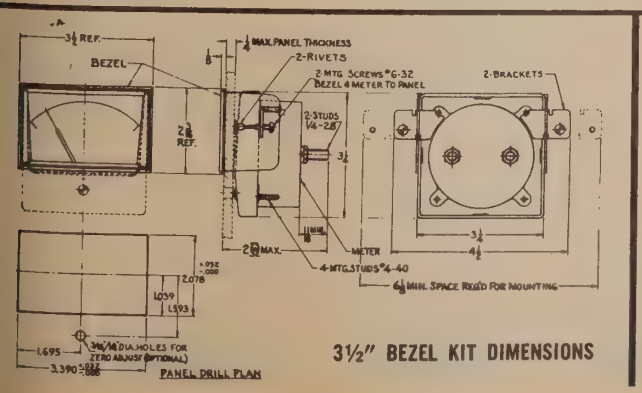
†Resistances of Model 1212 shown in ( )

TAUT BAND DC MICROAMMETERS Self-Shielding Meter Movement

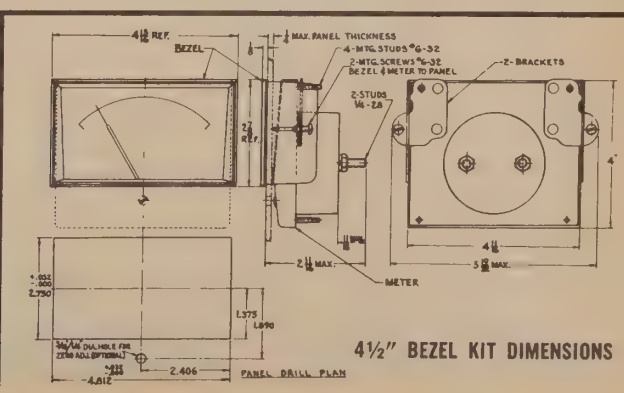
Range	Approx. Ω	1½" Case Style Cat. No.	1½" Case Style Price	2½" Case Style Cat. No.	2½" Case Style Price	3½" Case Style Cat. No.	3½" Case Style Price	4½" Case Style Cat. No.	4½" Case Style Price	8" Case Style Cat. No.	8" Case Style Price
0-5	5750	—	—	—	—	4358††	$46.20	4458††	$49.05	—	—
0-10	4900	—	—	4303	$39.00	4350	40.65	4459	43.95	—	—
0-15	1960 (5000†)	4601	$35.40	4304	35.40	4361	36.30	4461	39.60	—	—
0-25	1960 (5780‡)	4602	33.00	4306	33.60	4371	35.25	4471	38.25	11200	$44.10
0-50	960 (1600‡)	4603	25.80	4311	26.40	4381	27.00	4481	28.95	11201	38.85
0-100	500	4604	23.10	4321	24.00	4391	24.75	4491	27.30	11203	37.50
0-200	234	4605	21.30	4331	22.50	4401	23.40	4501	25.80	—	—

††High flux annular taut band meter movement.
† Resistances of Model 1212T shown in ( ).
‡ Resistances of Model 728T shown in ( ).

DC MILLIAMMETER 0-1 mA: 11210 35.40



3½" BEZEL KIT DIMENSIONS



4½" BEZEL KIT DIMENSIONS

Simpson WIDE-VUE PANEL INSTRUMENTS

1½", 2½", 3½", 4½" WIDE-VUE PANEL INSTRUMENTS

RF AMMETERS Self-Shielding Meter Movement

Range	Approx. Resistance (ohms)	1½" Case Styles Cat. No.	1½" Case Styles Price	2½" Case Styles Cat. No.	2½" Case Styles Price	3½" Case Styles Cat. No.	3½" Case Styles Price	4½" Case Styles Cat. No.	4½" Case Styles Price
						Model 1337		Model 1339	
0-1	.343	—	—	—	—	2970	$23.10	3050	$26.40
0-1.5	.200	—	—	—	—	2980	23.10	3060	26.40
0-2	.120	—	—	—	—	2990	23.10	3070	26.40
0-2.5	.10	—	—	—	—	3000	23.10	3080	26.40
0-3	.08	—	—	—	—	3010	23.10	3090	26.40
0-5	.045	—	—	—	—	3020	23.10	3100	26.40
0-8	.031	—	—	—	—	3030	23.10	3110	26.40
0-10	.023	—	—	—	—	3040	23.10	3120	26.40

RF MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω					Model 1337		Model 1339	
0-500	.63	—	—	—	—	5362	$27.25	5364	$30.75

AC VOLTMETERS RECTIFIER TYPE Self-Shielding Meter Movement

Range	Approx. Ω	Model 1214		Model 1247		Model 1347		Model 1349	
0-5	2000 ohms per volt	10011	$25.80	10015	$24.00	10020	$27.30	10090	$30.30
0-10		10012	25.80	10016	24.00	10030	27.30	10100	30.30
0-15		—	—	—	—	10040	27.30	10110	30.30
0-50		—	—	—	—	10050	27.30	10120	30.30
0-150		10013	25.80	10017	24.00	10060	27.30	10130	30.30
0-300		10014	25.80	10018	24.00	10070	27.30	10140	30.30

DECIBEL METERS
Zero Power Level: 6 mW into 500 Ω line
Self-Shielding Meter Movement

Range	Approx. Ω			Model 1247		Model 1347		Model 1349	
−10 to +6 dB	5000	—	—	3483	$26.85	3485	$28.50	3487	$29.40

VU (Volume Level) METERS†
Reference Level: 1 mW into 600 Ω line
Self-Shielding Meter Movement

Scale	Model 1214		Model 1247		Model 1347		Model 1349	
A—Scale	10472	$28.80	10474	$31.80	10480	$32.55	10490	$35.40
B—Scale	—	—	—	—	10550	32.55	10560	35.40

DC GALVANOMETERS Self-Shielding Meter Movement

Range	Sensitivity Micro Amperes	Resistance (ohms)	Model 1212		Model 1227		Model 1327		Model 1329	
50-0-50	500-0-500	43	3692	$18.15	3700	$18.90	3730	$19.80	3732	$21.00
50-0-50	75-0-75	1800	3694	19.20	3710	20.55	3720	22.20	3734	24.30

†Simpson VU meters meet all the Electrical and Ballistic specifications established by Bell Laboratories and American Standards Association as required by broadcasting, communication and sound engineers. They are available with either type A or B scales. Type A scale stresses the level in VU for monitoring wire lines. Type B scale stresses percent use of transmitter output and is the standard for broadcast service. Impedance is 3900 Ω @ "0" VU deflection.

Range	Approx. Impedance (ohms) @ 60 Hz.	2½" Case Style Cat. No.	2½" Case Style Price	3½" Case Style Cat. No.	3½" Case Style Price	4½" Case Style Cat. No.	4½" Case Style Pri

AC VOLTMETERS Iron Vane Type Movement

Range	Approx. Ω	Model 1257		Model 1357		Model 135	
0-5	33	—	—	10160	$19.05	10260	$21
0-10	133	9670	$18.15	10170	19.05	10270	21
0-15	300	9675	18.15	10180	19.05	10280	21
0-25	833	9680	18.15	10190	19.05	10290	21
0-50	3,333	9690	18.15	10200	19.05	10300	21
0-100	16,666	9695	18.75	10210	19.80	10310	21
0-150	25,000	9700	19.05	10220	20.55	10320	21
0-250	41,166	9705	19.05	10230	20.55	10330	21
0-300	50,000	9710	19.05	10240	20.55	10340	21
0-500††	83,333	9715	24.30	10250	25.95	10350	27

AC AMMETERS Iron Vane Type Movement

Range	Approx. Ω	Model 1257		Model 1357		Model 135	
0-1	.213	2560	$17.25	3130	$18.15	3260	$19
0-1.5	.105	2570	17.25	3140	18.15	3270	19
0-2	.065	—	—	3150	18.15	3280	19
0-3	.028	2575	17.25	3160	18.15	3290	19
0-5	.008	2580	17.25	3170	18.15	3300	19
0-10	.004	2590	17.25	3180	18.15	3310	19
0-15	.0025	2599	17.25	3190	18.15	3320	19
0-25	.002	2609	18.00	3200	18.90	3330	20
0-30	.0015	2615	18.00	3205	18.90	3335	20
0-50	.001	2519	18.00	32.10	18.90	3340	20
0-75	.008	—	—	3215	20.55	3345	21
0-100	.008	2622‡	17.25	3220‡	18.15	3350‡	19
0-150	.008	2624‡	17.25	3230‡	18.15	3360‡	19
0-200	.008	2626‡	17.25	3240‡	18.15	3370‡	
0-300	.008	2627‡	17.25	3250‡	18.15	3380‡	

AC MILLIAMMETERS Iron Vane Type Movement

Range	Approx. Ω	Model 1257		Model 1357		Model 135	
0-10	1,650	6294	$17.25	6625	$18.15	6665	$19
0-50	80	6295	17.25	6630	18.15	6670	19
0-100	17.2	6296	17.25	6640	18.15	6680	19
0-250	3.15	6297	17.25	6650	18.15	6690	19
0-500	.9	6300	17.25	6660	18.15	6699	19

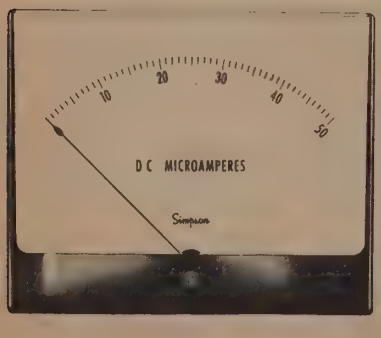
WATTMETERS DYNAMOMETER TYPE Single Phase

Range Watts	Range Volts	Max. Amps	Wattmeters calibrated for either magnetic non-magnetic panels and for a frequency ran of 25-125 Hz. Accuracy ±2% F.S.				Model 137	
0-75	150	1.0	—	—	—	—	10960	$50
0-150	150	2.0	—	—	—	—	10970	50
0-300	150	4.0	—	—	—	—	10975	50
0-750	150	10.0	—	—	—	—	10990	50
0-600	300	4.0	—	—	—	—	10980	54
0-1500	300	10.0	—	—	—	—	11000	54
0-3000	300	20.0	—	—	—	—	11010	54

COMPENSATED WATTMETERS

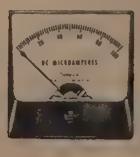
Range Watts	Range Volts	Max. Amps	Accuracy ±3% F.S.				Model 137	
0-10	300	.175	—	—	—	—	10930	$67
0-20	300	.400	—	—	—	—	10940	67
0-30	300	.650	—	—	—	—	10950	67

††External Multipliers, Model 183, (Featured on page 19) are furnished on meters having a range of 500 volts or higher. All others are self-contai
‡2½" AC ammeters are self-contained through 50 amps. 3½" and 4½" ammeters self-contained through 75 amps and have an impedance of app mately .0005Ω. Higher range AC ammeters are 5 amp meters to be used external current transformer. See page 19 for current transformer listi







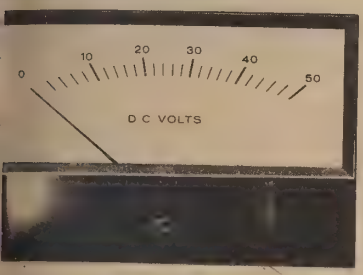




© United Technical Publicat

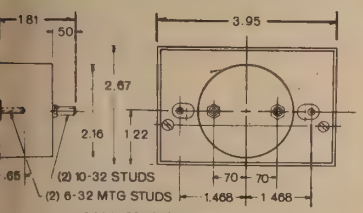
Simpson DESIGNER and BOLD-VUE INSTRUMENTS

DESIGNER SERIES

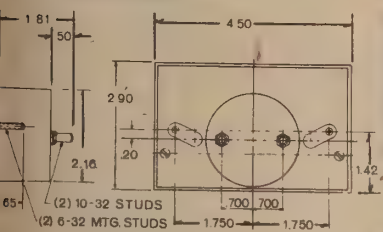


CLEAN, UNCLUTTERED LOOK

MAXIMUM READABILITY IN MINIMUM HEIGHT



3½" Models



4½" Models

Made for today's compact equipment designs—without sacrificing readability. The 4½" 524 models take up less than 3" of panel height, yet the scale is over 3½" long. Clean and crisp look, too. Excellent reliability, they feature self-shielding spring-backed jewel movements and ±2% accuracy. Attractive case is molded black phenolic, with glass window.

SPECIFICATIONS

Size	Type and Model No. DC	AC Rectifier	AC Iron Vane	Accuracy (% of full scale)	Scale Length	Pointer
3½"	523	543	—	±2%	3.12" (79.4 mm)	Knife-edge, Red
	—	—	553		2.82" (71.6 mm)	
4½"	524	544	—		3.51" (89.1 mm)	
	—	—	554		3.16" (80.2 mm)	

DC VOLTMETERS Self-Shielding

Range	Approx. Ω	3½" Case Style Model 523 Cat. No.	3½" Case Style Model 523 Price	4½" Case Style Model 524 Cat. No.	4½" Case Style Model 524 Price
0-5	1000 ohms per volt	15038	$20.85	15108	$22.80
0-10		15039	20.85	15109	22.80
0-15		15040	20.85	15110	22.80
0-30		15042	20.85	15112	22.80
0-50		15044	20.85	15114	22.80
0-100		15045	20.85	15111	22.80
0-150		15046	20.85	15116	22.80

DC AMMETERS Self-Shielding

Range	Approx. Ω	Model 523 Cat. No.	Model 523 Price	Model 524 Cat. No.	Model 524 Price
0-1	.050	15031	$20.10	15101	$21.75
0-3	.0166	15032	20.10	15102	21.75
0-5	.010	15033	20.10	15103	21.75
0-10	.005	15030	20.10	15100	21.75
0-15	.0033	15034	20.10	15104	21.75
0-25	.0020	15035	20.10	15105	21.75
0-50	.001	15036	20.10	15106	21.75

DC MILLIAMMETERS Self-Shielding

Range	Approx. Ω	Model 523 Cat. No.	Model 523 Price	Model 524 Cat. No.	Model 524 Price
0-1	43.0	15000	$19.50	15070	$20.85
0-5	2.0	15001	19.50	15076	20.85
0-10	10.0	15002	19.50	15077	20.85
0-50	2.0	15003	18.10	15078	21.75
0-100	1.0	15010	18.10	15080	21.75
0-200	0.5	15004	18.10	15079	21.75
0-300	0.33	15012	18.10	15081	21.75
0-500	0.2	15013	18.10	15082	21.75

VU METERS Self-Shielding

Scale	Model 543 Cat. No.	Model 543 Price	Model 544 Cat. No.	Model 544 Price
"A" Scale	15064	$32.55	15134	$35.40
"A" Scale, Illuminated	15065	35.85	15135	38.70
"B" Scale, Illuminated	15066	35.85	15136	38.70

DC MICROAMMETERS Self-Shielding

Range	Approx. Ω	Model 523 Cat. No.	Model 523 Price	Model 524 Cat. No.	Model 524 Price
*0-15	1960	15014	$36.30	15092	$39.60
0-25	2100	15015	30.75	15085	33.90
0-50	1800	15017	24.75	15087	26.85
0-100	1800	15019	22.80	15089	25.35
0-200	1100	15021	20.85	15091	22.80
0-500	90	15022	20.55	15093	22.20
25-0-25	1800	15023	25.05	15094	27.00
50-0-50	1800	15025	22.80	15095	25.50
100-0-100	1100	15027	21.00	15097	23.10
500-0-500	43	15024	19.80	15096	21.00

*Taut Band

DC MILLIVOLTMETERS Self-Shielding

Range	Approx. Ω	Model 523 Cat. No.	Model 523 Price	Model 524 Cat. No.	Model 524 Price
0-50	10	15048	$19.80	15118	$21.75

AC VOLTMETERS Iron Vane Type Movement

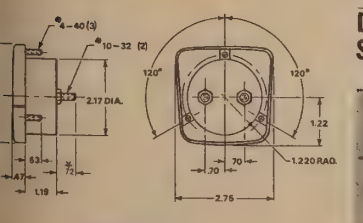
Range	Approx. Ω	Model 553 Cat. No.	Model 553 Price	Model 554 Cat. No.	Model 554 Price
0-150	25,000	15060	$20.55	15130	$21.75
0-250	41,166	15061	20.55	15131	21.75
0-300	50,000	15062	20.55	15132	21.75

AC AMMETERS Iron Vane Type Movement

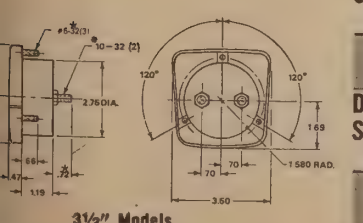
Range	Approx. Ω	Model 553 Cat. No.	Model 553 Price	Model 554 Cat. No.	Model 554 Price
0-1	.213	15049	$18.15	15121	$21.15
0-5	.008	15050	18.15	15120	21.15
010	.004	15052	18.15	15122	21.15
0-15	.0025	15051	18.15	15123	21.15
0-25	.002	15053	18.15	15125	21.75
0-50	.001	15054	18.15	15124	21.75
0-100	.008	15056†	18.15	15127†	21.15
0-150	.008	15057†	18.15	15128†	21.15

BOLD-VUE





2½" Models



3½" Models

AC Models 1252 & 1253 have stud length of .87".

Now you can have a bold looking 3-hole-mount meter built with Simpson quality. DC meters have self-shielding annular movements. AC meters have magnetically damped iron vane movements. Bold numbers and wide tapered lance pointer make reading easy. Phenolic base with clear acrylic cover.

Size	Type and Model No. DC	AC Iron Vane	Accuracy (% of full scale)	Scale Length	Pointer
2½"	1222	1252	±2%	2.207" (56.1 mm)	Wide Tapered Lance, Red
3½"	1223	1253		3.047" (77.4 mm)	

DC VOLTMETERS Self-Shielding Meter Movement

Range	Approx. Ω	2½" Case Style Model 1222 Cat. No.	2½" Case Style Model 1222 Price	3½" Case Style Model 1223 Cat. No.	3½" Case Style Model 1223 Price
0-5	1000 ohms per volt	—	—	15575	$20.85
0-10		15466	$20.10	15577	20.85
0-15		15467	20.10	15578	20.85
0-25		15470	20.10	—	—
0-30		15475	20.10	15581	20.85
0-50		15480	20.10	15583	20.85
0-100		—	—	15565	20.85
0-150		—	—	15587	20.85

DC AMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1222 Cat. No.	Model 1222 Price	Model 1223 Cat. No.	Model 1223 Price
0-1	0-050	—	—	15510	$20.10
0-5	0.010	15405	$19.20	15520	20.10
0-10	0.005	15410	19.20	15522	20.10

DC MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1222 Cat. No.	Model 1222 Price	Model 1223 Cat. No.	Model 1223 Price
0-1	43.0	15420	$18.90	15540	$19.50
0-50	2.0	—	—	15550	19.50
0-100	1.0	—	—	15552	20.10
0-500	0.2	—	—	15558	20.10

DC MICROAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	2½" Case Style Model 1222 Cat. No.	2½" Case Style Model 1222 Price	3½" Case Style Model 1223 Cat. No.	3½" Case Style Model 1223 Price
0-50	1800	15450	$24.30	15560	$24.75
0-100	1800	15452	21.75	15562	22.80
0-200	1100	—	—	15563	20.85
25-0-25	1800	—	—	15570	25.05
50-0-50	1800	15461	22.20	15571	22.80
100-0-100	1100	—	—	15572	21.00

AC VOLTMETERS Iron Vane Type Movement

Range	Approx. Ω	Model 1252 Cat. No.	Model 1252 Price	Model 1253 Cat. No.	Model 1253 Price
0-150	25,000	15620	$19.05	15660	$20.55
0-300	50,000	—	—	15675	20.55

AC AMMETERS Iron Vane Type Movement

Range	Approx. Ω	Model 1252 Cat. No.	Model 1252 Price	Model 1253 Cat. No.	Model 1253 Price
0-5	.008	15598	$17.25	15637	$18.15
0-10	.004	15600	17.25	15640	18.15
0-15	.0025	15605	17.25	15642	18.15
0-25	.002	15610	18.00	15645	18.90
0-50	.001	—	—	15648	18.90

†These meters are 5 amp meters with scales as indicated and require external current transformers. See listings on accessory page.

Simpson CENTURY PANEL INSTRUMENTS

Introducing Simpson's new panel instrument design concept. Now you can have a modern design with rugged phenolic and glass construction.

CALIBRATIONS

All DC meters listed below have the Simpson self-shielded movement (calibration not affected by stray magnetic fields or magnetic mounting). All AC meters have the Simpson Iron-vane type movement. AC Milliammeters and Ammeters are calibrated for use on 25 through 800 Hz. All AC Voltmeters are calibrated for use on 25 through 125 Hz. Calibration at frequencies up to 800 Hz can be made. Contact your local Distributor for prices.

SPECIFICATIONS

Size	Type and Model Number DC	AC Rectifier	AC Iron Vane	RF	Watt	Accuracy (% of full scale) DC; RF; AC Iron Vane; Wattmeters*	Scale Length	Pois
1½"	2121	2141	—	—	—	±2% AC Rectifier Meters ±3%	Dimensions shown under illustrations	Knif edg Blac
2½"	2122	2142	2152	—	—			
3½"	2123	2143	2153	2133	2173			
4½"	2124	2144	2154	2134	2174			

*Compensated Wattmeters ±3%.



1½" Models

SCALE LENGTH: DC and Rectifier 1.25" (31.7mm). VU Meters 1.23" (31.2mm).



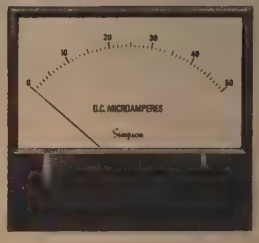
2½" Models

SCALE LENGTH: DC, Rectifier, RF, VU 2.07" (52.6mm). AC Iron Vane 1.86" (47.2mm).



3½" Models

SCALE LENGTH: DC, Rectifier, RF, VU 2.75" (69.8mm). AC Iron Vane, Wattmeters 2.48" (63mm).



4½" Models

SCALE LENGTH: DC, Rectifier, RF 4.09" (103.9mm). AC Iron Vane, Wattmeters 3.68" (93.5mm). VU Meters 3.71" (94.2mm).

DC VOLTMETERS Self-Shielding Meter Movement

Range	Approx. Resist. (ohms)	1½" Case Style Cat. No.	Price	2½" Case Style Cat. No.	Price	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price
0-5	1000 ohms per volt	17840	$18.75	17445	$20.10	17525	$20.85	17618	$22.80
0-6		—	—	—	—	—	—	17619	22.80
0-10		17842	18.75	17446	20.10	17527	20.85	17620	22.80
0-15		17843	18.75	17447	20.10	17528	20.85	17621	22.80
0-25		17844	18.75	17448	20.10	17529	20.85	17622	22.80
0-30		17845	18.75	17449	20.10	17530	20.85	17623	22.80
0-50		17846	18.75	17450	20.10	17531	20.85	17624	22.80
0-100		17848	18.75	17451	20.10	17532	20.85	17625	22.80
0-150		17849	18.75	17452	20.10	17533	20.85	17626	22.80
0-200		—	—	—	—	17534	20.85	17627	22.80
0-250		—	—	—	—	17535	20.85	—	—
0-300		—	—	17455	20.10	17536	20.85	17629	22.80
0-300	2000 ohms per volt	17850	18.75	—	—	—	—	—	—
0-500		17851	23.40	17456	20.85	17537	21.75	17630	23.55
0-750		—	—	17457	25.35	17538	21.75	17631	23.55
0-1000		—	—	17458	26.10	17539*	27.00	17632*	28.80

DC AMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 2121		Model 2122		Model 2123		Model 2124	
0-1	.050	17800	$18.75	17400	$19.20	17475	$20.10	17565	$21.75
0-1.5	.033	—	—	17401	19.20	17476	20.10	—	—
0-2	.025	17801	18.75	17402	19.20	17477	20.10	17567	21.75
0-3	.0166	17802	18.75	17403	19.20	17478	20.10	17568	21.75
0-5	.010	17803	18.75	17404	19.20	17479	20.10	17569	21.75
0-10	.005	17805	18.75	17405	19.20	17480	20.10	17570	21.75
0-15	.0033	17806†	18.75	17406	19.20	17481	20.10	17571	21.75
0-25	.0020	17807†	18.75	17407	19.20	17482	20.10	17572	21.75
0-30	.0017	—	—	17408	19.20	17483	20.10	17573	21.75
0-50	.001	17808†	18.75	17409†	19.20	17484	20.10	17574	21.75
0-100	10.0	—	—	17410†	19.20	17485†	20.10	17575†	21.75
0-150	10.0	—	—	—	—	17486†	20.10	17576†	21.75
0-200	10.0	—	—	17412†	19.20	17487†	20.10	17577†	21.75
0-300	10.0	—	—	—	—	17488†	20.10	17578†	21.75
0-500	10.0	—	—	—	—	17489†	20.10	17579†	21.75
15-0-15	.0033	—	—	—	—	17490	21.15	—	—
30-0-30	.0017	—	—	—	—	—	—	—	—

*External Multipliers, Model 183, are furnished on 1½" DC meters 500 volts or higher; on 2½" DC meters 750 volts or higher; and on 3½" and 4½" DC meters 1000 volts or higher. All others are self-contained.
†1½" DC Ammeters are self-contained through 10 amps. 15 amps and higher are supplied as 50 MV meters to be used with external shunts. 2½", 3½" and 4½" DC ammeters are self-contained through 50 amps. Higher range DC ammeters are 50 MV meters to be used with external shunts. Shunt listings are on page 19.

TAUT BAND DC MICROAMMETERS Self Shielding

Range	Resist. Approx. (ohms) Ω	2½" Case Style Cat. No.	Price	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price
0-5	5750	—	—	17495††	$46.20	17585††	$49.05
0-10	4900	17415	$39.00	17496	40.65	17586	43.95
0-15	1960	17416	35.40	17497	36.30	17587	39.60
0-25	1960	17417	33.60	17498	35.35	17588	38.25
0-50	960	17419	26.40	17500	27.00	17590	28.95
0-100	500	17421	24.00	17502	24.75	17592	27.30
0-200	234	17423	22.50	—	—	17594	25.80

†† High flux annular taut band movement.

DC MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 2121		Model 2122		Model 2123		Model 21	
0-1	43	17825	$18.00	17430	$18.90	17510	$19.50	17600	$2
0-3	2.0	—	—	17431	18.90	17511	19.50	17601	2
0-5	2.0 (20‡)	17826	18.00	17432	18.90	17512	19.50	17602	2
0-10	10.0 (2.2‡)	17827	18.00	17433	18.90	17513	19.50	17603	2
0-15	6.6 (2.2‡)	17828	18.00	17434	18.90	—	—	17604	2
0-20	5.0	—	—	—	—	17515	19.50	—	
0-25	4.0 (6.0‡)	17829	18.75	17436	19.20	17516	20.10	17606	2
0-50	2.0 (3.0‡)	17830	18.75	17437	19.20	17517	20.10	17607	2
0-100	1.0 (1.5‡)	17832	18.75	17438	19.20	17518	20.10	17608	2
0-150	.66 (1.0‡)	17833	18.75	17439	19.20	17519	20.10	17609	2
0-200	.50 (.75‡)	17834	18.75	17440	19.20	17520	20.10	17610	2
0-250	.40 (.60‡)	17835	18.75	17441	19.20	17521	20.10	17611	2
0-300	.33 (.50‡)	17836	18.75	17442	19.20	17522	20.10	17612	2
0-500	.20 (.30‡)	17837	18.75	17443	19.20	17523	20.10	17613	2
0-750	.13	—	—	—	—	17524	20.10	17614	2
0-1000	.05	—	—	17444	19.20	—	—	17615	2

DC MICROAMMETERS Self-Shielding Meter Movement

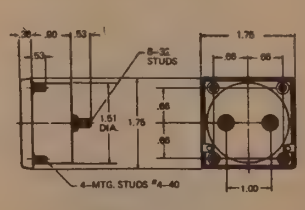
Range	Approx. Ω	Model 2121		Model 2122		Model 2123		Model 21	
0-50	1800(5500‡)	17815	$23.55	17418	$24.30	17499	$24.75	17589	$2
0-100	1800	17816	21.00	17420	21.75	17501	22.80	17591	2
0-200	1100	17818	19.05	17422	19.80	17503	20.85	17593	2
0-500	90(190‡)	17819	18.75	17424	19.50	17505	20.85	17595	2
25-0-25	1800(5500‡)	17820	23.70	—	—	17506	25.05	17596	2
50-0-50	1800	17821	21.15	17425	22.20	17507	22.80	17597	2
100-0-100	1100	17822	19.20	17426	20.10	17508	21.00	17598	2
500-0-500	43	17823	18.15	17427	19.05	17509	19.80	17599	2

‡Resistances of Model 2121

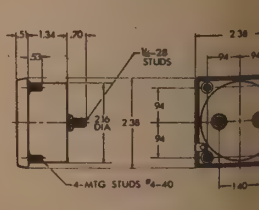
DC MILLIVOLTMETERS Self-Shielding Meter Movement

Range	Approx. Resistance (ohms)	2½" Case Style Cat. No.	Price	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price
0-50	10	17472	$19.20	17540	$20.10	17636	$21.
50-0-50	20	—	—	17541	20.10	17635	21.

CENTURY SERIES DIMENSIONS 1½", 2½" Models



Model 2121



Model 2122

© United Technical Publicati

Simpson CENTURY PANEL INSTRUMENTS

Range	Sensitivity μA	Approx. Resistance (ohms)	Model 2122 - 2½" Case Style Cat. No.	Price	Model 2123 - 3½" Case Style Cat. No.	Price
GALVANOMETERS Self-Shielding Meter Movement						
5-0-50	500-0-500	43	17470	$18.90	17558	$19.80
50-0-50	75-0-75	1800	—	—	17559	22.20

Range	Approx. Impedance (ohms) @ 60 Hz.	1½" Case Style Cat. No.	Price	2½" Case Style Cat. No.	Price	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price
AMMETERS Self-Shielding Meter Movement									
Range	Approx. Ω					Model 2133		Model 2134	
1	.343	—	—	—	—	—	—	17650	$26.40
2	.120	—	—	—	—	17552	23.10	17652	26.40
3	.08	—	—	—	—	17554	23.10	—	—
5	.045	—	—	—	—	17555	23.10	—	26.40
10	.023	—	—	—	—	17557	23.10	17657	26.40
CIBEL METERS									
o Power Level: 6 mW into 500Ω line									
f-Shielding Meter Movement									
Range	Approx. Ω			Model 2142		Model 2143		Model 2144	
-10 to +6 dB	5000	—	—	17465	$26.85	17549	$28.50	17648	$29.40
(Volume Level) METERS†									
ference Level: 1 mW into 600 Ω line									
f-Shielding Meter Movement									
Scale	Model 2141		Model 2142		Model 2143		Model 2144		
A-Scale	17865	$28.80	17473	$31.80	17560	$32.55	17646	$35.40	
B-Scale	—	—	—	—	17561	32.55	17647	35.40	
VOLTMETERS Rectifier Type Self-Shielding Meter Movement									
Range	Approx. Ω	Model 2141		Model 2142		Model 2143		Model 2144	
5		17855	$25.80	17460	$24.00	17542	$27.30	17640	$30.30
10	2000	17856	25.80	—	—	17543	27.30	17641	30.30
15	ohms	—	—	—	—	17544	27.30	17642	30.30
50	per	—	—	—	—	17545	27.30	17643	30.30
150	volt	17860	25.80	17462	24.00	17546	27.30	17644	30.30
300		17861	25.80	—	—	—	—	17645	30.30
VOLTMETERS Iron Vane Type Movement									
Range	Approx. Impedance (ohms) @ 60 Hz.			Model 2152		Model 2153		Model 2154	
3	33	—	—	—	—	17725	$19.05	—	—
10	133	—	—	17685	$18.15	17726	19.05	17771	$21.30
15	300	—	—	17686	18.15	17727	19.05	17772	21.30
25	833	—	—	17687	18.15	17728	19.05	17773	21.30
50	3,333	—	—	17688	18.15	17729	19.05	17774	21.30
100	16,666	—	—	—	—	17730	19.80	17775	21.30
150	25,000	—	—	17690	19.05	17731	20.55	17776	21.75
250	41,166	—	—	17691	19.05	17732	20.55	17777	21.75
300	50,000	—	—	17692	19.05	17733	20.55	17778	21.75
500††	83,333	—	—	—	—	17734	25.95	17779	27.75

pson VU meters meet all the Electrical and Ballistic specifications estab-ed by Bell Laboratories and American Standards Association as required by adcasting, communication and sound engineers. They are available with er type A or B scales. Type A scale stresses the level in VU for monitoring e lines. Type B scale stresses percent use of transmitter output and is standard for broadcast service. Impedance is 3900 @ "0" VU deflection.

Range	Approx. Impedance (ohms) @ 60 Hz.	2½" Case Style Cat. No.	Price	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price
AC AMMETERS Iron Vane Type Movement							
Range	Approx. Ω	Model 2152		Model 2153		Model 2154	
0-1	.213	17665	$17.25	17695	$18.15	17740	$19.35
0-1.5	.105	17666	17.25	—	—	—	—
0-2	.065	—	—	17697	18.15	17742	19.35
0-3	.028	17667	17.25	17698	18.15	17743	19.35
0-5	.008	17668	17.25	17699	18.15	17744	19.35
0-10	.004	17669	17.25	17700	18.15	17745	19.35
0-15	.0025	17670	17.25	17701	18.15	17746	19.35
0-25	.002	17671	18.00	17702	18.90	17747	20.10
0-30	.0015	17672	18.00	17703	18.90	17748	20.10
0-50	.001	17673	18.00	17704	18.90	17749	20.10
0-75	.008	—	—	17705	18.15	17750	21.75
0-100	.008	17674‡	17.25	17706‡	18.15	17751‡	19.35
0-150	.008	—	—	17707‡	18.15	17752‡	19.35
0-200	.008	—	—	17708‡	18.15	17753‡	19.35
0-300	.008	—	17.25	17709‡	18.15	17754‡	19.35
AC MILLIAMMETERS Iron Vane Type Movement							
Range	Approx. Ω	Model 2152		Model 2153		Model 2154	
0-10	1,650	17680	$17.25	—	—	17760	$19.35
0-50	80.	17681	17.25	17716	$18.15	17761	19.35
0-100	17.2	17682	17.25	17717	18.15	17762	19.35
0-250	3.15	17683	17.25	17718	18.15	17763	19.35
0-500	.9	17684	17.25	17719	18.15	17764	19.35

WATTMETERS Dynamometer Type Single Phase

Wattmeters are calibrated for either magnetic or non-magnetic panels and for a frequency range of 25-125 Hz.

Range	Maximum Volts	Maximum Amps	Accuracy ±2% F.S.		Model 2173		Model 2174	
0-75	150	1.0	—	—	17881	$40.65	17896	$50.55
0-150	150	2.0	—	—	17882	18.60	17897	50.55
0-300	150	4.0	—	—	17883	40.65	17898	50.55
0-750	150	10.0	—	—	17885	40.65	17900	50.55
0-600	300	4.0	—	—	17884	44.10	17899	54.00
0-1500	300	10.0	—	—	17886	44.10	17901	54.00
0-3000	300	10.0	—	—	17887	44.10	17902	54.00

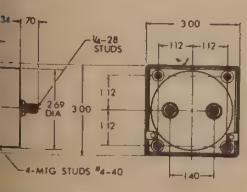
COMPENSATED WATTMETERS

Range	Maximum Volts	Maximum Amps	Accuracy ±3% F.S.		Model 2173		Model 2174	
0-10	300	0.175	—	—	17875	$64.95	17890	$67.50
0-20	300	0.400	—	—	17876	64.50	17891	67.50
0-20	500	0.175	—	—	17877	64.95	17893	67.50
0-30	300	0.650	—	—	17878	64.95	17892	67.50
0-30	500	0.300	—	—	17879	64.95	17894	67.50
0-50	500	0.500	—	—	17880	64.95	17895	67.50

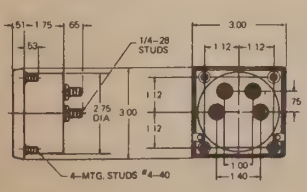
††External Multipliers, Model 183, (Featured on page 23) are furnished on AC meters having a range of 500 volts or higher. All others are self-contained.

‡2½" AC ammeters are self-contained through 50 amps. 3½" and 4½" AC ammeters self-contained through 75 amps. Higher range AC ammeters are 5 amp meters to be used with external current transformer. See page 19 for current transformer listings.

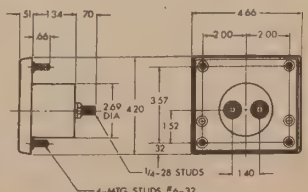
NTURY SERIES DIMENSIONS — 3½", 4½" Models



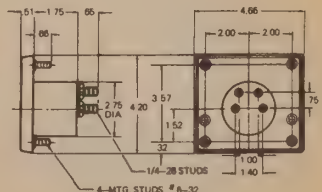
Models: 2123, 2133, 2143, 2153



Model 2173



Models: 2124, 2134, 2144, 2154



Model 2174

Simpson ROUND and RECTANGULAR INSTRUMENTS

2½", 3½", 4½" ROUND and RECTANGULAR STOCK INSTRUMENTS

CALIBRATION

All DC meters listed below have the Simpson self-shielding movement. (Calibration not affected by stray magnetic fields or magnetic mounting.) All AC meters have the Simpson Iron Vane type movement. AC Ammeters and Milliammeters are calibrated for use on 25 through 800 Hz. AC Voltmeters are calibrated for use on 25-125 Hz. Calibration at frequencies up through 800 Hz can be made. Contact your local Distributor for prices.

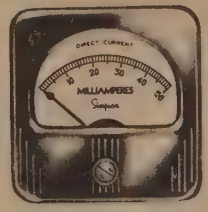
Wattmeters listed below have the Simpson dynamometer movement calibrated for either magnetic or non-magnetic panels and for a frequency range of 25-125 Hz. Standard wattmeters ±2%, compensated wattmeters ±3%.

SPECIFICATIONS

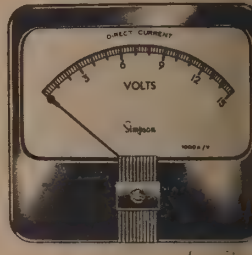
Size	Type and Model Number DC	AC Iron Vane	RF	Watt	Accuracy (% of full scale)	Scale Length	Point
2½"	125; 125T; 127; 127T	—	135; 137	—	±2% (Compensated Wattmeters ±3%)	1.8" (45.7 mm)	Spad Blac
	—	155; 157	—	175; 177		1.6" (41.1 mm)	
3½"	25; 25T; 27; 27T	—	35; 37	—		2.5" (63.7 mm)	
	—	55; 57	—	75; 77		2.3" (57.4 mm)	
4½"	29; 29T	—	39	—		3.8" (97 mm)	
	—	59	—	79		3.5" (89.0 mm)	



2½" Models 125, 125T, 135, 145, 155, 175
3½" Models 25, 25T, 35, 45, 55, 75



2½" Models 127, 127T, 137, 147, 157, 177
3½" Models 27, 27T, 37, 47, 57, 77



4½" Models 29, 29T, 39, 49, 59

DC VOLTMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Models 125	127		Models 25	27		Model 29	
0-1.5	1000 ohms per volt	8850	9020	$20.10	—	7290	$20.85	7620	$22.80
0-3		8860	9030	20.10	7070	7300	20.85	7630	22.80
0-5		8870	9040	20.10	7080	7310	20.85	7640	22.80
0-8		8880	9050	20.10	—	7320	20.85	7650	22.80
0-10		8890	9060	20.10	7100	7330	20.85	7660	22.80
0-15		8900	9080	20.10	7110	7350	20.85	7670	22.80
0-25		8910	9090	20.10	7120	7360	20.85	7680	22.80
0-30		8920	9100	20.10	7130	7370	20.85	7690	22.80
0-50		8930	9110	20.10	7140	7380	20.85	7700	22.80
0-100		8940	9130	20.10	7150	7400	20.85	7710	22.80
0-150		8950	9140	20.10	7160	7410	20.85	7720	22.80
0-200		8960	9160	20.10	7170	7430	20.85	7730	22.80
0-250		8970	9170	20.10	7180	7440	20.85	7740	22.80
0-300		—	9180	20.10	7190	7450	20.85	7750	22.80
0-500	2000 ohms per volt	—	9200	20.85	7200	7470	21.75	7760	23.55
0-750		—	—	—	7210	7490	21.75	7770	23.55
0-1000		—	—	—	7220†	7495†	27.00	7780†	28.80
0-1500		—	—	—	7230†	7520†	27.00	7790†	29.10
0-2000		—	9225†	25.95	7240†	7530†	27.90	7800†	29.60
0-2500		—	—	—	—	7550†	28.35	7810†	30.15
0-3000		—	—	—	7260†	7560†	28.65	7820†	30.45
0-4000		—	—	—	—	—	—	7830†	30.75
0-5000		—	—	—	7280†	7600†	29.40	7840†	31.20

DC AMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Models 125	127		Models 25	27		Model 29	
0-1	.050	1460	1680	$19.20	0005	0230	$20.10	0450	$21.75
0-1.5	.033	1470	1690	19.20	0020	0240	20.10	0460	21.75
0-2	.025	—	1709	19.20	0030	0250	20.10	0470	21.75
0-3	.0166	1490	1710	19.20	0040	0260	20.10	0480	21.75
0-5	.010	1500	1720	19.20	0050	0270	20.10	0490	21.75
0-10	.005	1510	1730	19.20	0060	0280	20.10	0500	21.75
0-15	.0033	1520	1740	19.20	0070	0290	20.10	0512	21.75
0-25	.0020	1530	1750	19.20	0080	0300	20.10	0520	21.75
0-30	.0017	1540	1760	19.20	0090	0310	20.10	0530	21.75
0-50	.001	1550	1770	19.20	0099	0320	20.10	0540	21.75
0-75	10.0	1560‡	1780‡	19.20	0110‡	0330‡	20.10	0550‡	21.75
0-100	10.0	1570‡	1790‡	19.20	0120‡	0340‡	20.10	0560‡	21.75
0-150	10.0	1580‡	1800‡	19.20	0130‡	0350‡	20.10	0570‡	21.75
0-200	10.0	1590‡	1810‡	19.20	0140‡	0360‡	20.10	0580‡	21.75
0-250	10.0	—	—	—	0151‡	—	20.10	0590‡	21.75
0-300	10.0	1610‡	—	19.20	0160‡	0380‡	20.10	0600‡	21.75
0-500	10.0	1620‡	—	19.20	0170‡	0390‡	20.10	0610‡	21.75
0-750	10.0	—	—	—	0177‡	0400‡	20.10	0620‡	21.75
0-1000	10.0	—	—	—	0188‡	0410‡	20.10	0630‡	21.75
15-0-15	.0033	—	—	—	0200	—	21.15	0640	22.35
30-0-30	.0017	1660	1880	19.50	0210	0430	21.15	0650	22.35
50-0-50	.001	1670	1890	19.50	0220	0440	21.15	0660	22.35

†External Multipliers, Model 183, are furnished on 2½" DC meters 750 volts or higher; and on 3½" and 4½" DC meters 1000 volts and higher. All others are self-contained.
‡DC ammeters are self-contained for ranges up to and including 50 amperes. Higher range DC ammeters (50 MV) listed above are calibrated for 5 ft. leads and require external shunts. See page 19 for complete listings.

DC MILLIVOLTMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Models 125	127		Models 25	27		Model 29	
0-50	10	6970	6990	$19.20	6910	6930	$20.10	6950	$21
0-100	20	—	—	—	—	6940	20.10	6960	21

DC MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Models 125	127		Models 25	27		Model 29	
0-1	43	5580	5760	$18.90	4610	4790	$19.50	5070	$20
0-1.5	43	5590	5780	18.90	4620	4810	19.50	5080	20
0-3	2.0	—	5790	18.90	4630	4820	19.50	5090	20
0-5	2.0	5610	5800	18.90	4640	4830	19.50	5100	20
0-10	10.0	5620	5810	18.90	4650	4840	19.50	5110	20
0-15	6.6	5630	5830	18.90	4660	4860	19.50	5120	20
0-20	5.0	—	—	—	4670	4880	19.50	5130	20
0-25	4.0	5650	5860	19.20	4680	4890	20.10	5140	21
0-50	2.0	5660	5880	19.20	4690	4910	20.10	5150	21
0-75	1.3	5670	—	19.20	—	4930	20.10	5160	21
0-100	1.0	5680	5910	19.20	4710	4940	20.10	5170	21
0-150	.66	5690	5930	19.20	4720	4960	20.10	5180	21
0-200	.5	5700	5940	19.20	4730	4980	20.10	5190	21
0-250	.4	5710	5960	19.20	4740	5000	20.10	5200	21
0-300	.33	5720	5970	19.20	4750	5010	20.10	5210	21
0-500	.2	5730	5990	19.20	4760	5030	20.10	5220	21
0-750	.13	—	—	—	—	5050	20.10	5230	21
0-1000	.05	—	6020	19.20	4780	5060	20.10	5240	21

DC MICROAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Models 125	127		Models 25	27		Model 29	
0-50	1800	4210	4260	$24.30	3760	3860	$24.75	3960	$26
0-100	1800	4220	4270	21.75	3770	3870	22.80	3970	25
0-200	1100	4230	4280	19.80	3780	3880	20.85	3980	22
0-500	90	4240	4281	19.50	3790	3890	20.55	3990	22
25-0-25	1800	4192	4243	25.35	3800	3900	25.05	4000	27
50-0-50	1800	4194	4245	22.20	3810	3910	22.80	4010	25
100-0-100	1100	4196	4247	20.10	3820	3920	21.00	4020	23
500-0-500	43	—	4249	19.05	3830	3930	19.80	4030	21

© United Technical Publicati

Simpson ROUND and RECTANGULAR INSTRUMENTS

2½", 3½", 4½" ROUND and RECTANGULAR PANEL INSTRUMENTS

nge	Approx. Impedance (Ohms) @ 60 Hz	2½" Case Styles Cat. Nos.	Price	3½" Case Styles Cat. Nos.	Price	4½" Case Styles Cat. No.	Price

AUDIO BAND DC MICROAMMETERS Self-Shielding

nge	Approx. Ω	Models 125T	127T		Models 25T	27T		Model 29T	
5	5750	—	—	—	3738	03838	$46.20	3938	$49.20
10	4900	4197	04246	$39.00	3739	03839	40.65	3939	43.95
15	1960	4199	04248	35.40	3741	03841	36.30	3941	39.60
25	1960	4201	04251	33.60	3751	03851	35.25	3951	38.25
50	960	4211	04261	26.40	3761	03861	27.00	3961	28.95
100	500	4221	04271	24.00	3771	03871	24.75	3971	27.30

AMMETERS Self-Shielding Meter Movement ernal Thermocouple Type

nge	Approx. Ω	Models 135	137		Models 35	37		Model 39	
	.343	1901	1980	$21.00	0670	0750	$23.10	0870	$26.40
.5	.200	1910	2000	21.00	—	0770	23.10	0880	26.40
	.120	—	2010	21.00	—	0780	23.10	0890	26.40
2.5	.10	1930	—	21.00	—	0800	23.10	0900	26.40
	.08	1940	2040	21.00	0710	0810	23.10	0910	26.40
	.045	1950	2060	21.00	0720	0830	23.10	0920	26.40
	.031	—	2080	21.00	—	0850	23.10	0930	26.40
0	.023	—	2090	21.00	0736	0860	23.10	0940	26.40

MILLIAMMETERS Self-Shielding Meter Movement ernal Thermocouple Type

nge	Approx. Ω				Models 35	37		Model 39	
15	5.5	—	—	—	5250	5290	$41.70	5330	$43.65
50	4.5	—	—	—	5260	5300	27.15	5340	30.75
50	3.5	—	—	—	5270	5310	27.15	5350	30.75
00	.63	—	—	—	5280	5320	27.15	5360	30.75

TTMETERS Dynamometer Type Single Phase

ge	Maximum Volts	Amps	Models 175	177		Models 75	77 Accuracy ±2%		Model 79	
5	150	1.0	—	10860	$38.70	10580	10650	$40.65	10720	$50.55
50	150	2.0	10800	10870	38.70	10590	10660	40.65	10730	50.55
00	150	4.0	—	10880	38.70	10600	10670	40.65	10740	50.55
50	150	10.0	10830	10900	38.70	10620	10690	40.65	10760	50.55
00	300	4.0	10820	10890	42.30	10610	10680	44.10	10750	54.00
500	300	10.0	10840	10910	42.30	—	10700	44.10	10770	54.00
000	300	20.0	—	10920	42.30	10640	10710	44.10	10780	54.00

MPENSATED WATTMETERS Single Phase

ge	Maximum Volts	Amps				Models 75	77 Accuracy ±3%		Model 79	
	300	.175	—	—	—	—	10642	$64.95	10712	$67.50
	300	.400	—	—	—	—	10644	64.95	10714	67.50
	500	.175	—	—	—	—	10646	64.95	10716	67.50
	300	.650	—	—	—	—	10645	64.95	10715	67.50
	500	.300	—	—	—	—	10648	64.95	10718	67.50
	500	.500	—	—	—	—	10649	64.95	10719	67.50

Scale	Sensitivity Micro-Amps	Res. Ohms	2½" Case Styles Cat. Nos.	Price	3½" Case Styles Cat. Nos.	Price	4½" Case Styles Cat. No.	Price

DC GALVANOMETERS

Scale	Sens. μA	Ω	Models 125	127		Models 25	27		Model 29	
50-0-50	500-0-500	43	3670	3690	$18.90	3630	3650	$19.80	3654	$21.00
50-0-50	75-0-75	1800	3660	3680	20.55	3620	3640	22.20	3652	24.30

AC VOLTMETERS Iron Vane Type Meter Movement

Range	Approx. Ω	Models 155	157		Models 55	57		Model 59	
0-1.5	3	—	—	—	—	—	—	8710	$21.30
0-3	12	—	—	—	—	8540	$19.05	8720	21.30
0-5	33	—	9390	$18.15	8410	8550	19.05	8730	21.30
0-10	133	9260	9400	18.15	8420	8566	19.05	8740	21.30
0-15	300	9270	9420	18.15	8430	8580	19.05	8750	21.30
0-25	833	9280	9440	18.15	8440	8599	19.05	8760	21.30
0-50	3,3333	9290	9450	18.15	8450	8610	19.05	8770	21.30
0-100	16,666	—	9460	18.75	8460	8620	19.80	8780	21.30
0-150	25,000	9310	9470	19.05	8470	8630	20.55	8790	21.75
0-250	41,166	9320	9490	19.05	8480	8650	20.55	8800	21.75
0-300	50,000	9330	9500	19.05	8490	8660	20.55	8810	21.75
0-500	83,333	9340‡	9520	24.30	8500‡	8680‡	25.95	8820‡	27.75
0-750	125,000	—	—	—	8510‡	8690‡	25.95	8830‡	30.15
0-1000	166,666	—	—	—	8520‡	8700‡	30.15	8840‡	31.20

AC AMMETERS Iron Vane Type Meter Movement

Range	Approx. Ω	Models 155	157		Models 55	57		Model 59	
0-1	.213	2100	2270	$17.25	0950	1120	$18.15	1290	$19.35
0-1.5	.105	—	—	—	0960	1130	18.15	1302	19.35
0-2	.065	2120	2290	17.25	0970	1140	18.15	1310	19.35
0-3	.028	2130	2300	17.25	0980	1145	18.15	1320	19.35
0-5	.008	2140	2310	17.25	0990	1160	18.15	1330	19.35
0-10	.004	2150	2320	17.25	1001	1170	18.15	1340	19.35
0-15	.0025	2160	2330	17.25	1010	1180	18.15	1350	19.35
0-25	.002	2170	2340	18.00	1020	1190	18.90	1360	20.10
0-30	.0015	2180	2350	18.00	1030	1200	18.90	1370	20.10
0-50	.001	2190	2360	18.00	1040	1210	18.90	1380	20.10
0-75	.0005	—	—	—	3432	3434	20.55	3436	21.75
0-75	.008	2200†	2370†	17.25	1050†	1220†	18.15	1390†	19.35
0-100	.008	2210†	2380†	17.25	1060†	1230†	18.15	1400†	19.35
0-150	.008	2220†	2390†	17.25	1070†	1240†	18.15	1410†	19.35
0-200	.008	—	—	—	1080†	1250†	18.15	1420†	19.35
0-250	.008	2240†	2410†	17.25	1090†	1260†	18.15	1430†	19.35
0-300	.008	—	2420†	17.25	1100†	1270†	18.15	1440†	19.35
0-500	.008	2260†	2422†	17.25	1110†	1280†	18.15	1450†	19.35

AC MILLIAMMETERS Iron Vane Type Meter Movement

Range	Approx. Ω	Models 155	157		Models 55	57		Model 59	
0-10	1,650	6030	6100	$17.25	—	5440	$18.15	5510	$19.35
0-15	887	—	—	—	5380	5499	18.15	—	19.35
0-25	270	—	—	—	—	5460	18.15	5530	19.35
0-50	80	6060	6130	17.25	5400	5470	18.15	5540	19.35
0-100	17.2	6070	6140	17.25	5410	5480	18.15	5550	19.35
0-250	3.15	6080	6150	17.25	5420	5490	18.15	5560	19.35
0-500	.9	6090	6152	17.25	5430	5500	18.15	5570	19.35

‡External Multipliers, Model 183, (Featured on page 19) are furnished on AC meters having a range of 500 volts or higher. All others are self-contained.

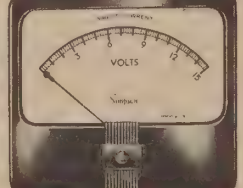
†These meters are 5 amp meters with scales as indicated and require external current transformers. See listings on page 19.



2½" Models 125, 125T, 135, 145, 155, 175
3½" Models 25, 25T, 35, 45, 55, 75



2½" Models 127, 127T, 137, 147, 157, 177
3½" Models 27, 27T, 37, 47, 57, 77



4½" Models 29, 29T, 39, 49, 59, 79

Simpson ROUND and RECTANGULAR INSTRUMENTS

2½", 3½", 4½" ROUND and RECTANGULAR PANEL INSTRUMENTS

CALIBRATION

All meters have the Simpson self-shielding movement and may be used on either magnetic or non-magnetic panels.

SPECIFICATIONS

Size	Model No.	Type	Accuracy (% of full scale)	Scale Length	Pointer
2½"	145; 147	AC Rectifier and DB, VU Meters	AC Rectifier and DB meters ±3% VU meters per ASA specifications in footnote	1.8" (45.7 mm)	Spade, Black
3½"	45; 47			2.5" (63.7 mm)	
4½"	49; 142			3.8" (97 mm)	

DECIBEL METERS Self-Shielding Meter
Zero Power Level: 6 mW into 500 Ω line

Range	Approx. Resistance (Ohms)	2½" Case Styles Cat. No.	Price	3½" Case Styles Cat. No.	Price	4½" Case Style Cat. No.	Price
		Models 145	147	Models 45	47	Model 49	
−10 to +6 dB	5000 ohms	3470	3480 $27.15	—	3450 $27.30	3460	$29.55

VU (Volume Level) METERS† Self-Shielding
Reference Level: 1 mW into 600 Ω line

Scale	Models 45	47	Model 142	
"A" SCALE; Not Illuminated	10440	10450 $32.55	10460	$35.40
"B" SCALE; Not Illuminated	—	10520 32.55	10530	35.40
"A" SCALE; Illuminated	—	— —	10470	38.70
"B" SCALE; Illuminated	—	— —	10570	38.70

†Simpson VU meters meet all the Electrical and Ballistic specifications established by Bell Laboratories and American Standards Association as required by broadcasting, communication and sound engineers. They are available with either type A or B scales. Type A scale stresses the level in VU for monitoring wire lines. Type B scale stresses per cent use of transmitter output and is the standard for broadcast service. Impedance is 3900 Ω at "0" VU deflection.

AC MILLIAMMETERS Rectifier Type Self-Shielding Meter Movem

Range	Approx. Resistance (Ohms)	2½" Case Styles Cat. No.	Price	3½" Case Styles Cat. No.	Price	4½" Case St Cat. No.	P
		Models 45	47	Model 49			
0-1	600	6820	6850 $26.40	6880	$28		
0-2	400	—	6860 26.40	6890	28		
0-5	200	6840	6870 26.40	6900	28		

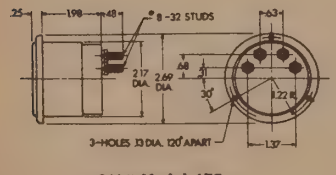
AC MICROAMMETERS
Rectifier Type Self-Shielding Meter Movement

Range	Approx. Resistance (Ohms)	Models 45	47	Model 49	
0-100	3400	4080	4120 $30.30	4160	$32
0-200	2400	—	— —	4170	29
0-300	1800	—	4140 26.40	4180	28
0-500	1200	—	4150 26.10	4190	28

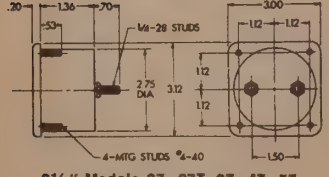
AC VOLTMETERS Rectifier Type Self-Shielding Meter Movem

Range	Approx. Resistance (Ohms)	Models 45	47	Model 49	
0-1	2000 ohms per volt	—	8120 $27.30	8300	$30
0-3		—	8130 27.30	8310	30
0-5		7960	8140 27.30	8320	30
0-10		7970	8150 27.30	8330	30
0-15		7980	8160 27.30	8340	30
0-50		—	8170 27.30	8350	30
0-100		—	8180 27.30	8360	30
0-150		8010	8190 27.30	8370	30
0-300		8020	8200 27.30	8371	30

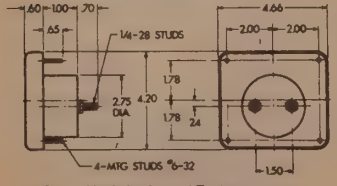
DIMENSIONS in Inches



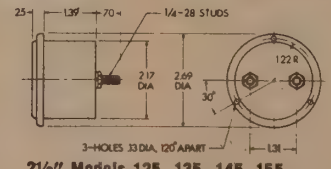
2½" Model 175



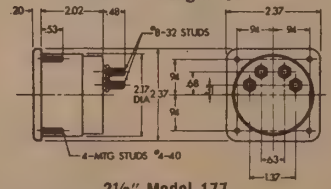
3½" Models 27, 27T, 37, 47, 57
*57 Barrel Length 1.45



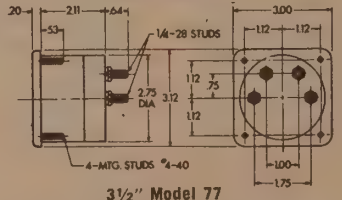
4½" Models 29, 29T, 39, 49, 59
*59 Barrel Length 1.09



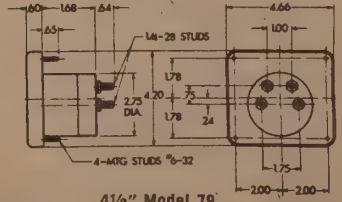
2½" Models 125, 135, 145, 155
* 135 Stud Length .63



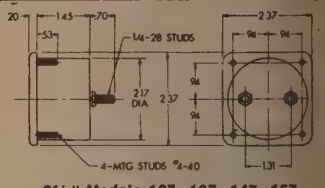
2½" Model 177



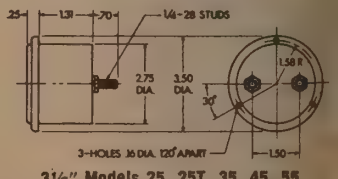
3½" Model 77



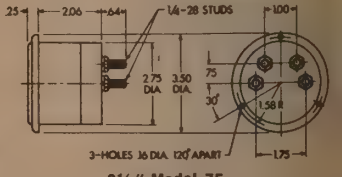
4½" Model 79



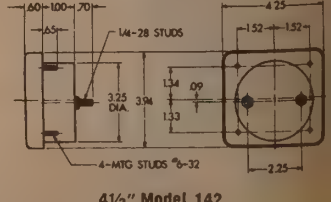
2½" Models 127, 137, 147, 157



3½" Models 25, 25T, 35, 45, 55



3½" Model 75



4½" Model 142

© United Technical Publicati

Simpson "RUGGED SEAL" PANEL INSTRUMENTS

"RUGGED SEAL" 3½", 4½", 4" x 6", SQUARE and RECTANGULAR INSTRUMENTS

MPSON "RUGGED SEAL" PANEL INSTRUMENTS

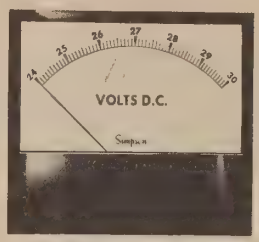
s line of metal cased panel instruments is ideal for use in field test uipment of wherever rigorous environmental conditions are encoun- ed. They are completely sealed, commercially ruggedized, glass ndow, metal cased and shielded, not affected by steel panel mounting.

SPECIFICATIONS

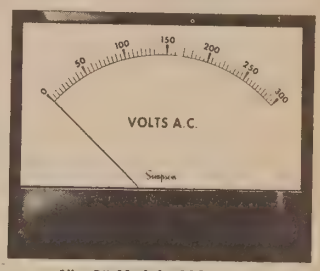
Size	Type and Model Number DC	AC Rectifier	Accuracy (% of full scale)	Scale Length	Pointer
3½"	3323	3343	DC Meters: ±2%	2.74"(70 mm)	Knife-edge Black
4½"	3324	3344	AC Rectifier Meters: ±3%	4.05"(103 mm)	
4" x 6"	3326	3346		4.94"(125 mm)	



3½" Models 3323, 3343



4½" Models 3324, 3344



4" x 6" Models 3326, 3346

C VOLTMETERS
lf-Shielding Meter Movement

nge	Approx. Resistance (Ohms)	3½" Case Style Cat. No.	3½" Case Style Price	4½" Case Style Cat. No.	4½" Case Style Price	4" x 6" Case Style Cat. No.	4" x 6" Case Style Price
1.5	1000 ohms per volt	16000	$22.95	16095	$25.05	16190	$27.30
10		16005	22.95	16100	25.05	16195	27.30
15		16010	22.95	16105	25.05	16200	27.30
25		16015	22.95	16110	25.05	16205	27.30
50		16020	22.95	16115	25.05	16210	27.30
100		16025	22.95	16120	25.05	16215	27.30
300		16030	22.95	16125	25.05	16220	27.30

C MILLIVOLTMETERS
lf-Shielding Meter Movement

nge	Approx. Ω	Model 3323		Model 3324		Model 3326	
10	10	16062	$23.10	16157	$25.50	16252	$27.90

C AMMETERS
lf-Shielding Meter Movement

nge	Internal Shunt	Model 3323		Model 3324		Model 3326	
	Internal Shunt 75 MV Max.	16035	$23.40	16130	$25.35	16225	$28.05
10		16040	23.40	16135	25.35	16230	28.05

C MILLIAMMETERS
lf-Shielding Meter Movement

nge	Approx. Ω	Model 3323		Model 3324		Model 3326	
00	80Ω .5Ω	16045	$22.05	16140	$24.00	16235	$26.85
		16050	23.70	16145	25.35	16240	28.05

Range	Approx. Resistance (Ohms)	3½" Case Style Cat. No.	3½" Case Style Price	4½" Case Style Cat. No.	4½" Case Style Price	4" x 6" Case Style Cat. No.	4" x 6" Case Style Price

DC MICROAMMETERS
Self-Shielding Meter Movement

Range	Approx. Ω	Model 3323		Model 3324		Model 3326	
0-50	3000	16055	$29.70	16150	$31.80	16245	$34.65
0-100	1300	16060	27.00	16155	28.95	16250	32.10

AC VOLTMETERS (RECTIFIER TYPE)
Self-Shielding Meter Movement

Range	Approx. Ω	Model 3343		Model 3344		Model 3346	
0-150	1000 ohms per volt	16065	$27.60	16160	$29.25	16255	$32.10
0-300		16070	27.60	16165	29.25	16260	32.10

AC AMMETERS (RECTIFIER TYPE)
Shielded Case Not Affected By Magnetic Mounting

Range	Internal Transformer Burden	Model 3343		Model 3344		Model 3346	
0-1	Internal Transformer Burden 0.5 VA maximum	16075	$34.50	16170	$36.00	16265	$39.00
0-5		16080	34.50	16175	36.00	16270	39.00

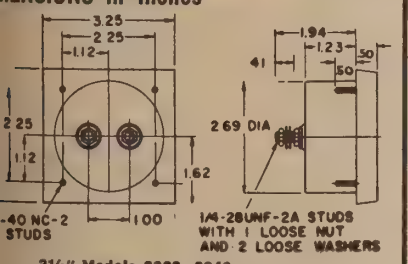
AC MILLIAMMETERS (RECTIFIER TYPE)
Self-Shielding Meter Movement

Range	Approx. Ω	Model 3343		Model 3344		Model 3346	
0-1	600	16085	$27.30	16180	$28.95	16275	$34.50

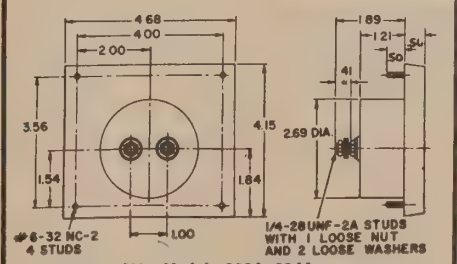
AC MICROAMMETERS (RECTIFIER TYPE)
Self-Shielding Meter Movement

Range	Approx. Ω	Model 3343		Model 3344		Model 3346	
0-100	4000	16090	$28.95	16185	$30.15	16280	$32.85

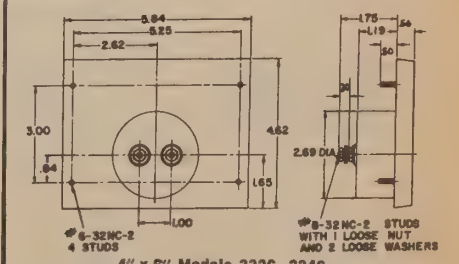
MENSIONS in Inches



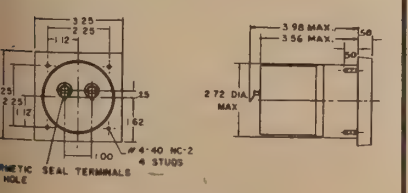
3½" Models 3323, 3343



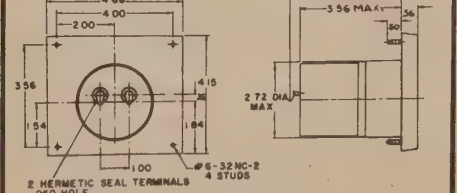
4½" Models 3324, 3344



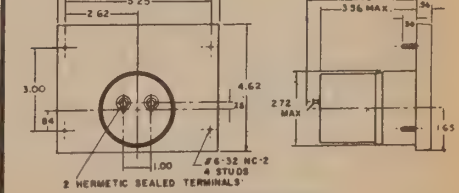
4" x 6" Models 3326, 3346



3½" Model 3383



4½" Model 3384



4" x 6" Model 3386

Simpson SEGMENTAL INSTRUMENTS

SIMPSON AVERAGE SENSING, TRUE RMS AND DC SEGMENTAL INSTRUMENTS

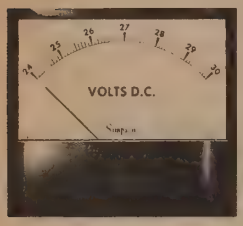
Segmental Voltmeters and frequency meters make it possible to measure very small changes in input conditions. The significant portion of the overall voltage or frequency range is expanded to occupy the full scale length. Thus, only that segment of the range that is important appears.

A.C. segmental voltmeters are available in either average sensing or true R.M.S. sensing units. When working with sine wave currents or when other measurements will be made with average sensi equipment, the average sensing meters are preferre

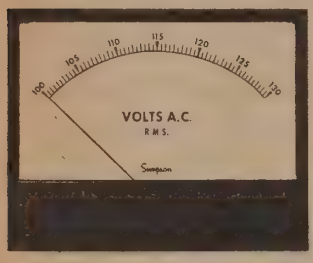
When working with distorted waveforms, as wou be encountered in constant voltage transforme S.C.R. circuits, D.C. to A.C. solid state inverters similar equipment, the true R.M.S. sensing met would probably be preferred. In addition to t standard expansions and accuracies shown, spec segmental voltmeters can be built on special ord



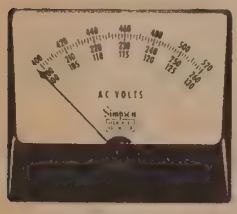
2½" Models 3222, 3282
3½" Models 3223, 3283
4½" Models 3224, 3284



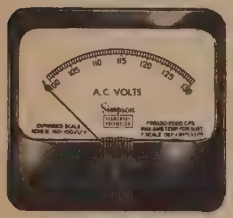
3½" Models 2143, 3323, 3383
4½" Models 2144, 3324, 3384



4" x 6" Models 3326, 3386



4½" Model 1349



4½" Model 49

SPECIFICATIONS

	Wide-Vue, Century, and Phenolic Case Styles		Rugged-Seal and Ruggedized Metal Case Styles				
	Average Sensing AC Segments Voltmeters		RMS Sensing AC Segmental Voltmeters			DC Segmental Voltmeters	Frequenc Meters
	Single Range	Multi-Range					
Range	100-130 AC Volts	100-130 / 200-260 / 400-520 AC Volts	100-130 AC Volts	105-125 AC Volts	110-120 AC Volts	—	—
Accuracy (% of Center Scale Value)	±.5%	100-130 ±.5%; 200-260 ±.75%; 400-520 ±.75%	±1.0%	±.5%	±.3%	±.5%	±.25%
Frequency Range	20-2000 Hz	50-1000 Hz	55-550 Hz			—	—
Center Scale Value	115 Volts	115/230/460 Volts	115 Volts	115 Volts	115 Volts	27 Volts	60 Hz 400 Hz
Sensitivity or Power Consumption	.6 to 1.3 VA (Sensitivity decreases as input voltage increases)		50 Ω/V	65 Ω/V	80 Ω/V	100 Ω/V	3 VA Max
Max. Input Voltage (10 Seconds)	150 Volts RMS	150/300/600 Volts RMS	150 Volts RMS			40 Volts	140 Volts RM
Square Wave Waveform Influence	11%		2.5%	2.0%	1.0%	—	.1%
Triangular Wave	5%		1.2%	.6%	.3%	—	.1%
Voltage Influence 105-125 Volts	—	—	—	—	—	—	.25%
Movement Type	Self Shielding						
Pointer	Spade, Black		Lance, Black				

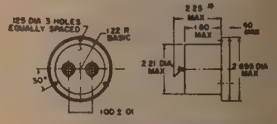
ROUND RUGGEDIZED SEGMENTAL PANEL INSTRUMENTS

Round Panel Meters Range	Center Scale Value	Accuracy*	2½" Case Style Cat. No.	Price	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price
AC Voltmeters True RMS			Model 3282		Model 3283		Model 3284	
100-130	115V	1.0%	16285	$ 93.15	16305	$ 85.80	16335	$ 95.40
105-125	115V	0.5%	16290	93.15	16310	85.80	16340	95.40
110-120	115V	0.3%	16295	93.15	16315	85.80	16345	95.40
DC Voltmeters			Model 3222		Model 3223		Model 3224	
24-30	27V	0.5%	16300	$ 79.95	16320	$ 72.90	16350	$ 81.90
Frequency Meters					Model 3283		Model 3284	
380-420 Hz	400 Hz	0.25%	—	—	16330	$202.95	16360	$212.40

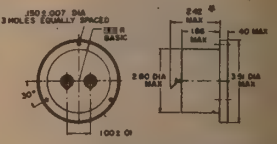
SQUARE RUGGED-SEAL SEGMENTAL PANEL INSTRUMENTS

Square Panel Meters Range	Center Scale Value	Accuracy*	3½" Case Style Cat. No.	Price	4½" Case Style Cat. No.	Price	4" x 6" Case Style Cat. No.	Price
AC Voltmeters True RMS			Model 3383		Model 3384		Model 3386	
100-130	115V	1.0%	16365	$ 78.60	16395	$ 86.70	16425	$ 92.70
105-125	115V	0.5%	16370	78.60	16400	86.70	16430	92.70
110-120	115V	0.3%	16375	78.60	16405	86.70	16435	92.70
DC Voltmeters			Model 3323		Model 3324		Model 3326	
24-30	27V	0.5%	16380	$ 65.70	16410	$ 73.65	16440	$ 79.20
Frequency Meters			Model 3383		Model 3384		Model 3380	
380-420 Hz	400 Hz	0.25%	16390	$198.00	16420	$203.70	16450	$209.55

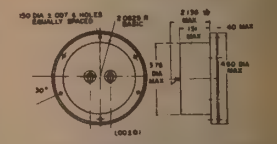
DIMENSIONS IN INCHES



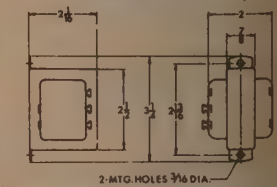
2½" Models 3222, 3282
* Model 3282 barrel dimensions 3.88", 2.94"



3½" Models 3223, 3283
* Model 3283 barrel dimension 4.00", 3.16"



4½" Models 3224, 3284
* Model 3284 barrel dimensions 3.98", 3.56"



External Potential Transformer

DIMENSIONS OF OTHER MODELS LISTE
Model 49 — see page 12
Models 1347, 1349 — see page 5
Model 2144 — see page 9
Models 3323, 3324, 3326, 3383, 3384, 3386 — see page 13

WIDE-VUE, CENTURY and STANDARD SEGMENTAL PANEL INSTRUMENTS — Single, Multi-Range

Range	Center Scale Value	Accuracy*	3½" Century Case Style Cat. No.	Price	3½" Wide-Vue Case Style Cat. No.	Price	4½" Century Case Style Cat. No.	Price	4½" Wide-Vue Case Style Cat. No.	Price	4½" Standard Case Style Cat. No.	Price
AC Voltmeters Aver. Sensing			Model 2143		Model 1347		Model 2144		Model 1349		Model 49	
100-300	115V	.5%	17548	$60.00	10152	$60.00	17638	$60.30	10155	$60.30	10151	$60.00
100-130 200-260 400-520	115V 230V 460V	.5% .75% .75%	—	—	—	—	17639	$74.55	10157‡	$74.55	—	—

* Accuracy is in percent of center scale value.
† Frequency meters are checked @ the center scale frequency @ 25°C and 115 volts sine wave after 30 minute warmup. Accuracy after 1.0 minute warmup is 1.0%. At end scale indications, maximum error will be 0.5%.
‡ Supplied with external potential transformer.

© United Technical Publicatio

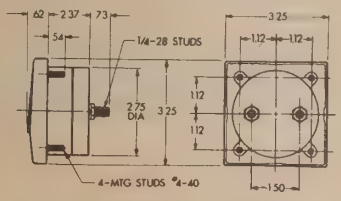
Simpson ELAPSED TIME METERS

2½" and 3½" AC and DC MODELS

idely used by research labs, manufacturing plants, and broadcast ations . . . to keep life and performance records based on operat- g time. New Model 108ET has interchangeable round and square ont mounting bezels. Model 1357ET has popular Wide-Vue styling. odel 107 has modern appearance, with clear lucite cover. DC odel 106 gives accurate (±2%) time readouts where synchronous power is not available. Model 106 withstands ambient tempera- res from −40°C to +65°C (−40°F to +149°F).

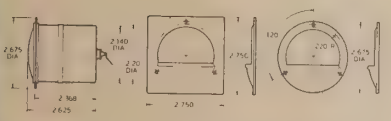
Models 106 and 107 manufactured in West Germany





3½" Model 1357ET





2½" AC Model 108ET. Has interchangeable round and square front bezels.

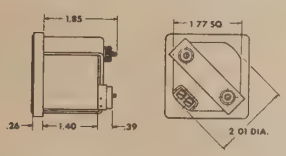
SPECIFICATIONS

Operating Voltage	Maximum Indication (Hours)	Power Consumption	Accuracy	Model Size	Model Number	Catalog Number	Price
6 V DC (+30% to —20%)	99,999	40 mA (max.)	±2%	2½"	106	13530	$20.00
12 V DC (+30% to —20%)	—	—	—	—	Adapter*	13535	1.00
24 V DC (+30% to —20%)	—	—	—	—	Adapter*	13538	1.00
120 V AC (±10%), 60 Hz	9999.9	2.5 watts	synchronous	2½"	108ET	03585	33.90
120 V AC (±15%), 60 Hz	9,999.99	2 watts	synchronous	2½"	107	13521	15.00
120 V AC (±10%), 60 Hz	99,999.9	5 watts	synchronous	3½"†	55ET	03580	25.35
120 V AC (±10%), 60 Hz	99,999.9	5 watts	synchronous	3½"††	1357ET	03595	25.35
120 V AC (±10%), 60 Hz	99,999.9	5 watts	synchronous	3½"‡	57ET	03590	25.35
240 V AC (±10%), 60 Hz	9999.9	2.5 watts	synchronous	2½"	108ET	03605	34.50
240 V AC (±15%), 60 Hz	9,999.99	2 watts	synchronous	2½"	107	13526	15.00
240 V AC (±10%), 60 Hz	99,999.9	5 watts	synchronous	3½"†	55ET	03600	25.65
240 V AC (±10%), 60 Hz	99,999.9	5 watts	synchronous	3½"‡	57ET	03610	25.65
240 V AC (±10%), 60 Hz	99,999.9	5 watts	synchronous	3½"††	1357ET	03615	25.65

*Adapter for model 106. Simply screws onto one terminal.
‡Matches standard model 47 rectangular panel meters.
†Matches standard model 45 round panel meters. ††Matches Wide-Vue panel meters.

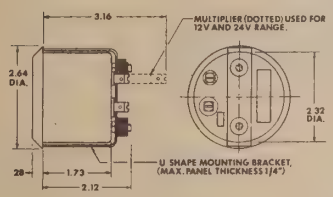


2½" AC Model 107



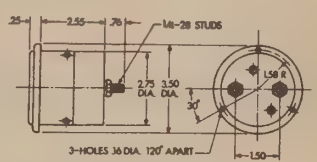


2½" DC Model 106



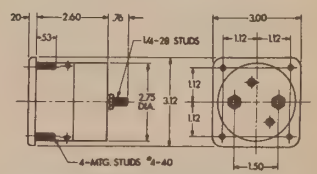


3½" Model 55ET





3½" Model 57ET



" RECTANGULAR INSTRUMENTS MODELS 1150 and 1150-1

2% and 1%-MIRROR SCALE

ALIBRATION AND DIALS

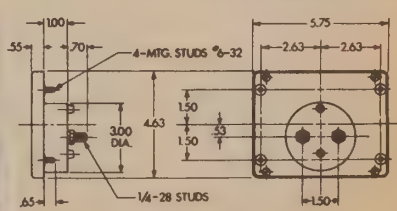
th models have the Simpson self-shielding movement which may used on either magnetic or non-magnetic panels.

ECIFICATIONS

ze	Model Number	Accuracy	Scale Length	Pointer
6"	1150	±2% of full scale	4.6" (114.8 mm)	Knife-edge, Red
	1150-1	±1% of full scale	4.6" (114.8 mm) Mirrored scale	Knife-edge, Red



6" Model 1150



6" Models 1150, 1150-1

Range	Approx. Resistance (Ohms)	Cat. No.	Price

MICROAMMETERS 1% Mirrored Scale

Range	Approx. Ω	Model 1150-1	
0-50	5200	4290	$43.35
0-100	2100	4291	41.70
0-200	1100	4292	37.35
0-500	90	4293	36.30

MILLIAMMETERS 1% Mirrored Scale

Range	Approx. Ω	Model 1150-1	
0-1	43	6158	$35.40
0-100	1.0	6161	35.40
0-500	.2	6162	35.40

MILLIVOLTMETERS 2%

Range	Approx. Ω	Model 1150	
0-50	10	7003	$29.10

Range	Approx. Resistance (Ohms)	Cat. No.	Price

DC MICROAMMETERS 2%

Range	Approx. Ω	Model 1150	
0-15	5500	4282	$44.10
0-25	3500	4283	39.45
0-50	5200	4284	36.00
0-100	2100	4285	34.50
0-200	1100	4286	30.15
0-500	90	4287	29.40

DC MILLIAMMETERS 2%

Range	Approx. Ω	Model 1150	
0-1	43	6153	$27.90
0-10	10	6154	27.90
0-50	2.0	6155	27.90
0-100	1.0	6156	27.90
0-500	.2	6157	27.90

Range	Approx. Resistance (Ohms)	Cat. No.	Price

DC AMMETERS 2%

Range	Approx. Ω	Model 1150	
0-1	.050	2424	$29.10
0-5	.010	2425	29.10
0-10	.005	2426	29.10
0-15	.0033	2427	29.10
0-25	.0020	2428	29.10
0-30	.0016	2429	29.10
0-50	.001	2430	29.10

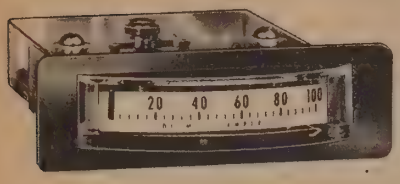
DC VOLTMETERS 2%

Range	Approx. Ω	Model 1150	
0-10		9533	$27.90
0-25	1000	9534	27.90
0-50	ohms	9535	27.90
0-100	per	9536	27.90
0-150	volt	9537	27.90
0-300		9538	27.90
0-500	2000 Ω/V	9539	28.80

Simpson

EDGEWISE PANEL INSTRUMENTS

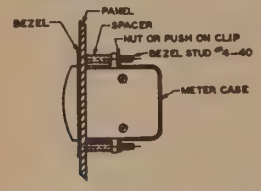
EDGEWISE INSTRUMENTS BARREL TYPE CONSTRUCTION 1½", 2½"

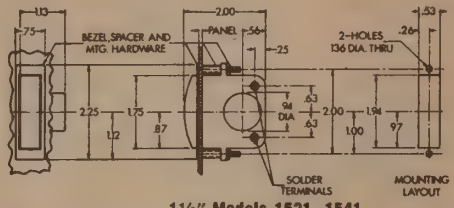


When panel designs call for making every square inch count, or when weight-saving is important, Simpson edgewise meters solve these many design problems. These meters are supplied with complete hardware which includes the bezel and two nuts. Mounting is fast and easy.

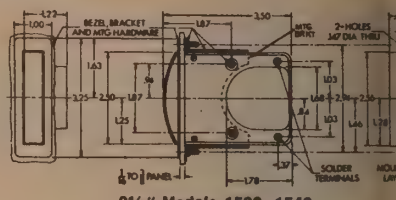
Models	1½" 1521, 1541	2½" 1522, 1542
Accuracy	DC ±2% of full scale; AC rectifier type ±3%	
Movement Type	Self-Shielding Meter Movement	
Scale Length	1.375" (35 mm)	1.875" (47.6 mm)
Pointer	Lance, Red	
Case Construction	Dustproof, molded acrylic	
Terminals	Solder (ammeters — stud type)	

MOUNTING DIAGRAMS 1½" and 2½" SIZES





1½" Models 1521, 1541



2½" Models 1522, 1542

DC VOLTMETERS Self-Shielding Meter Movement

Range	Approx. Resistance (Ohms)	1½" Case Style Cat. No.	1½" Case Style Price	2½" Case Style Cat. No.	2½" Case Style Price
		Model 1521		Model 1522	
0-10	1000 Ω/volt	10354	$18.15	10360	$20.10
0-15	1000 Ω/volt	10355	18.15	10370	20.10
0-25	1000 Ω/volt	10356	18.15	10375	20.10
0-50	1000 Ω/volt	10357	18.15	10380	20.10
0-150	1000 Ω/volt	10358	18.15	10390	20.10
0-500	2000 Ω/volt	10359	18.45	10410	20.40

DC MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1521		Model 1522	
0-1	20	6811	$18.00	6710	$19.80
0-5	2.5	6812	18.00	6720	19.80
0-10	13.5	6813	18.00	6730	19.80
0-25	5.4	6815	18.75	6740	20.70
0-50	2.7	6816	18.75	6750	20.70
0-100	1.35	6817	18.75	6760	20.70
0-500	.27	6819	18.75	6810	20.70

DC AMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1521		Model 1522	
0-5	.010	—	—	3390	$21.15
0-25	.002	—	—	3420	21.15

DC MILLIVOLTMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1521		Model 1522	
0-50	10	7013	$19.20	7011	$21.15

DC MICROAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1521		Model 1522	
0-25	3150	4552†	$27.60	4560	$29.70
0-50	1800	4553	24.15	4570	25.95
0-100	1100	4554	21.30	4580	23.40
0-200	290	4555	19.20	4590	21.1[illegible]
0-500	90	4556	18.75	4600	20.[illegible]

VU (Volume Level) METERS — Self-Shielding
Reference Level: 1 mW into 600 Ω line

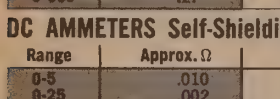
Scale	Model 1541		Model 1542	
"A" Scale	—	—	10500	$33.00
"B" Scale	—	—	10570	33.00

AC VOLTMETERS Rectifier Type Self-Shielding Meter Movem

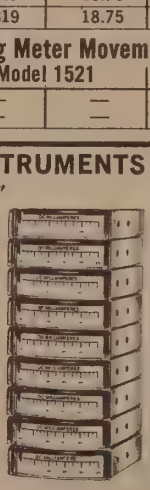
Range	Approx. Ω	Model 1541		Model 1542	
0-150	1000 Ω/volt	10415	$23.85	10420	$25.65
0-300	1000 Ω/volt	—	—	10430	25.65

†Resistance of Model 1521 0-25 Mics is 5500 Ω.

EDGEWISE PANEL INSTRUMENTS STACK HORIZONTALLY or VERTICALLY 1½", 2½"







Simpson's new miniature edgewise panel meter has a unique Self-Shielding Core Magnet Movement* that eliminates the protruding barrel which is prevalent in other edgewise meter designs. It lends itself to a design that is sharp, modern, extremely compact and with a meter scale that extends nearly to the full width and height of the meter. An optimum scale display area allows for the use of large, easy-to-read numerals on a horizontal plane.

*Patent Pending

Models	1½" 1921, 1941	2½" 1622, 1642
Accuracy	±2% of full scale; AC Rectifier types ±3	
Movement Type	Self-Shielding Core Magnet Movement	
Scale Length	1.370" (35.8 mm)	1.85" (47 mm)
Pointer	Lance, Red	
Case Construction	Steel Housing with rustproof finish; plastic window; insulated terminals; dustproof construction	
Terminals	Solder Type	6-32 studs
Dielectric	1500 Volts RMS	
Panel Cut Out	.525" x 1.718"	.562" x 2.312"
Hardware	Removable brackets with clamping screws	Bezel, bracket lockwashers and nu

DC VOLTMETERS Self-Shielding Meter Movement

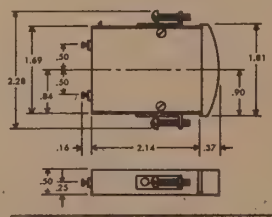
Range	Approx. Resistance (Ohms)	1½" Case Style Cat. No.	1½" Case Style Price	2½" Case Style Cat. No.	2½" Case Style Price
		Model 1921		Model 1622	
0-10	5000 Ω/volt	18000	$21.30	18006	$22.65
0-15	5000 Ω/volt	18001	21.30	18007	22.65
0-25	5000 Ω/volt	18002	21.30	18008	22.65
0-50	5000 Ω/volt	18003	21.30	18009	22.65
0-150	5000 Ω/volt	18004	21.30	18010	22.65
0-500	5000 Ω/volt	—	—	18011	22.80

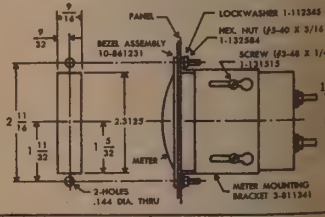
DC MILLIAMMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1921		Model 1622	
0-1	18	18012	$21.00	18019	$22.50
0-5	2	18013	21.00	18020	22.50
0-10	5	18014	21.00	18021	22.50
0-25	2	18015	22.05	18022	23.40
0-50	1	18016	22.05	18023	23.40
0-100	.5	18017	22.05	18024	23.40
0-500	.1	18018	22.05	18025	23.40

DC MILLIVOLTMETERS Self-Shielding Meter Movement

Range	Approx. Ω	Model 1921		Model 1622	
0-50	20	18028	$22.35	18029	$23.70





Range	Approx. Resistance (Ohms)	1½" Case Style Cat. No.	1½" Case Style Price	2½" Case Style Cat. No.	2½" Case Style Price
		Model 1921		Model 1622	
0-25	7760	18030	$27.45	18035	$28.65
0-50	2020	18031	27.15	18036	28.35
0-100	1060	18032	24.30	18037	25.80
0-200	310	18033	22.35	18038	23.70
0-500	63	18034	21.75	18039	22.95

AC VOLTMETERS Rectifier Type Self-Shielding Meter Movem

Range	Approx. Ω	Model 1941		Model 1642	
0-150	5000 Ω/volt	18042	$26.70	18043	$27.90

© United Technical Publicatio

Simpson NEW! DIGITAL PANEL INSTRUMENT





MODEL 2800

ACCURATE: ±0.1%, ±1 DIGIT

EASY TO READ NON-BLINKING DISPLAY

STORAGE CIRCUITRY HOLDS NUMBER UNTIL INPUT CHANGES

MODERN COMPACT DESIGN — FRONT PANEL ZERO ADJUSTMENT

dds so much to your new equip-ent design: easier readouts, etter accuracy, and the most -to-date appearance. Simpson's odel 2800 digital panel meters e reliable miniature instru-ents, which easily mount on quipment panels. The non-inking readouts, with storage rcuitry to hold the number, sures fast and clear readings. olid state circuitry (except for e readout tubes) is used roughout for reliability. Bezel s an attractive black matte ish with tinted window.

RANGES

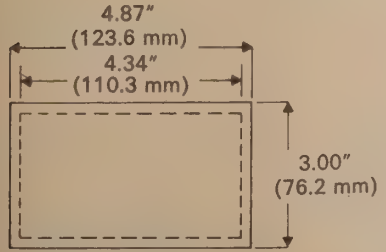
DC Voltage Range	Maximum Indication (with Overrange)	Input Impedance	Catalog Number	Price
00.0 — 99.9 mV	199.9 mV	10 kΩ	22950	$295.00
.000 — .999 volts	1.999 volts	100 kΩ	22951	295.00
0.00 — 9.99 volts	19.99 volts	1 MegΩ	22952	295.00
00.0 — 99.9 volts	199.9 volts	1 MegΩ	22953	295.00
000. — 999. volts	1010. volts*	1 MegΩ	22954	295.00

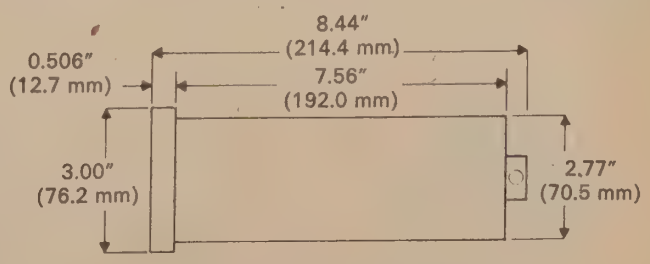
DC Current Range	Maximum Indication (with Overrange)	Voltage Drop	Catalog Number	Price
0.00 — 9.99 μA	19.99 μA	50 mV	22955	$295.00
00.0 — 99.9 μA	199.9 μA	50 mV	22956	295.00
.000 — .999 mA	1.999 mA	50 mV	22957	295.00
0.00 — 9.99 mA	19.99 mA	50 mV	22958	295.00
00.0 — 99.9 mA	199.9 mA	50 mV	22959	295.00

* Overrange limited to 10% on this unit.

SPECIFICATIONS

Accuracy: ±0.1% (F.S.), ±1 digit.
Resolution: 1 part in 1000.
Sample Rate: 5 readings per second, continuous.
Display: Non-blinking, with storage.
Number of Full-Time Readout Digits: 3
Readout Digits: Cold-gas glow tubes, 200,000 hour rated life.
Circuitry: Integrated circuits and solid-state components (except readout tubes).
Overrange: 100%. Number "1" automatically lights to the left of other digits to indicate overrange. When measured value exceeds overrange capacity, the "1" flashes — preventing erroneous readouts.
Underrange: Reverse polarity is automatically indicated by a light to the right of other digits. Linear 15% underrange permits reading negative values. Readout is a complement of actual reading.
Common Mode Rejection: Greater than 90 dB at 60 Hz with 1K-ohm unbalance.
Series Mode Rejection: Greater than 35 dB at 60 Hz.
Ambient Temperature Range: To maintain rated accuracy: +15°C to +35°C.
Power Required: 117 volts, 60 Hz., 9 VA (nominal).





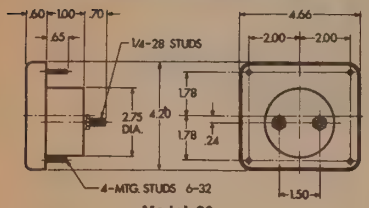
PANEL CUTOUT REQUIREMENT:
4.37" (111.0 mm) x 2.80" (71.1 mm)

Simpson 4½" PYROMETERS



Available in two versions: Standard phenolic Model 29 and Model 3324 Rugged Seal for extreme conditi
Both models are compensated for ambient temperature changes and include copper circuit compensat
±2% accuracy.

Each pyrometer is furnished with an external adjustable series resistor to permit use of lower re
tance thermocouples in the field.

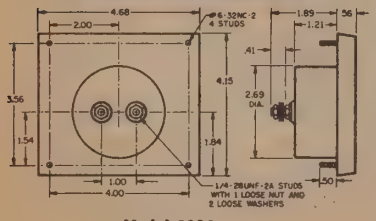


Model 29

MODEL 29

Temperature Range °F	Temperature Range °C	Type Thermo-couple†	External Resistance Ohms (max.)	Current Sensitivity MA Approx.	Cat. No.	Price
—150 to +250	—100 to +120	I/C	10Ω	.40	21200	$36.3
0 to +300	—20 to +150	I/C	5Ω	.40	21202	36.3
0 to +500	—20 to +260	I/C	10Ω	.35	21204	36.3
0 to +750	—20 to +400	I/C	10Ω	.30	21206	36.3
0 to +1000	—20 to +540	C/A	10Ω	.28	21208	36.3
0 to +1500	—20 to +820	C/A	10Ω	.42	21209	33.7
0 to +2000	—20 to +1200	Pt/Rh‡	10Ω	.43	21210	33.7
0 to +2500	—20 to +1380	Pt/Rh‡	10Ω	.40	21211	33.7





Model 3324

MODEL 3324

—150 to +250	—100 to +120	I/C	10Ω	.40	21201	$49.5
0 to +300	—20 to +150	I/C	5Ω	.40	21203	49.5
0 to +500	—20 to +260	I/C	10Ω	.35	21205	49.5
0 to +750	—20 to +400	I/C	10Ω	.30	21207	49.5
0 to +1000	—20 to +540	C/A	10Ω	.28	21212	49.5
0 to +1500	—20 to +820	C/A	10Ω	.42	21213	46.9
0 to +2000	—20 to +1200	Pt/Rh‡	10Ω	.43	21214	46.9
0 to +2500	—20 to +1380	Pt/Rh‡	10Ω	.40	21215	46.9

†Thermocouple not supplied with Pyrometer. I/C types are available from stock as accessory items (see bel
C/A types available soon.

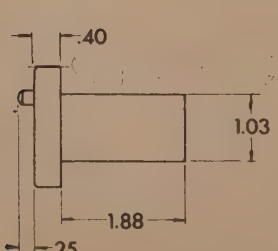
‡ Platinel II.

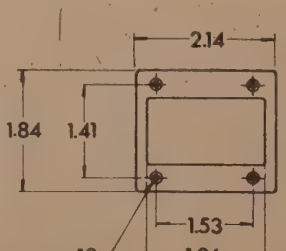
Simpson ELECTRO-MECHANICAL COUNTERS



NEW! SIMPSON COUNTERS

Simpson Electro-Mechanical Counters provide accurate counting in vending machines, duplicating equipment, packaging machinery, and in many production line applications. They feature instant number switching, so that only complete numbers are visible.





SPECIFICATIONS

RATED SPEED: 1 count per 100 milliseconds (10 counts per secon
600 counts per minute).
MINIMUM PULSE DURATION: 50 milliseconds "on", 50 milliseconds "off
VOLTAGE INPUT: ±15% of the rated voltage.
POWER CONSUMPTION: 4.2 watts (nominal).
MAXIMUM INDICATION: 9,999.
NUMERALS: White on black, 0.2" high, 0.15" wide.
NUMERAL SWITCHING: Ratchet principle, adding one count each time t
operating coil is opened. At any given time only whole numbers a
visible, for clear readouts.
NUMERAL RESET: Front-panel push-button instantly resets numerals to 000
CONSTRUCTION: Bezel of rugged thermosetting materials; black mat
finish. Heavy steel frame with a formed aluminum cover.

Voltage	Model	Catalog Number	1-9 Price*
117 VAC, 60 Hz	103	12643	$15.95
6 VDC	104	12641	15.95
12 VDC	104	12642	15.95

QUANTITY PRICES: 10-24, $13.56 ea; 25-49, $12.76 ea.; 50-99, $11.96 e
100-249, $11.17 ea.

© United Technical Publication

Simpson PANEL INSTRUMENT ACCESSORIES

HERMOCOUPLES

ock thermocouples are iron-constantan, calibrated to 5 or 10 ohms ±1% per table.

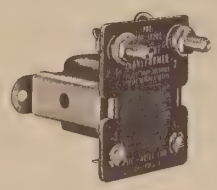
Types 21221 and 21224 are iron constantan thermocouple wire in a ainless steel overbraid for rugged service application where flexing or brasion would cause deterioration of standard thermocouples.

Types 21222 and 21223 are iron-constantan thermocouples with a ass cloth overbraid. These thermocouples are suited for most general rpose use or for permanent mounting in protected sheaths or conduit.

Cat. No.	Type	Resistance	Overbraid*	Length	Gauge	Price
21221	I/C	5 ohms	SS	162 in.	20	$15.60
21222	I/C	10 ohms	GC	137 in.	24	5.55
21223	I/C	10 ohms	GC	34 in.	30	4.65
21224	I/C	10 ohms	SS	325 in.	20	28.35

S—Stainless Steel GC—Glass Cloth
/A Thermocouples available soon.

CURRENT TRANSFORMERS — FOR USE WITH 0-10 VAC METERS AND CONTROLLERS



Model 186

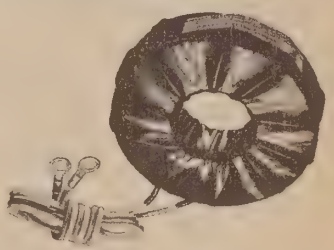
Designed for use with 0-10 volt AC meters. Available **from stock**, they convert meter relays to AC current control units. Transformer may be located remotely from indicating meter. Ranges from 0-50 milliamperes up to 0-50 amperes are available for immediate delivery. Frequency Range: 30 Hz. to 5 kHz. Accuracy: ±2%. (May be used with any 0-10 volt, 1000 Ω/volt, or 2000 Ω/volt, AC rectifier type meter.) Not for use in circuits where sustained overloads are possible.

Range	V.A.	Cat. Number	Price
0- 50 mA	0.40	01294	$15.15
0-100 mA	0.50	01295	14.10
0-200 mA	0.37	01296	14.10
0-300 mA	0.48	01303	14.10
0-500 mA	0.53	01304	14.10
0-750 mA	0.37	01307	14.10
0- 1 Amp	0.42	01308	13.05
0- 2 Amp	0.54	01309	13.05
0- 3 Amp	0.66	01311	$13.05
0- 5 Amp	0.75	01312	13.05
0-10 Amp	1.45	01314	13.05
0-15 Amp	1.05	01315	13.05
0-20 Amp	1.04	01316	13.05
0-25 Amp	1.50	01317	13.05
0-30 Amp	1.10	01318	13.05
0-40 Amp	1.09	01319	13.05
0-50 Amp	1.90	01321	13.05

URRENT TRANSFORMERS — OR USE WITH AC AMMETERS

ese current transformers are of the inserted e turn primary type for use with switchboard d panel ammeters where external transforms are required.

Ampere Ranges Primary	Secondary	Part Number	Price
50	5	1293	$27.00
75	5	1306	19.80
100	5	1297	16.35
150	5	1298	14.55
200	5	1299	14.55
250	5	1313	14.55
300	5	1300	16.35
400	5	1305	18.15
500	5	1301	19.80
600	5	2303	19.80
750	5	2459	23.40
1000	5	2304	25.20



Current Transformer

XTERNAL PORTABLE AND SWITCHBOARD HUNTS — FOR USE WITH DC AMMETERS

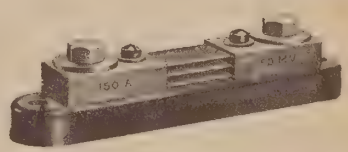
ese shunts are adjusted for a 50 millivolt op for use with switchboard and panel amters where external shunts are required. rtable shunts have phenolic base and suped up to 200 amperes. (Prices shown inde 5' leads.) Accuracy ±1%.

RTABLE SHUNTS

Amps	Part Number	Price
1	6700	$11.10
5	6703	11.10
10	6704	11.10
15	6705	11.10
25	6707	11.10
30	6708	11.10
50	6709	11.10
75	6711	11.10
100	6713	11.10
150	6714	11.10
200	6715	11.10

SWITCHBOARD SHUNTS

Amps	Part Number	Price
100	6500	$11.10
150	6503	12.00
200	6504	12.00
250	6505	12.00
300	6506	12.00
400	6507	14.55
500	6508	17.25
600	6509	20.40
750	6510	26.10
800	6511	27.60
1000	6512	33.60
1200	6513	40.05
1500	6514	49.95
2000	6515	55.50
2500	6516	70.20
3000	6517	83.25
3500	6518	116.40
4000	6519	139.50
4500	6520	153.00
5000	6521	171.90
6000	6522	189.60
7000	6523	227.70



Phenolic base is supplied up to 200 amperes



Switchboard type — 100 through 7000 amps

ODEL 183 MULTIPLIER SERIES

npson External Multipliers are available for mediate delivery from your local distributor the ranges listed below. Other intermediate nges are available on special order: DC Volts 5000; AC Volts to 1000. Send your specifications for a quotation.

VOLTS — 166 Ohms/Volt

nge	Multiplier Impedance (Ω) at 60 Hz.	Volt. Drop	Meter Volt. Drop	Part No.	Price
500	58,333	350	150	8562	$8.70
600	75,000	450	150	8563	9.90
750	100,000	600	150	8564	10.95
1000	141,666	850	150	8565	13.05

DC VOLTS — 2000 Ohms/Volt

Range	Multiplier Resistance Megohms	Meter Sensitivity DC μA	Part No.	Price
0-500	1	500	8552	$7.20
0-750	1.5	500	8553	7.65
0-1000	2	500	8554	7.65
0-1250	2.5	500	8555	7.65
0-1500	3	500	8556	8.10
0-2000	4	500	8557	8.10
0-2500	5	500	8558	8.25
0-3000	6	500	8559	8.25
0-4000	8	500	8560	8.85
0-5000	10	500	8561	9.75



External Multiplier — Model 183
For Usage See Voltmeter Footnotes

Simpson INSTRUMENT RELAYS and CONTROLLERS

• "RUGGED SEAL" CONTACTLESS TYPE

Maximum reliability design and control, alarm, or limit applications. Photoconductor sensing eliminates all interference wth the indicating meter. High gain transistor switch circuit provides accurate switching and a "dead band" of no more than 0.5% of full scale. Fail safe circuitry opens output relays in the event of power failure. Output relays are DPDT, with 10-ampere contacts. New pyrometer types are available for use with I/C or C/A thermocouples. Taut band types are available from stock with 10 μA full scale sensitivity. Rugged Seal construction withstands rigorous environmental conditions.

• PHENOLIC CASE CONTACTLESS TYPE

Now available with **contactless** control point sensing... same as used in Simpson's "Rugged Seal" controllers. C tactless operation offers better control accuracy, sma "dead band," and absolute freedom from interference w the indicating meter. High gain amplifier is all solid-state maximum reliability.

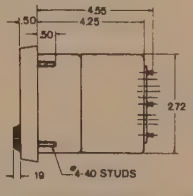
• PHENOLIC CASE CONTACT TYPE

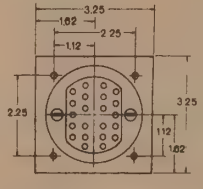
Model 29XA is also available in a contact type design. T type is well suited for general purpose applications wh cost and reasonable reliability are primary consideratio

SPECIFICATIONS	CONTACTLESS CONTROLLERS "Rugged Seal" Models 3323XA, 3323TXA, 3324XA, 3324TXA, 3344XA, 3326XA, 3326TXA		CONTACTLESS CONTROLLERS Phenolic Models 29XA, 29TXA, 49XA		INSTRUMENT RELAYS Phenolic Model 29XA
CALIBRATION ACCURACY:	±2% of Full Scale				
CONTROL POINT(S):	Single	Double	Single	Double	Double
CONTROL POINT ADJUSTMENT:	0-100% of arc.	Low limit: 0-95% of arc. High limit: 95-100% of arc. Adjustable to within 4° of each other.	0-100% of arc.	Low limit: 0-95% of arc. High lim 5-100% of arc. Adjustable to with 4° of each other.	
CONTROL POINT SWITCHING:	Within 1% of indication.				Contact "make" within 2% of in dication.
CONTROL POINT DIFFERENTIAL:	Difference between "on" and "off" is within 0.5% of Full Sale.				Make: within 2 F.S. Break: within 10 F.S.
CONTACTS/OUTPUT RELAY:	DPDT relay contacts for each control point. Each set of contacts rated at 10 Amperes, 115 VAC.				Gold Alloy. Rate at 10 Milliamps 15 VDC.
MOVEMENT:	Self-Shielding Annular				
POWER REQUIRED:	115 VAC, 50 - 500 Hz				
CASE CONSTRUCTION:	Sealed Metal Case, Glass Window		Phenolic Case, Glass Window		



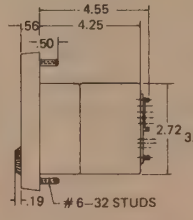
3½"

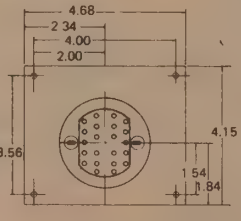


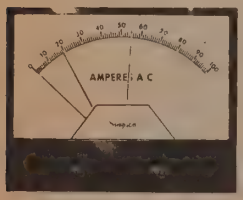




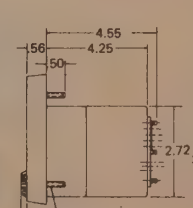
4½"

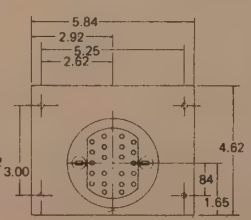




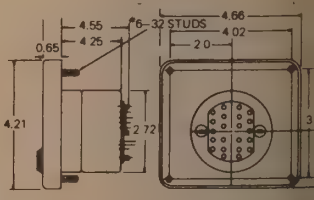


4" x 6"

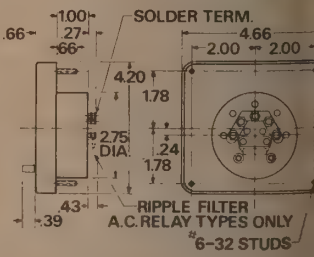




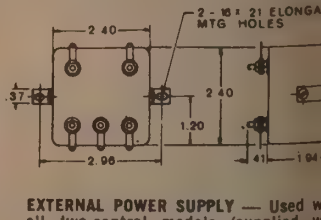










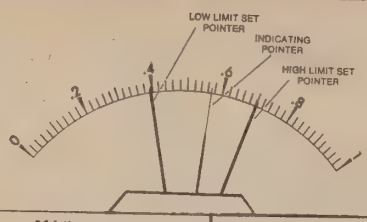


EXTERNAL POWER SUPPLY — Used w all two-control models (supplied w unit), except contact-type model 29

© United Technical Publicatio

Simpson INSTRUMENT RELAYS and CONTROLLERS

• CONTROL • ALARM • LIMIT



"RUGGED SEAL" CONTROLLERS

Range	Approx. Resistance (ohms)	Thermo-couple Type	3½" Single Control Point (High Limit) Cat. No.	3½" Single Control Point (High Limit) Price	3½" Double Control Point* Cat. No.	3½" Double Control Point* Price	4½" Single Control Point (High Limit) Cat. No.	4½" Single Control Point (High Limit) Price	4½" Double Control Point* Cat. No.	4½" Double Control Point* Price	4" x 6" Single Control Point (High Limit) Cat. No.	4" x 6" Single Control Point (High Limit) Price	4" x 6" Double Control Point* Cat. No.	4" x 6" Double Control Point* Price
AUT BAND DC MICROAMPERES			Model 3323TXA (Taut Band)				Model 3324TXA (Taut Band)				Model 3326TXA (Taut Band)			
0-10	5500	—	16606	$134.70	16607	$164.85	16614	$138.00	16615	$168.15	16622	$141.30	16623	$171.45
0-25	3000	—	16604	124.80	16605	154.95	16612	128.10	16613	158.25	16620	131.40	16621	161.55
0-50	2000	—	16602	116.55	16603	146.70	16610	119.85	16611	150.00	16618	123.15	16619	153.30
0-100	570	—	16600	113.10	16601	143.25	16608	116.40	16609	146.55	16616	119.70	16617	149.85
C MICROAMPERES							Model 3324XA							
0-200	570	—	—	—	—	—	16453	$116.40	16472	$146.55	—	—	—	—
0-500	220	—	—	—	—	—	16454	116.40	16473	146.55	—	—	—	—
C MILLIAMPERES			Model 3323XA				Model 3324XA				Model 3326XA			
0-1	80	—	16500	$111.90	16520	$142.20	16455	$115.20	16474	$145.50	16540	$118.50	16560	$148.80
C MILLIVOLTS			Model 3323XA				Model 3324XA				Model 3326XA			
0-50	10	—	16505	$112.20	16525	$142.50	16460	$115.50	16480	$145.80	16545	$118.80	16565	$149.10
C AMPERES							Model 3344XA							
0-5	.5 VA MAX.	—	—	—	—	—	16465	$127.05	16485	$157.35	—	—	—	—
C VOLTS							Model 3344XA							
0-10	1000Ω/V.	—	—	—	—	—	16570	$124.35	16575	$154.50	—	—	—	—
EMPERATURE							Model 3324XA							
-75° to + 225°F	5	I/C**	—	—	—	—	16801	$120.00	16807	$156.00	—	—	—	—
0° to + 300°F	5	I/C**	—	—	—	—	16802	120.00	16808	156.00	—	—	—	—
0° to + 500°F	10	I/C**	—	—	—	—	16803	117.00	16809	153.00	—	—	—	—
0° to + 750°F	10	I/C**	—	—	—	—	16804	117.00	16810	153.00	—	—	—	—
0° to +1000°F	10	I/C**	—	—	—	—	16805	117.00	16811	153.00	—	—	—	—
0° to +1500°F	10	C/A**	—	—	—	—	16806	117.00	16812	153.00	—	—	—	—

Double control models use external power supply. See dimensions.
Thermocouple not supplied. See panel instrument accessory page for I/C type thermocouples.
C/A thermocouples will be available soon.

HENOLIC CASE CONTROLLERS ND INSTRUMENT RELAYS

Range	Approx. Resistantce (Ohms)	4½" CONTACTLESS CONTROLLERS Single Control Point (High Limit) Cat. No.	Single Control Point (High Limit) Price	Double Control Point* Cat. No.	Double Control Point* Price	4½" CONTACT SWITCHING RELAYS Double Control Point Cat. No.	Double Control Point Price
UT BAND DC CROAMPERES		Model 29TXA		Model 29TXA			
0-10	5500	16700	$120.60	16701	$150.75	—	—
0-25	3000	16702	110.70	16703	140.85	—	—
0-50	2000	16704	105.75	16705	135.90	—	—
0-100	570	16706	102.30	16707	132.60	—	—
MICROAMPERES		Model 29XA		Model 29XA		Model 29XA	
0-50	5200	—	—	—	—	07032	$ 58.95
0-100	1800	—	—	—	—	07034	56.40
0-200	570 (1000‡)	16708	$ 99.00	16709	$129.15	07036	52.80
0-500	220 (280‡)	16710	99.00	16711	129.15	07038	52.05
MILLIAMPERES		Model 29XA		Model 29XA		Model 29XA	
0-1	80 (140‡)	16712	$ 97.80	16713	$128.10	07040	$ 50.85
MILLIVOLTS		Model 29XA		Model 29XA		Model 29XA	
0-50	10	16714	$ 98.10	16715	$128.40	07050	$ 51.00
AMPERES		Model 49XA		Model 49XA			
0-5	0.5 VA MAX.	16716	$109.65	16717	$139.95	—	—
VOLTS		Model 49XA		Model 49XA			
0-10	1000Ω/V	16718	$106.95	16719	$137.10	—	—

sistance in brackets are for contact type only.
uble control contactless models use external power supply module (supplied with unit). See dimensions page 20.

CONTROLLER ACCESSORIES

CURRENT TRANSFORMERS

Designed for use with 0-10 volt AC meters. Available from stock, they convert meter relays to AC current control units. Transformer may be located remotely from indicating meter. Ranges from 0-50 milliamperes up to 0-50 amperes are available for immediate delivery. Frequency Range: 30 Hz to 5 kHz. Accuracy: ±2%. (May be used with any 0-10 volt, 1000 Ω/volt, or 2000 Ω/volt, AC rectifier type meter.) Not for use in circuits where sustained overloads are possible.

Range	V.A.	Cat. Number	Price
0- 50 mA	0.40	01294	$15.15
0-100 mA	0.50	01295	14.10
0-200 mA	0.37	01296	14.10
0-300 mA	0.48	01303	14.10
0-500 mA	0.53	01304	14.10
0-750 mA	0.37	01307	14.10
0- 1 Amp	0.42	01308	13.05
0- 2 Amp	0.54	01309	13.05
0- 3 Amp	0.66	01311	13.05
0- 5 Amp	0.75	01312	13.05
0-10 Amp	1.45	01314	13.05
0-15 Amp	1.05	01315	13.05
0-20 Amp	1.04	01316	13.05
0-25 Amp	1.50	01317	13.05
0-30 Amp	1.10	01318	13.05
0-40 Amp	1.09	01319	13.05
0-50 Amp	1.90	01321	13.05

See pages 18 and 19 for thermocouples and other acccessories.
See page 19 for illustrations of Model 186.

Simpson VOLT OHM MILLIAMMETERS



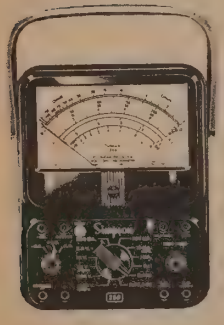
World Famous 260®

New 260® Series 6 for today's testing needs!

New 260® Series 6 has 150% better resolution of low level circuits with new 0-1 DC volt range. Also features new 0-500 volt AC and DC ranges plus new external access battery and fuse compartment. 50 μA movement is self-shielding and shock-resistant — protected from overloads of up to 200,000%! Wide selection of accessories include high voltage probes, carrying cases, and Add-A-Tester adapters.

Supplied complete with test leads (Cat. No. 07500), batteries, and operator's manual.

260-6 ..... $65.00
260-6RT (in roll-top protective case) 71.00
260-6M (with mirror scale) 67.00
260-6MRT (with mirror scale, roll-top case) 73.00
Ever-Redy Vinyl Carrying Case for above, Cat. No. 00805 ..... 14.00



PUSH-BUTTON OVERLOAD PROTECTION!

260-5P The Famous GOOF PROOF VOM

Virtually 100% protected! Makes burned components, bent pointers, and blown rectifiers a thing of the past. Ideal for use when exploring unfamiliar equipment, especially if no schematic is available. Also popular in schools, or wherever a VOM must be used by inexperienced personnel. No other VOM has all these features:

1. Reset button pops out to indicate overload.
2. Circuits cannot be reset while overload is present.
3. Does not require massive overloads to activate.
4. All ranges protected except those not feasible in a portable instrument (100Ω and 5000 VDC, 10 Amperes DC).

Uses same accessories as the 260-6, including Add-A-Tester adapters.

260-5P ..... $ 97.00
260-5PRT (with roll-top protective case) 103.00



250 VOM with 50 MILLIVOLT DROP

Makes testing new solid-state circuits easier. All the features of the famous 260® including a 1-ampere fused input, self-shielding varistor protected movement and Adjust-A-Vue handle which folds to use as a stand. Plus modified range coverage and 50 millivolt drop on DC current ranges . . . specifically for solid-state circuits. Taut band movement is shock-proof.

250 ..... $70.00
Ever-Redy Vinyl Carrying Case, for above. No. 00805 ..... 14.00

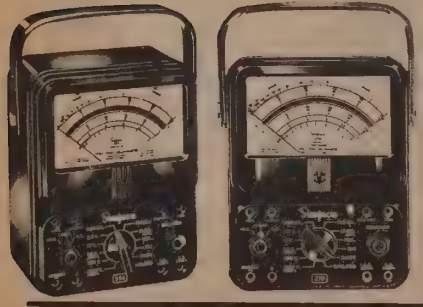


255 VOM with TEMPERATURE RANGE

Designed by Simpson for a major utility company to meet the specific needs of servicemen in the gas appliance, electrical heating and appliance fields. Has important features of 260® VOM plus temperature range of +100°F. to +1050°F. Low millivolt drop on DC current ranges for servicing new solid-state controls.

Complete with operator's manual, test leads with prods (No. 00115), 5 foot thermocouple lead (No. 00163), and batteries.

255 ..... $90.00
10,000 volt AC High-Voltage Probe Cat. No. 00161 ..... 17.00
Specially designed Carrying Case for 255. No. 00549 ..... 20.00
Probe Case, snaps onto above Carrying Case No. 00574 ..... 8.00



261-2 and 270-3 HIGH ACCURACY VOLT-OHM MILLIAMMETERS

Designed for VOM applications requiring higher accuracies. They have all the features of the 260-5M, including mirror scale, varistor protected self-shielding movement, and Adjust-A-Vue handle. Special calibration circuits and components, combined with strict manufacturing controls produce outstanding accuracy. 270-3 has built-in temperature compensation. Both use all 260® accessories, including plug-in Add-A-Tester® adapters.

261-2 ..... $73.00
261-2RT (Roll-top protective case) 79.00
270-3 ..... 78.00
270-3RT (Roll-top protective case) 84.00
Complete with operator's manual, test leads (No. 07500), and batteries.
Ever-Redy Vinyl Carrying Case, for above. No. 00805 ..... 14.00

© United Technical Publicati

Simpson VOLT OHM MILLIAMMETERS

IN THE 260® FAMILY THERE'S A VOM TO MEET YOUR EXACT NEEDS . . .

SPECIFICATIONS — 20,000Ω/V DC; 5,000Ω/V AC

RANGES	250	255	260-5P	260-6	260-6M	261-2	270-3
DC Volts	0-0.050; 0-0.250; 0-2.5; 0-10; 0-50; 0-250; 0-500; 0-1000	0-0.050; 0-0.250; 0-1; 0-2.5; 0-10; 0-50; 0-250; 0-1000	0-0.25; 0-1; 0-2.5; 0-10; 0-50; 0-250; 0-500; 0-1000; 0-5000				
AC Volts	0-2.5; 0-10; 0-50; 0-250; 0-500; 0-1000	0-2.5; 0-10; 0-50; 0-250; 0-1000	0-0.25; 0-1; 0-2.5; 0-10; 0-50; 0-250; 0-500; 0-1000; 0-5000				
DC Microamperes	0-50 (Both 50 and 250 MV Drop)		0-50 (250 MV Drop)				
DC Milliamperes	0-1; 0-10; 0-100; 0-500 (50 MV Drop)		0-1; 0-10; 0-100; 0-500				
DC Amperes	0-10 (50 MV Drop)	None	0-10 (250 MV Drop)				
AC Amperes	Up to 250 AC Amps with Optional Amp-Clamp Adapter						
DB Scale (1 MW-600Ω)	−20 to +10; −8 to +22; +6 to +36; +20 to +50	None	−20 to +10; −8 to +22; +6 to +36; +20 to +50				
Output Ranges	None	None	0.1 mfd capacitor in series with all AC voltage ranges through 250 volts.				
Resistance Ranges	R x 1 0-2000Ω (12Ω center)	R x 100 (0-200KΩ (1200Ω center)			R x 10K 0-20 megΩ (120KΩ center)		
Temperature Range	None	+100°F. to +1050°F.	None				
ACCURACIES:							
0-50 MV; 0-250 MV; 0-2.5 to 0-1000 V DC	±2% F.S.	±2% F.S.	±2% F.S.			±1.5% F.S.	±1.25% F.S.
0-5000 V DC	—	—	±3% F.S.			±2.5% F.S.	±2.25% F.S.
0-50 Microamperes	±1% F.S.	±1% F.S.	±1.5% F.S.			±1.0% F.S.	± .75% F.S.
0-1 MA to 0-10 A DC	±2% F.S.	±2% F.S.	±2% F.S.			±1.5% F.S.	±1.25% F.S.
R x 1 R x 100, R x 10,000	±2.5° of Arc ±2.0° of Arc	±2.5° of Arc ±2.0° of Arc	±2.5° of Arc ±2.0° of Arc			±2.0° of Arc ±1.5° of Arc	±1.5° of Arc ±1.0° of Arc
0-2.5 to 0-1000 V AC	±3" F.S.	±3% F.S.	±3% F.S.			±3% F.S.	±2.0% F.S.
0-5000	—	—	±4% F.S.			±4% F.S.	±3% F.S.
Movement Type	TAUT BAND Self Shielding Annular						
Temperature Compensated	No	No	No	No	No	No	Yes
Meter Movement Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Resetable Tester Circuit Protection	No†	No†	Yes	No†	No†	No†	No†
Mirror Scale	No	No	No	Yes	No	Yes	Yes
Scale Length	4.2 inches						
Dimensions	5¼" x 7" x 3⅛"						
Net Weight	3½ lbs.						
Price	$70.00	$90.00	$97.00	$65.00	$67.00	$73.00	$78.00

† 1 amp. fuse limits maximum current.

260® VOM ACCESSORIES



HIGH VOLTAGE PROBES

kV DC	No. 00507	$17.00
kV DC	No. 00508	17.00
kV DC	No. 00509	17.00
kV AC	No. 00161	17.00

TEST LEADS

Alligator Clip	No. 07500	$2.75
Probe Tip	No. 07538	3.25
Thermocouple (5 ft., for 255)	No. 00163	6.00

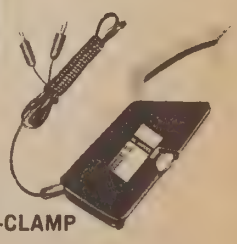
CARRYING CASES

Vinyl	No. 00805	$14.00
Leather	No. 01818	12.00
Utility	No. 00549	20.00
Roll-Top	No. 00249	13.00

AMP-CLAMP PLUG-IN ADAPTER FOR AC AMPERE MEASUREMENTS

Amp-on AC ammeter adapter allows measurement to be made without breaking circuit being tested. Simply plugs into 260®, 261, 270, 250 or 255 VOM. Ranges: 0-5, 10, 25, 50, 100, 250 AC Amperes. Readout is on VOMs 0-2.5 VAC scale. May be used with any VOM having 0-2.5, or 0-3 VAC range. When used with 0-3 VAC adapter ranges are from 0-6 to 300 AC Amperes. Rugged construction, and easy to use.

Model 150 Complete with No. 0533 test lead, Cat. No. 00532 ..... $30.00
Test Lead, Cat. No. 0533 ..... 2.25
Carrying Case No. 00548 ..... 8.00

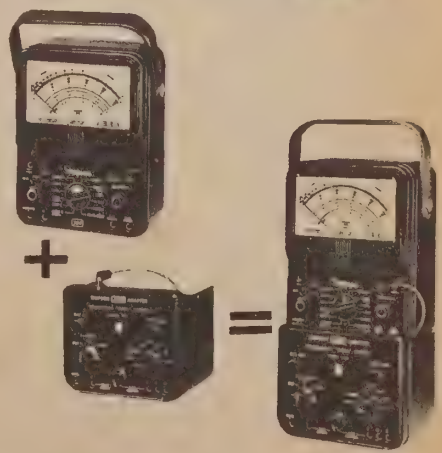


NEW AMP-CLAMP

260 ADD-A-TESTER ADAPTERS

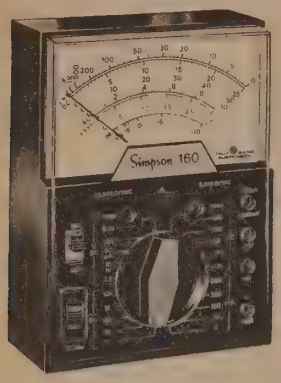
MODEL	RANGE	ACCURACY
TRANSISTOR TESTER MODEL 650 — $44.00	BETA: 0-5, 50, 250. Ico: 0-100 μa.	BETA: ±5%* Ico: ±3%*
AC VTVM MODEL 651 — $52.00	VOLTS: 0-0.5, 1.0, 2.5, 10,25, 50, 100, 250, 500 INPUT IMPEDANCE: Greater than 10megΩ on all ranges.	±3% F.S.*
TEMPERATURE TESTER MODEL 652 — $49.00	−50°F to 100°F, 100°F to 250°F. Sensing Element: Thermistor.	±2°F from −30° to +220°F. ±4°F over remainder of range.
AC AMMETER MODEL 653 — $30.00	0-0.25, 1.0, 2.5, 12.5, 25 Amps. Frequency range: 50-3000 cycles.	±3% F.S.
AUDIO WATTMETER MODEL 654 — $34.00	LOAD RANGES: 4, 8, 16, 600 ohms. WATTAGE: 25 watts (8, 600Ω), 50 watts (4, 16Ω) continuous. Intermittent duty: 50 and 100 w.	±10% (±7% with 261 and 270)
MICROVOLT ATTEN. MODEL 655 — $30.00	2.5 to 250,000 microvolts in decade steps. Frequency: DC to 20kc.	±1 DB
BATTERY TESTER MODEL 656 — $30.00	Up to 90 volts.	±3% F.S.*
MILLIOHMMETER MODEL 657 — $54.00	0-0.1 (150 ma. max. output), 0.25 (103 Ma.), 0.5 (90 Ma.), 1.0 (80 Ma.).	±2% F.S. (±1½% with 261 and 270).
DC AMMETER MODEL 661 — $33.00	DC AMPERES: 0-10, 2.5, 5, 10, 25.	±2% F.S. (±1½% with 261 and 270).

* 1% better accuracy when used with 261 or 270.



Simpson MULTI-TESTERS

NEW! IMPROVED 160 HANDI-VOM



Now even better... with ±2% DC and ±3% AC accuracy. Just 3⅝" wide, and a mere 12 ounces in weight, yet the 160 Handi-VOM has the accuracy and sensitivity of a full size VOM. The self-shielding Taut Band movement features outstanding repeatability and freedom from stray magnetic fields. And the movement is varistor protected from even 200,000% overloads. Built for today's VOM needs, including solid-state circuit testing, the 160 has 0-0.25 VDC and 0-50 DCμA ranges. Five resistance ranges are provided for easy and accurate ohms measurements. Optional accessories include probe-tip leads, and a new vacuum-formed carrying case.

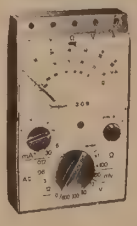
Complete with test leads and operator's manual.

160 Handi-VOM $55.00

SPECIFICATIONS	160
Ranges — DC Volts	0-0.25, 1.0, 2.5, 10, 50, 250, 500, 100
AC Volts	0-2.5, 10, 50, 250, 500, 100
DC Microamperes	0-50
DC Milliamperes	0-1, 10, 100, 500
DC Amperes	NONE
AC Milliamperes	NONE
AC Amperes	NONE
DB Scale (1 mW into 600 Ω)	−20 to +10, −8 to +22, +6 to +36, +20 to +50
DC Resistance	R x 1 (30 Ω center), R x 10, R x 100, R x 1k, R x 10k
Accuracy — DC	±2%
AC	±3%
Sensitivity — DC	20,000 Ω/volt
AC	5,000 Ω/volt
Movement Type	Taut Band
Illuminated Scale	NO
Light-Up Continuity Indicator	NO
Scale Length	3.0"
Dimensions (HxWxD)	4⅜" x 3⅜" x 1¾"
Net Weight	12 ounces
Price	$55.00

Model 208 and 209 AC/DC VOMs





Both of these new Simpson VOMs have **AC Current** ranges built-in. Separate inputs for voltage and current make combined readings easy — using two sets of leads you simply flip the range switch. Other new features: illuminated scale and light-up continuity checker. Complete with one set of test leads, batteries, and operator's manual.

Model 208 .....$72.50
Model 209 ..... 68.00

Manufactured in West Germany



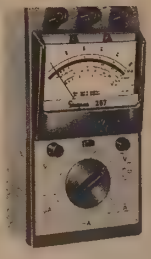
Model 355 MIDGETESTER®

So small (2¾" x 4½" x 1") it easily slips into your shirt pocket. No wonder the 355 Midgetester® is popular with those who must make basic voltage and resistance measurements "in the field."

Complete with test leads and operator's manual.

355 Midgetester® $50.00





NEW MULTITESTER

MEASURE CAPACITANCE AND AC CURRENT

PUSH-BUTTON OVERLOAD PROTECTED!

Both of these new Simpson VOMs have built-in capacitance a high Megohm ranges! The high voltage necessary for the measurements is supplied from an external source (which c simply be line voltage where AC is required). Overload circ breaker protects all ranges except 100 volts and high Supplies complete with test leads and operator's manual.

Model 256 .....$105.
Model 257 .....$ 95.

Manufactured in Austria

SPECIFICATIONS	208	209	355	256	257
Ranges DC Volts	0-0.6, 3, 12, 60, 300, 600	0-0.06, 12, 60, 300, 600	0.3, 12, 60, 200, 1200	0-0.1, 0.5, 2.5, 10, 25, 100, 250, 500, 1000, 5000	0-0.1, 0.5, 2.5, 10, 25, 100, 250, 1000, 5000
AC Volts	0-12, 60, 300, 600	0-12, 60, 300, 600	0.3, 12, 60, 200, 1200	0-0.5, 2.5, 10, 25, 100, 250, 500, 1000, 5000	0-10, 50, 250, 1000
DC Microamperes	NONE	NONE	NONE	0-100	0-10, 50, 250
DC Milliamperes	0-0.6, 30, 120, 600	0-120, 600	NONE	0-0.5, 2.5, 10, 50	0-1, 5, 25, 100
DC Amperes	0-3	0-3, 12	NONE	0-0.25, 1, 5	0-1
AC Milliamperes	0-06, 6, 30, 120, 600	0-6, 30, 120, 600	NONE	0-0.5, 2.5, 10, 50	NONE
AC Amperes	0-3	0-3, 12	NONE	0-0.25, 10, 50	NONE
DB Scale (1 mW into 600 Ω)	NONE	NONE	NONE	−34 to −4; −20 to +10; −8 to +22; 0 to +30; +12 to +42; +20 to +50; +26 to +56	−8 to +22; +6 to +36; +20 to +50
DC Resistance	R x 1 (128 Ω center), R x 100	R x 1 (43.9 Ω center), R x 100	R x 1 (120 Ω center), R x 10, R x 100, R x 1k	R x 1 (30 Ω center), R x 1k, R x 10k, R x 1 Meg*	R x 1 (30 Ω center), R x 1k, R x 100k, R x 10 Meg
AC Resistance	NONE	NONE	NONE	R x 1 Meg (1 MegΩ center)**	R x 1 Meg (1 MegΩ center)**
Capacitance	NONE	NONE	NONE	100 pF to 20,000 pF** 2,000 pF to 5 μF**	2,000 pF to 5 μF**
Output Ranges	NONE	NONE	NONE	0.1 μF capacitor in series with AC voltage ranges from 10 thru 250 V.A.C.	
Accuracy — DC	±1.5%	±1.5%	±3%	±1.0%	±1.5%
AC	±2.5%	±2.5%	±5%	±1.5%	±2.5%
Sensitivity — AC	10,000 Ω/v	1,666 Ω/v	10,000 Ω/v	25,000 Ω/V	100,000 Ω/V
DC	10,000 Ω/v	1,666 Ω/v	10,000 Ω/v	2,000 Ω/V	20,000 Ω/V
Price	$72.50	$68.00	$50.00	$105.00	$95.00

Supplied complete with batteries, test leads and operator's manual.

* With external DV voltage supply which may be any voltage between 100 and 130 volts (100 and 140 volts with Model 257).

** With external AC voltage supply which may be any 60 Hz voltage between 100 and 240 volts.

© United Technical Publicatio

Simpson VOLT-OHM-MILLIAMMETERS

IODEL 202 — ACCU-LOG®— A NEW CONCEPT IN VOMS

he first VOM to give you consistent "percent-of-reading" ccuracy . . . anywhere on the readout scale!

CCU-LOG has a special quasi-logarithmic scale. It gives you "percent-of-ading" accuracy anywhere on the readout scale, yet still allows easy zero ad-ıstment with a linear portion at the low end. There's no need to keep readings t the high end of the scale, or worry about "percent-of-full scale" accuracy mitations. Other features you'll like: two low power ohmmeter ranges, over-ıad protected taut band movement, and a large 7" antiparallax mirror scale.

xternal battery compartment makes battery changing faster, easier!

VOLTAGE RANGES
DC: 0.03 - 0.33; 0.1 - 1.1; 1 - 11; 10 - 110; 30 - 330; 100 - 1100 volts
AC: 1 - 11; 10 - 110; 30 - 330; 100 - 1100 volts

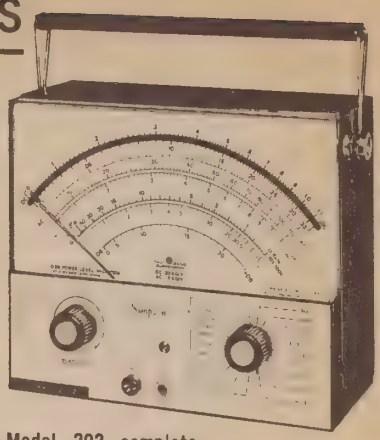
CURRENT RANGES
DC: 0.01 - 0.11; 0.1 - 1.1; 1 - 11; 10 - 110; 100 - 1100 milliamperes

LOW POWER RESISTANCE RANGES
Rx1 (4 ohm center, 2.7 mW maximum load); Rx10 (40 ohm center, 0.27 mW maximum load)

RESISTANCE RANGES
Rx1k (7k-ohm center); Rx10k (70k-ohm center); Rx100k (700k-ohm center)

SENSITIVITY
DC: 20k Ω/V AC: 5k Ω/V

ACCURACY
DC: ±2% of ***reading*** AC: ±3% of ***reading*** Resistance: ±3° of arc



ACCU-LOG Model 202 complete with test leads, batteries, and operator's manual **$100.00**
Carrying Case, Vinyl with Lead Storage Space, Cat. No. 00577.... **$ 17.00**
Carrying Case, Vinyl with Sponge Lining, Cat. No. 01565 ..... **$ 17.00**

7-INCH VOMs



NEW 269-3
EASIER TO READ 7" SCALES

MODEL 269 Series 3
100,000 Ω/V!

Now improved! . . . with a self-shielding Taut Band meter movement that gives better repeatability, plus faster pointer action. This new meter movement is combined with a new mirror scale; and knife-edge pointer, eliminating parallax errors. Large, readable scale is over 6 inches long. Accuracy is ±2% DC and ±3% AC, with new range coverage, too. One switch selects all 27 ranges. Battery replacement is quick and easy with the snap-on compartment. And the new 269-3 is protected from overloads with a replaceable 1.5 Ampere fuse at the input, and a varistor at the meter movement.

Complete with No. 00115 test leads, 4000 volt DC probe extension, and operator's manual.

Model 269-3 ..... **$98.00**

MODEL 263

64-RANGE DUAL-SENSITIVITY VOM
1½% DC ACCURACY

Dual sensitivity Volt-Ohm-Milliammeter has overlapping ranges — let's you place reading at the high end of scale for optimum accuracy. Large 7" scale makes readouts easier, too. Varistor protects the movement from even **200,000 per cent** overloads! 1½ volt alkaline battery assures maximum stability on low ohms range. External battery compartment for easiest replacement. See the chart below for complete specifications.

Complete with No. 00115 test leads, batteries, and operator's manual.

Model 263 ..... **$97.00**

MODEL 262 Series 3

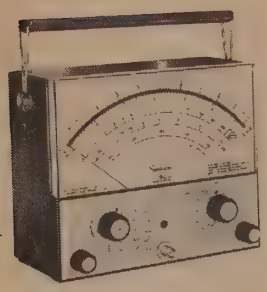
Popular 7" VOM has 34 ranges, movement overload protection, and more. See complete specifications below. Complete with No. 00115 test leads, batteries, and operator's manual.

Model 262-3 ..... **$83.00**

	MODEL 262-3	MODEL 263	MODEL 269-3
RANGES:	20,000 Ω/V DC 5,000 Ω/V AC	20,000 Ω/V DC • 10,000 Ω/V DC 10,000 Ω/V AC • 5,000 Ω/V AC	100,000 Ω/V DC 5,000 Ω/V AC
DC Volts	0-1.6/0-8/0-40/0-160/0-400/ 0-1600/0-4000	0-0.15/0-0.75/0-3/0-7.5/0-30/0-75/0-300/ 0-750/0-3000 @ 20KΩ/V 0-0.3/0-1.5/0-6/0-15/0-60/0-150/0-600/ 0-1500/0-6000 @ 10KΩ/V	0-1.6/0-8/0-40/0-160/0-400/ 0-800/0-1600/0-4000
AC Volts	0-3/0-8/0-40/0-160/0-400/0-800	0-2.5/0-7.5/0-30/0-150/0-750 @ 10kΩ/V 0-5/0-15/0-60/0-300/0-1500 @ 5KΩ/V	0-3/0-8/0-40/0-160/0-400/0-800
DC Microamperes	0-80/0-160	0-75 @ 150 MV; 0-150 @ 300 MV	0-16/0-160
DC Milliamperes	0-1.6/0-16/0-160	0-0.75/0-7.5/0-75/0-750 @ 150 MV; 0-1.5/0-15/0-150 @ 300 MV	0-1.6/0-16/0-160
DC Amperes	0-1.6/0-8	0-7.5 @ 150 MV; 0-1.5/0-15 @ 300 MV	0-1.6/0-8
DB Scale (L1MW-600)	−12 to +45.5 db in four ranges	−20 to +75.5 db in 10 ranges	−12 to +45.5 db in four ranges
Output Ranges	0.1 mfd capacitor in series with all AC Voltage ranges through 160 Volts	0.1 mfd capacitor in series with all AC Voltage ranges through 300 Volts	External 0.1 mfd capacitor required where DC is present.
Resistance Ranges	R×1 0-500Ω; R×10 0-5000Ω; R×100 0-50KΩ R×1K 0-500KΩ; R×10K 0-5 megΩ (4.5Ω Center); R×100K 0-50 megΩ	R×1 0-500Ω; R×10 0-5000Ω; R×100 0-50KΩ R×1K 0-500KΩ; R×10K 0-5 megΩ (4.5Ω Center); R×100K 0-50 megΩ	R×1 0-200Ω; R×10 0-20KΩ; R×100 0-200KΩ R×1K 0-2 megΩ; R×10K 0-20 megΩ (12Ω center); R×100K 0-200 megΩ
ACCURACIES: DC Volts	±3%	0-0.15 to 1500 ±1½%; 0-3000 to 6000 ±2½%	0-1.6 to 1600 ±2%; 0-4000 ±3%
AC Volts	±4%	±3%	0.3 to 800 ±3%
DC Current	±3%	±1½%	All Ranges ±2%
R×1	±3° of Arc	±3° of Arc	±3° of Arc
R×10, R×100K	±2½° of Arc	±2½° of Arc	±2½° of Arc
Scale Length	6.2 inches		
Dimensions	6" x 7¼" x 3"		
Net Weight	4 lbs.		

Simpson ELECTRONIC MULTIMETERS

NEW! MODEL 314 Solid-State VOM



- **7 Low Power Ohms Ranges**
- **Current Ranges as low as 10 μA at Full Scale**

For today's circuit designer and tester . . . won't load or burn out IC's and transistorized circuitry. Draws just 70 μW on low power ohms ranges. 10 Megohm input impedance on all voltage ranges plus 10X probe switch for 100 Megohm input. 21 AC and DC ranges. Offers 100 mA and 1 amp measurement ranges, AC and DC. Large 7″ mirror scale with knife-edge pointer eliminates parallax errors. External access battery compartment makes battery replacement easy.

Model 314 complete with AC/DC probe, battery, and operator's manual **$150.00**

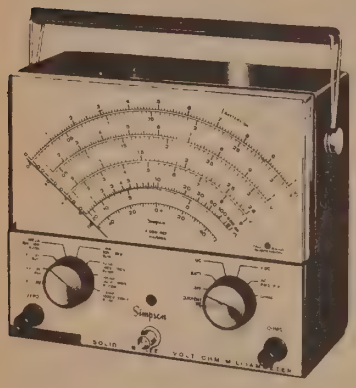
Ranges: 0-0.05 to 1000 DC V in ranges. 0-0.01 to 1000 AC V in ranges. 0-0.01 to 1000 mA AC a DC in 7 ranges. Rx1 (10 Ω center) Rx1 Meg in 7 ranges. −40 to + dB.

Accuracy: ±2% (FS) DC, ±3% (FS) A

Input Impedance: 10 Meg Ω AC and (10x probe switch for 100 Meg

Frequency Response: Flat to 100 kH

MODEL 313 Solid-State FET VOM



- **11 Meg Ω DC Input — Battery Operated**

The high impedance of a VTVM in a battery operated instrument! Operates for 300 hours or more on a single set of batteries. FET-input. All voltage ranges fully overload protected. Large, easy-to-read 7″ scale. Built-in "battery check" switch. Self-shielding movement.

Model 313 complete with AC/DC probe, batteries, and operator's manual **$125.00**

Ranges: 0-0.3 to 1000 V AC and DC 7 ranges. 0-0.1 to 1000 mA DC in ranges. Rx1 (10 Ω center) to R Meg in 7 ranges.

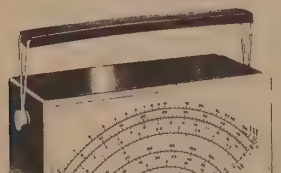
Accuracy: ±3% AC and DC.

Input Impedance: 11 Meg Ω DC, Meg Ω AC.

Frequency Response: Flat to 100 k (voltage ranges up to 3 volts F

VACUUM TUBE VOLT—OHMMETERS

MODEL 312 AC/DC VTVM



- **16 Meg Ω DC Input Impedance**

Offers 40% less circuit loading than most conventional VTVMs. Also features large 7″ scale with a tracking error of 1% or less and full scale accuracies of ±3% on all AC and DC ranges. Built-in movement overload protection. ½-volt DC range for today's solid-state circuits.

Model 312 for 105/125 V, 50/60 Hz. Complete with AC/DC probe, operator's manual **$95.00**

Model 312 for dual voltage, 110/220 V **102.00**

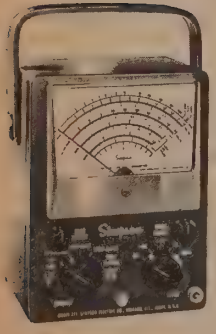
Ranges: 0-0.5 to 1500 DC V in ranges. 0-1.5 to 1500 AC RMS V 7 ranges. 0-4 to 4000 AC P-P V 7 ranges. Rx1 (10 Ω center) to R Meg in 7 ranges.

Accuracy: ±3% (FS) AC and DC.

Input Impedance: 16 Meg Ω DC, 1 M Ω AC.

Frequency Response: ±3% from 15 to 3 MHz (useable to 250 MHz w optional RF probe).

MODEL 311-3 AC/DC VTVM



- **22 Meg Ω DC Input**

Supplied complete with AC/DC probe, ground lead, operator's manual. For 117 V, 50/60 Hz.
311-3 .....**$91.00**

Ranges: 0-1.5 to 1500 DC V and AC RMS V in 7 ranges. 0-4 to 4000 AC P-P V in 7 ranges. 0-1.5 to 1500 AF V in 7 ranges. Rx1 (10 Ω center) to Rx1 Meg in 7 ranges.

Accuracy: ±3% (FS) DC, ±5% (FS) AC.

Input Impedance: 22 Meg Ω DC, 2.2 Meg Ω AC.

Frequency Response: Flat to 100 kHz (useable to 250 MHz with optional RF probe).

MODEL 303-2 AC/DC VTVM



- **Rugged Companion to the 260®**

Supplied complete with AC/DC probe, ground lead, operator's manual. For 117 V, 50/60 Hz.
303-2 .....**$92.00**
303-2RT (in roll-top case) **97.00**
303-2 for 117/220 V, 50/60 Hz **98.00**
303-2RT for 117/220 V, 50/60 Hz **104.00**

Ranges: 0-1.2 to 1200 DC V and AC RMS V in 6 ranges. 0-1.2 to 60 AF V in 3 ranges. −20 to +63 dB in 6 ranges. Rx1 (10 Ω center) to Rx1 Meg in 6 ranges.

Accuracy: ±3% (FS) DC, ±5% (FS) AC.

Input Impedance: 10 Meg Ω DC, 275k Ω AC.

Frequency Response: Flat to 100 kHz (useable to 100 MHz with optional RF probe).

MODEL 715 AC VTVM



- **dB Markings for Audio Work**

Supplied complete w shielded input cat operator's manual. 115 V, 50/60 Hz.
715 .....**$84**
715 for 115/220 V, 50/60 Hz **91**

Ranges: 0-0.01 to 300 AC RMS V in 10 rang −52 to +52 dB in 10 ranges (1 mW into 60 = "0" dB).

Input Impedance: 1 Meg Ω.

Accuracy: ±5% (FS).

Frequency Response: ±1 dB from 10 Hz to 400 k

© United Technical Publicati

Simpson TEMPERATURE TESTERS

IEW! MODEL 413 "THERMOSCRIPT"

Records Temperatures — Unattended for up to 32 days

Uses No Batteries — No Electrical Power

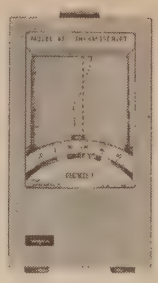
e fool-proof way to monitor temperatures of perishable goods in shipment storage. Gives a written record for any hour, any day. Precision clock tor drives chart for up to 32 days — can be packed right in shipping tes. Inkless recording system never needs re-fills. The model 413 is also al for air balancing specialists and other temperature monitoring appli-ions.

pplied complete with chart paper, three chart speed gears, protective stic bag, and operator's manual $130.00

ilable in 3 range models:

30° to +150°F ..... Catalog No. 23310
0° to +120°F ..... Catalog No. 23312
30° to + 90°F ..... Catalog No. 23314

Accuracy: ±1.5% of range span. (Speed accuracy: 1%).
Response Time: 15 minutes for a 50% change, when subjected to a sudden temperature drop.
Chart Speeds: 24, 48, 96 mm-per-day with interchangeable gears (supplied).
Chart Paper: Pressure sensitive.
Sensor: Shock-resistant bi-metal type, internally mounted.



ACCESSORIES

	Cat. No.	Each
Stainless Steel Mounting Bracket	23305	$ 8.00
Carrying Case	23306	10.00

CHART PAPER

	Cat. No.	Per 10 roll Box
+30° to +150°F calibration	23300	$18.00
0° to +120°F calibration	23302	18.00
−30° to + 90°F calibration	23304	18.00

IODELS 385-3L, 388-3L, 389-3L TEMPERATURE TESTERS

PROBES, LEADS & CARRYING CASES

Description	Cat. No.	
rface Temperature Probe	00790	$ 9.00
e Air Temperature Probe	00789	12.00
ditional Thermistor Lead	00010	9.00
0 Ft. Thermistor Lead	00216	10.00
0 Ft. Thermistor Lead	00415	11.00
0 Ft. Thermistor Lead	00416	14.00
0 Ft. Thermistor Lead	00417	18.00
er-Redy Leather Carrying Case	08073	12.00

MODEL 385-3L TEMPERATURE METER
Model 385-3L is ideal for those fast, accurate temperature checks from —50°F. to +70°F. Lightweight, portable, fits easily in your hand. Three lead model. Takes temperature readings in three different locations with a simple flick of the selector knob. Standard Model has Fahrenheit scale. Supplied with one No. 00010 15 ft. thermistor lead and operator's manual.
Size: 3"x5⅞"x2½". **Wt.** 1½ lbs. **$45.00**

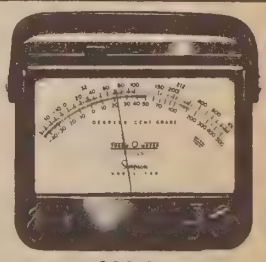
RANGE & ACCURACY: —50°F. to +70°F. ±1°F. @ Center Scale ±2°F. @ Either End


385-3L

neral Purpose Type	00190	$ 7.50
rface Temperature Probe Type 1000°F. Max.)	00187	12.00
gged Service Lead (8 ft.)	00496	10.00
er-Redy Vinyl Carrying Case	05262	14.00

MODEL 388-3L THERM-O-METER
Simpson's popular wide range Therm-O-Meter tester measures the temperature of practically anything within —50°F. to +1000°F. Standard model has combination °C. and °F. scale. Sensing Element: Thermocouple (Iron-Constantan). Supplied with internal battery and one 8' general purpose probe No. 00190 and operator's manual. Order additional probes as required.
Size: 7 15/16"x6"x2 15/16". **Weight:** 4 lbs.
Model 388-3L for three probes **$84.00**

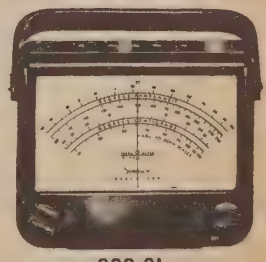
RANGE & ACCURACY: —50°F. to +1000°F. —40°C. to +500°C. ±1½ Scale Divisions


388-3L

rface Temperature Probe	00790	$ 9.00
e Air Temperature Probe	00789	12.00
ditional Thermistor Lead	00010	9.00
0 Ft. Thermistor Lead	00216	10.00
0 Ft. Thermistor Lead	00415	11.00
0 Ft. Thermistor Lead	00416	14.00
0 Ft. Thermistor Lead	00417	18.00
er-Redy Vinyl Carrying Case	05262	14.00

MODEL 389-3L
DUAL RANGE THERM-O-METER
Model 389-3L temperature tester, using three leads, makes temperature readings in three different locations at the same time; i.e., in a refrigerator, one lead could be connected to the evaporator plate, another to the wall of the food compartment and the third in the center of the food compartment. Readings are made quickly in 15 to 30 seconds depending on the medium being checked. Supplied with °C. and °F. scale. **Model** 389-3L....**$79.00**

RANGE & ACCURACY: —50°F. to +100°F. —40°C. to +35°C. +100°F. to +250°F. +40°C. to +120°C. Within ±2°F.


389-3L

st Prods and Spade Terminals	08379	$ 3.25
igator Clips and Spade Terminals	08376	2.75
er-Redy Vinyl Carrying Case	08073	12.00

APPLIANCE TESTER
MODEL 387 MILLIVOLTMETER
Make gas unit servicing faster, more accurate. Use Simpson's Millivoltmeter. Simply place the probe across the thermocouple terminals and test for the correct value. Checks Safety Thermocouples on Gas-Fired Units.
• Furnaces • Boilers • Hot Water Heaters • Heaters • Dryers • Refrigerators
Size: 3"x5⅞"x2½". **Wt.:** 1½ lbs. **$39.00**

RANGE & ACCURACY: 0-10, 0-30, 0-100, 0-300, 0-1000 Millivolts ±3% of Full Scale


387

Simpson MICRO-TESTERS*


Model 230


Model 240

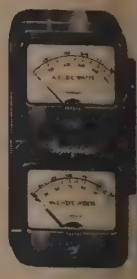

Model 362


Model 372


Model 378


Model 379


Model 390


Model 392

*** ALL MICROTESTERS HAVE RUGGED PHENOLIC CASES AND MEASURE APPROXIMATELY 3" x 5⅞" x 2½". WEIGHT: 1½ LBS.**

(Microtesters not illustrated are similar in appearance to those shown above.)

MODEL	DESCRIPTION	RANGES	PRICE
230 AC/DC VOM	One of the smallest AC and DC service instruments, yet it contains sufficient ranges to do a complete servicing job. Specifically designed for telephone, teletype and marine use. Excellent troubleshooter. Case, including the front panel, is molded of black phenolic for protection against high voltages.	**1,000 Ohms per Volt AC-DC. Voltage Ranges DC:** 10v; 50v; 250v; 1,000v. **AC:** 10v; 250v; 1,000v. **Current Ranges DC:** 10 ma; 50 ma; 250ma. **Resistance Ranges:** 0-1000Ω, 0-100kΩ **Accuracies:** DC volts ±3% F.S.; AC volts ±4% F.S.; DC resistance ±3° of linear arc from absolute value of resistance measured.	**$45.00** Complete with tests leads N 08375 and operator's manu
371 AC Voltmeter	Designed primarily for testing line voltages applied to motors, heating equipment and many other industrial applications.	**Ranges:** 0-150, 0-300, 0-600 volts. **Accuracy:** ±3% of full scale.	**$39.00**
376 AC Voltmeter	Rectifier type, 1000 ohms per volt. Useful in circuits where limited current is present. An excellent output meter when used with proper condenser.	**Ranges:** 0-5, 10, 25, 50, 100, 250, 500, 1000 AC volts. **Accuracy:** ±5% of full scale.	**$39.00**
377 DC Voltmeter	Resistance, 1000 ohms per volt. Useful in radio servicing and industrial applications.	**Ranges:** 0-1, 2.5, 5, 10, 25, 50, 100, 250, 500, 1000 DC volts. **Accuracy:** ±3% of full scale.	**$39.00**
240 AC/DC VOM	The "Hammeter." Specially designed for general application around labs, class room, ham shack, etc. Has voltage ranges of 3000 volts AC or DC to check high voltage on transmitters and receivers.	**1,000 Ohms per Volt AC-DC. Voltage Ranges DC:** 15v; 75v; 300v; 750v; 3,000v. **AC:** 15v; 150v; 750v; 3,000v. **Current Ranges DC:** 15ma; 150ma; 750ma. **Resistance Ranges:** 0-3,000Ω (30Ω center); 0-300KΩ (3KΩ center). **Accuracies:** DC volts ±3% F.S.; AC volts ±4% F.S.; DC resistance ±3° of linear arc from absolute value of resistance measured.	**$45.00** Complete with tests leads N 08375 and operator's manua
362 Low-Ohmmeter	The two ranges are essentially linear and permit highly accurate readings between 0.1 and 25 ohms. For checking motor armatures; switch and relay contact resistances; shorts between windings and grounds in radio chassis wiring; electrical equipment, etc.	**Ranges:** 0-5, 0-25 ohms. **Accuracy:** ±3% of linear arc length.	**$39.00** Complete with calibrat test leads No. 08376
372 Ohmmeter	Provides wide range of resistance measurements in a small package. .2 ohm to 500 megohms. Ideal for use in schools, on test benches or at inspection facilities.	**Ranges:** 0-500, 0-5000, 0-50,000, 0-500,000 ohms; 0-5, 0-50 megohms. **Center Scale:** 5, 50, 500, 5,000, 50,000, 500,000 ohms. **Accuracy:** ±3° of linear arc length.	**$39.00** Complete with tests lead 08375 and operator's manu
375 DC Ammeter	Provides complete range from a fraction of an amp to 25 amps without external shunts. Ideal unit for use with unmetered power supplies.	**Ranges:** 0-1, 2.5, 5, 10, 25 amperes. **Accuracy:** ±3% of full scale.	**$39.00**
370 AC Ammeter	Ideal for checking small motors, line loads, etc., where AC current measurements are required. 60 Hertz. Self-contained current transformer.	**Ranges:** 0-1, 0-2.5, 0-5, 0-10, 0-25 amperes. **Accuracy:** ±5% of full scale.	**$39.00**
373 DC Milliammeter	General purpose tester. Valuable in a number of applications. Provides DC current measurements from .02 to 1000 ma.	**Ranges:** 0-1, 5, 10, 25, 50, 100, 250, 1,000 ma. **Accuracy:** ±3% of full scale.	**$39.00**
378 AC Milliammeter	Five separate ranges. Typical applications are transformer vacuum tube tests. Contains current transformer and indicating instrument in one case.	**Ranges:** 0-5, 25, 100, 250, 1,000 ma. **Accuracy:** ±5% of full scale.	**$39.00**
379 Battery Tester	Provides accurate indications of condition of all standard flashlight, hearing aid (mercury cells), radio batteries.	**Ranges:** 0-1.5, 4.5, 6.0, 7.5, 9.0, 15.0, 22.5, 30.0, 45.0, 67.5, 90.0v.	**$39.00** Complete with tests leads No 08375 and operator's manual
374 DC Microammeter	Can be used with external resistors or multipliers as high sensitivity voltmeter at 20,000 ohms per volt. Can be shorted out of circuit by use of selector knob.	**Ranges:** 0-50, 100, 250, 500, 1,000 microamperes. **Accuracy:** ±3% of full scale.	**$39.00**
390 AC Volt-Amp-Wattmeter	The most popular tester for AC/DC volts, AC amps and AC watts with one meter. Rugged . . . useful for practically any appliance.	**Volts:** 0-150, 300. **Amps:** 0-3, 15. **Watts:** 0-300, 600, 1,500, 3,000. **Accuracy:** ±5% of full scale.	**$70.00** complete with test cord assembl No. 08418 and operator's manua
391 AC-DC Volt-Wattmeters	Simultaneous reading of volts and watts. Has separate meters, built-in cord and plug for connection to line outlet . . . separate switches for range selection.	**3,000 Watts Maximum AC or DC Range** **Volts:** 0-130, 0-260. **Watts:** 0-1,500, 0-3000. **Accuracy:** ±5% of full scale.	**$64.00** Supplied with cord, plug, and operator's manual **Leatherette Carrying Case Part No. 03413 — $12.00**
392 AC-DC Volt-Wattmeters	Simultaneous readings of volts and watts. Has separate meters, built-in cord and plug for connection to line outlet . . . separate switches for range selection.	**5,000 Watts Maximum AC or DC Range** **Volts:** 0-130, -260. **Watts:** 0-1,000, 0-5000. **Accuracy:** ±5% of full scale.	**$69.00** Supplied with cord, plug, and operator's manual **Leatherette Carrying Case Part No. 03413 — $12.00**

Ever-Redy Carrying Case, Part No. 04299 **$10.50** — for all Micro-Testers except Models 391 & 392.

Models 391 & 392 Carrying Case, Part No. 03413 **$12.00**

All prices are dealers net, subject to change without notice

© United Technical Publications

Simpson AC CURRENT LEAKAGE TESTER MODEL 229

FOR INDUSTRY • FIELD SERVICE • LAB • PRODUCTION



NEW!

Meets proposed U.S. Standards Committee specification (C101.1) for A.C. curren leakage tests.

Small leakage currents can be dangerous! And even when they're not, current above the "threshold of perception" can cause a violent reaction from fear, resulting in serious physical injury.

Simpson's new model 229 is designed to test 120 volt AC appliances and electrical equipment in accordance with the proposed U.S. standard. It approximates the normal perception curve to within ±1.0 dB, and measures currents as small as 5 microamperes.

The 229 is ruggedly built for use on production lines and "in field" servicing. Operation is simple, and all ranges are protected from damage if accidentally subjected to line voltage. It's the ideal instrument for checking the safety of your equipment.

SPECIFICATIONS

RANGES: AC Current: 0-0.3; 1; 3; 10 mA.
AC Voltage: 0-150 Volts.
Battery Test: Replace — Good.

RESOLUTION: 5 μA on 0-0.3 mA range.

ACCURACY: ±2% at 60 Hz.

ACCURACY vs. FREQUENCY: Approximates Dalziel's "Percentile 50 Threshold of Perception Curve within ±1.0 dB.*

INPUT IMPEDANCE: 1.5 k-ohms, shunted by a shaping network, on all current ranges.

INPUT RESISTANCE: 500 k-ohms on voltage range.

OVERLOAD PROTECTION: Fully protected up to 150 VAC on all ranges.

* See AIEE Proceedings, Volume 69, Section 0184. The mean value of perception on individuals in test was 1.067 mA at 60 Hz. (Available at major technical libraries.)

MODEL 229 CURRENT LEAKAGE TESTER
Complete with test leads, batteries, and operator's manual $90.00
Carrying Case, Leather, No. 00805 ..... $14.00



Model 466 HANDISCOPE®

Compact, light weight, and rugged. 5" general purpose oscilloscope has vertical deflection sensitivity of 30 mV/inch. Frequency response: 15 Hz to 100 kHz, ±1 dB. 6 dB down at 250 kHz. Usable to 1 MHz. 7⅞" x 12¼" x 16⅛". 19 lbs.

446 Handiscope® for use on 110 VAC, 50-60 Hz. Complete with test leads and operator's manual **$190.00**

Dual Voltage 466 Handiscope® As above, but for 110 or 220 VAC, 50-60 Hz **$214.00**



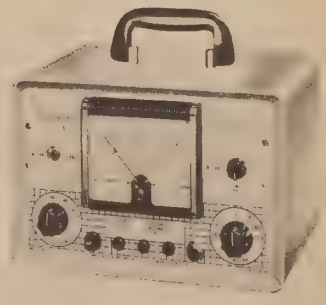
Model 458 COLORSCOPE

7" oscilloscope with both wide band (40 mV/inch sensitivity) and narrow band (15 mV/inch sensitivity) operating modes. In wide band operation, frequency response is flat (±1 dB) up to 4.5 MHz. Faithfully displays color burst frequency. Narrow band flat (±2 dB) up to 300 kHz. Weight: 29 lbs.

458 Colorscope, for use on 110 VAC, 50-60 Hz. Complete with operator's manual **$420.00**

Dual Voltage 458 Colorscope. As above, but for 110 or 220 VAC, 50-60 Hz. **$430.00**

Model 739 Probe Kit (see page 31) **$50.00**



Model 383A CAPACOHMETER

In-circuit capacitor leakage tester checks paper, mica, and ceramic capacitors. Pulse technique detects many marginal capacitors. Also directly indicates capacitance of good components, from 10.0 pF to 10.0 μF Weight: approximately 10 lbs.

Model 383A Capacohmeter, for use on 110 VAC, 60 Hz. Complete with test cord and operator's manual **$150.00**

© United Technical Publications

Simpson STRIP CHART RECORDERS



4 BUILT-IN CHART SPEEDS

OPTIONAL AUTOMATIC TAKE-UP REEL

NEW MODEL 603 RECORDERS

Available in a wide selection of ranges, these new Simpson chart recorders u **inkless** pressure sensitive paper. No pens to re-fill. No ink mess. The special formulated paper will not fog or blur with age, assuring clear and accurate rcord The rugged Taut Band movement is shockproof. In addition to recording, the met provides continuous readings of the measured value. **Four** built-in chart speeds a **switch selected.** Available in AC voltage, AC current, DC voltage, and DC curre measuring ranges. Each has a built-in event indicator, too. The 603 is compact f easy panel mounting and portable use. Mounting hardware included.

SPECIFICATIONS

Accuracy of Recording	
DC range models	±2.5% of Full Scale
AC range models	±4.0% of Full Scale
Event channel response time	10 milliseconds (nominal)
Event Indicator Voltage	115 volts/60 Hz.
Built-in Chart Speeds (Switch Selected)	1½/6/12/18 inches-per-hour (38/152/305/457 mm-per-hour)
Impression Rate	2 seconds
Chart Paper	Pressure Sensitive, 3" wide, 63 feet long.
Take-up Reel	Optional
Motor Drive	Synchronous, 115 volts/60 Hz.
Size	7½" x 4 3/16" x 2 25/32"
Weight	2½ lbs.

RANGES

Catalog Number	Range	Channel Event Voltage	Price
20201	0-50 DC μA	110 VAC	$107.00
20202	0-100 DC μA	110 VAC	102.00
20203	0-250 DC μA	110 VAC	96.00
20205	0-1 DC mA	110 VAC	90.00
20207	0-5 DC mA	110 VAC	97.00
20211	0-50 DC mA	110 VAC	97.00
20215	0-500 DC mA	110 VAC	97.00
20218	0-5 DC Amps	110 VAC	98.00
20219	0-50 DC mV	110 VAC	93.00

RANGES

Catalog Number	Range	Channel Event Voltage	Price
20225	0-15 DC Volts	110 VAC	$97.00
20227	0-50 DC Volts	110 VAC	97.00
20230	0-150 DC Volts	110 VAC	96.00
20250	0-5 AC Amps	110 VAC	120.00
20270	0-5 AC Volts	110 VAC	102.00
20280	0-150 AC Volts	110 VAC	102.00
20285	0-300 AC Volts	110 VAC	104.00
20286	100-130 AC Volts	110 VAC	105.00

CHART PAPER

Calibration	Catalog Number	Price per box of 6 rolls
50 division	20097	$13.55
60 divisions	20099	13.55
75 divisions	20098	13.55

ACCESSORIES

	Catalog Number	Price
Automatic take-up reel	20195	$15.00
Carrying case, vinyl	20196	20.00

Simpson TEST EQUIPMENT ACCESSORIES

CARRYING CASES



Ever-Redy Carrying Case
For 250, 260, 261, 270, 303
Cat. No. 0805 . . . $14.00



Roll Top Safety Case
For 260, 261, 303, 270
Cat. No. 6192 . . . $13.00



Ever-Redy Carrying Case
For 262, 263, 267, 268, 269, 388-3L, 389-3L
Cat. No. 5262 . . . $14.00



Vacuum Formed Carrying Case
Cat. No. 2929 . . . $11.00



Sponge Lined Carrying Case
Cat. No. 1566 . . . $17.00
Cat. No. 1613 . . . $14.00

Saves you time and protects your instruments. Instruments are always ready for instant testing.

For Testers	Cat. No.	Price
150 Amp-Clamp Carrying Case	0548	$ 8.00
160 Handi VOM Carrying Case	2225	11.00
160 Vacuum Formed Carrying Case	2929	11.00
208, 209 — Leather	0578	11.00
255 Utility Vinyl	0549	20.00
0549 Snap-on High Voltage Probe Case	0574	6.00
250, 260, 261, 270 — Leather	1818	11.00
250, 260, 261, 270, 303 — Ever-Redy Leather	0805	14.00
Combination 260 and Adapter, Leather Carrying Case	1871	15.00
262, 263, 267, 268, 269, 388-3L, 389-3L Ever-Redy Vinyl	5262	14.00
312, 313 Vinyl	0577	17.00
385-3L — Every-Redy Leather	8073	12.00
391, 392 — Leatherette-Covered	3413	12.00
355 — Ever-Redy Leather	6355	6.00
All Microtesters — Ever-Redy Leather	4299	11.00

For Testers	Cat. No.	Price
All Microtesters — Leatherette-Covered	3011	$9.00
Roll Top Safety Case For 260-2, 9, 10, 880's	6192	12.00
Roll Top Safety Case For 260-3, -4, -5, -5P, 261, 270	0249	13.00
Roll Top Safety Case For 303	6379	13.00

SPONGE LINED CASES

	Cat. No.	Price
312, 313 Vinyl Case	1565	$17.00
262, 263, 269 Vinyl Case	1613	14.00



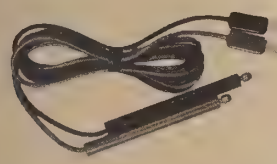
UTILITY CASE FOR 250, 255, 260, 261 AND 270

Ever-Redy Carrying case (Cat. No. 0549) has extra space for acces sories and/or tools. Probe case (No. 0574) can be snapped on to this case to accommodate any o the high voltage probes.

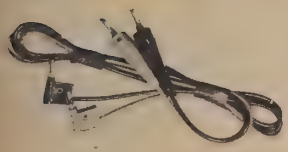
© United Technical Publications

Simpson TEST EQUIPMENT ACCESSORIES

TEST LEADS



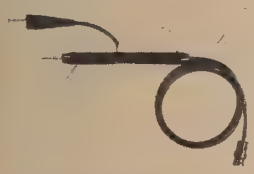




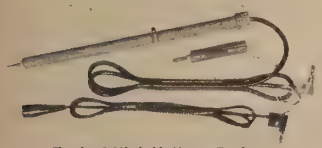
For Testers	Cat. No.	Price
160 Probe tip leads	02055	$ 3.00
160 Alligator clip leads	01927	2.50
202; 208; 209 Alligator clip leads	07500	2.75
202; 208; 209 Probe tip leads	07538	3.25
202; 208; 209 Combination probe tip leads with removable clips	00115	3.25
230; 240 Alligator clip leads	08375	2.75
230; 240 Probe tip leads	08381	3.25
250; 255 Alligator clip leads	07500	2.75
250; 255 Probe tip leads	07538	3.25
250; 255 Combination probe tip leads with removable clips	00115	3.25
256; 257 Combination probe tip leads with removable clips	07541	3.50
260 (series 1, 2 only) Alligator clip leads	08375	2.75
260 (series 1, 2 only) Probe tip leads	08381	3.25
260 (series 3, 4, 5 only); 261, 262 (series 3 only) Alligator clip leads	07500	2.75
260 (series 3, 4, 5 only); 261, 262 (series 3 only) Probe tip leads	07538	3.25
260 (series 3, 4, 5 only); 261, 262 (series 3 only) Combination probe tip leads with removable clips	00115	3.25
260-5, 260-5RT, 260-5M, 260-5MRT, 260-5P, and 260-5PRT all use 260 series 5 leads listed above.		
262 (series 1, 2 only) Combination probe tip leads with removable clips	08463	3.25

For Testers	Cat. No.	Price
263; 267; 268; 269 (series 2, 3 only) Alligator clip leads	07500	$2.75
263; 267; 268; 269 (series 2, 3 only) Probe tip leads	07538	3.25
263; 267; 268; 269 (series 2, 3 only) Combination probe tip leads with removable clips	00115	3.25
269 (series 1 only) Combination probe tip leads with removable clips	08463	3.25
270 Alligator clip leads	07500	2.75
270 Probe tip leads	07538	3.25
270 Combination probe tip leads with removable clips	00115	3.25
303 (series 1 only) Ground lead	00069	2.25
303 (series 2 only); 311 Ground lead	00733	2.25
355 Probe tip leads	08600	3.00
362; 371, 373; 374; 375; 376; 377; 378 Alligator clip leads	08376	2.75
362; 371; 373; 374; 375; 376; 377; 378 Probe tip leads	08379	3.25
383A Test lead assembly	07509	3.25
387 Alligator clip leads	08376	2.75
387 Probe tip leads	08379	3.25
390 Test cord assembly	08418	7.50
466 Input cable	00100	4.00
650 Test lead	07545	1.75
651 Ground lead	00733	2.25
715 Input cable	00100	4.00

HIGH VOLTAGE AND RF PROBES



Typical DC/AC/Ohms Probe
Cat. No. 00150, 00175, 07594

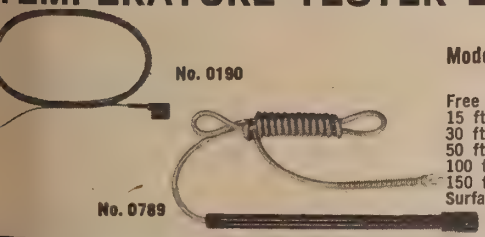


Typical High Voltage Probe
Cat. No. 0507, 0508,
0509, 0510, 0511

For	Voltage/Type	Cat. No.	Price
260 Series 2	25,000v	00007	$17.00
	50,000v	00179	17.00
250, 255, 260 Series 3, 4 4M, 5, 5M, 5P	10,000v DC	00507	17.00
261	25,000v DC	00508	17.00
267	50,000v DC	00509	17.00
270	10,000v AC	00161	17.00
262 Series 1	16,000v	00172	17.00
	40,000v	00180	17.00
262 Series 2	16,000v	00172	17.00
	40,000v	00180	17.00
262 Series 3	16,0000v	00146	17.00
	40,000v	00145	17.00
263	30KV @ 10KΩ/v 15KV @ 10KΩ/v	00158	17.00
269 Series 1	16,000v	00173	17.00
	40,000v	00181	17.00
296 Series 2, 3	16,000v	00119	17.00
	40,000v	00157	17.00

For	Voltage/Type	Cat. No.	Price
303 Series 1	DC Probe	00067	$5.50
	AC Probe	00068	5.50
	High Frequency (RF)	00073	11.75
	30,000v	00074	17.00
303 Series 2	DC/AC/Ohms Probe	00150	11.75
	High Frequency (RF)	00073	11.75
	30,000v	00186	17.00
311 Series 1	DC/AC/Ohms Probe	07594	12.00
	High Frequency (RF)	00731	17.00
	30,000v	00732	17.00
311 Series 2	DC/AC/Ohms Probe	07594	12.00
	High Frequency (RF)	00174	16.00
	30,000v	00732	17.00
311 Series 3	DC/AC/Ohms Probe	00175	12.50
	High Frequency (RF)	00176	16.00
	30,000v	00178	17.00
312	DC/AC/Ohms Probe	00150	11.75
	High Frequency (RF)	00152	11.75
	30,000v	00155	17.00
313	DC/AC/Ohms Probe	00189	12.25
	High Frequency (RF)	00191	11.75
	50,000v	00192	19.00

TEMPERATURE TESTER LEADS AND PROBES



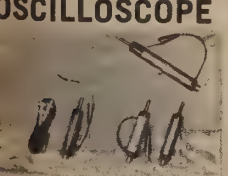
Models 385-3L, 389-3L, 260 — Adapter 652

	Cat. No.	Price
Free Air Temperature Probe	0789	$12.00
15 ft. Thermistor lead	0010	9.00
30 ft. Thermistor lead	0216	10.00
50 ft. Thermistor lead	0415	11.00
100 ft. Thermistor lead	0416	14.00
150 ft. Thermistor lead	0417	18.00
Surface temperature probe	0790	9.00

Models 388, 388-3L, 255

	Cat. No.	Price
388, -3L, Rugged Service Lead (8 ft.)	0496	$10.00
388, -3L General purpose thermocouple	0190	7.50
388, -3L Surface temperature thermocouple (1000° F. Max.)	0187	12.00
255 only, Thermocouple lead (5 ft.)	0183	6.00

OSCILLOSCOPE PROBE KIT



For use with Model 458 Oscilloscope. Includes *low capcity probe, voltage doubler, detector, 100:1 voltage divider and dual direct — resistive. (Isolation.)

Complete with 4 poles, plastic roll, and operator's manual $50.00

* For Model 458 only.

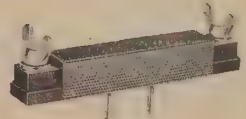
	Cat. No.	Price
Voltage Doubler	0740	$18.00
Low Capacitance	0741	18.00
100:1 Voltage Divider	0742	19.00
Direct-Resistive Dual Purpose	0743	15.00

METER SAFE/GUARD



Same protection as built-in new 260-5. Installs in minutes. Complete instructions for 260 series —1, 2, 3, 4. Cat. No. 12621. Complete only $1.95 ea.

ACCESSORY SHUNTS



Used with models 256 and 257 for DC current measurements up to 100 amps full scale. Convenient plug-in design.

Range (F.S.)	Cat. No.	Price
25 DC Amperes	06527	$15.00
50 DC Amperes	06528	15.00
100 DC Amperes	06531	15.00

© United Technical Publications

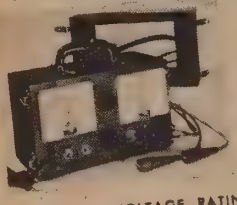
Insulation Testers

WRITE FOR DATA SHEETS ON THE INSTRUMENTS SHOWN. . . ALL ARE STANDARD PRODUCTION MODELS, AVAILABLE FOR IMMEDIATE DELIVERY FROM STOCK . . . LET US QUOTE ON YOUR REQUIREMENTS FOR MODIFIED UNITS OR SPECIAL TEST EQUIPMENT.

SLAUGHTER Company
TEST WITH CONFIDENCE

High-voltage Leakage Tester

checks insulation for . . . leakage
. . . grounds
. . . . . arcing



MODEL **122**

16 lb. Portable for lab and field work

VARIABLE VOLTAGE RATINGS TO 5 KV AC & DC. DUAL RANGE LEAKAGE METER 0/100/1000 μa. . . . CAPACITY COMPENSATION. . . MEASURES INSULATION RESISTANCE, CAPACITY, POWER FACTOR.

High-voltage Insulation Tester

with buzzer signal on breakdowns
. . . grounds
. . . . shorts



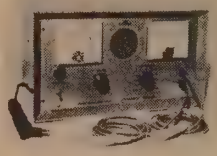
MODEL **101**

Watch what you are doing . . . not the tester

SIX TEST VOLTAGES . . 500 to 2500 V.A.C. PRICED SO YOU CAN AFFORD TO SPOT A FEW ALONG YOUR ASSEMBLY LINES.

High-voltage Leakage Tester

audibly signals excess leakage
. . . grounds
. . . . . arcing



MODEL **103**

Measures Leakage . . . not capacity
ENTRANT

TEST VOLTAGE CONTINUOUSLY VARIABLE ADJUSTABLE LEAKAGE LIMIT. . CAPACITY COMPENSATION ON AC TESTS. . . RATINGS TO 10,000 VOLTS AC & DC. . . . LIMITED ENERGY. . NON-DESTRUCTIVE. . . FOR LAB AND PRODUCTION LINE SERVICE. . . .

Adjustable High-voltage Tester

with buzzer signal on breakdowns
. . . grounds
. . . . shorts



MODEL **106**

Voltmeter shows actual Test Voltage

CONTINUOUSLY VARIABLE TEST VOLTAGE RATINGS TO 10,000 VOLTS AC & DC. . . RECOMMENDED FOR BREAKDOWN TESTING AT FINAL ASSEMBLY AND INSPECTION

Automatic H-V Insulation Tester

for precision checking . . . breakdowns
. . . leakage
. . . grounds



MODEL **103-MP**

Automatic Test Cycle

FULLY AUTOMATIC TEST CYCLE. . . CONTROLLED RATE-OF-RISE. . . ADJUSTABLE TEST VOLTAGE, DWELL TIME, & LEAKAGE LIMIT. . . CAPACITY COMPENSATION ON AC TEST. . . FOR PRECISION TEST OF CRITICAL PARTS & ASSEMBLIES. . .

Stroboscopes

WRITE FOR DATA SHEETS ON THE INSTRUMENTS SHOWN . . . ALL ARE STANDARD PRODUCTION MODELS, AVAILABLE FOR IMMEDIATE DELIVERY FROM STOCK . . . LET US QUOTE ON YOUR REQUIREMENTS FOR MODIFIED UNITS OR SPECIAL TEST EQUIPMENT.

SLAUGHTER Company
TEST WITH CONFIDENCE

Inspection Stroboscope

. . . with extra high intensity daylight lamp



MODEL **167**

0/600 Flashes per Minute

SUPER INTENSITY TRIGGERED FLASH UNIT . . . PUSH-TO-SEE SWITCH. . . . FOR INSPECTION ON-THE-GO UNDER HIGH AMBIENT LIGHT CONDITIONS.

Inspection Stroboscope

. . . . . with high intensity daylight lamp



MODEL **161**

0/2,000 Flashes per Minute

LIGHT WEIGHT INEXPENSIVE TRIGGERED FLASH UNIT. . . . . PUSH-TO-SEE SWITCH. . . . INTENSE WHITE LIGHT FOR INSPECTION ON-THE-GO

MIDGET STROBOSCOPE FLASH HEAD



MODEL **166**

0/10,000 Flashes per Minute

FOR WORK ON MINIATURIZED EQUIPMENT . . . . FOR PRINTING TRADES. . . . FOR BIO-MEDICAL WORK. . ADAPTS TO ANY SLAUGHTER STROBOSCOPE. . .

Universal Stroboscope

. . . with high intensity daylight lamp



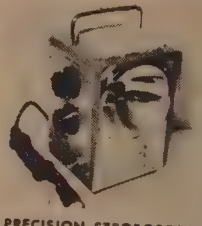
MODEL **163**

50/16,000 Flashes per Minute

UNIVERSAL UNIT FOR MOTION STUDY & INSPECTION ON-THE-GO. . . INSTANT STARTING . . . HIGH INTENSITY WHITE LIGHT . . . . TRIGGER EXTERNALLY OR OPERATE FROM INTERNAL OSCILLATOR

Metered Precision Stroboscope

. . . . . with high intensity daylight lamp



MODEL **165**

50/16,000 Flashes per Minute

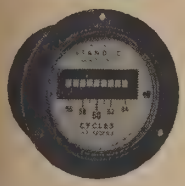
PRECISION STROBOSCOPE TACHOMETER INSTANT STARTING. . . HIGH INTENSITY WHITE LIGHT. . . OPERATES FROM EXTERNAL CONTACTS OR INTERNAL OSCILLATOR. . EASILY SYNCHRONIZED. . OUTPUT JACKS TO COUPLE SCOPE, ETC. . . .

© United Technical Publications

STICHT INSTRUMENTS

"STANDCO" VIBRATING REED FREQUENCY METERS





PANEL MOUNTING

3½" Bakelite Case

- Rugged
- Dependable
- Accuracy ±0.5%
- Reeds aged

HERMETICALLY SEALED

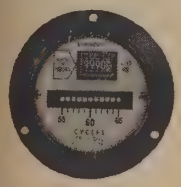
2½" and 3½"

All MIL-Specs. Also Ruggedized Types.

Cat. No.	No. Reeds	Interv. CPS	Range CPS
351	5	1	48-52
352	7	1	47-53
349	9	0.5	48-52
353	11	0.5	47.5-52.5
348	11	1	45-55
356	9	0.5	58-62
357	11	0.5	57.5-62.5
358	21	0.5	55-65
359	5	1	58-62
360	7	1	57-63
361	9	1	56-64
362	11	1	55-65
363	21	1	50-70

Bulletin 806

Cat. No.	No. Reeds	Interv. CPS	Range CPS
DUAL RANGE			
369	5	1	48-52
	5	1	58-62
400 CYCLES			
374	5	10	380-420
380	5	5	390-410
364	9	5	380-420
366	11	4	380-420
365	11	5	375-425
379	11	8	360-440
376	11	2	390-410
375	17	2.5	380-420
378	17	5	360-440
367	21	2	380-420
368	21	4	360-440



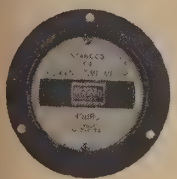
Bulletin 811

"STANDCO" COMBINATION FREQUENCY AND RUNNING TIME METERS

In 3½" flush mounting, round bakelite cases

Cat. No.	Freq. Range	No. of Reeds.	Time Range
TF-362	55-65 CPS	11 Reeds	9999.9 hrs.
TF-356	58-62 CPS	9 Reeds	9999.9 hrs.
TF-360	57-63 CPS	7 Reeds	9999.9 hrs.
TF-359	58-62 CPS	5 Reeds	9999.9 hrs.

"STANDCO" RUNNING TIME METERS



Bulletin 810

ALTERNATING CURRENT

3½" Round Flush		2⅝" Round Flush with U-Clamp
Type T-1	9999.9 hrs.	Type T-45
Type T-3	99,999 hrs.	9999.99 Hours
Type T-4	99,999 min.	
115V, 220V, 440V, 60 or 50 cycles		115 V 60 cycles 230 V 60 cycles



Bulletin 810

AC HERMETICALLY SEALED TYPE

3½" Round Flush		2½" Round Flush	
Type T-1	9999.9 hrs.	Type T-25	9999.9 hrs.
Type T-3	99,999 hrs.	Type T-30	99,999 hrs.
Type T-4	99,999 min.	Type T-35	99,999 min.

115V, 220V, 440V, 60 or 50 cycles



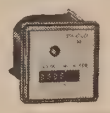
DIRECT CURRENT TYPE T-60

2⅝" Round Flush with U-Clamp

Reading Minutes and Hours to 99999 Hours

Bulletin 9160

Standard 12 volts DC
Specials 6, 24, 36 volts DC



AC MINIATURE TYPE T-40

1⅞" x 1⅞" Square Flush with U-Clamp

Register to 9999.99 Hours

Bulletin 9140

115 V 60 cycles
230 V 60 cycles
24 V 60 cycles



VIBRATION TYPE T-75

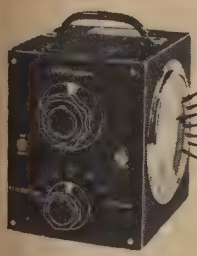
2⅝" Round Flush

Operates without electric power source. Application wherever vibrations occur during operation.

Bulletin 9175

99999 Hours

"STANDCO" TACHOMETERS



HIGH INTENSITY STROBOSCOPE

MODEL 510-AL

STOPS MOTION
MEASURES RPM
without contact

With brilliant daylight flasher unit for maximum readability.
With 4 ranges - 60-15,000 RPM
"Industry's Seeing Eye"

Bulletin 781



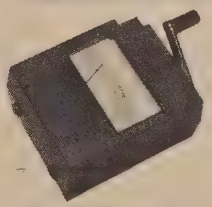
PORTABLE HAND TACHOMETERS

CENTRIFUGAL AND CHRONOMETRIC TYPES

With one, two, three, five or six ranges in one instrument. All speeds 0-100,000 RPM.

Bulletins 735, 750, 751, 756, 765, 790

"MEGOHMER" INSULATION TESTERS



DC GENERATOR (HAND CRANK) TYPES

"DWARF" Megohmer, 500 volts DC

Cat. No. 703 - 0-100 Megohms
0-10,000 Ohms

Cat. No. 705 - 0-100 Megohms
0-500 Ohms

Bulletin 421



HIGH RESISTANCE MEGOHMMETER

MODEL 29-U

20,000,000 MEGOHMS

Direct Reading: Unusual stability, fast in operation, high accuracy.

11 Ranges: From 300,000 ohms to 20 million megohms.

Power Supply: 115 volts AC, 60 cycles.

Test Potentials: 100 volts DC and 500 volts DC. Also: 0.5 volts to 1000 volts by external supply.

Bulletin 1029U

HERMAN H. STICHT COMPANY, INC.

© United Technical Publications

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



SPRAGUE TEST EQUIPMENT

TO-6 TEL-OHMIKE® CAPACITOR ANALYZER



The TO-6 TEL-OHMIKE capacitor analyzer is a must for checking all capacitors. It is a moderately priced instrument with laboratory quality and accuracy—the highest accuracy of any instrument of its type available to the service trade!

- **LEAKAGE CURRENT** of electrolytics measured directly on meter. Four ranges; .06, .6, 6, and 60mA. Three ranges of DC voltage (continuously variable within each range) permit testing capacitors at exact rated voltage up to 600 volts.
- **POWER FACTOR** of electrolytics, up to 50% measured by Wien Bridge.
- **METER PROTECTOR** of solid-state design allows severe accidental over-loads without burn-outs.
- **MAGIC-EYE TUBE** simplifies bridge balancing for capacitance and power factor measurements. High gain amplifier provides greatly improved sensitivity.
- **PUSH-BUTTONS** color-keyed for instant range selection.
- **MODERN CASE:** Silver-grey hammertone finish, panel is charcoal grey with highly contrasting white designations. Measures 8⅞" high, 14⅝" wide, 6⅛" deep. Weight only 13 pounds.

MODEL TO-6 ..... 115 VAC/50-60 cy
MODEL TO-6S ..... 115-230V/50 cy

Call Your Sprague Distributor for Current Prices

- **CAPACITANCE BRIDGE** measures up to 2000 μF. Five overlapping ranges include exclusive 1 pF to 100 pF range. Special shielded transformer for bridge voltage. Extremely low AC voltage; 1.35 volts for electrolytic capacitors, 2.85 for all others, permits safe testing of all low voltage capacitors.
- **INSULATION RESISTANCE** of papers, ceramics and micas directly read on large meter. No guessing with neon lamps. Dual range—to 10KMΩ@ 30V for low voltage units . . . to 50KMΩ@ 150V for higher voltage components. Fast charge feature speeds testing of high capacitance units.

TEL-OHMIKES FOR RACK MOUNTING

Electrically identical to TO-6 and TO-6S. These models have a standard 19"w. x 10½"h. panel so that it can be mounted in standard relay racks.

MODEL TO-6RM.....115 VAC/50-60 cy
MODEL TO-6SRM.....115-230 V/50 cy

Call Your Sprague Distributor for Current Prices

M-3 MIKE-O-METER® MOTOR CAPACITOR ANALYZER

- **ACCURATELY MEASURES** capacitance and power factor of any motor-starting, motor-running capacitor or any other capacitor within the range of .1 μF to 1000 μF. Uses the highly reliable Wien Bridge method.
- **SIMPLIFIES** capacitor testing for the air conditioning, refrigeration, and electric motor technician.
- **DIRECT READINGS** on highly visible, calibrated scales.
- **MAGIC EYE** tube makes bridge-balancing easy.
- **SAFE OPERATION** is assured by the automatic discharge of the capacitor when test switch is released. The M-3 is transformer operated. Instrument case is isolated from AC line.
- **BUILT FOR SERVICE** and a long dependable life, whether in your shop, or on the job in the field.
- **COMPONENTS IN THE M-3** were selected to provide reliability. Highest quality capacitors and resistors are used. The power transformer is specially treated to resist moisture.
- **ELECTRON TUBES** resistant to shock and vibration were chosen for the M-3. They can be obtained from any electronic parts distributor.
- **ALSO CHECKS** capacitors for open, shorted, or intermittent conditions.
- **SLOPING PANEL** and recessed eye designed to improve visibility, especially when working in lighted areas.
- **STEEL CASE** measures 9 inches high, 6 inches wide and 5¾ inches deep. Has folding metal carrying handle. Weighs only 6 pounds.
- **ATTRACTIVELY FINISHED** in blue hammerloid. Panel is light grey with black markings.



MODEL M-3, 110-125 VAC, 50/60 CYCLES . . . . . .
MODEL M-3S, 110-125/220-230 VAC, 50-60 CYCLES . . . .
PROTECTIVE VINYL COVER, Cat. No. CV-3 . . . . . .

Call Your Sprague Distributor for Current Prices

Copyright 1970, Sprague Products Company
IND-REM-65-7038
All sizes subject to change without notice.

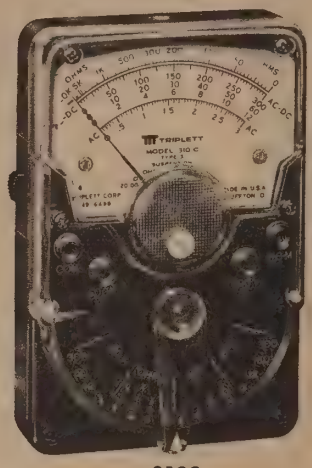
© United Technical Publications

TRIPLETT CORPORATION

GENERAL MULTI-PURPOSE V-O-Ms



310



310C

Volt-Ohm-Milliammeter MODEL 310 TYPE 2

1. **Hand size V-O-M with provision for attaching AC clamp-on ammeter.**
2. **20,000 Ohms per volt DC sensitivity; 5,000 AC.**
3. **One selector switch minimizes chance of incorrect settings and burnouts, plus diode overload protection.**

Self-shielded for checking in strong magnetic fields.
Rugged, high torque, bar-ring instrument.
Unbreakable plastic meter window.
Fitting interchangeable test prod into top of tester makes it the common probe, freeing one hand.
Standard sensitivity 20,000 ohms per volt DC, and 5,000 ohms per volt AC.
Spring-backed instrument jewels for ruggedness.
Accuracy 3% DC, 4% AC.

RANGES

DC Volts: 0-3-12-60-300-1,200 (at 20,000 ohms per volt). **AC Volts:** 0-3-12-60-300-1,200 (at 5,000 ohms per volt). **Ohms:** 0-20,000-200,000. **Megohms:** 0-2-20. **DC Microamperes:** 0-600 at 250 millivolts. **DC Milliamperes:** 0-6-60-600 at 250 millivolts. **Weight**—Approx. 14 oz., complete with batteries.
Case—Molded, black, 2¾" x 4¼" x 1$\frac{5}{16}$". Batteries: NEDA #910, 220.
Complete with leads, battery and instruction manual. Shipping wt. 2 lbs.
Model 310 Catalog No. 3018 **$44.00**

MODEL 310-C TYPE 3

New 310-C is the same as Model 310, above, (except 600 volt ranges replace 1200 volt ranges of model 310) plus the following features: (suspension meter).

1. **Hand size V-O-M with provision for attaching AC clamp-on ammeter.**
2. **15,000 Ohms per volt AC sensitivity; (20,000 DC same as 310).**
3. **Single fully enclosed lever range switch, plus DC polarity reversing and diode overload protection.**

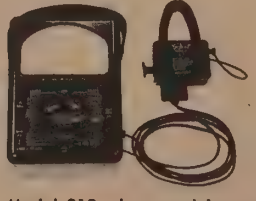
Model 310-C Catalog No. 3022 **$56.00**

Clamp-On Adapter



MODEL 10

CHECKS LINE LOADS WITH MODEL 310 (Also can be used with Models 630, 630-A, 631, 630-PL, 630-APL, 630-APLK, 630-PLK, 630-L by means of 611 leads.)
Checks all line loads instantly, accurately, safely—without breaking the circuit or interrupting work. Easy range switching. Model 10 Clamp-On Adapter AC Ammeter ranges: 0-6-12-30-60-120-300. Clips around single wire to read A.C. Amperes direct. Used with Adapter 101 to divide instantly two-conductor cords. A lever securely locks the Model 10 to



Model 310 when used in combination. Model 10 can be left attached to Model 310 when the latter tester is used as an AC-DC V-O-M only. The only change is to remove the lead plug from the Model 310 V-O-M jack and insert it in the jack provided in the Model 10 housing. Case black molded plastic.
Model 10 Catalog No. 60211 **$20.00**
Model 10-C Catalog No. 60210
For use with Model 310-C **$20.00**

Clamp-On Ammeter Set

MODEL 100



Handsomely packaged set includes: Model 310 V-O-M, Model 10 Clamp-On Ammeter Adapter; Model 101 Line Separator; Model 379 Leather Case; Model 311 Leads. ($83.20 Value Separate Unit Purchase Price.)
Model 100, as above, you save $5.20 over individual purchase price. Shipping wt. 7 lbs.
Model 100 Catalog No. 3014 **$78.00**
Model 100-C Same as above but with Model 310-C, and Model 10-C.
Model 100-C Catalog No. 3010 **$88.00**
Model 100-FET Catalog No. 3013 **$109.00**

Leads



No. 611 LEADS
In addition to use with the Model 310, the No. 10 Adapter also can be used as a Clamp-On Ammeter with any Volt-Ohm-Milliammeter having a 3 AC Volt scale at 5,000 Ohms per Volt or above, such as Triplett Models 630, 630-A, 630-PL, 630-APL, 630-APLK, 630-PLK, 630-L, 631, etc. (see illustration). This is done by means of a long lead attachment (No. 611) making possible easy readings in difficult locations.
611 Leads Catalog No. 79A-160 **$3.40**

No. 311 LEADS
The Model 10 can be separated from the Model 310 (in the same way as above) by using No. 311 lead attachment. This permits readings in difficult locations. Also used with Models 310-C and 10-C.
311 Leads Catalog No. 79-161 **$3.40**

Line Separator

MODEL 101



Plugs into AC outlet to divide instantly two-conductor cords. Increases ammeter sensitivity 10X and 20X. Use up to 30 AC amperes from 0.3 to 30 in nine steps. Also has provision for Voltmeter prods for voltage measurements. Case, black molded plastic with engraed markings.
Model 101 Catalog No. 60218 **$8.00**

Net
© United Technical Publications

TRIPLETT CORPORATION



GENERAL MULTI-PURPOSE V-O-Ms

Volt-Ohm-Milliammeter MODEL 630 TYPE 2

1. **One selector switch minimizes chance of incorrect settings and burnouts.**
2. **4.4 Ohm center scale, reads from 0.1 ohm up to 100 megohms resistance in 4 ranges.**
3. **20,000 ohms per volt DC sensitivity; 5,000 AC.**

Popular streamlined tester with long meter scales arranged for easy reading. Outstanding resistance ranges: low reading .1 ohm, high 100 megs. Fuse affords protection to the resistors in the ohmmeter circuit, especially the X1 setting.

Spring-backed instrument jewels for ruggedness. Accuracy ±2% DC, ±3% AC. Meter movement diode protected against instantaneous overloads.

RANGES

DC Volts: 0-3-12-60-300-1,200-6,000 at 20,000 ohms per volt. **AC Volts:** 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt. **Ohms:** 0-1,000-10,000. **Megohms:** 0-1-100. **DC Microamperes:** 0-60 at 250 millivolts. **DC Milliamperes:** 0-1.2-12-120 at 250 millivolts. **DC Amperes:** 0-12. **DB:** −20 to +77 (600 ohm line at 1 MW). **Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges. **Usable** with frequencies through 500 kHz. **CASE**—Molded, black, 3-7/32" x 5½" x 7½". Batteries: NEDA #210, 13F.

Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.

Model 630 Catalog No. 3030 **$64.00**

Pocket Volt-Ohm-Milliammeter MODEL 666-R

1. **One selector switch.**
2. **Three resistance ranges to 3 megohms.**
3. **Five volt ranges to 5,000 AC and DC volts.**

Hand-size—the ideal tester for electrical maintenance. Recessed range knob enables tester to fit in tool kit.

AC rectifier pre-calibrated unit for easy replacement. Banana jacks at top of the panel lessen possibility of leads falling over the meter dial. Accuracy 3% DC, 4% AC.

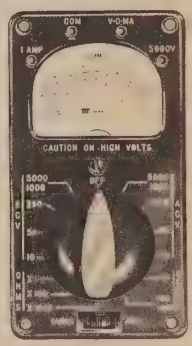
RANGES

DC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt. **AC Volts:** 0-10-50-250-1,000-5,000 at 1,000 ohms per volt. **Ohms:** 0-3,000-300,000. **Megohms:** 0-3. **DC Milliamperes:** 0-10-100 at 250 MV. **DC Amperes:** 0-1 at 250 MV.

CASE—Black molded, streamlined, handy pocket size; $3\frac{1}{16}$" x 5⅞" x $2\frac{9}{16}$".

Complete with leads, alligator clips, batteries and instruction manual. Shipping wt. 3 lbs. Batteries: NEDA #814, 13F.

Model 666-R Catalog No. 3066 **$46.00**





Volt-Ohm-Milliammeter MODEL 630-PL TYPE 2

1. **One selector switch minimizes chance of incorrect settings and burnouts. Polarity reversing for DC.**
2. **4.4 Ohms center scale, reads up to 100 megohms resistance.**
3. **Meter movement diode protected against instantaneous overloads.**

Polarity reversing switch. Tester usable with frequencies through 500 kHz. Instant-vision, wider spread scales; streamlined case, handsome modern design. Unbreakable plastic window.

Fuse affords extra protection to the resistors in the ohmmeter circuit, especially the X1 setting. Spring-backed instrument jewels for ruggedness.

High sensitivity: 5,000 ohms per volt AC; 20,000 ohms per volt DC.

Accuracy ±2% DC, ±3% AC.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000—at 20,000 ohms/volt. 0-0.25 at 100 microamperes. **AC Volts:** 0-3-10-50-250-1,000-5,000—at 5,000 ohms/volt. **Decibels:** −20 to +11, +21, +35, +49, +61, +75; "0" DB at 1 MW on 600 ohm line. **DC Microamperes:** 0-100—at 250 millivolts. **DC Milliamperes:** 0-10-100-1,000—at 250 millivolts. **DC Amperes:** 0-10—at 250 millivolts. **Ohms:** 0-1,000-10,000—(4.4-44 at center scale). **Megohms:** 0-1-100—(4,400-440,000 at center scale). **Output V (AC):** 0-3-10-50-250-1,000—at 5,000 ohms/volt, jack with condenser in series with AC ranges.

Case: Molded, black, 3-11/32" x 5½" x 7½". Batteries: NEDA #210, 13F.

Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.

Model 630-PL Cat. No. 3050 **$64.00**

Volt-Ohm-Milliammeter MODEL 630-PLK TYPE 3

1. **Burnout proof solid state overload protection.**
2. **One selector switch minimizes chance of incorrect settings. DC polarity reversing.**
3. **4.4 Ohm center scale, leads up to 100 megohms resistance in 4 ranges.**

Transistorized electronic switching circuit (exclusive patent) guards against accidental burn-outs. Now you can virtually eliminate bent pointers, burned-out resistors, damaged pivots, overheated springs, burned-out coils, changes in accuracy due to overheating, in fact nearly any need for repairs. Life of transistor circuit battery is nearly that of shelf life. Automatically checked by using X100K ohms range. Overload protection on meter in addition to transistorized circuit that protects tester.

Accuracy ±2% on DC, ±3% AC. High sensitivity: 20,000 Ω/V DC; 5,000 Ω/V AC. Shipping weight 5 lbs.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt; 0-0.25 at 100 microamperes. **AC Volts:** 0-3-10-50-250-1,000-5,000 at 5,000 ohms/volt. **Decibels:** −20 to +11, +21, +35, +49, +61, +75; "0" DB at 1 MW on 600 ohm line. **DC Microamperes:** 0-100 at 250 Mv. **DC Milliamperes:** 0-10-100-1000 at 250 Mv. **DC Amperes:** 0-10 at 250 Mv. **Ohms:** 0-1,000-10,000 (4.4-44 at center scale). **Megohms:** 0-1-100 (4,400-440,000 at center scale). **Output Volts (AC):** 0-3-10-50-250-1,000 at 5,000 ohms/volt; jack with condenser in series with AC ranges. **Case:** Molded, black, 3-11/32" x 5½" x 7½". Batteries: NEDA #210, 13F.

Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.

Model 630-PLK Cat. No. 3055 **$98.00**

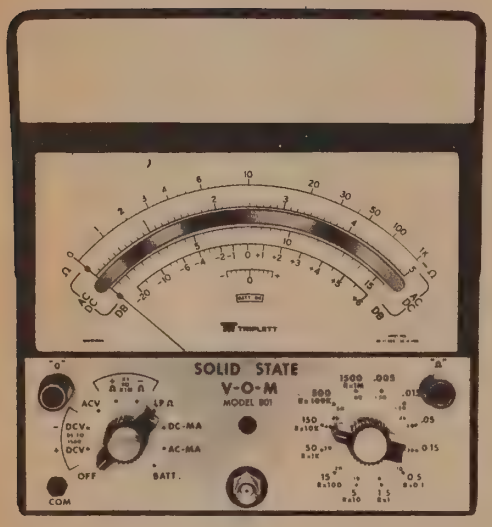


TRIPLETT CORPORATION

FET V-O-M with LOW POWER OHMS

MODEL 801

1. **Low Power Ohms—8 ranges with 35 mV power source and 1 Ohm center scale.**
2. **High Sensitivity—0.005 V AC full scale at 10 Megohm input resistance.**
3. **Simplified Scale—8" meter with only 2 arcs for 46 AC/DC ranges.**



Designed to be one of the most useful instruments in the electronics lab and electronics field service, the Model 801 V-O-M offers 73 measurement ranges embracing a very broad span of measurements at accuracies to please the most exacting user. Featured are: 15 resistance ranges including 8 low-power ranges applying only 35 mV to the device under test; common AC and DC scales to simplify meter dial; low ranges reading 100 Ohms, 0.005 V AC, 0.05 V DC and 5 μA AC and DC full scale; rugged 8", 25 μA suspension meter. Low-power resistance ranges are ideal for in-circuit checking of ICs, transistors and other solid-state components . . . permit measurements without triggering amplifying and semi-conducting devices. Accuracy: ±2% on all DC voltage ranges except 1500 V ±3%; ±3% on all AC voltage ranges and DC current ranges; ±4% on AC current ranges; ±3% of DC V arc on all resistance ranges. AC ranges for frequencies from 50 Hz to 50 KHz.

RANGES

Ten DC Volt Ranges: 0-0.05-0.15-0.5-1.5-5-15-50-150-500-1500. Input resistance 11 Megohms with 1 Megohm series resistor in probe tip. Includes 40 dB 60 Hz rejection filter. **Twelve AC Volt Ranges:** 0-0.005-0.015-0.05-0.15-0.5-1.5-5-15-50-150-500-1500. Input resistance 10 Megohms. Frequency range 50 Hz to 50 KHz. Capacitance at input jack 60 mmfd max. **Fifteen Resistance Ranges:** Low-power ranges of 0-100-1K-10K-100K-1 Meg-10 Meg-100 Meg-1000 Meg at 35 mV and 1 Ohm center reading on the low range. Conventional ranges of 0-1K-10K-100K-1 Meg-10 Meg-100 Meg-1000 Meg at 1.5 V and 10 Ohm center reading on the low range. **Twelve AC and Twelve DC Current Ranges:** 0-5μA-15μA-50μA-150μA-500μA-1.5mA-5mA-15mA-50mA-150 mA-500mA-1.5 A at 45 mV. Optional external shunt for 0-5A-15A measurements. **Twelve dB Ranges:** −50 to +60 dB in 10 dB steps. **Case:** Molded, black, high-impact material with metal handle that can be used to support instrument at approximately 25° angle; etched aluminum panel; 8"x7"x5".

Batteries: 3-4½ V mercury or alkaline; 1-1½ V "D" cell.

Model 801, complete with leads, alligator clips, batteries and instruction manual. Cat. No. 3071 **$200.00**

High Voltage Probe 50 KV Cat. No. 79-292 **$25.20**

RF Probe 250 MHz/20 V Cat. No. 79-289 **$9.50**

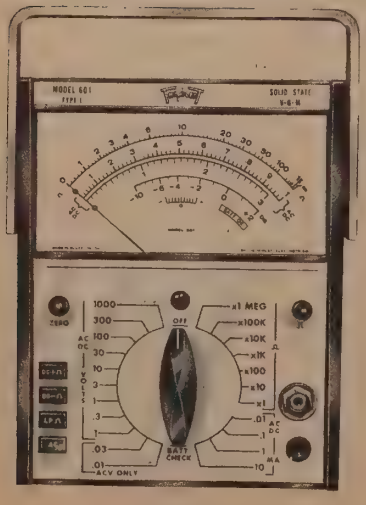
Leather Case Cat. No. 10-2467 **$31.00**

15 Ampere Shunt Adapter Cat. No. 91-620 **$10.00**

FET V-O-M with LOW POWER OHMS

MODEL 601

1. **14 Ohmmeter ranges with 7 Low-Power ranges (LPΩ) at 75 mV DC for Transistorized and Integrated circuits.**
2. **Voltage ranges from 10 mV AC and 100 mV DC full scale; plus AC & DC Current ranges from 10 ua full scale.**
3. **Modern easy-to-use push button selection of DC polarity, AC, and Low-Power Ohms (LPΩ) functions.**



Single range selector switch, easy to use. Large 4½" Suspension meter movement. Special Low-Power Ohms circuit has only 0.1 mW of power, permits in-circuit resistance measurements in solid state circuitry. Simple to read uncluttered dial provides quick readings using only four scales for all 52 ranges. 11 Megohm input resistance on all voltage ranges. AC and DC current ranges never before available on a similar unit. Accuracy is ±2% of Full Scale on DC, ±3% AC, (Current, ±3% and ±4%).
Usable with frequencies from 50 Hz to 50KHz.

RANGES

Nine DC Volt Ranges: 0-0.1-0.3-1-3-10-30-100-300-1000 at 11 Meg. **Eleven AC Volt Ranges:** 0-0.01-0.03-0.1-0.3-1-3-10-30-100-300-1000 at 11 Meg. **Fourteen Ohms Ranges:** 0-1K-10K-100K-1 Meg-10 Meg-100 Meg-1000 Meg (Standard 1.5 V, 55 mW.) 0-1K-10K-100K-1 Meg-10 Meg 100 Meg-1000 Meg (Low-Power 0.1 mW, 75 mV). Center Scale value 10 ohms on x1 range. **Four DC Current Ranges:** 0-10-100-1000-10,000 μA at 100 mV. **Four AC current Ranges:** 0-10-100-1000-10,000 μA at 100 mV. **Eleven dB Ranges:** −40 to +60 dB in 10 dB steps.

Case: Molded, black high impact material, $3\frac{3}{16}$" x 5⅛" x 6½".

Batteries: 10 "AA" cells NEDA #15A. Complete with leads, alligator clips, batteries, instruction manual with complete calibration instructions. Shipping weight 5 lbs.

Model 601 Catalog No. 3033 **$158.00**

High Voltage Probe, 30 kV, Cat. No. 79-270 **$26.50**

RF Probe, 250 MHz/50 V, Cat. No. 79-271 **$9.50**

Leather Case, Cat. No. 10B-1793 **$15.40**

Net.

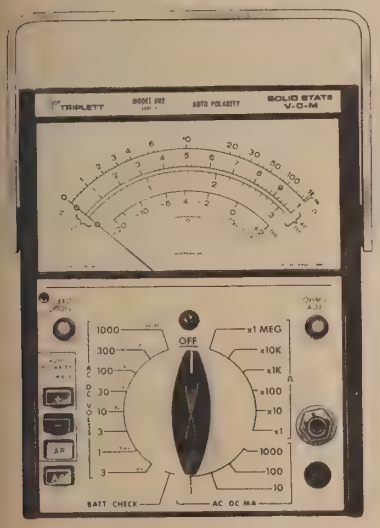
© United Technical Publications

TRIPLETT CORPORATION

FET V-O-M with AUTO-POLARITY

MODEL 602

1. **Auto-polarity—convenient and time-saving; creates memory and suppressed scale.**
2. **High sensitivity—0.3 V range with 10 Megohm AC and 11 Megohm DC input resistance.**
3. **Simplified scale—only 2 arcs for 24 AC/DC ranges.**



Designed to speed testing by reading upscale regardless of circuit polarity, yet handy push-buttons allow selection and determination of polarity when required. 0.3 V full scale in lowest range on both AC and DC. Tester offers 38 ranges, but 24 AC/DC ranges are read from only two arcs on 4½" meter to keep dial clean and readable. Input amplifier incorporates a high degree of feedback so both AC and DC meter tracking scales are linear. In Auto-Polarity mode, instrument is not adjusted for zero, but for zero or lowest null. This means zero adjustment can be made from virtually any angle without introducing a parallax error. 50 μA suspension-type meter movement absorbs shocks and jars that would disable ordinary meters. Accuracy: ±3% on all Voltage ranges except 1000V ±4%; ±4% on all current ranges; ±3% of DCV arc on resistance. AC ranges for frequencies from 50 Hz to 50 KHz.

RANGES

Eight DC Volt Ranges: 0-0.3-1-3-10-30-100-300-1000 at 11.12 Megohms all ranges. **Eight AC Volt Ranges:** 0-0.3-1-3-10-30-100-300-1000 at 10 Megohms with frequency compensation on all but two top ranges. **Six Resistance Ranges:** 0-1K-10K-100K-1 Meg-10 Meg-1000 Meg. Center scale 10 Ohms on X1 range. **Four DC and Four AC Current Ranges:** 0-1-10-100-1000 mA at 300 mV. **Eight dB Ranges:** −10 to +60 dB in 10 dB steps.

Case: Molded, black, high-impact material with metal handle that can be used to support instrument at approximately 25° angle. 5⅛" x 6½" x 3$\frac{3}{16}$".

Batteries: 2-9V NEDA 1604; 1-1½ V "D" cell.

Model 602, complete with leads, alligator clips, batteries and instruction manual. Cat. No. 3036 **$100.00**

High Voltage Probe 30 KV Cat. No. 79-370 **$26.50**

RF Probe 250 MHz/20V Cat. No. 79-264 **$9.50**

Leather Case Cat. No. 10-1793 **$15.40**

HANDSIZE FET V-O-M

MODEL 310-FET

1. **All Solid-State (F.E.T.) with 10 Megohm input resistance, Battery operated.**
2. **High sensitivity (300 mV DC fs) for transistor bias measurements, resistance measurements to 5,000 Megohms.**
3. **Handsize with single selector switch and provision for attaching AC clamp-on adapter.**



Resistance measurements to 5,000 Megohms. Open Ckt. voltage 1.5V on all ranges. Max. short ckt. current 30mA. Max. pwr. across device under test 11 mW. Rugged Suspension Movement. Accuracy is ±3% of full scale on DC, and ±4% on AC. ±3% of DC arc on Ohms. High Sensitivity (300 mV fs DC) allows transistor bias measurements. Zero center mark for null measurements. Polarity reversing switch for DC and ohms.

RANGES

DC Current: 0-0.12-1.2 milliamperes at 300 mV.

DC Volts: 0-0.3-1.2-6-30-120-600 at 10 megohms.

AC Volts: 0-3-12-60-300-600 at 5,000 ohms per volt.

Ohms: 0-5K-500K-50 Megohms—5,000 Megohms at 50 ohms center scale.

Case: Molded, black, measures 2¾" x 4¼" x 1⅛". 42" leads.

Battery operated, 7V NEDA #1501, 1½V ASA Type N. Battery check on selector switch.

Model 310-FET, complete with leads, instruction manual and batteries. Suggested U.S.A. User Net Price **$74.00**

Catalog Number 3027.

Model 100-FET Catalog No. 3013 **$109.00**

© United Technical Publications

Net

TRIPLETT CORPORATION

LABORATORY ACCURACY V-O-Ms



Volt-Ohm-Milliammeter MODEL 630-M TYPE 1

1. **1,000,000 Ohms per volt DC for greater accuracy on high resistance circuits. 20,000 ohms per volt AC.**
2. **1 μa Suspension Meter Movement. No pivots, bearings, or rolling friction. Extremely rugged. Greater sensitivity and repeatability.**
3. **61 Ranges, usable with frequencies through 100 kHz. Temperature compensated. 1½% DC accuracy, 3% AC in horizontal position.**

Now the input impedance of a VTVM with the convenience of a V-O-M. Reads as low as 20 nanoamperes. Components mounted on quality glass epoxy etched circuit board. Meter protected by diodes against accidental overload.

RANGES

D.C. Volts: 0-0.6-3-12-60-300 at 500,000 Ohms/Volt.
0-0.3-1.5-6-30-150 at 1,000,000 Ohms/Volt.
0-1200 at 125,000 Ohms/Volt.
0-600 at 250,000 Ohms/Volt.
A.C. Volts: 0-3-12-60-300-1200 at 10,000 Ohms/Volt.
0-1.5-6-30-150-600 at 20,000 Ohms/Volt.
DB: −20 to +63 in 10 ranges.
D.C. Microamperes: 0-1 at 300 M.V.
0-60-600 at 300 M.V.
0-120 at 600 M.V.
D.C. Milliamperes: 0-6-60-600 at 300 M.V.
0-1.2-12-120-1200 at 600 M.V.
D.C. Amperes: 0-6 at 300 M.V.
0-12 at 600 M.V.
Ohms: 0-1K-10K-100K (4.4-44-440 at center scale)
Megohms: 0-1-10-100 (4400-44,000-440,000 Ohms center scale)
Output: Condenser in series with AC Volt ranges
Case—Heavy, molded black case, 3-11/32" x 5½" x 7½", with removable black leather strap handle. Shipping wt. 5 lbs. Batteries: NEDA 13F.
Model 630-M Cat. No. 3108 **$231.00**

Volt-Ohm-Milliammeter MODEL 630-NS TYPE 2

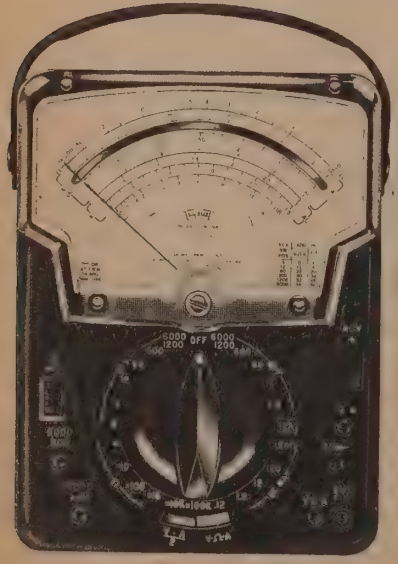
1. **200,000 Ohms per volt DC sensitivity for greater accuracy on high resistance circuits. 20,000 ohms per volt AC.**
2. **Suspension Meter Movement. Diode overload protected. Extremely rugged.**
3. **62 Ranges. Temperature and frequency compensated. ±1½% DC Accuracy, ±3% AC. Polarity reversing for D.C.**

The unit is precision designed to give maximum coverage, to withstand accidental overloads and to offer greater reading accuracy. Usable with frequencies through 100 kHz. Accuracy 1½% DC, 3% AC.

RANGES

DC Volts: 0-0.6-3-12-60-300-1200 at 100,000 Ohms/Volt.
0-0.3-1.5-6-30-150-600 at 200,000 Ohms/Volt.
0-0.150 at 60 microamperes.
AC Volts: 0-3-12-60-300-1200 at 10,000 Ohms/Volt.
0-1.5-6-30-150-600 at 20,000 Ohms/Volt.
DB: −20 to +63 in 10 ranges.
DC Microamperes: 0-60-600 at 150 Mv.
0-5-120 at 300 Mv.
DC Milliamperes: 0-6-60-600 at 150 Mv. 0-1.2-12-120-1200 at 300 Mv.
DC Amperes: 0-6 at 150 Mv. 0-12 at 300 Mv.
Ohms: 0-1K-10K-100K (4.4-44-440 at center scale).
Megohms: 0-1-10-100 (4400-44,000-440,000 Ohms center scale).
Output: Condenser in series with AC Volt ranges.
CASE—Molded, black, 3-11/32" x 5½" x 7½".
Shipping wt. 5 lbs. Batteries: NEDA #815, 13F.
Model 630-NS Cat. No. 3102 **$116.00**





Volt-Ohm-Milliammeter MODEL 630-NA TYPE 3

Suspension Movement

1. **One selector switch minimizes chance of incorrect settings and burnouts.**
2. **70 Ranges: 1½% DC accuracy on meter; with mirrored scale and diode overload protection.**
3. **Temperature and frequency compensation. Polarity reversing.**

The super deluxe of V-O-Ms. Usable with frequencies through 500 kHz.
Large open front meter easy to read.
Unbreakable window. Mirror scale.
Meter has special diode protection against the most severe overloads. A fuse affords protection to resistors in the ohmmeter circuit (especially the X1 setting) should too high a voltage be applied.
Accuracy 1½% DC, 3% AC.

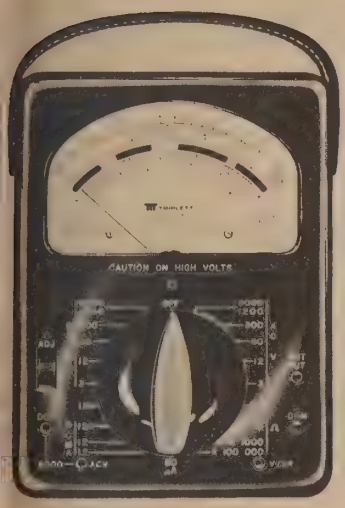
RANGES

DC Volts: 0-.6-3-12-60-300-1,200-6,000 at 10,000 ohms per volt.
0-.3-1.5-6-30-150-600-3,000 at 20,000 ohms per volt.
0-0.120 at 60 microamperes.
AC Volts: 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.
0-1.5-6-30-150-600-3,000 at 10,000 ohms per volt.
Ohms: 0-1K-10K-100K.
Megohms: 0-1-10-100.
DC Microamperes: 0-120 at 240 millivolts.
0-60-600 at 120 millivolts.
DC Milliamperes: 0-1.2-12-120-1,200 at 240 millivolts.
0-6-60-600 at 120 millivolts.
DC Amperes: 0-12 at 240 millivolts. 0-6 at 120 millivolts.
DB: −20 to +77 (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.
Case—Molded, black, 3-11/32" x 5½" x 7½".
Batteries: NEDA #210, 13F.
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.
Model 630-NA Cat. No. 3042 **$98.00**

Net
© United Technical Publications

TRIPLETT CORPORATION

LABORATORY ACCURACY V-O-Ms



Volt-Ohm-Milliammeter MODEL 630-A TYPE 3

1. **±1½% DC, ±3% AC accuracy.**
2. **One selector switch minimizes chance of incorrect settings and burnouts.**
3. **Rugged 5½" suspension meter movement with 4½" mirrored scale.**

Other features same as Model 630.

A laboratory type Volt-Ohm-Milliammeter with mirrored scale and suspension type movement. Greater accuracy made possible through the use of special ½% resistors. Accuracy ±1½% DC, ±3% AC. Outstanding resistance ranges: low reading .1 ohm, high 100 megs. Fuse affords protection to the resistors in the ohmmeter circuit, especially the X1 setting. Diode overload.

RANGES

DC Volts: 0-3-12-60-300-1,200-6,000 at 20,000 ohms per volt.
AC Volts: 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.
Ohms: 0-1,000-10,000.
Megohms: 0-1-100.
DC Microamperes: 0-60 at 250 millivolts.
DC Milliamperes: 0-1.2-12-120 at 250 millivolts.
DC Amperes: 0-12.
DB: −20 to +77 (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.
Usable with frequencies through 500 kHz.
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.
Model 630-A Catalog No. 3034 **$75.00**

Volt-Ohm-Milliammeter MODEL 630-APL TYPE 3

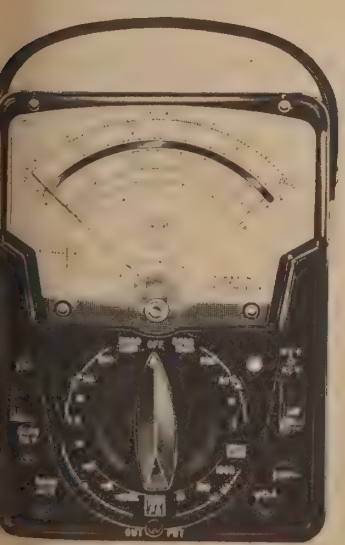
1. **±1½% DC, ±3% AC accuracy.**
2. **One selector switch minimizes chance of incorrect settings and burnouts. Polarity reversing for DC.**
3. **Suspension meter movement diode protected against instantaneous overloads.**

laboratory type Volt-Ohm-Milliammeter with mirored scale and suspension type movement. Greater ccuracy made possible through the use of special ½% resistors. Accuracy ±1½% DC, ±3% AC. High ensitivity: 20,000 ohms per volt DC; 5,000 ohms per olt AC. Polarity reversing switch. Tester usable with requencies through 500 KHz.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000—at 20,000 ohms/volt. 0-0.25 at 100 microamperes.
AC Volts: 0-3-10-50-250-1,000-5,000—at 5,000 ohms/volt.
Ohms: 0-1,000-10,000—(4.4-44 at center scale).
Megohms: 0-1-100—(4,400-440,000 at center scale).
DC Microamperes: 0-100—at 250 millivolts.
DC Milliamperes: 0-10-100-1,000—at 250 millivolts.
DC Amperes: 0-10—at 250 millivolts.
DB: −20 to +11, +21, +35, +49, +61, +75; "0" DB at 1 MW on 600 ohm line.
Output V (AC): 0-3-10-50-250-1,000—at 5,000 ohms/volt, jack with condenser in series with AC ranges.
Case: Molded, black, 3-11/32" x 5½" x 7½". Batteries: NEDA #210, 13F.
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.
Model 630-APL Cat. No. 3038 **$75.00**





Volt-Ohm-Milliammeter MODEL 630-APLK TYPE 2

WITH OVERLOAD PROTECTION

1. **Burnout proof solid state overload protection.**
2. **One selector switch minimizes chance of incorrect settings. DC polarity reversing.**
3. **4.4 Ohm center scale, reads up to 100 megohms resistance in 4 ranges.**

Suspension meter movement, 4½" mirror scale.
Transistorized electronic switching circuit (exclusive patent) guards against accidental burn-outs. Now you can virtually eliminate bent pointers, burned-out resistors, damaged pivots, overheated springs, burned-out coils, changes in accuracy due to overheating, in fact nearly any need for repairs. Life of transistor circuit battery is nearly that of shelf life. Automatically checked by using X100K ohms range. Overload protection on meter in addition to transistorized circuit that protects tester.
Accuracy ± 1½% on DC, ±3% AC. High sensitivity: 20,000 Ω/V DC; 5,000 Ω/V AC. Shipping weight 5 lbs.

RANGES

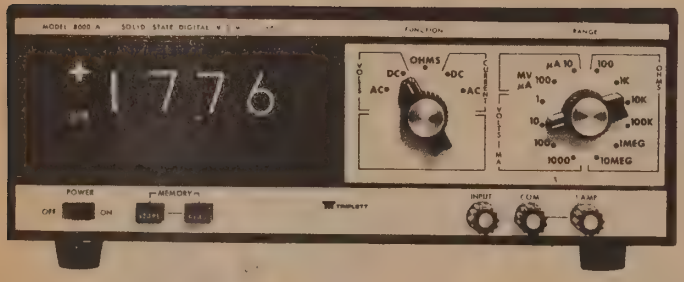
DC Volts: 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt; 0-0.25 at 100 microamperes.
AC Volts: 0-3-10-50-250-1,000-5,000 at 5,000 ohms/volt.
Ohms: 0-1,000-10,000 (4.4-44 at center scale).
Megohms: 0-1-100 (4,400-440,000 at center scale).
DC Microamperes: 0-100 at 250 Mv.
DC Milliamperes: 0-10-100-1000 at 250 Mv.
DC Amperes: 0-10 at 250 Mv.
DB: −20 to +11, +21, +35, +49, +61, +75; "0" DB at MW on 600 ohm line.
Output Volts (AS): 0-3-10-50-250-1,000 at 5,000 ohms/volt; jack with condenser in series with AC ranges.
Case: Molded, black, 3-11/32" x 5½" x 7½". Batteries: NEDA #210, 13F.
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.
Model 630-APLK Cat. No. 3120 **$110.00**

© United Technical Publications

TRIPLETT CORPORATION

LABORATORY ACCURACY V-O-Ms

Digital Volt-Ohm-Milliammeter MODEL 8000A



8000A

1. **True 0.1% DC accuracy. Virtually no kickback current*. Allows voltage measurements in high resistance circuits at stated accuracy.**
2. **High AC accuracy with nearly perfect linearity and 10 Megohm input resistance.**
3. **Low profile design in shielded case with modular construction for ease in use and maintenance.**

*There is virtually no internally-generated current from the V-O-M input circuit to affect measuring accuracy (Patent pending on this feature).



8000

Recognizing that the kickback current which occurs in every other digital V-O-M seriously affects accuracy in voltage measurements in high resistance circuits, Triplett has virtually eliminated that deficiency through the use of a new circuit (patent pending). The result . . . the Model 8000A Digital V-O-M delivers "true accuracy," up to 50% overrange, test-after-test on any kind of circuit. Also featuring automatic zeroing, 38 measurement ranges, protective circuitry that prevents damage when up to 1000 V AC or DC is applied on any voltage range, and an instant replay circuit that displays a previously-stored reading for on-demand comparison with a current reading. Ohmmeter voltage for full-scale measurement on any range is on 0.1 V DC.

RANGES

Five DC Voltage Ranges: 0-0.1-1-10-100-1000. Input resistance 10 Megohms. Accuracy ±0.1% of reading ±1 digit.

Five AC Voltage Ranges: 0-0.1-1-10-100-1000. Input impedance 10 Megohms. Accuracy ±0.2% of reading ±1 digit except ±0.3% of reading ±1 digit on 100 and 1000 V ranges. **Six Resistance Ranges:** 0-100-1K-10K-100K-1 Meg-10 Meg. Maximum applied voltage 0.1 V DC at full-scale on any range . . . proportionately less for other than full-scale measurements. Accuracy ±0.2% of reading ±1 digit except ±0.3% of reading ±1 digit on 1 Meg and 10 Meg ranges. **Five DC and Five AC Current Ranges:** 0-10 µA-1 mA-10 mA-100 mA-1A at 100 mV on all ranges. Accuracy ±0.2% of reading ±1 digit on DC ±0.4% of reading ±1 digit on AC.

The Model 8000A/8000 Digital V-O-M also features three gas-filled readout tubes and a neon lamp to indicate 1000, a movable decimal point, automatic over-range indication, and auto-polarity on DC. Sample rate is 6 times per second.

Case: All-steel case and internal module covers provide strength and electrical shielding. Etched aluminum panel for long wear. Self-contained stand may be used to elevate the panel approximately 25° for easy viewing. Weight is approximately 9¼ pounds.

Power Requirements: 115 ±10 V AC at 50/60 Hz -12 W. 230 ±20 V AC available on request.

Complete with leads, alligator clips and instruction manual with calibration instructions.

Model 8000-A with Memory Cat. No. G 150 **$630.00**

Model 8000 without Memory Cat. No. G 100 **$575.00**

DELUXE LAB STYLE

Volt-Ohm-Milliammeter MODEL 800 TYPE 2



1. **8" Suspension Meter with 6.95" mirror scale for greater readability plus diode overload protection.**
2. **1½% DC and 3% AC accuracy with temperatures and frequency compensation.**
3. **70 Ranges with a DC polarity reversing switch and fused ohmmeter circuit.**

No other V-O-M offers all the Deluxe features of the Model 800. 3% AC ACCURACY to 1200 volts; mirror and knife-edge pointer to eliminate parallax; USABLE with frequencies to 100 kHz; WIRED CIRCUIT, HIGH FLUX BAR-RING self-shielded magnet; DUAL SENSITIVITY provides extra ranges, DC volts at 20,000 and 10,000 ohms per volt, AC at 10,000 and 5,000 ohms per volt. Shatterproof meter window, molded transparent plastic; fully antistat treated.

RANGES

DC Volts: 0-0.6-3-12-60-300-1200-6000 at 10,000 Ohms per Volt. 0-0.3-1.5-6-30-150-600-3000 at 20,000 Ohms per Volt. 0-.120 at 60 Microamperes. **AC Volts:** 0-3-12-60-300-1200-6000 at 5,000 Ohms per Volt. 0-1.5-6-30-150-600-3000 at 10,000 Ohms per Volt. **DB:** −20 to +70 in 10 ranges. **DC Microamperes:** 0-60-600 at 120 MV. 0-120 at 240 MV. **DC Milliamperes:** 0-6-60-600 at 120 MV. 0-1.2-12-120-1200 at 240 MV. **DC Amperes:** 0-6 at 120 MV. 0-12 at 240 MV. **Ohms:** 0-1K-10K-100K (4.4-44-440 at center scale). **Megohms:** 0-1-10-100 (4400-44,000-440,000 Ohms center scale). **Output:** Condenser in series with AC volt ranges. Batteries: NEDA #13F, 210. **CASE**—Heavy, molded black case, 7½" x 6¼" x 3⅞", with movable handle, which can also serve as a tester stand. Shipping wt. 7 lbs.

Model 800 Cat. No. 3070 **$116.00**

Net

© United Technical Publication

TRIPLETT CORPORATION

SPECIAL FEATURE V-O-Ms



Solid State Volt-Ohm-Milliammeter MODEL 630-L TYPE 2

1. **2 low power ohms ranges (X1 and X10). 140 Mv. ohmmeter circuit voltage.**
2. **One selector switch minimizes chance of incorrect settings and burnouts.**
3. **Designed for testing in solid-state circuitry.**
   Fused ohmmeter circuit. Diode overload protected meter.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt.
AC Volts: 0-3-10-50-250-1,000-5,000 at 5,000 ohms per volt.
Decibels: −20 to +75; "0" Db at 1 Mw on 600 ohm line.
DC Microamperes: 0-100 at 120 millivolts.
DC Milliamperes: 0-10-100-1000 at 120 millivolts.
DC Amperes: 0-10 at 120 millivolts.
Ohms: 0-1,000-10,000 (13-130 at center scale).
Megohms: 0-1-100 (4,400-440,000 at center scale).
Output V (AC): 0-3-10-50-250-1,000 at 5,000 ohms/volt, jack with condenser in series with AC ranges.
Case: Black molded, 3-11/32" x 5½" x 7½". Batteries: NEDA #210 & Burgess #13.
Model 630-L Cat. No. 3040 **$69.00**

Combination V-O-M and VTVM MODEL 631

1. **Combination Volt-Ohm-Milliammeter and battery operated Vacuum Tube Voltmeter.**
2. **11 Megohm input to VTVM.**
3. **One selector switch, 34 ranges.**

Large meter easy to read; unbreakable meter face.
Spring-backed instrument jewels for ruggedness.
Accuracy 3% DC, 4% AC, VTVM 4%. Usable to 500 kHz.

V-O-M RANGES

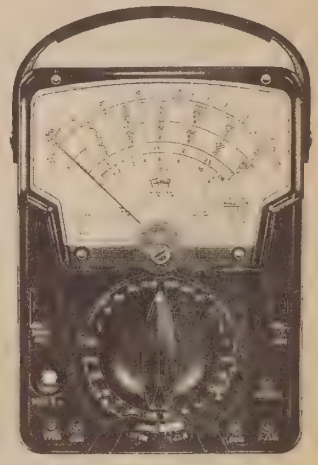
DC Volts: 0-3-12-60-300-1,200 (20,000 ohms per volt).
AC Volts: 0-3-12-60-300-1,200 (5,000 ohms per volt).
Ohms: 0-1,500-15,000.
Megohms: 0-1.5-150.
DC Microamperes: 0-60 at 250 MV.
DC Milliamperes: 0-1.2-12-120-1,200 at 250 MV.
DC Amperes: 0-12 at 250 MV.
DB: −20 to +63. (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.

VTVM RANGES

DC Volts: 0-1.2-6-30-120.
Case: Molded, black, 3-11/32" x 5½" x 7½". Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs. Batteries NEDA #13F, Burgess XX15.
Model 631 Catalog No. 3058 **$86.00**

RF PROBE FOR 631

With this probe and Model 631 RF measurements can be made up to 20 volts at 250 MHz.
RF Probe Catalog No. 79-145 **$10.00**





Electronic Volt-Ohmmeter MODEL 850

1. **Long 7" easy-to-read scale.**
2. **.5 DCV range for transistor circuits.**
3. **High stability—meter connected in cathode circuit of 12AU7.**

Among its outstanding features:
ELECTRICAL PROTECTION of meter against burnout. SEPARATE SCALE on easy-view meter for Peak-to-peak readings. SINGLE UNIT PROBE—with built-in switch for AC/DC/OHMS. Line voltage: 115 VAC 50-60 cycles. Ground type plug. Spring-backed instrument jewels for ruggedness.
Accurate within ±3% on AC and DC. Ohms accurate within ±3% of full scale based on DC scale.

RANGES

Eight DC Volts Ranges: 0-.5-1.5-5-15-50-150-500-1500. **Seven AC RMS Volts Ranges:** 0-1.5-5-15-50-150-500-1500. **Seven Peak-to-Peak Volts Ranges:** 0-4-14-40-140-400-1400-4000. **Seven Resistance Ranges:** 0-1000-10,000-100,000-1 Meg-10 Meg-100 Megohms-1000 Megohms. **Frequency Range:** 15 Hz to 3 MHz; (up to 250 MHz with accessory diode probe available extra). **Input Resistance:** DC Volts 11 Megohms; AC Volts minimum of .83 Megohms.
CASE—Molded black case, 7⅝" x 6 7/16" x 3¾". Carrying handle also can be used to place the tester at 25° angle for ease in reading. Shipping wt. 7 lbs.
PANEL—Etched aluminum.
Model 850 Cat. No. 3074 **$98.00**
MODEL 850 (Foreign—220V, 50 to 60 Hz.) Cat. No. 3075 **$105.00**
Auxiliary Diode Probe for voltages to 20 volts with frequencies to 250 MHz.
Catalog Number 79-215 **$9.50**
High Voltage Probe for DC voltages to 50 KV.
Catalog Number 79-196 **$26.50**

© United Technical Publications
Net

TRIPLETT CORPORATION

ACCESSORIES LEATHER CASES

For Models 630, 630-A, 630-PL, 630-APL, 630-NA, 630-M, 630-NS, 631, 630-L, 630-PLK, 630-APLK; 601, 602 USES 639-OS CASE ONLY



639-N

Model 639-N black cowhide leather carrying case. Center-cover flaps snap back allowing full view of scales and permitting complete access to instrument without removal from case. Tester stand is included at no extra cost.

Model 639-N
Cat. No. 10-1189 **$13.20**



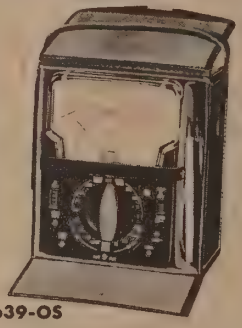
639/639-P

Model 639 black leather case.

Model 639
Cat. No. 10-823 **$13.20**

Model 639-P black cowhide leather carrying case lined with ⅜" sponge rubber.

Model 639-P
Cat. No. 10-921 **$18.80**



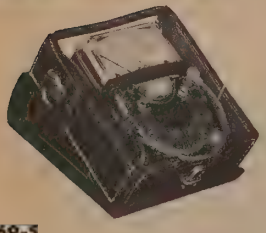
639-OS

Model 639-OS—Black leather case, has built-in stand on back. Flaps open to permit use of tester in case. Compartment for accessories. Used with Model 601, and 602, or any 630 series.

Model 639-OS
Cat. No. 10B-1793 **$15.40**

For Models 310-310-C





369-S

Model 369-S leather carrying case for use with Models 310 or 310-C. Has removable leather shoulder strap. The case flap folds back to form a handy stand. Contains a retractable hook for hanging from nails, pipes, etc., freeing both hands. Test leads store in case and remain plugged into tester jacks while flap is closed keeping your 310 or 310-C ready for instant use. Soft shock absorbent lining.

Model 369-S
Cat. No. 10-1791 **$10.50**



379

Model 379 as above, large 310-10 in combination. Has pocket for 101.

Model 379
Cat. No. 10-1456 **$8.40**

Model 369-T Neckstrap Carrying Case for Model 310.

Model 369-T
Cat. No. 10B-1608 **$10.00**



369

369-T

Model 369—Handsome black cowhide leather carrying case for Model 310. Trouser belt slips through loop on back of the case for out-of-the-way carrying.
Cat. No. 10-1258 **$4.40**



TESTER STAND



For Models 800 and 850

Model 859-OP black leather carrying case, lined with sponge rubber. Flaps open to permit use of tester without removal from case. Built-in stand on back.

Model 859-OP
Cat. No. 10-1669 **$24.30**

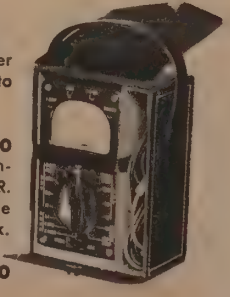
For Model 666-R

Model 669 black leather case for 666-R. (Similar to Model 639 above).

Model 669
Cat. No. 5616 **$8.80**

Model 669-OS black leather case for Model 666-R. Tester can be used in the case. Built-in stand on back.

Model 669-OS
Cat. No. 10B-1792 **$9.50**



ACCESSORIES

	Cat. No.	Price
EXTERNAL SHUNTS—for 630- 630-A		
30 Amperes (Plug-in)	91-247	**$13.20**
60 Amperes (Portable)	91-248	**16.60**
120 Amperes (Portable)	91-255	**16.60**
EXTERNAL SHUNTS FOR 631		
60 Amperes (Portable)	91-248	**$16.60**
120 Amperes (Portable)	91-255	**16.60**
EXTERNAL SHUNTS FOR 630-NA, 800		
0-15-30 Amperes (Plug-in)	91-429	**$17.60**
0-30-60 Amperes (Portable)	91-430	**23.20**
0-60-120 Amperes (Portable)	91-431	**23.20**
EXTERNAL SHUNTS FOR 666-R, 630-PL, 630-APL, 630-PLK, 630-APLK		
25 Amperes (Plug-in)	91-243	**$13.20**
50 Amperes (Portable)	91-244	**16.60**
100 Amperes (Portable)	91-191	**16.60**

REPLACEMENT LEADS

LEADS for Models 630, 630-A, 630-PL, 630-APL, 630-PLK, 630-APLK, 631, 666-R, 630-NA, 630-M & 630-NS, 630-L, 800 ....79-127 **$3.40**

REPLACEMENT LEADS for Models 310, 310-C 79-153 **$3.40**

REPLACEMENT AC-DC—Ohms probe lead assembly for Model 850 .....79-192 **$7.80**

RF PROBE FOR 631

With this probe and Model 631 RF measurements can be made up to 20 volts at 250 MHz. 79-145 **$10.00**

HIGH VOLTAGE PROBES

Completely insulated polystyrene test probe with guard-type handle. Probe is 11¾" long, with 48" high-voltage wire lead with banana plug at tester end.

MODELS 630, 630-A, and 631		
0-30,000 D.C. Volts	79-70	**$18.80**
0-30,000 A.C. Volts	79-71	**18.80**
0-60,000 A.C. Volts	79-152	**18.80**
Models 630-PL, 630-APL, 630-PLK, 630-L		
0-10,000 D.C. Volts	79-83	**$18.80**
0-25,000 D.C. Volts	79-130	**18.80**
0-25,000 A.C. Volts	79-166	**18.80**
Models 630-NA and 800		
0-30,000 D.C. Volts	79-152	**$18.80**
0-30,000 A.C. Volts	79-71	**18.80**
0-60,000 A.C. Volts	79-152	**18.80**
For Model 630-NS		
0- 6,000 D.C. Volts	79-229	**$18.80**
0- 6,000 A.C. Volts	79-230	**18.80**
0-30,000 A.C. Volts	79-152	**18.80**
For Model 630-M		
0-30,000 A.C. Volts	79-152	**$18.80**
0- 6,000 A.C. Volts	79-230	**18.80**
0- 6,000 D.C. Volts	79-247	**18.80**
For Models 601 and 602		
0-30,000 DC Volts	79-270	**$26.50**
RF Probe 50V/250 MHz	79-271	**9.50**
GRD Lead	79-261	**2.50**

Hook-Type Probe

For Model 630 Series and Model 800 .....79-293 **$4.50**

TESTER STAND

Metal stand holds Model 630, 630-A, 630-PL, 630-APL, 630-NA, 630-NS, 630-PLK, 630-APLK, 631, 630-M or 630-L tester in approximately a 45° angle; will enable you to make easier readings.

STAND ONLY—Shipping wt. 1 lb. 255A-35 **$2.20**

PROBES FOR MODELS 310 AND 310-C

PROBE EXTENSIONS for 310 & 310-C leads, insulated, 3 inches long. 11968A **$1.80**

MINIATURE ALLIGATOR CLIPS for use with 310-310-C Probe extensions. 2451A-59 **$.80**

PROBES FOR MODEL 850

Auxiliary Diode Probe for voltages to 20 volts with frequencies to 250 MHz. 79-215 **$9.50**

High Voltage Probe for DC Voltages to 50 KV 79-196 **$26.50**

Net

© United Technical Publications

TRIPLETT

USE THIS HANDY CHART TO SELECT THE TRIPLETT V-O-M FOR YOUR NEEDS

VOM COMPARISON CHART

MODEL NUMBER	D-C VOLTAGE				D-C CURRENT				A-C VOLTAGE				OHMMETER					OUTPUT VOLTAGE		POLARITY REVERSING SWITCH	TEMP. COMPENSATED METER †	OVERLOAD PROTECTED METER **	SPECIAL FEATURES	BATTERY COMPLEMENT	CATALOG NUMBER	PRICE
	MEASUREMENT RANGE	No. OF RANGES	SENSITIVITY	ACCURACY	MEASUREMENT RANGE	No. OF RANGES	VOLTAGE DROP	ACCURACY	MEASUREMENT RANGE	No. OF RANGES	SENSITIVITY	ACCURACY	MEASUREMENT RANGE	No. OF RANGES	CENTER SCALE Ω	ACCURACY	FUSED CIRCUIT	MEASUREMENT RANGE	No. OF RANGES							
	VOLTS		Ω/V	%	μA AMPS		mV	%	VOLTS		Ω/V	%	Ω M Ω			%		Db						NEDA #		
310 TYPE 2	.05-1200	5	20K	3	10 600 MA	4	250	3	.05-1200	5	5K	4	5 20	4	200	3	No	—	—	No	No	No	11	220 910	3018	$ 44.00
310C TYPE 3	.05- 600	5	20K	3	10 600 MA	4	250	3	.05- 600	5	15K	4	5 20	4	200	3	No	—	—	Yes	No	Yes	7,11,12	220 910	3022	68.00
310-FET	.005- 600	6	10 Meg	3	2 1.2 MA	2	300	3	.05- 600	5	5K	4	1 5000	4	50	3	No	—	—	Yes	N/A	Yes	7,11,14	1501 N (ASA)	3027	74.00
630 TYPE 2	.05-6000	6	20K	2	1 12	5	250	2	.05-6000	6	5K	3	.1 100	4	4.4	2	Yes	−20 to +77	6	No	No	Yes	—	13F 210	3030	64.00
630PL TYPE 2	.005-5000	7	20K	2	2 10	5	250	2	.05-5000	6	5K	3	.1 100	4	4.4	2	Yes	−20 to +75	6	Yes	No	Yes	—	13F 210	3050	84.00
666R	.2-5000	5	1K	3	200 1	3	250	3	.2-5000	5	1K	4	.5 3	3	20	3	No	—	—	No	No	No	10	814 815	3066	48.00
630A TYPE 3	.05-6000	6	20K	1½	1 12	5	250	1½	.05-6000	6	5K	3	.1 100	4	4.4	1½	Yes	−20 to +77	6	No	No	Yes	1,7	13F 210	3034	76.00
630APL TYPE 3	.005-5000	7	20K	1½	2 10	5	250	1½	.05-5000	6	5K	3	.1 100	4	4.4	1½	Yes	−20 to +75	6	Yes	No	Yes	1,7	13F 210	3038	76.00
630L TYPE 2	.005-5000	7	20K	2	2 10	5	120	2	.05-5000	6	5K	3	.1 100	4	12*	2	Yes	−29 to +75	6	Yes	No	Yes	3	210 13†	3040	69.00
630PLK TYPE 3	.005-5000	7	20K	2	2 10	5	250	2	.05-5000	6	5K	3	.1 100	4	4.4	2	Yes	−20 to +75	6	Yes	No	Yes	4	13F 210	3055	98.00
631 (VOM) (VTVM)	.05-1200 .02- 120	5 4	20K 11 Meg	3 4	1 12	6	250	3	.05-1200	5	5K	4	.1 150	4	6.7	3	No	−20 to +63	5	No	No	No	9	13F XX15***	3058	88.00
630-APLK TYPE 2	.005-5000	7	20K	1½	2 10	5	250	1½	.05-5000	6	5K	3	.1 100	4	4.4	1½	Yes	−20 to +75	6	Yes	No	Yes	1,4,7	13F 210	3120	110.00
630NA TYPE 3	.002-6000	14	20K/10K	1½	1 12	12	120/ 240	1½	.05-6000	12	10K/5K	3	.1 100	6	4.4	1½	Yes	−20 to +77	12	Yes	Yes	Yes	1,2,7	13F 210	3042	98.00
800 TYPE 2	.002-6000	14	20K/10K	1½	1 12	12	120/ 240	1½	.05-6000	12	10K/5K	3	.1 100	6	4.4	1½	Yes	−20 to +77	12	Yes	Yes	Yes	1,2,6,7	13F 210	3070	116.00
630NS TYPE 2	.002-1200	13	200K/ 100K	1½	.1 12	13	150/ 300	1½	.05-1200	10	20K/10K	3	.1 100	6	4.4	1½	Yes	−20 to +63	10	Yes	Yes	Yes	1,2,7	13F 615	3102	116.00
630M TYPE 1	.002-1200	13	1 Meg/ 500K	1½	.02 12	13	150/ 300	1½	.05-1200	10	20K/10K	3	.1 100	6	4.4	1½	Yes	−20 to +63	10	No	Yes	Yes	1,2,7,8	13F	3108	231.00
850 (VTVM)	.01-1500	8	11 Meg	3	— —	—	—	—	.05-1500	7	830K	3	.2 1000	7	10	3	No	— —	—	Yes	No	No	13	814	3074	98.00
601	.002-1000	9	11 Meg	2	.2 .01	4	100	3	.0002-1000	11	10 Meg	3	.2 1000	14	10	3	Yes	−40 to +60	11	Yes	N/A	Yes	7,14,15,16	15A	3033	158.00
602	.01-1000	8	11 Meg	3	20 1	4	300	4	.01-1000	8	10 Meg	3	.2 1000	6	10	3	Yes	−30 to +62	8	Yes	N/A	Yes	7,14,15,17	1604 AL-2***	3036	100.00
801	.001-1500	10	11 Meg	2	.1 1.5	12	45	3	.0001-1500	12	10 Meg	3	.02 1000	15	10	3	Yes	−70 to +66	12	Yes	N/A	Yes	6,7,14, 15,16	1306A AL-2***	3071	200.00
8000	0001-1000	5	10 Meg	.1	.01 1.5	6	100	.2	.0001-1000	5	10 Meg	.3	.1 15	5	N/A	.2	Yes	— —	—	No	N/A	Yes	1,15,18	N/A	G100	575.00
8000-A	0001-1000	5	10 Meg	.1	.01 1.5	6	100	.2	.0001-1000	5	10 Meg	.3	.1 15	5	N/A	.2	Yes	— —	—	No	N/A	Yes	1,15,18,19	N/A	G150	630.00

Special Features—1. High accuracy & mirror scale 2. Sensitivity switch 3. Two low power ohmmeter ranges for semiconductor measurements 4. Overload protection for complete VOM 5. Rack mounted 6. Large 7" scale 7. Suspension meter 8. 1 million ohms/volt sensitivity 9. Battery-operated VTVM (d-c volts) 10. Low cost 11. Miniature size 12. Enclosed selector switch 13. Long scale VTVM. Note: VTVMs have constant input Z 14. F-E-T amplifier circuit 15. AC current ranges same as DC 16. Low-Power ohms (LPΩ) 0.1mW, 75 mV & 7 ranges 17. Automatic Polarity 18. Digital display 19. Memory circuit ‡ N/A Not applicable to this type instrument * 4.4 ohms on X1K & X100K ** Overload diodes protect meter only † Mercury type *** Burgess No. (no NEDA # available)

ALL PRICES SUGGESTED U.S.A. USER NET SUBJECT TO CHANGE—SPECIFICATIONS SUBJECT TO REVISION.

TRIPLETT CORPORATION

TRIPLETT CORPORATION

DC MICROAMMETERS (Suspension Type)

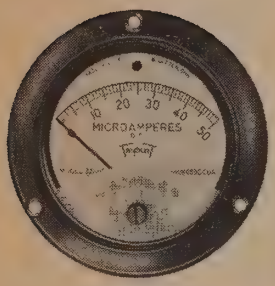


DC 220-G, 320-G, 420-G
AC 230-G, 330-G, 430-G

Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½ Models 820 820-M
0-5			$43.60	$44.60	$44.60		$45.60	$45.60				
0-10			37.30	38.30	38.30	$48.30	39.40	39.40	$49.40	$46.20	$48.30	$51.5
0-20			32.00	33.10	33.10	43.10	34.10	34.10	44.10	41.00	43.10	46.2
0-50	$25.20		25.20	26.30	26.30	36.20	27.30	27.30	37.30	34.10	36.20	39.4
0-100	22.60		22.60	23.60	23.60	33.60	24.70	24.70	34.70	31.50	33.60	36.8
0-200			21.50	22.60	22.60	32.50	23.60	23.60	33.60	30.50	32.60	35.7
0-500			21.00	22.00	22.00	32.00	23.10	23.10	33.10	29.90	32.00	35.2
50-0-50			22.60	23.60			24.70					
100-0-100			21.50	22.60			23.60					
500-0-500			20.50	21.50			22.60					
0-1000†			20.50	21.50			22.60					

† Scale Reads 0-1 Ma.

DC MICROAMMETERS (Pivot & Jewel Type)



DC 221-HR, 321-HR

Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½ Models 820 820-M
0-50	$22.60	$22.60	$22.60	$23.60	$23.60	$33.60	$24.70	$24.70	$34.70	$31.50	$33.60	$36.8
0-100	21.00	21.00	21.00	22.00	22.00	32.00	23.10	23.10	33.10	29.90	32.00	35.2
0-200	19.40	19.40	19.40	20.50	20.50	30.50	21.50	21.50	31.50	28.40	30.50	33.6
0-500	18.40	18.40	18.40	19.40	19.40	29.40	20.50	20.50	30.50	27.30	29.40	32.6
50-0-50		21.00										
100-0-100		19.40										
500-0-500		17.30										

DC MILLIAMMETERS



DC 220-G, 320-G, 430-G
AC 230, 330-G, 430-G
BEZEL MOUNTED

Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½ Models 820 820-M
0-1	$17.30	$17.30	$17.30	$18.40	$18.40	$28.40	$19.40	$19.40	$29.40	$26.30	$28.40	$31.5
0-1.5	17.30		17.30	18.40			19.40					
0-3	17.30		17.30	18.40			19.40					
0-5	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-10	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-15	17.30		17.30	18.40			19.40					
0-25	17.30		17.30	18.40			19.40					
0-50	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-75	17.30		17.30	18.40			19.40					
0-100	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-150	17.30		17.30	18.40			19.40					
0-200	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-250	17.30		17.30	18.40			19.40					
0-300	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-400	17.30		17.30	18.40			19.40					
0-500	17.30	17.30	17.30	18.40	18.40	28.40	19.40	19.40	29.40	26.30	28.40	31.5
0-750	17.30		17.30	18.40			19.40					
0-1000	17.30		17.30	18.40			19.40					

DC AMMETERS



DC 420, AC 430

Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½ Models 820 820-M
0-1	$17.90	$17.90	$17.90	$18.90	$18.90	$28.90	$20.00	$20.00	$29.90	$26.80	$28.90	$32.00
0-3			17.90	18.90			20.00					
0-5			17.90	18.90	18.90	28.90	20.00	20.00	29.90	26.80	28.90	32.00
0-10			17.90	18.90	18.90	28.90	20.00	20.00	29.90	26.80	28.90	32.00
0-15			17.90	18.90			20.00					
0-25			17.90	18.90	18.90	28.90	20.00	20.00	29.90	26.80	28.90	32.00
0-30			17.90	18.90			20.00					
0-50			17.90	18.90	18.90	28.90	20.00	20.00	29.90	26.80	28.90	32.00

ALL PRICES ARE SUGGESTED U.S.A. NET SUBJECT TO CHANGE
(Slightly higher west of Rockies and in Canada)

© United Technical Publications

TRIPLETT CORPORATION

C MILLIAMMETERS

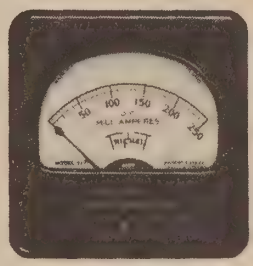
Range	2½" Models 230-G 231-S 237-S	3½" Models 330-G 331-S 337-S	3½" Model 330-R	3½" Model 330-E	4½" Models 430 430-G	4½" Model 430-R	4½" Model 430-E	5½ & 6½" Models 530-G 636	7½" Model 736	8" Model 820
0-10	$16.80	$17.90	$17.90	$27.80	$18.90	$18.90	$28.90	$25.70	$27.80	$30.90
0-15	16.80	17.90			18.90					
0-25	16.80	17.90			18.90					
0-50	16.80	17.90			18.90					
0-100	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-200	16.80	17.90			18.90					
0-250	16.80	17.90			18.90					
0-500	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90



DC 320-E, 420-E
AC 330-E, 430-E

C AMMETERS

Range	2½" Models 230-G 231-S 237-S	3½" Models 330-G 331-S 337-S	3½" Model 330-R	3½" Model 330-E	4½" Models 430 430-G	4½" Model 430-R	4½" Model 430-E	5½ & 6½" Models 530-G 636	7½" Model 736	8" Model 820
0-1	$16.80	$17.90	$17.90	$27.80	$18.90	$18.90	$28.90	$25.70	$27.80	$30.90
0-2	16.80	17.90			18.90	18.90				
0-3	16.80	17.90			18.90	18.90				
0-5	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-10	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-15	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-25	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-30	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-50	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90



DC 227-T, 327-T
AC 237-S, 337-S

HERMO AMMETERS (RF)

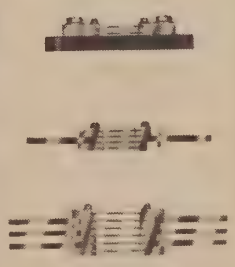
Range	2½" Models 240-G 241-T 247-T	3½" Models 340-G 341-T 347-T	4½" Models 440 440-G
.5 Amps	$21.50	$22.60	$23.60
1 Amps	21.50	22.60	23.60
1.5 Amps	21.50	22.60	23.60
2.5 Amps	21.50	22.60	23.60
5 Amps	21.50	22.60	23.60
10 Amps	21.50	22.60	23.60

ANEL METER ACCESSORIES

C AMMETER

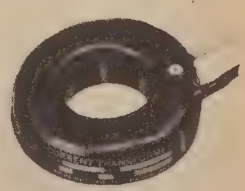
HUNTS

Amps	Millivolts	Price	Amps	Millivolts	Price
0-1	50	$11.50	0-500	50	$20.40
0-2	50	11.50	0-600	50	24.30
0-5	50	11.50	0-750	50	30.80
0-10	50	11.50	0-800	50	30.80
0-20	50	11.50	0-1000	50	60.80
0-50	50	11.50	0-1200	50	60.80
0-100	50	11.50	0-1500	50	67.80
0-150	50	11.50	0-2000	50	75.60
0-200	50	11.50	0-2500	50	81.80
0-250	50	13.50	0-3000	50	124.00
0-300	50	13.50	0-4000	50	159.80
0-400	50	16.50	0-5000	50	189.00



CURRENT TRANSFORMERS

Ampere Range	Ratio	VA	Price
0-75	75:5	2	$15.40
0-100	100:5	2	15.40
0-150	150:5	2	15.40
0-200	200:5	2	15.40
0-250	250:5	2	15.40
0-300	300:5	2	15.40
0-400	400:5	2	15.40
0-500	500:5	2	20.30
0-750	750:5	5	28.40
0-1000	1000:5	5	28.40



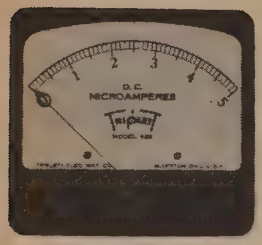
Notes

1. For use with 5 ampere AC meter.
2. All ratios are defined with one primary turn. Leads 24" long. Frequency 25-400 Hz.

ONTACT FACTORY FOR PRICES ON RF MILLIAMMETERS

LL PRICES ARE SUGGESTED U.S.A. USER NET SUBJECT TO CHANGE (Slightly higher west of Rockies and in Canada)

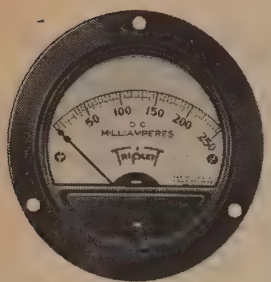
TRIPLETT CORPORATION



DC 626, 726
AC 636, 736

DC MILLIVOLTMETERS (Suspension Type)

Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½" Models 820 820-M
0-5				$34.00			$36.00					
0-10				30.90			32.90					
0-15				30.90			32.90					
0-25				26.70			27.60					



D.C. 221-T, 321-T
A.C. 231-S, 331-S

DC MILLIVOLTMETERS

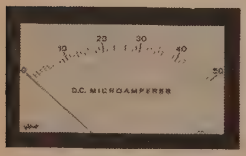
Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½" Models 820 820-M
0-50	$17.90	$17.90	$17.90	$18.90	$18.90	$28.90	$20.00	$20.00	$29.90	$26.80	$28.90	$32.00
0-100	17.90		17.90	18.90			20.00					
0-150	17.90		17.90	18.90			20.00					



RF 240-G, 340-G, 440-G
DC 520-G, AC 530-G

DC VOLTMETERS

Range	1½" Model 120-G	1½" Model 120	2½" Models 220-G 221-T 227-T	3½" Models 320-G 321-T 327-T	3½" Model 320-R	3½" Model 320-E	4½" Models 420 420-G	4½" Model 420-R	4½" Model 420-E	5½ & 6½" Models 520-G 626	7½" Model 726	8 & 8½" Models 820 820-M
0-1	$18.90	$18.90	$18.90	$20.00			$21.00					
0-3	18.90		18.90	20.00			21.00					
0-5	18.90		18.90	20.00	$20.00	$29.90	21.00	$21.00	$31.00	$27.80	$29.90	$33.10
0-10	18.90	18.90	18.90	20.00	20.00	29.90	21.00	21.00	31.00	27.80	29.90	33.10
0-15	18.90		18.90	20.00			21.00	21.00				
0-25	18.90	18.90	18.90	20.00	20.00	29.90	21.00	21.00	31.00	27.80	29.90	33.10
0-30	18.90		18.90	20.00			21.00					
0-50	18.90	18.90	18.90	20.00	20.00	29.90	21.00	21.00	31.00	27.80	29.90	33.10
0-100	18.90		18.90	20.00			21.00					
0-150	18.90	18.90	18.90	20.00	20.00	29.90	21.00	21.00	31.00	27.80	29.90	33.10
0-200	18.90		18.90	20.00			21.00					
0-250	18.90		18.90	20.00			21.00					
0-300	18.90		18.90	20.00	20.00	29.90	21.00	21.00	31.00	27.80	29.90	33.10
0-500	19.40***		19.40***	20.50	20.50	30.50	21.50	21.50	31.50	28.40	30.50	33.60
0-750	19.40***		19.40***	20.50***			21.50					
0-1000***	24.70		24.70	25.70			26.80					
0-2000***	24.70		24.70	25.70			26.80					
0-3000***	24.70		24.70	25.70			26.80					
0-5000***	24.70		24.70	25.70			26.80					



RF 240-G, 340-G, 440-G
DC 520-G, AC 530-G
BEZEL MOUNTED



DC 320-R, 420-R
AC 330-R, 430-R

*** Supplied with external resistors.

ALL PRICES ARE SUGGESTED U.S.A. USER NET SUBJECT TO CHANGE
(Slightly higher west of Rockies and in Canada)

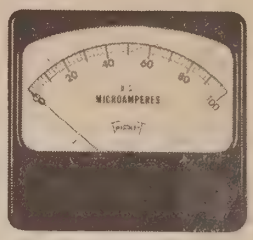
Net
© United Technical Publication

TRIPLETT CORPORATION

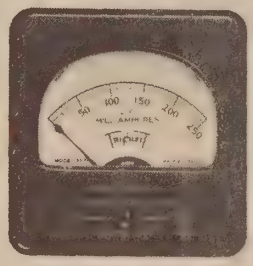
AC VOLTMETERS

Range	2½" Models 230-G 231-S 237-S	3½" Models 330-G 331-S 337-S	3½" Model 330-R	3½" Model 330-E	4½" Models 430 430-G	4½" Model 430-R	4½" Model 430-E	5½ & 6½" Models 530-G 636	7½" Model 736	8" Model 820
0-1.5	$16.80	$17.90			$18.90					
0-3	16.80	17.90			18.90					
0-5	16.80	17.90			18.90					
0-10	16.80	17.90	$17.90		18.90	$18.90		$25.70	$27.80	$30.90
0-15	16.80	17.90			18.90					
0-25	16.80	17.90			18.90					
0-50	16.80	17.90	17.90		18.90	18.90		25.70	27.80	30.90
0-100	16.80	17.90			18.90					
0-150	17.90	18.90	18.90	$28.90	20.00	20.00	$29.90	26.80	28.90	32.00
0-250	17.90	18.90			20.00					
0-300	17.90	18.90	18.90		20.00	20.00		26.80	28.90	32.00
0-500	23.60	24.70	24.70		25.70	25.70		32.60	34.70	37.80
90-130		31.80*			32.90					

*Expanded scale 90-130 AC volts available on Model 330-G only.



RF 440


RF 247-T, 347-T

AC RECTIFIER TYPE VOLTMETERS

Range	1000 Ohms Per Volt		2000 Ohms Per Volt	
	Models 350-G 351-T 357-T	Models 450 450-G	Models 350-G 351-T 357-T	Models 450 450-G
0-1			$28.40	$29.40
0-3			28.40	29.40
0-5	$26.30	$27.30		
0-10	26.30	27.30		
0-15	26.30	27.30		
0-50	26.30	27.30		
0-100	26.30	27.30		
0-150	26.30	27.30		
0-300	26.30	27.30		

Contact factory for prices on AC Rectifier Milliammeters.


450 VU TYPE A SCALE

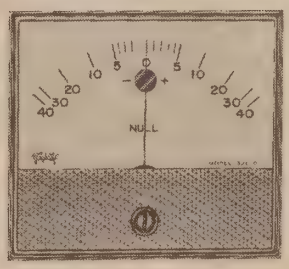
VOLUME UNIT METERS & DB METERS (Power Level Indicators)

Range	1½" Model 150	3½" Models 350-G 351-T 357-T	4½" Models 450 450-G	3½" Models 351-T or 357-T (Illuminated)	4½" Model 450 (Illuminated)
VU	$30.50	$31.50	$32.60	$34.10	$35.20
DB		27.30	28.40	29.90	31.00

Specify Type "A" or "B" scale preferred when ordering VU Meters.


357-T DB

NULL METERS

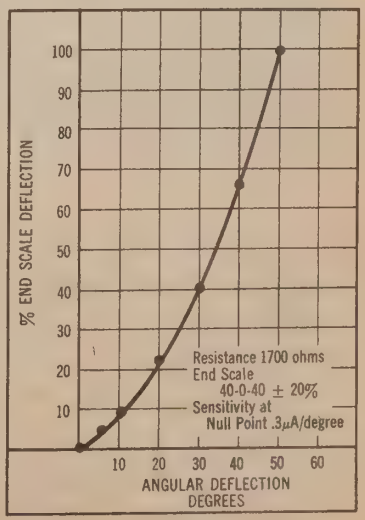


Triplett Null Meters with suspension type movements are available in 3½" and 4½" G-Series instruments.

0-0-40 320-G with 1700 ohms resistance.
Catalog Number 8069745 ..... $41.00

0-0-40 420-G with 1700 ohms resistance.
Catalog Number 8069845 ..... $42.40

Sensitivity at Null Point is 0.3 μa per degree. End scale value is 40-0-40 ± 20%. Center spot mirrored for elimination of parallax in reading.

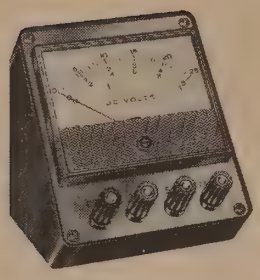


ALL PRICES ARE SUGGESTED U.S.A. USER NET SUBJECT TO CHANGE
(Slightly higher west of Rockies and in Canada)

s Normally In Stock.

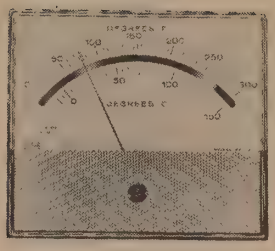
TRIPLETT CORPORATION

G/P PORTABLES



G/P PORTABLE

DC 320-G/P	Ohms Res.	Price
0-1-5-25 Volts (1000 Ω/V)		$35.60
0-25-100-500 Volts (1000 Ω/V)		36.40
0-6-60-600 Volts (1000 Ω/V)		36.40
0-50 μa	2300	33.20
500-25-0-25-500 μa	6250	37.60
0-0.25-1-5 Ma.		34.70
0-25-100-500 Ma.		35.10
0-1-10-100 Ma.		35.10
0-1-5-25 Amp.		35.60
0-50-100-250 Mv.		35.10
0-3-15 Amp.		32.10
0-10-50-250 μa (Suspension)		68.00
40-0-40 μa (Suspension) Null Meter	1700	46.70
AC RECTIFIER TYPE 350-G/P		
0-6-60-600 Volts (1000 Ω/V)		57.80
AC IRON VANE TYPE 330-G/P		
0-120-600 Volts (83 Ω/V) and 0-12 Ma.		48.10
0-5-25 Volts (4 Ω/V) and 0-250 Ma.		35.90
0-30-120 Volts (17 Ω/V) and 0-60 Ma.		37.30
0-150 Volts (12 Ω/V)		28.60
0-1 Amp.	.3	27.00
0-5 Amp.	.015	27.00
0-25 Amp.	.002	27.00
OHMS 320-G/P		
0-1K-100K (10-1000 at center scale) Includes 1.5 V battery and test leads		39.40
0-1 Meg-100Meg (5K-500K at center scale) Includes 30 V battery and test leads		45.50
RF VOLTS 340-G/P		
0-2.5 Volts (240 Ω/V)		54.70
WATTS 360-G/P		
0-150 Watts (150 V., 2A. Max.)		57.90



420-G

PYROMETERS & THERMOCOUPLES

PYROMETERS

Both styles incorporate cold junction compensation and copper (resistance) compensation. The pyrometers are calibrated for 5 ohms or 10 ohms as noted in the table below. Pyrometers are supplied less thermocouples.

THERMOCOUPLES

Both Types J and K can be supplied as the exposed junction type with either glass cloth or stainless steel sheathes. Resistance tolerance is ±1% on both the 5 ohms and 10 ohms versions. Both types of insulation sheaths will provide continuous operation to 900°F or a single reading to 1400°F. Stainless steel sheathing improves abrasion resistance.

Special ranges and thermocouples are available on request. Consult factory. As a guide, a 300°F span is the minimum obtainable.

PYROMETERS

Temperature Range °F	Temperature Range °C	Thermocouple Type*	External Resistance	Models 420 420-G
−150 to +250	−100 to +120	J	10 Ohms	$37.00
0 to +300	− 20 to +150	J	5 ohms	37.00
0 to +500	− 20 to +260	J	10 Ohms	37.00
0 to +750	− 20 to +400	J	10 Ohms	37.00
0 to +1000	− 20 to +540	J	10 Ohms	35.00
0 to +1500	− 20 to +820	K	10 Ohms	35.00
0 to +2000	− 20 to +1200	K	10 Ohms	35.00

*J (Iron—Constantan) K (Chromel—Alumel)



420

THERMOCOUPLES

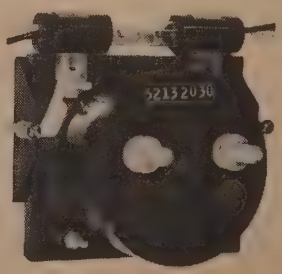
Type	Overbraid Type†	Approximate Length (Inches)	Resistance	Price
J	GC	137	10 Ohms	$ 6.00
J	GC	162	5 Ohms	8.00
J	SS	137	10 Ohms	10.00
J	GC	54	10 Ohms	4.50
K	GC	205	10 Ohms	12.00
K	SS	206	10 Ohms	18.00
K	GC	50	10 Ohms	4.50
K	SS	50	10 Ohms	7.00

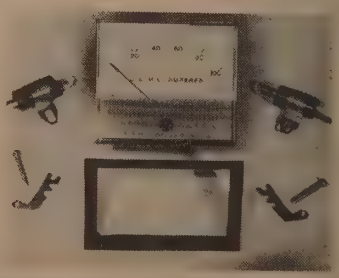
†GC (Glass Cloth) SS (Stainless Steel)

ILLUMINATION KITS FOR G-METERS

Illumination Kits are available for the bezel mounted G-Series panel meters.

	User Net
Illumination Kit for Model 520-G Pt. #66A-83	$2.80
Illumination Kit for Model 420-G Pt. #66A-80	2.60
Illumination Kit for Model 320-G Pt. #66A-80	2.60
Illumination Kit for Model 220-G Pt. #66A-80	2.60





Net

© United Technical Publications

TRIPLETT CORPORATION

2¾-Digit Panel Meter

1. **2¾ DIGITS . . . Provides double the accuracy, (.25% of reading ±½ digit) and double the resolution at lower cost.**
2. **INSTANTANEOUS RESPONSE . . . 16 millisecond display rate with 60 times per second sampling rate.**
3. **FOOL PROOF READINGS . . . Numeral display cannot be read if test measurements are beyond range or of negative polarity.**



MODEL 4228-N SPECIFICATIONS

DC VOLTS

Range	Catalog No.	Input Resistance	Max. Voltage
±199.5 mV	F89-14-01	1 K Ohm	10 V
±1.995 V	F89-14-02	10 K Ohm	50 V
±19.95 V	F89-14-03	100 K Ohm	150 V
±199.5 V	F89-14-04	1 megOhm	500 V
±1000 V	F89-14-05	10 megOhm	1000 V

DC CURRENT

Range	Catalog No.	Shunt Resistance	Max. Current
±199.5 uA	F89-14-06	1 K Ohm	10 mA
±1.995 mA	F89-14-07	100 Ohm	50 mA
±19.95 mA	F89-14-08	10 Ohm	150 mA
±199.5 mA	F89-14-09	1 Ohm	500 mA
±1.995 A	F89-14-10	0.1 Ohm	2.5A

MODEL 4228-N

Model 4228-N With 2¾ digit feature, indicating capabilities to 199.5 and accuracy of 0.25% of reading ±½ digit.
Suggested Price **$140.00**

Model 4225-N Available with indicating capabilities to 99.5 and accuracy of ±0.5% of reading ±½ digit, retaining all other features of the Model 4228-N.
Suggested Price **$125.00**

Model 4220-N Available with indicating capabilities to 99 and accuracy of ±1% of reading ±1 digit, retaining all other features of Model 4228-N except negative polarity indication.
Suggested Price **$110.00**

3½-Digit Panel Meter

1. **Low-cost, bipolar 3½ digit instrument reads to 100% over-range.**
2. **Dual-slope analog/digital conversion gives high noise rejection, stability and accuracy.**
3. **Single-plane, seven-bar readout for accurate wide-angle readability.**



MODEL 4235-F SPECIFICATIONS

DC VOLTS

Range*	Catalog No.	Input Resistance	Max. Voltage
10.00 mV	F89-13-01	100 megOhms	100 V
100.0 mV	F89-13-02	1000 megOhms	250 V
1.000 V	F89-13-03	1000 megOhms	250 V
10.00 V	F89-13-04	10 megOhms	1000 V
100.00 V	F89-13-05	10 megOhms	1000 V
1000.00 V	F89-13-06	10 megOhms	1000 V

DC CURRENT

Range*	Catalog No.	Shunt Resistance	Max. Current
.000 uA	F89-13-07	10 K Ohms	2 mA
0.00 uA	F89-13-08	10 K Ohms	2 mA
00.0 uA	F89-13-09	1 K Ohms	10 mA
.000 mA	F89-13-10	100 Ohms	20 mA
0.00 mA	F89-13-11	10 Ohms	100 mA
00.0 mA	F89-13-12	1 Ohm	500 mA
.000 Amps	F89-13-13	0.1 Ohm	2.5 Amps

*100% over-range on all ranges except 1000 V.

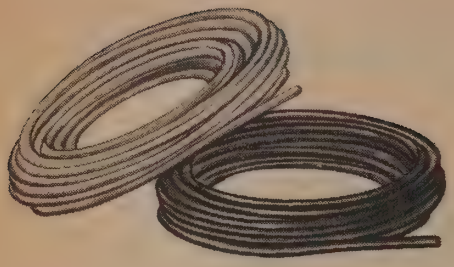
MODEL 4235-F

Accuracy (Voltage): ±0.1% of reading ±1 Digit.
Accuracy (Current): ±0.15% of reading ±1 Digit.

Model 4235-F Suggested Price **$240.00**
($265 with BCD Output)

Model 4230-F Available with indicating capabilities to .999 and accuracy of 0.1% of reading ±1 digit, retaining all other features of Model 4235-F except autopolarity. Over-range indicated by blinking numeral display.
Suggested Price **$220.00**

COLE-FLEX
polyvinylchloride plastic tubing



CONFORMS TO MIL-I-631D

OPERATING TEMPERATURES —20°C to +105°C

***STOCK COLORS:** 1—Clear, 2—Black, 3—White, 4—Yellow, 5—Red, 6—Green.

Type F, Form U, Grade C, Class I, Category 1.

DESCRIPTION: The superior mechanical thermal, and electrical properties of **Cole-flex P-105,** coupled with its economical cost have led to an ever increasing use of this all-purpose insulating material. Another major advantage of P-105 is its high degree of flexibility which is maintained even under severe environmental conditions.

Rated for temperatures as high as 105°C, P-105 has a high dielectric strength that remains unaffected by increasing temperature throughout its range. P-105 maintains a high resistance to the agents of heat, oil, chemical corrosion and fungi with no loss in tensile strength, or flexibility. Other features include an exceptional resistance to abrasion and indefinite shelf life.

Cole-flex P-105 is compounded with first quality, non-migratory resinous type plasticizers. Carefully selected stabilizers and modifiers added in the manufacturing process, counteract chemical and environmental degradation. Under adverse conditions P-105 retains its flexibility which permits it to cling to and protect irregular shapes. An unusually simple to handle insulating material, P-105 "snakes" well under all environmental conditions.

APPLICATIONS: Designed and manufactured for general electronic, aircraft and electrical applications involving temperatures as high as 105°C. Especially useful to protect wires and cables subject to abrasion or where a flexible tubing with a high degree of resistivity to oil, chemicals or solvents is necessary.

Cole-flex Number	Size	Nom. Inside Dia. (Inch.)	Nom. Wall Thickness (Inch.)	*Stock Colors	Standard Put-Ups
P-105/24	24	.022	.012	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/22	22	.027	.012	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/20	20	.034	.016	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/19	19	.038	.016	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/18	18	.042	.016	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/17	17	.047	.016	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/16	16	.053	.016	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/15	15	.059	.016	1 - 6	25′, 100′, 500′, 1000′ Spools
P-105/14	14	.066	.016	1 - 6	25′, 100′, 500′ Spools
P-105/13	13	.076	.016	1 - 6	25′, 100′, 500′ Spools
P-105/12	12	.085	.016	1 - 6	25′, 100′, 500′ Spools
P-105/11	11	.095	.016	1 - 6	25′, 100′, 500′ Spools
P-105/10	10	.106	.016	1 - 6	25′, 100′, 500′ Spools
P-105/9	9	.118	.020	1 - 6	25′, 100′, 500′ Spools
P-105/8	8	.133	.020	1 - 6	25′, 100′, 500′ Spools
P-105/7	7	.148	.020	1 - 6	25′, 100′, 500′ Spools
P-105/6	6	.166	.020	1 - 6	25′, 100′, 500′ Spools
P-105/5	5	.186	.020	1 - 6	25′, 100′, 500′ Spools
P-105/4	4	.208	.020	1 - 6	25′, 100′, 250′ Coils
P-105/3	3	.234	.020	1 - 6	25′, 100′, 250′ Coils
P-105/2	2	.263	.020	1 - 6	25′, 100′, 250′ Coils
P-105/1	1	.294	.020	1,2,3	25′, 100′, 250′ Coils
P-105/0	0	.330	.020	1,2,3	25′, 100′, 250′ Coils
P-105/5/16″	5/16″	.312	.025	1,2,3	25′, 100′, 250′ Coils
P-105/3/8″	3/8″	.375	.025	1,2,3	25′, 25′, 100′ Coils
P-105/7/16″	7/16″	.438	.025	1,2,3	25′, 100′ Coils
P-105/1/2″	1/2″	.500	.025	1,2,3	25′, 100′ Coils
P-105/9/16″	9/16″	.562	.030	1,2,3	25′, 50′ Coils
P-105/5/8″	5/8″	.625	.030	1,2,3	25′, 50′ Coils
P-105/3/4″	3/4″	.750	.035	1,2,3	25′, 50′ Coils
P-105/7/8″	7/8″	.875	.035	1,2,3	25′, 50′ Coils
P-105/1″	1″	1.000	.035	1,2,3	25′, 50′ Coils
P-105/1 1/8″	1 1/8″	1.125	.035	1,2	25′ Coils
P-105/1 1/4″	1 1/4″	1.250	.040	1,2	25′ Coils
P-105/1 3/8″	1 3/8″	1.375	.040	1,2	25′ Coils
P-105/1 1/2″	1 1/2″	1.500	.045	1,2	25′ Coils
P-105/1 3/4″	1 3/4″	1.750	.055	1,2	25′ Coils
P-105/2″	2″	2.000	.060	1,2	25′ Coils
P-105/2 1/4″	2 1/4″	2.250	.065	1,2	25′ Coils
P-105/2 1/2″	2 1/2″	2.500	.070	1,2	25′ Coils

COLE-FLEX CORP.

© United Technical Publications

COLE-FLEX
plastic impregnated fiberglass tubing



CONFORMS TO MIL-I-3190 — GRADE B

THERMAL CLASS B: (130°C). NEMA Type 3

DIELECTRIC: 4000v d.c.

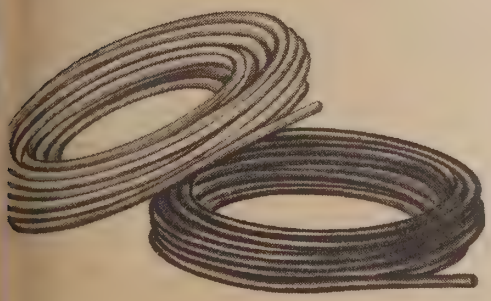
OPERATING TEMPERATURE: −20°C to +130°C

STOCK COLOR: Black.
OTHER COLORS AVAILABLE TO ORDER

STANDARD PUT-UPS:

SIZES: #24 through #19 — 25′, 100′, 500′, 1000′ Spools
#18 through #6 — 25′, 100′, 500′ Spools
#5 through ½ — 25′, 100′ Spools
⅝ through 1′ — 25′ and 50′ Coils

Cole-flex Number	Size	Wall Thickness Max. (Inches)	Wall Thickness Min. (Inches)	Cole-flex Number	Size	Wall Thickness Max. (Inches)	Wall Thickness Min. (Inches)
PF-130/24	24	.022	.016	PF-130/7	7	.028	.020
PF-130/22	22	.022	.016	PF-130/6	6	.028	.020
PF-130/20	20	.022	.016	PF-130/5	5	.036	.026
PF-130/19	19	.022	.016	PF-130/4	4	.036	.026
PF-130/18	18	.022	.016	PF-130/3	3	.036	.026
PF-130/17	17	.022	.016	PF-130/2	2	.036	.026
PF-130/16	16	.028	.020	PF-130/1	1	.042	.030
PF-130/15	15	.028	.020	PF-130/0	0	.042	.030
PF-130/14	14	.028	.020	PF-130/⅜″	⅜″	.042	.030
PF-130/13	13	.028	.020	PF-130/7/16″	7/16″	.042	.030
PF-130/12	12	.028	.020	PF-130/½″	½″	.042	.030
PF-130/11	11	.028	.020	PF-130/⅝″	⅝″	.042	.030
PF-130/10	10	.028	.020	PF-130/¾″	¾″	.042	.030
PF-130/9	9	.028	.020	PF-130/⅞″	⅞″	.042	.030
PF-130/8	8	.028	.020	PF-130/1″	1″	.042	.030



PF-130 is the toughest and most pliable of insulating materials and is formulated to provide the maximum in electrical characteristics, chemical resistance, heat stability and abrasion resistance.

A Class B, Grade B, insulating material, PF-130, is recommended for conditions requiring continuous operation at temperatures up to 130°C. Prolonged baking at this high temperature does not affect the tubing's retention of color.

The tubing is constructed from an inorganic fiberglass base sleeving coated with a heat resistant, extremely flexible, tough plastic insulation.

PF-130 has excellent "cut-through" characteristics and is heat-treated to permanently set the glass fibers assuring perfect roundness and ends that will not fray, when cut. Neither the fiberglass base sleeving nor the plastic coating will support combustion.

APPLICATIONS: Because of its toughness and flexibility the material is widely used where tubing is subject to bending, knotting, and high torque. PF-130 will not peel or crack or lose its dielectric values even under conditions involving extreme abuse.

Other applications include use in electric motors, generator or resistor leads where maximum push-back of insulation is desirable.

COLE-FLEX CORP.

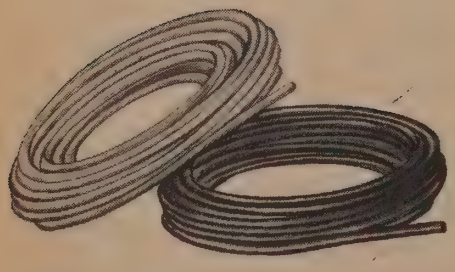
COLE-FLEX
extruded teflon tubing

CONFORMS TO MIL-I-22129B, AMS-3653, AMS-3654, CS252-63

Cole-flex Teflon Tubing is unmatched by any other type of tubing for use in electrical applications at high frequencies and temperatures. Teflon is rated for continuous operation at 250°C, and retains an exceptional toughness and its flexibility throughout its temperature range.

Because of its resistance to soldering iron temperature, **Cole-flex** Teflon Tubing will not shrink back during the soldering process. **Cole-flex** Teflon Tubing will not melt and flow as do conventional thermoplastic materials. At high frequencies, its dielectric strength is many times that of other insulating materials.

Cole-flex Teflon Tubing is chemically inert, has zero moisture absorption and its insulation resistance properties are unaffected by heat aging or temperature use up to 250°C.



ALL SIZES CAN BE FURNISHED CUT TO LENGTH ON ORDER.

TUBING CAN BE ETCHED ON THE OUTSIDE SURFACE FOR BONDING PURPOSES. CONTACT FACTORY FOR PRICES. 10 STANDARD MIL-STD-104 COLORS AVAILABLE ON ORDER.

THIN WALL (TT-250)

Cole-flex Number	Size	Nom. Inside Dia. (Inch.)	Nom. Wall Thickness (Inch.)	Stock Colors	Standard Put-Ups
TT-250/30	30	.012	.009	Natural, Black	1000′, 100′, 25′ Spool
TT-250/28	28	.015	.009	Natural, Black	1000′, 100′, 25′ Spool
TT-250/26	26	.018	.010	Natural, Black	1000′, 100′, 25′ Spool
TT-250/24	24	.022	.010	Natural, Black	1000′, 100′, 25′ Spool
TT-250/22	22	.027	.010	Natural, Black	1000′, 100′, 25′ Spool
TT-250/20	20	.034	.012	Natural, Black	1000′, 100′, 25′ Spool
TT-250/19	19	.038	.012	Natural, Black	1000′, 100′, 25′ Spool
TT-250/18	18	.042	.012	Natural, Black	1000′, 100′, 25′ Spool
TT-250/17	17	.047	.012	Natural, Black	1000′, 100′, 25′ Spool
TT-250/16	16	.053	.012	Natural, Black	500′, 100′, 25′ Spool
TT-250/15	15	.059	.012	Natural, Black	500′, 100′, 25′ Spool
TT-250/14	14	.066	.012	Natural, Black	500′, 100′, 25′ Spool
TT-250/13	13	.076	.012	Natural, Black	500′, 100′, 25′ Spool
TT-250/12	12	.085	.012	Natural, Black	500′, 100′, 25′ Spool
TT-250/11	11	.095	.012	Natural, Black	250′, 100′, 25′ Spool
TT-250/10	10	.106	.012	Natural, Black	250′, 100′, 25′ Spool
TT-250/9	9	.118	.015	Natural, Black	250′, 100′, 25′ Coils*
TT-250/8	8	.133	.015	Natural, Black	100′, 25′ Coils*
TT-250/7	7	.148	.015	Natural, Black	100′, 25′ Coils*
TT-250/6	6	.166	.015	Natural, Black	100′, 25′ Coils*
TT-250/5	5	.186	.015	Natural, Black	100′, 25′ Coils*
TT-250/4	4	.208	.015	Natural, Black	100′, 25′ Coils*
TT-250/3	3	.234	.015	Natural, Black	100′, 25′ Coils*
TT-250/2	2	.263	.015	Natural, Black	100′, 25′ Coils*
TT-250/1	1	.294	.015	Natural, Black	100′, 25′ Coils*
T-250/0	0	.330	.015	Natural, Black	100′, 25′ Coils*

STANDARD WALL (TS-250)

Similar in characteristics to TT-250 (Thin Wall Tubing), but for use in applic tion where additional dielectric values and mechanical strength are necessa

Cole-flex Number	Size	Nom. Inside Dia. (Inch.)	Nom. Wall Thickness (Inch.)	Stock Colors	Standard Put-Ups
TS-250/24	24	.022	.012	Natural Only	1000′, 100′, 25′ Spool
TS-250/22	22	.027	.012	Natural Only	1000′, 100′, 25′ Spool
TS-250/20	20	.034	.016	Natural Only	1000′, 100′, 25′ Spool
TS-250/19	19	.038	.016	Natural Only	1000′, 100′, 25′ Spool
TS-250/18	18	.042	.016	Natural Only	1000′, 100′, 25′ Spool
TS-250/17	17	.047	.016	Natural Only	1000′, 100′, 25′ Spool
TS-250/16	16	.053	.016	Natural Only	500′, 100′, 25′ Spool
TS-250/15	15	.059	.016	Natural Only	500′, 100′, 25′ Spool
TS-250/14	14	.066	.016	Natural Only	500′, 100′, 25′ Spool
TS-250/13	13	.076	.016	Natural Only	500′, 100′, 25′ Spool
TS-250/12	12	.085	.016	Natural Only	500′, 100′, 25′ Spool
TS-250/11	11	.095	.016	Natural Only	250′, 100′, 25′ Spool
TS-250/10	10	.106	.016	Natural Only	250′, 100′, 25′ Spool
TS-250/9	9	.118	.020	Natural Only	250′, 100′, 25′ Coils*
TS-250/8	8	.133	.020	Natural Only	100′, 25′ Coils*
TS-250/7	7	.148	.020	Natural Only	100′, 25′ Coils*
TS-250/6	6	.166	.020	Natural Only	100′, 25′ Coils*
TS-250/5	5	.186	.020	Natural Only	100′, 25′ Coils*
TS-250/4	4	.208	.020	Natural Only	100′, 25′ Coils*
TS-250/3	3	.234	.020	Natural Only	100′, 25′ Coils*
TS-250/2	2	.263	.020	Natural Only	100′, 25′ Coils*
TS-250/1	1	.294	.020	Natural Only	100′, 25′ Coils*
TS-250/0	0	.330	.020	Natural Only	100′, 25′ Coils*

* RANDOM LENGTHS PACKED IN 100′ ROLLS.

COLE-FLEX CORP.

© United Technical Publication

COLE-FLEX

irradiated polyolefin shrinkable tubing

CONFORMS TO MIL-I-23053/5

SHRINKS 50% (2:1 RATIO) WITH ONLY 5% LONGITUDINAL SHRINKAGE

FOUR SIZES COVERING MORE APPLICATIONS

OPERATING TEMP. RANGE: −55°C to +135°C

STOCK COLORS: BLACK WHITE, RED, YELLOW, BLUE, AND CLEAR

Cole-flex Number	Size (Inches)	Min. I.D. Before Shrinkage (Inches)	Recovered I.D. After Shrinkage (Inches)	Recovered Nom. Wall Thickness (Inches)	Standard Package 4′ Lengths		Standard Package 6″ Lengths	
					Total Footage	No. of Lengths	Total Footage	No. of Lengths
ST-221-3/64″	3/64	.046	.023	.016	100′	25	20′	40
ST-221-1/16″	1/16	.063	.031	.017	100′	25	18′	36
ST-221-3/32″	3/32	.093	.046	.020	100′	25	16′	32
ST-221-1/8″	1/8	.125	.062	.020	100′	25	14′	28
ST-221-3/16″	3/16	.187	.093	.020	100′	25	12′	24
ST-221-1/4″	1/4	.250	.125	.025	100′	25	10′	20
ST-221-3/8″	3/8	.375	.187	.025	100′	25	8′	16
ST-221-1/2″	1/2	.500	.250	.025	20′	5	7′	14
ST-221-3/4″	3/4	.750	.375	.030	20′	5	6′	12
ST-221-1	1	1.000	.500	.035	20′	5	4′	8
ST-221-1 1/2″	1 1/2	1.500	.750	.040	20′	5	2.5′	5
ST-221-2	2	2.000	1.000	.045	20′	5	1.5′	3
ST-221-3	3	3.000	1.500	.050	8′	2	1′	2
ST-221-4	4	4.000	2.000	.055	8′	2	.5′	1

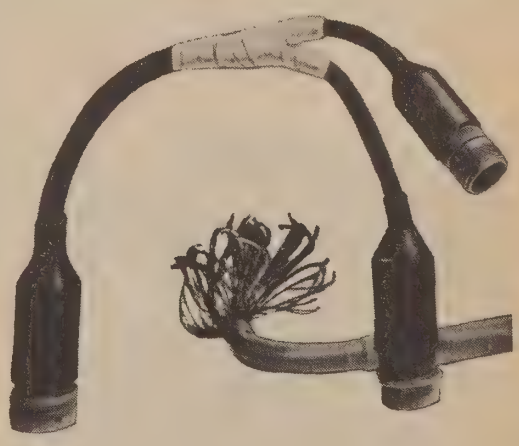
STANDARD PACKAGE ST-221 Tubing is available ONLY in the specified packages. When ordering, indicate package desired (6 inches or 4 foot).

Cole-flex ST-221 Shrinkable Tubing, when heated, forms a tight-mechanical bond, even over irregularly shaped materials. ST-221 is available in a range of colors and in clear.

ST-221 is an all-purpose polyolefin extruded tubing that is simple to use and provides a tight mechanical bond. ST-221 is an irradiated, thermally stable, modified polyolefin base product. ST-221 Clear may be used so that labeled, printed components or cable data is clearly visible and inspection of insulated components, cables or terminations is simplified.

The tubing is supplied in an expanded form and easily slips over the object to be covered. When a temperature of approximately 275°F. (135°C.) is applied, it immediately returns to its predetermined size (approximately one-half smaller) and forms a permanent tight-fitting mechanical bond. ST-221 Tubing will not cold-flow or melt but retains form stability throughout its temperature range. No radioactivity exists in or on the material and it will not emit radiation. Longitudinal shrinkage is 5% maximum when completely recovered.

Controlled shrinkage to the correct predetermined size takes place within seven seconds at 225°F. to 255°F. Shrinkage will begin at 235°F., but at a somewhat slower rate. When using an oven, temperature may range from 225°F. to 300°F. Prolonged exposure to these temperatures will not affect the physical or electrical properties of ST-221 Shrinkable Tubing. ST-221 Clear Tubing remains transparent over its entire operating range of −55°C. to 135°C.



FLAMMABILITY: Although ST-221 Clear is a high temperature material, it is flammable and will burn. However, when the tubing is shrunk over non-flammable or flame-resistant components, such as connectors, terminals and wire, the entire assembly will not support combustion.

Assorted sizes and colors per box — contains an assortment of 6″ lengths in various sizes and colors. Every length identified as to size and supplied in Black, White, Red, Yellow, Blue, and Clear.

Cole-flex Number	Tubing Size Range	Lengths Per Box
STA-1	3/64″ thru 3/16″	30
STA-2	1/4″ thru 3/4″	16
STA-3	1″ thru 4″	10

COLE-FLEX CORP.

COLE-FLE

NEW – irradiated polyolefi shrinkable tubin (industrial grade



LONG LENGTHS — GOOD FOR CABLE JACKETING

Conforms to MIL-1-631D, Type F, Form U, Grade C, Class 1, Cat. 1

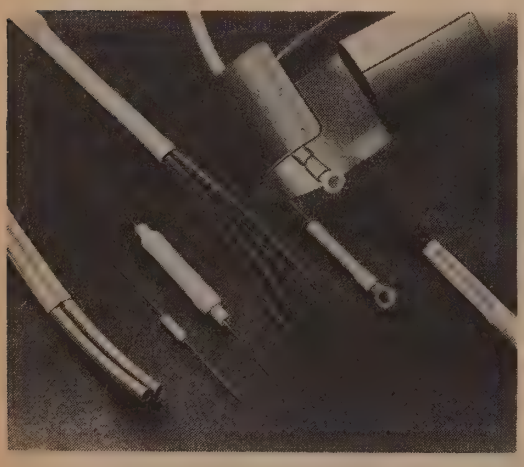
SHRINKAGE RATIO: 2:1 (50% Shrinkage)

OPERATING TEMPERATURE RANGE: −20°C to + 105°C

STOCK COLOR: Black

Cole-flex Number	Size (Inches)	Minimum I.D. Before Shrinking (Inches)	Recovered I.D. After Shrinking (Inches)	Nominal Wall Thickness (Inches)	Standard Put-up (Feet)
ST-205-3/64"	3/64	.046	.023	.020	25, 100, 1000
ST-205-1/16"	1/16	.062	.031	.020	25, 100, 1000
ST-205-3/32"	3/32	.093	.046	.020	25, 100, 1000
ST-205-1/8"	1/8	.125	.062	.025	25, 100, 1000
ST-205-3/16"	3/16	.187	.093	.025	25, 100, 1000
ST-205-1/4"	1/4	.250	.125	.025	25, 100, 500
ST-205-3/8"	3/8	.375	.187	.030	25, 100, 200
ST-205-1/2"	1/2	.500	.250	.030	25, 100, 200
ST1205-3/4"	3/4	.775	.375	.035	25, 100, 200
ST-205-1"	1	1.000	.500	.040	25, 100

Supplied in Continuous Lengths — No More than 3 Lengths per Put-up.



Cole-flex ST-205 is an easy to use **irradiated** polyolefin tubing supplie in long lengths which make it an excellent cable jacketing material.

Although manufactured to commercial specifications it will meet MIL-I-631 Type F, Form U, Grade C, Class I, Cat. 1. for PVC tubing. Rated at 105° expanded to twice its recovered diameter, flexible, tough, it is an ide material for insulating harnesses, cable cores and components.

Economically priced it is well suited for countless applications not requi ing the temperature ratings of our other shrinkable products. ST-205 ha an indefinite shelf life and will not shrink by aging.

Shrinkage occurs at 245°F. Shrinking Temperature recommended 245° to 275°F.

ST-105-MS — Assorted sizes per box—contains an assortment of 6" lengths in various sizes. Every length identified as to size and supplied in black only.

Cole-flex Number	Tubing Size Range	Lengths Per Box
STA-5	3/64" thru 1/4" (6 sizes)	10 lengths per size (60 lengths)
STA-6	3/8" thru 1" (4 sizes)	10 lengths per size (40 lengths)
STA-7	1½" and 2" (2 sizes)	7 lengths per size (14 lengths)

COLE-FLEX CORP.

© United Technical Publication

COLE-FLEX

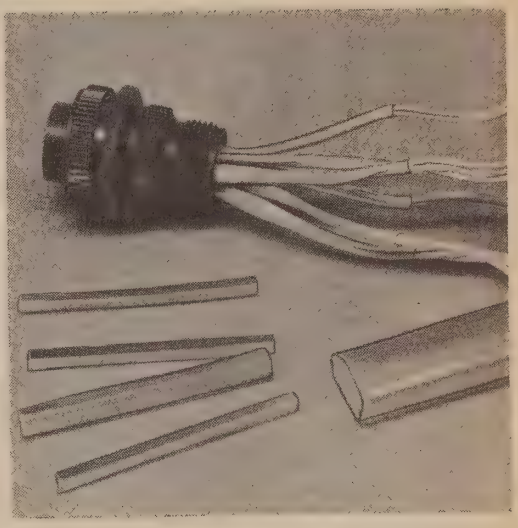
rradiated polyolefin semi-rigid shrinkable tubing

ONFORMS TO MIL-I-23053/6

PERATING TEMPERATURE: —55°C. to +135°C.

AXIMUM STRENGTH AT STRESS POINTS

HRINKAGE RATIO: 2:1 (50% Shrinkage)



T-295 Shrinkable Tubing is designed to provide maximum mechanical rength at stress or connection points. An extremely strong, heavy wall, rasion-resistant, extruded tubing ST-295 is supplied in expanded form and sily slips over the object to be covered.

hen a temperature of approximately 275°F. (135°C.) is applied, ST-295 mediately returns to its predetermined size (approximately ½ smaller) and rms a permanent tight-fitting mechanical bond. ST-295 will not cold-flow melt but retains form stability throughout its temperature range. No dioactivity exists in or on the material and it will not emit radiation. Longi-dinal shrinkage is less than 5% when completely recovered.

ntrolled shrinkage to the correct predetermined size takes place within ven seconds at 275°F. to 300°F. When using an oven, temperature may nge from 235°F. to 300°F. Prolonged exposure to these temperatures will t affect the physical or electrical properties of ST-295 Tubing.

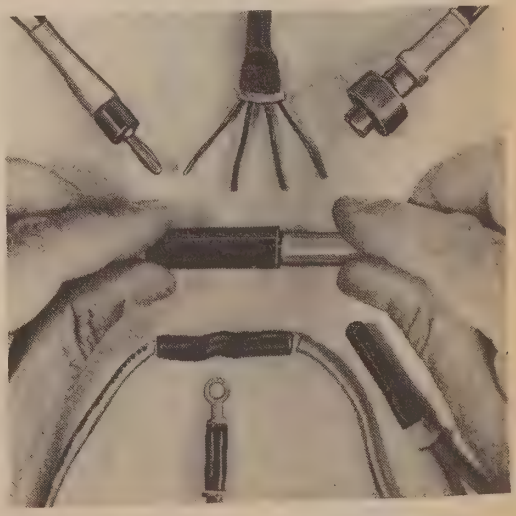
AMMABILITY: Although ST-295, Clear, is a high temperature material, it flammable and will burn. However, when the tubing is shrunk over non-mmable or flame-resistant components, such as connectors, terminals and res, the entire assembly will not support combustion.

Cole-flex Cat. No. 4 Ft. Length	Catalog No. 6 Inch Length	Size (Inches)	Minimum I.D. Before Shrinking (Inches)	Recov'd I.D. Shrinking (Inches)	Nominal Thick-ness (Inches)	Standard Pkg.* 4 Ft. Lengths Total Ftg.	Standard Pkg.* 4 Ft. Lengths No. Lengths	Standard Pkg.* 6 In. Lengths Total Ftg.	Standard Pkg.* 6 In. Lengths No. Lengths	Stock Colors
ST-295 3/64-4	ST-295 3/64-6	3/64	.046	.023	.020	100′	25	20′	40	Yellow, Clear
ST-295 1/16-4	ST-295 1/16-6	1/16	.063	.032	.020	100′	25	18′	36	White, Clear
ST-295 3/32-4	ST-295 3/32-6	3/32	.093	.045	.020	100′	25	16′	32	Blue, Clear
ST-295 1/8 -4	ST-295 1/8 -6	1/8	.125	.063	.020	100′	25	14′	28	Red, Clear
ST-295 3/16-4	ST-295 3/16-6	3/16	.187	.093	.025	100′	25	12′	24	Green, Clear
ST-295 1/4 -4	ST-295 1/4 -6	1/4	.250	.125	.025	100′	25	10′	20	Slate, Clear
ST-295 3/8 -4	ST-295 3/8 -6	3/8	.375	.187	.030	100′	25	8′	16	Brown, Clear
ST-295 1/2 -4	ST-295 1/2 -6	1/2	.500	.250	.030	20′	5	7′	14	White, Clear

ACKAGED ASSORTMENTS

ontains an assortment of 6″ lengths in all sizes.

ole-flex Number	Tubing Size Range	Lengths Per Box
STA-4	3/64″ thru ½″ (8 sizes)	5 lengths per size (40 lengths)



COLE-FLEX CORP.

COLE-FLEX

irradiated kynar* high temperature shrinkable tubing

CONFORMS TO MIL-I-23053/8

OPERATING TEMPERATURE RANGE: −55°C to +175°C

A TOUGH, THIN WALL TUBING WITH OUTSTANDING CUT-THROUGH AN ABRASION RESISTANCE. SEMI-RIGID POLYVINYLIDENE FLUORIDE. 10 SIZE COVER COMPLETE RANGE OF .032 — 1 INCH. CLEAR AND NON-FLAMMABLE

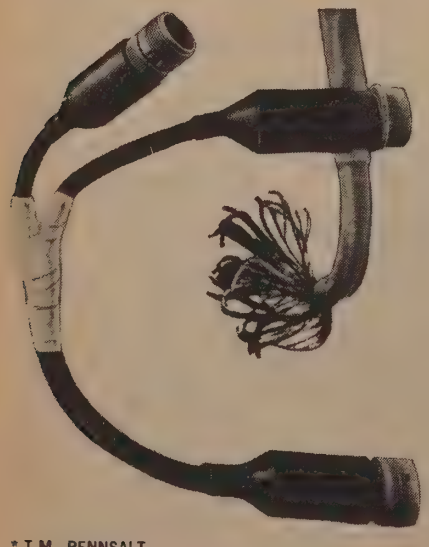
SHRINKAGE RATIO: 2:1 (50% Shrinkage)

STOCK COLORS: Clear Only.

STANDARD PACKAGE:

ST-350 tubing is available only in the specified packages. When ordering indicate package desired (16 inches or 4 foot). Can be furnished **cut t length** on order.

Cole-flex Number	Min. I.D. Before Shrinkage (Inches)	Recovered I.D. After Shrinkage (Inches)	Recovered Nom. Wall Thickness (Inches)	Standard Package 4′ Lengths		Standard Package 6″ Lengths	
				Total Footage	No. of Lengths	Total Footage	No. of Lengths
ST-350-3/64″	.046	.023	.010	100′	25	16′	32
ST-350-1/16″	.063	.031	.010	100′	25	14′	28
ST-350-3/32″	.093	.046	.010	100′	25	12′	24
ST-350-1/8″	.125	.062	.010	100′	25	10′	20
ST-350-3/16″	.187	.093	.010	100′	25	8′	16
ST-350-1/4″	.250	.125	.012	100′	25	6′	12
ST-350-3/8″	.375	.187	.012	100′	25	4′	8
ST-350-1/2″	.500	.250	.012	20′	5	2′	4
ST-350-3/4″	.750	.375	.017	20′	5	1′	2
ST-350-1″	1.000	.500	.019	20′	5	.5′	1



* T.M. PENNSALT.

Cole-flex ST-350 is a new shrinkable tubing with outstanding temperatur and physical characteristics and high dielectric strength. **Longitudina shrinkage is only 5%.**

ST-350 is an extremely tough extruded tubing that can be repeatedly flexed bent, or twisted without loss of its mechanical or electrical strength. Sup plied as a clear tubing, ST-350 may be used where inspection or identifica tion of the item covered is necessary.

When a temperature of approximately 347°F. (175°C.) is applied, the tubin immediately returns to its predetermined size (approximately one-hal smaller) and forms a permanent, tough mechanical bond.

ST-350 will never cold flow or melt and will not split when shrunk ove sharp or irregularly shaped objects.

ST-350 is non-flammable and will operate continuously at temperatures fron −55°C to +175°C. It will withstand intermittent heat shock at tempera tures up to 350°C.

Compared with other fluorocarbon tubing types, ST-350 has markedl superior abrasion, cut-through, and cold flow properties.

SHRINKING METHODS: The use of a hot air gun is recommended as bein generally the easiest heating method. However, excellent results may b achieved by the use of an oven, radiant heat, dipping in hot liquids, o heating with a soldering iron, burner, or even the flame of a match.

COLE-FLEX CORP.

© United Technical Publications

COLE-FLEX

NEW – light-weight heat gun for shrinkable tubing



REVOLUTIONARY NEW ORTABLE ELECTRIC EAT GUN FOR EAT-SHRINK APPLICATIONS:

modern design	• versatile
light weight	• reliable
compactness	• no maintenance
quiet	• fast, easy repair
maneuverable	• low cost

rief Specification and Description

OTAL WEIGHT (including cord set): 2 lbs.

VERALL HEIGHT; LENGTH; THICKNESS (Max): 7.50" x 6.50" x 2.75"

VERALL LENGTH (with deflector): 7.75"

OISE LEVEL: Audible — None; R.F. — None

OWER REQUIREMENT 115 vac; 3A (max.): 60 cps.

EAT OUTPUT AT 0.5" (max.)
Measured with dry bulb: > 650°F
Measured with thermocouple: > 1000°F

FM @ FPM: 3 @ 600

UNCTION: Hand held or bench top without modification.

XTERNAL CONSTRUCTION: Stainless steel; high impact polymer.

AINTENANCE: None (Brushless, self-lubricating motor).

EPAIRABILITY: Excellent (less than ten minutes).

ATALOG NUMBER: GUN-1 — Supplied with deflector & U.L. approved 8 ft. 3 wire, grounding wire & plug.

UGGESTED USER PRICE: $37.95

The new Heat Gun has been developed by **Coleman** to answer the need for a modern, compact, reliable, and low-cost portable electric heat-gun for use in heat shrink applications. The Gun offers a unique combination of features and benefits to all users of heat-shrinkable products.

COLE-FLEX CORP.

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

INSULATORS

Ceramic • Steatite • Standoffs • Feed-thrus • Antenna • Beads • Rods

DABURN FEED-THRU INSULATORS




These are quality porcelain insulators smoothly glazed. Heavy nickel plated brass hardware used. Cushion washers supplied.

DABURN No.	Hgt. H	B	H_1	Mounting Hole	H'dwe	Std. Pkg.
10-58	5/8"	11/16"	1/4"	5/16"	6-32	50
10-78	1"	13/16"	5/16"	7/16"	10-32	25
10-125	1 1/4"	7/8"	3/8"	7/16"	10-32	25
10-234	2 3/4"	2"	1"	3/4"	1/4-20	10

CORRUGATED FEED-THRU INSULATOR




These numbers have twice the leakage path of the straight type due to the increased surface area. Brass nickel plated hardware and cushion washers supplied.

DABURN No.	Hgt. H	B	H_1	Mounting Hole	H'dwe	Std. Pkg.
10-79	1 3/8"	1 1/4"	11/16"	9/16"	10-32	25
10-76	2 3/4"	1 5/8"	1"	3/4"	1/4-20	10
10-52	4 1/2"	2 1/8"	1 1/2"	1"	1/4-20	5

DABURN METAL BASE INSULATORS



Made of hi tensile strength, low absorption ceramic, fully glazed corrugated surface. Provides longer leakage path. Drawn metal bases.

Daburn No.	Hgt. H	B	D	Mtg. Screw	H'dwe	Std. Pkg.
10-67	1 3/8"	1 7/8"x1 5/16"	1 1/2"	2 #8	10-32	25
10-176	2 3/4"	1 3/4"x1 3/4"	1 3/8"	4 #10	1/4-20	10
10-451	4 1/2"	2 1/4"x2 1/4"	1 3/4"	4 #10	1/4-20	5

DABURN STEATITE CONE INSULATORS




Steatite cones have smooth glaze white. Come complete with brass nickel plated screws and cushion washers

Daburn No.	Hgt. H	B	B_1	T	Mtg. Hole	Std. Pkg.
10-30	5/8"	5/8"	7/16"	6-32	5/32"	100
10-31	1"	11/16"	1/2"	8-32	3/16"	50
10-32	1 1/2"	3/4"	5/8"	10-32	7/32"	50
10-33	2 3/4"	2 5/16"	3/4"	1/4-20	3/32"	25

DABURN LEADIN INSULATORS



Sections are each 2 3/4" high hi vitrified porcelain glazed. Comes thru with 2 additional bushings 1/4" and 1/2" long, permitting complete insulation of the threaded rod of any length in multiples of 1/4". Complete with brass nickel plated hardware. Lead and cushion washers permit a water tight seal.

Daburn No.	Description	Std. Pkg.
10-237	10" Rod/Bushings	10
10-238	15" Rod/Bushings	10

DABURN STANDOFF INSULATORS




Quality glazed porce-insulators — mounting surface ground flat. Brass nickel plated hardware supplied.

Daburn No.	A	B	C	D	Hole	Mtg. H'dwe	Std. Pkg.
10-16	1"	1 3/8"	7/8"	1"	5/32"	8-32	50
10-17	1 1/2"	1 3/4"	1 1/8"	1 1/4"	5/32"	10-32	25

DABURN THREADED RODS — BRASS NICKEL PLATED



These rods are used on our insulator assemblies.

DABURN No.	Length	Thread	Std. Pkg.
14-250	1 5/8"	6-32	1000
14-251	2 1/4"	10-32	1000
14-252	3"	10-32	1000
14-253	3 1/2"	10-32	1000
14-255	5"	1/4-20	1000
14-256	5 1/2"	1/4-20	1000
14-257	11"	1/4-20	1000
14-258	15"	1/4-20	1000

DABURN STEATITE FEED-THRU INSULATORS



Feedthrus come thru with tops and bottoms for chassis, panel, shields, rack mounting. No hardware included. Made of L5 glazed Steatite.

Daburn No.	Hgt. Top	Diam.	Hole Panel	T'kness Panel To	Screw Size Max.	Std. Pkg.
10-204	1/8"	1/2"	5/16"	1/8"	6-32	50
10-205	7/32"	5/8"	7/16"	1/8"	8-32	50
10-206	3/8"	1/2"	1/4"	3/16"	6-32	50
10-207	3/8"	5/8"	3/8"	3/8"	8-32	50
10-208	3/4"	1 1/8"	3/4"	3/8"	10-32	50
10-209	1 5/8"	1 1/4"	1/2"	2"	10-32	50

DABURN FISH SPINE BEADS



Made of L5 Steatite. Suitable for buss and heavy lines insulation. Beads follow bends and curves because of ball and socket style interlocks. Four beads cover approximately 1". 100 will cover 25" of wire. Size: 5/16" O.D. x 1/8" I.D. Beads treated with Dow Corning compound to prevent accumulation of surface moisture.

Daburn No.		Std. Pkg.
10-215	Fish Spine Beads	100, 1000

DABURN AIRPLANE INSULATORS

Suitable for mobile and aircraft or guy wire application. compression type strain insulators. Nos. 10-73, 10-74 made of white glazed low absorption porcelain. No. 10-72 made of wet process porcelain.



10-73, 10-74



10-72

Daburn No.	Description	Std. Pkg.
10-73	2" White	100
10-74	1 1/2" White	100
10-72	2 1/4" Brown	25

DABURN STEATITE AIRPLANE INSULATOR



Compression type Steatite insulator has small wind resistance. Fully glazed.

Daburn No.	Description	Std. Pkg.
10-63	1 1/2" Lgth.; 17/32" Diam. 3/4" Line Spacing	25

DABURN STEATITE STANDOFFS

JAN-I-8 AND JAN-I-10 SPECS.



These threaded Steatite pillars are made of L5 glazed Steatite with threaded holes on both sides have one hole mounting.
COLOR: White

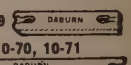
Daburn No.	Conforms to NEW Type	Hgt.	Diam.	L'gth of Thr'd	Thr'd
10-41		1/4"	1/4"	All	6-32
10-41B		3/8"	1/4"	5/32"	6-32
10-41A		1/2"	1/4"	5/32"	6-32
10-44A		3/4"	1/4"	1/4"	6-32
10-45A		1"	1/4"	1/4"	6-32
10-42		3/8"	3/8"	5/32"	6-32
10-42A	NL633W01-004	1/2"	3/8"	5/32"	6-32
10-43A	NL633W01-005	5/8"	3/8"	1/4"	6-32
10-44B	NL633W01-006	3/4"	3/8"	1/4"	6-32
10-45B	NL644W01-008	1"	3/8"	3/8"	6-32
10-46B	NL633W01-010	1 1/4"	3/8"	3/8"	6-32
10-46A	NL633W01-012	1 1/2"	3/8"	3/8"	6-32
10-46C	NL633W01-016	2"	3/8"	3/8"	6-32
10-43		1/2"	1/2"	1/4"	6-32
10-44		3/4"	1/2"	1/4"	6-32
10-45		1"	1/2"	3/8"	6-32
10-46		1 1/2"	1/2"	3/8"	6-32
10-47		2 1/2"	1/2"	3/8"	6-32
10-40	NL633W02-005	5/8"	1/2"	3/16"	8-32
10-40A	NL633W02-006	3/4"	1/2"	1/4"	8-32
10-40B	NL633W02-008	1"	1/2"	3/8"	8-32
10-40C	NL633W02-010	1 1/4"	1/2"	3/8"	8-32
10-40D	NL633W02-012	1 1/2"	1/2"	3/8"	8-32
10-40E	NL633W02-016	2"	1/2"	3/8"	8-32
10-40F	NL633W02-020	2 1/2"	1/2"	3/8"	8-32
10-40G	NL633W02-024	3"	1/2"	3/8"	8-32
10-44C		3/4"	3/4"	1/4"	10-32
10-45C	NL633W03-008	1"	3/4"	3/8"	10-32
10-45D	NL633W03-010	1 1/4"	3/4"	3/8"	10-32
10-45E	NL633W03-012	1 1/2"	3/4"	3/8"	10-32
10-45F	NL633W03-016	2"	3/4"	3/8"	10-32
10-45G	NL633W03-020	2 1/2"	3/4"	3/4"	10-32
10-45H	NL633W03-024	3"	3/4"	3/8"	10-32
10-45S	NL633W03-032	4"	3/4"	3/8"	10-32
10-47B	NL633W04-012	1 1/2"	1"	1/2"	1/4-20
10-47D	NL633W04-016	2"	1"	5/8"	1/4-20
10-47E	NL633W04-020	2 1/2"	1"	5/8"	1/4-20

STD. PKG: 100 except 10-47B, D, E, which are 50.

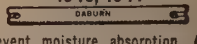
ANTENNA STRAIN INSULATORS



10-68



10-69

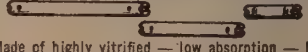


10-70, 10-71

Porcelain glazed to prevent moisture absorption. All have long leakage path — small cross section strength under continuous tension — white glaze prevents accumulation of dirt and ice.

Daburn No.	Description	Std. Pkg.
10-68	4 1/2" Long Center Ins.	10
10-69	4 1/4" Long	25
10-70	7" Long	10
10-71	12" Long	10

FEEDER SPREADER INSULATORS



Made of highly vitrified — low absorption — hi tensile strength porcelain, with white glaze overall.

Daburn No.	Description	Std. Pkg.
10-62	2" Long Spreader	25
10-64	4" Long Spreader	25
10-65	6" Long Spreader	25

ANTENNA INSULATORS



10-06



10-0

Daburn No.	Description	Std. Pkg.
10-0	Glass Insulator	100
10-06	Porcelain Insulator — White	100

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

OFF-THE-SHELF

DABURN TRANSISTOR HEAT SINKS and RETAINER CLIPS

IMMEDIATE DELIVERY

Transistor heat sinks made with beryllium oxide, which is unique among inorganic materials, insulates electrically like a ceramic, but conducts heat like a metal. Where electrical applications require both dielectric insulation and hi-heat transfer from device to chassis, only beryllium oxide (BeO) can provide a satisfactory solution to design problems. Heat generating devices will operate at higher power levels longer and more reliably, with beryllia cooling.

BERYLLIUM OXIDE HEAT SINKS OFFERS THESE ADVANTAGES:

- Extremely resistant to shocks, vibration and moisture.
- High resistivity — low dielectric loss
- Increased transistor life and output
- Freedom from outgassing, infinite shelf life

PHYSICAL PROPERTIES & DIELECTRIC STRENGTH

GREATER THAN: 300 Volts/MIL
CHEMICAL PURITY: 99+% Beryllium oxide
DENSITY: 2.9 Grams/CC
MELTING POINT: 4650°F
HEAT CAPACITY AT 350°: 0.3 BTU/LB
THERMAL EXPANSION: 3.2 x 10^{-6}/°F
THERMAL CONDUCTIVITY: 140 BTU/FT² HR°F-FT
TRANSVERSE STRENGTH: 25,000 PSI
ELASTIC MODULES: 40 x 10^{6} PSI

FIG. 1



FIG. 2

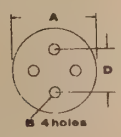


FIG. 3

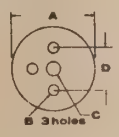


FIG. 4



FIG. 6

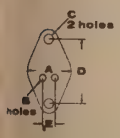
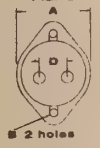


FIG. 7



FIG. 8



Immediate Delivery from stock. All avaliable "Off the Shelf" in JEDEC-TO, DO and MT Nos. Standard thickness 1/16". Also available in 1/32" thickness

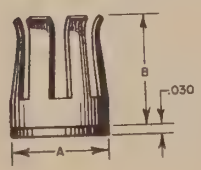
DABURN Cat. No.	Transistor Case Type For Jedec	Fig.	DIMENSIONS "A" Dim.	"B" Dim.	"C Dim.	"D" Dim.	"E" Dim.
DHS-1	MT-1	7	.781±.015	.328±.015	—	—	—
DHS-3	TO-3	4	.980±.010	.165±.010	—	.435±.015	—
DHS-3A	MT-3	7	.625±.005	.320±.005	—	—	—
DHS-3C (Consists of Round TO	TO-3C Insulator with Glass Epoxy Case)	8	1.125±.030	.140±.015	—	—	—
DHS-4	DO-4	7	.560±.015	.200±.005	—	—	—
DHS-5	TO-5	1	.437±.015	.054±.005	—	.200±.010	—
DHS-5A	DO-5	7	.812±.015	.270±.005	—	—	—
DHS-5B	MT-5	7	.250±.015	.156±.010	—	—	—
DHS-6	TO-6	3	1.225±.025	.187±.015	.218±.015	.690±.015	—
DHS-8	TO-8	1	.600±.030	.062±.015	—	.282±.015	—
DHS-9	TO-9	1	.437±.015	.054±.005	—	.200±.010	—
DHS-10	MT-10	7	.672±.015	.265±.015	—	—	—
DHS-11	TO-11	1	.437±.015	.054±.005	—	.200±.010	—
DHS-12	TO-12	2	.437±.015	.054±.005	—	.200±.005	—
DHS-14	MT-14	7	1.250±.015	.540±.010	—	—	—
DHS-16	TO-16	1	.437±.015	.054±.005	—	.200±.010	—
DHS-18	TO-18	1	.312±.015	.031±.005	—	.100±.010	—
DHS-33	TO-33	2	.437±.015	.054±.010	—	.200±.005	—
DHS-36	TO-36	3	1.225±.025	.187±.015	.218±.015	.690±.015	—
DHS-38	TO-38	1	.750±.015	.062±.005	—	.200±.010	—
DHS-39	TO-39	1	.437±.015	.054±.005	—	.200±.010	—
DHS-43	TO-43	2	.437±.015	.054±.010	—	.200±.005	—
DHS-46	TO-46	1	.312±.015	.031±.005	—	.100±.010	—
DHS-66	TO-66	6	.700±.010	.094±.010	.155±.010	.960±.010	.200±.010

STD. PUT-UP: 5, 25, 100.

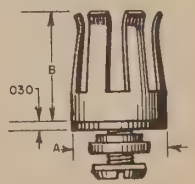
BERYLLIUM OXIDE FOR TRANSISTOR RETAINER CLIPS, HEAT DISSIPATION AND ELECTRICAL INSULATION

TRANSISTOR RETAINERS: Optimum thermal conductivity, with absolute electrical insulation reliability, is offered by spring clip transistor retainers. The retainers provide electrical isolation for the semiconductor by means of a disc of beryllium oxide ceramic brazed to the base of the beryllium copper retainer. Solid ceramic disc, in contrast to a thin insulating coating, is practically immune to loss of insulating value thru cracking, abrasion, chipping or other results of rough treatment in assembly. Heat transfer from the semiconductor to chassis or heat sink is not sacrificed since the high purity BeO has thermal conductivity to that of aluminum metal. Maximum soldering temperature —300°C.

FOR SOLDER MOUNTING



FOR MECHANICAL MOUNTING



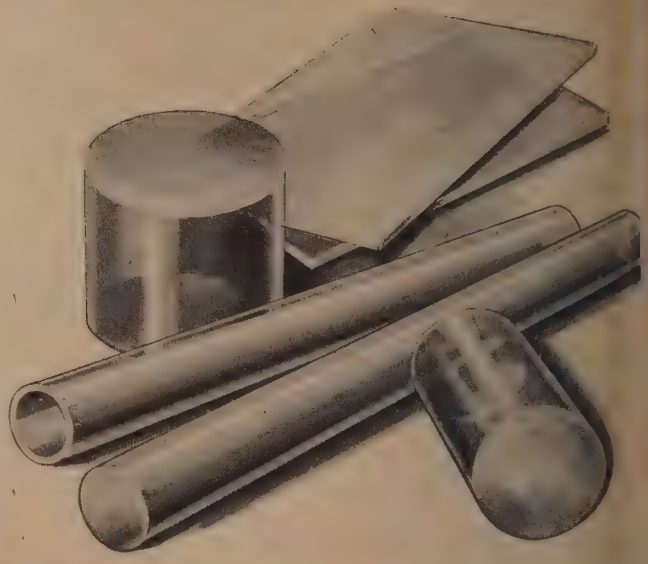
DABURN Cat. No.	Mounting Style	Type	"A" O.D.	"B" Length	"C" Screw Size
DTR-01	Solder	TO-5	3/8"	.37"	—
DTR-02	Screw	TO-5	3/8"	.37"	4-40 x 3/16"
DTR-05	Solder	TO-18	.221"	.28"	—
DTR-06	Screw	TO-18	.221"	.28"	2-56 x 3/16"

STD. PUT-UP: 5, 25, 100

© United Technical Publications

JB® Polystyrene

ROD TUBING SHEET



For radio and electronic applications, because of its very low loss factor at ultra high frequencies, Polystyrene is the ideal material for insulators, coil forms, shields, etc. It has excellent arc resistance, is non-tracking and has splendid insulating properties. Because its water absorption is practically zero it has excellent dimensional stability.

POLYSTYRENE ROD — Transparent
AVAILABLE IN 12" OR 48" LENGTHS

Catalog Number	Diameter	Net Price 12" lgth.	Net Price 48" lgth.
JB-100	1/8"	$ .03	$ .12
JB-101	3/16"	.07	.28
JB-102	1/4"	.12	.48
JB-103	5/16"	.18	.72
JB-104	3/8"	.26	1.04
JB-106	1/2"	.48	1.92
JB-107	5/8"	.72	2.88
JB-108	3/4"	1.00	4.00
JB-109	7/8"	1.42	5.68
JB-110	1"	1.90	7.60
JB-111	1 1/8"	2.50	10.00
JB-112	1 1/4"	3.00	12.00
JB-113	1 3/8"	3.60	14.40
JB-114	1 1/2"	4.30	17.20
JB-116	1 3/4"	6.00	24.00
JB-118	2"	7.50	30.00

POLYSTYRENE TUBING — Satin Finish
AVAILABLE IN 12" OR 48" LENGTHS

Catalog Number	O.D.	I.D.	Net Price 12" lgth.	Net Price 48" lgth.
JB-201	1/4"	1/8"	$ .10	$ .40
JB-202	5/16"	3/16"	.14	.56
JB-203	3/8"	1/4"	.18	.72
JB-205	1/2"	3/8"	.26	1.04
JB-206	5/8"	1/2"	.32	1.28
JB-207	3/4"	5/8"	.40	1.60
JB-208	1"	7/8"	.56	2.24
JB-220	1 1/2"	1 1/4"	1.50	6.00
JB-222	2"	1 3/4"	2.20	8.80

POLYSTYRENE SHEET*

Catalog Number	Thickness	Sheet Size	Net Price
JB-125	1/16"	12" x 12"	$ 4.15
JB-126	3/32"	12" x 12"	4.80
JB-127	1/8"	12" x 12"	5.50
JB-128	3/16"	12" x 12"	7.15
JB-129	1/4"	12" x 12"	8.15
JB-245	1/16"	12" x 24"	7.80
JB-246	3/32"	12" x 24"	9.15
JB-247	1/8"	12" x 24"	10.50
JB-248	3/16"	12" x 24"	13.15
JB-249	1/4"	12" x 24"	15.65
JB-315	1/32"	24" x 24"	9.65
JB-301	1/16"	24" x 24"	11.15
JB-302	3/32"	24" x 24"	13.00
JB-303	1/8"	24" x 24"	14.80
JB-304	3/16"	24" x 24"	18.75
JB-305	1/4"	24" x 24"	23.00
JB-309	3/8"	24" x 24"	31.25
JB-311	1/2"	24" x 24"	38.65
JB-317	5/8"	24" x 24"	50.00
JB-318	3/4"	24" x 24"	69.25
JB-319	1"	24" x 24"	94.15

*Sheets are all crystal clear with smooth surfaces fully protected against abrasion by masking paper on both sides.

JULIUS BLUM & CO., INC.

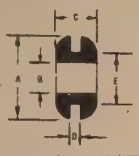
Net

© United Technical Publications

russell industries, inc.

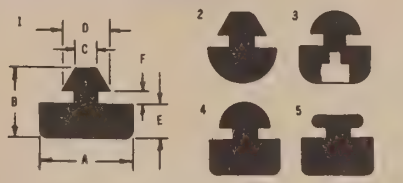
All items except MS-35489 Grommets are molded of natural and synthetic rubber compounds or reclaimed rubber in combination or blends thereof. All series are listed in ascending order of diameter and height.

GROMMETS



Part No.	A O.D.	B I.D.	C Height	D Groove Width	E Groove Diam.
GOB-2101	1/4	1/8	1/8	1/32	3/16
GOB-2104	11/32	7/64	3/16	1/16	13/64
GOB-2105	11/32	1/8	3/16	1/16	3/16
GOB-210	11/32	1/8	3/16	1/16	1/4
GOB-2158	13/32	3/16	13/64	1/16	5/16
GOB-2157	7/16	1/8	5/32	1/16	3/16
GOB-2156	7/16	3/16	3/16	1/32	5/16
GOB-215	7/16	3/16	7/32	1/16	5/16
GOB-415	7/16	3/16	1/4	3/32	5/16
GOB-2161	7/16	13/64	5/32	1/32	21/64
GOB-2153	15/32	7/64	1/4	1/16	5/16
GOB-2151	15/32	7/64	9/32	3/32	5/16
GOB-2171	1/2	3/16	3/16	1/32	3/8
GOB-2173	1/2	3/16	7/32	1/16	5/16
GOB-217	1/2	3/16	5/32	1/16	3/8
GOB-2171	1/2	1/4	5/32	1/32	5/16
GOB-2191	17/32	7/32	25/64	3/64	11/32
GOB-219	17/32	7/32	13/64	3/32	11/32
GOB-2201	5/16	5/16	3/8	1/8	5/16
GOB-220	5/16	1/4	1/4	1/16	3/8
GOB-221	5/16	5/32	1/4	1/16	3/8
GOB-2211	5/16	5/32	1/4	1/16	13/32
GOB-321	5/16	5/32	5/16	1/8	3/8
GOB-324	9/32	5/16	3/8	1/8	7/16
GOB-2253	3/8	5/32	1/4	3/64	5/16
GOB-2254	5/8	1/32	11/64	3/64	5/16
GOB-2260	5/8	1/4	3/32	1/16	3/8
GOB-2255	5/8	13/64	5/16	1/16	7/16
GOB-2352	5/8	5/16	7/32	1/32	7/16
GOB-2252	5/8	5/16	1/4	1/16	7/16
GOB-225	5/8	3/8	1/4	1/16	3/8
GOB-2258	5/8	3/8	11/32	1/16	17/32
GOB-226	23/32	21/64	5/16	1/16	9/16
GOB-2261	3/4	1/4	11/64	1/16	9/16
GOB-3262	3/4	5/16	7/16	1/16	17/32
GOB-3261	3/4	5/16	5/16	1/16	17/32
GOB-1101-1	3/4	3/8	1/2	1/8	17/32
GOB-1101	3/4	7/16	1/4	1/16	9/16
GOB-230	13/16	1/2	9/32	1/16	5/8
GOB-2274	7/8	5/16	5/16	1/16	5/8
GOB-2272	7/8	5/16	11/32	3/32	11/16
GOB-2271	7/8	3/8	5/16	1/16	5/8
GOB-1102-5	1 1/16	5/16	1/2	5/32	3/4
GOB-1102	1 1/16	1/2	5/16	1/16	13/16
GOB-1102-2	1 1/16	1/2	11/32	1/8	13/16
GOB-2301	1 1/16	11/16	1/4	1/16	13/16
GOB-1103	1 1/8	5/8	5/16	1/16	7/8
GOB-1105	1 1/8	13/16	1/4	3/64	5/16
GOB-1104	2 1/8	1 1/2	7/16	1/16	1 3/4

BUTTON BUMPERS



Part No.	A Max. Diam.	B Hgt.	C Insert Head	D Insert Head Base	E Base Hgt.	F Channel Width
FIG. 1						
BUT-3062	3/8	1/4	1/4	5/16	3/32	3/64
BUT-3061	3/8	3/32	3/16	1/4	1/8	3/64
BUT-4061	3/8	5/16	3/16	1/4	1/8	1/16
BUT-4161	3/8	11/32	3/16	1/4	1/8	3/32
BUT-3063	7/16	1/2	1/4	5/16	3/16	3/64
BUT-3072	1/2	21/64	9/32	3/8	1/8	3/64
BUT-4071	1/2	3/8	3/16	1/4	1/8	1/16
BUT-4171	1/2	7/16	3/16	1/4	3/16	1/16
BUT-4165	1/2	7/16	1/4	5/16	13/64	1/16
BUT-4072	1/2	7/16	13/64	1/4	3/16	1/16
BUT-4081	9/16	1/4	9/32	3/8	1/16	1/16
BUT-1160	3/4	1/2	.480	5/16	1/8	.050
BUT-1161	3/4	5/16	.480	27/64	3/16	.050
BUT-611	7/8	1/2	5/16	13/32	1/4	3/64
FIG. 2						
BUT-4076	1/2	7/16	1/4	5/16	3/16	1/16
BUT-3167	5/16	9/16	3/16	1/4	3/32	1/32
BUT-3064	7/16	19/64	15/64	19/64	3/32	3/64
FIG. 3						
BUT-306	3/8	3/8	3/16	17/64	3/16	.040
BUT-307	1/2	7/16	1/4	11/32	1/4	.040
BUT-407	1/2	7/16	1/4	11/32	1/4	1/16
BUT-317	1/2	1/2	1/4	11/32	1/4	1/8
FIG. 4						
BUT-4068	7/16	17/64	3/16	1/4	3/32	3/64
BUT-3263	7/16	7/16	1/4	5/16	3/16	1/8
FIG. 5						
BUT-4083	5/8	3/32	13/32	17/32	1/8	3/32

MS-35489 GROMMETS

ARMY-NAVY APPROVED AN 931 (Military Standard)
SPECIFICATION: MIL-G-3036
GROMMET, ELASTIC, HOT-OIL AND COOLANT RESISTANT MATERIAL

MS #	AN 931 #	I.D.	O.D. Groove	O.D.	Width Groove	Thickness
MS-35489-1	AN 931-3-5	3/16	5/16	7/16	1/16	3/16
MS-35489-6	AN 931-4-7	1/4	7/16	5/8	1/16	3/16
MS-35489-9	AN 931-5-9	5/16	9/16	13/16	1/16	3/16
MS-35489-11	AN 931-6-10	3/8	5/8	7/8	1/16	3/16
MS-35489-13	AN 931-7-11	7/16	11/16	15/16	1/16	3/16
MS-35489-14	AN 931-8-13	1/2	13/16	1 1/16	1/16	3/16
MS-35489-17	AN 931-10-14	5/8	7/8	1 1/8	1/16	3/16
MS-35489-19	AN 931-11-16	11/16	1	1 5/16	1/16	3/8
MS-35489-20	AN 931-12-17	3/4	1 1/16	1 3/8	1/16	3/8
MS-35489-22	AN 931-14-20	7/8	1 1/4	1 5/8	1/16	7/16
MS-35489-23	AN-931-16-22	1	1 3/8	1 3/4	1/16	7/16
MS-35489-35	AN 931-A4-7	1/4	7/16	5/8	1/8	3/16
MS-35489-40	AN 931-A6-10	3/8	5/8	7/8	1/8	3/16
MS-35489-42	AN 931-A7-11	7/16	11/16	15/16	1/8	3/16
MS-35489-43	AN 931-A8-13	1/2	13/16	1 1/16	1/8	3/16
MS-35489-49	AN-931-A12-17	3/4	1 1/16	1 3/8	1/8	3/8

RECESSED BUMPERS

Part No.	A Max. Diam.	B Hgt.	C Screw Head Depth	D Screw Shaft Depth	E Screw Base Opening	F Screw Shaft Width
FIG. 1						
REC-2062	3/8	1/4	3/16	1/16	1/4	5/32
REC-2082	5/8	1/2	1/4	1/4	5/16	5/32
REC-2082S	5/8	1/2	1/4	1/4	5/16	5/32
REC-2084S	3/4	3/8	7/16	3/16	7/16	1/32
REC-2096S	15/16	5/8	7/16	3/16	7/16	1/32
FIG. 2						
REC-208	3/8	3/16	3/32	3/32	3/16	5/64
REC-2061	7/16	3/32	3/32	1/16	1/4	5/32
REC-207	1/2	1/4	1/8	1/8	1/4	1/8
REC-207S	1/2	1/4	1/8	1/8	1/4	1/8
REC-2081	5/8	5/16	3/16	1/8	1/4	3/16
REC-2081S	5/8	5/16	3/16	1/8	1/4	3/16
REC-2088	5/8	5/16	5/16	1/8	1/4	1/8
REC-2085	3/4	3/8	3/16	3/16	5/16	5/32
REC-2085S	3/4	3/8	3/16	3/16	5/16	5/32
REC-209	13/16	1/2	1/4	1/4	3/16	5/32
REC-209S	13/16	1/2	1/4	1/4	3/16	5/32
REC-2097	1	1	5/8	3/8	3/16	5/32
REC-2097S	1	1	5/8	3/8	3/16	5/32
REC-2099S	1	1 1/2	5/8	7/8	3/16	5/32
FIG. 3						
REC-2195	15/16	1/4	1/8	1/8	1/2	1/4
FIG. 4						
REC-2087	3/4	3/32	5/32	1/8	1/4	1/8
REC-2095S	15/16	3/8	3/16	3/16	3/8	5/32
REC-2197S	1	1/2	1/4	1/4	3/8	3/16

RECESSED BUMPERS AVAILABLE IN WHITE ON SPECIAL REQUEST.

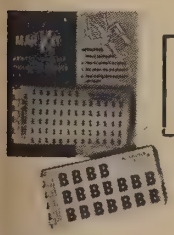
MACHINE BUMPERS



Part No.	A O.D.	B Height	C Screw Length	Screw Size	Nominal Durometer
MAC-51	1/2	1/4	1/4	8-32	75
MAC-62	5/8	5/16	1/4	8-32	75
MAC-75	3/4	3/8	1/4	8-32	75
MAC-87	7/8	1/2	1/2	10-32	75
MAC-100	1	1/2	1/2	10-32	75
MAC-112	1 1/8	1/2	1/2	10-32	75

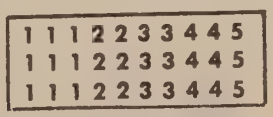
DRI-TRANSFER LETTERING

EACH MARKIT® CONTAINS 27 3" x 8" PAGES IN LOOSE LEAF FORM BOUND WITH PLASTIC SPIRAL RING.





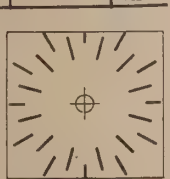
ALPHABET MARKIT®



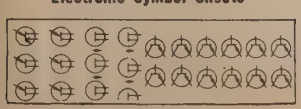
NUMERALS MARKIT®

ALPHABET BLACK	ALPHABET WHITE	NUMERALS BLACK	NUMERALS WHITE	SIZE
AM-1	AM-1W	NM-1	NM-1W	1/8"
AM-2	AM-2W	NM-2	NM-2W	1/4"
AM-3	AM-3W	NM-3	NM-3W	3/8"
AM-4	AM-4W	NM-4	NM-4W	1/2"
AM-5	AM-5W	NM-5	NM-5W	21/32"
AM-6	AM-6W	NM-6	NM-6W	25/32"

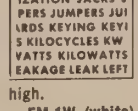
Dial Marking Kit
Contains dial patterns, arc, wedges, lines, dots, switch symbols, graduation lines, lines for rotary tap switches, potentiometers and calibrated meter dials.
DM-1 (14 Pages black — 13 Pages white)



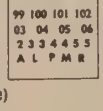
Electronic Symbol Sheets



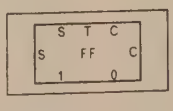
Electronic Words MarKit®
An electronic glossary with over a thousand words from "AC" to "zooms" in alphabetical order for easy application to control panels, prototypes, drawings, terminal boards, electrical and mechanical components. Size 1/8" high.
EM-1 (black) **EM-1W (white)**



Terminal and Chassis MarKit®
Contains numbers (through 200, 1 through 0 and 01 through 09) plus complete alphabets. All numbers 1/8" high. For application in prototypes and production.
TC-1 (15 Pages black — 12 Pages white)

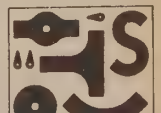


Logic Diagram Symbols MarKit®
Contains flip flops, arrows, arrow heads, time delays, and, nand, or, nor, registers, shift registers, connection dots, Schmidt triggers, single shots.
LD-1 (black)



DST-1 Thermistors, photocells, Zener Diodes, SCR's.
BRS-1 Bridge Rectifiers, Diodes, SCR's.
UNP-1 FET, Unijunction, NPN and PNP Transistors.
RCT-1 Capacitors, Tubes, Resistors, Potentiometers, Varistors.
BFP-1 Plugs, Jacks, Switches, Lights, Fuses.

Printed Circuit Pads MarKit®
Thousands of printed circuit pads: circles (with center hole), teardrops, teardrops (with vanishing point), double end teardrops, double end teardrops (with vanishing points), elbows, elbow (terminal), T-connectors, fillets, ovals.
PC-1 (black)



MARKETCH® ETCHING SOLUTION
Adhere any desired MarKit® symbol to copper surface of printed circuit boards. Burnish thoroughly. Then deposit entire board into etching solution until all exposed copper is completely etched from board. Symbol will remain as it is, unaffected by etching solution. Wash board under running water. Wipe board dry. Then use thinner or fine sandpaper until bright copper is exposed.
PCE-1 — PRICE $3.00
One pint liquid in unbreakable plastic container. Weight approx. 28 oz.

CC-1 Grounds, Shields, Contactors, Connections.
IRM-1 Relays, Contactors, Heaters, Reactors, Rotating Components, Thermal Delay Relays, Industors, Transformers.
LAB-1 Antennas, Amplifiers, Speakers, Mikes, Boxes.
SHEET SIZE — 8½" x 13½" BLACK ONLY

Amperex®

MICROELECTRONIC PRODUCTS
LEADLESS INVERTED DEVICES

SILICON DIODES, LOGIC and VOLTAGE REFERENCE DIODES

TYPE	DESCRIPTION	PRIMARY ELECTRICAL CHARACTERISTICS								OUTLINE	
		PIV (V)	V_f (V)	@ I_F (mA)	C_o(max) (pF)	@ V_R	t_{rr}(max) (nsec)	V_z (V)	TOLERANCE	DWG. NO.	JEDEC NO.
LDD5	LOGIC DIODE	60	1.0	50	3	0	4	—	—	42	—
LDD10	LOGIC DIODE, DUAL COMMON CATHODE	60	1.0	50	3	0	4	—	—	42	—
LDD15	LOGIC, DIODE, DUAL ISOLATED	60	1.0	50	3	0	4	—	—	42	—
LDD50	LOGIC DIODE, DUAL COMMON ANODE	60	1.0	50	3	0	4	—	—	42	—
LDZ70/4A3	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	4.3V	5%	42	—
LDZ70/4A7	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	4.7V	5%	42	—
LDZ70/5A1	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	5.1V	5%	42	—
LDZ70/5A6	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	5.6V	5%	42	—
LDZ70/6A2	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	6.2V	5%	42	—
LDZ70/6A8	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	6.8V	5%	42	—
LDZ70/7A5	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	7.5V	5%	42	—
LDZ70/8A2	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	8.2V	5%	42	—
LDZ70/9A1	VOLTAGE REFERENCE DIODE	—	—	—	—	—	—	9.1V	5%	42	—

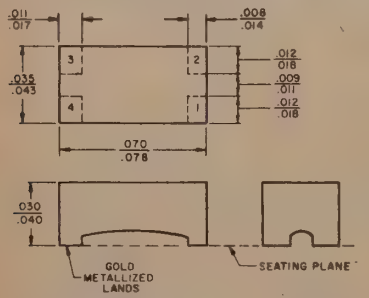
LOW LEVEL, LOW NOISE AMPLIFIERS (BIPOLAR and FIELD EFFECT)

TYPE	POLARITY	PRIMARY ELECTRICAL CHARACTERISTICS													OUTLINE	
		I_C Range (mA)	V_{CEO} (V)	V_{GSS} (V)	h_{FE} MIN.	h_{FE} MAX.	I_C (mA) for h_{FE}	I_{DSS} (mA) MIN.	I_{DSS} (mA) MAX.	Y_{fs} (μmho) MIN.	Y_{fs} (μmho) MAX.	f_T (MHz)	C_{obo} (pF)	C_{RSS} (pF)	NF (dB)	DWG. NO.	JEDEC NO.
LDA400	NPN	0.001-1.0	35	—	40	120	0.01	—	—	—	—	250	6	—	2.0	42	—
LDA401	NPN	0.001-1.0	35	—	100	300	0.01	—	—	—	—	250	6	—	2.0	42	—
LDF603	N-Channel	—	—	20	—	—	—	1	8	2000	8000	—	—	1.0	2.0	42	—
LDF604	N-Channel	—	—	20	—	—	—	2	6	3500	7500	—	—	1.0	2.0	42	—
LDF605	N-Channel	—	—	20	—	—	—	5	15	5000	10000	—	—	1.0	2.0	42	—

HIGH FREQUENCY AMPLIFIERS (BIPOLAR)

TYPE	POLARITY	PRIMARY ELECTRICAL CHARACTERISTICS									OUTLINE	
		I_C Range (mA)	V_{CEO} (V)	h_{FE} MIN.	h_{FE} MAX.	I_C (mA) for h_{FE}	NF (dB)	f (MHz) for NF	C_{CB} (pF)	f_T (MHz)		DWG. NO.	JEDEC NO.
LDA406	NPN	2-15	15	20	—	3	6	60	1.7(C_{obo})	600	—	42	—
LDA407	NPN	2-25	15	25	150	15	5	450	1.0	1000	—	42	—
LDA410	NPN	1-25	35	30	—	7	—	—	0.3	380	—	42	—
2N5263	NPN	2-25	15	25	150	15	5	450	1.0	1000	—	42	—

INTERCHANGEABILITY GUIDE



Type	LID Replacement	Type	LID Replacement
1N749	LDZ70/4A3	1N3510	LDZ70/4A7
1N750	LDZ70/4A7	1N3511	LDZ70/5A1
1N751	LDZ70/5A1	1N3512	LDZ70/5A6
1N752	LDZ70/5A6	1N3513	LDZ70/6A2
1N753	LDZ70/6A2	1N3514	LDZ70/6A8
1N754	LDZ70/6A8	1N3515	LDZ70/7A5
1N755	LDZ70/7A5	1N3516	LDZ70/8A2
1N756	LDZ70/8A2	1N3517	LDZ70/9A1
1N757	LDZ70/9A1	1N4608	LDD5
1N914	LDD5	1N4687	LDZ70/4A3
1N914A	LDD5	1N4688	LDZ70/4A7
1N916	LDD5	1N4689	LDZ70/5A1
1N916A	LDD5	1N4690	LDZ70/5A6
1N916B	LDD5	1N4691	LDZ70/6A2
1N999	LDD5	1N4692	LDZ70/6A8
1N3206	LDD5	1N4693	LDZ70/7A5
1N3258	LDD5	1N4694	LDZ70/8A2
1N3509	LDZ70/4A3	1N4695	LDZ70/9A1

Type	LID Replacement	Type	LID Replacement
2N697	LDA404	2N2509	LDA400
2N706	LDS200	2N2510	LDA400
2N708	LDS201	2N2511	LDA401
2N709	LDS205	2N2586	LDA401
2N718	LDA404	2N2708	LDA407
2N718A	LDA404	2N2857	LDA407
2N731	LDA404	2N2904	LDA452
2N743	LDS200	2N2905	LDA453
2N744	LDS201	2N2906	LDA452
2N753	LDS201	2N2907	LDA453
2N783	LDS201	2N3010	LDS205
2N834	LDS200	2N3227	LDS201
2N835	LDS200	2N3252	LDS210
2N914	LDS201	2N3554	LDS210
2N918	LDA406	2N3570	LDA407
2N929	LDA400	2N3571	LDA407
2N930	LDA401	2N2572	LDA407
2N956	LDA405	2N3600	LDA407
2N995	LDA450	2N3724	LDS210
2N1613	LDA404	2N3821	LDF603
2N1711	LDA405	2N3822	LDF604
2N1983	LDA402	2N3832	LDS205
2N2218	LDA404	2N3839	2N5363
2N2219	LDA405	2N3967	LDF604
2N2221	LDA404	2N3967A	LDF604
2N2222	LDA405	2N3968	LDF604
2N2368	LDS200	2N3968A	LDF604
2N2369	LDS201	2N3970	LDF691
2N2369A	LDS201	2N3971	LDF692
2N2475	LDS205	2N3972	LDF693
2N2476	LDS210	2N4013	LDS210
2N2477	LDS210	2N4091	LDF691
2N2481	LDS201	2N4092	LDF692
2N2483	LDA400	2N4093	LDF693
2N2484	LDA401	2N4220	LDF603

Type	LID Replacement	Type	LID Replacement
2N4220A	LDF603	D1422	LDF605
2N4221	LDF604	D3069	LDF603
2N4221A	LDF604	DA6E-1	LDA401
2N4222	LDF605	DA6E-2,3	LDA402
2N4222A	LDF605	DA6E-4	LDA403
2N4351	LDF604	FK914	LDS201
2N4391	LDF691	FK918	LDA406
2N4392	LDF692	FK2369A	LDS201
2N4393	LDF693	FK2484	LDA401
2N4868	LDF604	FK3299	LDA404
2N4869	LDF604	FK3300	LDA405
2N5053	LDA407	FK3502	LDA453
2N5078	LDF605	FT118	LDA410
2N5103	LDF603	FV914	LDS201
2N5104	LDF604	FV918	LDA406
2N5105	LDF605	FV2369	LDS201
2N5180	LDA406	FV2484	LDA401
2N5186	LDS200	FV3299	LDA404
2N5187	LDS200	FV3300	LDA405
2N5188	LDS210	FV3502	LDA453
2N5263	LDA407	MM1941	LDA406
A210	LDA420	MM2483	LDA400
A321	LDA400	MM2484	LDA401
A322	LDA401	MFE2133	LDF692
A323	LDA401	MMT3903	LDA450
A324	LDA400	MMT3904	LDA451
A473	LDA410	NS6203	LDA405
A485	LDA407	NS6205	LDA453
D26E-4	LDA403	NS9710	LDA406
D26G-1	LDA406	TIS22	LDA400
D1180	LDF603	TIS23	LDA401
D1183	LDF605	TIS24	LDA401
D1201	LDF603	TIS56	LDA410
D1301	LDF605	TIS57	LDA410
D1421	LDF603	U182	LDF691
		UC100	LDF603

© United Technical Publication

Amperex®

LEADLESS INVERTED DEVICES

GENERAL PURPOSE AMPLIFIERS (BIPOLAR)

TYPE	POLARITY	PRIMARY ELECTRICAL CHARACTERISTICS							OUTLINE	
		I_C RANGE (mA)	V_{CEO} (V)	h_{FE} MIN.	h_{FE} MAX.	I_C FOR h_{FE} (mA)	f_T (MHz)	C_{obo} (pF)	DWG. NO.	JEDEC NO.
LDA402	NPN	0.1-30	35	100	300	1	250	6	42	—
LDA403	NPN	0.1-30	35	270	600	1	250	6	42	—
LDA404	NPN	1-300	30	40	120	150	200	8	42	—
LDA405	NPN	1-300	30	100	300	150	200	8	42	—
LDA450	PNP	0.1-50	30	40	120	10	200	8	42	—
LDA451	PNP	0.1-50	30	100	300	10	200	8	42	—
LDA452	PNP	10-300	30	40	120	150	200	8	42	—
LDA453	PNP	10-300	30	100	300	150	200	8	42	—

LOGIC SWITCHES (BIPOLAR and FIELD EFFECT)

TYPE	POLARITY	PRIMARY ELECTRICAL CHARACTERISTICS													OUTLINE	
		I_C RANGE (mA)	V_{CER} (V)	V_{GSS} (V)	h_{FE} MIN.	h_{FE} MAX.	I_C FOR h_{FE} (mA)	I_{DSS} MIN. (mA)	I_{DSS} MAX. (mA)	f_T (MHz)	C_{obo} (pF)	C_{rss} (pF)	t_s (ns)	t_d ON (ns)	t_d OFF (ns)	DWG. NO.	JEDEC NO.
LDS200	NPN	1-100	15	—	20	60	10	—	—	500	4	—	13	—	—	42	—
LDS201	NPN	1-100	15	—	40	120	10	—	—	500	4	—	13	—	—	42	—
LDS205	NPN	1-100	6(V_{CEO})	—	20	120	10	—	—	600	3	—	6	—	—	42	—
LDF691	N-Channel	—	—	30	—	—	—	50	150	—	—	3.5	—	15	20	42	—
LDF692	N-Channel	—	—	30	—	—	—	25	75	—	—	3.5	—	15	35	42	—
LDF693	N-Channel	—	—	30	—	—	—	5	30	—	—	3.5	—	15	50	42	—

MEDIUM CURRENT SWITCHES and CORE DRIVERS

TYPE	POLARITY	PRIMARY ELECTRICAL CHARACTERISTICS									OUTLINE	
		I_C RANGE (mA)	V_{CEO} (V)	h_{FE} MIN.	h_{FE} MAX.	I_C FOR h_{FE} (mA)	f_T (MHz)	C_{obo} (pF)	t_{on} (ns)	t_{off} (ns)	DWG. NO.	JEDEC NO.
LDA404	NPN	1-300	30	40	120	150	200	8	30	225	42	—
LDA405	NPN	1-300	30	100	300	150	200	8	30	225	42	—
LDA452	PNP	10-300	30	40	120	150	200	8	25	100	42	—
LDA453	PNP	10-300	30	100	300	150	200	8	25	100	42	—
LDS210	NPN	100-500	30	30	—	300	200	10	15	50	42	—

LOW ON RESISTANCE SWITCHES

TYPE	POLARITY	PRIMARY ELECTRICAL CHARACTERISTICS										OUTLINE	
		V_{CEO} (V)	h_{FE} MIN.	h_{FE} MAX.	I_C FOR h_{FE} (mA)	f_T (MHz)	R_{ac}(on) MIN. (Ω)	R_{ac}(on) MAX. (Ω)	I_B FOR R_{ac}(on) (mA)	h_{FE}(inv.) MIN.	I_E FOR h_{FE}(inv.) (mA)	DWG. NO.	JEDEC NO.
LDS207	NPN	5	50	—	0.3	—	—	3	1	20	0.3	42	—
LDS208	NPN	30	70	—	10	200	—	4	3	—	—	42	—

INTEGRATED CIRCUITS, MONOLITHIC DIGITAL

FJ—FAMILY OF MONOLITHIC DIGITAL INTEGRATED CIRCUITS

High speed, high fan-out and high noise margin (Typ. 1.0V) transistor-transistor logic supply voltage of 5V. Operating temperature 0 to 70°C. Storage temperature −55 to +150°C. Available in the 14-lead dual-in-line package with Amperex "two-in-one" ultra reliable construction. (See drawing 52) except FJJ-101, FJJ-181, FJJ-191 which are 16 leads. (See drawing 54).

TYPE	DESCRIPTION	EQUIVALENT TYPE	FAN-OUT (MIN.)	POWER CONSUMPTION (mW)	PROPAGATION DELAY (ns)	CLOCK RATE MHz
FJH 101	SINGL **NAND** GATE	SN74 30 N	10	10	13	—
FJH 111	DUAL **NAND** GATE	SN74 20 N	10	20	13	—
FJH 121	TRIPLE **NAND** GATE	SN74 10 N	10	30	13	—
FJH 131	QUADRUPLE **NAND** GATE	SN74 00 N	10	40	13	—
FJH 141	DUAL **NAND** POWER GATE	SN74 40 N	30	53	13	—
FJH 151	DUAL EXPANDABLE **AND-OR-NOT** GATE	SN74 50 N	10	28.5	13	—
FJH 161	DUAL **AND-OR-NOT** GATE	SN74 51 N	10	28.5	13	—
FJH 171	EXPANDABLE **AND-OR-NOT** GATE	SN74 53 N	10	14.25	13	—
FJH 181	**AND-OR-NOT** GATE	SN74 54 N	10	14.25	13	—
FJH 221	QUADRUPLE **NOR** GATE	SN74 02 N	10	57	13	—
FJH 231	QUADRUPLE **OR**-ABLE **NAND** GATE	SN74 01 N	10	40	30	—
FJJ 101	J-K FLIP-FLOP WITH **AND** INPUTS	SN74 70 N	10	70	—	20
FJJ 111	J-K MASTER-SLAVE FLIP-FLOP WITH **AND** INPUTS	SN74 72 N	10	40	—	10
FJJ 121	DUAL J-K MASTER SLAVE FLIP FLOP	SN74 73 N	10	80	—	10
FJJ 131	DUAL D FLIP-FLOP	SN74 74 N	10	85	—	15
FJJ 181	QUADRUPLE GATED D FLIP-FLOP	SN74 75 N	10	160	—	—
FJJ 191	DUAL J-K MASTER-SLAVE FLIP FLOP	SN74 76 N	10	80	—	10
FJJ141	BCD DECADE COUNTER	SN74 90 N	10	160	—	10
FJJ 211	DIVIDE BY 16 COUNTER	SN74 93 N	10	160	—	8
FJJ 251	DIVIDE BY 12 COUNTER	SN74 92 N	10	160	—	10
FJL 101	BCD-TO-DECIMAL DECODER AND NUMERICAL INDICATOR TUBE DRIVER	SN74 41A N	—	95	—	—
FJY 101	DUAL **AND-OR-NOT** EXPANDER	SN74 60 N	—	8	15[1]	—

[1] If used with FJH 151

© United Technical Publications

Amperex®

INTEGRATED CIRCUITS, HYBRID, LINEAR

INTEGRATED CIRCUITS, HYBRID, LINEAR

TYPE	DESCRIPTION	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (Volts)	INPUT IMPEDANCE (Ω)	OPEN-LOOP GAIN (dB)	INPUT OFFSET CURRENT (pA)	SLEW RATE Volts/μsec	INPUT VOLTAGE Temp. Coeff.	UNITY GAIN BAND-WIDTH	OUTLINE DWG.
ATF-401	HYBRID THIN FILM OPERATIONAL AMPLIFIER	±2.2	±11	(DIFF.) 200 k MIN. (COMMON MODE) 10 M MIN. f = 100 Hz	(5 k LOAD) 100dB	10nA MAX.	0.5	10 μv/°C	2 MHz	62
ATF-404	HYBRID THIN FILM OPERATIONAL AMPLIFIER	±5 MIN.	±10 MIN.	10^{10} MIN.	90 MIN.	50 MAX.	12	50	4	63

TYPE	DESCRIPTION	COLLECTOR-BASE VOLTAGE (Volts)	COLLECTOR EMITTER VOLTAGE (Volts)	EMITTER-BASE VOLTAGE (Volts)	COLLECTOR CURRENT (mA)	TOTAL DISSI-PATION (mW)	THERMAL DERATING FACTOR (≦25°C) (mW/°C)	h_{FE} MATCH	V_{BE} (mV)	OUTLINE DWG.
ATF-405	DIFFERENTIAL AMPLIFIER FOR HIGH FREQUENCY APPLICATIONS	30	15	2.5	25	400	2.9	±10%	10 MAX.	64

TYPE	DESCRIPTION	VOLTAGE GAIN (BOTH SECTIONS @ 10 kHz) (dB)	OUTPUT VOLTAGE (Volts)	INPUT IMPEDANCE (Ω)	OUTPUT IMPEDANCE (Ω)	POWER OUTPUT (mW)	COMMON MODE REJECTION RATIO (dB)	NOISE FIGURE @ 1 MHz (dB)	OUTLINE DWG.
ATF-416	HYBRID THIN FILM VIDEO AMPLIFIER FOR BROAD BAND APPLICATIONS	52±3	±5 MIN.	30,000 MIN.	800	3.3	40	4 MAX.	66

TYPE	DESCRIPTION	INDIVIDUAL ELECTRICAL CHARACTERISTICS				MATCHING CHARACTERISTICS		OUTLINE DWG.
		Gain, h_{FE} @ I_C = 0.5mA V_{CE} = 5V, min.	Leakage Current I_{CBO} @ V_{CB} = 10V, max.	Breakdown Voltage BV_{CBO} @ 10mA min.	Saturation Voltage V_{CE} Sat @ I_c = 10mA, I_b = mA, max.	Differential Base-Emitter Voltage Δ V_{BE} mV	ΔV_{BE} Temperature Coefficient μV/°C	
ATF-418	DUAL COMPLEMENTARY SYMMETRY MATCHED PAIRS NPN/PNP	100	10 nA	25V	0.5V	5 MAX.	10	67

TYPE	DESCRIPTION	ON RESISTANCE (each D/A Switch) −25 to +85°C		OFFSET VOLTAGE (each D/A Switch)		SWITCHING SPEED (each Switch)		OUTLINE DWG.
		To Common Terminal R_L = 20kΩ (Ω)	To Reference Voltage R_L = 20kΩ (Ω)	To Common Terminal R_L = 2 MΩ (mV)	To Reference Voltage R_L = 2 MΩ (mV)	Turn-on Time (μs)	Turn-off Time (μs)	
ATF-451/452	HYBRID THIN FILM QUAD LADDER SWITCH FOR HIGH ACCURACY CONVERTERS	(ATF-451) 4±1 (ATF-452) 4±3	(ATF-451) 4±1 (ATF-452) 4±3	(ATF-451) 1 (ATF-452) 1.25	(ATF-451) 1 (ATF-452) 1.25	(ATF-451) 0.5 (ATF-452) 0.5	(ATF-451) 0.5 (ATF-452) 0.5	68

TYPE	DESCRIPTION	AGC VOLTAGE (Volts)	AGC CURRENT (mA)	CENTER OPERATING FREQUENCY (MHz)	CURRENT DRAIN (mA)	POWER DISSIPATION (mW)	INPUT IMPEDANCE (30 MHz) (Ω)	OUTPUT IMPEDANCE (30 MHz) (Ω)	NOISE FIGURE (30 MHz) (dB)	OUTLINE DWG.
ATF-412	HYBRID THIN FILM 30 MHz IF AMPLIFIER	16 MAX.	1.2 MAX.	30	4.5	150 MAX.	75	200	10	65

INTEGRATED CIRCUITS, MONOLITHIC, LINEAR

TELECOMMUNICATION CIRCUITS

TYPE	DESCRIPTION	VOLTAGE GAIN (dB)	OUTPUT VOLTAGE (V)	CURRENT DRAIN (mA)	SUPPLY VOLTAGE (V)	CONVERSION GAIN (dB)	OUTLINE DWG.
TAA 480	CLASS A PUSH-PULL CHANNEL AMPLIFIER	14.5 (CLOSED LOOP)	4 (MIN.)	5.2	20	—	56
TAB 101	RING MODULATOR-DEMODULATOR	—	—	—	+9 +1.5	−0.75	56
TAA 500	CERAMIC OR DYNAMIC MICROPHONE AMPLIFIER	300	1.0	20 TO 100	—	—	59

OPERATIONAL AMPLIFIERS

TYPE	DESCRIPTION	VOLTAGE GAIN (dB)	COMMON MODE REJECTION RATIO (dB)	INPUT OFFSET CURRENT (nA)	VOLTAGE DRIFT (μV/°C)	CURRENT DRIFT (nA/°C)	OUTPUT IMEPED-ANCE (Ω)	SUPPLY VOLTAGES (V)	OUTLINE DWG.
TAA 241	ANALOG COMPUTER, INSTRUMENTATION AND CONTROL OPERATIONAL AMPLIFIERS	3400	92	500	5	6	200	+12; −6	57
TAA 242		3600	100	180	2.5	3	200	+12; −6	57
TAA 243		2300	80	3000	—	—	200	+12; −6	57

© United Technical Publications

Amperex®

INTEGRATED CIRCUITS, MONOLITHIC, LINEAR (Continued)

TELEVISION CIRCUITS

TYPE	DESCRIPTION		OUTLINE DWG.
TAA 470	RGB MATRIX AMPLIFIER	RGB MATRIX PRE-AMPLIFIER WITH THERMAL MATCHING TO DRIVE CATHODE OR GRID OF A COLOR PICTURE TUBE WITHOUT NEED FOR CLAMPING CIRCUITRY	61
TAA 550	VOLTAGE STABILIZER FOR VARICAP TUNERS	THREE STABILIZED VOLTAGE RANGES AVAILABLE: 31 to 32V, 32 to 34V, 34 to 35V. OPERATING CURRENT: 5 mA TEMPERATURE COEFFICIENT: −3.1 to +1.55 mV/°C	60
TAA 630	DOUBLE BALANCED COLOR DEMODULATOR	DUAL SYNCHRONOUS DEMODULATOR FOR COLOR TV RECEIVES DRIVING COLOR DIFFERENCE AT PCV TRANSISTORS OR AMPEREX TAA-470 RGB MATRIX AMPLIFIER	61
TAA 700	VIDEO PROCESSING CIRCUIT	VIDEO AMPLIFIER: OUTPUT 6V (P-P), 14 mA. BLACK LEVEL 5.6V AGC CIRCUIT: SIGNAL EXPANSION (Full Control) 15%, KEYING INPUT PULSE 1-5V. SYNC CIRCUIT: CONTROL VOLTAGE, LINE OSC: ±3V,; OUTPUT VERT. SYNC. 10V P-P	61

WIDE BAND LIMITING AMPLIFIERS

TYPE	DESCRIPTION	SMALL SIGNAL VOLTAGE GAIN (dB)	3 dB BANDWIDTH (MHz)	INPUT LIMITING VOLTAGE (μV)	OUTPUT VOLTAGE (V)	SUPPLY VOLTAGE (V)	OUTLINE DWG.
TAA 350	HIGH AM REJECTION	67	12	100	0.6 (P-P)	6.0	56
TAA 380A	INTER-CARRIER SOUND I.F.	70	5	250	2.0 (P-P)	7.5	56
TAA 380	FM CHANNEL AMPLIFIER WITH DEMODULATOR AND AF AMPLIFIER	67	10	250	0.2 RMS Δ-F. Δf = 25 kHz	7.5	56
TAA 450		69	10	300	0.4 RMS Δf = 25 kHz	7.5	56
TAA 570		—	—	100	1.0 RMS Δf = 25 kHz	12.0	56

SPECIAL APPLICATIONS

TYPE	DESCRIPTION	SUPPLY VOLTAGE (V)	THRESHOLD VOLTAGE (V)	CDS CELL RESISTANCE (MΩ)	NISE PROPAGATION DELAY TIME (μs)	OUTPUT LOAD (Ω)	OUTLINE DWG.
TAA 560	PHOTO-TIMER (WITH EXTERNAL CDS CELL)	2.5	1.55	20	10	50	59
SAJ 100	MOS HEPTUPLE (÷7) FREQUENCY DIVIDER FOR ORGANS	25 8	SEVEN DIVIDERS USING MASTER-SLAVE FLIP-FLOPS ARE SEPARATELY GROUPED 3-2-1-1. FREQUENCY RANGE 200 kHz MAX. OUTPUT IS SQUARE WAVE, RISE TIME 10 μs MAX. AMPLITUDE 6.5 MIN.				61

HEARING AID AMPLIFIERS

TYPE	DESCRIPTION	POWER GAIN (dB)	NOISE FIGURE (dB)	OUTPUT POWER (mW)	*BANDWIDTH (3 dB) (kHz)	SUPPLY VOLTAGE (V)	OUTLINE DWG.
OM200	THREE STAGE, HIGH GAIN AMPLIFIER	80	6 (MAX.)	0.2 (MIN.)	20	1.3	53
TAA370	AMPLIFIER WITH CLASS A OUTPUT STAGE	90	6 (MAX.)	1.5	20	1.3	49
TAA103	THREE STAGE HIGH GAIN AMPLIFIER	75	12 (MAX.)	10 (MIN.)	20	8.0	53

AF PRE-AMPLIFIERS

TYPE	DESCRIPTION	OUTPUT VOLTAGE R.M.S. (V)	OUTPUT CONDUC-TANCE (μA/V)	INPUT IMPED-ANCE (kΩ)	NOISE FIGURE (dB)	EQUIVALENT INPUT NOISE SIGNAL (μV)	TRANS-CONDUC-TANCE (mA/V)	VOLTAGE GAIN (OPEN LOOP) (dB)	SUPPLY VOLTAGE (V)	OUTLINE DWG.
TAA310	HIGH GAIN, LOW NOISE	2.0	—	20	2.5	—	—	100	+ 7	56
TAA320	HIGH INPUT IMPEDANCE	—	650	10^8 (MIN.)	—	25	7.5	—	−20	47
TAA435	PRE-AMPLIFIER AND DRIVER	*	—	70 (MIN.)	6	—	—	80	+14	56

* Sufficient to drive complementary pair (Amperex 2N4079) to 5 watts output.

AF OUTPUT AMPLIFIER

TYPE	DESCRIPTION	OUTPUT POWER (W)	INPUT IMPEDANCE (kΩ)	INPUT SIGNAL (P_o = 1W) (mV)	NOISE FIGURE (dB)	SUPPLY VOLTAGE (V)	OUTLINE DWG.
TAA300	COMPLETE AUDIO STAGE WITH 1 WATT CLASS B OUTPUT	1	15	8.5	6	+9	56

GENERAL PURPOSE AMPLIFIERS

TYPE	DESCRIPTION	POWER GAIN (dB)	NOISE FIGURE (dB)	OUTPUT POWER (mW)	BANDWIDTH (3 dB) (kHz)	SUPPLY VOLTAGE (V)	OUTLINE DWG.
TAA263	THREE STAGE DIRECT COUPLED AMPLIFIER	77	5	10 (MIN.)	—	+8	58
TAA293	THREE STAGE AMPLIFIER	80	6	10 (MIN.)	600	+6	56

AM RADIO CIRCUIT

TYPE	DESCRIPTION	TOTAL CURRENT DRAIN (mA)	A.G.C. RANGE (dB)	SIGNAL TO NOISE RATIO (dB)	SUPPLY VOLTAGE (V)	OUTLINE DWG.
TAD100	OSCILLATOR, MIXER, i.f. AMPLIFIER, DETECTOR, a.f. AMPLIFIER, AND DRIVER STAGE	15	60 (MIN.)	23	6	52
		21	60 (MIN.)	23	9	

© United Technical Publications



Classic

Motors and Gearmotors

Carter Motor ®

Available up to 1/7 hp. Gearmotors from 1 to 750 rpm, up to 13 in. lbs. torque, continuous duty. Universal and DC shunt models, induction and variable speed types, base or flange mounted. Ball bearing, high quality, die cast construction. Ideal for SCR motor controllers, pumps, lab stirrers, machine drives. 3 5/16" dia., 6 1/16" long. Shaft, 5/16" dia., weight 5 lbs. Ask for "Classic" catalog.

115 V. DC SHUNT MOTORS

4 lead reversible, self ventilated, totally enclosed available

Model	HP	RPM	List
CSA1840A	1/40	1800	$49.50
CSB1830A	1/30	1800	51.00
CSA3628A	1/28	3600	49.50
CSB3620A	1/20	3600	51.00
CSA5020A	1/20	5000	49.50
CSB5015A	1/15	5000	51.00

Other ratings and voltages from 12 V. to 115 V. DC available.

115 V. AC/DC UNIVERSAL MOTORS

2 lead — uni-directional ventilated only

Model	HP	RPM	Rot.	List
CUA3620A	1/20	3600	CCW	$43.00
CUB7510A	1/10	7500	CCW	45.00
CUB1007A	1/7	10000	CCW	45.00

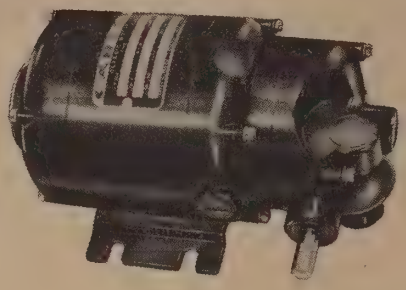
Other ratings and voltages from 12V. to 230 V. DC available.

115 V. CLASSIC PM DC MOTORS

2 lead reversible, base mount totally enclosed

Model	HP	RPM	List
CPA1840E	1/40	1800	$49.50
CPB1830E	1/30	1800	51.00
CPA3628E	1/28	3600	49.50
CPB3620E	1/20	3600	51.00

Other ratings and voltages from 12 V. to 115 V. DC available.



Any of the shunt or PM models listed are available for 12 to 115 volt DC. Universal types from 12 to 230 volts. Add $2.00 to list. Motors can be modified promptly at slight extra cost. Make Carter your specialty motor source.

115 V. "CLASSIC" PM DC GEARMOTORS

2 lead reversible, base mount totally enclosed

	SINGLE REDUCTION				DOUBLE REDUCTION			
Model	Torque in. lbs.	RPM	List	Code	Torque in. lbs.	RPM	List
CPA066E3	6	60	$66.50	CPA0024E2	4	2	$75.00
CPA105E3	5	100	66.50	CPA017E2	7	10	75.00
CPA204E3	4	200	66.50	CPA036E2	6	30	75.00
SPA402E3	2.5	400	66.50	CPA056E2	6	50	75.00

115 V. DC SHUNT GEAR MOTORS

4 lead reversible — totally enclosed
3 5/16" dia., 6 1/16" L., Wt. 5 Lbs., 5/16" dia. Shaft

Model	In lbs.	RPM	List
CSA066E3	6	60	$66.50
CSA105E3	5	100	66.50
CSA302E3	2.5	300	66.50
CSA0057E2	7	5	75.00
CSA036E2	6	30	75.00

Other ratings and rotation available up to 500 RPM.

115 V. AC/DC UNIVERSAL GEAR MOTORS

2 lead — uni-directional
3 5/16" dia., 6 1/16" L., Wt. 4 1/2 Lbs., 5/16" dia. Shaft

Model	Torque in. lbs.	RPM	Rot.	List
CUA203R3	3	200	CCW	$61.00
CUA302R3	2.5	300	CCW	61.00
CUA0051A2	1.0	5	CCW	69.50
CUA024A2	4	20	CCW	69.50
CUA054A2	4	50	CCW	69.50

Other ratings and rotation available up to 750 RPM.

"CLASSIC" HEAVY DUTY GEARMOTOR

Classic gearmotor for outputs up to 13 in. lbs. torque. Universal and DC Shunt Models. Hardened ground steel worms with laminated bakelite gear for long life, quiet operation. 3-5/16" dia., 7-3/8" long with 1/2" dia. shaft. Weight 5-1/2 lbs.

Model	Torque in lbs.	RPM	Rot.	List
115 v. DC Shunt 4 lead reversible				
CSA4512A5	12	45	Rev.	$82.00
CSA1805A5	5	180	Rev.	82.00
115 v. AC/DC Universal 2 lead				
CUA1312A5	12	130	CW	73.50
CUA504A5	4.5	500	CW	73.50

Other ratings and rotation available.



REGENT

Motors and Gearmotors

UP TO 22 IN. LBS. TORQUE

Universal and DC Shunt models. Hardened ground steel worm with laminated bakelite gear for long life, quiet operation. 3 7/8" dia. 9 9/16" long with 1/2" dia. shaft. Weight 12 lbs.

GEARMOTORS	Model	Torque in. lbs.	RPM	Rot.	List
115 v. DC Shunt 4 lead reversible	MSB4520A5	20	45	Rev.	$105.00
115 v. DC Shunt 4 lead reversible	MSB1811A5	12	180	Rev.	105.00
115 v. AC/DC Universal 2 lead	MUB5008A5	8	500	CW	102.00
115 v. AC/DC Universal 2 lead	MUB2512A5	12.5	250	CW	102.00

NOTE: Above Classic and Regent models 5000 RPM armature speed or less can be supplied with PM DC Tach Generator mounted to frame for speed reference voltage. Ideal for SCR Feedback Motor Control Applications. Write for details.

115 V. DC SHUNT MOTORS

4 lead reversible

3 7/8" Dia., Wt. 9 3/4 Lbs., 3/8" Dia. Shaft

Face mount listed. Base mount available, same price. Totally enclosed.

Model	HP	RPM	List
MSB1815EF	1/15	1800	$73.00
MSB367EF	1/7	3600	73.00
MSC1812EF	1/12	1800	76.00
MSC366EF	1/6	3600	76.00
MSD188EF	1/8	1800	82.00
MSD364EF	1/4	3600	82.00

Other ratings and rotation available.



115 AC/DC UNIVERSAL MOTORS

3 7/8" Dia., Wt. 9 3/4 Lbs., 3/8" Shaft Dia.

2 lead uni-directional. Ventilated only. Face mount. Base mount available, same price. Reversible available on order.

CLOCKWISE ROTATION				COUNTER CLOCKWISE			
Model	HP	RPM	List	Model	HP	RPM	List
MUB504RF	1/4	5000	$70.00	MUB504AF	1/4	5000	$70.00
MUB1002RF	1/2	10000	70.00	MUB1002AF	1/2	10000	70.00
MUB753RF	1/3	7500	70.00	MUB753AF	1/3	7500	70.00
MUC503RF	1/3	5000	73.00	MUC503AF	1/3	5000	73.00
MUC10058RF	5/8	10000	73.00	MUC10058AF	5/8	10000	73.00
MUD502RF	1/2	5000	79.00	MUD502AF	1/2	5000	79.00
MUD1001RF	1	10000	79.00	MUD1001AF	1	10000	79.00



"CLASSIC" PM DC TACH-GENERATORS

A high output DC Tachometer-Generator for slow speed industrial and commercial purposes. Barium ferrite magnet. Couples to motor shaft and to meter for direct readings without belts or gears to step up speed. Requires no batteries, or external excitation. 2 lead reversible. Face or flange mount available. 5/16" dia. shaft. 1% linearity. Up to 15 watts capacity.

Model Number	DC Output per/1000	Mounting	Max. Speed RPM	List
CTA60AA	60 v.	base	3000	$78.00
CTA50AA	50 v.	base	4000	76.00
CTA25AA	25 v.	base	8000	74.00

Built-in capacitor filter assures ripple of less than 3%. Unfiltered models will average 5% or less AC ripple. Other voltages available.



"ECLIPTIC" TACHOMETER GENERATORS

Converts rotation rate into reference voltage for speed indication. Ideal for motor controllers and various industrial applications such as variable speed drives, textile machines, machine tools, etc. Can couple direct to drive motor, requires no belts or gears. 2 lead, reversible. Linearity below 1%, 5 to 20 MA capacity. May be connected to a DC meter calibrated for RPM, FPM, GPH or other measurements. Size 1-3/8" x 2-1/4" plus shaft, .118 dia. 19/32" long.

M176T1	2.5	v. per 1000 RPM — 10,000	Max.	$51.00
M176T2	5	v. per 1000 RPM — 10,000	Max.	53.00
M176T3	12	v. per 1000 RPM — 4,000	Max.	56.00
M176T4	20	v. per 1000 RPM — 2,500	Max.	70.00
M176T5	1.25	v. per 1000 RPM — 10,000	Max.	51.00
M176T6	10	v. per 1000 RPM — 5,000	Max.	56.00
M176T7	7	v. per 1000 RPM — 6,000	Max.	56.00

Carter Motor

Carter Motor Company

Carter Motor Company reserves the right to make changes without notice, in materials, specifications, prices, and to discontinue models, without obligation.

Trade Discount Applies To List Prices Only

© United Technical Publication

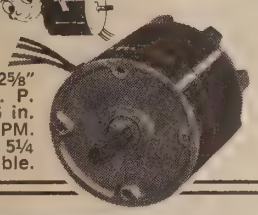
CALL ON hurst-POWER HEAVY DUTY HYSTERESIS SYNCHRONOUS MOTORS

HEAVY DUTY SYNCHRONOUS MOTORS

NEW! Mini-Bee

MODEL MB

Just 2 13/32" x 2 5/8" long. 1/100 H. P. Start torque 6 in. oz. at 1800 RPM. Sync torque: 5¼ in. oz. Reversible.



- VIDEO RECORDING
- INSTRUMENTATION
- DATA HANDLING
- TAPE RECORDING
- TELEMETERING
- TURNTABLES
- AND NUMEROUS OTHER DIRECT DRIVE APPLICATIONS

Hystereris synchronous. 40°C heat rise, full load. Inverted rotor for reduced flutter. Sealed ball bearings. Stainless steel shafts, lifetime lubrication.

Honey Bee

MODEL HB

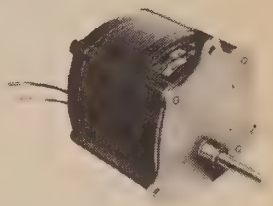
1/50 H.P. Start torque 12 in. oz. at 1800 RPM. Sync torque: 11 in. oz. Avail. 1800 RPM. 3¾" dia. x 3⅝" long. Reversible.



hurst MODEL GA
600 IN. OZ. OF TORQUE AT 1 RPM (Reversible)

For long life and higher torque applications. Offers instrument manufacturers high performance and economy.

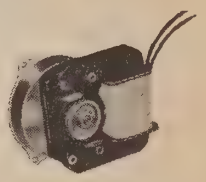
- HEAVY DUTY GEARING
- NO LUBRICATION REQUIRED
- CAPACITOR INCLUDED



MODEL GA

hurst MODEL EA
150 IN. OZ. OF TORQUE AT 1 RPM (CW Rotation)

Open frame, shaded pole, extremely cool running. Bronze bearings, brass gears, hardened steel pinions and wheel shafts, stainless steel output shaft. For dependable, low-cost timing applications. Wide range of speeds.



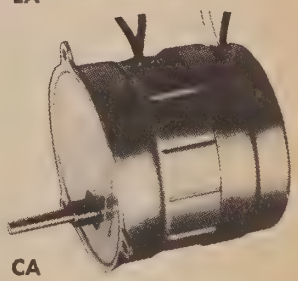
MODEL EA

hurst MODEL DA
150 IN. OZ. OF TORQUE AT 1 RPM (Reversible)

Timing accuracy both clockwise and counter-clockwise. SPDT switching. Case 2½" diam., 1¾" long. Will not overheat. Capacitor included.

hurst MODEL CA
100 IN. OZ. OF TORQUE AT 1 RPM (Reversible)

Features 1200 rpm rotor speed for quiet performance. Extremely versatile (animated displays, program instruments, outdoor advertising, etc.). Wide range of output speeds. Will not overheat. Capacitor included.



MODEL CA

hurst MODEL SM
RATED 40 IN. OZ. OF TORQUE AT 1 RPM (CW Rotation)

For tough jobs demanding accurate timing. Excellent shock and vibration resistance. Starts instantly at full torque. Will not overheat. Wide range of output speeds.

hurst MODEL PC-SM / MODEL PC-DA
CLUTCH AND BRAKE MOTOR 40 IN. OZ. OF TORQUE AT 1 RPM (CW Rotation)

CLUTCH AND BRAKE MOTOR 120 IN. OZ. OF TORQUE AT 1 RPM (Reversible)

Both are positive clutch and instantaneous brake motors. For extremely fast starts and stops. Motor runs continuously with clutch and brake controlled by switching actuator only. Clutch starts output shaft within 20 milliseconds; brake stops output shaft within ⅛° at 1 rpm; within 12° at 60 rpm. Motor on AC voltage; actuator AC. Will not overheat.

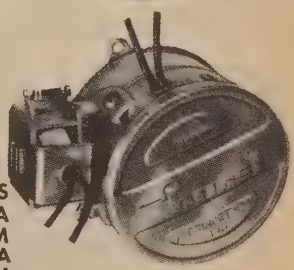


MODELS DA SM

hurst MODEL AR-DA / MODEL AR-SM
100 IN. OZ. OF TORQUE AT 1 RPM (Reversible)

40 IN. OZ. OF TORQUE AT 1 RPM (CW Rotation)

Automatic reset. Planetary-type clutch operates directly upon output shaft. When de-energized, shaft is manual or automatic reset. Addition of external return spring to output shaft provides automatic reset on either model. Motor on AC voltage; actuator AC. Will not overheat. Capacitor included.

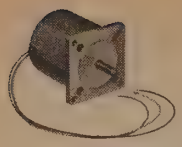


MODELS PC-DA PC-SM AR-DA AR-SM

ALL MOTORS 115 VAC, 60 Hz. CAPACITOR FURNISHED ON ALL 'REVERSIBLE' MODELS. MODELS CA, SM, DA, EA, PC-DA, AR-DA, PC-SM, AR-SM STAINLESS STEEL SHAFTS 1" LONG, 3/16" DIA. FLATTED, ¾" USABLE. MODELS MB AND HB STAINLESS STEEL SHAFTS 1" LONG, 3/16" DIA. ROUND. MODEL GA STAINLESS STEEL SHAFT 1" LONG, ¼" DIA. FLATTED, ¾" USABLE.

© United Technical Publications

SLO-SYN®



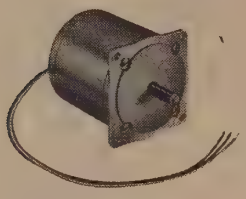
TYPE SS25



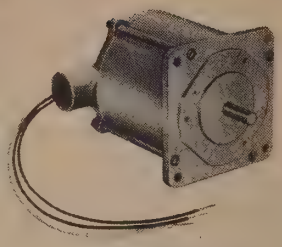
TYPES SS400 & SS402



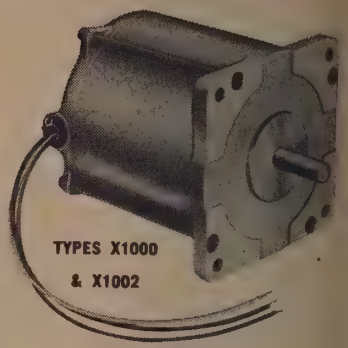
TYPES SS150 & SS152



TYPES TS50 & TS52



TYPES X250 & X252



TYPES X1000 & X1002

A-C OPERATION — Standard SLO-SYN Synchronous/Stepping Motors are permanent magnet a-c motors having extremely rapid starting, stopping and reversing characteristics and a slow basic shaft speed of 72 rpm synchronous with a line frequency of 60 hertz. Three-lead types need only a single-pole, three-position switch for complete forward, reverse and "off" control. No excessive inrush current when energized because starting and operating current are nearly identical. Can be completely stalled without overheating and with no harmful effects on components. Starts or stops in less than 5° of shaft rotation; no need for mechanical or electrical braking. When used with an auxiliary high speed motor, the SLO-SYN motor can remain coupled to the load and safely overdriven. Phase shifting resistor and capacitor must be used when operating from a single-phase source but not from two-phase. All standard motors are rated for continuous duty at maximum ambient temperature of 40°C. Types SS150 and SS152 use Class A insulation; all others have Class B.

D-C STEPPING — When used for phase-switched d-c stepping, the motors can be connected to provide either 100 or 200 steps per revolution. Accuracy of the steps is ±.09° noncumulative. Three-lead types require a center-tapped d-c supply and single-pole, double-throw switching; four-lead types require a single-ended power supply and single pole, double-throw switching. Bifilar motors can also be used with transistorized switching circuits. With a suitable control potentiometer instead of switches, a SLO-SYN motor can be made to rotate steplessly, permitting extremely accurate positioning. All motors have lubricated-for-life bearings.

PRECISION STEPPING

For phase-switched d-c stepping, types HS25, HS50, HS50D and HS50L make 200 steps per shaft revolution. Each 1.8° step is accurate within ±3% (.06°) noncumulative. May be operated at speeds greater than 500 steps per second if accelerating and decelerating circuits are used. With proper circuitry, the motors may be operated at speeds of 1000 steps per second or higher without missing any steps.

200 RPM

Types TS25, TS50 and TS52 are similar to standard models but operate at synchronous speeds of 200 rpm and take 36 or 72 steps per revolution when used for d-c stepping.

RATINGS AND SPECIFICATIONS FOR A-C APPLICATIONS

TYPE	MAXIMUM AMPERES	TORQUE (Oz-In)	MAXIMUM MOMENT OF INERTIA OF A RIGIDLY ATTACHED LOAD (Lb-In²)	PHASE-SHIFTING COMPONENTS* RESISTOR	RESISTOR PART NUMBER	CAPACITOR	CAPACITOR PART NUMBER	APPROXIMATE MOTOR WEIGHT (POUNDS) NET	SHIPP
120 Volts, 50/60 hertz, 1 Phase, 200 RPM at 60 hertz									
TS25	0.2	25	0.12	300 ohm, ±5%, 25 watt	R-TS25/50	1.5 mfd ±6%, 330 VAC	C-TS25	2	2¼
TS50	0.3	50	0.25	300 ohm, ±5%, 25 watt	R-TS50	3.75 mfd ±6%, 330 VAC	C-SS150/TS50	4¾	5¾
120 volts, 50/60 hertz, 1 phase, 72 RPM at 60 hertz									
SS25§	0.1	25	0.15	500 ohm ±5%, 5 watt	R-SS25	0.75 mfd ±6%, 330 VAC	C-SS25	1¼	1½
SS50§	0.3	50	0.5	250 ohm ±5%, 25 watt	R-SS50/150	2.6 mfd ±6%, 330 VAC	C-SS50	3	3½
SS50M†§	0.3	50	0.5	250 ohm ±5%, 25 watt	R-SS50M/150M	2.6 mfd ±6%, 330 VAC	C-SS50M	3	3½
SS150	0.4	150	1.5	250 ohm ±5%, 25 watt	R-SS50/150	3.75 mfd ±6%, 330 VAC	C-SS150/TS50	6½	8
SS150M†	0.4	150	1.5	250 ohm ±5%, 25 watt	R-SS50M/150M	3.75 mfd ±6%, 330 VAC	C-SS150M	6½	8
SS250	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	6½	8
SS250M†	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250M	6.5 mfd ±6%, 330 VAC	C-SS250M	6½	8
X250‡	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	7¾	9
SS400	0.6	400	4.5	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	12¼	13¾
X1000‡	3.0	1000	9	65 ohm ±5%, 160 watt	R-X1000	30 mfd ±6%, 330 VAC	C-X1000	31	33
X1500	3.0	1500	12	50 ohm ±5%, 375 watt	R-X1500	30 mfd ±5%, 330 VAC	C-X1000/1500	38	41
SS1800	4.0	1800	16	40 ohm ±5%, 375 watt	R-SS1800	60 mfd ±6%, 330 VAC	C-SS1800	45	50
240 Volts, 50/60 hertz, 1 Phase, 200 RPM at 60 hertz									
TS52	0.2	50	0.25	1200 ohm ±5%, 25 watt	R-SS152/TS52	1.0 mfd ±6%, 660 VAC	C-SS152/TS52	4¾	5¾
240 Volts, 50/60 hertz, 1 Phase, 72 RPM at 60 hertz									
SS52§	0.2	50	0.5	1000 ohm ±5%, 10 watt	R-SS52	0.67 mfd ±6%, 660 VAC	C-SS52	3	3½
SS152	0.2	150	1.5	1200 ohm ±5%, 25 watt	R-SS152/TS52	1.0 mfd ±6%, 660 VAC	C-SS152/TS52	6½	8
SS252	0.3	250	3	500 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	6½	8
X252‡	0.3	250	3	500 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	7¾	9
SS402	0.3	400	4.5	500 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	12¼	13¾
X1002‡§	1.5	1000	9	250 ohm ±5%, 200 watt	R-X1002	8 mfd ±6%, 660 VAC	C-X1002	31	33
SS1802	2.0	1800	16	130 ohm ±5%, 320 watt	R-SS1802	15 mfd ±6%, 660 VAC	C-SS1802	45	50

*External resistor and capacitor must be ordered separately. †Militarized. ‡Explosion-proof. §For 60 hertz. Other phase-shifting components required for 50 hertz.

THE SUPERIOR ELECTRIC COMPANY

SEE OTHER SUPERIOR ELECTRIC PRODUCT

© United Technical Publications

Synchronous / Stepping Motors FOR A-C CONSTANT SPEED • FOR D-C STEPPING

THREE-LEAD SLO-SYN SYNCHRONOUS/STEPPING MOTORS — RATINGS FOR STEPPING APPLICATIONS

MOTOR TYPE	TS25	TS50	TS52	SS25	SS50 SS50M	SS52	SS150 SS150M	SS152	SS250 SS250M X250	SS252 X252	SS400	SS402	X1000	X1002	SS1800	SS1802
D-C VOLTS	60	50	100	80	50	100	35	70	32	64	30	60	11.5	23	9.5	19
AMPERES PER WINDING	0.15	0.25	0.13	0.07	0.15	0.08	0.35	0.18	0.50	0.25	0.60	0.30	3.2	1.6	4.7	2.4

FOUR-LEAD SLO-SYN SYNCHRONOUS/STEPPING MOTORS RATINGS FOR STEPPING APPLICATIONS

TYPES	D-C INPUT VOLTS PER WINDING	AMPERES PER WINDING
SS25-1014	16	0.35
SS25-1012	40	0.14
SS25-1013	80	0.07
SS50-1012	2.5	3.1
SS50-1011	10	0.75
SS50-1002	25	0.30
SS50-1014	50	0.15
SS150-1007	2	6.3
SS150-1018	7	1.75
SS150-1015	17.5	0.70
SS150-1025	35	0.35
SS250-1010	3	5.3
SS250-1009	8	2.0
SS250-1008	16	1.0
SS250-1007	32	0.50
SS400-1005	15	1.2
SS400-1007	30	0.6
X1000-1005	11.5	3.2
X1000-1008	23	1.6
SS1800-1004	9.5	4.7
SS1800-1005	19	2.4

SLO-SYN PRECISION STEPPING MOTORS RATINGS FOR DC STEPPING APPLICATIONS

TYPES	DC VOLTS	AMPERES PER WINDING
HS25	5.4	1.5
HS50	3	4
HS50L	4.5	3.5

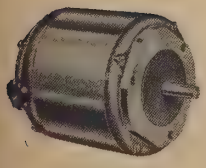
BIFILAR SLO-SYN SYNCHRONOUS/STEPPING MOTORS RATINGS FOR STEPPING APPLICATIONS

TYPE	D-C VOLTS	AMPERES PER WINDING
TS50-1001	3	4.0
SS25-1002	5.9	0.88
SS25-1001	11.8	0.44
SS25-1011	23.6	0.22
SS50-1010	2	3.3
SS50-1009	5.5	1.3
SS50-1008	8	0.85
SS50-1001	14	0.53
SS50-1007	35	0.21
SS150-1023	1.4	8.5
SS150-1009	2.5	4.0
SS150-1010	10	1.25
SS150-1017	25	0.5
SS250-1006	2.5	5.0
SS250-1027	4.6	3.1
SS250-1002	9	1.55
SS250-1004	22.5	0.61
X250-1003	4.6	3.1
X250-1002	9	1.55
SS400-1021	5.3	3.4
SS400-1002	8.3	2.2
SS400-1006	21.2	0.85
X1000-1002	10	3.6
X1000-1007	25.4	1.42
SS1800-1007	11.5	3.9
SS1800-1002	14.4	3.1
SS1800-1006	23	2.0



BIFILAR

Used for d-c stepping where use of push-pull circuitry and center-tapped power supply is not possible or where increased torque at high stepping speeds is required.



SPECIAL ENVIRONMENT

High Vacuum types for vacuums to 10^{-6} Torr; High Temperature types for temperatures to 130°C; High Radiation types withstand dosage of 3,000 megarads. All available from 50 to 1800 oz-in; High Vacuum 25 oz-in also.

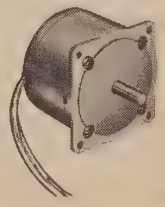


PLANETARY GEAR

Basic 50 and 150 oz-in types and type X250 available with planetary gear assemblies in speeds of 16.6, 3.32, 0.665, 0.133 or 0.027 rpm; 16.6 rpm available in other 250 and on 400 oz-in types.

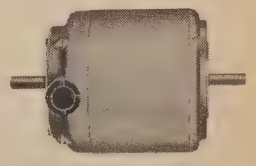
FOUR-LEAD

Designed for d-c stepping to provide the flexibility needed for use with equipment requiring isolated windings with no common connection.



DOUBLE END

Three-lead, bifilar and four-lead types with output shaft at each end of motor available in all listed torque ratings. 50, 150 and 250 oz-in types available also with planetary gear assemblies in 16.6, 3.32, 0.665, 0.133 or 0.027 rpm speeds.



VISCOUS DAMPED

Type HS50D precision stepping motor has a unique fluid system resulting in a step function approaching critical damping. Speed of response and running characteristics are essentially unaffected by the silicone viscous damping fluid. Possesses characteristics of types described under PRECISION STEPPING on facing page.



PAGES IN SECTIONS 2100, 4000 AND 5600

© United Technical Publications

SLO-SYN® *Preset Indexers*



TWO-AXIS
TYPE 2SP1800-4



SINGLE-AXIS
TYPE SP1800B-4

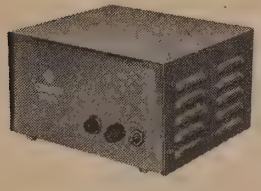


ABSOLUTE
TYPE SA1800-5

Used to control indexing of SLO-SYN bifilar motors. The index angle, or position, can be preset by dial setting on the control panel the number of 1.8° steps to be driven. Have provision for actuating any external equipment needed to perform related operations. Index, jog and free run can be initiated manually from the control panel or from an external switch. Can be made to cycle automatically with proper external switching. Single- and two-axis models are available with counting ranges to 99,999 steps. Two-axis models provide independent control of two SLO-SYN motors. Speed adjustable from 4 steps/second up to maximum possible with motor used. Optional backlash take-up circuit.

ABSOLUTE PRESET INDEXERS permit either absolute or incremental positioning modes. In the absolute positioning mode, the number set on the controls determines the final position of the motor relative to the starting, or "zero" point. When incremental positioning is used, the motor will move the preselected number of steps each time the INDEX button is pressed. Optional backlash take-up circuit.

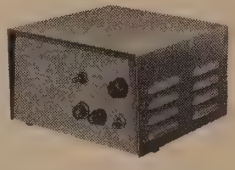
SLO-SYN® *Translator*



TYPE ST1800B

Pulse-to-step converter designed for use with appropriate bifilar SLO-SYN motors converted for incremental stepping. Convert low level signal pulses or square waves into the correct switching sequence needed to step a SLO-SYN motor at 200 steps/revolution (1.8° per step). Input is 105-125 volts a-c, 1 ampere. Signal input impedance is 500 ohms. Used for programmed positioning, indexing and indicating operations.

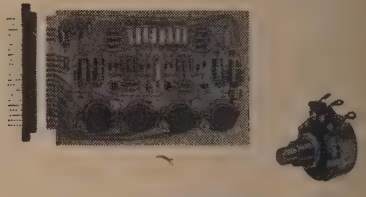
SLO-SYN® *Adjustable Speed Drive*



TYPE ST1800BV

Essentially, SLO-SYN Adjustable Speed Drive type ST1800BV is a translator which includes a built-in oscillator to supply the triggering signals. Oscillator frequency can be adjusted to vary the speed from 4 steps/second up to the maximum permissible with the motor used. Direction of rotation can be controlled either from the front panel or from a remotely located switch.

SLO-SYN® *Translator Module*



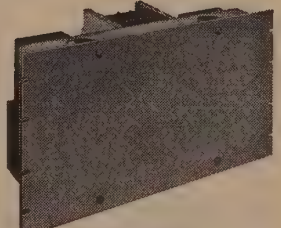
TYPE STM1800V

Plug-in circuit boards with logic capabilities for stepping a SLO-SYN motor in 1.8° increments. Type STM1800 is a basic translator which will provide bi-directional motor operation. Type STM1800V is similar but includes a built-in oscillator which can be adjusted to drive the motor at speeds from 4 steps/second up to maximum at which the motor will drive the load.

SLO-SYN® *High Speed Drives*

Translator

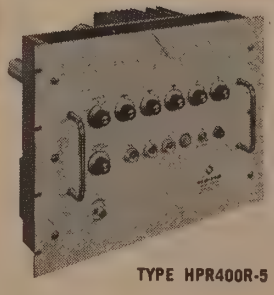
Drive SLO-SYN Precision Stepping Motors up to 2000 steps per second without losing any steps. Triggering the translator circuits is an internal oscillator which can supply a variable frequency range adjustable from 50 to 2000 steps per second. Triggering pulses can be supplied by tape readers, computers, oscillators, pulse generators and other signal producing equipment.



TYPE HTR400

Preset Indexer

Drive SLO-SYN Precision Stepping Motors in indexing and other positioning operations. Acceleration and deceleration circuits permit driving motors up to 2000 steps per second without missing any steps. Decade counter controls on front panel allow the operator to select any desired positioning increment. Optional backlash take-up circuit.



TYPE HPR400R-5

THE SUPERIOR ELECTRIC COMPANY

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100, 4000 AND 5600

© United Technical Publications

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

AUTOTRON

Transistorized A725 ON/OFF Control A750 and A750DA Timing Controls

AUTOTRON, INC., Danville, Ill. 61832

Features of A725, A750 and A750DA

One connection changes from LIGHT- to DARK-energized operation (or vice versa).

5.8, 4.7, 3.3, 2.5, 2.2 and 1.1 Light Source Voltages makes available minimum suitable voltage for maximum lamp life and maximum speed of sensing cell response.

Rugged, 5-amp DPDT Plug-in Relay.

a. **Plug-in mounting** permits replacement in seconds without special skill or tools

b. **Transparent enclosure** protects against dust, physical injury and tampering.

Rectified output current for positive and QUIET operation of control relay.

Transistors protected from transient voltages.

Cad Cells are exceptionally well shielded from extraneous light.

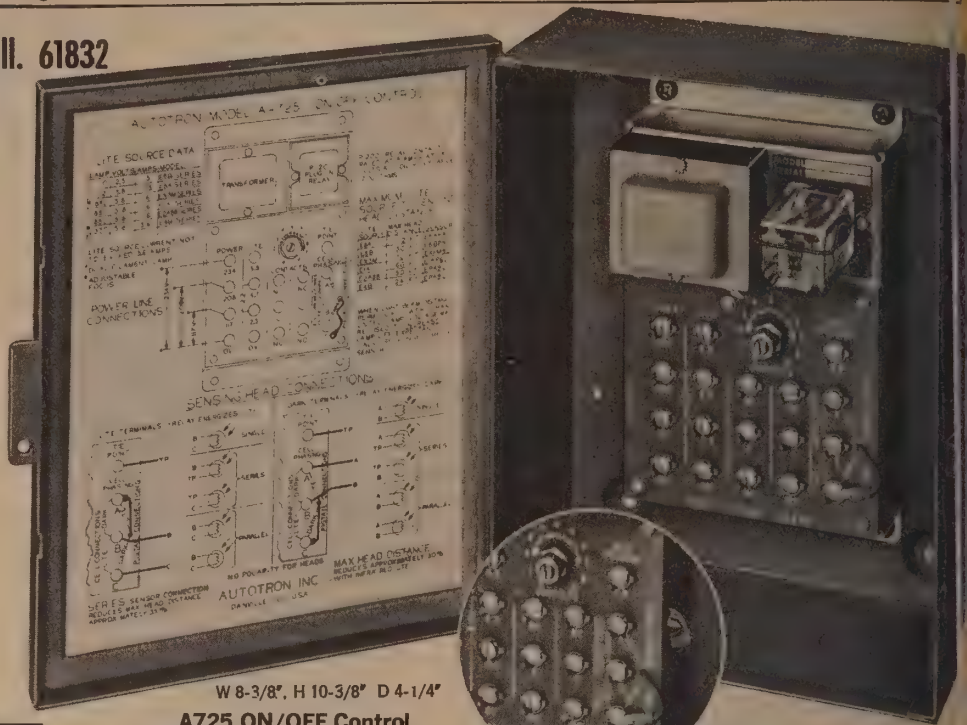
All circuit components are securely mounted on a modern circuit board.

All contacts of the DPDT Relay wired to large, screw type terminals.

Operate at ambient temperatures to 115°F.

In JIC enclosures at $12.50 extra.

Operate from 234, 208 and 117 V, 50-60 c.



W 8-3/8", H 10-3/8" D 4-1/4"

A725 ON/OFF Control
A750 and A750DA models come in the same cabinet with wiring diagrams mounted in the cover.

Sensitivity adjustment on A725M, A750P, A750M, A750DA and A750DAM Controls

A725 ON/OFF Control

FAST ACTING – .025 sec. light time and .025 sec. dark time minimum.

SENSITIVE – Adjustment has shaft lock.

Power Consumption, 25 VA.

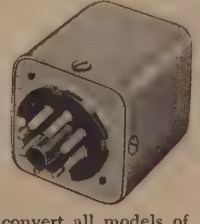
Energizes LIGHT connected to LIGHT terminals.

Energized DARK connected to DARK terminal.

A725 ON/OFF Control less heads.....$69.50
■A725M ON/OFF Control less heads..... 79.50

Control-Pak Numbers Control-Sensor-Light Source	Max. Feet betw. heads	Control-Pak Net Price
A725-E8AAP10LC-E8AC	2	$102.50#
A725-E8AP10LC-E8AC	2	102.50#
A725-E8BAP10LC-E8BAC	10	102.50#
A725-E8BP10LC-E8BC	20	102.50#
●A725-E8ZP10-E8Z10	20	159.50
■A725M-E8BP5AC-E8BC	20	127.50
■●A725M-E8ZP5A-E8Z10	20	184.50
A725-EXPM10LC-EX3ME	50	109.50
A725-E1AP10LC-E1AE	45	104.50
A725-EPB10LC-E3BE	100	109.50
A725-EPB10LC-E4CE	20	127.50
A725-ECP10LC-ECC	2	102.50
A725-EAP12G-ELG	3 in.	93.00
A725-PF10LC-LFE	5	157.50
A725-ELA10TH	‡†10	▲98.25
A725-A700EH-7C		107.00

A870 Solid State AC Switch



Replaces plug-in relay to convert all models of A725, A750 and A750DA series for solid state operation **from 117 VAC power supply ONLY.** Wiring diagram included with each switch.

Output: 117 VAC; 400 watt, 3.4 amperes maximum load, 100 milliamperes minimum.

Ambient Temperature: 115° maximum.

Module temperature increases with load current. At 3 amp. load current, case temperature is normally 130° max.

A870 Solid State AC Switch including Jumper Wires and Fuse Holder with Fuse.....**$52.50**

A870 Solid State Switch can also be furnished for other applications. Information on request.

A750 Timing Control

Timing Ranges (specify)

Range No. .7 adjustable 1 to 8 seconds, approx.
Range No. 1.0–2 to 16 seconds, approx.
(other ranges available–tell us what you need)
Timing adjustment has shaft lock.

Energizes LIGHT and times out DARK connected to LIGHT terminal. Recycle time is almost instant (.015 sec. max.) and is independent of light level on the sensing cell. Timing control is voltage regulated and variation in timing between 100 and 130 volts is negligible.

Energizes DARK and times out LIGHT connected to DARK terminal. Recycle time is 50 milliseconds min. depending on light intensity on the sensing cell. For minimum recycle time reduce light intensity to minimum operating value.

Power consumption, 25 VA.

A750 Timing Control less heads $88.00
■A750M Timing Control less heads.....108.00

Control-Pak Numbers Control-Sensor-Light Source	Max. Feet betw. heads	Control-Pak Net Price
A750-E8AAP10LC-E8AC	1	$121.00#
A750-E8AP10LC-E8AC	1	121.00#
A750-E8BAP10LC-E8BAC	7.5	121.00#
A750-E8BP10LC-E8BC	15	121.00#
●A750-E8ZP10-E8Z10	15	178.00
■A750M-E8BP5AC-E8BC	15	156.00
●■A750M-E8ZP5A-E8Z10	15	213.00
A750-EXPM10LC-EX3ME	35	128.00
A750-E1AP10LC-E1AE	30	123.00
A750-EPB10LC-E3BE	75	128.00
A750-EPB10LC-E4CE	12	146.00
A750-ECP10LC-ECC	1	121.00
A750-EAP12G-ELG	1.5 in.	111.50
A750-PF10LC-LFE	2.5	176.00
□A750P-ELA10TH	††6	▲126.75
A750-A700EH-7C		125.50

■ **The suffix "M" in A725M, A750M, and A750DAM identifies extremely sensitive controls with sensitivity adjustment that operate with very short light change. The "M" type controls have been developed for operation by photo sensors that have the "5A Feature" described on the opposite page. This combination is used for scanning register marks, for sensing fast moving objects and other applications where light change is short. Sensors with the 5A Feature are also used where the sensing head is exposed to high temperature.**

A750DA Extra Fast Timed Output Pulse Width Control

Timing Ranges same as A750

The Control Relay of the A750DA energiz instantaneously with adequate light change ar de-energizes at expiration of pre-set timing p riod as follows:

With LIGHT Terminal connection the contr relay energizes instantly when the cell receiv enough light; remains energized even though th cell goes dark and de-energizes when the Timir Period expires, except: while the relay is ene gized, if the cell goes **DARK and then go LIGHT** before the Timing Period expires th relay remains energized **and a NEW Timir Period starts.**

With DARK terminal connection, DARK on th cell produces the same relay action as LIGH does in the above.

Timing and Sensitivity Adjustments are insic cabinet.
Adjustable time delay repeat accuracy 1%. Tim Delay adjustment has shaft lock.

Power consumption, 25 VA.

A750DA Timing Control less heads.....$124.0
■A750DAM Timing Control less heads.. 134.0

Control-Pak Numbers Control-Sensor-Light Source	Max. Feet betw. heads	Control-P Net Pric
A750DA-E8AAP10LC-E8AC	2	$157.00
A750DA-E8AP10LC-E8AC	2	157.00
A750DA-E8BAP10LC-E8BAC	10	157.00
A750DA-E8BP10LC-E8BC	20	157.00
●A750DA-E8ZP10-E8Z10	20	214.00
■A750DAM-E8BP5AC-E8BC	20	182.00
●■A750DAM-E8ZP5A-E8Z10	20	239.00
A750DA-EXPM10LC-EX3ME	50	164.00
A750DA-E1AP10LC-E1AE	45	159.00
A750DA-EPB10LC-E3BE	100	164.00
A750DA-EPB10LC-E4CE	20	182.00
A750DA-ECP10LC-ECC	2	157.00
A750DA-EAP12G-ELG	3 in.	147.50
A750DA-PF10LC-LFE	5	212.00
A750DA-ELA10TH	‡†10	▲152.75

● E8ZP10, E8ZP5A and E8Z10 Heads are UL listed explosion proof but the control is not. Information on explosio proof enclosures furnished on request

†Distance between Scanner Lens and Reflector
‡When used with No. P380 Retro-Reflector
▲No. P380 Retro-Reflector, 3" diameter, $1.50 additiona
□A750P has sensitivity adjustment with shaft lock.

All Sensors and Light Sources listed in these tables are illustrated and described on the opposite page.

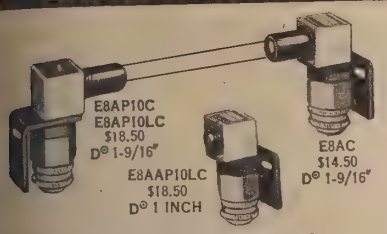
Net

© United Technical Publications

Remote Sensing and Light Source Heads including UL listed, Fiber Optic and Retro-reflective.

AUTOTRON

E8AP/E8A Remote Heads



Series E8A and E8B Construction

Housings are machined from aluminum. Lenses are ground and polished. Lens assemblies are easily removed without dismounting to provide accessibility for inspection or replacement of cell or lamp.

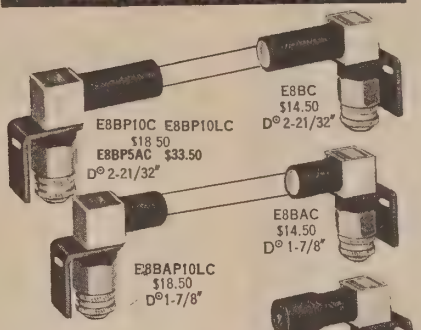
Heads can be turned to any position in the mounting brackets. Overall height, including bracket, 2¼"; including cord grip, approx. 2½"; overall width, including bracket, 15/16". Dimensional diagrams on request.

The 5A Feature for High Speed Sensing and High Temperatures.

Sensing Heads with the **5A Feature** rise in 4 milliseconds and decay in 60 milliseconds. The sensing cell withstands temperatures up to 200°F. When required, practically any AUTOTRON photo sensing head can be furnished with the 5A Feature at extra cost.

Sensors with the 5A Feature are designed for use with A725M, A750M and A750AM described on the facing page.

E8BP/E8B Remote Heads



Infrared Filter for E8B Heads Easily installed and removed. Gives Light Source invisible infrared beam. Shields sensor from ambient fluorescent light. Reduces max. distance about 50%

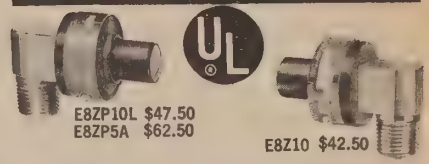


ECP10LC-ECC Subminiature Heads



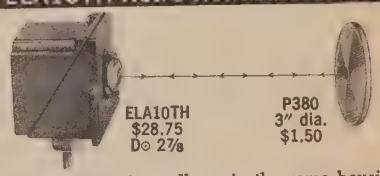
Each head is ¾" diameter by 2½" long; equipped with 6-foot cord potted to the head, equipped with ¾ NPT fitting for connection to control. Lamp rating; .38 amps at 2.5 volts. Life expectancy, 7,500 hours. Cell and lamp is easily replaceable.

UL listed E8Z Series Heads



Series E8B cells, lamps and lenses in explosion proof housings, for use in hazardous locations. Underwriters' Laboratories listing: Class I, Groups C and D; Class II, Groups E, F, and G. E8Z10 rated 1.25 w, 2.5 v; E8ZP10L rated 0.125 va. maximum, 40 v. maximum; E8ZP5A rated 0.250 va maximum, 10 v, dc maximum. Mounting threaded for ½-14 NPT. Potted leads, 24" long. Overall size: Approx. 2 15/16" long; 2" high, 1 9/16" wide.

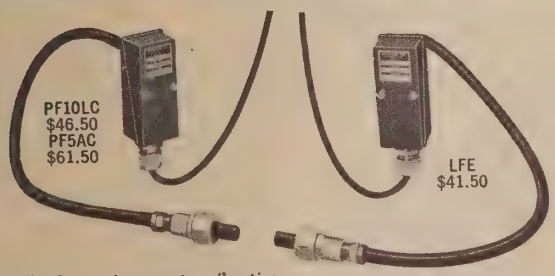
ELA10TH Retro-Reflective Sensor



Lamp and sensing cell are in the same housing. Light projected through the lens strikes a retro-reflective surface and returns through the same lens to the sensing cell. The retro-reflective surface may be tilted up to 15° from perpendicular to the light path.

Gasket-sealed, cast aluminum case with 6-foot multi-conductor cable. Slots in mounting flanges are 1" long on 3 1/16" centers. Overall width 3 15/16", height 2 13/16"

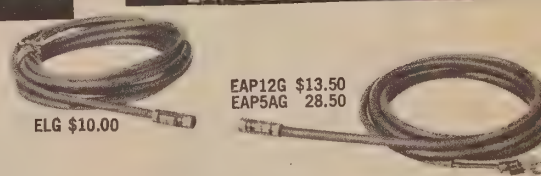
PF10LC-LFE Fiber Optic Remote Heads.



Developed especially for resistance to vibration as well as simplicity of application and alignment in hard-to-get-at places. The Fiber Optic Cables may be bent in any direction with curves of ¾" radius or more.

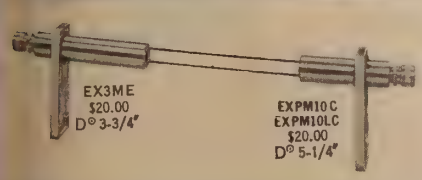
Each sensing head or light source has a gasket sealed case housing the lamp or cell. The lens tube is assembled to a Fiber Optic Cable, 24" long which is connected to the housing. A 6-foot factory installed cable connects the lamp or cell housing to the control. The heads are equipped with infrared filters for screening out fluorescent light. The lamp is rated .38 amperes at 2.5 volts. Life expectancy is 7,500 hours.

EAP12G-ELG Assemblies



Lens, cell or lamp and 6-foot cable connection are potted in a tube, 9/32" diameter by 1" long. Potting for protection against application conditions and mechanical injury makes the assembly permanent. In case of failure the entire assembly must be replaced. Lamp rating; .38 amps. at 2.5 volts. Life expectancy, 7,500 hours.

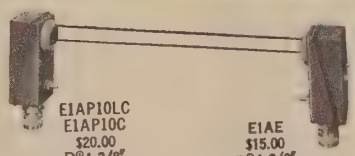
EXPM/EX3M Remote Heads



EX3ME Adjustable Focus Light Source has light beam adjustable from focal size of ⅛" x ¼" at 2" focal length to 7/16" x 1" focal size at 6" focal length. Also adjustable to straight light beam. No. 88, 1.6 ampere lamp is housed with ¾" diameter lens in brass tube mounted in aluminum bracket. Height 4¾"; width 1½".

EXPM9C Sensing Head has cad cell housed with ¾" diameter lens in brass tube mounted in aluminum bracket. Height, 4¾"; width, 1½".

E1AP/E1A Remote Heads



Series E1A heads have ¾" diameter lenses mounted in flexible silicon rubber. Gasket sealed aluminum cases are tapped for ½" conduit. May be adjusted with rigidly positioned on ½" pipe or conduit with lock nut. Case easily opened for inspection of lamp or cell with mounting undisturbed. Depth of case in direction of light beam, 1⅜"; width, 1-7/16"; height 3⅝".

36-page Catalog including 51 application diagrams mailed promptly on request.

In the illustrations and in the Control-Paks photo sensors and light sources are shown in matched pairs for simplicity of arrangement. Any sensing head can be used with any light source if the light source provides enough light to operate the sensor.

EPB10C-E3BE and E4CE



Each above unit has 1½ inch diameter lens in an aluminum lens holder mounted in a gasket sealed cast aluminum case with adjustable mounting bracket. Case is tapped for ¾" conduit. Weight 3½ lbs. Depth 5 11/16", Width 4" Height 5¼".

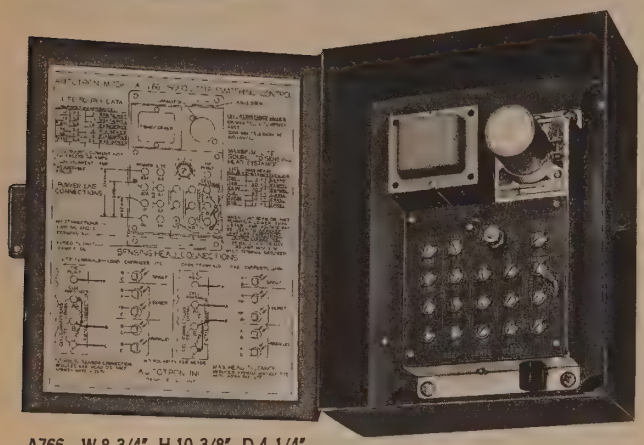
E3BE has No. 88L lamp, rated 1.6 amp. at 5.8 v. Focusing adjustment provides ½x⅛" focal size at 12" focal length; ⅞x¼" focal size at 24" and 1¼x⅜" focal size at 36" focal length.

E4CE has No. 2330B **prefocused two-filament** lamp rated 3.6 amps. at 5.8 v. The two filaments maintain light source continuity; when one fails a built-in relay switches on the other filament and a signal lamp; also operates SPDT contacts which may be used for remote warning control. The prefocused lamp is replaceable with minimum change in light beam. **Extra** low voltage connection for prolonged life.

© United Technical Publications

AUTOTRON

A766 Photo-Control with Solid State Switching
A741B High-Speed Counting Eye



A766 - W 8-3/4", H 10-3/8", D 4-1/4"

A766 Transistorized Photo Control with Solid State Switching

A766 Photoelectric Control uses Solid State Switching instead of conventional relays, thereby avoiding weaknesses inherent with mechanical contactors.

Features

24 VDC Fused Output, 30 watt max.—20-ohm load min.

LIGHT- or DARK-actuated—a single connection adjusts phasing.

FAST ACTING—.04 second DARK time; .02 second LIGHT time.

Sensitivity Adjustment with shaft lock.

Transistors are protected from transient voltage.

Choice of 5.8, 4.7, 3.3, 2.5, 2.2 and 1.1 Light Source Voltage provides optimum operating voltage for prolonged lamp life and increased speed of sensing cell response.

All circuit components are securely mounted on printed circuit board.

Operates at ambient temperatures up to 115°F.

Furnished in JIC enclosures at $12.50 extra.

Power consumption, 45 watts, maximum.

Operates from 234, 208, and 117 V, 50-60 C.

A766 Control without pick-up.....$88.50

Control-Pak Numbers Control-Sensor-Light Source	Max. Feet betw. heads	Control-Pak Net Prices
A766-E8AP10LC-E8AC	2 ft.	$121.50#
A766-E8BP10LC-E8BC	20 ft.	121.50#
●A766-E8ZP10-E8Z10	20 ft.	178.50
A766-EXPM10LC-EX3ME	50 ft.	128.50
A766-E1AP10LC-E1AE	45 ft.	123.50
A766-EPB10LC-E3BE	100 ft.	128.50
A766-EPB10LC-E4CE	20 ft.	146.50
Reflective Sensors		
A766-ELA10TH	†10 ft.	▲117.25
A766-E8LP12G*	3 in.	117.25
A766-E8S12G*	3 in.	117.25
A766-E8S12G-6A*	fl 3¼ in.	120.75
A766-E8S12G-4A*	fl ⅞ in.	120.75

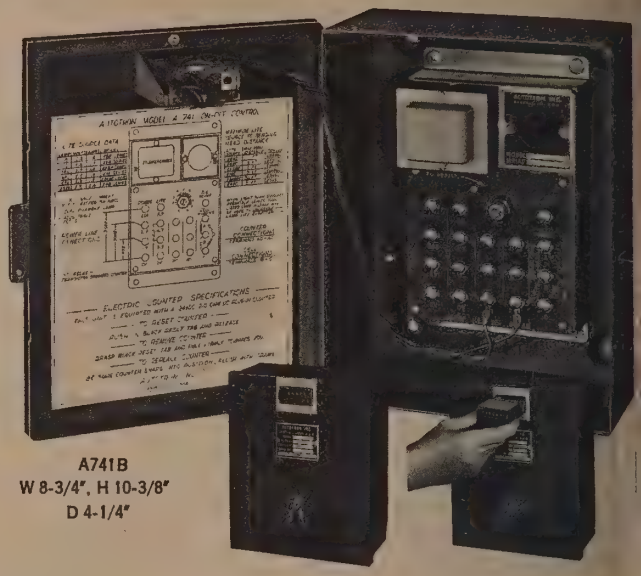
*Described on page 3
†Distance between Scanner Lens and Reflector
‡When used with No. P380 Retro-Reflector
▲No. P380 Retro-Reflector, 3" diameter, $1.50 additional.
fl Focal length

#Mounting bracket and cord grip are standard. Furnished with cord assembly potted inside housing, without mounting bracket at no extra charge when specified.

Use of infrared filters reduces maximum distance between heads approximately 50%

All sensing, light source and reflector type heads are equipped with factory installed 6-foot cables for connecting to controls.

Do Dimension in direction of Light Beam



A741B
W 8-3/4", H 10-3/8"
D 4-1/4"

A741B Hi-Speed Transistorized Counting Ey

Rectified output current for positive DC actuation of F043 Counter-relay contacts to maintain.

25 counts per sec. (.015 sec. min. Light, .025 sec. min. Dark).

Instant Reset 6-digit Plug-in Counter—counts up to 40 million cou without missing a count. Life expectancy 150 million counts. Eas removed for inspection or replacement.

Provides 5.8, 4.7, 3.3, 2.5, 2.2, and 1.1 Light Source Voltages.

Transistors are protected from transient voltages.

All circuit components are securely mounted on printed circuit board.

Operate at ambient temperatures up to 115°F.

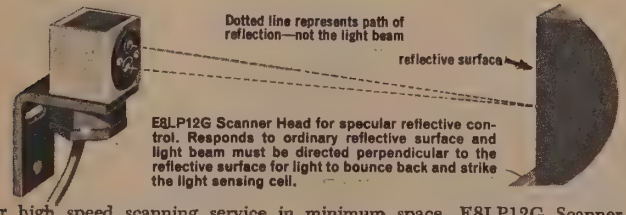
Operate from 234, 208 and117 v, 50-60 c.

Power Consumption 20 watts.

A741B—Includes A741 Control with F043C Counter, Socket and Fra assembly mounted in Control Door Panel and wired as illustrated. $122.

Counting Eye Pack No. Counter Photo Light Control Sensor Source	Maximum distance	Counting Eye Pack Prices
A741B-E8AP10LC-E8AC	1 ft.	$155.00
A741B-F8BP10LC-E8BC	8 ft.	155.00
●A741B-E8ZP10-E8Z10	8 ft.	212.00
A741B-EXPM10C-EX3ME	15 ft.	162.00
A741B-E1AP10C-E1AE	10 ft.	157.00
A741B-EPB10C-E3BE	30 ft.	162.00
A741B-EPB10C-E4CE	12 ft.	180.00
Reflective Sensors		
A741B-E8LP12G*	3 in.	150.75
A741B-E8S12G*	3 in.	150.75
A741B-E8S12G-6A*	fl 3¼ in.	154.25
A741B-E8Z12G-4A*	fl ⅞ in.	154.25

E8LP12G Specular Reflective Scanner Head

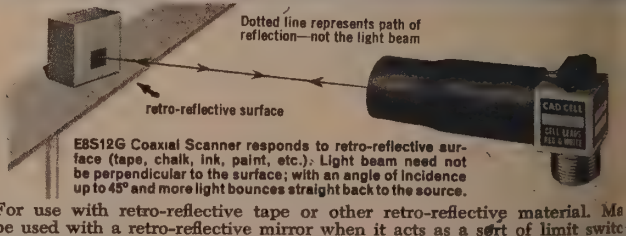


For high speed scanning service in minimum space. E8LP12G Scanner Head combines the fast acting cadmium selenide cell and the light source lamp in a single miniature housing (approximately ⅞ inch in all three dimensions plus ⅜" male pipe thread connection. See dimensional diagram below.)

The light sensing element is a fast response, cadmium selenide cell. The lamp has a built-in lens. An infrared filter helps protect against ambient light. The lamp rating is 2.5 volts at .5 amperes-life expectancy up to 75,000 hours depending on operating voltage.

E8LP12G Scanner Head including mounting bracket, also 6-foot factory-connected cable with cable grip and seal for connecting to 800 control. **$28.75**

E8S12G Retro-Reflective Scanner Head



For use with retro-reflective tape or other retro-reflective material. Ma be used with a retro-reflective mirror when it acts as a sort of limit switc or for detecting or identifying objects with retro-reflective marking code marks, labels, etc.

The light beam does not need to be perpendicular to the retro-reflecti surface; beams at angles up to 15° and more (depending on condition bounce straight back to the cell.

E8S12G Scanner Head† with mounting bracket, 6-foot factory connecte cable, cable grip and seal for connection to the control..... **$28.7**

E8S12G-6A has a fixed pin-point beam; focal size 1/16x5/16 at 3¼"

E8S12G-4A has 1/32x⅛" focal size at ⅞" from the end of the light shield.

E8S12G-6A and E8S12G-4A complete with mounting bracket, 6-foot fac tory connected cable, cable seal and grip.....each **$32.2**

Net

© United Technical Publications

High Sensitivity, Transistorized, Compact Photoelectric Controls

AUTOTRON

A579C ON/OFF and A579CP Timing Controls

eatures of above controls

ransistorized. Light Energized

owerful Cad Cell is shock-protective nounted in fixed alignment.

ad Cell is exceptionally well shielded rom extraneous light.

ast Acting – .02 second light; .03 econd dark time, minimum.

ensitive–5 fc minimum light.

ugged, 5-ampere DPDT plug-in re-ay, in plastic enclosure.

ens, ¾" diameter, mounted in flex-ble silicon rubber.

ower consumption, 5 VA. For 115/ 30 v, 50-60 c.

erminals for 2.5 v light source.

Rectified output for positive and QUIET DC control relay operation.

Transistors are protected from transient voltage.

All circuit components are securely mounted on printed circuit board.

All relay contacts are wired to large, screw type terminals.

Cast aluminum case is gasket-sealed.

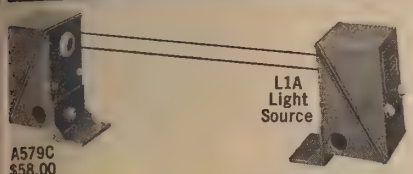
Maximum ambient temperature is 115°F.

Gasket-sealed cast aluminum case, tapped for ¾" conduit, has adjustable mounting bracket.

D° 3 9/16, W 4", H 5½". Weight 3 lb.



A579C ON/OFF Control



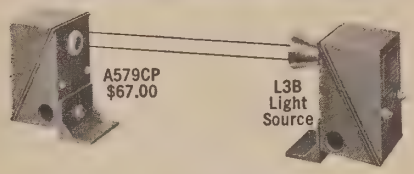
Control relay energizes when light is on the cell; de-energizes when light beam is interrupted.

Time Delay is easily added by connecting capacitor to marked terminals. The delay times out DARK (delays de-energizing of control relay when light beam is interrupted). Instructions included with each control.

Control-Pak Numbers Control-Light Source	Max. Feet betw. heads	Control-Pak Net Prices
A579C-L1A	15	$ 77.75
A579C-L2B	30	81.80
A579C-L3B	30	85.50
A579C-L4	15	107.50
A579C-L6C		94.00
A579C-L6R		106.00

Light Sources are described on page 6

A579CP Timing Control



Relay energizes LIGHT: times out DARK (when light beam is interrupted timing elapses before relay de-energizes) Time Delay adjustment from outside case; equipped with shaft lock.

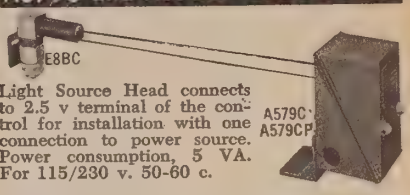
Repeat accuracy 4%.

Timing Ranges { Adjustable } No. 0.4: 0.1 to 5 sec. No. 2.0: 1.0 to 20 sec.

Control-Pak Numbers Control-Light Source	Max. Feet betw. heads	Control-Pak Net Prices
A579CP-L1A	15	$ 86.75
A579CP-L2B	30	90.80
A579CP-L3B	30	94.50
A579CP-L4	15	116.50
A579CP-L6C		103.00
A579CP-L6R		115.00

Specify Adjustable Timing Range listed above

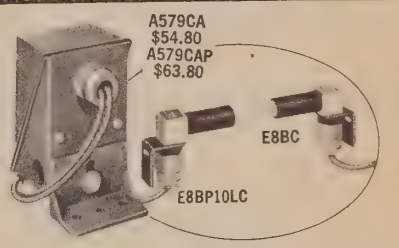
A579C and A579CP E8BC C-Paks



Light Source Head connects to 2.5 v terminal of the control for installation with one connection to power source. Power consumption, 5 VA. For 115/230 v. 50-60 c.

Control-Pak Numbers Control-Light Head	Max. Feet betw. heads	Control-Pak Net Prices
A579C-E8BC	6	$ 72.50
●A579C-E8Z10	6	100.50
Timing Controls—Specify Timing Range		
A579CP-E8BC	3	81.50
●A579CP-E8Z10	3	109.50

A579CA A579CAP Control-Paks



A579CA and A579CAP have the same features as A579C and A579CP except the lens and sensing element are omitted and terminals are provided for connecting a remote sensing head and a 2.5 v light source.

Control-Pak Numbers Control-Sensor-Light	Max. Feet	Control-Pak Net Prices
A579CA-E8BAP10LC-E8BAC	6	$ 87.80
A579CA-E8BP10LC-E8BC	12	87.80
●A579CA-E8ZP10L-E8Z10	12	144.80
Timing Controls—Specify Timing Range		
A579CAP-E8BAP10LC-E8BAC	3	96.80
A579CAP-E8BP10LC-E8BC	6	96.80
●A579CAP-E8ZP10L-E8Z10	6	153.80

Sensing and Light Source Heads described on Page 2

800C and 800CM Dark-energized ON/OFF Controls

Energizes with the sensing cell DARK.

Chatter free relay operation–due to square wave signal sent to relay coil.

The latest silicon transistors assure extreme temperature stability.

FAST ACTING: .02 second light, .03 second dark, minimum. 800CM is exceptionally fast; 4 microseconds rise time, 60 microseconds decay time.

Sensitivity adjustment has shaft lock.

De-energizing delay can be added by user. Instructions included with each control.

Operate at temperatures up to 115°F. 800CM operates at temperatures to 200°F.

Has terminals for 2.5 v light source.

Rugged 5-ampere DPDT Relay, plug-in mounted with "see-thru" plastic cover.

All contacts of the relay wired to screw type terminals.

Transistors are protected from transient voltage.

All circuit components are mounted on a circuit board.

Gasket-sealed cast aluminum case, tapped for ¾" conduit, has adjustable mounting bracket.

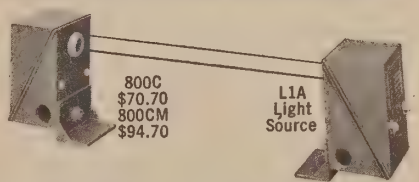
Lens, ¾" diameter, mounted in flexible silicon rubber.

Power Consumption, 5 VA. For 115/230 v, 50-60 c.

D° 3 9/16", W 4", H 5½". Weight 3 lbs.

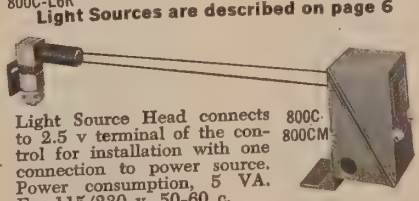
M suffix identifies extremely sensitive controls with sensitivity adjustment that operate with very short light change. The "M" type controls have been developed for operation by photo sensors that have the "5A Feature" described on Page 2 This combination is used for scanning register marks, for sensing fast moving objects and other applications where light change is short.

800C ON/OFF Control-Paks



Control-Pak Numbers Control-Light Source	Max. Feet betw. heads	Control-Pak Net Prices
800C-L1A	15	$ 90.45
800C-L2B	30	94.50
800C-L3B	30	98.20
800C-L4	15	120.20
800C-L6C		106.70
800C-L6R		118.70

Light Sources are described on page 6

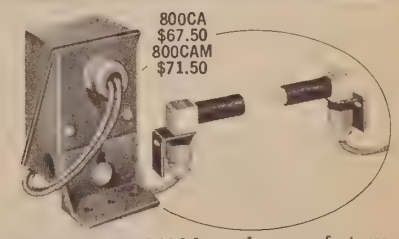


Light Source Head connects to 2.5 v terminal of the control for installation with one connection to power source. Power consumption, 5 VA. For 115/230 v. 50-60 c.

Control-Pak Numbers Control-Light Source	Max. Feet betw. lenses	Control-Pak Net Prices
800C-E8BC	6	$ 85.20
■800CM-E8BP5AC	6	128.20
●800C-E8Z10	6	113.20

Sensors with the 5A Feature are also used where the sensing head is exposed to high temperature.

800CA ON/OFF Control-Paks



800CA and 800CAM have the same features as 800C and 800CM except the lens and sensing element are omitted and terminals are provided for connecting a remote sensing head and a 2.5 v. light source.

Control-Pak Numbers Control-Sensor-Light Source	Max. Feet betw. heads	Control-Pak Net Prices
800CA-E8BAP10LC-E8BAC	12 ft.	$100.50
●800CA-E8ZP10L-E8Z10	12 ft.	157.50
■800CAM-E8BP5AC-E8BC	12 ft.	119.50
800CA-PF10LC-LFE	6 ft.	155.50
800CA-EBP10LC-EBC	2 ft.	100.50
800CA-EAP12G-ELG	4 in.	91.00
800CA-A700EH-7C		105.00
800CA-E8LP12G	6 in.	96.25
800CA-E8S12G	30 in.	96.25
800CA-E8S12G-6A	3¼ in.	99.75
800CA-E8S12G-4A	⅛ in.	99.75
■●800CAM-E8ZP5A-E8Z10	12 ft.	176.50

• E8ZP10, E8ZP5A and E8Z10 Heads are UL listed explosion proof but the control is not. Information on controls in explosion proof enclosures furnished on request.

Sensor and Light Source Heads described on Pages 2 and 3

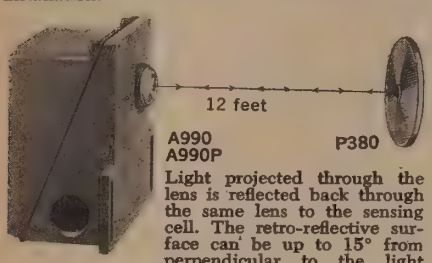
© United Technical Publications

AUTOTRON

Retro-Reflective Photoelectric Controls
Tube Type Photoelectric Controls

A990 ON/OFF and A990P Timing Controls

A900 and A900P each is a Control-Pak in one case. Sensing cell, light source, amplifiers, sensitivity adjustment and control relay are all in the same housing. Only one connection to power is required. A retro-reflective surface completes the installation.



Light projected through the lens is reflected back through the same lens to the sensing cell. The retro-reflective surface can be up to 15° from perpendicular to the light beam. Retro-reflective tape, paint, etc. may be used. Retro-reflective quality of the target affects operating distance.

A990 and A990P Features

High Sensitivity. Available with and without sensitivity adjustment.

Provides dependable operation when objects block the light beam; also with limited light change such as may be provided by retro-reflective tape on a moving carton.

Transistorized.

Rugged 5-amp DPDT plug-in relay, with dust cover.

Rectified output for DC operation of Relay.

Transistors protected from transient voltage.

All circuit components securely mounted on modern printed circuit board.

All Relay Contacts wired to screw type terminals.

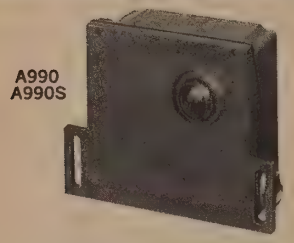
Maximum ambient operating temperature, 115°F.

Gasket-sealed cast aluminum case tapped for ¾" conduit.

D (direction of light beam) 3⅛", W 6¼", H 5 1/16". Shipping weight, 3½ lbs.

Power Consumption, 10 VA. For 115/230 v, 50-60 c.

A990 ON/OFF Controls



Control relay energizes LIGHT; de-energizes DARK.

Fast Acting: .02 second light; .03 second dark, minimum.

Max. distance, lens to Retro-reflector, 12 ft.

A990 Retro-Reflective ON/OFF Control
Has pre-adjusted sensitivity.....**$59.00***

A990S Retro-Reflective ON/OFF Control
Has sensitivity adjustment from outside case.....**$65.00***

*P380 Retro-reflector, 3" dia. $1.50 extra
*P380A Retro-reflector, 1½" dia. $0.75 extra
*P380B Retro-reflector, ⅞" dia. $0.40 extra

A990P Timing Controls



A single switch adjusts Control Relay to **Energize LIGHT and time out DARK** or to **Energize DARK and time out LIGHT.** Max. distance, lens to Retro-reflector, 15 ft.

Timing Range
No. 0.5 — 0.5 to 4.5 seconds
No. 0.7 — 1 to 8 seconds

A990P Retro-Reflective Timing Control
Has pre-adjusted sensitivity.....**$69.00***

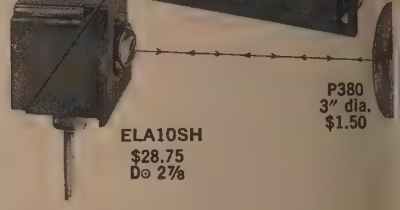
A990PS Retro-Reflective Timing Control
Has sensitivity adjustment from outside case.....**$75.00***

Retro-Reflective Control-Pa



ELA10SH is a remote Retro-reflective Sen Head designed for use with **A990A** and **A99** Controls described below.

A990A and **A990PA** have the same feature **A990** and **A990P** respectively except the sen element is omitted and terminals are prov for connecting ELA10SH Retro-reflective S ner Head. For 115-230 v., 50-60 c. Power sumption 10 VA.



A990A-ELA10SH A990A has pre-adjusted se sitivity **$82.7**

A990AS-ELA10SH A990AS has sensitivity a justment from outside case.....**$88.7**

Retro-Reflective Timing C-Paks

A990PA-ELA10SH A990PA has pre-adjust sensitivity **$92.7**

A990PAS-ELA10SH A990PAS has sensitivi adjustment from outside case.....**$98.7**

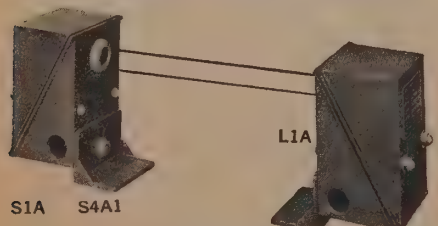
With above controls maximum distance betwe ELA10SH and P380 Retro-reflector is 15 fe

ON/OFF and Timing Photo Controls with Tube Type Sensors

S Series ON/OFF Controls

Rugged, industrial Photoelectric Controls, factory adjusted for use where object interrupts the light beam 100%. Minimum dark time, .06 second; minimum light time, .06 second. Control relay contacts, SPDT, rated 8 amps. at 115 VAC, noninductive load. Splashproof cast aluminum case with adjustable bracket; tapped for ¾" conduit. Power consumption 10 watts.

S1A and S4A1 ON/OFF Controls



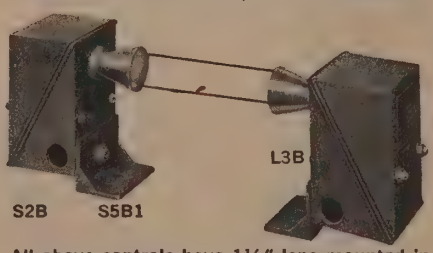
All above controls have ¾" lens mounted in flexible silicon rubber. Require 20 foot-candles minimum light. Weight, 2 lb. Dimensions, diagram 24A.

DARK† energized	LIGHT† energized	50-60 cycles VOLTS	NET each
S1A	S4A1	115/220	$43.75

S Series Control-Paks

Control-Paks energized DARK	Control-Paks energized LIGHT	max. ft. between lenses	Min. Dark Time	Min. Light Time	Net per Set
S1A-L1A	S4A1-L1A	8	.06	.06	$63.50
S1A-L2B	S4A1-L2B	8	.06	.06	67.55
S2B-L1A	S5B1-L1A	12	.06	.06	69.50
S2B-L2B	S5B1-L2B	20	.06	.06	73.55
S2B-L3B	S5B1-L3B	20	.06	.06	77.25
S2B-L4	S5B1-L4	norm. 12 / low 4	.06	.06	99.25

S2B and S5B1 ON/OFF Controls



All above controls have 1½" lens mounted in aluminum lens tube. Requires 10 foot-candles minimum light. Weight, 3 lb. Dimensions, diagram 24B.

DARK† energized	LIGHT† energized	50-60 cycles VOLTS	NET each
S2B	S5B1	115/230	$49.75

T1B Timing Contr



Relay energizes DARK—unit times out DAR Time delay with shaft lock adjustment from to 10 seconds. Repeat accuracy 4% Minimu light 40 foot-candles. Control Relay contac SPDT, rated 8 amps at 115 VAC, non-indu tive. Splashproof aluminum case tapped ¾" conduit. Adjustable mounting brack Lens dia. 1½" Power consumption 10 wat 115/230 V., 50-60 cycles. Weight 3 lbs. Dime sions, Diagram 24B.

T1B Timing Control.....**$62.5**

T1B Timing Control-Paks

Control-Paks	max. ft. between lenses	Min. dark time	Min. light time	Price per set
T1B-L1A	5 ft.	—	.5	$82.2
T1B-L2B	10 ft.	—	.5	86.3
T1B-L3B	10 ft.	—	.5	90.0

Light Sources are described on page 6

AUTOTRON, INC., 3629 N. Vermilion, Danville, Ill. 61832 Phone 217-446-0650 TWX-910-244-1455

 © United Technical Publication

Light Sources for use with Photoelectric Controls
Compact Photoelectric Controls

AUTOTRON

Series L1 Light Sources

A, L1D and L1DA Light Sources all have se features—

Lens, ¾" diameter, mounted in flexible silicon rubber.

Lamp, 88L, rated 1.6 amps. at 5.8 volts.

5.8V. and 4.8V. transformer tap leads for lamp operation; the EXTRA 4.8V. lead permits low voltage operation where feasible to prolong lamp life.

Gasket-sealed cast aluminum case that provides access to the lamp with mounting alignment undisturbed.

L1A Light Source



D⊙3⅜, W 4, H 5½

Has gasket-sealed cast aluminum case tapped for ¾" conduit with adjustable and reversible mounting bracket. Weight, 3½ lbs.

L1A Light Source.....$19.75

L1AR	L1AY	L1ARY	L1ABA	L1ARBA
31.75	$24.75	$36.75	$29.75	$41.75

L1D Light Source

L1D: D⊙ 1.93", W 3.28", H 5.62"



Space-saving gasket-sealed cast aluminum case has mounting flanges front and bottom. Front flanges have four mounting slots; bottom flanges have four mounting holes for ¼" bolts on ⅞" x 2⅝" centers.

Lamp operates at low voltage for extended life. Case is tapped for ½" conduit. For 115/230V 50-60C. Weight 1¾ lbs.

L1D Light Source Net $18.50

L1DA Light Source

L1DA: D⊙ 2.18", W 1.96", H 5.62"



Another space saver—Gasket-sealed cast aluminm case is tapped in center of bottom for ¾" pipe. Use of lock nut permits rigid positioning. Adjustable bracket described below. For 115/230V 50-60C. Weight 1¼ lbs.

Lamp operates at low voltage for extended life.

L1DA Light Source Net $18.50

Adjustable Mounting Bracket



For L1DA Light Source and BC3A Control. Clamp fits ¾" pipe which screws into tapped opening in bottom of above housings. Pipe may be raised, lowered and rotated. Two socket-head set screws lock pipe in desired position.

P381 Adjustable Mounting Clamp ..... Net $3.25

L2B Light Source



D⊙5⅜, W 4 H 5½

Has 88L lamp, rated 1.6 amps. at 5.8V. 1½" diameter lens in aluminum lens holder. Splashproof cast aluminum case tapped for ¾" conduit with adjustable and reversible mounting bracket. Weight 3½ lbs.

L2B Light Source
.....Net each $23.80

L2BR	L2BY	L2BRY	L2BBA	L2BRBA
$35.80	$28.80	$40.80	$33.80	$45.80

L3B Adjustable Focus Light Source



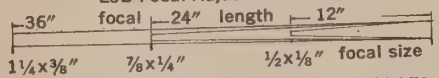
D⊙5⅜, W 4, H 5½

Has 1½" diameter lens in an aluminum lens holder. Gasket sealed cast aluminum case; tapped for ¾" conduit and with adjustable and reversible mounting bracket. Has 88L lamp rated 1.6 amps. at 5.8V. Transformer taps for 5.8 and 4.8 volt lamp operation which permits low voltage operation where feasible to prolong lamp life. Also has 3-way lamp positioning adjustment shown below with focusing adjustment from ½x ⅛" beam at 12" focal length, and ⅞x¼" beam at 24" focal length to 1¼x⅜" beam at 36" focal length. Weight, 3½ lbs.



Three-Way Lamp-positioning Bracket provided in L3B Adjustable Focus Light Source. The lamp can be positioned to adjust alignment without moving the case. Moving the lamp closer or farther from the lens changes the focus, depending on the size of the lens, as shown in the diagram.

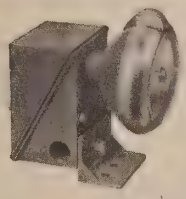
L3B Focal Adjustment Range



L3B Light Source.....$27.50

L3BR	L3BBA	L3BRBA
$39.50	$37.50	$49.50

L6C Hi Intensity Light Source



D⊙6¾, W 4½, H 6

L6C Light Source is recommended for adverse conditions such as steam, vapor, fog, and rain fall where extra light intensity is required. Has #4515 sealed beam spot light swivel-mounted for alignment adjustment. Transformer has 5V and 3.8V taps for lamp operation. Average lamp life is 3000 hours at normal voltage and 10000 hours at low voltage. Gasket-sealed cast aluminum case has adjustable and reversible mounting bracket and is tapped for ¾" conduit. Weight, 6 lbs.

L6C High Intensity Light Source.....$36.00

L6R Hi Intensity Light Source

Has High-Intensity Lamp and SAFETY RELAY.



D⊙ 6,
W 7-1/4
H 5-1/4

L6R has the same operating features as L6C **plus a built-in SAFETY RELAY.** The SAFETY RELAY energizes when the lamp comes on; de-energizes when the lamp fails or goes off. The Safety Relay may be arranged to stop a machine, close a valve, operate a signal or other circuit in case the lamp burns out. Relay contacts are SPDT, rated 5 amperes at 115 VAC, non-inductive. Gasket-sealed cast-aluminum case with rigid mounting feet, tapped for ½" conduit. Weight 7 lbs.

L6R Light Source.....$48.00

36-page Catalog including 51 application diagrams mailed promptly on request.

L4 Dual Filament Light Source

Has Two-filament Lamp to avoid shutdowns.



D⊙7¾, W 7¼, H 5¼

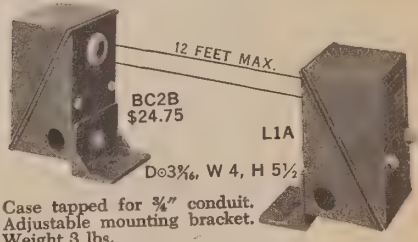
Has 2330B prefocused two-filament lamp rated 3.6 amps. at 5.8V. The two filaments maintain light source continuity: when one fails, a built-in relay switches on the other filament and a signal lamp in the housing; also operates SPDT contacts which may be used for remote warning control.

The prefocused lamp permits replacement with minimum change in light beam. Extra low voltage connection for prolonged lamp life. 1½" lens in aluminum lens holder. Gasket-sealed cast aluminum case with rigid mounting feet, tapped for ½" conduit. Weight, 6 lbs.

L4 Light Source.....$49.50

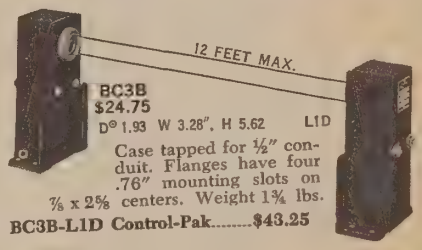
BC2B, BC3B and BC3AB Controls

Light-Energized. Cad Cell sensing element.
¾" lens mounted in flexible silicone rubber
Min. dark time .06 sec.; min. light time .06 sec.
Contacts SPDT, 3-amps at 115 VAC resistive.
Relay plastic enclosed. Power Consumption 0.5 w.
Gasket-sealed cast aluminum cases.
For 115 v. 50-60 cycle operation only.



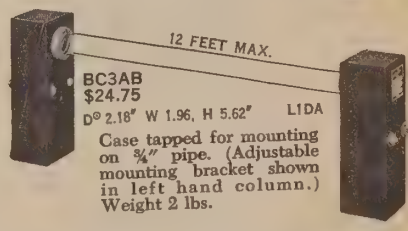
Case tapped for ¾" conduit. Adjustable mounting bracket. Weight 3 lbs.

BC2B-L1A Control-Pak.....$44.50



Case tapped for ½" conduit. Flanges have four .76" mounting slots on ⅞ x 2⅝ centers. Weight 1¾ lbs.

BC3B-L1D Control-Pak.....$43.25



Case tapped for mounting on ¾" pipe. (Adjustable mounting bracket shown in left hand column.) Weight 2 lbs.

BA feature: BEAM INTENSITY ADJUSTMENT

Built-in potentiometer inside light source case but adjustable with screwdriver from outside case, for dimming lamp. To order add suffix BA to Light Source Number and add $10.00 to Price. Example: L1ABA, $29.75.

R feature: SAFETY RELAY

Safety Relay built into the Light Source which may be used to stop a machine, close a valve, operate a signal or other circuit in case the lamp burns out.

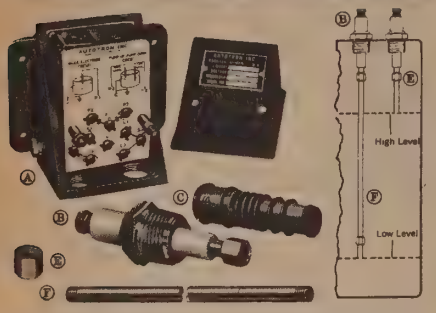
The Safety Relay energizes when the light comes on; de-energizes when the lamp fails or goes off. Relay contacts are SPDT, rated 5 amperes at 115 VAC, non-inductive. To order, add suffix R to Light Source number and add $12.00 to price.

© United Technical Publications

AUTOTRON

Specialized Electronic Controls

Electronic Liquid Level Control



For use with liquids up to 750,000 ohms resistance such as acids, bases, salts, milk, beer, water, alcohols, ammonia, distilled water, anti-biotics.

Ⓐ **A744 Control** supplies 20VDC (safe for personnel) maximum probe voltage. Stepless sensitivity adjustment with shaft lock. Plug-in 5 amp. SPDT relay, plastic enclosed. Gasket-sealed cast aluminum case 6-3/16″ wide, 5⅜″ high, 3⅜″ deep. 4 mounting holes for ¼″ bolts on 5½″ x 3″ centers. Power Consumption, 5 W. For 115 or 230v (specify) 50-60c.....**Each $74.50**

Ⓑ **P-304 Electrode** has ½″ pipe threads—may be installed in top or side of tank....**Each $10.60**

Ⓒ **P-305 Elastic Seal** for electrode wiring connection ..... **Each $1.00**

Ⓔ **P-310 hex nut,** stainless steel, ⅝″ long—¼-20 thread.....**Each $1.00**

Ⓕ **P-309 18-8 stainless steel rod** ¼″ x 12″—¼-20 thread both ends.....**Each $1.50**

Type of System Components	One Electrode Quan.	Price	Two Electrode Quan.	Price
Ⓐ A744 Control	1	$74.50	1	$ 74.50
Ⓑ P-304 Electrode	1	10.60	2	21.20
Ⓒ P-305 Dri-Seal	1	1.00	2	2.00
Connecting Cable	10 ft.	3.00	20 ft.	6.00
Price Totals		$89.10*		$103.70*

*P-309 Rod and P-310 Nuts not included

Current Surge Overload Protection



Unique Protection for tools, equipment, personnel

The Surj-Switch uses electronic amplification for instant reaction to variations from normal load current. Easily adjusted on the job to operate at the desired value.

The 10-amp, SPDT Control Relay may operate a warning signal, a lubricating circuit, feeding rate control, etc. without interrupting operation or may be used to stop operation.

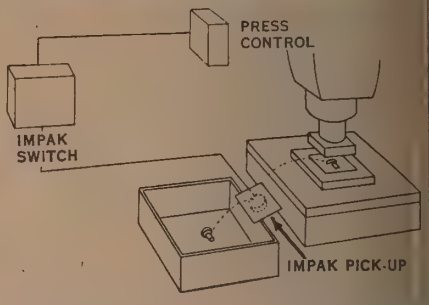
Used on surface grinders to warn when excessive pressures are applied; on machine tools to warn when tools become dull; on automated installations; **whenever load change indicates trouble.**

Model K1 Surj-Pick-up. Required for operation of Surj-Switch Controls—for 50-60 cycle, 0 to 80 amperes, one or 3-phase, any voltage..**$35.00**

Model J Surj-Switch. For overloads,.....**$55.00**

Model JA Surj-Switch. For under loads....**$65.00**

Impak-Switch Die Protection



In the above diagram each piece properly ejected from the die strikes the impact sensing plate which actuates the Impak Control and the Control re-cycles the press control for another stroke.

The impact of falling parts against the sensing plate of the Impak-Pick-up activates the Impak-Switch. Objects may be of practically any reasonably uniform size, ranging from ball bearings to heavy stampings, etc.

In other die protection applications the Impak Control has time delay set to barely exceed the complete stroke cycle of the press. Each properly ejected piece re-cycles the Impak Control before the timing period expires.

Model V Impak-Pick-up—with 6-ft. shielded plastic-covered cable.....Net $30.00

Model A750V Impak-Switch Control Can be operated by impacts as small as 1/10 ounce falling two inches but impact of each piece against the impact plate must be greater than the vibration to which the Impak-Pickup is subjected.
A750V Impak-Switch (less pickup).....$98.00

A2BX Solar ON/OFF Control



Automatically turns lights "ON" at preset light value—and turns lights "OFF" when light exceeds preset value.

DPDT Control Relay energizes when light exceeds intensity for which control is set; de-energizes when light falls below the preset level.

In case of tube failure the relay de-energizes; providing same control action as when light falls below preset level.

Dual Time Delays prevent operation by either momentary light flashes or shadows. Modern, simple circuitry uses one rugged, premium type power tube. Light intensity adjustment from outside of housing. Gasket-sealed cast aluminum housing, tapped for ½″ conduit. For 115/230 v, 50-60 c. Power consumption, 20 watts

Available with three adjustment ranges:

No. A2BX-.2; 1 to 5 fc for street lighting; parking lots
No. A2BX-.5; 15 to 50 fc for signs, parking lots
No. A2BX-1; 20 to 150 fc for obstruction or tower lights

A2BX Solar Control (all models) Net $76.95

Tubeless Bin Level Control



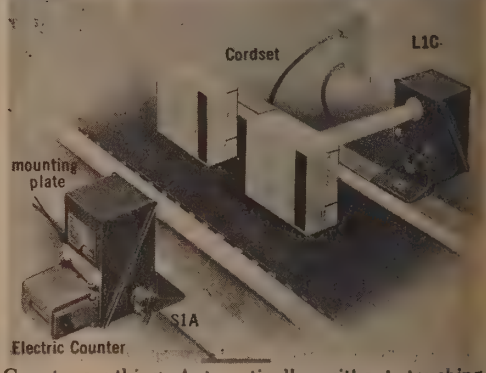
Tubeless Photoelectric actuation—unaffected by pressure of material in the bin. Only rigid, non-moving Lucite probes project into the bin. Cast aluminum, gasket-sealed housing mounts to bin wall as shown. Removal of cover makes all parts accessible. Dust-covered plug-in DPDT 8-ampere relay provides ON/OFF control for either high or low bin level. All wiring connections brought out of case in 3-foot oil-proof cable. For 115/230V, 50-60 C.

A700—Relay operates from cad cell output, light-energized. Power Consumption, 10 watts. .....**Net $68.00**

A700S—has transistor circuit and sensitivity adjustment—dark-energized. Power Consumption, 5 watts.....**Net $98.75**

Includes 3-ft cable, face gasket and template.

AUTOTRON Counting Eye



Counts anything—Automatically—without touching the object. Each object must interrupt the light beam .06 second or more. Space between objects must permit restoration of the light beam .06 second or more. Max. distance between lenses, 8 feet.

Counting Eye Components	
S1A Photoelectric Control (see page 5)	$43.75
L1A Light Source (see page 6)	19.75
Cordset: two 6-foot rubber covered cords with plugs and attachment clamps	3.00
Plate and hardware for mounting counter (4 mounting holes on 3-15/16 x 1-23/64″ centers)	1.50
CE-600AS602 Electric Counter (6-digit, knob reset)	41.60

A-138A Counting Eye, 115v, 50-60c. **Net $115.50**

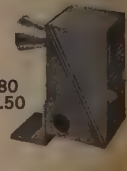
Includes above items wired ready to plug in.

Photoelectric Controls with Infrared Light Beams



For burglar alarms, safety and other applications where an invisible light beam offers advantages. The control lens is shielded from normal light so operation continues night or day whether lights are on or off.

A880-L160A Infrared Control-Pak.....$121.00
For 115/230v, 50-60c. Daylight Range, 50 feet; Night Range, 100 feet.

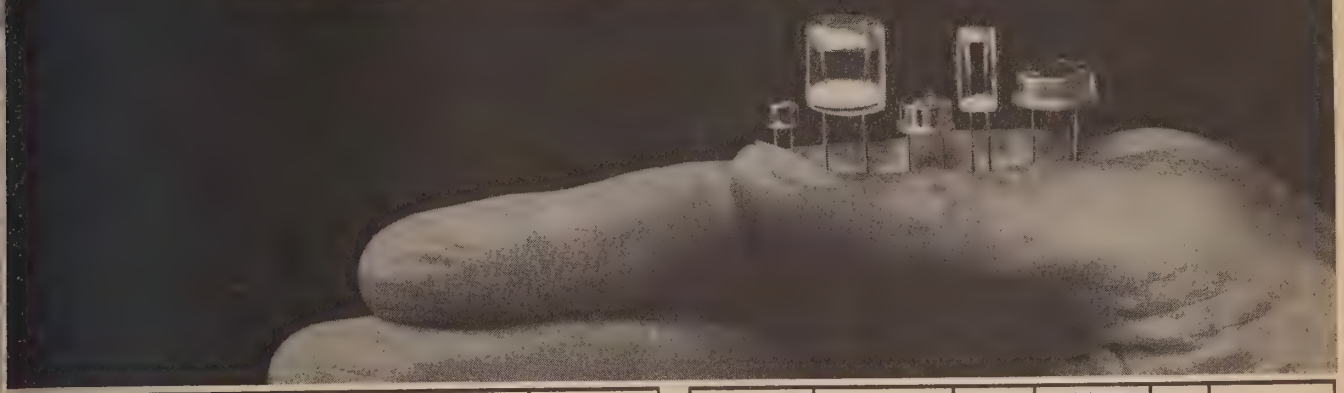


Net

© United Technical Publications

Photoconductive Cells

This listing represents less than half of the Clairex standard and special photocells available. A 16-page design manual is available on request.



Photocell ordering abbreviation	Diam. X Length (inches)	Resistance @ 2 fc ± 33⅓%	Minimum resistance ratio from 2 ftc to Dark within 5 sec.	Maximum voltage	Power Dissipation @ 25°C (mw)
CL5M2	.55 X .18	55K	1:100	250	2000-500[1]
CL602	.25 X .5	1 meg.		300	75
CL702	.36 X .18	1 meg.		300	125
CL902	.21 X .15	1 meg.		250	50

Type 2 CdS (photosensitive material designated by last number in ordering abbreviation, i.e. CL5M2). Peak spectral response 5150 angstroms, bluest response photosensitive material, high stability, lowest temperature error.

CL503	.5 X .5	7.2K	1:10,000	250	500-250[1]
CL5M3	.55 X .18	7.2K		250	2000-500[1]
CL603	.25 X .5	133K		300	75
CL603A	.25 X .5	75K		300	75
CL603AL	.25 X .5	3.5K		170	75
CL703	.36 X .18	133K		300	125
CL703A	.36 X .18	67K		300	125
CL703L	.36 X .18	2.7K		100	125
CL903	.21 X .15	133K		250	50
CL903A	.21 X .15	67K		250	50
CL903L	.21 X .15	6.0K		100	50

Type 3 CdSe, peak spectral response 7350 angstroms, fast response, and very high light-to-dark resistance ratio. Can be used for high speed switching or counting. Sensitive to near infra red. For use with incandescent or neon lamps.

CL504	.5 X .5	1.5K	1:1000	250	500-250[1]
CL5M4	.55 X .18	1.5K		250	2000-500[1]
CL504L	.5 X .5	0.25K		170	500-250[1]
CL5M4L	.55 X .18	0.25K		170	2000-500[1]
CL604	.25 X .5	30K		300	75
CL604L	.25 X .5	1.5K		170	75
CL704	.36 X .18	30K		300	125
CL704L	.36 X .18	0.6K		100	125
CL904	.21 X .15	30K		250	50
CL904L	.21 X .15	2K		100	50

Type 4 CdSe, peak spectral response 6900 angstroms, lowest resistance photocells available. Can be used for "on-off" applications when low resistance is desired. For use with incandescent or neon lamps.

CL505	.5 X .5	9K	1:100	250	500-250[1]
CL5M5	.55 X .18	9K		250	2000-500[1]
CL505L	.5 X .5	1.5K		170	500-250[1]
CL5M5L	.55 X .18	1.5K		170	2000-500[1]
CL605	.25 X .5	166K		300	75
CL605L	.25 X .5	7.5K		170	75
CL705	.36 X .18	166K		300	125
CL705L	.36 X .18	3.3K		100	125
CL905	.21 X .15	166K		250	50
CL905L	.21 X .15	10K		100	50

Type 5 CdS, peak spectral response 5500 angstroms (closely matches the human eye), most stable, lowest memory photocell available. Can be used in light measuring applications and precision low speed switching. For use with incandescent, fluorescent or neon lamps.

CL705HL	.36 X .18	28K	1:1000	100	125
CL905HL	.21 X .15	100K		100	50
CL905HN	.21 X .15	700K		100	50

Type 5H CdS, peak spectral response 5500 angstroms (closely matches the human eye). Combines high speed, stability, linearity, and uniform color temperature response.

Photocell ordering abbreviation	Diam. X Length (inches)	Resistance @ 2 fc ± 33⅓%	Minimum resistance ratio from 2 ftc to Dark within 5 sec.	Maximum voltage	Power Dissipation @ 25°C (mw)
CL507	.5 X .5	7.2K	1:1000	250	500-250[1]
CL5M7	.55 X .18	7.2K		250	2000-500[1]
CL607	.25 X .5	133K		300	75
CL707	.36 X .18	133K		300	125
CL707L	.36 X .18	2.7K		100	125
CL907	.21 X .15	133K		250	50
CL907N	.21 X .15	66K		100	50

Type 7 CdS, peak spectral response 6150 angstroms, moderate speed and ratio. Can be used in generat beam breaking applications. For use with incandescent, neon or fluorescent lamps.

CL707H	.36 X .18	500K	1:1000	300	125
CL707HM	.36 X .18	100K		250	125
CL707HL	.36 X .18	10K		100	125
CL907HN	.21 X .15	300K		100	50
CL907HL	.21 X .15	24K		100	50

Type 7H CdS Peak Spectral response 6200 angstroms. Very fast decay time coupled with low resistance and high linearity. Ideal for beam breaking applications.

Photocell ordering abbreviation	Diam. X Length (inches)	Resistance @ 2 fc ± 33⅓%	Minimum resistance ratio from 2 ftc to Dark within 5 sec.	Maximum voltage	Power Dissipation @ 25°C (mw)	Type
CL703/2	.36 X .18	50K	1:10,000	300	125	3 CdSe
CL703L/2	.36 X .18	6.5K	1:10,000	100	125	3 CdSe
CL704L/2	.36 X .18	1.5K	1:1000	100	125	4 CdSe
CL705/2	.36 X .18	166K	1:100	300	125	5 CdSe
CL705L/2	.36 X .18	7.5K	1:100	100	125	5 CdS

DUAL ELEMENT

Photocells contain two separate elements with two separate leads and one common lead.



PHOTOMOD®

PHOTOCELL-LAMP ASSEMBLIES

Part No.	Rated Lamp Voltage	Resistance (Max. Ohms) @ Rated Lamp Voltage	Max. Allowable Cell Voltage @ Peak AC
CLM3006A	6	160	120V
CLM4006A	6	55	120V
CLM4012A	12	30	120V
CLM3012A	12	160	120V
CLM5H10A	10	3000	120V
CLM7H16A	16	550	170V
CLM3120A	120	1150	120V
CLM4120A	120	160	120V

FOOTNOTE: [1] With and without heat sink.

CLAIREX ELECTRONICS®

A DIVISION OF CLAIREX CORPORATION

WRITE FOR NAME OF YOUR NEAREST CLAIREX REPRESENTATIVE OR DISTRIBUTOR.

WORNER ELECTRONIC DEVICES

WORNER FOTOLECTRIC CONTROLS

NET PRICES

COMPLETE INSTALLATION INSTRUCTIONS WITH EVERY UNIT

THREE-UNIT CONTROLS



Model 63 Series represents a line of three high speed, precision Amplifiers; each engineered for a highly specialized use.

Each amplifier is designed for amplification of energy developed by one set of Series 33/23 Fotolectric Heads listed below.

Heavy duty construction throughout, size 9¼" x 11½" x 5". Engineered for 110/120v. 50/60 cy. a.c.

Model 63, the Worner Master Unit, serves most industrial uses. It is generally recommended for supervising fast moving objects and will operate normally up to 750 times a minute.....**Each $144.12**

Model 63-A, equipped with Time Delay Circuit giving delay from 0 to 45 seconds .....**Each $160.77**

Model 63-B, has added amplification to operate on less active change of light .....**Each $171.87**

Model 64. Economy Unit. Operates up to 450 times a minute..**Each $87.90**

WIDE RANGE OF FOTOLECTRIC HEADS



Series 33 Light Sources
Series 23 Photocells

Selection of any of the following seven combinations, with current flow amplified by a choice of any of the above Amplifiers, provides unbeatable control supervision. Units are alike externally.

Model 33 Series Light Sources and Model 23 Series Photocells are heavy duty units. Components are housed in solid metal castings equipped with conduit fitting. Size of case 3" x 3" x 4½".

DIRECTIONAL BEAM for objects over 2" square. Distances listed cover area of supervision (between units).

DISTANCE	LIGHT SOURCE	EACH	PHOTOCELL	EACH
1 to 10 ft.	**Model 33-10**	$23.40	use with **Model 23-10**	$28.80
	Made moisture-proof upon order at $7.50 per unit.			
10 to 25 ft.	**Model 33-25w**	$39.78	use with **Model 23-25w**	$40.32
	These units are moisture-proof.			

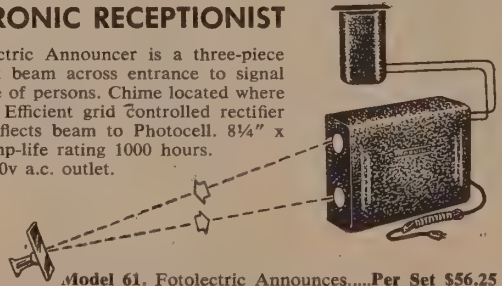
FOR SUPERVISING LARGE OBJECTS UP TO 75 FT.

Model 33-C Light Source and Model 23-C Photocell supervise over an indoor distance over 25 ft. up to 75 ft. from unit to unit. 6¼" x 7" x 4½". Use with any of the above Amplifiers.

Model 33-C.....**each $23.88**.....use with **Model 23-C**.....**each $32.76**

THE ELECTRONIC RECEPTIONIST

Model 61 Fotolectric Announcer is a three-piece set. Projects light beam across entrance to signal entry or departure of persons. Chime located where signal is desired. Efficient grid controlled rectifier circuit. Mirror reflects beam to Photocell. 8¼" x 6½" x 3¾". Lamp-life rating 1000 hours. Plugs into 110/120v a.c. outlet.



Model 61. Fotolectric Announces.....**Per Set $56.25**

Model 61-T. Fully transistorized. Size 7¾" x 5¾" x 3⅛"....**Per Set $64.80**

SOLID STATE TWO-UNIT FOTOELECTRIC SET

Amplifier, Photocell and Relay are combined in the Receiver unit. Light Source unit is designed with interchangeable optical system for supervising any specified distance up to 25 feet.

TWO-STAGE amplifier system provides: (A) operation direct from the relay to a solenoid, and (B) operation direct to the control of the task. Heavy duty, aluminum units 2½" x 3" x 7½". .....**Per Set $126.60**

SOLID STATE THREE-UNIT FOTOELECTRIC SETS



Model 118 Amplifier
6" x 8" x 5" ..**$111.00**

THREE-STAGE TRANSISTOR AMPLIFIER remotely installed to operate with a choice of Photocell and Light Source combinations according to distances to be handled.

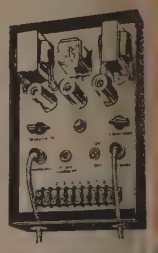
The Amplifier Relay operates at 450 **plus** per minute. Instant-On Feature, no waiting for tubes to warm up. Plug-in relay. D.P.D.T. 5 amp. Inductive per set of contacts. Sensitivity control for photocell input. Light Source control for required amount of light. Send for Model 118 Bulletin with complete descriptions and recommendations for Photocell and Light Source combinations.

AMPLIFIERS FOR MINIATURE HEADS

Model 66/67 Series Amplifiers are available in a choice of four units. For positive and accurate performance, the maximum speed rating of each unit can be regulated provided light projected to the Photocell will have an "on-period" equal to the "off-period" with wiring to Photocell having zero (0) capacity. 110/120v. 50/60 cy. a.c.

Model 67 Amplifier for general applications where fine detection at high speeds is not a factor or Relay is not required to operate in excess of 450 times per minute .....**Each $97.83**

Model 66 Amplifier, operates up to 900 counts a minute. Double-pole, double-throw relay with contact rating 110v. 60 cy. a.c., 10 amp.-non-inductive and 5 amp. inductive. Has light beam intensity control .....**Each $154.80**

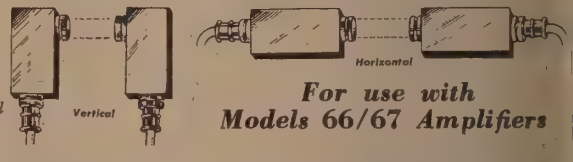


Model 66 Amplifier Door removed to show components.

Model 66-A Amplifier, designed for use with ultra high speed electronic decade counters. Accurate counts of light beam interruption or variation of intensity up to 10,000 counts per minute. Output pulses up to 50 volt d.c. regulated by the sensitivity control.....**Each $166.9**

Model 66-T Amplifier, same operating features as Model 66 with added Time Delay circuit to give regulated time delay from 0 to 45 seconds. Efficient for synchronizing operations.....**Each $186.4**

"MINIATURE" FOTOLECTRIC HEADS



For use with Models 66/67 Amplifiers

Machined out of solid aluminum blocks. Light weight, unbreakable, one piece, dependable. Only 1¼" x 2½" x ¾". Unsurpassed for pin-point detection. Distance to cross-over point 3" to 12". Distance of directional beam up to 8 feet. For desired speed, select Amplifier accordingly. Six foot cable equipped both ends with prong-type connectors having screw band tighteners. For 110/120v. 50/60 cy. a.c.

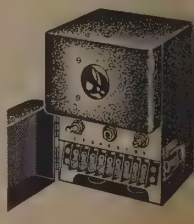
Model M-36 Vertical Light Source.....$37.2
Model M-26 Vertical Photocell Receiver..... 41.3
Model M-37 Horizontal Light Source..... 37.2
Model M-27 Horizontal Photocell Receiver..... 41.3

TWO-UNIT CONTROL

For Indoor Use



Amplifier includes photocell, relay and components. Efficient for distances from a few inches to 75 ft. For use where Relay is not required to operate over 400 times a minute, such as; counting, sorting large objects; limit switches; start, stop operations; opening doors, etc.

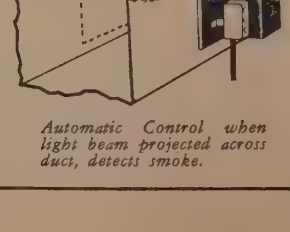


Model 62 R & L "Two-Unit Set".....**Per Set $110.25**

STOP Smoking Smokestacks!

GET into Air-Pollution Business Now!

Control smoke at its source. Insure maximum boiler efficiency, profit by fuel economies, prevent waste, protect against violation of smoke control ordinances.



Automatic Control when light beam projected across duct, detects smoke.

A predetermined density of smoke passing through the boiler breaching intercepts the light beam and activates whatever alarm or automatic control equipment is employed. The Amplifier Control unit is remotely installed for observation of its jewel lights which indicate whether correct Ringleman Unit is maintained.

For comprehensive details, please address your distributor for "Worner Combustion Control Bulletin".

© United Technical Publications

WORNER FOTOLECTRIC PROTECTION

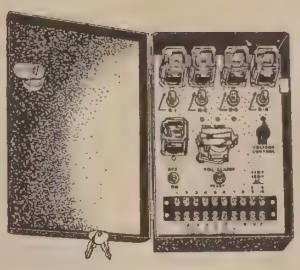
WORNER ELECTRONIC DEVICES

NET PRICES

COMPLETE INSTALLATION INSTRUCTIONS WITH EVERY UNIT

THE WORNER MASTER CONTROL SYSTEM

MODEL 9000 SERIES



onsists of Model 9000-S Master Control Panel. Can ıpervise ONE to FOUR Light Source and Photo-ll detection sets, hereafter referred to as "Foto-ectric Sets".

n separate circuit, the Master Control Panel will so supervise foil tape, door traps and window vitch systems. Both circuits operate independently nd simultaneously. Sounds continuous alarm (until eset) when either of these detection circuits is pened or wiring of Fotolectric system is tampered ith.

his control panel prevents false alarms should ower fail or drop momentarily and resets auto-natically when power is restored. Also operates with ny type electrical devices employed by professional urglar alarm companies.

he unit contains Relays which energize alarm cir-uits. The cabinet size is 7" x 10¼" x 4⅜" and its peration is safeguarded by a pick-proof lock. The nit is installed remotely. Designed for 110/120v. 0/60 cy. a.c.

llustration shows FOUR Relay plug-in location for , 2, 3 and 4 Relays as needed; one Relay for each otolectric (detection) Set used. Model 9000-S Master ontrol Panel is priced "less Relays," as only NE Relay is automatically supplied with each Model o. 9000 series Fotolectric Set ordered.

Model 9000-S Master Control Panel .....**Each $91.08**

Model	Range	Fotolectric Set	Per Set
9100	100 ft.	Light Source & Photocell	134.67
9150	150 ft.	Light Source & Photocell.....	153.57
9075	75 ft.	Light Source & Photocell.....	167.73
9250	250 ft.	Light Source & Photocell.....	175.71
9500	500 ft.	Light Source & Photocell.....	207.00

MODEL 7000 SERIES

Comprises (light Source and Photocell) Fotolectric Sets that operate in conjunction with burglar alarm companies' central control equipment. The Fotolectric Sets do not interfere with operation of Central Alarm Companies', foil tapes or window traps. For 110/120v. 50/60 cy. a.c. For 24v. 60 cy. use Worner Step-Down Transformer.

Model	Range	Fotolectric Set	Per Set
7100	100 ft.	Light Source & Photocell.....	$134.67
7150	150 ft.	Light Source & Photocell.....	153.57
7075	75 ft.	Light Source & Photocell.....	167.73
7250	250 ft.	Light Source & Photocell.....	175.71
7500	500 ft.	Light Source & Photocell.....	207.00

MODEL 5000 SERIES

There are 2 Models. Each model has Light Source and Photocell units. The Photocell unit of each Model contains all amplifier components. Thus each Model is a Two-Unit alarm set. Each is designed for indoor use and not intended for use with foil systems, etc.

Has on-off switch, phone jack to test plate current, sensitivity control. Lock. Alarm can be turned off or trespass trap reset only by the possessor of the key. For 110/120v. 50/60 cy. a.c.

Model	Range	Fotolectric Set	Per Set
5100	100 ft.	Two-Unit System	$134.67
5150	150 ft.	Two-Unit System	153.57

LIGHT SOURCE & PHOTOCELL SETS

All light beams are infra-red (invisible) light.

Sets for 100 and 150 ft. ranges are for indoor use. Sets for 75, 250, and 500 ft. ranges are for both indoor and outdoor use.

Sets for 75, 150, 250 and 500 ft. ranges have unwanted light rejector for maximum daytime operating efficiency.

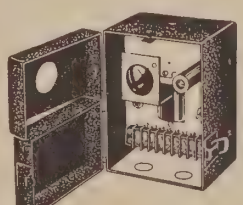
Some cases are similar, but circuits vary greatly.



Light Sources and Photocell Units for 100 ft. Ranges. Models: 9100, 7100, 5100.



Light Sources for 150 ft. Range. Models: 9150, 7150, 5150.

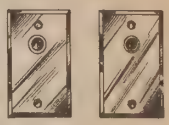


Photocells for 150 ft. Range. Models: 9150, 7150, 5150.



Sets for 75, 250 and 500 foot ranges have hooded weather-proof cases. Photocell cases have locks.

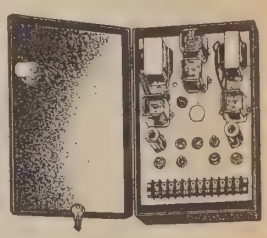
BURGLAR DETECTION UNITS CONCEALED IN THE WALL



Light Source and Photocell Receiver units concealed behind light-switch-type face plates. Projects invisible light beam ranging up to 30 feet (indoors). Standard size wall plates concealing Fotolectric detection units are high finish stainless steel. Light bulb rated 2000 hours. For guaranteed efficiency Model 81/82 Fotolectric sets must be used only with specially engineered Amplifiers listed below. Complete installation instructions enable any electrician to install.

Model 81 "In-Wall" Light Source.....**Each $32.67**
Model 82 "In-Wall" Photocell Receiver.....**Each 38.22**

AMPLIFIERS FOR ABOVE FOTOLECTRIC SET

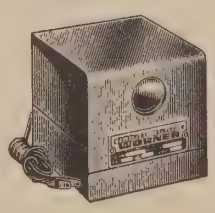


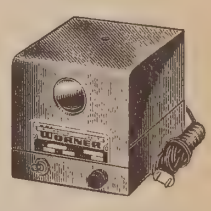
Two specially engineered units for amplifying the energy of the above concealed units.

Circuits with no-voltage control relay prevent false alarms due to line voltage irregularities and will sound alarm if tampered with. Standard alarm continuous, Regulated warning signal "special" upon order. For 110/120v. 60 cy. a.c.

Model 86-1 is a single channel Amplifier Panel that will amplify current flow of one Fotolectric Set.....**Each $140.76**

Model 86-2 is a dual channel Amplifier Panel that will amplify current flow of two Fotolectric Sets, guarding separate areas. Will also supervise one Fotolectric Set, providing for future addition of a second Fotolectric Set **Each $214.83**





TWO-UNIT WORNER WATCHMAN

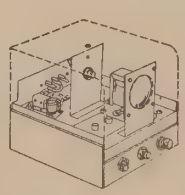
This Two-Unit Set consists of a Light Source and a Photocell unit that supplies 6-volt energy for activating the alarm circuit.

The Light Source is equipped with removable infrared filter providing visible light beam ranging up to 50 feet. The Photocell unit is equipped with toggle switch for either continuous alarm or to sound only while light beam is broken. Extraneous light rejector maintains daylight range. Two-piece case construction enables removal of cover without mounting. Identical cases 5" x 5" x 5½" welded steel, mahogany hammerloid finish. For indoor use; 110/120v. 60 cycle a.c.

Model 4000 Two-Unit Watchman (Indoors).....**Per Set $ 96.30**
Model 4100 Two-Unit Alarm (Weatherproof)...**Per Set 167.73**

SOLID STATE BURGLAR ALARM

Two-Unit Combination. Indoor Use.



Photocell - Amplifier has 2-piece case for convenient installation and servicing.

The Photocell unit supplies 6-volt a.c. energy to activate a 6-volt a.c. alarm, thus providing a Two-Unit alarm set.

Alarm may be sounded at one or more remote locations. Knob control for continuous, limited or reset alarm. Built-in device minimizes unwanted light. Infrared filter provides invisible light beam ranging up to 50 feet. Both Light Source and Photocell units are externally alike, 5" x 5" x 5½". Two-piece hammerloid cases simplify installation and servicing.

Model 8002 R & L, Solid State Burglar Alarm Set **$99.00**

SOLID STATE INVERTERS

All Units are Frequency Stable and have Automatic Frequency Control

Specially Designed to Provide 117 Volt 60 Cycle AC Power for the Operation of Tape Recorders, VTR Equipment, Publi Address Systems, TV Sets, Ham Gear, Small Portable Tools and Appliances, Test Instruments, Closed Circuit TV, Scientifi Laboratory and Hospital Equipment, Small AC-DC Universal Motors, Fluorescent and Incandescent Lamps from 12 Volt D Storage Battery Power in Automobiles, Buses, Trucks, Campers, Mobile Homes, Boats, and Aircraft.



Illustrates ATR Model 12U-S2A (275-300 Watts)
Overall Dimensions: 11" x 9" x 4"
Shipping Weight: 17 lbs.



Illustrates ATR Model 12U-S4G (400-450 Watts)
Overall Dimensions: 11" x 9¾" x 5¼"
Shipping Weight: 27 lbs.

ATR Model 12U-S6M (600-650 Watts) not illustrated, similar to illustration above
Overall Dimensions: 11" x 11¼" x 6¾"
Shipping Weight: 34 lbs.

ATR SOLID STATE Inverters are Universal Type Inverters recommended for the applications as listed above plus hundreds more! These Inverters are very well filtered and feature quick starting, frequency stability with varying load and input voltage, rugged heavy-duty construction, reverse polarity protection, and built-in power factor corrector utilizing a simple toggle switch. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life operation at high efficiency and maximum reliability. All models indicated here are equipped with heavy duty power transistors and plug-in frequency reed for automatic frequency control. These Inverters also come equipped with four-point voltage regulators which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. The operating efficiency is approximately 80%. To figure approximate current consumption from storage battery, divide the rated input wattage of the load being operated by the storage battery voltage, and further divide this answer by .80 which will give the approximate current consumption from the battery based on the actual load being operated. These Inverters are recommended primarily for use with loads having power factors in excess of 70%. Inverters come complete with battery cables ready for operation.

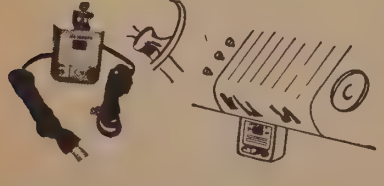
Type	DC Input Volts	AC Output 60 Cycles (Volts)	Output Wattage		Dealer Price
			Int.	Cont.	
12U-S2A	12	117	300	275	$139.50
*12U-S2A-P	12	117	300	275	139.50
12U-S4G	12	117	450	400	198.45
12U-S6M	12	117	650	600	249.75

"-P" model is equipped with cigarette lighter cord set to plug into dash receptacle. Caution — Do not load beyond 150 watts due to possible damage to cigarette receptacle wiring.

All ATR Inverters are housed in attractively finished brown-hammeroid metal cabinets and are complete with battery cables ready for operation.

For Inverters having larger or smaller output capacities, or for operation on other DC input voltages from 6 volts to 220 volts, please consult available ATR Inverter catalog sheets.

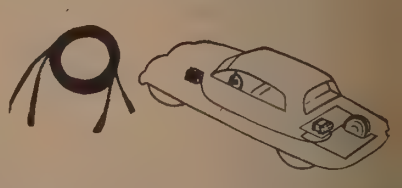
ACCESSORIES



REMOTE CONTROL UNIT — for under-dash mounting permitting installation of Inverter in auto-trunk compartment.
Dealer Price $10.95



MOUNTING BRACKETS — to securely mount Inverter in trunk compartment of car or under-dash, as illustrated.
Dealer Price $5.45 pr.



EXTENSION CABLES — to provide additional cable lengths for installation of Inverter in trunk compartment.
Dealer Price $21.75 pr.

Manufactured by

ATR ELECTRONICS, INC.

QUALITY PRODUCTS SINCE 1931

Net

© United Technical Publications

ATR UNIVERSAL INVERTERS

Specially Designed for Operating Standard A.C. Tape Recorder, Television Set, Dictating Machine, Radio Set, Ham Gear, Public Address System, Amplifier, Record Player, Electric Razor, Food Mixer, Vacuum Cleaner, Sewing Machine, Business Machine, Electric Drill, Fluorescent and Incandescent Lamp, and Electronic Test Equipment from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Trains, Planes, and D.C. Districts. Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

ATR Universal Inverters are actually a combination of 4 Inverter designs in one unit! These Inverters are especially recommended for applications as mentioned above and feature complete RF frequency interference suppression, instant starting, frequency stability, and built-in power factor corrector utilizing a simple toggle switch. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life operation at high efficiency and maximum reliability. All models indicated are equipped with ATR heavy duty plug-in Inverter Vibrators. These Inverters also come equipped with four-point voltage regulator which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. The operating efficiency is in excess of 75%. To figure approximate current consumption from storage battery, divide the rated input wattage of the recorder (or load) being operated by the storage battery voltage and further divide this answer by .75 which will give the actual current consumption based on the actual load and efficiency. The battery current consumption required for a tape recorder is normally less than that drawn by ordinary automobile headlight(s). These Universal Inverters are recommended only for use with loads having power factors in excess of 70%.



Featured cut above illustrates Model 12U-RHG.

All Units are Frequency Stable and have Automatic Frequency Control.

"—P" models equipped with cigarette lighter cord set to plug into dash receptacle.

All ATR Universal Inverters are housed in attractively finished brown-hammerloid metal cabinets.

Dimensions of Standard (RSF) Model Universal Inverters, 8½" x 9⅞" x 5¼"; shipping weight 22 lbs.

Dimensions of Heavy Duty (RHG) Model Universal Inverters, 6⅞" x 11¼" x 8½"; shipping weight 27 lbs.

Dimensions of Super Heavy Duty (HSJ) Model Universal Inverters 6½" x 12⅞" x 8½"; shipping weight 37 lbs.

For correct replacement Vibrator, consult Inverter Vibrator Guide.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Watt. Int.	Output Watt. Cont.	Shipping Weight	Dealer Price
6U-RSF	6	110 Volts	100	80	22 lbs.	$79.66
6U-RSF-P	6	110	100	80	22	79.66
6U-RHG	6	110	150	125	27	103.50
6U-HSJ	6	110	175	150	37	125.00
12U-RSF	12	110	150	125	22	66.00
12U-RSF-P	12	110	150	125	22	66.00
12U-RHG	12	110	200	175	27	87.50
12U-HSJ	12	110	250	225	37	113.82
*28U-RSF	28	110	125	100	22	79.66
*28U-RHG	28	110	175	150	27	96.66
*28U-HSJ	28	110	250	200	37	125.00
32U-RSF	32	110	150	100	22	79.66
32U-RHG	32	110	200	180	30	96.66
32U-HSJ	32	110	325	225	37	125.00
50U-RSF	50	110	150	100	22	79.66
50U-RHG	50	110	225	200	27	103.50
110U-RSF	110	110	250	150	22	66.00
110AU-RHG	110	110	325	250	27	87.50
110BU-RHG	110	110	450	350	30	103.50
110U-HSJ	110	110	600	400	37	125.00
220U-RSF	220	110	250	150	22	73.00
220U-RHG	220	110	325	250	27	103.50
220U-HSJ	220	110	500	300	37	125.00

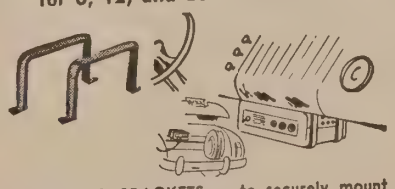
* Recommended for 24 volt battery systems.

ACCESSORIES for 6, 12, and 28 Volt D.C. Input Inverters.



REMOTE CONTROL UNIT — for under-dash mounting permitting installation of Inverter in auto-trunk compartment.

Dealer Price $10.95



MOUNTING BRACKETS — to securely mount Inverter in trunk compartment of car or under-dash, as illustrated.

Dealer Price $5.45 pr.



EXTENSION CABLES — to provide additional cable lengths for installation of Inverter in trunk compartment.

Dealer Price $10.95 pr.

Manufactured by

ATR ELECTRONICS, INC.

QUALITY PRODUCTS SINCE 1931

© United Technical Publications

PORTABLE — Plug-in Type INVERTERS

All Units are Frequency Stable and have Automatic Frequency Control.

Specially Designed for Operating Standard A.C. Dictating Machines, Record Players, Incandescent Lamps, Electric Razors, Electronic Test Equipment, and Other Small Electrical and Electronic Devices from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Planes, Trains, and D.C. Districts.

ATR Portable Inverters are light-weight plug-in units for applications as recommended above. These Inverters feature instant starting, frequency stability, and high efficiency and reliability. Inverters have partial RF filtering which is only suitable for small insensitive type radios. For sensitive radio sets, ATR Universal Inverters, catalog sheet 657U, must be used. The 6 and 12-volt units are equipped with cigarette lighter cord set to plug into dash receptacle; whereas, the other higher input voltage units are equipped with standard two-blade plug-in cord sets. With ATR Inverters the need for special equipment is eliminated. They are designed for quiet, long-life operation. All ATR Models indicated are equipped with ATR plug-in Inverter Vibrators. Models RME and RMF come equipped with a four-point voltage regulator which makes possible the correct output voltage for minimum to maximum loads. The battery current consumption required is normally less than that drawn by one ordinary automobile headlight. The operating efficiency is approximately 75%. To figure battery current consumption see catalog sheet 657U. These Inverters are recommended only for use with loads having power factors in excess of 80% and should be used only for the applications as outlined above and on the reverse side of this sheet. These Portable Inverters are not recommended for tape recorder operation, except as specified in (2) below.



Illustrates ATR Mighty Midget (DME) Model Inverter having Cigarette Lighter Plug Attachment.



Illustrates ATR Medium (RME and RMF) Model Inverter having Four-Point Voltage Regulator and Cigarette Lighter Plug Attachment.

EASY TO INSTALL
EASY TO OPERATE



Illustrates Under-Dash Mounting for ATR Models RME and RMF.

Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

TYPE	INPUT D.C. VOLTS	A.C. OUTPUT 60 CYCLES	OUTPUT Int.	WATTAGE Cont.	SHIPPING WEIGHT	DEALER PRICE
6-DME (1)	6	110 Volts	40	30	5 lbs.	$24.55
6C-DME (1)	6/12	110 Volts	40	30	5 lbs.	28.15
6-RMF (2)	6	110 Volts	80	60	12 lbs.	48.15
6C-RMF (2)	6/12	110 Volts	80	60	12 lbs.	53.15
12-DME (1)	12	110 Volts	50	40	5 lbs.	21.98
12T-RME-1 (2) (3)	12	110 Volts	125	110	14 lbs.	46.15
*28-RME (2)	28	110 Volts	100	80	12 lbs.	54.95
32-RME (2)	32	110 Volts	100	80	12 lbs.	54.95
110-RME (2)	110	110 Volts	150	100	12 lbs.	52.60
220-RME	220	110 Volts	150	100	12 lbs.	54.95

* Recommended for 24-Volt Battery Systems.
For Inverters having larger or smaller output capacities, or for operation on other D.C. input voltages, please consult available ATR Inverter catalog sheets.
All models designated above are housed in attractively finished brown-hammerloid metal cabinets. Dimensions of Medium (RME and RMF) Model Inverters, 8⅜" x 8" x 3¾"; shipping weight, 12 lbs. Dimensions of Mighty Midget (DME) Model Inverters, 5¼" x 4¾" x 2¾"; shipping weight, 5 lbs. For correct replacement vibrator, consult Inverter Vibrator Guide.

(1) These Inverters primarily recommended for Edison VP dictating machines. May also be used with Model 200 Soundscriber (with engine of car not running).
(2) Primarily recommended for Dictaphone's Time Master, Gray Audograph and DeJur Stenorette dictating machines, or other similar types. Also, highly recommended for Norelco Tape Recorder Model EL-3516 and Geloso Model G255-S.
(3) THIS INVERTER SPECIALLY DESIGNED AND RECOMMENDED ALSO FOR USE WITH PORTABLE TV SET.

Manufactured by

ATR ELECTRONICS, INC.

QUALITY PRODUCTS SINCE 1931

Net

© United Technical Publications

INVERTERS, VIBRATORS, "A" ELIMINATORS, ETC. — ATR ELECTRONICS, INC.



DC TO AC UNIVERSAL INVERTERS

New, universal inverters for operating 110-v., 60 cycle AC equipment from DC voltages in autos, buses, trucks, boats, trains, planes and DC districts. Designed especially for standard 110-volt AC tape recorders, TV sets, radios, PA systems, electric razors, test equipment, etc. Units are carefully engineered and ruggedly constructed to provide long life operation. All feature complete RF interference suppression and exceptional frequency stability. Have operating efficiency in excess of 75%. Four-point voltage regulator corrects output voltage for minimum and maximum loads, and also helps compensate for input voltages lower or higher than normal. Inverters are recommended for use with loads having power factors in excess of 70%. Built-in toggle switch selects most efficient operation for use with TV sets or tape recorders. Inverters are not recommended for use with large motor driven appliances such as refrigerators, washing machines, etc. All have On-Off switches. Housed in attractive brown hammerloid metal cabinet with convenient leather carrying strap. Sizes: Standard Model RSF, 8½x9⅞x5¼"; Heavy-Duty Model RHG, 6⅞x11¼x 8½"; Extra-Heavy-Duty Model HSJ, 6½x12⅞x8½". With battery clips for instant connection to power source. Models with "P" suffix equipped with adapter cord for use in auto cigarette lighter receptacles. *Recommended for 24 volt battery operation. **Before ordering, check wattage of equipment with which inverter will be used.**

Stock No.	Mfr's Type	DC Input Volts	AC Output 60 Cycles (volts)	Output Watt. Int.	Output Watt. Cont.	Shipping Wt. (Lbs.)	List Price	Net Price
	6U-RSF	6	110	100	80	22	$119.50	$ 79.66
	6U-RSF-P	6	110	100	80	22	119.50	79.66
	6U-RHG	6	110	150	125	27	155.25	103.50
	6U-HSJ	6	110	175	150	37	187.55	125.00
	12U-RSF	12	110	150	125	22	99.00	66.00
	12U-RSF-P	12	110	150	125	22	99.00	66.00
	12U-RHG	12	110	200	175	27	131.25	87.50
	12U-HSJ	12	110	250	225	37	170.75	113.82
	*28U-RSF	28	110	125	100	22	119.50	79.66
	*28U-RHG	28	110	175	150	27	145.00	96.66
	*28U-HSJ	28	110	250	200	37	187.55	125.00
	32U-RSF	32	110	150	100	22	119.50	79.66
	32U-RHG	32	110	200	180	30	145.00	96.66
	32U-HSJ	32	110	325	225	37	187.55	125.00
	50U-RSF	50	110	150	100	22	119.50	79.66
	50U-RHG	50	110	225	200	27	155.25	103.50
	110U-RSF	110	110	250	150	22	99.00	66.00
	110AU-RHG	110	110	325	250	27	131.25	87.50
	110BU-RHG	110	110	450	350	30	155.25	103.50
	110U-HSJ	110	110	600	400	37	187.55	125.00
	220U-RSF	220	110	250	150	22	109.50	73.00
	220U-RHG	220	110	325	250	27	155.25	103.50
	220U-HSJ	220	110	500	300	37	187.55	125.00



PORTABLE PLUG-IN TYPE INVERTERS

Specially Designed for Operating Standard AC Dictating Machines, Record Players, Incandescent Lamps, Electric Razors, Electronic Test Equipment, and other Small Electrical and Electronic Devices from DC Voltages in Automobiles, Buses, Trucks, Boats, Planes, Trains, and DC Districts.

Lightweight inverters for operating 110 v. AC equipment from DC voltage sources. Feature excellent frequency stability and high efficiency. 6 and 12-volt units plug into cigarette lighter receptacle of any vehicle; others are equipped with standard 2-prong plugs. All are designed especially for use with dictating machines; record players, electric razors, test equipment, etc. Not recommended for large tape recorders and motor driven appliances such as refrigerators, washing machines, etc. Brown Hammerloid case with leather carrying strap. Sizes: DME, 5¼x4¾x2¾"; RME and RMF, 8⅜x8x 3¾". *Recommended for 24-volt operation. **Check wattage rating of equipment before ordering. RMF/RME Model Inverters equipped with voltage regulator.**

Stock No.	Mfr's Type	DC Input Volts	AC Output 60 Cycles (volts)	Output Watt. Int.	Output Watt. Cont.	Shipping Wt. (Lbs.)	List Price	Net Price
	6-DME[1]	6	110	40	30	5	$36.85	$24.55
	6C-DME[1]	6/12	110	40	30	5	42.25	28.15
	6-RMF[2]	6	110	80	60	12	72.35	48.15
	6C-RMF[2]	6/12	110	80	60	12	79.69	53.15
	12-DME[1]	12	110	50	40	5	32.97	21.98
	12T-RME-1[2 3]	12	110	125	110	14	69.25	46.15
	*28-RME[2]	28	110	100	80	12	82.45	54.95
	32-RME[2]	32	110	100	80	12	82.45	54.95
	110-RME[2]	110	110	150	100	12	78.95	52.60
	220-RME	220	110	150	100	12	82.45	54.95

[1] These Inverters primarily recommended for Edison VP dictating machines. May also be used with Model 200 Soundscriber (with engine of car not running).
[2] Primarily recommended for Dictaphone's Time Master, DeJur Stenorette, and Gray Audograph dictating machines or other similar types. Also recommended for use with Norelco tape recorder Model EL-3516 and Geloso Model G 255-S Tape Recorder.
[3] **This Inverter specially designed and recommended also for use with portable TV set.**



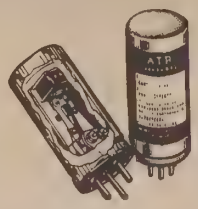
SOLID STATE INVERTERS

Specially Designed to Provide 117 Volt 60 Cycle AC Power for the Operation of Tape Recorders, VTR Equipment, Public Address Systems, TV Sets, Ham Gear, Small Portable Tools and Appliances, Test Instruments, Closed Circuit TV, Scientific Laboratory and Hospital Equipment, Small AC-DC Universal Motors, Fluorescent and Incandescent Lamps from 12 Volt DC Storage Battery Power in Automobiles, Buses, Trucks, Campers, Mobile Homes, Boats, and Aircraft.

ATR SOLID STATE Inverters are Universal Type Inverters recommended for the applications as listed above plus hundreds more! These Inverters are very well filtered and feature quick starting, frequency stability with varying load and input voltage, rugged heavy-duty construction, reverse polarity protection, and built-in power factor corrector utilizing a simple toggle switch. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life operation at high efficiency and maximum reliability. All models indicated here are equipped with heavy duty power transistors and plug-in frequency reed for automatic frequency control. These Inverters also come equipped with four-point voltage regulators which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. The operating efficiency is approximately 80%. To figure approximate current consumption from storage battery, divide the rated input wattage of the load being operated by the storage battery voltage, and further divide this answer by .80 which will give the approximate current consumption from the battery based on the actual load being operated. These Inverters are recommended primarily for use with loads having power factors in excess of 70%. Inverters come complete with battery cables ready for operation.

Type	DC Input Volts	AC Output 60 Cycles (volts)	Output Wattage Int.	Output Wattage Cont.	Dealer Price
12U-S2A	12	117	300	275	$139.50
*12U-S2A-P	12	117	300	275	139.50
12U-S4G	12	117	450	400	198.45
12U-S6M	12	117	650	600	249.75

"P" model is equipped with cigarette lighter cord set to plug into dash receptacle. Caution — Do not load beyond 150 watts due to possible damage to cigarette receptacle wiring.
All ATR Inverters are housed in attractively finished brown-hammerloid metal cabinets and are complete with battery cables ready for operation.
For Inverters having larger or smaller output capacities, or for operation on other DC input voltages from 6 volts to 220 volts, please consult available ATR Inverter catalog sheets.



VIBRATORS

For All Auto Radio Sets Since 1954 Use One of the ATR Vibrators Listed Below.

ATR Vibrators Feature:
Ceramic Stack Spacers with Two-Bolt Stack construction. Instant Starting — as a result of highly efficient magnetic circuit with formed base for more uniform operation on both high and low voltages.
Large Oversize Tungsten Contacts having Full Wiping Action — for greater reliability and longer life.
Perforated Reed of Highest Quality Swedish Spring Steel.
Highest Precision Construction and Workmanship — practically all parts used are held to within a tolerance of 0.0005 of inch.
Value Plus — as readily evidenced by the Larger Contacts, Ceramic Spacers and Precision Construction and Workmanship. Available in TEN-PAK.

ATR No. 1400 (Bulk), 4-Prong, 6-Volt For All 6-Volt Sets Since 1954.

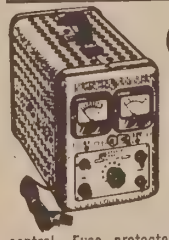
ATR No. 1843 (Bulk), 3-Prong, 12-Volt For All 12-Volt General Motors Since 1954.
ATR No. 1843 also used in following automobiles: 1956 Ford (Philco), Lincoln (Bendix), and Mercury (Bendix); 1956 Chrysler (Philco); 1955-57 Packard; 1956-57 Plymouth (Philco); 1956 Studebaker (Philco) and 1957 Mercury (Philco).

ATR No. 1840 (Bulk), 4-Prong, 12-Volt For 12-Volt Cars other than GM Since 1954.



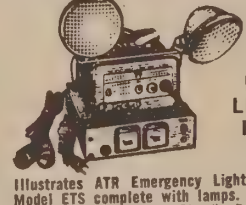
SHAV-PAKS

Every man should have this lightweight ATR Inverter in his car for that "Keep Clean-Shaved Look." Will operate standard AC Electric Shavers from your CAR or Boat. Complete with 3 ft. cord set. Plugs into cigarette lighter receptacle. Fuse protected, rugged construction, and attractively housed in grey hammerloid-finish steel case. Size: 4x2⅝x2¾". Ship. wt., 2½ lbs.
Model 6-SPB (6 volt) ..... Net **$16.50**
Model 12-SPB (12 volt) ..... Net **14.25**



"A" BATTERY ELIMINATOR

For Demonstrating and Testing Transistor or Vibrator - Type Auto Radios. Designed for testing DC Electrical Apparatus on regular 110 volt AC lines — equipped with full-wave dry disc-type rectifier, assuring noiseless, interference - free operation. Fully Automatic and Fool-Proof; has voltmeter, ammeter, and 8-position voltage control. Fuse protected and housed in heavy gauge brown hammerloid-finish metal case. 6 ft. cord set included. Size: Model 610C-ELIF, 6½x9⅛x8½", ship. wt., 22 lbs.; Model 620C-ELIT, 6½x12⅞x8½", ship. wt., 33 lbs.
Ideal as a Power Supply for Model Railroad Trains, Radio Sets, Electro Plating Outfits, and other 6 or 12 Volt, DC Equipment. May also be used as a Battery Charger.
Model 610C-ELIF (6 volt at 10 amps. or 12 volt at 6 amps.) ..... Net **$65.80**
Model 620C-ELIT (6 volt at 20 amps. or 12 volt at 10 amps.) ..... Net **$87.75**



EMERGENCY LIGHTING AND POWER UNIT

Illustrates ATR Emergency Lighting and Power Unit, Model ETS complete with lamps.
Completely Automatic Standby-Power Units Specially Designed to Permit the Instantaneous Continued Operation of Critical Lighting Equipment, PA Systems, Amplifiers, Intercom Systems, Burglar Alarms, Fire Alarms, Synchronous Electric Clocks, Electric Time and Recording Clocks, Incubators, Gas Valves, Telephone and Test Equipment, and Similar Critical Devices in the Event of 115 Volt AC Commercial Power Line Failure. For Use: In Hospitals, Banks, Hotels, Theatres, Factories, Office Buildings, Schools, Homes and Other Areas of Operation.

Type	*Storage Battery Input (volts)	AC Output 60 Cycles (volts)	Output Wattage Int.	Output Wattage Cont.	Net With Lamps
661-ETM	6	110	80	60	$231.75
662-ETS	6	110	100	80	253.50
663-ETH	6	110	150	125	275.50
1232-ETS	12	110	125	100	247.50
1233-ETH	12	110	175	150	267.00
1234-ETJ	12	110	250	200	287.25

For Units Without Lamps Deduct $37.50 Net.

ALL ATR INVERTERS LISTED ABOVE ARE FREQUENCY STABLE AND HAVE AUTOMATIC FREQUENCY CONTROL

© United Technical Publications

BURGESS BATTERIES



2U6



P6



C5



F2BP



P45

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Package Quantities	Weight of Unit Package in Pounds	Sugg. Dealer Each	Sugg. List Price Each
BURGESS BATTERIES FOR TRANSISTOR CIRCUITS											
130-Disp. 12	14	1035	1½	Flashlight	63/64 (diam.)		1 15/16	12	1½	$.2225	$.35
2MN6-Disp. 12	1604D	222	9	Snap Type	1	39/64	1 7/8	12	1	.65	.98
2N6	1602	246	9	Snap Type	1 3/8	1 3/8	2 3/4	1	3/10	1.50	2.25
2U6-Disp. 12	1604	216	9	Snap Type	1	39/64	1 7/8	12	1	.48	.69
230-Disp. 12	13	1050	1½	Flashlight	1 21/64 (diam.)		2 25/64	12	2 5/8	.2225	.35
930-Disp. 12	15	1015	1½	Flashlight	35/64 (diam.)		1 31/32	12	½	.155	.25
A4	___	.....	6	Flat Contacts	1 9/32	1 9/32	2 11/32	1	¼	2.75	3.95
C6X	1612	2356N	9	Snap Type	2 5/16	1 1/32	6 1/16	1	5/8	1.97	2.95
D5	26	707	7½	Snap Type	2 9/16	2	2 23/32	1	1	2.50	3.60
D6	1603	276	9	Snap Type	2 9/16	2	3 5/32	1	1	1.67	2.50
D6PI	1601	2506	3, 6, 9	Socket	2 19/32	1 7/16	7 27/32	1	1½	4.20	6.30
D6S	1608	2761N	9	Socket	2¼	1¼	7 29/32	1	1⅛	4.80	7.20
L6-Disp. 6	1611	206	9	Flat Contacts	47/64 (diam.)		1 31/32	6	½	.62	.89
M6	1605	266	9	Snap Type	1 13/16	1 13/16	2 7/16	1	2/5	1.36	1.95
NE-Disp. 6	910	904	1½	Flashlight	7/16 (diam.)		1 11/64	6	¼	.095	.15
P6-Disp. 6	1600	226	9	Snap Type	1 (diam.)		1 13/16	6	½	.68	.98
PM6-Disp. 6	1600D	.....	9	Snap Type	1 (diam.)		1 15/16	6	5/8	.80	1.19
PM8	1810	228	12	Snap Type	1 (diam.)		2 7/16	1	⅛	1.05	1.50
XX9	1900	239	9, 13½	Socket	1 9/32	29/32	2 17/32	1	⅛	2.15	3.10
Y6	1606	.....	9	Snap Type	3/5	3/5	1 9/10	1	1/16	.83	1.20
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR - RADIO "A" BATTERIES											
2F	11	W353	1½	Socket	2 13/32	1 3/8	4 1/4	1	¾	1.22	1.75
2F2H	703	W356	3	Binding Post	2 5/8	2 5/8	4 1/16	5	7	2.51	3.75
2FH	700	711	1½	Binding Post	2 5/8	1 11/32	4 1/8	5	3½	1.04	1.55
2F4	1	718	6	Socket	4	2 13/16	5 1/16	1	2½	2.87	4.10
20F	719	740	1½	Socket	7 5/8	2 1/16	6 15/16	1	6 4/5	7.65	10.95
21R	20	964	1½	Flashlight	1 21/64 (diam.)		4 1/8	1	2/5	.97	1.40
4D	...	...	1½	Socket	2 5/8	2 5/8	2 13/16	1	1	1.35	1.93
4F	4	742	1½	Socket	2 5/8	2 5/8	4 3/32	1	1 2/5	1.15	1.65
422	704	750	3	Brass Straps	1 11/32	23/32	2 5/16	1	2 ozs.	1.00	1.50
432	705	751	4½	Brass Straps	1 3/32	21/32	2 1/4	1	3 ozs.	2.90	4.35
532	706	703	4½	Brass Straps	2 15/32	13/16	2 23/32	1	3/10	1.63	2.35
8R	23	960P	1½	Socket	1 3/32	(diam.)	3 15/16	1	¼	1.85	2.65
B5	8	713	7½	Socket	3 29/32	7/8	2 27/32	1	½	2.50	3.75
C5	9	717	7½	Socket	2 7/32	1 15/16	3 1/32	1	¾	1.23	1.75
F2BP	701	W352	3	Binding Post	2 27/32	1 3/8	4 1/32	6	4	1.51	2.25
F3	3	736	4½	Socket	4	1 7/16	4 1/8	1	1	1.65	2.40
F4BP	915	510S	6	Binding Post	2 5/8	2 5/8	4	1	1 2/5	1.13	1.69
F4PI	6	744	6	Socket	2 21/32	2 21/32	4 1/8	1	1½	1.15	1.65
G3	7	746	4½	Socket	4 1/16	1 7/8	4 11/16	1	1½	3.18	4.75
Z4	2	724	6	Flat Contacts	1 3/16	1 3/16	2 7/32	1	1/5	1.00	1.50
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR - RADIO "B" BATTERIES											
10308SC	716	W363F	45	Spring Clip	8 1/32	4 1/32	7 3/16	1	12	8.72	12.95
10308PI	726	W363P	45	Socket	8 1/32	4 1/32	7 3/16	1	11½	8.72	12.95
21308SC	715	W364F	45	Spring Clip	8 1/8	4 15/32	7 9/32	1	12 4/5	8.80	12.50
21308PI	727	W364P	45	Socket	8 1/8	4 15/32	7 9/32	1	12 4/5	9.30	13.25
2308SC	723	W365F	45	Spring Clip	8 3/32	2 31/32	7 1/4	1	7½	8.72	12.95
2308PI	717	W365P	45	Socket	8 3/32	2 31/32	7 1/4	1	7 4/5	11.98	17.90
4156	710	763	22½	Binding Post	3 17/32	2 1/8	2 29/32	1	1	1.61	2.35
5156PI	721	...	22½	Socket	4 7/64	2 3/8	2 55/64	1	1 3/5	4.63	6.95
5156SC	708	778	22½	Spring Clip	4 1/8	2½	2 3/4	5	8	4.63	6.95
5308	709	762S	45	Binding Post	4 1/16	2 9/16	5 1/8	1	3	3.05	4.35
A30	206	W359	45	Socket	3 9/16	2¼	4 5/16	2	3½	4.55	6.50
B30	207	484	45	Socket	4 1/16	2 17/32	5 5/16	2	4½	5.40	7.75
D30	...	487	45	Socket	5 1/16	2 1/32	7 5/16	1	4½	7.70	11.25
K10	224	417	15	Flat Contact	1¼	7/8	1 17/32	1	2 ozs.	1.67	2.50
K15	225	420	22½	Flat Contact	1¼	7/8	2 9/32	1	2 ozs.	1.83	2.75
K20	226	430	30	Flat Contact	1¼	15/16	2 23/32	1	3 ozs.	2.17	3.25
K45	203	457	67½	Snap Type	2 1/16	15/16	2¼	1	½	2.97	4.25
M30	202	482	45	Socket	3 9/16	1 3/4	5½	1	2	3.27	4.55
N60X	216	495	90	Snap Type	1 7/8	1 11/32	7 1/8	1	1	6.50	9.70
P45	211	477	67½	Snap Type	1 29/32	1	5 9/32	1	¾	2.70	3.85
P60	214	479	90	Snap Type	1 29/32	1	7 13/32	1	4/5	3.27	4.55
U10	208	411	15	Flat Contact	1	39/64	1 7/16	1	1 oz.	1.00	1.50
U15	215	412	22½	Flat Contact	1	39/64	1 31/32	1	1 oz.	1.17	1.75
U20	210	413	30	Flat Contact	1	39/64	2 17/32	1	2 ozs.	1.30	1.95
U200	722	493	300	Pin Jacks	2¾	2 9/32	3 7/8	1	1	9.07	12.95
U30	213	415	45	Snap Type	1 3/32	19/32	3 17/32	1	⅛	1.75	2.50
UX45	217	416	67½	Snap Type	1 7/32	31/32	3 31/32	1	¼	2.50	3.75
V45	200C	468	67½	Snap Type	2 3/4	1 11/32	3 43/64	6	4½	2.77	3.95
V60	204	490	90	Snap Type	3 23/32	1 5/32	3 11/16	1	1 3/10	3.15	4.50
W20PI	...	...	30	Socket	1 5/16	1 13/16	3 7/32	1	½	5.15	7.35
W30	...	...	45	Binding Post	3	1¼	3 25/32	1	3/5	4.78	7.15
XX15	...	425P	22½	Socket	1 11/32	15/16	3 7/8	1	¼	2.33	3.50

(Continued on next page

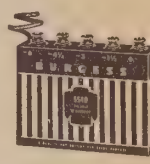
Trade Discount Applies To List Prices Only
© United Technical Publication

BURGESS BATTERIES

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	Sugg. List Price Each
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR - RADIO "B" BATTERIES (Continued)											
XX30	201	455	45	Snap Type	2 17/32	31/32	3 21/32	1	1/2	$2.27	$3.25
XX30PI	. . .	455P	45	Socket	2 17/32	31/32	4 1/32	1	1/2	3.05	4.50
XX45	200	467	67 1/2	Snap Type	2 3/4	1 11/32	3 45/64	1	3/4	2.70	3.85
XX50	212	437	75	Snap Type	1 27/32	1 5/16	6 5/16	1	1	5.50	8.20
XX69	227	W361	103 1/2	Flashlight Brass	1 11/32	1 11/32	11 23/32	1	1	4.86	6.95
Y10	220	504	15	Flat Contact	19/32	19/32	1 23/64	1	1 oz.	1.00	1.50
Y15	221	505	22 1/2	Flat Contact	19/32	19/32	1 31/32	1	1 oz.	1.17	1.75
Y20	223	506	30	Flat Contact	1 3/16	19/32	1 13/32	1	1 oz.	2.17	3.25
Y20S	222	507	30	Flat Contact	19/32	19/32	2 9/16	1	1 oz.	1.50	2.25
Z30	205	738	45	Socket	3	2 5/16	4 1/16	1	1 1/4	4.95	7.25
Z30NX	711	W350	45	Binding Post	3 1/32	1 7/8	4 13/32	5	7 3/5	2.69	3.85
BURGESS INDUSTRIAL AND ELECTRONIC "C" BATTERIES											
2370	712	761T	4 1/2	Binding Post	3 15/16	1 3/8	2 7/8	1	3/4	2.35	3.35
2370PI	718	771	4 1/2	Socket	4 1/64	1 27/64	2 63/64	1	3/4	3.52	5.25
5360	714	781	4 1/2	Binding Post	2 13/32	27/32	2 27/32	1	1/4	1.51	2.25
5540	713	773	7 1/2	Bndg Post Neg	4	7/8	2 3/4	1	2/5	2.17	3.25
W5BP	----	W362	7 1/2	Binding Post	2 31/32	23/32	1 3/4	1	1/8	5.80	8.65
BURGESS FLASHLIGHT AND LANTERN BATTERIES											
2-Disp. 24	13F	950	1 1/2	Flashlight	1 21/64 (diam.)		2 3/8	48	10 1/2	.1625	.25
2-Bulk 50	13F	950	1 1/2	Flashlight	1 21/64 (diam.)		2 3/8	50	10 1/2	.1625	.25
210-Disp. 24	13C	1150	1 1/2	Flashlight	1 21/64 (diam.)		2 3/8	48	11	.19	.30
210-Bulk 50	13C	1150	1 1/2	Flashlight	1 21/64 (diam.)		2 3/8	50	10 3/4	.19	.30
1-Disp. 24	14F	935	1 1/2	Flashlight	63/64 (diam.)		1 15/16	24	2 1/2	.1625	.25
Z-Disp. 24	15E	515	1 1/2	Flashlight	35/64 (diam.)		1 31/32	24	1	.125	.20
910-Disp. 12	15F	915	1 1/2	Flashlight	35/64 (diam.)		1 31/32	12	1/2	.13	.20
7-Disp. 12	24F	912	1 1/2	Flashlight	13/32 (diam.)		1 3/4	12	1/4	.13	.20
NE-Disp. 6	910	904	1 1/2	Flashlight	7/16 (diam.)		1 11/64	6	1/4	.095	.15
F4M (Metal)	908	509	6	Spring	2 5/8	2 5/8	4 3/8	12	16 1/3	1.13	1.69
F4BP	915	510S	6	Binding Post	2 5/8	2 5/8	4	1	1 2/5	1.13	1.69
F4SC	917	510F	6	Spring Clip	2 5/8	2 5/8	4 1/2	1	1 1/4	1.40	2.10
TW1	918	731	6	Binding Post	5 3/8	2 7/8	4 15/16	1	3 1/5	2.30	3.45
TW1-X	918D	.....	6	Binding Post	5 3/8	2 7/8	4 15/16	1	3 1/5	2.64	3.95
TW2	926	732	12	Binding Post	5 3/8	2 7/8	4 15/16	1	3 1/5	2.30	3.45
Z46HD	.....	.....	69	Flat Contact	2 1/2	2 1/16	8 1/32	2	6 1/4	3.83	5.75
BURGESS IGNITION - TELEPHONE AND PROTECTIVE SYSTEM BATTERIES * Battery also available with spring clip terminals ** Battery also available with screw terminals											
2F8H	.....	.....	12	Binding Post	8 5/16	2 13/16	5 13/16	1	6 1/4	4.25	6.35
2G8H	922	1463	12	Binding Post	10 1/2	2 3/4	7 13/32	1	7	4.66	6.98
4FH	900E	.....	1 1/2	Screw Terminal	2 5/8	2 5/8	4	12	16	1.06	1.59
4F2H	901	W357	3	Spring Clip	3 29/32	2 11/16	5 13/32	1	2 3/5	3.85	5.75
4F4H	902	706	6	Binding Post	8 5/16	2 13/16	5 13/16	1	6 1/5	3.98	5.98
4F5H	903	715	7 1/2	Binding Post	7 3/16	3 31/32	5 13/16	1	7 1/2	4.86	7.25
4F6H	904	716	9	Binding Post	8 1/2	3 31/32	5 13/16	1	8 1/2	5.53	8.25
*6 Ign.	905	6 Ign. S	1 1/2	Screw Terminal	2 1/2 (diam.)		6 5/8	12	25	1.05	1.59
**6 Tel.	906	6 GL	1 1/2	Spring Clip	2 1/2 (diam.)		6 5/8	12	26 1/5	1.05	1.59
6 Ind.	911	6 R.R.	1 1/2	Screw Terminal	2 1/2 (diam.)		6 5/8	12	26 1/2	1.05	1.59
S461	907	1461	6	Binding Post	10 1/2	2 3/4	7 13/32	4	37 1/2	3.98	5.98
BURGESS PHOTO-FLASH BATTERIES											
120-Disp. 12	14P	835	1 1/2	Flashlight	1 (diam.)		1 15/16	12	1 1/5	.19	.30
220-Disp. 12	13P	850	1 1/2	Flashlight	1 11/32 (diam.)		2 23/64	12	2 1/2	.19	.30
720-Disp. 24	24P	812	1 1/2	Flashlight	13/32 (diam.)		1 3/4	24	2/5	.1625	.25
920-Disp. 24	15P	815	1 1/2	Flashlight	35/64 (diam.)		1 31/32	24	4/5	.1625	.25
U15	215	412	22 1/2	Flat Contact	31/32	9/16	1 31/32	1	1 oz.	1.17	1.75
*Y10	220	504	15	Flat Contact	19/32	19/32	1 23/64	1	1 oz.	1.00	1.50
Y15	221	505	22 1/2	Flat Contact	19/32	19/32	1 31/32	1	1 oz.	1.17	1.75
U10	208	411	15	Flat Contact	1	39/64	1 7/16	1	1 oz.	1.00	1.50
U20	210	413	30	Flat Contact	1	39/64	2 17/32	1	2 ozs.	1.30	1.95
XX150	.....	489	225	Pin Jacks	4 1/4	2 3/8	4 1/4	1	2 1/2	7.67	10.95
U160	.....	491	240	Flat Contact	2 9/16	1 5/16	4 13/32	1	4/5	7.20	10.25
U320	.....	497	510	Flat Contact	2 13/16	1 17/32	5 5/16	1	1 1/2	13.00	18.50
K30P-K	.....	.....	45	Battery & Bulb				1	1/2	2.25	3.35
BURGESS POCKET TAPE RECORDER BATTERIES											
2VT8	1700	.....	12	Flat Contact	1 5/16	1 5/16	3 19/32	1	1/2	2.00	3.00
2X7	.....	.....	10 1/2	Snap Type	2 1/2	1 25/32	2 11/32	1	1/2	4.00	5.90
BURGESS "A & B" PACKS FOR RADIO AND OTHER ELECTRONIC APPLICATIONS											
6TA60	410	W369	1 1/2A, 90B	Socket	9 31/32	2 1/4	4 7/16	1	4 4/5	11.40	16.95
G6B60	400	752	9A, 90B	Recessed Plug	13 29/32	2 13/16	4 21/32	1	6 3/5	12.00	17.90



XX45



5540



2



TW1



No. 6 Ignition

© United Technical Publications

BURGESS BATTERIES



220



Hg-9



Y15



5308



5360

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L W H	Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	Sugg. List Price Each
BURGESS ALKALINE BATTERIES									
AL1-Disp. 6	14A	E93	1½	Flat Contact	63/64 (diam.) 1 15/16	6	1	$ .52	$ .80
AL133-Disp. 6	1306A	523	4½	Flat Contact	21/32 (diam.) 2	6	½	1.14	1.75
AL2-Disp. 6	13A	E95	1½	Flat Contact	1 21/64 (diam.) 2 13/32	6	2	.65	1.00
AL7-Disp. 24	24A	E92	1½	Flat Contact	13/32 (diam.) 1¾	24	7/10	.39	.60
AL9-4PK.	15A	E91	1½	Flat Contact	17/32 (diam.) 1 31/32	24	2	.39	.60
ALN-2PK.	910A	E90	1½	Flat Contact	29/64 (diam.) 1⅛	2	1 oz.	.325	.50
APX19-2PK.	1307	531	4½	Snap Type	21/32 (diam.) 2 13/32	2	⅜	1.14	1.75
APX21-2PK.	.....	523	4½	Flat Contact	21/32 (diam.) 2 1/32	2	⅜	1.14	1.75
APX24-2PK.	1308	532	3	Snap Type	21/32 (diam.) 2	2	⅜	.975	1.50
APX825-2PK.	.....	.....	1½	Flat Contact	29/32 (diam.) 15/64	2	1 oz.	.41	.625
AL912	.....	.....	18	Flat Contact	2 55/64 2 49/64 1 9/32	1	¾	6.63	9.35
BURGESS MERCURY BATTERIES									
Information on additional Mercury Batteries not listed below is available.									
Hg-1	1100	E1	1.4	Flat	5/8 (diam.) 21/32	4	.13	.63	.95
Hg-1R	.....	E1N	1.35	Flat	5/8 (diam.) 21/32	4	.13	.83	1.25
Hg-3R	.....	E3	1.35	Flat	1 (diam.) 21/32	4	.30	1.30	1.95
Hg-4R	.....	E4	1.35	Flat	1 13/64 (diam.) 21/32	4	.45	1.67	2.50
Hg-9-4PK.	15M	E9	1.4	Flat	17/32 (diam.) 1 31/32	4	.30	.67	1.00
Hg-12	1101	E12	1.4	Flat	5/8 (diam.) 2	2	.25	1.00	1.50
Hg-12R	.....	E12N	1.35	Flat	5/8 (diam.) 2	2	.25	1.30	1.95
Hg-42R	.....	E42N	1.35	Flat	1 13/64 (diam.) 2 3/8	1	.50	3.67	5.50
H114R	.....	E114	5.4	Flat	43/64 (diam.) 1 3/32	2	.15	2.17	3.25
H115R	.....	E115N	6.75	Flat	43/64 (diam.) 1 21/64	2	.15	2.50	3.75
H126-Disp. 6	1611M	E126	8.4	Flat	47/64 (diam.) 2	6	.50	1.50	2.25
H132R	.....	E132N	2.7	Flat	43/64 (diam.) 1 5/16	2	.15	1.30	1.95
H133-6PK.	1306M	E133	4.2	Flat	21/32 (diam.) 2	6	.60	1.50	2.25
H133R	.....	E133N	4.05	Flat	21/32 (diam.) 2	2	.20	1.67	2.50
H134R	.....	E134N	5.4	Flat	43/64 (diam.) 2 5/8	2	.25	1.97	2.95
H135R	.....	E135N	6.75	Flat	43/64 (diam.) 3 3/32	2	.30	2.34	3.50
H136R	.....	E136N	8.1	Flat	43/64 (diam.) 3 15/16	2	.35	2.63	3.95
H137R	.....	E137N	9.45	Flat	43/64 (diam.) 4 19/32	1	.20	3.00	4.50
H146X-Disp. 6	1604M	E146X	8.4	Snap	1 1/32 21/32 1¾	6	.75	1.30	1.95
H152R	.....	E152N	2.7	Flat	31/32 (diam.) 1 7/64	2	.075	1.30	1.95
H162R	.....	E162	2.7	Flat	43/64 (diam.) 57/64	2	.15	1.30	1.95
H163	1305	E163	4.2	Flat	21/32 (diam.) 1 5/16	2	.15	1.67	2.50
H163R	.....	E163N	4.05	Flat	21/32 (diam.) 1 5/16	2	.15	1.83	2.75
H164-Disp. 6	1404	E164	5.6	Flat	21/32 (diam.) 1¾	6	.40	1.50	2.25
H164R	.....	E164N	5.4	Flat	21/32 (diam.) 1¾	2	.20	1.83	2.75
H165	1500	E165	7.0	Flat	21/32 (diam.) 2 13/64	2	.20	1.97	2.95
H165R	.....	E165N	6.75	Flat	21/32 (diam.) 2 13/64	2	.20	2.17	3.25
H169	.....	E169	12.6	Flat	43/64 (diam.) 3 63/64	1	.17	3.50	5.25
H177-Disp. 6	1606M	.....	9.8	Snap	35/64 (diam.) 1 29/32	6	.15	1.50	2.25
H233	1300	E233	4.2	Flat	1¼ (diam.) 1 31/32	1	.20	2.67	4.00
H286	.....	E286	8.4	Snap	1 (diam.) 1 15/16	6	.75	1.50	2.25
H289	.....	E289	12.6	Snap	1 (diam.) 2 25/64	6	1.00	2.92	4.25
Hg-312	.....	E312	1.4	Flat	5/16 (diam.) 9/64	6	.024	.24	.35
Hg-400	1106	E400	1.4	Flat	29/64 (diam.) 9/64	6	.024	.33	.50
Hg-400R	.....	E400N	1.35	Flat	29/64 (diam.) 9/64	6	.024	.63	.95
Hg-401-3PK.	910M	E401	1.4	Flat	29/64 (diam.) 1⅛	3	.09	.63	.95
Hg-401R	.....	E401N	1.35	Flat	29/64 (diam.) 1⅛	2	.05	.83	1.25
Hg-450R	.....	E450	1.35	Flat	29/64 (diam.) 9/16	4	.01	.83	1.25
Hg-502R	.....	E502	1.35	Flat	17/32 (diam.) 1 31/32	2	.16	1.17	1.75
Hg-520	.....	E520	1.40	Flat	½ (diam.) 9/32	6	.06	.21	.30
Hg-575	.....	.....	1.4	Flat	29/64 (diam.) ⅛	6	.05	.24	.35
Hg-625	.....	E625	1.4	Flat	5/8 (diam.) ¼	4	.05	.49	.75
Hg-625R	.....	E625N	1.35	Flat	5/8 (diam.) ¼	4	.05	.63	.95
Hg-630	1104	E630	1.4	Flat	5/8 (diam.) ¼	4	.05	.50	.75
Hg-630R	.....	E630N	1.35	Flat	5/8 (diam.) ¼	4	.05	.63	.95
Hg-640	1105	E640	1.4	Flat	5/8 (diam.) 7/16	4	.15	.50	.75
Hg-640R	.....	E640N	1.35	Flat	5/8 (diam.) 7/16	4	.15	.63	.95
Hg-675	.....	E675	1.4	Flat	29/64 (diam.) 13/64	6	.022	.335	.50
HPX-4	.....	EPX4	5.6	Flat	21/32 (diam.) 1 61/64	1	.20	1.83	2.75
HPX-6	.....	EPX6	8.4	Flat	21/32 (diam.) 4 3/32	1	.20	3.00	4.50
HPX-13-B1.4	.....	EPX13	1.35	Flat	5/8 (diam.) ¼	4	.05	2.52*	3.80*
HPX-14	.....	EPX14	2.70	Flat	21/32 (diam.) 5/8	4	.34	1.30	1.95
HPX-23	.....	.....	5.6	Flat	5/8 (diam.) 49/64	6	.11	.63	.95
HPX-25	.....	.....	4.05	Flat	43/64 (diam.) 27/32	2	.06	1.67	2.50
HPX-29	.....	.....	4.05	Flat	31/64 (diam.) 21/32	2	.034	1.30	1.95
303314	.....	.....	16.8	Flat	2⅞ 1 13/16 1 5/16	1	.80	11.20	16.00
BURGESS PRIMARY SILVER OXIDE BATTERIES								* Per Card	
13SO	.....	MS13	1.5	Flat	5/16 (diam.) 13/16	6	.02	.30	.45
41SO	.....	MS41	1.5	Flat	29/64 (diam.) 5/32	6	.04	.30	.45
76SO	.....	MS76	1.5	Flat	29/64 (diam.) 1/32	6	.04	.40	.60

© United Technical Publications

BURGESS BATTERIES

BURGESS SEALED RECHARGEABLE NICKEL CADMIUM CELLS AND BATTERIES

Information on additional Nickel Cadmium Batteries not listed below is available.

BURGESS Number	NEDA Number	Other	Volts	Overall Dimensions L	W	H	Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	Sugg. List Price Each
CD1			1.25	.460 (diam.)		.225	1		$ 1.40	$ 2.00
CD2			1.25	.610 (diam.)		.236	1		1.06	1.50
CD8			1.25	.984 (diam.)		.232	1		1.16	1.65
*CD8L	*(L indicates types		1.25	.984 (diam.)		.257	1		1.31	1.90
CD3			1.25	.984 (diam.)		.275	1		1.18	1.70
*CD3L	with solder lugs		1.25	.984 (diam.)		.300	1		1.38	1.95
CD4			1.25	.984 (diam.)		.350	1		1.21	1.75
*CD4L	on terminals).		1.25	.984 (diam.)		.375	1		1.41	2.00
CD5			1.25	1.700 (diam.)		.300	1		1.83	2.60
*CD5L			1.25	1.700 (diam.)		.325	1		1.99	2.85
CD6(AA)			1.25	.560 (diam.)		1.950	1		2.14	3.05
*CD6L(AA)			1.25	.560 (diam.)		2.275	1		2.27	3.25
CD9			1.25	.550 (diam.)		3.680	1		4.36	6.25
CD7(D)			1.25	1.350 (diam).		2.425	1		4.47	6.40
*CD7L(D)			1.25	1.350 (diam.)		2.775	1		4.61	6.60
CD10(D)			1.25	1.300 (diam.)		2.425	1		7.13	10.20
*CD10L(D)			1.25	1.300 (diam.)		2.775	1		7.26	10.40
CD11(D)			1.25	1.300 (diam.)		2.425	1		4.98	7.15
CD12 (short C)			1.25	.876 (diam.)		1.672	1		2.96	4.25
CD12L(short C)			1.25	.876 (dia.)		1.672+L	1		3.10	4.45
CD13 (half D)			1.25	1.273 (diam.)		1.440	1		6.83	9.75
CD13L(half D)			1.25	1.273 (dia.)		1.440+L	1		6.96	9.95
CD14 (C)			1.25	1.01 (diam.)		1.945	1		3.90	5.60
CD21			6	1.065 (diam.)		1.525	1		8.40	12.00
CD22			6	1.065 (diam.)		1.975	1		8.80	12.60
CD23			6	1.800 (diam.)		1.725	1		13.32	19.05
CD24			9.6	1.065 (diam.)		2.650	1		12.67	18.10
CD25			9.6	1.065 (diam.)		3.200	1		12.80	18.25
*CD25L			9.6	1.065 (diam.)		3.200	1		12.86	18.25
CD26			9.6	1.800 (diam.)		2.575	1		21.34	30.50
CD27			12	1.065 (diam.)		2.925	1		15.17	21.70
CD28			12	1.065 (diam.)		3.600	1		16.25	23.25
CD29			12	1.800 (diam.)		3.100	1		25.20	36.15
CD30			6	1½	1½	3 13/16	1		27.45	39.20
CD31			6	3 13/16	1 17/32	3⅝	1		32.99	47.25
CD33			6	5⅜	2⅞	4 15/16	1		30.47	43.45
CD100			1.25	1.36	.75	3.36	1		10.24	13.60
CD101			1.25	1.36	1.36	2.40	1		8.33	11.90
CD102			1.25	1.36	1.36	3.36	1		9.79	14.00
CD107			1.25	1.93	1.67	4.25	1		15.36	21.95
CD108			1.25	3.56	1.05	4.90	1		17.68	25.50
CD109			1.25	3.56	1.34	4.90	1		21.23	30.00
CD110			1.25	3.56	1.66	4.90	1		27.32	39.05
CD111			1.25	3.56	1.97	4.90	1		29.48	42.00

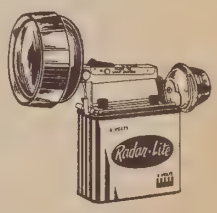

CD3



CD7



CD25



TW3

BURGESS SAFARI LITE AND RADAR LIGHTS (complete with batteries)

BURGESS Number	Description	Pkg. Unit Quan.	Wt. of Un. Pkg. in Lbs.	Sugg. Dealer Each	Sugg. List Price Each
165/2GY or 165/2GN	Safari Lite Fluorescent Light (GY-Graytone or GN-Veldt Green) with 2 No. Z46 Batteries	1	10⅘	$20.95	$33.95
TW3 Comp.	Radar-Lite Spot-Flasher with 1 No. TW1 Battery (Lamp 4546, 407)	1	5 1/10	9.90	15.50
TW4 Comp.	Radar-Lite Spot-Without Flasher with No. TW1 Battery (Lamp 4546)	1	4¾	8.15	13.25
TW7 Comp.	Radar-Lamp Chrome-Finish, TW8 Copper-Finish with 1 No. TW1 Battery (Lamp 1651)	1	4⅕	7.15	10.95
TW10 Comp.	Panther Lite Spot-Flasher with 1 No. TW1 Battery (Lamp 4546, 407)	1	5¼	11.80	18.95
TW11 Comp.	Radar-Lite (Bulb Reflector Model) with 1 No. TW1 Battery (Lamp 425)	1	4¾	7.20	10.95
TW12 Comp.	12 Volt Radar-Lite with 1 No. TW2 Battery (Lamp 965)	1	5	8.00	12.95
TW6E Comp.	Power Failure Operated Lantern Flood Beam with 1 No. TW1 Battery (Lamp 4512)	1	6	16.30	23.95
TW34	Radar-Flash without battery	1	¾	2.90	4.50


165/2

BURGESS DOLPHIN, RADAR-MATE AND FLASHLIGHTS (less batteries)

164	Dolphin Lantern. Uses 1 No. F4M battery (Lamp PR13)	1	½	1.97	2.95
163	Tuffy-Plastic Flashlight—2 Cell Prefocused (Lamp PR2)	6	1½	.74	1.19
257	Satellite Torch—2 Cell Junior Prefocused (Lamp PR4)	3	1	1.30	1.95
357	Satellite Torch—2 Cell Prefocused (Lamp PR2)	6	2¾	1.30	1.95
263	2 Cell Magnet-Tough Plastic Industrial Flashlight (Lamp PR2)	6	2½	1.45	2.19
453	2 Cell Industrial—Safety Light (Lamp PR2)	1	½	3.48	5.25
563	Penlight (AAA size) (Lamp 224)	12	1	.85	1.29
663	Penlight (Heavy Duty AA size) (Lamp 222)	12	1	.85	1.29
667	Magnet Lazer Lite—2 Cell Prefocused (Lamp PR2)	6	4	2.26	3.39
763	Snap-Lite Pocket Light (AAA size) (Lamp 224)	12	1½	.82	1.25


357

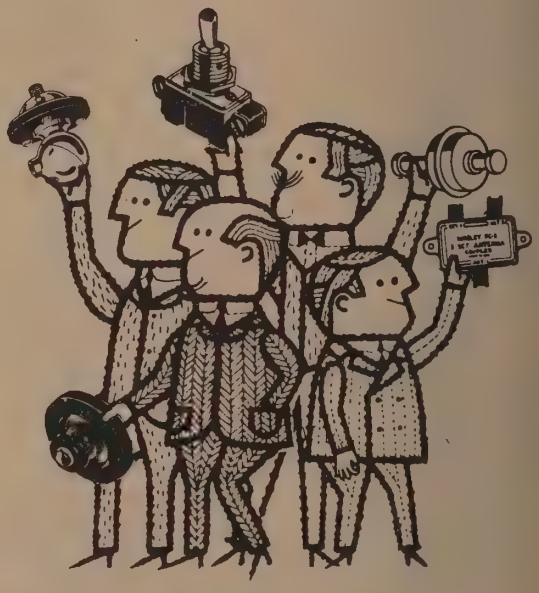
© United Technical Publications

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*



- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

Custom DC to AC CONVERTERS

115 v. AC 60 HZ Output, 250 to 750 Watts

Carter Motor ®



Dependable rotary power for operating office business machines, professional tape recorders, railroad, mobile and marine radio and radar equipment. Finest construction. Sealed ball bearings require no lubrication. Long life, continuous duty, high efficiency on all models. Only popular models listed here. For 50 Hz output, add $7.50 to list prices. All models 100% power factor. Size: 200 watts, 12⅝" l. x 6¾" w. x 7¼" h.; 210 and 300 watts, 11⅝" long; 500 watts, 12⅝" long; 750 watts, 13⅞" long.

Frequency Control Models

†Carter Number	DC Input Volts	Amps.	115 AC Watts	List Price
DR1021CP	115	2.5	210	$390.00
DR1050CP	115	7.0	500	450.00
JR1021CP	28	14.0	210	390.00
JR1030CP	28	20	300	400.00
JR1050CP	28	28	500	450.00
ER1021CP	24	16	210	390.00
ER1030CP	24	22	300	400.00
ER1050CP	24	33	500	450.00
BR1021CP	12	29	210	390.00
BR1030CP	12	35	300	400.00
BRS1040CP*	12	56	400	425.00

† Includes meter and control as shown
* One hour duty cycle

Models listed at left have manually operated frequency control and meter to maintain 60 HZ output over a ±10% input voltage variation. All other custom converters from 210 to 750 watt output can be supplied with frequency control at $100.00 additional to list price. Add 3" to height.

Filter available: add $60.00 to list prices, 3" to height. Add $20.00 for built in capacitor filter.



CUSTOM CONVERTER

Carter Number	DC Input Volts	Amps.	115 AC Watts	List Price
KSX1020C5P	230	1.3	200	$360.00
DSX1020C5P	115	2.6	200	350.00
HSX1020C5P	64	5	200	350.00
CSX1020C5P	32	9	200	350.00
K1025CP	230	1.8	250	305.00
K1030CP	230	2.3	300	315.00
K1040CP	230	2.8	400	350.00
K1050CP	230	3.5	500	355.00
K1075CP	230	4.4	750	390.00
D1021CP	115	2.5	210	290.00
D1025CP	115	3.5	250	295.00
D1030CP	115	4.6	300	300.00
D1040CP	115	5.6	400	330.00
D1050CP	115	7	500	350.00
D1075CP	115	8.8	750	380.00
H1025CP	64	7.8	250	295.00
H1030CP	64	8.2	300	300.00
H1040CP	64	10	400	330.00
H1050CP	64	12.5	500	350.00
H1075CP	64	16	750	380.00
W1025CP	48	9	250	295.00
W1030CP	48	10	300	300.00
W1040CP	48	13	400	330.00
W1050CP	48	16	500	350.00
W1075CP	48	22	750	380.00

Carter Number	DC Input Volts	Amps.	115 AC Watts	List Price
C1025CP	32	15	250	$295.00
C1030CP	32	19	300	300.00
C1040CP	32	21	400	330.00
C1050CP	32	25	500	350.00
C1075CP	32	32	750	380.00
J1021CP	28	14	210	290.00
J1025CP	28	19	250	295.00
J1030CP	28	20	300	300.00
J1040CP	28	24	400	330.00
J1050CP	28	28	500	350.00
J1075CP	28	38	750	380.00
E1025CP	24	18	250	295.00
E1030CP	24	22	300	300.00
E1040CP	24	28	400	330.00
E1050CP	24	33	500	350.00
E1075CP	24	44	750	380.00
B1021CP	12	29	210	290.00
B1025CP	12	35	250	295.00
B1030CP	12	45	300	300.00
BS1040CP*	12	56	400	330.00

* One hour duty cycle.
All models listed are for 115 V. AC 60 HZ single phase output. 100% power factor.

STAND-BY LOAD-TRANSFER CONVERTERS



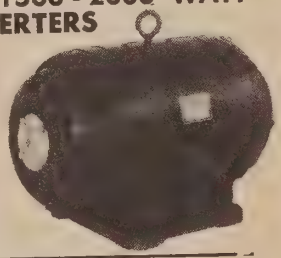
Starts automatically should AC power fail. Shuts off when power restored. Runs from batteries. Operates paging and control circuits for hospitals, schools, utilities, etc. Popular models listed. Other ratings from 200 to 750 watt output. Batteries or trickle charger not supplied.

For stand-by feature on other custom converters listed above, add Y to code number and $90.00 to list price.

Number	DC Input	AC	List
B1030CPY	12 v 22 A	300 w	$390.00
W1050CPY	48 v 16 A	500 w	435.00
D1050CPY	115 v 7 A	500 w	435.00
D1075CPY	115 v 8.8 A	750 w	470.00

230 v. output also available

Monarch 1000 - 1500 - 2000 WATT CONVERTERS



1000, 1500 and 2000 watt 60 HZ AC output, 24 to 230 volt input models. The Monarch series is ideal for heavy-duty industrial service, marine, mine, crane and railroad communications. Slow speed (1800 rpm), long life. 4-pole design; ball bearing equipped. No filter is necessary for most applications. Size: 19" x 11" x 12" high. Three-phase output available, add $60 to list. 24 v. Input at 1500 w. rating. Built-in capacitor filter available, add $30.00 to list.

Carter Number	DC Input Volts	Amps	Watts, AC at 60 HZ, 115 v.	List Price
E10100M	24	68	1000	$775.00
J10150M	28	80	1500	825.00
C10150M	32	69	1500	825.00
D10200M±	115	25	2000	875.00
K10200M±	230	12.5	2000	875.00

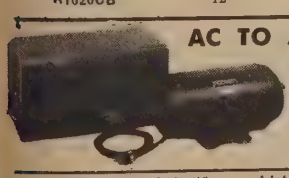
± Reduced voltage starters necessary, add $120.00 to list price.



"MARK II" SUPER CONVERTERS

Designed for high PF non-inductive AC loads such as amplifiers, lab and medical equipment, standby emergency lighting, telephone and marine communications. Not damaged by intermittent transients or sudden overloads. Will not operate refrigerators, large AC motors or low PF transformers. Ball bearing, con. duty. Size: 8¼" x 4½" x 5" high. Weight: 13 lbs. (*10¼" long, 4½" wide, 5" high. Weight: 10 lbs.)

Carter Number	DC Inputs Volts	Amps	Watts, AC at 60 HZ, 115 v.	List Price
D1010CB	115	1.7	100	$166.00
D1015CB	115	2.0	150	170.00
B1010CB	12	15	100	158.00
B1015CB	12	23	150	160.00
D1020CB*	115	2.6	200	185.00
B1020CB*	12	30	200	180.00



AC TO AC FREQUENCY CHANGERS

Produces 115 v., 50 or 60 HZ AC output from 25 to 400 HZ input. For operating standard equipment on non-standard frequencies. Standard units are for single phase input and output. Three-phase output available on order. For frequency meter, add $50.00 to list price. Non regulated.

Number	Output*	List	Number	Output*	List
FC1025CP	250 w	$800.00	FC10100M	1000 w	$1,500.00
FC1050CP	500 w	800.00	FC10150M	1500 w	1,650.00
FC1075CP	750 w	825.00	FC10200M	2000 w	1,725.00

* 60 HZ output. 50 HZ available



REFRIGERATOR-APPLIANCE MARINE CONVERTERS

Operates standard refrigerators, compressors (up to 1/6 hp only), vacuum cleaners and other appliances from DC; for use aboard commercial and pleasure boats. Converter operates only when power is called for. Has handy AC outlet to run most appliances from DC. Input from 24 to 230 v. DC. Size: 14" x 6¾" x 11" high. Net Weight: 85 lbs. 750 w. con. duty rating. Models from 24 to 230 v. DC input.

Number	Input	List	Number	Input	List
RF34	34 v.	$540.00	RF115	115 v.	$540.00

CARTER DC to AC GENEVERTERS



Compact model for low power marine and industrial applications requiring up to 60 watt 115 v. 60 HZ output. High power factor. Models listed are for 115 v. DC input. Others available for 12, 24, 32 or 48 v. input. Size: 7⅜" x 4¾" x 3½" high. Weight: 10¼ lbs.

Carter Number	DC Input Volts	Amps.	Output Watts	List Price
1020LD	115	.4	20	$104.00
1040LD	115	.6	40	105.00
1060LD	115	.85	60	106.00

"CUSTOM" DYNAMOTORS

For railroad and marine radio-telephone, industrial communications systems, locomotives, telephone emergency standby power, etc. Heavy duty construction. Low rpm speed, small temperature rise assure extra long life. Filter not normally required. Size: 12⅝" x 6-11/16" x 7¼". Weight: 47 lbs.

Number	DC Input	DC Output	Recv.	Trans.	List
KS1220P	236-264 v	12.8 v	5 A	18 A	$380.00
DS1220P	118-132 v	12.8 v	5 A	18 A	370.00
HS1220P	67-74 v	12.8 v	5 A	18 A	370.00
CS1220P	33-37 v	12.8 v	5 A	18 A	370.00
BS2820PV	14 v.	28 v		20 A	370.00

Carter Motor

Carter Motor Company reserves the right to make changes without notice, in materials, specifications, prices, and to discontinue models, without obligation.

ELECTRO POWER SUPPLIES

Stocked at your franchised **ELECTRO** *distributor*

PRECISION BUILT

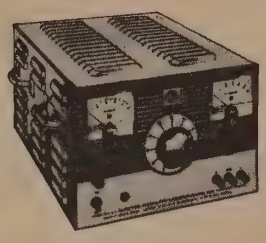
The ELECTRO line provides a wide range of DC outputs up to 125 volts with adequate filtering for requirements ranging from critical transistor circuitry to applications permitting up to 5% ripple.

Every model is engineered to give unusual performance life per dollar. Each has an adjustable output voltage range. Meters indicating voltage and current are large easy to read. Controls clearly marked. Output terminal are isolated from the cabinet... several are rack mounte A one-year warranty on every ELECTRO power supply Designed for production line, industrial and educationa laboratory applications.

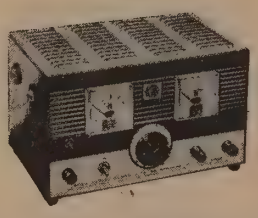
INDUSTRIAL



A



B



C



D

MODEL EF

(Fig. C) provides variable voltage 0-28v or 0-14v at 5 amps continuous, 10 amps, intermittent load. Ripple less than 1%. Uses selenium rectifiers. Input: 117 VAC, 60 Hz.

MODELS EFB AND EFBR

(Figs. C, D) designed for very low ripple requirements of transistor work. Continuously variable voltage control. Selenium rectifiers. Employs chokes and capacitors in ripple filter. Model EFB Federal stock number 6130-957-1450. Model EFBR (Fig. D) same except with standard EIA rack panel. Input: 117 VAC, 50/60 Hz.

MODELS NFB AND NFBR

(Fig. A) for continuous heavy-duty. Continuously variable output, 0-32v for loads to 15 amps. Ripple: less than 0.75% at 15 amps. Ripple filter circuit uses chokes and capacitors. Variable autoformer for smooth control. Bridge-type silicon rectifiers. Model NFBR same except with standard EIA rack panel. (Federal stock number 6130-853-3127.) Input: 117 VAC, 50/60 Hz.

MODELS GFL AND GFLR

(Fig. A) low cost, semi-regulated, low ripple, highe voltage. Ideal for designing and testing DC appliances telephone circuits, relays and solenoids; laboratory work Continuously variable output 0.125v DC at 5 amps. Ripple 0.5%. Silicon rectifiers. Overload protection. Model GFL same except with standard EIA rack panel. Input: 11 VAC, 50/60 Hz.

MODELS PS-5 AND PS-5R

(Fig. A) designed for 48-volt applications. Delivers 55 watts well-filtered DC output continuously variable 0-55 DC. Ripple: 0.5% rms at 10 amps. Silicon rectifiers. Mode PS-5R same except with standard EIA rack panel. Input 117 VAC, 50/60 Hz.

MODEL PS-1000 SERIES

(Fig. B) for continuous heavy duty. Continuously variabl output. Low ripple. Filter circuit uses chokes and capacitor Variable autoformer for smooth control. Bridge-type silico rectifiers. Three models are available with output voltag ranges 0-32v DC at 30 amps, 0-55v DC at 20 amps and 125 DC at 8 amps. Input: 117 VAC, 50/60 Hz.

Model	Figure	Voltage Output	Amps Output	Load Regulation* (V/A)†	Max. Ripple %	Meters††	DC Impedance (ohms)*	Size (HxWxD) Inches	Weight Lbs. (Net)	Price (Net)
EF	C	0-28 0-14	0-5 0-5	0.9 (1-5A) 0.6 (1-5A)	1.0 1.0	0-50V, 0-6A	0.9 (1-5A) 0.6 (1-5A)	7x12x8½	25	$125.00
EFB	C	0-32 0-16	0-4 0-8	1.25 1.0	0.1 0.1	0-40/20V 0-10A	1.25 1.0	7x12x8½	36	175.00
EFBR	D	0-32 0-16	0-4 0-8	1.25 1.0	0.1 0.1	0-40/20V 0-10A	1.25 1.0	8¾x19x8½	47	195.00
GFL	A	0-125	0-5	1.5	0.5	0-150V, 0-5A	1.5	9¾x14¼x14¼	88	320.00
GFLR		0-125	0-5	1.5	0.5	0-150V, 0-5A	1.5	10½x19x14¼	100	345.00
NFB	A	0-32	0-15	0.4	0.75	0-50V, 0-25A	0.4	9¾x14¼x14¼	84	300.00
NFBR		0-32	0-15	0.4	0.75	0-50V, 0-25A	0.4	10½x19x14¼	97	325.00
PS-5	A	0-55	0-10	0.8	0.5	0-75V, 0-15A	0.8	9¾x14¼x14¼	70	325.00
PS-5R		0-55	0-10	0.8	0.5	0-75V, 0-15A	0.8	10½x19x14¼	89	350.00
PS-1000-32	B	0-32	0-30	0.2	0.75	0-50V, 0-30A	0.2	9¾x14¼x19¼	103	425.00
PS-1000-55	B	0-55	0-20	0.5	0.5	0-75V, 0-30A	0.5	9¾x14¼x19¼	113	425.00
PS-1000-125	B	0-125	0-8A	1.0	Less than 1%	0-150V, 0-10A	1.0	9¾x14¼x19¼	120	425.00

*No-load to full-load unless otherwise specified.
†Output voltage change for each ampere of output current change.
††All 2% accuracy except 5% for general purpose units.
Rectifiers: Selenium and Silicon ("avalanche" characteristics on industrial units).

ELECTRO PRODUCTS LABORATORIES, INC.

Net

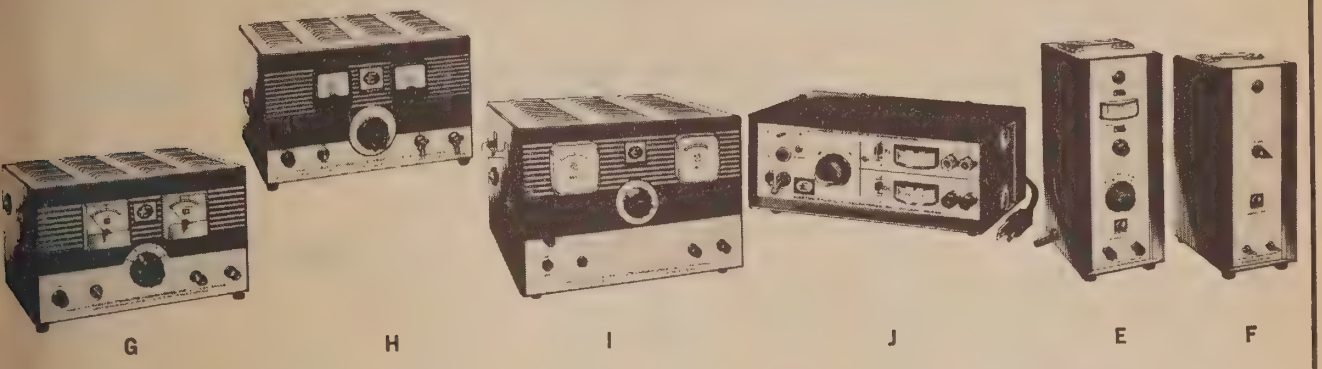
© United Technical Publication

ELECTRO POWER SUPPLIES

LECTRO

vailable through your electronic distributor. *Prices and models subject to change.*

GENERAL PURPOSE



G H I J E F

MODEL D-612T AND MODEL H

Figs. G, H) low ripple, less than ½% rms up to 5 amps; or servicing transistor auto and portable radios. Maximum utput power in this price range. Ideal for citizens' band ransceivers, battery charging, solenoids, etc., requiring up o 16v DC. Model H heavy duty; dual range. Ideal as storage attery replacement in school laboratories, thermoelectric ower source, and other high-current, low-voltage applica- ions. Both types have voltage and current output meters. nput: 117 VAC, 60 Hz.

MODEL EC-1

Fig. F) reliable, low cost. 12v DC with 5 amp output for chool labs and industrial research, production testing, etc. ow-cost source for FM and AM auto radio demonstrations. Maximum ripple ½%. Four-position voltage adjustment witch; off, low, medium and high. EPL patented rectifier onduction cooling. Used vertically or horizontally. Input: 17 VAC, 60 Hz.

MODEL EC-2

(Fig. E) low priced unit for auto, tape disk and transistor adio servicing. Wide applications in research and develop- ment. Continuously variable voltage adjustment provides versatility. Maximum ripple ½% rms at 5 amps. Patented conduction cooling. Used vertically or horizontally. Output: 0-16 VDC combination edge-view voltmeter/ammeter. Input: 117 VAC, 60 Hz.

MODELS PS-30 AND PS-50

(Fig. I) heavy duty adjustable 12-volt units for servicing auto, aircraft and marine communications equipment. Useful in industrial and educational labs, thermoelectric cooling power source, etc. Maximum ripple at maximum current 1%. Eight-position tap switch output voltage adjustable. Model PS-50 delivers 50 amps continuously. Model PS-30 delivers 30 amps continuously. Input: 117 VAC, 50/60 Hz.

MODEL 3301-U

(Fig. J) specifically designed for high school and college electrical and electronic experiments in science labs. Provides both AC and DC low-voltage outputs, adjustable and metered. Two circuit breakers protect primary and outputs, and line isolated transformer and three-wire line cord are safety features. Free 48-page manual of experiments supplied with each unit. Input: 117 VAC, 60 Hz.

Model	Figure	Voltage Output	Amps Output	Load Regulation* (V/A)†	Max. Ripple %	Meters††	DC Impedance (ohms)*	Size (HxWxD) Inches	Weight Lbs. (Net)	Price (Net)
D-612T	G	0-16 0-8	0-10 0-10	0.44 (3-10A) 0.3 (3-10A)	0.5 @ 5A 2 @ 10A	0-20V, 0-10A	0.44 (3-10A) 0.3 (3-10A)	7x12x8½	22	$ 89.50
H	H	12 (adp.) 6 (adj.)	0-10 0-20	0.23 (3-10A) 0.15 (3-20A)	5 5	0-20V, 0-30A	0.23 (3-10A) 0.15 (3-20A)	7x12x8½	30	125.00
EC-1	F	12 (adj.)	0-5	1.4	0.5	None	1.4	10¾x4⅜x6½	12	44.50
EC-2	E	0-16	0-5	1.8	0.5	0-20V/10A	1.8	10¾x4⅜x6½	11	64.50
PS-30	I	12 (adj.)	0-30	0.12 (6-30A)	1	0-20V, 0-50A	0.27	9¾x14¼x14¼	68	225.00
PS-50	I	12 (adj.)	0-50	0.17	1	0-20V, 0-50A	0.17	9¾x14¼x19¼	87	335.00
3301-U	J	0-16DC 0-20AC	0-3	1.8 (1-3A)	0.5	0-20V/0-5A DC 0-20V/0-5A AC	2.4 DC 0.5 AC	4¾x10¾x6½	11	115.00

*No-load to full-load unless otherwise specified.
†Output voltage change for each ampere of output current change.
††All 2% accuracy except 5% for general purpose units.

ELECTRO PRODUCTS LABORATORIES, INC.

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



EVEREADY® FLASHLIGHTS, LANTERNS, and BATTERIES

THE WORLD'S MOST TRUSTED BRAND FOR OVER 60 YEARS

"CAPTAIN" FLASHLIGHTS... Classic Design

- Heavy-Duty Copper/Nickel/Chrome/Plated Steel
- Exclusive 3-Way Lock Switch and Flasher
- End-Loading . . . Ring Hanger



o. 9951 Magnet Lite. Uses 2 No. 950, D-99 or 95 Batteries, No. PR2 Lamp.



No. 9251 Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Also available: **No. 9351** — Uses 3 No. 950, D-99 or E95 Batteries, No. PR3 Lamp.



No. 9231 — Uses 2 No. 935 or E93 Batteries, No. PR4 Lamp.

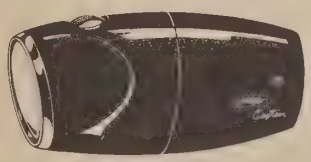


o. 9652 — Uses 6 No. 950, D-99 or E95 Batteries, No. R18 Lamp. Also available: **No. 9352** — Uses 3 No. 950, -99 or E95 Batteries, No. PR3 Lamp.

	No. 9231	No. 9251	No. 9351	No. 9352	No. 9652	No. 9951
List Each	$2.69	$2.69	$3.39	$4.49	$6.69	$3.39
Sugg. Dealer	1.79	1.79	2.26	2.99	4.46	2.26

RECHARGEABLE DEVICES

- Never need batteries
- Retain a charge up to a year when not in use
- One year warranty



No. 3210 "Captain" Rechargeable Mini-Spotlight — Smooth roll action switch. Ideal for pocket or purse. Available in Harbor Blue or Jet Black.



No. 6300 "Commander" Rechargeable Flashlight — Handy for pocket or purse. Available in Diablo Red/Oyster White finish. Gift boxed or blister packed.



o. 71A Display 1 "Captain" 200BL, 1 "Captain" 3300, 2 Commander" 6200's, 2 "Com- ander" 6300's.



No. 3112 "Commander" Rechargeable Lantern — Modern, easy-to-hold, cantilever handle with thumb-tip, push-button control.



No. 3300 "Captain" Rechargeable Flashlight — Twice the light of standard 2-Cell Flashlights . . . never needs batteries! Uses rechargeable battery, No. PR-3 Lamp. Gift boxed or blister packed.



No. 3400 "Captain" Rechargeable Lantern — Twice the light of other rechargeable lanterns, powerful sealed beam lamp generates 13,000 candle power, rugged carrying case. Easy grip cantilever handle with finger-tip switch.

	No. 71A	No. 3112	No. 3210	No. 3300	No. 3400	No. 6300
List Each	$91.70	$19.95	$12.95	$16.95	$39.95	$14.95
Sugg. Dealer	55.02	11.97	7.77	10.17	23.97	8.97

WEATHERPROOF LANTERNS

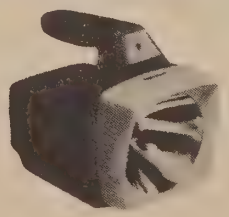


o. 100WB "Big Jim" Lantern w/ asher and 1 No. 731 Battery, No. 546 Lamp, No. 407 Signal Lamp.
o. 101WB Same without flasher.



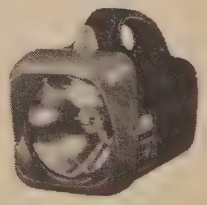
No. 108A Waterproof All American Lantern. "Cordahide" polyethylene construction. Uses 1 No. 509 Battery. No. PR13 Lamp.

In display — order No. 108AD — Contains 3 No. 108A per unit carton All American Lanterns in Colors (white, red, black).



No. 112 Individually boxed (red) All American Lantern with unique power cartridge. "Cordahide" polyethylene construction. Uses No. PR12 Lamp, 5 No. 950, D99 or E95 batteries.

In display — order No. 112. 3 No. 112 All American Lanterns per unit carton in colors (red, blue, gray).



No. 459 Hercules Waterproof/ Floating Lantern. Explosion-proof, insulated case impervious to gasoline, alcohol, most oils and greases.

	No. 100WB	No. 101WB	No. 108A	No. 112	No. 459
List Each	$16.95	$14.95	$3.98	$2.98	$7.95
Sugg. Dealer	11.30	9.97	2.65	1.99	5.30

ALL PRICES WITHOUT BATTERIES

EVEREADY® FLASHLIGHTS, LANTERNS, and BATTERIE

THE WORLD'S MOST TRUSTED BRAND FOR OVER 60 YEARS

INDUSTRIAL and SPECIAL PURPOSE LITES



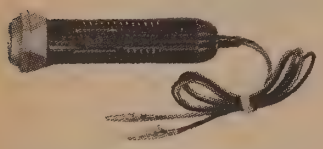
No. 330 Utility Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available individually boxed **(No. 330).**



Signal Spotlights
No. 307R or Y. 2 Cell with signal wand (8") specify color: Red (R) or Yellow (Y).



No. 459 Hercules Waterproof/Flo ing Lantern. Explosion-proof, in lated case impervious to gasoli alcohol, most oils and greases.



No. 308CT Combination spotlight/ continuity tester . . . a high-quality tool for professionals.



Industrial Flashlights
No. 1251 — 2 Cell, No. PR6 Lamp. **No. 1351** — 3 Cell, No. PR7 Lamp. Uses Nos. 950, 1050, D99 or E95 Batteries. Will not shatter, crack or dent.



Safety Flashlights
No. 1259 — 2 Cell, No. PR6 Lamp. **No. 1359** — 3 Cell, No. PR7 Lamp. Uses Nos. 950, 1050, D99 or E95 Batteries. Approved by U.S. Bureau of Mines. Listed by Underwriters' Laboratories, Inc.



No. 3452 Head-Lite. Uses 1 No. 5 Battery and No. PR13 Lamp. Ra proof pouch also available (1348).

	No. 51	No. 308CT	No. 330	No. 337D	No. 459	No. 307R or Y	No. 1251	No. 1259	No. 1348	No. 1351	No. 1359	No. 3452
List Each	$16.68	$6.95	$1.19	$1.39	$7.95	$4.45	$3.30	$4.60	$1.00	$3.75	$4.90	$3.79
Sugg. Dealer	11.16	4.50	0.79	0.94	5.30	2.95	2.20	3.07	0.67	2.50	3.26	2.52

HEAVY-GAUGE, CHROME-PLATED METAL FLASHLIGHTS



Magnet Lites
No. 5MF Magnet Lite — 2 Cell, No. PR2 Lamp. No. 7MF — 3 Cell, No. PR3 Lamp. Use Nos. 950, D-99 or E95 Batteries. Available individually boxed. **No. 5MF** available in display of 6 with (order 6 No. 5MFD) Selling Tags.



Leader Lites
No. 356D Leader Lite — Uses 2 No. 950, D-99 E95 Batteries. No. PR2 Lamp. Available in Display



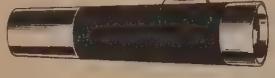
America's Standard
No. 2251 All-Purpose Flashlight — 2 Cell, No. PR2 Lamp. Use Nos. 950, D-99 or E95 Batteries. Available individually.



No. 4251 Wrangler Flashlight. Luxurious, inset, walnut grain vinyl, chrome-plated lens ring, 4-position switch, optically perfect reflector. Available individually boxed or in display of 6 (order 6 No. 4251D). Uses 2 No. 950, D-99 or E95 Batteries. No. PR-2 lamp.



No. 5251 "Commander" Flashlight. Triple-pla chrome finish, sturdy, safety-glow lens ring. Po tive action switch. Available individually boxed in display of 12 (order 5251D). Uses 2 No. 9 D-99 or E95 batteries. No. PR-2 Lamp.



No. 4MF "Pop-Out" Magnet Flashlight. Hidden magnet bulb into sleek case pops out when placed near steel, retracts into case when removed. Available individually boxed or in display of 6 (order 6 No. 4MFD).

	No. 4MF	No. 5MF	No. 356D	No. 2251	No. 4251	No. 5251
List Each	$2.49	$2.29	$1.19	$2.29	$2.29	$.99
Sugg. Dealer	1.66	1.53	.74	1.53	1.53	.595

MINIATURE FLASHLIGHTS



No. 315 Heavy-Duty Penlite. Uses 2 No. 915 or E91 Batteries and No. 222 Lamp. Available individually boxed or in Counter Display of 12 (order 12 No. 315D).



No. 115 "Little Jim" Packet Lite — Uses 1 No. 915 or E91 Battery, No. 112 Lamp. Available in Counter Display of 12 (order 12 No. 115D).



No. 312 Slim Penlite. Uses 2 No. 912 or E92 Batteries and No. 224 Lamp. Available individually boxed or in Counter Display of 12 (order 12 No. 312D).



No. 170 Display-combination miniature lite asso ment contains: 6 each of Slim and Heavy Duty P lites and 6 "Little Jim" Pocket Lites.

	No. 115D	No. 312	No. 315	No. 170
List Each	$0.79	$1.29	$1.29	$20.22
Sugg. Dealer	0.525	0.85	0.85	13.35

ALL PRICES WITHOUT BATTERIES

Trade Discount Applies To List Prices Only
© United Technical Publicatio

EVEREADY® BATTERIES with POWER TO SPARE

THE WORLD'S MOST TRUSTED BRAND FOR OVER 60 YEARS

POPULAR FLASHLIGHT BATTERIES


No. 915
Size AA


No. 935
Size C


No. 950
Size D


No. D99
Heavy-Duty
Size D

ENERGIZERS FOR TRANSISTOR RADIOS

and other electronic applications


No. 206
9 Volts


No. 216
9 Volts


No. 226
9 Volts


No. 333
4½ Volts


No. 1015
Size AA
1½ Volts


No. 1035
Size C
1½ Volts

SUPER POWER ALKALINE BATTERIES

for radios, cameras, toys, flashlights,
and high drain applications, rechargeable TV


No. E90
Size N
1½ Volts


No. E91
Size AA
1½ Volts


No. E92
Size AAA
1½ Volts


No. 523
4½ Volts


No. 563
4½ Volts


No. E93
Size C
1½ Volts


No. E95
Size D
1½ Volts


No. 581
15 Volts

COMPLETE LINE SPECIFICATIONS

MERCURY BATTERIES


No. E9
1.4 Volts


No. E146X
8.4 Volts


No. E133
4.2 Volts

SEALED NICKEL CADMIUM RECHARGEABLE BATTERIES


No. B50
1.25 Volts


No. CH1.2
1.25 Volts


No. CH4
1.25 Volts

LANTERN BATTERIES


No. 509 — Spring
No. 510S — Screws
No. 510F — Fahnestock
6 Volts


No. 731
6 Volts


No. 520
6 Volts
Alkaline

OTHER BATTERIES


No. 6 "Ignitor"
1½ Volts


"HOT SHOT"
No. 1481 6 Volts
No. 1462 6 Volts
No. 1463 12 Volts
No. 1562 7½ Volts
No. 1662 9 Volts


EMERGENCY
LIGHTING
No. 706 6 Volts
No. 715 7½ Volts
No. 716 9 Volts

EVEREADY® COMPLETE LINE SPECIFICATIONS

PRIMARY BATTERIES

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Dealer Price	Retail Price	Major Use
E1	1100M	Mercury	0.625 Diam. x 0.645			Flat Contacts—,+1.4		0.43	4	$0.62	$0.95	Meters, Instr., Misc.
E1N	—	Mercury	0.625 Diam. x 0.645			Flat Contacts—,+1.35		0.43	4	0.81	1.25	
EPX1	—	Mercury	0.625 Diam. x 0.650			Flat Contacts—,+1.35		0.43	4	0.65	1.00	Camera Light Meter
E3	—	Mercury	0.985 Diam. x 0.660			Flat Contacts—,+1.35		1.0	4	1.27	1.95	Meters, Instr., Misc.
E4	—	Mercury	1.195 Diam. x 0.660			Flat Contacts—,+1.35		1.6	4	1.62	2.50	
EPX4	—	Mercury	0.662 Diam. x 1.965			Flat Contacts—,+5.6		1.2	1	1.79	2.75	Camera
No. 6 "Ignitor" Gen. Purpose	905	Carb. Zinc	2-5/8 Diam. x 6-21/32			**Knurled Nut & Screw—,+1.5	2	1.0	1	1.05	1.59	Ign. Lighting
No. 6 "Gray Label Telephone	906	Carb. Zinc	2-5/8 Diam. x 6-21/32			***Knurled Nut & Screw—,+1.5	2	2.0	1	1.05	1.59	Telephone
No. 6 Railroad and Industrial	911	Carb. Zinc	2-5/8 Diam. x 6-21/32			**Knurled Nut & Screw—,+1.5	2	3.0	1	1.05	1.59	Ign. Tele.
EPX6	—	Mercury	0.662 Diam. x 4.415			Flat Contacts—,+4.05,+8.1		1.6	1	2.92	4.50	Camera
E9	15M	Mercury	0.550 Diam. x 1.968			Flat Contacts—,+1.4		1.05	4	0.65	1.00	Trans. Radio
E12	1101M	Mercury	0.640 Diam. x 1.968			Flat Contacts—,+1.4		1.4	2	0.97	1.50	
E12N	—	Mercury	0.640 Diam. x 1.968			Flat Contacts—,+1.35		1.4	2	1.27	1.95	Instr. Misc.
E13	—	Mercury	0.310 Diam. x 0.210			Flat Contacts—,+1.4		0.04	6	0.27	0.40	Electric Dev.
EPX13	—	Mercury	0.615 Diam. x 0.238			Flat Contacts—,+1.35		0.14	4	0.62	0.95	Camera Light Meter
S13	—	Silver Oxide	0.310 Diam. x 0.210			Flat Contacts—,+1.5		0.04	6	0.30	0.45	Electr. Dev.
EPX14	—	Mercury	0.655 Diam. x 0.607			Flat Contacts—,+2.7		0.3	4	1.27	1.95	Camera Light Meter
EPX23	—	Mercury	0.600 Diam. x 0.787			Flat Contacts—,+5.6		0.12	6	0.62	0.95	
EPX25	—	Mercury	0.660 Diam. x 0.845			Flat Contacts—,+4.05		0.45	2	1.62	2.50	
EPX29	—	Mercury	0.475 Diam. x 0.680			Flat Contacts—,+4.05		0.3	2	1.27	1.95	Photo
EPX30	—	Alkaline	0.955 Diam. x 0.480			Flat Contacts—,+3.0		0.5	2	—	—	
T35	—	Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts—,+1.5		1.4	6	0.39	0.60	Electric Clock
E41	—	Mercury	0.455 Diam. x 0.162			Flat Contacts—,+1.4		0.07	6	0.27	0.40	Electr. Dev.
S41	—	Silver	0.455 Diam. x 0.165			Flat Contacts—,+1.5		0.06	6	0.30	0.45	Novelties
E42	13M	Mercury	1.195 Diam. x 2.390			Flat Contacts—,+1.4		5.85	1	3.25	5.00	Instr. Trans. Appl., Misc.
E42N	—	Mercury	1.195 Diam. x 2.390			Flat Contacts—,+1.35		5.85	1	3.57	5.50	
T50	—	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts—,+1.5		3.3	6	0.48	0.75	Electric Clock
S76	—	Silver Oxide	0.455 Diam. x 0.200			Flat Contacts—,+1.5		0.08	6	0.37	0.55	Novelties
EPX77	1107A	Silver Oxide	0.455 Diam. x 0.220			Flat Contacts—,+1.5		0.09	6	0.81	1.25	Photoflash
E89	1108A	Alkaline	0.563 Diam. x 1.087			Flat Contacts—,+1.5		0.4	2	—	—	Trans. Appl.
E90	910A	Alkaline	0.455 Diam. x 1.130			Flat Contacts—,+1.5		0.34	2	0.325	0.50	Radio, Electric Devices
E91	15A	Alkaline	9/16 Diam. x 1-31/32			Flat Contacts—,+1.5		0.75	24	0.39	0.60	
E92	24A	Alkaline	0.405 Diam. x 1.745			Flat Contacts—,+1.5		0.4	12	0.39	0.60	Electr. Photoflash
E93	14A	Alkaline	1-1/32 Diam. x 1-15/16			Flat Contacts—,+1.5		2.2	12	0.52	0.80	Radio, Electr. Dev.
E94	927	Alkaline	1-11/32 Diam. x 1-13/64			Flat Contacts—,+1.5		2.1	12	0.52	0.80	Spec. Lighting Appl.
E95	13A	Alkaline	1-11/32 Diam. x 2-13/32			Flat Contacts—,+1.5		4.5	12	0.65	1.00	Electr. Photo, Comm. Equip.
†D99	13D	Carb. Zinc.	1-11/32 Diam. x 2-13/32			Flat Contacts—,+1.5		3.3	48	0.2225	0.35	Flashlight, Toys
E113	—	Mercury	0.661 Diam. x 0.845			Flat Contacts—,+4.05		0.43	2	1.92	2.95	
E114	—	Mercury	0.661 Diam. x 1.08			Flat Contacts—,+5.4		0.57	2	2.11	3.25	
E115	—	Mercury	0.661 Diam. x 1.315			Flat Contacts—,+7		0.71	2	2.11	3.25	
E115N	—	Mercury	0.661 Diam. x 1.315			Flat Contacts—,+6.75		0.71	2	2.44	3.75	
E126	1611M	Mercury	0.744 Diam. x 2			Flat Contacts—,+8.4		1.65	1	1.46	2.25	
E132	1200M	Mercury	0.661 Diam. x 1.315			Flat Contacts—,+2.8		0.94	2	1.14	1.75	
E132N	—	Mercury	0.661 Diam. x 1.315			Flat Contacts—,+2.7		0.94	2	1.27	1.95	
E133	1306M	Mercury	0.661 Diam. x 1.965			Flat Contacts—,+4.2		1.42	12	1.46	2.25	
E133N	—	Mercury	0.661 Diam. x 1.965			Flat Contacts—,+4.05		1.42	2	1.62	2.50	Instr. Trans. Appl. Misc.
E134	—	Mercury	0.661 Diam. x 2.615			Flat Contacts—,+5.6		1.89	2	1.62	2.50	
E134N	—	Mercury	0.661 Diam. x 2.615			Flat Contacts—,+5.4		1.89	2	1.92	2.95	
E135	—	Mercury	0.661 Diam. x 3.265			Flat Contacts—,+7		2.37	2	1.92	2.95	
E135N	—	Mercury	0.661 Diam. x 3.265			Flat Contacts—,+6.75		2.37	2	2.27	3.50	
E136	—	Mercury	0.661 Diam. x 3.915			Flat Contacts—,+8.4		2.86	2	2.40	3.70	
E136N	—	Mercury	0.661 Diam. x 3.915			Flat Contacts—,+8.1		2.86	2	2.56	3.95	
E137	—	Mercury	0.661 Diam. x 4.565			Flat Contacts—,+9.8		3.34	1	2.73	4.20	
E137N	—	Mercury	0.661 Diam. x 4.565			Flat Contacts—,+9.45		3.34	1	2.92	4.50	
E145	—	Mercury	0.660 Diam. x 1-3/16			Flat Contacts—,+7		0.7	2	1.78	2.75	
E146X	1604M	Mercury	1.031 x 0.660 x 1-3/4			Min. Snap—,+8.4		1.6	6	1.27	1.95	Trans. Radio
E152	—	Mercury	0.505 Diam. x 1.139			Flat Contacts—,+2.8		0.4	2	1.10	1.70	
E152N	—	Mercury	0.505 Diam. x 1.139			Flat Contacts—,+2.7		0.4	2	1.27	1.95	
E153	—	Mercury	0.505 Diam. x 1.708			Flat Contacts—,+4.2		0.6	2	1.43	2.20	Instr., Trans. Appl., Misc.
E153N	—	Mercury	0.505 Diam. x 1.708			Flat Contacts—,+4.05		0.6	2	1.62	2.50	
E162	—	Mercury	0.661 Diam. x 0.887			Flat Contacts—,+2.7		0.58	2	1.27	1.95	
E163	1305M	Mercury	0.661 Diam. x 1.327			Flat Contacts—,+4.2		0.9	2	1.62	2.50	
E163N	—	Mercury	0.661 Diam. x 1.327			Flat Contacts—,+4.05		0.9	2	1.79	2.75	
E164	1404M	Mercury	0.661 Diam. x 1.767			Flat Contacts—,+5.6		1.2	12	1.46	2.25	
E164N	—	Mercury	0.661 Diam. x 1.767			Flat Contacts—,+5.4		1.2	2	1.79	2.75	Instr., Trans. Appl. Misc.
E165	1500M	Mercury	0.661 Diam. x 2.207			Flat Contacts—,+7		1.5	2	1.92	2.95	
E165N	—	Mercury	0.661 Diam. x 2.207			Flat Contacts—,+6.75		1.5	2	2.10	3.25	
E169	1901M	Mercury	0.662 Diam. x 3-63/64			Flat Contacts—,+12.6		4.2	1	3.41	5.25	
E175	1501M	Mercury	1/2 Diam. x 1-3/32			Flat Contacts—,+7		1.0	1	1.27	1.95	
E177	1606M	Mercury	35/64 Diam. x 1-29/32			Min. Snap—,+9.8		0.67	1	1.50	2.25	
206	1611	Carb. Zinc	3/4 Diam. x 2			Flat Contact, Neg. Recess.—,+9		1.2	6	0.62	0.89	
216	1604	Carb. Zinc	1-1/32 x 21/32 x 1-29/32			Min. Snap—,+9		1.5	12	0.48	0.69	Trans. Radio
222	1604D	Carb. Zinc	1-1/32 x 11/16 x 1-15/16			Min. Snap—,+9		1.5	12	0.64	0.98	
226	1600	Carb. Zinc	1 Diam. x 1-15/16			Snap Type—,+9		2.0	6	0.68	0.98	
228	1810	Carb. Zinc	1 Diam. x 2-7/16			Snap Type—,+12		2.3	1	1.10	1.70	
E233	1300M	Mercury	1.005 Diam. x 1-31/32			Flat Contacts—,+4.2		3.0	1	2.60	4.00	
E233N	—	Mercury	1.005 Diam. x 1-31/32			Flat Contacts—,+4.05		3.0	1	2.92	4.50	Instr.
E234	—	Mercury	1.005 Diam. x 2.578			Flat Contacts—,+5.6		4.2	1	2.92	4.50	
E234N	—	Mercury	1.005 Diam. x 2.578			Flat Contacts—,+5.4		4.2	1	3.22	4.95	
E235N	—	Mercury	1-1/64 Diam. x 3-5/16			Flat Contacts—,+6.75		5.0	1	3.87	5.95	
E236N	—	Mercury	1.005 Diam. x 3.921			Flat Contacts—,+8.1		6.3	1	4.22	6.50	Instr.
239	1900	Carb. Zinc	1-21/64 x 1-1/32 x 2-11/16			Socket—,+9,+13.5		3.0	1	1.67	2.50	
243	1610	Carb. Zinc	1-13/32 x 1-11/32 x 2-3/4			Min. Snap—,+4.5		4.5	1	1.50	2.25	
246	1602	Carb. Zinc	1-13/32 x 1-11/32 x 2-3/4			Min. Snap—,+9		4.5	1	1.50	2.25	
266	1605	Carb. Zinc	1-13/16 x 1-13/16 x 2-7/16			Snap Type—,+9		7.0	1	1.36	1.95	Trans. Radio
276	1603	Carb. Zinc	2-9/16 x 2-1/32 x 3-5/32			Snap Type—,+9		15.0	1	1.67	2.50	
E286	1600M	Mercury	1 Diam. x 1-15/16			Flat Contacts—,+8.4		1.6	1	1.46	2.25	
E289	1810M	Mercury	1 Diam. x 2-13/32			Snap Type—,+12.6		3.6	1	2.92	4.50	
E312	—	Mercury	0.310 Diam. x 0.140			Flat Contacts—,+1.4		0.03	6	0.28	0.425	
S312	—	Silver Oxide	0.310 Diam. x 0.140			Flat Contacts—,+1.5		0.02	6	0.30	0.45	Electr. Dev.
333	1306	Carb. Zinc	0.662 Diam. x 1.965			Flat Contacts—,+4.5		0.9	6	0.68	0.98	Trans. Radio
W350	☆	Carb. Zinc	3-1/16 x 1-7/8 x 4-31/32			Knurled Nut & Screw—,+22.5,+45		14.5	1	2.69	3.85	Radio Trans., Instr.
W352	701	Carb. Zinc	2-5/8 x 1-5/16 x 4-1/32			Knurled Nut & Screw—,+3		12.0	1	1.51	2.25	Electr. Dev., Instr.
W353	11	Carb. Zinc	2-19/32 x 1-3/8 x 4-5/32			Socket—,+1.5		12.5	1	1.22	1.75	Port. Radio
W356	☆	Carb. Zinc	2-5/8 x 2-5/8 x 4-9/16			Knurled Nut & Screw—,+3	1	7.0	1	2.51	3.75	Radio & Electr. Dev.
W357	901	Carb. Zinc	3-25/32 x 2-11/16 x 5-13/16			Fahnestock—,+3	2	12.0	1	2.51	3.75	Model Ign. Tele.
W359	☆	Carb. Zinc	3-9/16 x 2-1/4 x 4-1/2			Socket—,+45	1	11.8	1	4.16	6.25	Port. Radio "B"
W361	227	Carb. Zinc	1-3/8 x 1-3/8 x 11-23/32			Flat Contacts—,+103.5	1	4.0	1	4.86	6.95	
W362	—	Carb. Zinc	2-27/32 x 19/32 x 1-29/32			Knurled Nut & Screw+,—4.5,—7.5		1.5	1	3.15	4.75	Radio "C"
■W363F(P)	☆	Carb. Zinc	8-1/32 x 4-1/16 x 7-5/8			Fahnestock—,+22.5,+45	10	5.0	1	8.72	12.95	Heavy Duty Radio "B"
W364F	☆	Carb. Zinc	8-1/8 x 4-7/16 x 7-11/16			Fahnestock—,+22.5,+45	11	14.0	1	9.76	14.50	
■W365F(P)	723	Carb. Zinc	8-1/16 x 2-15/16 x 7-5/8			Fahnestock—,+22.5,+45	7	7.5	1	8.72	12.95	Ind. "B"

Trade Discount Applies To List Prices Only

© United Technical Publicatio

EVEREADY® COMPLETE LINE SPECIFICATIONS

PRIMARY BATTERIES CONTINUED

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Dealer Price	Retail Price	Major Use
E400	1106M	Mercury	0.455 Diam. x 0.135			Flat Contacts—, ┌1.4		0.04	6	0.32	0.50	
E400N		Mercury	0.455 Diam. x 0.135			Flat Contacts—, ┌1.35		0.04	6	0.62	0.95	
E401	910M	Mercury	0.470 Diam. x 1.130			Flat Contacts—, ┌1.4		0.4	3	0.62	0.95	Trans. Appl.
E401N	—	Mercury	0.470 Diam. x 1.130			Flat Contacts—, ┌1.35		0.4	2	0.81	1.25	
409	908C	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32			Coil Springs—, ┌6	1	6.5	1	—	—	Lanterns
411	208	Carb. Zinc	1-1/32 x 5/8 x 1-29/64			Flat Contacts—, ┌15		0.95	1	1.00	1.50	
412	215	Carb. Zinc	1-1/32 x 5/8 x 2			Flat Contacts—, ┌22.5		1.3	1	1.17	1.75	
413	210	Carb. Zinc	1-1/32 x 5/8 x 2-9/16			Flat Contacts—, ┌30		1.6	1	1.30	1.95	
415	213	Carb. Zinc	1-3/64 x 5/8 x 3-11/16			Min. Snap—, ┌45		2.5	1	1.75	2.50	
416	217	Carb. Zinc	1-21/64 x 63/64 x 3-1/2			Min. Snap—, ┌67.5		4.0	1	2.07	2.95	Instr.
417	224	Carb. Zinc	1-5/16 x 31/32 x 1-9/16			Flat Contacts—, ┌15		1.8	1	1.67	2.50	
420	225	Carb. Zinc	1-5/16 x 31/32 x 2-3/16			Flat Contacts—, ┌22.5		2.5	1	1.83	2.75	
425P	—	Carb. Zinc	1-23/64 x 1-1/32 x 3-15/16			Socket—, ┌22.5		4.1	1	2.33	3.50	
430		Carb. Zinc	1-5/16 x 1 x 2-13/16			Flat Contacts—, ┌30		3.2	1	2.17	3.25	
437	212	Carb. Zinc	1-15/16 x 1-15/32 x 6-15/32			Snap Type—, ┌75		14.8	1	3.15	4.50	Port. Radio "B"
E450	—	Mercury	0.455 Diam. x 0.570			Flat Contacts—, ┌1.35		0.18	4	0.81	1.25	Instr.
455		Carb. Zinc	2-21/32 x 1 x 3-11/16			Snap Type—, ┌45		7.8	1	2.27	3.25	Port. Radio "B"
455P	—	Carb. Zinc	2-21/32 x 1-1/64 x 3-29/32			Socket—, ┌45		8.6	1	2.50	3.75	Instr.
457	203	Carb. Zinc	2-13/16 x 1-3/8 x 2-1/2			Snap Type—, ┌67.5		7.4	1	2.70	3.85	Port. Radio "B"
460	—	Carb. Zinc	1-57/64 x 1-3/8 x 2.43			Flat Contacts—, ┌45		5.3	1	2.17	3.25	Photoflash
467	200	Carb. Zinc	2-13/16 x 1-3/8 x 3-45/64			Snap Type—, ┌67.5		12.0	1	2.70	3.85	Port. Radio "B"
468	200C	Carb. Zinc	2-13/16 x 1-3/8 x 3-45/64			Snap Type—, ┌67.5		12.0	1	2.77	3.95	Radio, Electr. Dev
477	211	Carb. Zinc	1-29/32 x 63/64 x 5-7/16			Snap Type—, ┌67.5		8.6	1	2.70	3.85	
479	214	Carb. Zinc	1-31/32 x 1-1/32 x 7-15/32			Snap Type—, ┌90		12.0	1	2.97	4.25	Port Radio "B"
482	202	Carb. Zinc	3-19/32 x 1-27/32 x 5-1/2			Socket—, ┌45	1	14.0	1	2.97	4.25	
484	207	Carb. Zinc	3-31/32 x 2-17/32 x 5-5/16			Socket—, ┌45	3	2.0	1	3.47	4.95	Fluor. Lantern
487	—	Carb. Zinc	5-1/8 x 2-1/16 x 7-1/4			Socket—, ┌22.5, ┌45	4	2.0	1	3.84	5.50	Farm Radio "B"
489	728	Carb. Zinc	4-11/32 x 2-11/16 x 4-3/16			Socket—, ┌225	2	12.0	1	7.67	10.95	Electr. Flash
490	204	Carb. Zinc	3-23/32 x 1-3/8 x 3-45/64			Snap Type—, ┌90		15.0	1	3.15	4.50	Port Radio "B"
491		Carb. Zinc	2-19/32 x 1-5/16 x 4-1/2			Flat Recessed & Socket—, ┌240		13.0	1	6.96	9.95	
492	730	Carb. Zinc	3-9/16 x 2-29/32 x 4-29/32			Socket—, ┌180, ┌225	2	8.0	1	9.00	12.95	Electr. Flash
493	722	Carb. Zinc	2-11/16 x 2-7/32 x 3-29/32			Pinjacks—, ┌300		14.5	1	9.07	12.95	Geiger Counter
495		Carb. Zinc	1-15/16 x 1-15/32 x 7-1/8			Snap Type—, ┌90	1	—	1	4.17	6.25	Port. Radio "B"
497		Carb. Zinc	3 x 1-19/32 x 5-5/8			Flat Recessed—, ┌180, ┌510		10.0	1	12.56	17.95	Electr. Flash
E502	—	Mercury	0.550 Diam. x 1.968			Flat Contacts—, ┌1.35		1.05	2	1.14	1.75	Trans. Appl.
504	220	Carb. Zinc	39/64 x 19/32 x 1-3/8			Flat Contacts—, ┌15		0.6	1	1.00	1.50	
505	221	Carb. Zinc	19/32 x 19/32 x 1.975			Flat Contacts—, 22.5		0.9	1	1.17	1.75	Instr
506	223	Carb. Zinc	1-13/64 x 5/8 x 1-27/64			Flat Contacts—, ┌30		0.9	1	2.17	3.25	
507		Carb. Zinc	39/64 x 19/32 x 2.605			Flat Contacts—, ┌30		0.9	1	1.50	2.25	
509	908	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32			Coil Springs—, ┌6	1	5.5	1	1.13	1.69	Lantern
510F	917	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32			Fahnestock—, ┌6	1	4.0	1	1.19	1.79	Misc.
510S		Carb. Zinc	2-5/8 x 2-5/8 x 4-5/16			Knurled Nut & Screw—, ┌6	1	7.0	1	1.13	1.69	
520	930	Alkaline	5-17/32 x 4-21/32 x 2-21/32			Ins. Screw—, ┌6	2	8.0	1	4.34	6.50	Lantern
E520	—	Mercury	0.495 Diam. x 0.286			Flat Contacts—, ┌1.4		0.07	6	0.23	0.35	Trans. Appl.
523	1306A	Alkaline	0.662 Diam. x 1.965			Flat Contacts—, ┌4.5		1.17	1	1.14	1.75	Photoflash, Trans. Radio
529	1310A	Alkaline	9/16 Diam. x 2			Recessed—, Flat Contact ┌3		0.75	1	—	—	Photo
531	1307A	Alkaline	0.662 Diam. x 2.290			Min. Snap—, ┌4.5		1.25	1	1.14	1.75	Automatic Camera
532	1308A	Alkaline	0.664 Diam. x 1.670			Snap Type—, ┌3		0.8	1	0.975	1.50	
544	1406A	Silver Oxide	0.514 Diam. x 0.990			Flat Contacts—, ┌6		0.5	1	1.57	2.50	Photo
E601	—	Mercury	0.627 Diam. x 1.140			Flat Contacts—,		1.22	2	1.14	1.75	Instr.
621	—	Carb. Zinc	2-9/16 Diam. x 13-1/8			Knurled Nut & Screw—, ┌3	4	10.0	1	3.68	5.50	Fishing Buoy
E625	—	Mercury	0.615 Diam. x 0.238			Flat Contacts—, ┌1.4		0.15	4	0.49	0.75	Trans. Appl.
E625N	—	Mercury	0.615 Diam. x 0.238			Flat Contacts—, ┌1.35		0.14	4	0.62	0.95	
EPX625	—	Mercury	0.615 Diam. x 0.238			Flat Contacts—, ┌1.35		0.15	4	0.62	0.95	Camera Light Meter
E630	1104M	Mercury	0.615 Diam. x 0.238			Flat Contacts—, ┌1.4		0.17	4	0.49	0.75	Trans. Radio
E630N	—	Mercury	0.615 Diam. x 0.238			Flat Contacts—, ┌1.35		0.17	4	0.62	0.95	Instr
E640	1105M	Mercury	0.625 Diam. x 0.440			Flat Contacts—, ┌1.4		0.28	2	0.49	0.75	Trans. Radio
E640N	—	Mercury	0.625 Diam. x 0.440			Flat Contacts—, ┌1.35		0.28	4	0.62	0.95	Instr.
EPX640	—	Mercury	0.625 Diam. x 0.440			Flat Contacts—, ┌1.35		0.13	4	0.62	0.95	Photo
E675	—	Mercury	0.455 Diam. x 0.205			Flat Contacts—, ┌1.4		0.09	6	0.32	0.50	Instr.
EPX675	—	Mercury	0.455 Diam. x 0.205			Flat Contacts—, ┌1.35		0.09	6	0.62	0.95	Photo
703		Carb. Zinc	2-7/16 x 27/32 x 3-1/16			Spring—, ┌45		5.0	1	1.36	1.95	Instr.
706	902	Carb. Zinc	8-5/16 x 2-13/16 x 6-7/16			Ins. Screw—, ┌6	5	11.0	1	4.01	5.98	Ign. Emerg. Lighting
707	26	Carb. Zinc	2-9/16 x 2-1/32 x 2-13/16			Snap Type—, ┌7.5		12.0	1	1.30	1.95	Port. Radio "A"
711	700	Carb. Zinc	2-5/8 x 1-5/16 x 4-1/32			Knurled Nut & Screw—, ┌1.5		12.0	1	0.99	1.49	Model Ign. "Glo-Plug"
713	8	Carb. Zinc	3-29/32 x 53/64 x 2-27/32			Socket—, ┌7.5		9.0	1	2.50	3.75	Port. Radio "A"
714	—	Carb. Zinc	3-31/32 x 1-11/32 x 3-3/4			Knurled Nut & Screw—, ┌4.5		13.5	1	1.67	2.50	Tele. Test Sets
715	903	Carb. Zinc	7-1/4 x 4-1/16 x 6-7/16			Ins. Screw—, ┌7.5	7	10.0	1	4.86	7.25	Ign. Emerg. Lighting
716		Carb. Zinc	8-37/64 x 4-1/16 x 6-7/16			Ins. Screw—, ┌9	8	8.0	1	5.53	8.25	
717	9	Carb. Zinc	2-5/32 x 1-15/16 x 3-1/32			Socket—, ┌7.5		8.0	1	1.23	1.75	
718	1	Carb. Zinc	3-29/32 x 2-3/4 x 5-7/16			Socket—, ┌6	2	4.0	1	2.87	4.10	
720	18	Carb. Zinc	2-25/32 x 1-13/32 x 3-1/32			Socket—, ┌15		6.5	1	1.30	1.95	Port. Radio "A"
724	2	Carb. Zinc	1-7/32 x 1-7/32 x 2-11/32			Flat Contacts—, ┌6		2.5	1	1.00	1.50	
726	19	Carb. Zinc	4-3/32 x 1-7/16 x 2-15/16			Socket—, ┌4.5		10.5	1	1.67	2.50	
729	425	Carb. Zinc	3-27/32 x 2-7/32 x 7-13/16			Socket—"A", ┌1.5 "A", —"B", ┌90 "B"	2	7.0	1	5.96	8.95	Port. Radio "A-B"
731	918	Carb. Zinc	5-11/32 x 2-27/32 x 4-15/16			Ins. Screw—, ┌6	3	4.0	1	2.30	3.45	Lantern
732	926	Carb. Zinc	5-11/32 x 2-27/32 x 4-15/16			Ins. Screw—, ┌12	3	4.0	1	2.64	3.95	Lantern
735	900	Carb. Zinc	2-5/8 x 2-5/8 x 4-5/16			Knurled Nut & Screw—, ┌1.5	1	7.0	1	1.06	1.59	Model Ign. "Glo-Plug"
736	3	Carb. Zinc	3-15/16 x 1-5/16 x 4			Socket—, ┌45	1	—	1	1.67	2.50	Port. Radio "A"
738	205	Carb. Zinc	3 x 2-5/16 x 4-1/8			Socket—, ┌22.5, ┌45	1	3.0	1	2.97	4.25	Port. Radio "B"
741	17	Carb. Zinc	3-25/32 x 2-11/16 x 5-3/8			Socket—, ┌1.5	2	10.0	1	2.90	4.15	
742	4	Carb. Zinc	2-5/8 x 2-5/8 x 3-27/32			Socket—, ┌15	1	6.0	1	1.15	1.65	
743	5	Carb. Zinc	3-13/16 x 2-5/8 x 4-1/32			Socket—, ┌1.5	1	15.0	1	2.69	3.85	Port. Radio "A"
744		Carb. Zinc	2-5/8 x 2-5/8 x 3-27/32			Socket—, ┌6	1	6.0	1	1.15	1.65	
746	7	Carb. Zinc	3-15/16 x 1-15/16 x 4-21/32			Socket—, ┌4.5	1	3.0	1	2.50	3.75	
750	704	Carb. Zinc	1-7/32 x 5/8 x 2-21/32			Spring—, ┌3		2.0	1	1.00	1.50	Instr.
751	705	Carb. Zinc	1-25/32 x 5/8 x 2-21/32			Spring—, ┌4.5		3.0	1	1.67	2.50	
752	400	Carb. Zinc	14-1/16 x 2-11/16 x 4-1/16			Recessed Plug—, "A", ┌9 "A", —"B", ┌90 "B"	6	2.0	1	7.96	11.95	
753	401	Carb. Zinc	9-7/32 x 2-23/32 x 4-5/16			Socket—"A", ┌7.5 "A", ┌9 "A", —"B", ┌90 "B"	4	12.0	1	7.29	10.95	
755	403	Carb. Zinc	8-9/16 x 3-3/4 x 2-7/16			Socket—"A", ┌6 "A", ┌7.5 "A", —"B", ┌75 "B"	3	9.0	1	6.57	9.95	Port. Radio "A-B"
756	405	Carb. Zinc	8-7/8 x 2-1/8 x 3-25/32			Socket—"A", ┌7.5 "A", ┌9 "A", —"B", ┌90 "B"	2	14.0	1	5.96	8.50	
757	406	Carb. Zinc	9-7/32 x 2-23/32 x 4-7/32			Recessed Plug—"A", ┌9 "A", —"B", ┌90 "B"	4	12.0	1	7.96	11.95	Farm Radio "A-B"
759		Carb. Zinc	15-11/16 x 4-1/32 x 6-15/16			Socket—"A", ┌1.5 "A", —"B", ┌90 "B"	16	4.0	1	8.91	11.95	Tele. Test Sets
761T	712	Carb. Zinc	4-1/16 x 1-13/32 x 3-1/32			Knurled Nut & Screw—, ┌1.5, ┌3, ┌4.5		14.0	1	2.17	3.25	Instr.
762S	709	Carb. Zinc	4-3/32 x 2-9/16 x 5-7/16			Knurled Nut & Screw—, ┌22.5, ┌45	2	12.0	1	3.05	4.35	
763	710	Carb. Zinc	3-1/2 x 2-3/32 x 3-1/16			Knurled Nut & Screw—, ┌22.5		14.0	1	1.61	2.35	
766T	702	Carb. Zinc	6-13/16 x 4-3/16 x 3-5/16			Fahnestock—, ┌16.5, ┌18, ┌19.5, ┌21, ┌22.5	4	10.0	1	5.96	8.95	Switchbd. Testing

EVEREADY® COMPLETE LINE SPECIFICATIONS

PRIMARY BATTERIES CONTINUED

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Dealer Price	Retail Price	Major Use
773	*	Carb. Zinc	3-29/32 x 27/32 x 3			5 Knurled Nut & Screws, 1 Wire +, −1.5, −3, −4.5, −6, −7.5		9.0	1	2.17	3.25	Port. Radio "C"
778	708	Carb. Zinc	4 x 2-7/16 x 3-1/8			Fahnestock +, −3, −4.5, −6, −9 −10.5, −16.5, −22.5	1	8.0	1	4.63	6.95	Instr.
781	*	Carb. Zinc	2-7/16 x 27/32 x 3			Knurled Nut & Screw −, +4.5		5.0	1	1.51	2.25	
789	—	Carb. Zinc	5-1/4 x 1-13/32 x 3-11/32			Flat Contacts −, +3	1	1.5	1	3.67	5.50	Fingerprint Camera
799	—	Carb. Zinc	8 x 4-3/8 x 8-5/8			Fahnestock −, +22.5, +45, +49.5	13	5.0	1	12.56	17.95	Camera Cranking
812	24P	Carb. Zinc	13/32 Diam. x 1-3/4			Flat Contacts −, +1.5		0.3	12	0.1625	0.25	
815	15P	Carb. Zinc	9/16 Diam. x 1-31/32			Flat Contacts −, +1.5		0.6	24	0.1625	0.25	
EPX825	—	Alkaline	0.905 Diam. x 0.228			Flat Contacts −, +1.5		0.24	2	0.41	0.625	Photoflash
835	14P	Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts −, +1.5		1.4	24	0.19	0.30	
850	13P	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts −, +1.5		3.3	12	0.19	0.30	
†904	910F	Carb. Zinc	0.455 Diam. x 1.180			Flat Contacts −, +1.5		0.22	6	0.095	0.15	Novelties
†912	24F	Carb. Zinc	13/32 Diam. x 1-3/4			Flat Contacts −, +1.5		0.3	12	0.13	0.20	
†915	15F	Carb. Zinc	9/16 Diam. x 1-31/32			Flat Contacts −, +1.5		0.6	24	0.13	0.20	Flashlight, Toys
†935	14F	Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts −, +1.5		1.4	24	0.1625	0.25	
†950	13F	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts −, +1.5		3.0	48	0.1625	0.25	
960P	23	Carb. Zinc	1-11/32 Diam. x 4-1/16			Socket −, +1.5		5.0	1	1.30	1.95	
964	20	Carb. Zinc	1-11/32 Diam. x 4-5/32			Flat Contacts −, +1.5		5.9	1	0.63	0.95	Port. Radio "A"
1015	15	Carb. Zinc	9/16 Diam. x 1-31/32			Flat Contacts −, +1.5		0.6	24	0.155	0.25	
1035	14	Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts −, +1.5		1.4	24	0.2225	0.35	
1050	13	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts −, +1.5		3.0	48	0.2225	0.35	Trans. Radio
†1150	13C	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts −, +1.5		3.3	48	—	—	Ind. Flashlight
1461	907	Carb. Zinc	10-7/16 x 2-23/32 x 7-7/32			Knurled Nut & Screw −, +6	9	4.0	1	3.98	5.98	Ign. Fence Control
1462	—	Carb. Zinc	5-1/4 x 5-1/4 x 7-1/4			Knurled Nut & Screw −, +6	9	—	1	4.66	6.98	
1463	922	Carb. Zinc	10-7/16 x 2-23/32 x 7-7/32			Knurled Nut & Screw −, +12	7	11.0	1	4.66	6.98	Toy Cars
1562	*	Carb. Zinc	7-27/32 x 4-31/32 x 7-7/32			Knurled Nut & Screw −, +7.5	11	4.0	1	5.32	7.95	
1662	913	Carb. Zinc	7-13/16 x 5-9/32 x 7-1/4			Knurled Nut & Screw −, +9	13	8.0	1	5.99	8.95	Ign. Lights
2356N	1612	Carb. Zinc	2-3/16 x 1-5/32 x 6-1/4			Snap Type −, +9		11.0	1	1.97	2.95	
2506	1601	Carb. Zinc	8 x 2-13/16 x 1-9/16			Socket −, +3, +6, +9	1	8.0	1	2.33	3.50	
2709N	1613	Carb. Zinc	1-13/32 x 47/64 x 4-11/16			Snap Type −, +9		2.5	1	1.30	1.95	Trans. Radio
2713N	1403	Carb. Zinc	1-13/32 x 47/64 x 4-11/16			Min. Snap −, +6		3.5	1	1.67	2.50	
2731N	1303	Carb. Zinc	2-13/16 x 1-3/4 x 8-11/32			Socket −, +4.5	1	9.0	1	3.30	4.95	
2744N	920	Carb. Zinc	2-5/8 x 2-5/8 x 3-27/32			Socket −, +6	1	7.0	1	1.13	1.69	
2745N	924	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32			Coil Spring −, +6	1	7.0	1	1.13	1.69	Flasher, Misc.
2746N	925	Carb. Zinc	2-5/8 x 2-5/8 x 4-5/16			Knurled Nut & Screw −, +6	1	7.0	1	1.13	1.69	Lighting, Mis.
2761N	1608	Carb. Zinc	2-9/32 x 1-1/4 x 7-31/32			Socket −, +9	1	3.0	1	3.30	4.95	
2762N	1609	Carb. Zinc	2-13/16 x 1-3/4 x 8-11/32			Socket −, +9	1	9.0	1	3.30	4.95	Trans. Radio
2780N	923	Carb. Zinc	5-11/32 x 2-27/32 x 4-5/32			Socket −, +12	3	—	1	2.64	3.95	Flasher, Misc.
E302157	—	Mercury	2-1/2 x 1-3/8 x 4-1/4			Socket −, +1.35		13.5	1	12.50	17.75	
E302250	—	Mercury	11/16 Diam. x 1-29/32			Tabs −, +9.45		1.0	1	3.15	4.50	Rad. Det. Equip.
E302351	—	Mercury	1-1/16 Diam. x 2-5/8			Flat Contacts −, +5.4		4.5	1	6.53	9.35	Fire Alarm
E302358	—	Mercury	3/4 Diam. x 2-5/32			Wire Leads −, +10.8		1.3	1	4.10	5.95	
E302362	—	Mercury	23/32 Diam. x 3-5/32			Wire Leads −, +16.2		1.8	1	5.60	8.00	Rad. Det. Equip.
E302435	—	Mercury	11/16 Diam. x 1-1/2			Flat Contacts −, +6.75		0.75	1	3.46	4.95	
E302462	—	Mercury	2-13/16 x 1-17/32 x 6-3/8			Wire Leads −, +97.2	2	—	1	40.00	56.00	Transmt. "B"
E302465	—	Mercury	2-3/16 Diam. x 3-3/4			Wire Leads −, +47.25	1	1.0	1	22.50	32.00	Geophys.
E302478	—	Mercury	1-1/4 Diam. x 3-5/8			Flat Contacts −, +9.8		9.0	1	6.90	9.80	Wire Recorder
E302497	—	Mercury	1-1/16 Diam. x 4-3/16			Screw −, +6.75		6.0	1	9.33	13.35	
E302579	—	Mercury	1-13/32 x 3/4 x 3-3/16			Wire Leads −, +29.7		5.0	1	12.50	18.00	Test Equip.
E302580	—	Mercury	2-23/32 x 2-23/32 x 3-29/32			Socket −, +27	2	1.6	1	33.60	48.00	
E302642	—	Mercury	1-9/32 Diam. x 2-5/8			Flat Contacts −, +7		6.0	1	5.33	7.60	
E302651	—	Mercury	1-5/16 Diam. x 2-7/16			Special Leads −, +1.35		6.14	1	4.80	6.90	Instr.
E302702	—	Mercury	1-1/8 Diam. x 1-5/8			Wire Leads −, +2.7		2.0	1	4.00	5.70	
E302904	—	Mercury	1-11/32 Diam. x 2-31/32			Wire Leads −, +5.4		6.0	1	7.33	10.45	Geophys.
E302905	—	Mercury	1-11/32 Diam. x 3-19/32			Wire Leads −, +6.75		9.0	1	8.40	12.00	Meter
E302907	—	Mercury	1-5/16 Diam. x 4-7/8			Wire Leads −, +9.45		11.6	1	10.67	15.25	Test Equip.
E302908	—	Mercury	1-11/32 Diam. x 5-9/16			Wire Leads −, +10.8		12.0	1	12.00	17.15	Instr.
E303145	1614M	Mercury	2-3/16 x 7/8 x 4-7/16			Snap Type −, +8.4		9.34	1	6.75	9.95	Rad. Det. Equip.
E303219	—	Mercury	0.515 Diam. x 1-5/8			Flat Contacts −, +9.8		1.0	1	2.06	2.95	Depth Finder
E303236	1309M	Mercury	23/32 x 23/32 x 1-29/32			Flat Contacts −, +4.2		1.28	1	1.31	1.85	Radio Conc. (FM)
E303314	2200M	Mercury	2.81 x 2.85 x 1.320			Recessed Flat Contacts −, +16.8		12.8	1	11.00	16.00	Paging Dev.
E303394	—	Mercury	2-1/2 x 1-3/4 x 2.280			Snap Type −, +11.2		14.0	1	10.15	14.50	Comm. Equip.
E303462	2100M	Mercury	2.14 x 2.12 x 1.8			Recessed Flat Contacts −, +15.4	1	0.8	1	11.25	16.50	Tape Recorder
E303496	—	Mercury	0.655 Diam. x 1.330			Flat Contacts −, +4.2		0.87	1	1.31	1.85	Transceiver
												Paging Dev.

*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping

**Equipped with screw terminals unless Fahnestock spring terminals are specified.

*Equipped with Fahnestock spring terminals unless screw terminals are specified

■Furnished with Fahnestock spring terminals. If socket terminals are required specify W-363P, W-365P.

†Flashlight Types

††These complete line specifications contain the basic data on all "Eveready" batteries in production at the time of preparation. Since the characteristics of individual batteries are sometimes modified, manufacturers who are designing their product to use a particular battery should contact the nearest Union Carbide Consumer Products Division Sales Office for verification of specifications.

RECHARGEABLE BATTERIES

"Eveready" Battery Number	Formerly Number	Nominal Capacity (10 hour rate)	Cell Type	Overall Dimensions in inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Dealer Price	Retail Price	Major Use
B1	N39	1 AH	Button	1.980 Diam. x 0.394			Flat Contacts −, +1.25		2.0	1	$3.13	$4.50	
B1T	N39T	1 AH	Button	1.980 Diam. x 0.406			Solder Tabs −, +1.25		2.0	1	3.30	4.75	Instr., Hobby, Trans. Appl.
BH1	N40	1 AH	Button	1.980 Diam. x 0.396			Flat Contacts −, +1.25		2.0	1	3.70	5.30	Misc.
BH1T	N40T	1 AH	Button	1.980 Diam. x 0.406			Solder Tabs −, +1.25		2.0	1	3.86	5.55	
CF1	—	1 AH	Cylindrical "Short C"	1.034 Diam. x 1.165			Flat Contacts −, +1.25		1.8	1	2.83	4.05	Elec. Shaver
CF1T	—	1 AH	Cylindrical "Short C"	1.034 Diam. x 1.175			Solder Tabs −, +1.25		1.8	1	2.96	4.25	
CH1	—	1 AH	Cylindrical "Short C"	1.034 Diam. x 1.165			Flat Contacts −, +1.25		1.8	1	2.55	3.70	
CH1T	—	1 AH	Cylindrical "Short C"	1.034 Diam. x 1.175			Solder Tabs −, +1.25		1.8	1	2.70	3.90	Inst., Hobby, Trans. Appl., Misc.
C1.2	—	1.2 AH	Cylindrical "Sub C"	0.900 Diam. x 1.684			Flat Contacts −, +1.25		1.7	1	2.57	3.70	
C1.2T	—	1.2 AH	Cylindrical "Sub C"	0.900 Diam. x 1.689			Solder Tabs −, +1.25		1.7	1	2.70	3.90	
CF1.2	—	1.2 AH	Cylindrical "Sub C"	0.900 Diam. x 1.684			Flat Contacts −, +1.25		1.9	1	3.10	4.45	
CF1.2T	—	1.2 AH	Cylindrical "Sub C"	0.900 Diam. x 1.689			Solder Tabs −, +1.25		1.9	1	3.23	4.65	
CH1.2	N53	1.2 AH	Cylindrical "Sub C"	0.900 Diam. x 1.684			Flat Contacts −, +1.25		1.9	1	2.80	4.00	Appliance, Instr., Misc.
CH1.2T	N53T	1.2 AH	Cylindrical "Sub C"	0.900 Diam. x 1.689			Solder Tabs −, +1.25		1.9	1	2.92	4.20	
CH1.5	N54	1.5 AH	Cylindrical "C"	1.031 Diam. x 1.969			Flat Contact −, Solder Tab +1.25		2.3	1	5.52	7.90	
CH1.5T	N54T	1.5 AH	Cylindrical "C"	1.031 Diam. x 1.974			Solder Tabs −, +1.25		2.3	1	5.65	8.10	

© United Technical Publicatio

EVEREADY® COMPLETE LINE SPECIFICATIONS

RECHARGEABLE BATTERIES CONTINUED

"Eveready" Battery No.	Formerly Number	Nominal Capacity (10 hour rate)	Cell Type	Overall Dimensions in inches L W H	Terminals & Voltages	Battery Weight lbs.	Battery Weight ozs.	Unit Pkg. Quan.	Dealer Price	Retail Price	Major Use
B2	N41	2 AH	Button	1.984 Diam. x 0.689	Flat Contacts −, +1.25		3.3	1	5.10	7.30	Instr., Misc
B2T	N41T	2 AH	Button	1.984 Diam. x 0.701	Solder Tabs −, +1.25		3.3	1	5.26	7.55	

SEALED NICKEL-CADMIUM BATTERIES

CH2.3	N55	2.2 AH	Cylindrical "1/2 D"	1.344 Diam. x 1.508	Flat Contacts −, +1.25		3.2	1	6.83	9.75	
CH2.3T	N55T	2.2 AH	Cylindrical "1/2 D"	1.344 Diam. x 1.518	Solder Tabs −, +1.25		3.2	1	6.96	9.95	Instr., Misc
B3	N43	3 AH	Button	1.984 Diam. x 0.984	Flat Contacts −, +1.25		5.0	1	6.44	9.20	
B3T	N43T	3 AH	Button	1.984 Diam. x 0.996	Solder Tabs −, +1.25		5.0	1	6.60	9.45	
CF4	—	4 AH	Cylindrical "D"	1.294 Diam. x 2.390	Flat Contact −, Solder Tab +1.25		5.4	1	7.13	10.20	
CF4T	—	4 AH	Cylindrical "D"	1.294 Diam. x 2.410	Solder Tabs −, +1.25		5.4	1	7.26	10.40	Appliances, Instr., Misc
CH4	N57	4 AH	Cylindrical "D"	1.294 Diam. x 2.390	Flat Contact −, Solder Tab +1.25		5.4	1	6.47	9.25	
CH4T	N57T	4 AH	Cylindrical "D"	1.294 Diam. x 2.410	Solder Tabs −, +1.25		5.4	1	6.60	9.45	
R6	N76	6 AH	Rectangular	2-31/32 x 1-45/64 x 3-45/64	Nut & Stud −, +1.25		15.7	1	12.61	18.00	
RH7	N78	7 AH	Rectangular	1-5/8 x 1-33/64 x 4-1/64	Nut & Stud −, +1.25		14.7	1	17.60	25.00	
R11	N79	11 AH	Rectangular	3-19/32 x 1-1/16 x 4-59/64	Nut & Stud −, +1.25	1	12.0	1	17.68	25.50	Port. Power Supplies
R15	N81	15 AH	Rectangular	3-19/32 x 1-25/64 x 4-59/64	Nut & Stud −, +1.25	2	3.0	1	21.23	30.00	
RH15	N82	15 AH	Rectangular	3-19/32 x 1-3/16 x 4-31/32	Nut & Stud −, +1.25	1	11.0	1	29.74	42.50	
B20	N22	20 MAH	Button	0.457 Diam. x 0.213	Flat Contacts −, +1.25		0.4	1	1.40	2.00	Hearing Aid, Misc.
B20T	N22T	20 MAH	Button	0.457 Diam. x 0.223	Solder Tabs −, +1.25		0.4	1	1.56	2.25	Instr., Misc.
R23	N85	23 AH	Rectangular	3-19/32 x 2-1/64 x 4-59/64	Nut & Stud −, +1.25	3	2.0	1	29.48	42.00	Port. Power Supplies
B50	N24	50 MAH	Button	0.610 Diam. x 0.235	Flat Contacts −, +1.25		0.12	1	1.06	1.50	Instr., Misc
B50T	N24T	50 MAH	Button	0.610 Diam. x 0.245	Solder Tabs −, +1.25		0.12	1	1.21	1.75	
N64	—	500 MAH	Pack	2.81 x 2.81 x 1.32	Recessed Flat Contacts −, +15		12.5	1	56.10	80.00	Comm Equip
N65	—	1 AH	Pack	7.32 x 1.46 x 3.10	Socket −, +13.75	1	11	1	93.37	133.00	
N67	N67	900 MAH	Pack	1-31/64 x 1-33/64 x 4-13/64	Wire Leads −, +6.25		8.3	1	21.82	31.25	
N70	N70	1.5 AH	Pack	3-7/8 x 1-9/16 x 4-1/3	Wire Leads −, +6.25	1	12.0	1	32.99	47.25	Instr., Misc.
N86	—	1.2 AH	Pack	4-1/32 x 2-1/32 x 2-7/16	Knurl, Nut & Screw −, +12.5	1	8.0	1	30.52	43.75	
B100	N26	100 MAH	Button	0.992 Diam. x 0.252	Flat Contacts −, +1.25		0.32	1	1.16	1.65	
B100T	N26T	100 MAH	Button	0.992 Diam. x 0.264	Solder Tabs −, +1.25		0.32	1	1.31	1.90	
B150	N28	150 MAH	Button	0.992 Diam. x 0.272	Flat Contacts −, +1.25		0.4	1	1.18	1.70	Instr. Trans. Dev., Misc
B150T	N28T	150 MAH	Button	0.992 Diam. x 0.284	Flat Contacts −, +1.25		0.41	1	1.38	1.95	
B225	N32	225 MAH	Button	0.992 Diam. x 0.351	Solder Tabs −, +1.25		0.44	1	1.21	1.75	
B225T	N32T	225 MAH	Button	0.992 Diam. x 0.363	Solder Tabs −, +1.25		0.45	1	1.41	2.00	
BH225	N33	225 MAH	Button	0.992 Diam. x 0.358	Flat Contacts −, +1.25		0.46	1	1.38	1.95	
BH225T	N33T	225 MAH	Button	0.992 Diam. x 0.370	Solder Tabs −, +1.25		0.47	1	1.53	2.20	Instr., Hobby,
CF225	—	225 MAH	Cylindrical	0.675 Diam. x 0.646	Flat Contacts −, +1.25		0.40	1	1.43	2.05	Trans. Dev., Misc
CF225T	—	225 MAH	Cylindrical	0.675 Diam. x 0.652	Solder Tabs −, +1.25		0.41	1	1.56	2.25	
CH225	—	225 MAH	Cylindrical	0.675 Diam. x 0.646	Flat Contacts −, +1.25		0.40	1	1.30	1.85	
CH225T	—	225 MAH	Cylindrical	0.675 Diam. x 0.652	Solder Tabs −, +1.25		0.41	1	1.43	2.05	
B400	—	400 MAH	Button	0.992 Diam. x 0.571	Flat Contacts −, +1.25		0.66	1	2.21	3.15	Recording Dev
B400T	—	400 MAH	Button	0.992 Diam. x 0.583	Solder Tabs −, +1.25		0.66	1	2.36	3.40	
B450	N36	450 MAH	Button	1.697 Diam. x 0.315	Flat Contacts −, +1.25		1.16	1	1.83	2.60	
B450T	N36T	450 MAH	Button	1.697 Diam. x 0.327	Solder Tabs −, +1.25		1.16	1	1.99	2.85	
CF450	—	450 MAH	Cylindrical	0.675 Diam. x 1.116	Flat Contacts −, +1.25		0.71	1	2.14	3.05	
CF450T	—	450 MAH	Cylindrical	0.675 Diam. x 1.122	Solder Tabs −, +1.25		0.72	1	2.27	3.25	
CH450	—	450 MAH	Cylindrical	0.675 Diam. x 1.116	Flat Contacts −, +1.25		0.71	1	1.95	2.80	
CH450T	—	450 MAH	Cylindrical	0.675 Diam. x 1.122	Solder Tabs −, +1.25		0.72	1	2.08	3.00	
BH500	N38	500 MAH	Button	1.360 Diam. x 0.394	Flat Contacts −, +1.25		1.0	1	2.21	3.15	Instr., Hobby
BH500T	N38T	500 MAH	Button	1.360 Diam. x 0.416	Solder Tabs −, +1.25		1.0	1	2.36	3.40	Trans. Dev., Misc
CF500	—	500 MAH	Cylindrical "AA"	0.563 Diam. x 1.974	Flat Contacts −, +1.25		0.8	1	2.14	3.05	
CF500T	—	500 MAH	Cylindrical "AA"	0.563 Diam. x 1.969	Solder Tabs −, +1.25		0.8	1	2.27	3.25	
CH500	—	500 MAH	Cylindrical "AA"	0.563 Diam. x 1.969	Flat Contacts −, +1.25		0.8	1	1.95	2.80	
CH500T	—	500 MAH	Cylindrical "AA"	0.563 Diam. x 1.974	Solder Tabs −, +1.25		0.8	1	2.07	3.00	
1007	1007	4 AH	Pack	6-13/32 x 3-7/32 x 3-1/8	Socket −, +10	3	13.0	1	50.06	59.00	Port Tools
1807		—	Charger	—	—	2	12	1	11.72	14.25	Charger
07867		—	Cable	—	—		6	1	1.28	1.90	Cable

B = Button C = Cylindrical R = Rectangular

Items with suffix T have tabs enabling the user to solder leads to battery without damage. Leads must not be soldered directly to the battery case

ALKALINE SECONDARY BATTERIES

560	2.5 AH*	Pack	2-21/32 x 1-17/32 x 7-5/32	Socket −, +7.5	1	9.0	1	5.29	7.95	Electr. Dev.
561	5 AH*	Pack	8-5/16 x 2-13/16 x 5-7/8	Socket −, +15	6	—	1	11.29	16.95	
563	2.5 AH*	Cylindrical	1-23/64 Diam. x 7-5/32	Flat Contacts −, +4.5		15.0	3	3.00	4.50	Micro Television
564	5 AH*	Pack	8-5/16 x 2-13/16 x 5-7/8	Socket −, +13.5	5	8.0	1	10.99	16.50	
565	5 AH*	Pack	2-25/32 x 2-25/32 x 5-11/32	Socket −, +6	2	8.0	1	5.29	7.95	Toy Car
596	4 AH*	Cylindrical	1-23/64 Diam. x 3.730	Flat Contacts −, +1.5		7.5	1	1.30	1.95	Micro Television

*At the 4 hour rate

LEAD ACID BATTERIES

NP3.5-6/T	3.5 AH	Pack	2-25/32 x 1-7/8 x 4-5/32	Solder Tabs −, +6	1	10.0	1	12.94	18.50	
NP3.5-6/TW	3.5 AH	Pack	2-25/32 x 1-7/8 x 4-5/32	Wire Leads −, +6	1	10.0	1	13.29	18.98	
PDA3.5-6/W	3.5 AH	Pack	2-13/16 x 1-7/8 x 3-13/16	Wire Leads −, +6	1	5.0	1	8.62	12.50	Appliances, Instr., Misc
NP6-6/T	6 AH	Pack	4-1/2 x 2-1/16 x 3-21/32	Solder Tabs −, +6	2	3.0	1	18.83	26.95	
NP8-6/T	8 AH	Pack	6 x 2 x 3-7/8	Solder Tabs −, +6	3	6.0	1	20.55	29.50	
NP1-12/T	1 AH	Pack	5-5/16 x 1-3/8 x 2-17/32	Solder Tabs −, +12	1	4.0	1	—	—	
RZ6.05	—	Charger	—	—	1	8	1	16.49	23.75	Chargers
RZ6.1	—	Charger	—	—	1	6	1	23.25	33.50	

††These complete line specifications contain the basic data on all "Eveready" batteries in production at the time of preparation. Since the characteristics of individual batteries are sometimes modified, manufacturers who are designing their product to use a particular battery should contact the nearest Union Carbide Consumer Products Division Sales Office for verification of specifications.

GATES POWER SUPPLIES

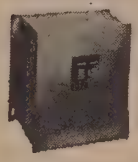
SILICON POWER RECTIFIER



For transister circuits & electronic equipment
MODEL G92F

INPUT: 115 volts AC 60 cycles, 1 phase
OUTPUT: 0-32 Volts DC, 0-10 Amperes D.C. continuous duty
REGULATION: No load to full load 15%
RIPPLE: Less than 0.3% RMS
METERS: 2% Accuracy
DIMENSIONS: 17" x 9" x 9"
PRICE: $169.50 NET
*Also available in 5 Amperes
PRICE: $114.50 NET

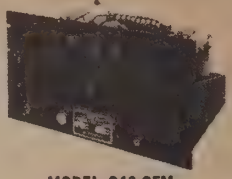
INDUSTRIAL POWER UNITS



MODEL A10

INPUT 115 or 230 AC Volts, 60 cycles—Single Phase.
DC OUTPUT 115 Volts DC 125 Watts
APPLICATION: Power sources for operating DC Motors, Relays, Solenoids, Magnetic Chucks.
DIMENSIONS: 11" H x 9" W x 6½" D
PRICE $63.00 NET
250 Watts — $72.50

SELENIUM POWER SUPPLY



MODEL G48-6FM

INPUT: 115 Volts AC 60 Cycles—Single Phase
OUTPUT: 0-48 Volts DC, 0-6 Amperes
CONTROL: Continuously variable over entire range
RIPPLE: 1% RMS
DIMENSIONS: 19" W x 13" D x 10½" H, Fits RETMA, Western Electric racks
PRICE: $190.00 NET

SILICON POWER SUPPLY



MODEL #GS 14-15F

INPUT: 115 Volts AC, 1 Phase, 60 cycles
OUTPUT: 0-14 Volts DC, 0-15 Amperes, continuous duty
RIPPLE: Less than 1% RMS
METER ACCURACY: 2%
DIMENSIONS: 9" H x 17½" W x 9" D
PRICE: $159.50 NET
Rack Model Same Price

SILICON RACK MOUNT SUPPLY



MODEL #GX30-10

INPUT: 115 Volts AC 60 Cycles, Single Phase
OUTPUT: 26, 28, 30 Volts DC 0-10 Amperes Continuous Duty
REGULATION: 10% No Load to Full Load
RIPPLE: 0.3% RMS
DIMENSIONS: 8¾" H x 19" W x 10" D
PRICE: $137.50 NET

AIRCRAFT BATTERY ELIMINATOR



MODEL #G101F

INPUT: 115 Volts AC 60 cycles, single phase
OUTPUT: 0-32 Volts DC, 0-20 Amperes, continuous duty
RIPPLE: 0.5% RMS
Unique overload device prevents needle slam and shows overload condition
REGULATION: D.C.V. at full load: 30
D.C.V. at 1/10 load: 35
METERS: 2% Accuracy
DIMENSIONS: 19" x 14¼" x 12¼"
PRICE: $275.00 NET
May be used for Rack or Bench

ECONOMY RANGE DC POWER SUPPLIES — Less Than 1% Ripple - Good Regulation - Rack Mount Type - Heavy Duty Construction - Powerstat - Fused 2% Meters - 115 Vac Input

MODEL GT 12-5:	Output 0.12V,	5A	$ 80.
MODEL GT 12-10:	Output 0-12V,	10A	$ 130.
MODEL GT 12-15:	Output 0-12V,	15A	$ 145.
MODEL GT 12-25:	Output 0-12V,	25A	$ 154.
MODEL GT 12-100:	Output 0-12V,	100A	$ 395.
MODEL GT 14-5:	Output 0-14V,	5A	$ 120.
MODEL GT 14-15:	Output 0-14V,	15A	$ 135.
MODEL GT 14-20:	Output 0-14V,	20A	$ 145.
MODEL GT 14-30:	Output 0-14V,	30A	$ 276.
MODEL GT 14-40:	Output 0-14V,	40A	$ 285.
MODEL GT 14-50:	Output 0-14V,	50A	$ 350.
MODEL GT 14-75:	Output 0-14V,	75A	$ 375.
MODEL GT 14-100:	Output 0-14V,	100A	$ 425.
MODEL GT 16-5:	Output 0-16V,	5A	$ 85.
MODEL GT 16-10:	Output 0-16V,	10A	$ 90.
MODEL GT 16-25:	Output 0-16V,	25A	$ 155.
MODEL GT 16-30:	Output 0-16V,	30A	$ 195.
MODEL GT 16-40:	Output 0-16V,	40A	$ 260.
MODEL GT 16-50:	Output 0-16V,	50A	$ 370.
MODEL GT 16-70:	Output 0-16V,	70A	$ 390.
MODEL GT 16-80:	Output 0-16V,	80A	$ 405.
MODEL GT 28-5:	Output 0-28V,	5A	$ 90.
MODEL GT 28-12:	Output 0-28V,	12A	$ 169.
MODEL GT 28-24:	Output 0-28V,	24A	$ 275.
MODEL GT 32-5:	Output 0-32V,	5A	$ 105.
MODEL GT 32-8:	Output 0-32V,	8A	$ 149.
MODEL GT 32-12:	Output 0-32V,	12A	$ 179.
MODEL GT 32-15:	Output 0-32V,	15A	$ 194.
MODEL GT 32-24:	Output 0-32V,	24A	$ 295.
MODEL GT 32-30:	Output 0-32V,	30A	$ 325.
MODEL GT 32-50:	Output 0-32V,	50A	$ 425.
MODEL GT 32-60:	Output 0-32V,	60A	$ 561.
MODEL GT 48-5:	Output 0-48V,	5A	$ 138.
MODEL GT 48-10:	Output 0-48V,	10A	$ 164.
MODEL GT 48-15:	Output 0-48V,	15A	$ 170.
MODEL GT 48-25:	Output 0-48V,	25A	$ 250.
MODEL GT 48-35:	Output 0-48V,	35A	$ 300.
MODEL GT 48-50:	Output 0-48V,	50A	$ 350.
MODEL GT 48-60:	Output 0-48V,	60A	$ 425.
MODEL GT 48-80:	Output 0-48V,	80A	$ 500.
MODEL GT 48-100:	Output 0-48V,	100A	$ 550.
MODEL GT 80-5:	Output 0-80V,	5A	$ 220.
MODEL GT 80-10:	Output 0-80V,	10A	$ 275.
MODEL GT 80-20:	Output 0-80V,	20A	$ 450.
MODEL GT 80-50:	Output 0-80V,	50A	Inquire
MODEL GT 80-100:	Output 0-80V,	100A	Inquire
MODEL GT 115-5:	Output 0-115V,	5A	$ 24
MODEL GT 115-10:	Output 0-115V,	10A	$ 28
MODEL GT 115-15:	Output 0-115V,	15A	$ 28
MODEL GT 115-20:	Output 0-115V,	20A	$ 31
MODEL GT 115-25:	Output 0-115V,	25A	$ 35
MODEL GT 115-30:	Output 0-115V,	30A	$ 39
MODEL GT 115-40:	Output 0-115V,	40A	$ 49
MODEL GT 115-50:	Output 0-115V,	50A	$ 56
MODEL GT 115-60:	Output 0-115V,	60A	$ 66
MODEL GT 115-70:	Output 0-115V,	70A	$ 70
MODEL GT 120-5:	Output 0-120V,	5A	$ 27
MODEL GT 130-2:	Output 0-130V,	2A	$ 12
MODEL GT 130-5:	Output 0-130V,	5A	$ 22
MODEL GT 130-10:	Output 0-130V,	10A	$ 28
MODEL GT 200-10:	Output 0-220V,	10A	$ 38

PRICES SUBJECT TO CHANGE

GATES
ELECTRONIC COMPANY, INC.

3 PHASE MODEL POWERSTAT METERS

MODEL GP 125-40:	Output	40A, 0-125V	$ Inqui
MODEL GP 125-80:	Output	80A, 0-125V	$ Inqui
MODEL GP 125-125:	Output	125A, 0-125V	$ Inqui
MODEL GP 250-15:	Output	15A, 0-250V	$ Inqui
MODEL GP 250-25:	Output	25A, 0-250V	$ Inqui
MODEL GP 250-40:	Output	40A, 0-250V	$ Inqui
MODEL GP 250-75:	Output	75A, 0-250V	$ Inqui
MODEL GP 500-5:	Output	5A, 0-500V	$ Inqui
MODEL GP 500-10:	Output	10A, 0-500V	$ Inqui
MODEL GP 500-25:	Output	25A, 0-500V	$ Inqui
MODEL GP 500-35:	Output	35A, 0-500V	$ Inqui

LOW-COST BASIC/OEM SUPPLIES

MODEL L6.3-30	6.3VDC	@ 30A/1%	$ 12
MODEL L12-12	12VDC	@ 12A/Rip. 1Mv/.01%	$ 18
MODEL L12-15	12VDC	@ 15A/1%	$ 17
MODEL L12-24	12VDC	@ 24Amp.	$ 10
MODEL L12-24	12VDC	@ 24A/1%	$ 14
MODEL L12-50	12VDC	@ 50Amp.	$ 13
MODEL L12-50	12VDC	@ 50A/Rip. 1%	$ 22
MODEL L24-30	24VDC	@ 30A/Rip. 1%	$ 31
MODEL L28-1	28VDC	@ 1A/0.5%	$ 5
MODEL L28-2	28VDC	@ 1A/Rip. .05%	$ 6
MODEL L28-5	28VDC	@ 5Amp.	$ 8
MODEL L28-8	28VDC	@ 8Amp.	$ 11
MODEL L28-12	28VDC	@ 12Amp.	$ 12
MODEL L28-24	28VDC	@ 24Amp. (N.F.)	$ 11
MODEL L28-24	28VDC	@ 24Amp.	$ 18
MODEL L28-30	28VDC	@ 30Amp.	$ 31
MODEL L28-50	28VDC	@ 50Amp. (N.F.)	$ 20
MODEL L28-50	28VDC	@ 50Amp.	$ 28
MODEL L28-50	28VDC	@ 50Amp. —1% R.	$ 40
MODEL L28-100	28VDC	@ 50Amp. —1% R.	$ 41
MODEL L115-2.5	115VDC	@ 2.5A	$ 8
MODEL L115-5	115VDC	@ 5A	$ 12
MODEL L115-10	115VDC	@ 10A (N.F.)	$ 18
MODEL L115-10	115VDC	@ 10A	$ 34
MODEL L220-5	220VDC	@ 5A	$ 22
MODEL L220-10	220VDC	@ 10A	$ 34
MODEL L440-5	440VDC	@ 5A	$ 34

(N.F.) means not filtered

12 VOLT POWER SUPPLIES — 1% Ripple

MODEL GS 12-1,	Output	1A, 12V	$ 35.0
MODEL GS 12-3,	Output	3A, 12V	$ 55.0
MODEL GS 12-5,	Output	5A, 12V	$ 65.0
MODEL GS 12-10,	Output	10A, 12V	$ 85.0
MODEL GS 12-15,	Output	15A, 12V	$130.0
MODEL GS 12-20,	Output	20A, 12V	$150.0
MODEL GS 12-25,	Output	25A, 12V	$170.0
MODEL GS 12-30,	Output	30A, 12V	$190.0

Net

© United Technical Publication

ALL TYPES OF POWER SUPPLIES

SILICON POWER RECTIFIER
Model G50-50R



INPUT: 220 Volts AC, 60 cycles, 3 phase

OUTPUT: 0-50 volts DC, 0-50 amperes continuous duty

RIPPLE: .3% RMS

REGULATION: No Load to Full Load 8%

METERS: 2% Accuracy

DIMENSIONS: 21" x 15" x 19"

SILICON INDUSTRIAL POWER UNIT
Model G30-100

INPUT: 220 Volts AC, 60 cycles, 3 phase

OUTPUT: 0-32 Volts DC, 0-100 amperes continuous duty

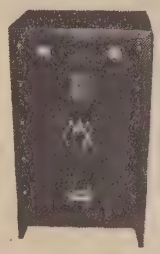
RIPPLE: .3% RMS

REGULATION: 5-8% 1/10th load to full load with constant input and at maximum output voltage setting

METERS: 2% Accuracy

DIMENSIONS: 21" x 15" x 19"

SILICON AIRCRAFT BATTERY ELIMINATOR
Model G30-200



INPUT: 220 Volts AC, 60 cycles, 3 phase

OUTPUT: 0-32 Volts DC, 0-200 amperes continuous duty also avail. 300A

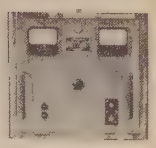
RIPPLE .5% RMS

REGULATION: 5-8% 1/10th load to full load with constant input and maximum output voltage setting

METERS: 2% Accuracy

DIMENSIONS: 25" x 25" x 43"

SILICON REGULATED POWER SUPPLY
Model G530-40M



INPUT: 115 Volts AC, 60 cycles, 1 phase

OUTPUT: 5-30 Volts DC, 0-40 amperes

RIPPLE: 1% RMS

REGULATION: ±1% from no load to full load

METERS: 2% Accuracy

DIMENSIONS: 21" x 15" 19"

SILICON POWER SUPPLY



MODEL GX 30-5

INPUT: 115 Volts AC 60 cycles, single phase

OUTPUT: 28-30-32 Volts DC, 0-5 Amperes, DC Continuous Duty

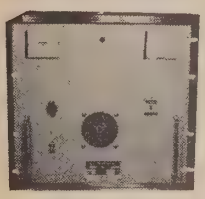
REGULATION: 12% No Load to Full Load

RIPPLE: .5% RMS

DIMENSIONS: 5" W x 13½" L x Overall Height 9"

PRICE: $85.00 — 6 Amps $95.00

SILICON GENERAL PURPOSE RECTIFIER



MODEL G-115

INPUT: 115 Volts AC 60 cycles, 1 Phase

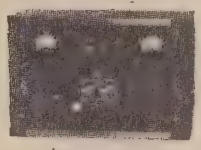
OUTPUT: 0-32 Volts DC, 0-50 Amperes DC, Continuous duty variable over entire range

RIPPLE: 1% RMS

DIMENSIONS: 22"H x 19"W x 15"D

PRICE: $522.00 NET

DC POWER SUPPLY



MODEL G94F

INPUT: 115 Volts AC 60 cycles, 1 Phase DC

OUTPUT: 0-300 Volts DC Continuous Variable 0-1 Amperes.

RIPPLE: 3 MV RMS

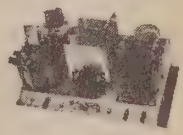
DIMENSIONS: Rack 8¾" H x 19" L x 9½" D

CABINET: 10½"Hx22"Lx12"D

PRICE: $275.00

Also 0-2 Amp. **PRICE:** $340.00

SILICON POWER SUPPLY



MODEL GX30-20

INPUT: 115 Volts, 1 Phase, 60 cycles

OUTPUT: 0-34, Volts, DC 0-20 Amperes, continuous duty

REGULATION: No load to full load: 18%

RIPPLE: Below 1% Silicon Rectifiers, High Efficiency

DIMENSIONS: 10" x 17" x 3"

PRICE: $185.00 NET

PHASE — BENCH MODEL PLATING SUPPLIES

ODEL GL 6-50	6V	50A	$204.00
ODEL GL 9-50	9V	50A	$212.00
ODEL GL 12-50	12V	50A	$220.00
ODEL GL 18-50	18V	50A	$236.00
ODEL GL 6-75	6V	75A	$256.00
ODEL GL 9-75	9V	75A	$264.00
ODEL GL 12-75	12V	75A	$276.00
ODEL GL 18-75	18V	75A	$292.00
ODEL GL 6-100	6V	100A	$268.00
ODEL GL 9-100	9V	100A	$284.00
ODEL GL 12-100	12V	100A	$300.00
ODEL GL 18-100	18V	100A	$316.00
ODEL GL 6-150	6V	150A	$300.00
ODEL GL 9-150	9V	150A	$328.00
ODEL GL 12-150	12V	150A	$352.00
ODEL GL 18-150	18V	150A	$372.00
ODEL GL 6-200	6V	200A	$330.00
ODEL GL 9-200	9V	200A	$352.00
ODEL GL 12-200	12V	200A	$372.00
ODEL GL 6-250	6V	250A	$372.00
ODEL GL 9-250	9V	250A	$396.00
ODEL GL 12-250	12V	250A	$460.00

VOLT POWER SUPPLIES — Rack Type — 1% Ripple

ODEL G 24-6R	24VDC	6A	$ 95.00
ODEL G 24-15R	24VDC	15A	$105.00
ODEL G 24-25R	24VDC	25A	$125.00
ODEL G 24-50R	24VDC	50A	$210.00

PRICES SUBJECT TO CHANGE

GR LINE REGULATED POWER SUPPLIES — 2% Meters 1% Ripple

MODEL GR 12-5	0-12V	5A	$120.00
MODEL GR 12-10	0-12V	10A	$155.00
MODEL GR 12-20	0-12V	20A	Inquire
MODEL GR 12-30	0-12V	30A	$175.00
MODEL GR 16-5	0-16V	5A	$175.00
MODEL GR 16-10	0-16V	10A	$125.00
MODEL GR 8-10	0-8V	10A	$155.00
MODEL GR 28-5	0-28V	5A	$ 95.00
MODEL GR 14-5	0-14V	5A	$125.00
MODEL GR 32-4	0-32V	4A	$ 79.00
MODEL GR 16-8	0-16V	8A	$135.00
MODEL GR 32-15	0-32V	15A	$225.00
MODEL GR 55-10	0-55V	10A	$210.00
MODEL GR 125-1	0-125V	1A	$375.00
MODEL GR 125-5	0-125V	5A	$215.00
MODEL GR 125-10	0-125V	10A	$485.00

INDUSTRIAL POWER UNITS — SINGLE PHASE

MODEL GK 115-125A	Output 115V	125W	Input 115V	$ 63.00
MODEL GK 115-125B	Output 115V	125W	Input 230V	$ 63.00
MODEL GK 115-125C	Output 115V	125W	Input 440V	$ 63.00
MODEL GK 115-250A	Output 115V	250W	Input 115V	$ 72.50
MODEL GK 115-250B	Output 115V	250W	Input 230V	$ 72.50
MODEL GK 115-250C	Output 115V	250W	Input 440V	$ 72.50
MODEL GK 115-375A	Output 115V	375W	Input 115V	$ 89.00
MODEL GK 115-375B	Output 115V	375W	Input 230V	$ 89.00
MODEL GK 115-375C	Output 115V	375W	Input 440V	$ 89.00
MODEL GK 115-500A	Output 115V	500W	Input 115V	$105.00
MODEL GK 115-500B	Output 115V	500W	Input 230V	$105.00
MODEL GK 115-500C	Output 115V	500W	Input 440V	$105.00
MODEL GK 115-750A	Output 115V	750W	Input 115V	$130.00
MODEL GK 115-750B	Output 115V	750W	Input 230V	$130.00
MODEL GK 115-750C	Output 115V	750W	Input 440V	$130.00
MODEL GK 115-1000A	Output 115V	1000W	Input 115V	$150.00
MODEL GK 115-1000B	Output 115V	1000W	Input 230V	$150.00
MODEL GK 115-1000C	Output 115V	1000W	Input 440V	$150.00
MODEL GK 230-125A	Output 230V	125W	Input 115V	$ 67.00
MODEL GK 230-125A	Output 230V	125W	Input 230V	$ 67.00
MODEL GK 230-125C	Output 230V	125W	Input 440V	$ 67.00
MODEL GK 230-250A	Output 230V	250W	Input 115V	$ 75.00
MODEL GK 230-250B	Output 230V	250W	Input 230V	$ 75.00
MODEL GK 230-250C	Output 230V	250W	Input 440V	$ 75.00
MODEL GK 230-375A	Output 230V	375W	Input 115V	$110.00
MODEL GK 230-375B	Output 230V	375W	Input 230V	$110.00
MODEL GK 230-375C	Output 230V	375W	Input 440V	$110.00
MODEL GK 230-500A	Output 230V	500W	Input 115V	$115.00
MODEL GK 230-500B	Output 230V	500W	Input 230V	$115.00
MODEL GK 230-500C	Output 230V	500W	Input 440V	$115.00
MODEL GK 230-750A	Output 230V	750W	Input 115V	$172.00
MODEL GK 230-750B	Output 230V	750W	Input 230V	$172.00
MODEL GK 230-750C	Output 230V	750W	Input 440V	$172.00
MODEL GK 230-1000A	Output 230V	1000W	Input 115V	$180.00
MODEL GK 230-1000B	Output 230V	1000W	Input 230V	$180.00
MODEL GK 230-1000C	Output 230V	1000W	Input 440V	$180.00

GATES
ELECTRONIC COMPANY, INC.

GATES POWER SUPPLIES

MODEL G230-25



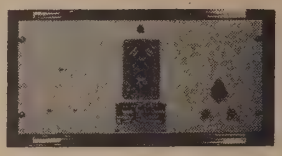
INPUT: 208/440, 3pn 60 cy
OUTPUT: 230 @ 25A
RIPPLE: 4.5%
REGULATION: 1/10 Load 8%
METERS: None
DIMENSIONS: 21″ W x 15″ D x 14″ H
PRICE: $575.00
METERS $50.00 EXTRA

MODEL G12-250



INPUT: 208, 3ph 60 cy
OUTPUT: 0-12V @ 250A
RIPPLE: 4.5%
REGULATION: 1/10 Load 8%
METERS: YES
DIMENSIONS: 20″ W x 20″ D x 35″ H
PRICE: $575.00

MODEL G220-10



INPUT: 115VAC
OUTPUT: 220VDC @ 10A
RIPPLE: 48%
METERS: NONE
DIMENSIONS: 21″ W x 15″ D x 10″ H
PRICE: $425.00
METERS $50.00 EXTRA

SILICON INDUSTRIAL POWER UNIT
MODEL G30-40F



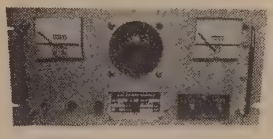
INPUT: 115 Volts AC, 60 cycles, single phase.
OUTPUT: 0-32 Volts DC, 0-40 Amperes DC, continuous duty
RIPPLE: 1% RMS
DIMENSIONS: 12¼″H x 19″W x 13″D
REGULATION: D.C.V. at full load: 32 minimum D.C.V. at 1/10 load: 35 maximum
PRICE: $425.00

MODEL GT125-5F



INPUT: 115VAC
OUTPUT: 0-125 @ 5A
RIPPLE: 0.5%
REGULATION: UNREGULATED
METERS: YES
DIMENSIONS: 21″ W x 15″ D x 10½″ H
PRICE: $325.00

MODEL GT14-40



INPUT: 115VAC
OUTPUT: 0-14 @ 40A
RIPPLE: 0.1%
REGULATION: UNREGULATED
METERS: YES
DIMENSIONS: 19″ W x 13½″ D x 8-3/6″ H
PRICE: $275.00 — RACK MOUNTED

MODEL GX28-50



INPUT: 115VAC
OUTPUT: 28 @ 50A
RIPPLE: 0.5%
REGULATION: UNREGULATED
METERS: NONE
DIMENSIONS: 19″ W x 13½″ D x 12¼″ H
PRICE: $325.00 — RACK MOUNTED

MODEL G45-30



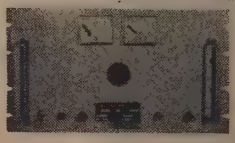
INPUT: 115VAC
OUTPUT: 45, 42, 40, 36, 32, 30, 29, 28, 26 @ 30A
RIPPLE: 1%
REGULATION: FAN COOLED
METERS: 5%
DIMENSIONS: 19″ W x 10″ D x 8-3/6″ H
PRICE: $375.00



MODEL GT20-200

INPUT: 220 VAC 60 cy. 1 Phase
OUTPUT: 0-22 VDC @ 200A
RIPPLE: 1%
CABINET: 35″ x 20″ x 20″
METERS: VOLT & AMP.
PRICE $625.00

NEW SCR REGULATED POWER SUPPLIES



GCR32-30 115VAC 24-32 @ 30A 1% ±1% Meters 19″Wx17″Dx12¼″H
PRICE: $550.00 — Cabinet $25.00 more

GCR32-25 115VAC 24-32 @ 25A 1% ±1% Meters 19″Wx17″Dx12¼″H
PRICE: $505.00 — Cabinet $25.00 more

GCR32-20 115VAC 24-32 @ 20A 1% ±1% Meters 19″Wx17″Dx10¼″H
PRICE: $475.00 — Cabinet $25.00 more

HIGH VOLTAGE DC POWER SUPPLIES

1% Ripple - Good Regulation - Cabinets - Meters - Heavy Duty Construction - Powerstat - Fused 1% Meters - 115 Vac Input Heavy Duty Line Cord.

MODEL GP	32-5	Input 115V, 60c, 1ph.	Output 0-32V	@	5A	.....$ Inquire
MODEL GP	32-10	Input 115V, 60c, 1ph.	Output 0-32V	@	10A	.....$ Inquire
MODEL GP	32-20	Input 115V, 60c, 1ph.	Output 0-32V	@	20A	.....$ Inquire
MODEL GP	32-40	Input 115V, 60c, 1ph.	Output 0-32V	@	40A	.....$ Inquire
MODEL GP	32-100	Input 220V, 60c, 3ph.	Output 0-32V	@	100A	....$ Inquire
MODEL GP	32-150	Input 220V, 60c, 3ph.	Output 0-32V	@	150A	....$ Inquire
MODEL GP	60-6	Input 115V, 60c, 1ph.	Output 0-60V	@	6A	.....$ Inquire
MODEL GP	60-10	Input 115V, 60c, 1ph.	Output 0-60V	@	10A	.....$ Inquire
MODEL GP	60-12	Input 115V, 60c, 1ph.	Output 0-60V	@	12V..	....$ Inquire
MODEL CP	60-20	Input 115V, 60c, 1ph.	Output 0-60V	@	20A	.....$ Inquire
MODEL GP	60-50	Input 220V, 60c, 3ph.	Output 0-60V	@	50A	.....$ Inquire
MODEL GP	60-80	Input 220V, 60c, 3ph.	Output 0-60V	@	80A	.....$ Inquire
MODEL GP	60-250	Input 220V, 60c, 3ph.	Output 0-60V	@	250A	....$ Inquire
MODEL GP	125-2.5	Input 117V, 60c, 1ph.	Output 0-125V	@	2.5A	....$ Inquire
MODEL GP	125-3	Input 117V, 60c, 1ph.	Output 9-124V	@	3A	.....$ Inquire
MODEL GP	125-5	Input 117V, 60c, 1ph.	Output 0-125V	@	5A	.....$ Inquire
MODEL GP	125-10	Input 117V, 60c, 1ph.	Output 0-125V	@	10A	.....$ Inquire
MODEL GP	125-20	Input 117V, 60c, 1ph.	Output 0-124V	@	20A	.....$ Inquire
MODEL GP	125-24	Input 220V, 60c, 3ph.	Output 0-125V	@	24A	.....$ Inquire
MODEL GP	125-40	Input 220V, 60c, 3ph.	Output 0-125V	@	40A	.....$ Inquire
MODEL GP	125-80	Input 220V, 60c, 3ph.	Output 0-125V	@	80A	.....$ Inquire
MODEL GP	125-120	Input 220V, 60c, 3ph.	Output 0-125V	@	120A	....$ Inquire
MODEL GP	250-5	Input 117V, 60c, 1ph.	Output 0-250V	@	5A	.....$ Inquire
MODEL GP	250-10	Input 117V, 60c, 1ph.	Output 0-250V	@	10A	.....$ Inquire
MODEL GP	250-12	Input 220V, 60c, 3ph.	Output 0-250V	@	12A	.....$ Inquire
MODEL GP	250-20	Input 220V, 60c, 3ph.	Output 0-250V	@	20A	.....$ Inquire
MODEL GP	250-40	Input 220V, 60c, 3ph.	Output 0-250V	@	40A	.....$ Inquire
MODEL GP	250-60	Input 220V, 60c, 3ph.	Output 0-250V	@	60A	.....$ Inquire
MODEL GP	300-1	Input 220V, 60c, 3ph.	Output 0-250V	@	1A	.....$ 27
MODEL GP	300-1.5	Input 220V, 60c, 3ph.	Output 0-250V	@	1.5A	....$ 31
MODEL GP	300-2	Input 220V, 60c, 3ph.	Output 0-250V	@	2A	.....$ 35
MODEL GP	300-3	Input 220V, 60c, 3ph.	Output 0-250V	@	3A	.....$ 45
MODEL GP	300-5	Input 220V, 60c, 3ph.	Output 0-250V	@	5A	.....$ 64
MODEL GP	500-1	Input 220V, 60c, 3ph.	Output 0-500V	@	1A	.....$ 30
MODEL GP	500-1.5	Input 220V, 60c, 3ph.	Output 0-500V	@	1.5A	....$ 36
MODEL GP	500-2	Input 220V, 60c, 3ph.	Output 0-500V	@	2A	.....$ 42
MODEL GP	500-3	Input 220V, 60c, 3ph.	Output 0-500V	@	3A	.....$ 52
MODEL GP	500-5	Input 220V, 60c, 3ph.	Output 0-500V	@	5A	.....$ 72
MODEL GP	500-5	Input 220V, 60c, 3ph.	Output 0-500V	@	5A	.....$ Inquire
MODEL GP	500-10	Input 220V, 60c, 3ph.	Output 0-500V	@	10A	.....$ Inquire
MODEL GP	500-20	Input 220V, 60c, 3ph.	Output 0-500V	@	20A	.....$ Inquire
MODEL GP	500-30	Input 220V, 60c, 3ph.	Output 0-500V	@	30A	.....$ Inquire

GATES
ELECTRONIC COMPANY, INC.

SILICON RECTIFIERS FOR EXITATION OF SYNCHRONOUS MOTORS. HEAVY DUTY, INDUSTRIAL CONSTRUCTION. PROVEN IN USE.

3.5	KW	125 DCV	28 DCA	.....$ Inquire
5	KW	125 DCV	40 DCA	.....$ Inquire
7	KW	125 DCV	56 DCA	.....$ Inquire
10	KW	125 DCV	80 DCA	.....$ Inquire
22	KW	125 DCV	168 DCA	.....$ Inquire
55	KW	125 DCV	440 DCA	.....$ Inquire

Net

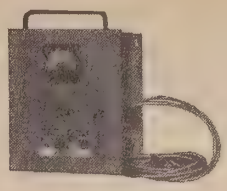
© United Technical Publications

HIGHEST QUALITY-LOWEST PRICE



SILICON POWER SUPPLY
Model GX24-1

INPUT: 115 Volts AC, 60 cycles, 1 phase
OUTPUT: 24 Volts DC, 0-1 ampere DC, continuous duty
RIPPLE: 0.3% RMS
REGULATION: 8% no load to full load
DIMENSIONS: 3″ x 5″ x 10″
PRICE: $75.00
0-2 Amps **PRICE: $85.00**

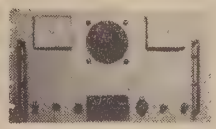


PORTABLE SILICON BATTERY CHARGER
Model G612-20

INPUT: 115 volts AC, 60 cycles, 1 phase
OUTPUT: 6/12 Volts DC, 20 amperes continuous duty
METER: Amp. meter 2% Accuracy
DIMENSIONS: 11″H x 9″W x 6½″D
PRICE: $57.50

SILICON RECTIFIER
Model GT32-30

INPUT: 115 Volts, 50-60 cycles, 1 phase
OUTPUT: 30 amperes, 0-32 Volts DC
RECTIFIER: Full wave silicon rectifier
RIPPLE: 1% RMS
VOLTAGE CONTROL: Powerstat
METERS: 2% Accuracy volt meter, amp. meter
DIMENSIONS: 10½″ x 13½″ x 19″
PRICE: $350.00 — WT. 92 Lbs.





SILICON RECTIFIER
Model GT32-24

INPUT: 115 Volts, 50-60 cycles, 1 phase
OUTPUT: 24 amperes, 0-32 Volts DC
RECTIFIER: Full wave silicon rectifier
RIPPLE: 1%
VOLTAGE CONTROL: Powerstat
DIMENSIONS: 8¾″ x 13½″ x 19″
METERS: 2% Accuracy volt meter, amp. meter
PRICE: $325.00 — WT. 75 Lbs.

BENCH PLATING RECTIFIER
Model G50-8



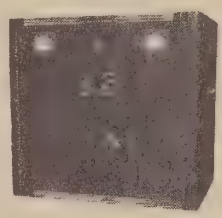
INPUT: 115 volts, 50-60 cycles, 1 phase
OUTPUT: 50 amperes, 0-8 Volts DC
RECTIFIER: Full wave silicon rectifier
RIPPLE: 2% $75. extra
VOLTAGE CONTROL: Powerstat
METER: 2% Accuracy, volt meter, amp. meter
DIMENSIONS: 21″ x 15″ x 10″
PRICE: $175.00

BENCH PLATING RECTIFIER
Model G100-8



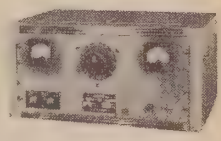
INPUT: 115 Volts, 50-60 cycles, 1 phase
OUTPUT: 100 amperes, 0-8 Volts DC
RECTIFIER: Full wave silicon rectifier
RIPPLE: 2% $75. extra
VOLTAGE CONTROL: Powerstat
METERS: 2% Accuracy, volt meter, amp. meter
DIMENSIONS: 21″ x 15″ x 10″
PRICE: $275.00

BENCH PLATING RECTIFIER
Model G200-6



INPUT: 115 Volts, 50-60 cycles, 1 phase
OUTPUT: 200 amperes, 0-6 Volts DC
RECTIFIER: Full wave silicon rectifier
RIPPLE: 2% $100 extra
COOLING: Fan
VOLTAGE CONTROL: Powerstat
METERS: 2% Accuracy, volt meter, amp. meter
DIMENSIONS: 21″ x 15″ x 19″
PRICE: $385.00

BENCH PLATING RECTIFIER
Model G50-15



INPUT: 115 Volts, 50-60 cycles, 1 phase
OUTPUT: 50 amperes, 0-15 Volts DC
RECTIFIER: Full wave silicon rectifier
RIPPLE: 2% $125 extra
VOLTAGE CONTROL: Powerstat
METERS: 2% Accuracy, volt meter, amp. meter
DIMENSIONS: 21″ x 15″ x 10″
PRICE: $210.00

MAGNETICALLY REGULATED D.C. POWER SUPPLIES

REGULATION: Line ±1% for ±15% line voltage change load ±2% for any load change between ½ load and full load. Ripple 1% RMS Maximum. Rack or cabinet types.

VOLTS	D.C. OUTPUT AMPS	VA	CATALOG NUMBER	LOAD REGULATION 20% F.L.	LOAD REGULATION 50% F.L.	PRICE
6	10	60	6GDCV10	9	7	$130.00
6	15	90	6GDCV15	9	7	140.00
12	5	60	12GDCV5	7	5	92.00
12	10	120	12GCDV10	7	5	120.00
12	15	180	12GDCV15	7	5	155.00
18	5	90	18GDCV5	5	4	96.00
18	10	180	18GDCV10	7	5	141.00
24	6	144	24GDCV6	5	4	116.00
24	10	240	24GDCV10	6	4	144.00
24	15	360	24GDCV15	5	4	200.00
24	25	600	24GDCV25	6	4	275.00
28	8	224	28GDCV8	6	4	144.00
28	15	420	28GDCV15	7	5	200.00
48	4	192	48GDCV4	3.5	2.5	109.00
48	4	480	48GDCV4	4	2	149.00
48	20	960	48GDCV20	3	2	223.00
125	2	250	125GDCV2	2.5	1.5	117.00
150	2	300	150GDCV2	2	1.5	117.00
150	1	200	200GDCV1	3	2	112.00
250	1	250	250GDCV1	3	2	120.00

A single source for all possible types of "brute" force" and regulated power supplies that can fill 90% of your design and application needs. Gates Power Supplies give you absolutely lowest cost and long life. The units are excellently constructed of high rated components for trouble free, years of service.

Silicon or Selenium. Single and three-phase units. 1 to 1000 volts, 1 to 1000 Amps. Metered and unmetered Static or variable outputs. Rack, cabinet or chassis mounts. Unit or hundred quantities 48 hour delivery. Two year guarantees. Power supplies for OEM Application, Testing Prototype, Lab type units, Plating, Motor Control, Cathode Protection, Transistor power, Anodizing, Battery Charging, Battery Conversions, Marine types, Aircraft Starting.

GATES
ELECTRONIC COMPANY, INC.

AC VOLTAGE STABILIZERS

For Electronic and Electric Equipment

General Electric a-c voltage stabilizers are static-magnetic transformer-type products which provide voltage maintained within ±1% variation while input line voltage fluctuates ±15%. They are offered in the following variations:

Unfiltered output: output voltage waveform is relatively flat-topped, with harmonic content from 15 to 20%.

Harmonic filtered output: output voltage is filtered to near sinusoidal waveshape, with a maximum of 3% harmonic content.

Enclosed construction: completely metal enclosed for safe external mounting.

Open construction: for installation within electronic or electric equipment

Cord/Receptacle units: for convenient temporary connections.

SINGLE PHASE — Magnetic-capacitor circuitry is frequency sensitive. Stabilizers designed for one frequency are not suitable for use on another.

THREE PHASE — Standard single-phase a-c voltage stabilizers can be connected for 3-phase, 4-wire loads with input connected delta. However, single-phase models cannot be connected for 3-phase, 3-wire loads: select from 3-phase delta-delta models.

Volt-amp Output Capacity	Input Voltage Range	Stabilized Output Voltage	Unfiltered Output Model Number	Unfiltered Output Sugg'd Net Price 1-4§	Harmonic Filtered Output Model Number	Harmonic Filtered Output Sugg'd Net Price 1-4§
SINGLE PHASE — ENCLOSED — FOR 60 HERTZ						
15	95-130	118	9T91Y4070	$17.97	.....	.....
30	95-130	118	9T91Y4090	20.58	.....	.....
60	95-130	118	9T91Y4110	27.16	.....	.....
120	95-130	118	9T91Y4130	37.37	.....	.....
250	95-130	118	9T91Y4140‡	62.37	9T91Y7140‡	$64.64
250	190-260	118	9T91Y4142‡	62.37	.....	.....
250	190-260X380-520	118/236	9T91Y4144‡	69.17	.....	.....
250	380-520	118	9T91Y4145‡	62.37	.....	.....
500	95-130	118	9T91Y4150‡	98.09	9T91Y7150‡	100.93
500	190-260	118	9T91Y4152‡	98.09	.....	.....
500	380-520	118	9T91Y4155‡	98.09	.....	.....
1000	95-130	118	9T91Y4170	150.26	9T91Y7170	154.79
1000	95-130X175-235X190-260	118/236	.....	.....	9T91Y7173	174.07
1000	190-260	118	9T91Y4172	150.26	9T91Y7172	154.79
1000	190-260X380-520	118/236	.....	.....	9T91Y7174	171.23
1000	380-520	118	9T91Y4175	150.26	.....	.....
2000	95-130X175-235X190-260	118/236	9T91Y4183	301.08	9T91Y7183	315.82
2000	190-260X380-520	118/236	9T91Y4184	296.54	9T91Y7184	310.72
2000	380-520	236/472	9T91Y4186	288.04	.....	.....
3000	95-130X175-235X190-260	118/236	9T91Y4193	404.84	9T91Y7193	425.25
3000	190-260X380-520	118/236	9T91Y4194	396.33	.....	.....
3000	380-520	236/472	9T91Y4196	385.56	.....	.....
5000	190-260X380-520	118/236	9T91Y4204	610.66	9T91Y7204	644.11
5000	95-130X175-235X190-260	118/236	9T91Y4203	620.30	9T91Y7203	656.02
5000	380-520	236-472	9T91Y4206	548.10	.....	.....
7500	95-130X175-235X190-260	118/236	9T91Y4213	925.34	.....	.....
7500	190-260X380-520	118/236	9T91Y4214	907.20	9T91Y7214	1000.19
10000	95-130X175-235X190-260	118/236	.....	.....	9T91Y7223	1326.21
10000	190-260X380-520	118/236	9T91Y4224	1185.03	9T91Y7224	1301.27
15000	190-260X380-520	118/236	9T91Y4244	1739.56	9T91Y7244	1919.30
SINGLE PHASE — OPEN — FOR 60 HERTZ						
15	95-130	118	9T91Y5070	$17.01	.....	.....
30	95-130	118	9T91Y5090	19.39	.....	.....
60	95-130	118	9T91Y5110	25.34	.....	.....
120	95-130	118	9T91Y5130	35.15	.....	.....
250	95-130	118	9T91Y5140	58.97	9T91Y8140	$60.67
250	190-260	118	9T91Y5142	58.97	.....	.....
500	95-130	118	9T91Y5150	92.42	9T91Y8150	94.12
500	190-260	118	9T91Y5152	92.42	.....	.....
750	95-130	118	9T91Y5160	116.24	9T91Y8160	120.20
1000	95-130	118	9T91Y5170	140.62	9T91Y8170	145.15
1000	190-260	118	9T91Y5172	140.62	9T91Y8172	145.15
1500	95-130	118	9T91Y5010	195.05	9T91Y8010	204.69
2000	95-130X175-235X190-260	118/236	9T91Y5183	282.37	9T91Y8183	296.54
SINGLE PHASE — ENCLOSED — FOR 50 HERTZ						
250	95-130	118	9T91Y4147‡	$72.01	9T91Y7147‡	$74.28
250	95-130X175-235X190-260	118/236	9T91Y4148‡	81.08	9T91Y7148‡	83.92
500	95-130X175-235X190-260	118/236	9T91Y4158	127.58	9T91Y7158	130.98
500	190-260X380-520	118/236	9T91Y4159	124.74	9T91Y7159	128.71
1000	95-130X175-235X190-260	118/236	9T91Y4178	195.05	9T91Y7178	201.29
2000	95-130X175-235X190-260	118/236	9T91Y4188	346.44	9T91Y7188	363.45
3000	95-130X175-235X190-260	118/236	9T91Y4198	465.51	9T91Y7198	488.19
5000	95-130X175-235X190-260	118/236	9T91Y4208	714.42	9T91Y7208	750.14
7500	95-130X175-235X190-260	118/236	9T91Y4218	1061.99	9T91Y7218	1166.04
7500	190-260X380-520	118/236	9T91Y4219	1044.41	9T91Y7219	1149.31

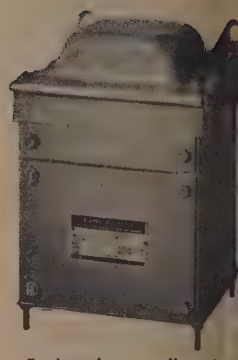
‡ Can be used with adapter kit for quick conversion to a cord and receptacle unit.

Freq.	VA	Input Voltage Range	Stabilized Output Voltage	Model Number	Sugg'd Net Price 1-4§
3 PHASE DELTA DELTA — ENCLOSED					
60	6000*	190 to 260/380 to 520 delta	230/236 delta	9T91Y3506	$1307.50
60	10000*	190 to 260 delta	236 delta	9T91Y3501G2	1884.71
50	10000*	190 to 260 delta	236 delta	9T91Y3510	2059.91

*Minimum recommended load 20% of rated; maximum harmonic content 5%.
§ OEM quantity prices available on request.



Open — small ratings



Enclosed — small rating

Cord/Receptacle Units

Integral single-phase units with a 2-prong cord set an female receptacle in the case.

Volt-amp Output Capacity	Input Voltage Range	Stabilized Output Voltage	Model Number	Sugg'd Ne Price 1-4
ENCLOSED — UNFILTERED OUTPUT — FOR 60 HERTZ				
15	95-130	118	9T91Y4070G19	$20.58
30	95-130	118	9T91Y4090G19	23.19
60	95-130	118	9T91Y4110G19	29.65
120	95-130	118	9T91Y4130G19	40.03

Adapter kits are available for use with 250 and 50 volt-amp stabilizers to provide quick conversion to cord and receptacle unit.

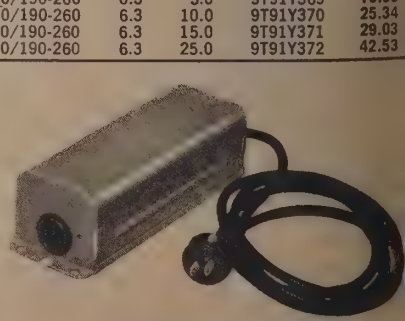
For Use With Stabilizer Model Number	Order Adapter Kit Model Number 2-prong	3-prong	Sugg'd Ne Price 1-4
9T91Y4140	9T91Y4140G55	9T91Y4140G75	
9T91Y4142	9T91Y4140G55	9T91Y4140G75	
9T91Y4144	9T91Y4140G55	9T91Y4140G75	2-prong
9T91Y4145	9T91Y4140G55	9T91Y4140G75	Kits
9T91Y4147	9T91Y4140G55	9T91Y4140G75	$2.61
9T91Y4148	9T91Y4140G55	9T91Y4140G75	
9T91Y4150	9T91Y4140G55	9T91Y4140G75	
9T91Y4152	9T91Y4140G55	9T91Y4140G75	
9T91Y4155	9T91Y4140G55	9T91Y4140G75	
9T91Y7140	9T91Y7140G55	9T91Y7140G75	3-prong
9T91Y7150	9T91Y7150G55	9T91Y7150G75	Kits
9T91Y7147	9T91Y7147G55	9T91Y7147G75	$3.23
9T91Y7148	9T91Y7147G55	9T91Y7147G75	

Filament Ratings—Single Phase—60 Hert

For stabilized power for 6-volt nominal filaments, thes stabilizers are suitable for operation with other 6-vo loads of rated or lower output current requirement Current-limiting characteristic protects cold filament from high current surges.

Volt-amp Output Capacity	Input Voltage Range	Output Volts	Output Amps	Model Number	Sugg'd Ne Price 1-4
OPEN					
15	95-130	6	2.5	9T91Y365	$17.01
15	95-130	6.3	2.4	9T91Y367	17.01
31.5	95-130/190-260	6.3	5.0	9T91Y369	19.39
63	95-130/190-260	6.3	10.0	9T91Y370	25.34
94.5	95-130/190-260	6.3	15.0	9T91Y371	29.03
157.5	95-130/190-260	6.3	25.0	9T91Y372	42.53

Typical cord/receptacle unit



Prices subject to change without notice

GENERAL ELECTRIC

Net

© United Technical Publication

STABILTRON* AC VOLTAGE STABILIZERS

For Electronic and Electric Equipment Requiring PRECISE Voltage Control

General Electric Stabiltron a-c voltage abilizers can be used in a wide variety electronic equipment applications where ecise control of voltage is required. The abiltron consists entirely of static com-nents — there are no tubes to burn out moving parts to replace or maintain.

The Stabiltron senses deviations from predetermined output voltage level b\ error detector. The error signal, through e silicon-controlled rectifier circuit, au- ents the voltage stabilizer action and ovides almost instantaneous correction output voltage.

Typical applications include computers, dar and communications equipment, dustrial process control, and X-ray uipment.

put Voltage — The most common power urce voltages can be handled by the andard models listed. Stabiltron units n be provided for special voltage levels request.

utput Voltage — Stabiltron voltage stabi-ers maintain extremely precise voltage itput in spite of wide fluctuations of line ltage, frequency, load, load power factor, d ambient temperatures.

The table below illustrates the effect the output of the maximum steady state cursions, within rated limits of some of ese variables.

BLE 1 — TYPICAL OUTPUT VOLTAGE HARACTERISTICS

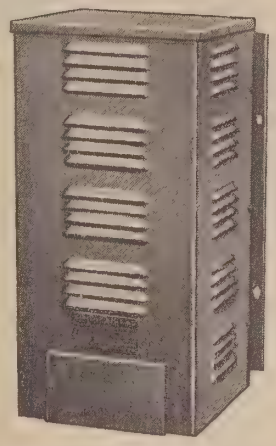
Variable	Excursion	Output Voltage Bandwidth¶
ne voltage†	95 to 130	0.02 to 0.2%
equency	57 to 63 Hertz	0.15 to 0.4%
ad	0 to 100% rated load	0.02 to 0.1%
ad power factor	0.4 lagging to unity	0.01 to 0.1%
nbient temperature	—25C to 40C	0.01%/degree C

† range is indicated because exact amounts are dependent on the static level of other variables.
¶ When the Stabiltron unit is operated at less than rated load, the line voltage can be reduced considerably below 95 volts without serious deterioration of the output voltage.

esponse — Under transient line or load nditions, elapsed time for correction of itput voltage and transient excursion om the normal bandwidth are key con-derations to equipment operation.

The Stabiltron provides fast response d small transient excursion through its nique combination of solid state and mag-tic circuitry.

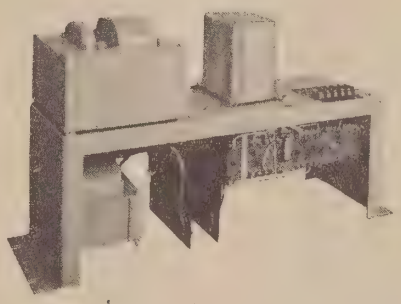
*Trade-name of General Electric Co.



ENCLOSED CONSTRUCTION · 2-kva units are suitable for either wall or floor mounting. 5- and 10-kva units can be floor mounted only.



PANEL CONSTRUCTION is suitable for standard 19-inch rack mounting.



OPEN CONSTRUCTION is suitable for horizontal or vertical mounting surfaces in equipment enclosures.

57-63CPS; 3% HARMONIC: 0.4 LAG TO UNITY LOAD PF

Kva	Model Number	Sugg'd Net Price 1-4 △	Input Voltage Range	Output Voltage (Adjustable ±4%)	Approx. Net Weight (Pounds)	Construction Type	Approx. Dim. (in.) H	W	D
0.5	9T91Y3021	$465.15	95-130/190-260	118	70	Panel	7	19	14¾
0.5	9T91Y3021G2	456.23	95-130/190-260	118	70	Open	7	19	13¼
1.0	9T91Y3022	548.10	95-130/190-260	118	125	Panel	8¾	19	15½
1.0	9T91Y3022G2	540.23	95-130/190-260	118	125	Open	8¾	19	14
2.0	9T91Y3023	733.43	95-130/190-260	118/236	185	Enclosed	25	14½	11¼
2.0	9T91Y3023G2	720.83	95-130/190-260	118/236	180	Open	23½	14½	10¼
5.0	9T91Y3027	1574.48	95-130/175-235/190-260	118/236	570	Enclosed	26½	28	14
10.0	9T91Y3030	2432.33	190-260/380-520	118/236	975	Enclosed	28	39	17

△ OEM quantity prices are available on request.

TABLE 2 — TYPICAL TRANSIENT RESPONSE CHARACTERISTICS

Transient Change	Percent Peak Output Voltage Excursion	Response‡ Time	Total Recovery§ Time
0 to 115V input	14%	4 Hertz	13 Hertz
95 to 130V input	14%	3 Hertz	8 Herzt
130 to 95V input	9%	5 Hertz	9 Hertz
0 to 100% rated load	24%	1 Hertz	2 Hertz
20% to 100% rated load	21%	1 Hertz	2 Hertz
100% to 20% rated load	34%	1 Hertz	10 Hertz

‡ The time required for the output to recover 63.3% from its maximum excursion.
§ The time required for the output to recover to normal bandwidth limits.

Harmonic Content — Under all rated ranges of line variation and most load conditions, the total harmonic content of the output wave form will not exceed three percent for a sine wave power source Even under adverse conditions, when the power source is not a sine wave, the Stabiltron voltage stabilizer will correct the wave form to the load to approximately three percent harmonic content.

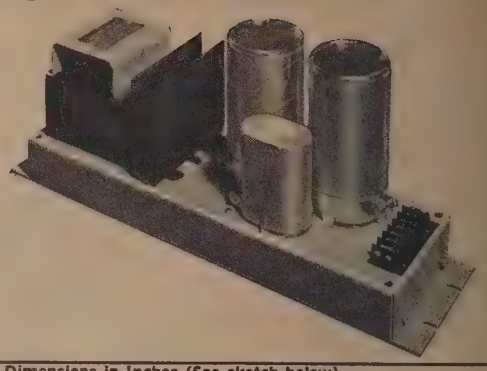
Rectifier-filter Loading — Since the output wave form is low in harmonic content. the Stabiltron voltage stabilizer can be connected successfully to a rectifier (capacitor input) filter load to the input of a d-c power supply having capacitor input filters.

Prices subject to change without notice

GENERAL ELECTRIC

REGULATED DC POWER SUPPLIES

Improve Performance of Computers and Other Electronic Equipment



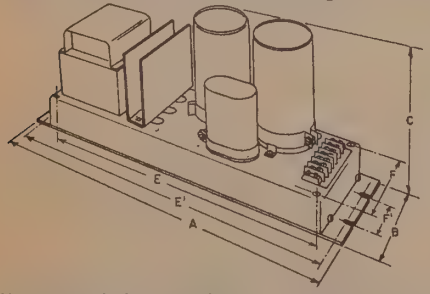
These component power supplies can be used in a wide variety of applications where relatively constant d-c voltage is required despite fluctuating line voltages. Computers, process control equipment, and electronic measuring devices are typical applications where demands for accuracy require constant regulation of voltage.

Performance-proved GE d-c power supplies can be designed to suit your needs for either 50- or 60-Hertz power sources.

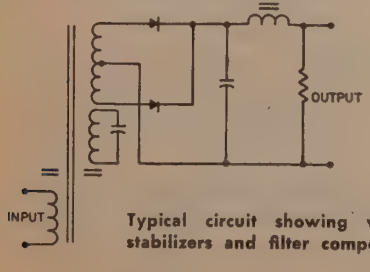
97- TO 130-VOLT INPUT RANGE, 40C AMBIENT

DC OUTPUT†				LOAD REGULATION‡		Dimensions in Inches (See sketch below)							NET
						OVER-ALL			MOUNTING				
									Chassis		Rack		
Volts	Amps	MODEL NO.	Suggested Net Price 1-4*	100% to 50% load	100% to 20% load	A	B	C	F	E	F′	E′	WGT LBS.
60 HERTZ													
10.0	16.0	9T66Y8	$173.25	5%	8%	19	7	6⅝	6¼	16¼	4	18⅜	25
12.0	5.0	9T66Y51	147.00	5%	6%	19	3½	7⅝	2¾	16¼	3	18⅜	16
12.0	15.0	9T66Y53	178.50	5%	7%	19	5¼	8	4½	16¼	2¼	18⅜	25
12.0	20.0	9T66Y978	194.25	5%	7%	19	7	8	6¼	16¼	4	18⅜	35
18.0	5.0	9T66Y61	134.40	4%	5%	19	3½	7⅝	2¾	16¼	3	18⅜	19
18.5	6.0	9T66Y966	139.65	4%	5%	19	5¼	7	4½	16¼	2¼	18⅜	20
18.5	12.0	9T66Y967	165.90	5%	7%	19	5¼	7¾	4½	16¼	2¼	18⅜	20
±18.5	24.0	9T66Y965	391.65	5%	8%	19	8¾	7	8	16¼	5¾	18⅜	45
24.0	2.5	9T66Y987	127.05	4%	6%	19	3½	6⅛	2¾	16¼	3	18⅜	16
24.0	6.0	9T66Y988	150.15	3%	5%	19	5¼	6½	4½	16¼	2¼	18⅜	25
24.0	10.0	9T66Y989	174.30	3%	5%	19	5¼	8	4½	16¼	2¼	18⅜	28
24.0	20.0	9T66Y990	227.85	3%	5%	19	7	9⅜	6¼	16¼	4	18⅜	45
24.0	50.0	9T66Y991	402.15	3%	5%	19	10½	11⅜	9¾	16¼	§	18⅜	105
28.0	8.0	9T66Y83	166.95	3%	5%	19	5¼	8	4½	16¼	2¼	18⅜	25
28.0	20.0	9T66Y85	247.80	3%	5%	19	7	9⅜	6¼	16¼	4	18⅜	50
28.0	50.0	9T66Y6	450.45	3%	5%	19	10½	12⅛	10½	17½	10½	18⅜	105
48.0	4.0	9T66Y93	139.65	3%	5%	19	5¼	8	4½	16¼	2¼	18⅜	25
48.0	10.0	9T66Y94	191.10	2%	4%	19	5¼	8	4½	16¼	2¼	18⅜	35
90.0	1.0	9T66Y69	120.75	2%	3%	19	3½	7⅛	2⅝	16¼	3	18⅜	19
90.0	10.0	9T66Y985	265.65	3%	4%	20⅞	7⅜	7	6⅛	20	¶	¶	100
125.0	2.0	9T66Y980	150.15	2%	3%	19	5¼	6½	4½	16¼	2¼	18⅜	26
125.0	4.0	9T66Y970	194.25	2%	3%	19	7	7⅝	6¼	16¼	4	18⅜	45
150.0	2.0	9T66Y981	158.55	2%	3%	19	5¼	6½	4½	16¼	2¼	18⅜	28
200.0	1.0	9T66Y982	140.70	2%	3%	19	5¼	6½	4½	16¼	2¼	18⅜	24
50 HERTZ													
12.0	15.0	9T66Y53G5	$187.95	5%	7%	19	5¼	6½	4½	16¼	2¼	18⅜	27
24.0	10.0	9T66Y989G5	182.70	3%	5%	19	5¼	8	4½	16¼	2¼	18⅜	30
24.0	20.0	9T66Y990G5	239.40	3%	5%	19	7	8½	6½	16¼	4	18⅜	50
28.0	8.0	9T66Y83G5	173.35	2%	5%	19	5¼	8	4½	16¼	2¼	18⅜	25
48.0	4.0	9T66Y93G5	147.00	3%	5%	19	4¼	8	4½	16¼	2¼	18⅜	30
48.0	10.0	9T66Y94G5	200.55	2%	4%	19	5½	9	4½	16¼	2¼	18⅜	38
125.0	2.0	9T66Y980G5	150.15	2%	3%	19	5¼	7⅜	4½	16¼	2¼	18⅜	28

* OEM quantity prices are available on request.
† May vary ±1%. All standard units come equipped with a plate for 19-inch rack mounting.
‡ Indicates approximate percent increase in output voltage due to decrease of load current from full load.
§ Rack mounting plate has four mounting slots on each end. Distance between centers of two outer slots is 7½ in., between two inner slots 3 in.
¶ Not available for 19-inch rack mounting.



Mounting holes suitable for ¼-20 screws. Length of screw may vary with chassis height.



Typical circuit showing voltage stabilizers and filter components.

EFFECT OF INPUT VOLTAGE VARIATION

D-c power supplies can be designed for various input voltages and ranges. With all other variables constant, the output voltage will not vary more than ±1 percent for a change in input voltage over the rated range of 97 to 130 volts input.

EFFECT OF TEMPERATURE CHANGE

For every 40C change in the ambient temperature, the output voltage level will change approximately one percent.

EFFECT OF FREQUENCY

A change of one percent in frequency will change output voltage level approximately one and one-half percent.

ISOLATION

All d-c power supplies provide electrical isolation between the a-c power source and the d-c load.

POLARITY

GE d-c power supplies can be designed with the polarity you require. All standard units listed can be installed with either plus or minus grounded.

RIPPLE

Ripple levels of one percent RMS meet most requirements. However, other levels of ripple content can be designed into GE power supplies.

EFFICIENCY

Efficiency ranges from 70 to 85 percent for normal output voltage levels. For unusually low output voltages or low power ratings, some decrease in efficiency may occur.

REGULATION

Load regulation characteristics depend on the rated output voltage and rated power level of the power supply.

Prices subject to change without notice

GENERAL ELECTRIC

Net

© United Technical Publications

volt-pac® VOLTAGE REGULATORS

- **New solid-state control**
- **Precise output voltage control**
- **Fast voltage-correction rate**
- **Cabinet or rack-mounted models**
- **Magnetic circuit-breaker protection**

General Electric's new automatic voltage regulator line provides closely regulated output voltages from varying input voltages. They normally include a motor-operated Volt-Pac variable transformer, associated buck-boost transformers which handle a wide range of input-voltage variation, and a new solid-state SCR control.

These automatic regulators maintain a preselected output voltage level within 1 percent bandwidth, and are temperature compensated from −20 to +40C. They can be bench or floor mounted, or in smaller sizes, mounted in standard relay racks.



Single-Phase



Three-Phase

	Wide Range Input				Narrow Range Input▲			Rack Mounted		Cabinet Type	
		Load		Correction Rate	Load		Correction Rate		Suggested		Suggested
	Freq. (Hertz)	Max. Amps	KVA*	Volts/Sec.	Max. Amps	KVA*	Volts/Sec.	Model Number	Net Price§	Model Number	Net Price§
		95-135V INPUT			105-125V INPUT						
	50/60	7.5	0.86	8.0	.....	.....	.....	.....	.....	9T92A100	$477.00
	50/60	10.0	1.15	8.0	21.5	2.5	4.0	9T92A101G3	$459.00	9T92A101	490.50
Single-phase	50/60	14.8	1.70	8.0	33.0	3.8	4.0	9T92A102G3	477.00	9T92A102	504.00
115V Nominal,	50/60	20.0	2.30	8.0	45.0	5.2	4.0	9T92A103G3	490.50	9T92A103	522.00
110-220V	60	50.0	5.75	10.4	.....	.....	.....	9T92Y132G3	549.00	9T92Y132	576.00
Adjustable Output¶	60	100.0	11.50	10.4	.....	.....	.....	9T92Y133G3	666.00	9T92Y133	693.00
	60	150.0	17.20	10.4	.....	.....	.....	.....	.....	9T92Y134	742.50
		190-260V INPUT‡			215-245V INPUT						
	50/60	7.5	1.70	16.0	.....	.....	.....	.....	.....	9T92A108†	$549.00
Single-phase	50/60	12.0	2.75	12.0	26.0	6.0	6.0	9T92A109G3	$544.50	9T92A109	571.50
230V Nominal,	60	32.5	7.50	17.2	.....	.....	.....	9T92Y136G3	607.50	9T92Y136	634.50
220-240V	60	52.0	12.00	17.2	.....	.....	.....	9T92Y137G3	702.00	9T92Y137	729.00
Adjustable Output¶	60	130.0	30.00	17.2	.....	.....	.....	.....	.....	9T92Y138	846.00
		400-520V INPUT			430-490V INPUT						
Single-phase	50/60	12.0	5.50	24.0	26.0	12.0	12.0	9T92A114G3	$621.00	9T92A114	$648.00
460V Nominal,	60	32.5	15.00	34.4	.....	.....	.....	9T92Y140G3	787.50	9T92Y140	814.50
440-480V	60	52.0	24.00	34.4	.....	.....	.....	.....	.....	9T92Y141	945.00
Adjustable Output¶	60	130.0	60.00	34.4	.....	.....	.....	.....	.....	9T92Y142	1179.00
		200-260V INPUT‡			215-245V INPUT‡						
	50/60	14.0	5.00	12.0	30.0	12.0	6.0	9T92A120G3	$1017.00	9T92A120	$1044.00
Three-phase	50/60	20.8	8.30	12.0	45.0	18.0	6.0	9T92A121G3	1071.00	9T92A121	1098.00
230V Nominal,	50/60	28.5	11.50	12.0	61.0	24.0	6.0	.....	.....	9T92A122	1143.00
220-240V	60	68.0	27.00	17.2	.....	.....	.....	.....	.....	9T92Y145	1404.00
Adjustable Output¶	60	136.0	54.00	17.2	.....	.....	.....	.....	.....	9T92Y146	1863.00
	60	170.0	67.50	7.5	.....	.....	.....	.....	.....	9T92Y147	2070.00
		400-520V INPUT			430-490V INPUT						
	50/60	12.0	9.60	24.0	26.0	21.0	12.0	.....	.....	9T92A127	$1147.50
Three-phase	60	32.5	26.00	34.4	.....	.....	.....	.....	.....	9T92Y149	1314.00
460V Nominal,	60	52.0	41.50	34.4	.....	.....	.....	.....	.....	9T92Y150	1701.00
440-480V	60	100.0	80.00	34.4	.....	.....	.....	.....	.....	9T92Y151	2043.00
Adjustable Output¶	60	130.0	104.0	15.0	.....	.....	.....	.....	.....	9T92Y152	2169.00

▲ Where narrow range input ratings are not listed for certain models, units can be custom designed as needed.

* Load kva is based on ontput voltage at midpoint in the output range.

¶ When output voltage is adjusted up or down from midpoint, the rated input range will shift proportionately.

Note: All dual input voltage range models are connected for the narrow range when shipped. Reconnection for the wide input range can be made when the unit is installed, if desired. For reconnection, follow directions included with the unit.

§ OEM quantity prices are available on request.

† This model is suitable for a wider input voltage range, i.e., 190-270V.

‡ These models can be used for 199-217V output and 181 to 236V input by changing connections as outlined in connection diagram included in shipping carton.

No Waveform Distortion

No harmonic waveform distortion is introduced at any load or with any input voltage. The output voltage waveform is a precise reproduction of applied input waveform.

Adjustable Output Voltage

Output voltage for units nominally rated 115 volts is adjustable from 110 to 120 volts. Output voltage also is adjustable from 220 to 240 volts for units rated 230 volts; from 440 to 480 volts for nominally rated units of 460 volts. Please note that the specified input-voltage range is applicable for nominal output voltage. When operating at any other output voltage within specified range, the input voltage range shifts in proportion with the selected output voltage.

Accurate Static-sensing Control

Solid-state control combined with the new Sylvan-Kettler static-sensing device achieve the optimum in automatic accuracy. The voltage regulator is governed automatically by a dead-band-type voltage-sensitive control utilizing either lamp or zener bridges. The circuit includes magnetic input circuit breakers and an output voltmeter.

FEATURES

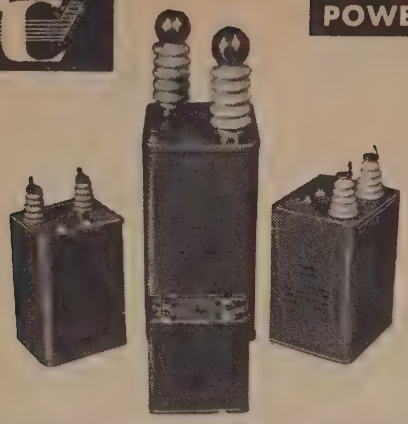
- No wave-form distortion
- Dual rated for wide or narrow input voltage ranges
- Adjustable output voltage
- ±1% output voltage band for rated input ranges
- Output voltmeter included
- Fused control circuit
- Fast voltage correction
- −20 to +40C ambient temperature range
- 0 to 100% rated load
- Not sensitive to load power factor
- Not sensitive to line frequency (59-61 Hz)
- Up to 99% efficient
- Solid State control using lamp bridge circuit (Zener diode bridge circuit is available at slightly higher price.)
- Easily replaceable control circuit

Prices subject to change without notice.

GENERAL ELECTRIC

POWER SUPPLIES

POWER SUPPLIES — COMPACT "M" SERIES



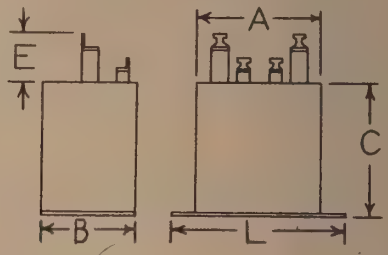
THE HV-M SERIES Power Packs have these important features:

1. **Input Voltage** 0 to rated input voltage* at 50 to 500 CPS.
2. **Output Ratings** 0 to 10 milliamperes in accordance with the rating of the power pack.
3. **Ripple** 1% RMS or 2.75% peak to peak at rated voltage.
4. **Output Voltage** can be varied from 0 to rated voltage and load by means of a variable auto transformer.
5. **Two Output Terminals** are isolated from the container, permitting either terminal or both to be operated away from ground. EXCEPTION: The HV750-152M and HV750-502M has a small and a large output terminal. The power pack is normally furnished to deliver a positive output.
6. **Ambient Temperature Range** is minus 55° C to plus 85° C (with limited ratings). EXCEPTION: The HV300-502M, HV500-502M and the HV750-502M are limited to operation at an ambient temperature of 50° C maximum.
7. **Design Life** 40,000 hours at 35° C and 25,000 hours at 65° C at rated output. Life is 5000 hours at 85° C if the output current is no more than 80% of the rated current. Useful life is generally double the figure given above if an approximately 3% drop in voltage is tolerable.
8. **Mounting Position:** Any.
9. **Altitude** up to 10,000 feet operating 50,000 feet non-operating.
10. **Vibration** 10 to 55 CPS with a total of 0.06 inches for 2 hours in each plane for all power packs which have a base dimension of 3 3/4" x 9/16" or less.
11. **Salt Spray** per MIL-Q-151 for 50 hours.
12. **Rectifiers** are long life selenium type.
13. **Filter Capacitors** are special film types designed for long life.
14. **Hermetically Sealed Container.**
15. **Oil Filled Container** prevents corona.
16. **Container Finish** Zinc chromate primer and light blue-gray lacquer per MIL-L-7178.
17. **Terminals** are steatite, solder seal type with solder lug terminals.

Contact your distributor for prices

***HOW TO ORDER**

Select the part number for output voltage and current. This numb has a rated input voltage of 118V. If a 220V. input is needed add the suffix "X" to the part number. For 230V. input, add t suffix "Y", and for 240V. input, add the suffix "Z".



PART NUMBER	KV RANGE	MAX. MA.	DIMENSIONS A	B	C	E	WEIGH LBS.
HV20-152M	0-2	1.5	3 3/4	1 3/4	3 3/4	3/8	2
HV50-152M	0-5	1.5	3 3/4	2 1/4	3 3/8	5/8	2
HV100-152M	0-10	1.5	3 3/4	3 3/16	4 1/2	1 1/16	4
HV150-152M	0-15	1.5	3 3/4	3 3/16	5 1/2	1 1/16	5
HV200-152M	0-20	1.5	3 3/4	4 9/16	5 7/8	2 1/8	9
HV300-152M	0-30	1.5	3 3/4	4 9/16	7 1/2	3 1/4	11
HV500-152M	0-50	1.5	4 11/16	6	8 1/2	4 5/16	18
HV750-152M	0-75	1.5	5 5/8	7 5/8	12 3/16	7 1/2	26
HV20-502M	0-2	5	3 3/4	2 1/4	3 3/8	3/8	2
HV50-502M	0-5	5	3 3/4	2 1/4	3 3/4	5/8	3
HV100-502M	0-10	5	3 3/4	4 9/16	5 7/8	1 1/16	8
HV150-502M	0-15	5	3 3/4	4 9/16	6 1/8	1 11/16	9
HV200-502M	0-20	5	3 3/4	4 9/16	8	2 1/8	12
HV300-502M	0-30	5	4 11/16	6	8 1/2	3 1/4	18
HV500-502M	0-50	5	5 5/8	7 3/8	12 3/16	4 5/16	26
HV750-502M	0-75	5	11 1/8	14 1/16	16 1/4	7 1/2	124
HV10-103M	0-1	10	3 3/4	2 1/4	3 3/8	3/8	2
HV25-103M	0-2.5	10	3 3/4	2 1/4	3 3/4	5/8	3
HV50-103M	0-5	10	3 3/4	4 9/16	5 7/8	5/8	8
HV100-103M	0-10	10	3 3/4	4 9/16	8	1 1/16	12
HV150-103M	0-15	10	4 11/16	6	8 1/2	1 11/16	18
HV250-103M	0-25	10	5 5/8	7 3/8	12 3/16	3 1/4	26
HV375-103M	0-37.5	10	11 1/8	14 1/16	16 1/4	4 5/16	124

POWER SUPPLIES — LVE SERIES — REGULATED LOW VOLTAGE

AC Input 105 to 125 volts. 50 to 420Hz.

DC Output Voltage Catalog items are available in the most commonly used voltages between 12 vdc and 100 vdc.

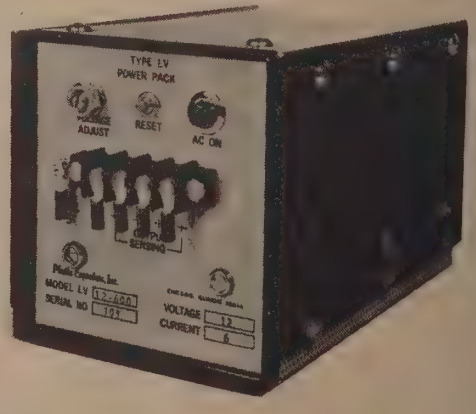
Regulation

0.01% for line voltages 105 to 125 vac.
0.05% for no load to full load.
Temperature coefficient is negative 0.015% per degree centigrade over the temperature range.

SPECIAL FEATURES

- All Solid Sate
- All Silicon Semiconductors
- ±2% Output Voltage Control
- Remote Sensing Terminals
- Less than 3 MV P-P Ripple and Noise
- 0 to 55°C Temperature Operating Range
- Unique Heatsink Design
- Natural Convection Cooling (NO FORCED AIR)
- Control Circuit maintained in a stable environment
- Input electrically isolated from Output
- Protected from Overload and Short Cir
- Floating Output Potential allows Positive or Negative Output
- Output terminal, control, pilot light and reset button are mounted on the front panel
- Any mounting position

MODEL LV-	OUTPUT VOLTAGE RANGE	MAXIMUM OUTPUT CURRENT AMPERES	DIMENSIONS A X B X C	WT. LBS.
5-250	4.9-5.1	2.5	3 X 5 X 5	5.0
5-1000	4.9-5.1	10.0	5 X 5 X 12	20.0
12-200	11.75-12.25	2.0	3 X 5 X 5	5.0
12-600	11.75-12.25	6.0	5 X 5 X 8	15.0
12-800	11.75-12.25	8.0	5 X 5 X 12	20.0
24-100	23.5-24.5	1.0	3 X 5 X 6	5.0
24-200	23.5-24.5	2.0	5 X 5 X 7	9.0
24-400	23.5-24.5	4.0	5 X 5 X 8	15.0
24-600	23.5-24.5	6.0	5 X 5 X 12	20.0
28-400	27.4-28.6	4.0	5 X 5 X 8	15.0
36-200	35.3-36.7	2.0	4 X 5 X 7	9.0
48-200	47.0-49.0	2.0	5 X 5 X 8	15.0
100-150	98.0-102.0	1.5	5 X 5 X 12	20.0



Contact your distributor for prices

Plastic Capacitors, Inc.

© United Technical Publications

LAMBDA ELECTRONICS CORP.

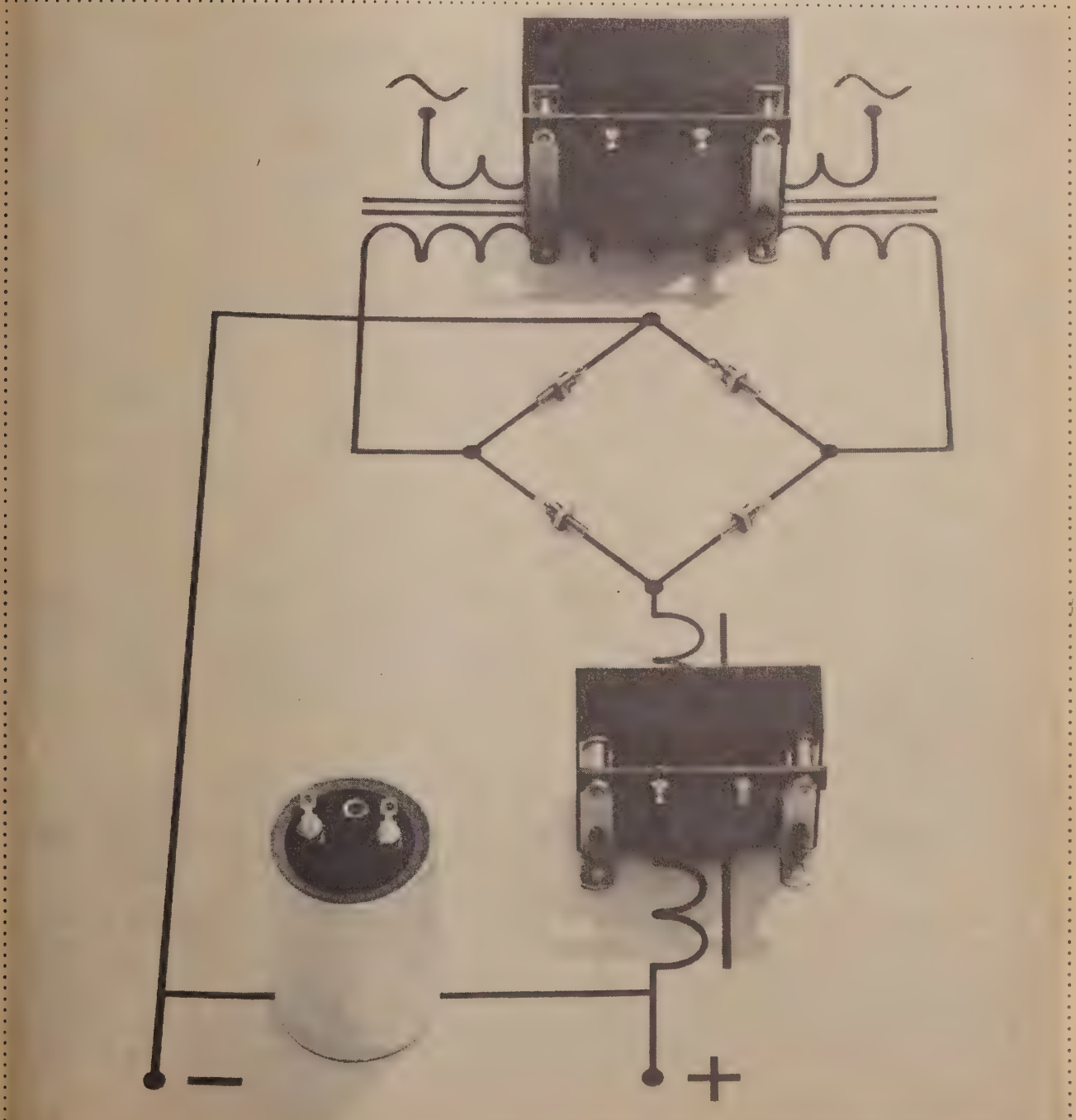
DISTRIBUTOR DIVISION

Lambda Power Kits

pre-designed power supply circuits and selected components for building your own power supply

SELECT-DON'T-DESIGN FROM OFF-THE-SHELF COMPONENTS:

power transformers | silicon rectifiers
filter chokes | regulator systems
computer grade electrolytic capacitors



LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda Power Kits

pre-designed power supply circuits and selected components providing four levels of regulation and ripple . . . over 150 circuits

1. Define parameters

- output voltage
- current
- regulation
- ripple

2. Select power kit

All the major components you need . . . pre-designed to meet your specific requirements.



TYPICAL POWER KIT COMPONENTS

Everything you need for a pre-designed power supply.

Lambda power kits are comprised of components selected for a pre-designed power supply circuit so that you can build your own dc power supply. The components vary depending upon the circuit selected, as well as the dc voltage and dc current required.

Major components supplied are:

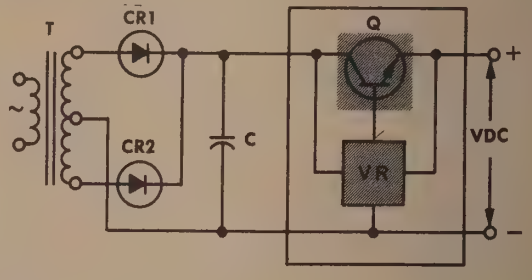
- power transformers
- filter chokes
- computer grade electrolytic capacitors
- silicon rectifiers
- regulator systems

Designed for breadboard, pre-production and production models.

Lambda, with the introduction of standard power kits, leaves you free to design your circuit without having to bother with the power supply. Lambda now offers a wide selection of power supply kits to provide you with all the major components needed to build a power supply.

Wide selection of circuits for regulation and ripple.

Lambda offers a selection of pre-designed groups of circuits from which you can select the regulation and ripple characteristics required for your application. Specifications are available from 0.01% regulation 250 μV RMS ripple to 20% regulation at 2 V RMS ripple.



Wide selection of output voltages and currents.

In each group of circuits Lambda offers a wide selection of voltages and currents to meet your needs . . . both single and dual outputs. Voltage ranges up to 48 VDC and current ranges up to 50 amperes DC are provided.

Simply select what you need . . . no calculations or design necessary.

All the circuits supplied with the Power Kits are complete showing all components, and have been pre-designed, proved and tested by Lambda Engineering to assure you the same quality and performance achieved by Lambda's standard line of power supplies. In addition, thermal properties of rectifiers and transistors for heat sinking are provided. Lambda transformers and chokes carry the same 5 year guarantee as Lambda power supplies. Lambda transformers and chokes are fully varnish-impregnated and built to MIL-T-27C, grade 6, specifications.

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda Power Kits

Circuit Specifications

SERIES 1000 —
Capacitor-Input Filter Power Supply Circuits

line regulation: 1.2% per % @ full load
load regulation: 20% from ½ load to full load
output voltage tolerance: ±5% @ nominal line of 115 Vac
ripple: 1 v RMS, up to 12 Vdc
2 v RMS, 15 to 48 Vdc
dc output voltages: 5 to 48 Vdc (eleven ranges)
dc outut currents: 0.25 to 50 amps (seven ranges)
input voltages: 105-132 Vac, 57-63 Hz

SERIES 2000 —
Choke-Input Filter Power Supply Circuits

line regulation: 1% per % @ full load
load regulation: 10% from ½ load to full load
output voltage tolerance: ±5% @ nominal line of 115 vac
ripple: 2% (RMS) of dc output voltage
dc output voltages: 5 to 48 Vdc (eleven ranges)
dc output currents: 1.0 amp to 50 amps (five ranges)
input voltages: 105-132 Vac, 57-63 Hz

SERIES 3000 —
Regulated Power Supply Circuits

regulation: 0.15% + 10 mV — line or load
ripple: 5 mV RMS
dc output voltages: 5 to ± 18 Vdc (five ranges)
dc output currents: 0.25 to 50 amps (seven ranges)
input voltages: 105-132 Vac, 57-63 Hz
temperature coefficient: 0.03%/°C
remote sensing
automatic current limiting

SERIES 4000 —
Highly Regulated Power Supply Circuits

regulation: 0.01% + 1 mV — line or load
ripple: 250 μV RMS, 1 mV pk-pk
dc output voltages: 5 to ± 18 Vdc (five ranges)
dc output currents: 0.25 to 50 amps (seven ranges)
input voltages: 105-132 Vac, 57-63 Hz
temperature coefficient: 0.015%/°C
remote sensing
remote programming: 1000 ohm/v nominal or volt/volt
series/parallel operation: with similar single or dual units
automatic current limiting

How to Select Lambda Power Kits

1. Determine the regulation and ripple requirement for the circuit you wish to supply.
2. Select one of the four series of circuits that best satisfies your needs — 1000, 2000, 3000 or 4000 series.
3. Turn to the table for that series and select the power supply kit that meets your dc output voltage and current requirements. No need to design the power supply or to calculate voltage drops across components. This has already been done for you.
4. You may purchase either the entire kit, the transformer, the filter choke, or the capacitors, silicon rectifiers, and regulator.
5. Number System — The Lambda part number is an alpha-numeric designation in three parts:

Stock No. Prefix	Stock No.	Suffix
LPKT	2311	-3

The stock number prefix defines the kit or components you wish to purchase and the suffix identifies the circuit to be used within that series.

LPKT = Lambda Power Kit
LPTX = Lambda Power Transformer
LPFC = Lambda Filter Choke
LPCR = Capacitors and Rectifiers
LPCO = Capacitors, Rectifiers and Regulators

The stock number defines the circuit series (which identifies the regulation and ripple) in addition to output voltage and current. For stock numbers in the:

1000 series, see pages 782-783.
2000 series, see pages 784-785.
3000 series, see pages 786-787.
4000 series, see pages 788-789.

Capacitors and silicon rectifiers are only supplied as a unit package in series 1000, 2000 and 3000.

Capacitors, silicon rectifiers, and regulator are only supplied as a unit package in Series 4000.

EXAMPLE:

If you were to order part number LPKT 2311-3, you would be ordering a complete Lambda Power Kit in the 2000 series, a power supply with a choke input filter, which provides a dual + and − 18 volts dc output at 5 amps each, as shown in series 2000 circuit 3. The kit price on the chart is $138. If, on the other hand you only wanted the transformer, you would order LPTX 2311-3 at $44 or LPFC 2311-3 at $82 if you only wanted the filter chokes, etc.

ORDERING:

1. Turn to the page listing the circuit series that meets your requirement for regulation and ripple.
2. Select the voltage you need along the vertical axis of the selection chart.
3. Select the current you need along the horizontal axis of the selection chart.
4. Pick the stock number directly off the chart at the intersection of the axis.
5. You select the stock number prefix to the number depending upon whether you want the entire kit or just individual components. The price for each item is also listed in the same section of the chart. Prices for 1 to 4 units are listed in the left-hand column and prices for 5 or more units are listed in the right-hand column under each current rating.

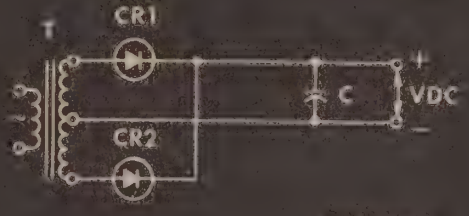
LAMBDA ELECTRONICS CORP.

DISTRIBUTOR DIVISION

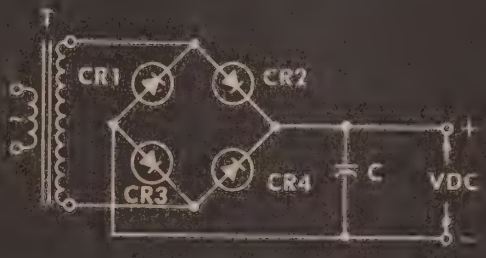
Lambda power kits 1000 series

transformers, capacitors, rectifiers and circuits

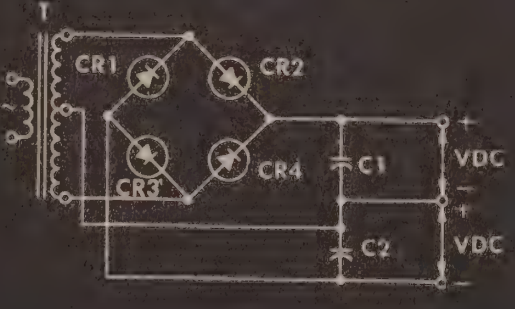
CAPACITOR-INPUT FILTER POWER SUPPLY CIRCUITS



CIRCUIT 1



CIRCUIT 2



CIRCUIT 3

Lambda transformers and chokes are guaranteed for five years.



LPKT
LAMBDA POWER KIT



LPTX
LAMBDA POWER TRANSFORMER



LPCR
CAPACITOR AND RECTIFIERS

Regulation
line: 1.2% per % at full load
load: 20% from ½ load to full load
output voltage tolerance: ±5% at nominal line of 115 Vac

Ripple
1 V RMS, up to 12 Vdc
2 V RMS, 15 to 48 Vdc

DC output voltages
5 to 48 Vdc (eleven ranges)

DC output currents
0.25 to 50 amps (seven ranges)

AC input
105-132 Vac, 57-63 Hz

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda power kits 1000 series

power kit and component selection chart

DC OUTPUT CURRENT AND STOCK NUMBERS

DC OUTPUT VOLTAGE	STOCK NUMBER PREFIX	0.25 AMP 1-4	0.25 AMP 5 & UP	0.5 AMP 1-4	0.5 AMP 5 & UP	1.0 AMP 1-4	1.0 AMP 5 & UP	5.0 AMPS 1-4	5.0 AMPS 5 & UP	10.0 AMPS 1-4	10.0 AMPS 5 & UP	25.0 AMPS 1-4	25.0 AMPS 5 & UP	50.0 AMPS 1-4	50.0 AMPS 5 & UP
5 VDC		1003-1		1005-1		1007-1		1011-1		1015-1		1025-1		1031-1	
	LPKT	$11.00	$9.50	$11.00	$9.50	$17.00	$14.50	$30.00	$25.50	$48.00	$41.00	$88.00	$75.00	$145.00	$123.00
	LPTX	8.00	7.00	8.00	7.00	13.50	11.50	21.00	18.00	34.00	29.00	60.00	51.00	93.00	79.00
	LPCR	3.00	2.50	3.00	2.50	3.50	3.00	9.00	7.50	14.00	12.00	28.00	24.00	52.00	44.00
6 VDC		1053-1		1055-1		1057-1		1061-1		1065-1		1075-1		1081-1	
	LPKT	$11.00	$9.50	$11.00	$9.50	$11.50	$10.00	$30.00	$25.50	$48.00	$41.00	$88.00	$75.00	$145.00	$123.00
	LPTX	8.00	7.00	8.00	7.00	8.00	7.00	21.00	18.00	34.00	29.00	60.00	51.00	93.00	79.00
	LPCR	3.00	2.50	3.00	2.50	3.50	3.00	9.00	7.50	14.00	12.00	28.00	24.00	52.00	44.00
12 VDC		1103-1		1105-1		1107-1		1111-1		1115-1		1125-1		11131-1	
	LPKT	$11.00	$9.50	$11.00	$9.50	$12.50	$10.50	$41.00	$35.00	$56.00	$48.00	$113.00	$96.00	$147.00	$125.00
	LPTX	8.00	7.00	8.00	7.00	9.50	8.00	33.00	28.00	47.00	40.50	94.00	80.00	115.00	98.00
	LPCR	3.00	2.50	3.00	2.50	3.00	2.50	8.00	7.00	9.00	7.50	19.00	16.00	32.00	27.00
±12 VDC		1133-1		1135-3		1137-3		1141-3							
	LPKT	$20.00	$17.00	$20.00	$17.00	$21.50	$18.50	$66.00	$56.00						
	LPTX	14.00	12.00	14.00	12.00	16.00	14.00	50.00	42.50						
	LPCR	6.00	5.00	6.00	5.00	6.00	5.00	16.00	13.50						
15 VDC		1153-2		1155-2		1157-2		1161-2		1165-2		1175-1		1181-1	
	LPKT	$11.50	$10.00	$11.50	$10.00	$13.00	$11.50	$43.00	$37.00	$58.00	$49.00	$122.00	$104.00	$155.00	$132.00
	LPTX	8.00	7.00	8.00	7.00	9.50	8.00	33.00	28.50	47.00	39.50	99.00	84.00	118.00	101.00
	LPCR	3.50	3.00	3.50	3.00	3.50	3.00	10.00	8.50	11.00	9.50	23.00	20.00	37.00	31.00
±15 VDC		1203-3		1205-3		1207-3		1211-3							
	LPKT	$20.00	$17.00	$20.00	$17.00	$22.00	$19.00	$69.00	$59.00						
	LPTX	14.00	12.00	14.00	12.00	16.00	14.00	53.00	45.50						
	LPCR	6.00	5.00	6.00	5.00	6.00	5.00	16.00	13.50						
18 VDC		1253-2		1255-2		1257-2		1261-2		1265-2		1275-1			
	LPKT	$11.50	$10.00	$11.50	$10.00	$14.00	$12.00	$46.00	$39.00	$62.00	$53.00	$125.00	$106.00		
	LPTX	8.00	7.00	8.00	7.00	10.00	9.00	36.00	30.50	52.00	44.50	105.00	89.00		
	LPCR	3.50	3.00	3.50	3.00	3.50	3.00	10.00	8.50	10.00	8.50	20.00	17.00		
±18 VDC		1303-3		1305-3		1307-3		1311-3							
	LPKT	$20.00	$17.00	$20.00	$17.00	$28.00	$24.00	$72.00	$61.00						
	LPTX	14.00	12.00	14.00	12.00	22.00	19.00	56.00	47.50						
	LPCR	6.00	5.00	6.00	5.00	6.00	5.00	16.00	13.50						
24 VDC				1355-2		1357-2		1361-2		1365-2		1375-2			
	LPKT			$18.00	$15.50	$20.00	$17.00	$52.00	$44.00	$66.00	$56.00	$132.00	$112.00		
	LPTX			14.50	12.50	16.50	14.00	42.00	35.50	56.00	47.50	110.00	93.50		
	LPCR			3.50	3.00	3.50	3.00	10.00	8.50	10.00	8.50	22.00	18.50		
28 VDC				1455-2		1457-2		1461-2		1465-2		1475-2			
	LPKT			$18.00	$15.50	$20.00	$17.00	$52.00	$44.00	$66.00	$56.00	$132.00	$112.00		
	LPTX			14.50	12.50	16.50	14.00	42.00	35.50	56.00	47.50	110.00	93.50		
	LPCR			3.50	3.00	3.50	3.00	10.00	8.50	10.00	8.50	22.00	18.50		
48 VDC						1507-2		1511-2		1515-2					
	LPKT					$25.00	$21.00	$63.00	$54.00	$114.00	$97.00				
	LPTX					20.00	16.50	53.00	45.50	100.00	85.00				
	LPCR					5.00	4.50	10.00	8.50	14.00	12.00				

© United Technical Publications

Net

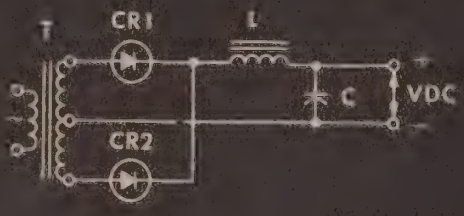
LAMBDA ELECTRONICS CORP.

DISTRIBUTOR DIVISION

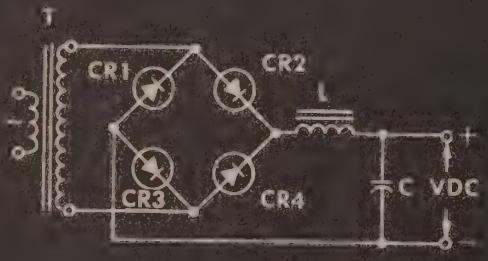
Lambda power kits 2000 series

transformers, chokes, capacitors, rectifiers and circuits

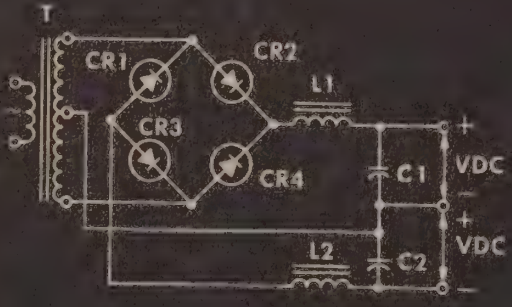
CHOKE-INPUT FILTER POWER SUPPLY CIRCUITS



CIRCUIT 1



CIRCUIT 2



CIRCUIT 3

Lambda transformers and chokes are guaranteed for five years.



LPKT
LAMBDA POWER KIT



LPTX
LAMBDA POWER TRANSFORMER



LPFC
LAMBDA FILTER CHOKE



LPCR
CAPACITOR AND RECTIFIERS

Regulation
line: 1% per % at full load
load: 10% from ½ load to full load
output voltage tolerance: ±5% at nominal line of 115 Vac

Ripple
2% (RMS) of dc output voltage

DC output voltages
5 to 48 Vdc (eleven ranges)

DC output currents
1.0 to 50 amps (five ranges)

AC input
105-132 Vac, 57-63 Hz

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda power kits 2000 series

power kit and component selection chart

DC OUTPUT VOLTAGE	STOCK NUMBER PREFIX	DC OUTPUT CURRENT AND STOCK NUMBERS									
		1.0 AMP		5.0 AMPS		10.0 AMPS		25.0 AMPS		50.0 AMPS	
		1-4	5 & UP	1-4	5 & UP	1-4	5 & UP	1-4	5 & UP	1-4	5 & UP
5 VDC		2007-1		2011-1		2015-1		2025-1		2031-1	
	LPKT	$23.00	$19.50	$49.00	$42.00	$83.00	$71.00	$137.00	$117.00	$181.00	$160.00
	LPTX	8.00	7.00	17.00	14.50	27.00	23.00	41.00	35.00	57.00	51.00
	LPFC	12.00	10.00	24.00	20.50	47.00	40.00	80.00	68.00	92.00	82.00
	LPCR	3.00	2.50	8.00	7.00	9.00	8.00	16.00	14.00	32.00	27.00
6 VDC		2057-1		2061-1		2065-1		2075-1		2081-1	
	LPKT	$23.00	$19.50	$49.00	$42.00	$83.00	$71.00	$137.00	$117.00	$181.00	$160.00
	LPTX	8.00	7.00	17.00	14.50	27.00	23.00	41.00	35.00	57.00	51.00
	LPFC	12.00	10.00	24.00	20.50	47.00	40.00	80.00	68.00	92.00	82.00
	LPCR	3.00	2.50	8.00	7.00	9.00	8.00	16.00	14.00	32.00	27.00
12 VDC		2107-1		2111-1		2115-1		2125-1		2131-1	
	LPKT	$23.00	$19.50	$53.00	$45.00	$96.00	$82.00	$149.00	$127.00	$205.00	$173.00
	LPTX	8.00	7.00	21.00	18.00	40.00	34.00	52.00	44.00	90.00	76.00
	LPFC	12.00	10.00	24.00	20.00	47.00	40.00	80.00	68.00	83.00	70.00
	LPCR	3.00	2.50	8.00	7.00	9.00	8.00	17.00	15.00	32.00	27.00
±12 VDC		2137-3		2141-3							
	LPKT	$44.00	$37.00	$89.00	$75.00						
	LPTX	14.00	12.00	26.00	22.00						
	LPFC	24.00	20.00	48.00	41.00						
	LPCR	6.00	5.00	15.00	12.00						
15 VDC		2157-2		2161-2		2165-2		2175-1		2181-1	
	LPKT	$25.00	$21.50	$56.00	$49.00	$100.00	$85.00	$156.00	$133.00	$215.00	$183.00
	LPTX	8.00	7.00	22.00	19.00	38.00	33.00	61.00	52.00	96.00	82.00
	LPFC	13.00	11.00	24.00	21.50	47.00	40.00	78.00	66.00	87.00	74.00
	LPCR	4.00	3.50	10.00	8.50	15.00	12.00	17.00	15.00	32.00	27.00
±15 VDC		2207-3		2211-3							
	LPKT	$47.00	$40.00	$90.00	$76.00						
	LPTX	15.00	13.00	27.00	23.00						
	LPFC	26.00	22.00	48.00	41.00						
	LPCR	6.00	5.00	15.00	12.00						
18 VDC		2257-2		2261-2		2265-2		2275-1			
	LPKT	$25.00	$21.50	$69.00	$59.00	$104.00	$87.00	$177.00	$150.00		
	LPTX	8.00	7.00	20.00	17.00	44.00	37.00	77.00	65.00		
	LPFC	13.00	11.00	41.00	35.00	49.00	41.00	78.00	66.00		
	LPCR	4.00	3.50	8.00	7.00	11.00	9.00	22.00	19.00		
±18 VDC		2307-3		2311-3							
	LPKT	$48.00	$41.00	$138.00	$117.00						
	LPTX	16.00	14.00	44.00	37.00						
	LPFC	26.00	22.00	82.00	70.00						
	LPCR	6.00	5.00	12.00	10.00						
24 VDC		2357-2		2361-2		2365-2		2375-2			
	LPKT	$28.00	$24.00	$90.00	$77.00	$106.00	$90.00	$190.00	$161.00		
	LPTX	11.00	9.50	37.00	31.00	47.00	40.00	78.00	66.00		
	LPFC	13.00	11.00	45.00	39.00	48.00	41.00	78.00	66.00		
	LPCR	4.00	3.50	8.00	7.00	11.00	9.00	34.00	29.00		
28 VDC		2457-2		2461-2		2465-2		2475-2			
	LPKT	$29.00	$24.50	$92.00	$79.00	$109.00	$93.00	$195.00	$166.00		
	LPTX	12.00	10.00	37.00	31.50	47.00	40.00	83.00	71.00		
	LPFC	13.00	11.00	45.00	39.00	51.00	44.00	78.00	66.00		
	LPCR	4.00	3.50	10.00	8.50	11.00	9.00	34.00	29.00		
48 VDC		2507-2		2511-2		2515-2					
	LPKT	$40.00	$34.00	$94.00	$81.00	$121.00	$103.00				
	LPTX	16.50	14.00	39.00	33.50	56.00	48.00				
	LPFC	18.00	15.50	45.00	39.00	51.00	43.00				
	LPCR	5.50	4.50	10.00	8.50	14.00	12.00				

© United Technical Publications

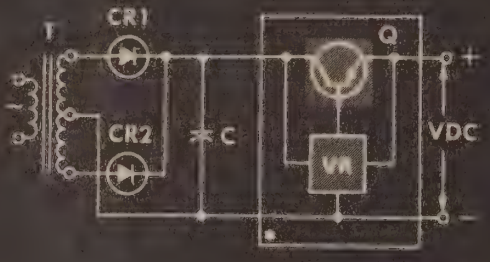
Net

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

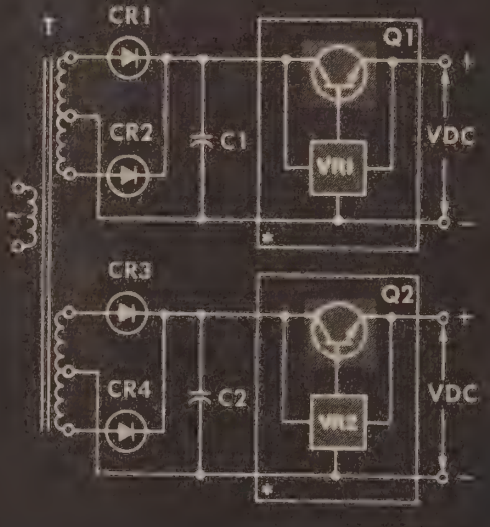
Lambda power kits 3000 series

transformers, capacitors, rectifiers and circuits

REGULATED POWER SUPPLY CIRCUITS (SIMPLIFIED DIAGRAMS)



CIRCUIT 1



CIRCUIT 3

*Complete circuit diagrams are provided with kits and components. Lambda does not supply those components shown in shaded areas.

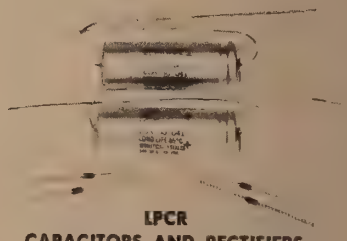
Lambda transformers and chokes are guaranteed for five years.



LPKT
LAMBDA POWER KIT



LPTX
LAMBDA POWER TRANSFORMER



LPCR
CAPACITORS AND RECTIFIERS

Regulation
0.15% + 10 mV, line or load
Ripple
5 mV RMS
DC output voltage
5 to ± 18 Vdc (five ranges)
DC output currents
0-25 to 50 amps (seven ranges)
AC input
105-132 Vac, 57-63 Hz
Temperature coefficient
0.03%/°C
Remote sensing
Automatic current limiting

© United Technical Publication

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda power kits 3000 series

power kit and component selection chart

DC OUTPUT CURRENT AND STOCK NUMBERS

DC OUTPUT VOLTAGE	STOCK NUMBER PREFIX	0.25 AMP 1-4	0.25 AMP 5 & UP	0.5 AMP 1-4	0.5 AMP 5 & UP	1.0 AMP 1-4	1.0 AMP 5 & UP	5.0 AMPS 1-4	5.0 AMPS 5 & UP	10.0 AMPS 1-4	10.0 AMPS 5 & UP	25.0 AMPS 1-4	25.0 AMPS 5 & UP	50.0 AMPS 1-4	50.0 AMPS 5 & UP
		3003-1		3005-1		3007-1		3011-1		3015-1		3025-1		3031-1	
	LPKT	$19.00	$16.50	$20.00	$17.50	$24.00	$21.00	$61.00	$53.00	$80.00	$70.00	$108.00	$94.00	$182.00	$159.00
5 DC	LPTX	16.00	14.00	17.00	15.00	20.50	18.00	53.00	46.00	70.00	61.50	90.00	78.00	151.00	132.00
	LPCR	3.00	2.50	3.00	2.50	3.50	3.00	8.00	7.00	10.00	8.50	18.00	16.00	31.00	27.00
		3053-1		3055-1		3057-1		3061-1		3065-1		3075-1		3081-1	
	LPKT	$20.00	$17.50	$21.00	$18.00	$25.00	$22.00	$60.00	$52.00	$81.00	$71.00	$109.00	$95.00	$185.00	$162.00
6 VDC	LPTX	17.00	15.00	18.00	15.50	21.50	19.00	52.00	45.00	71.00	62.50	91.00	79.00	154.00	135.00
	LPCR	3.00	2.50	3.00	2.50	3.50	3.00	8.00	7.00	10.00	8.50	18.00	16.00	31.00	27.00
		3133-3		3135-3		3137-3		3141-3							
	LPKT	$28.00	$24.00	$29.00	$25.00	$37.00	$35.00	$93.00	$81.00						
±12 VDC	LPTX	22.00	19.00	23.00	20.00	30.50	29.50	76.00	66.00						
	LPCR	6.00	5.00	6.00	5.00	6.50	5.50	17.00	15.00						
		3203-3		3205-3		3207-3		3211-3							
	LPKT	$29.00	$25.00	$30.00	$26.00	$38.00	$33.00	$95.00	$83.00						
±15 VDC	LPTX	23.00	20.00	24.00	21.00	31.50	27.50	78.00	68.00						
	LPCR	6.00	5.00	6.00	5.00	6.50	5.50	17.00	15.00						
		3303-3		3305-3		3307-3		3311-3							
	LPKT	$30.00	$26.00	$31.00	$27.00	$40.00	$35.00	$97.00	$85.00						
±18 VDC	LPTX	24.00	21.00	25.00	22.00	33.50	29.50	80.00	70.00						
	LPCR	6.00	5.00	6.00	5.00	6.50	5.50	17.00	15.00						

OVERVOLTAGE PROTECTOR ACCESSORIES



MODEL	ADJ. VOLT RANGE VDC	POWER KIT CURRENTS	PRICE
LC-OV-10	3-24	0.25, 0.5 and 1 amp	$20.00
LM-OV-1	3-8	5 and 10 amps	30.00
LM-OV-2	6-20	5 and 10 amps	30.00
LM-OV-7	3-8	25 and 50 amps	75.00
LM-OV-8	6-20	25 and 50 amps	75.00

© United Technical Publications

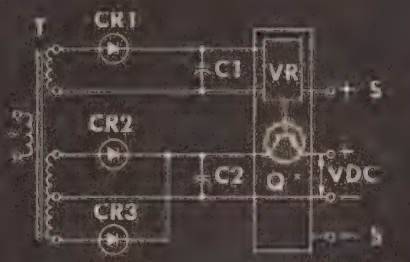
LAMBDA ELECTRONICS CORP.

DISTRIBUTOR DIVISION

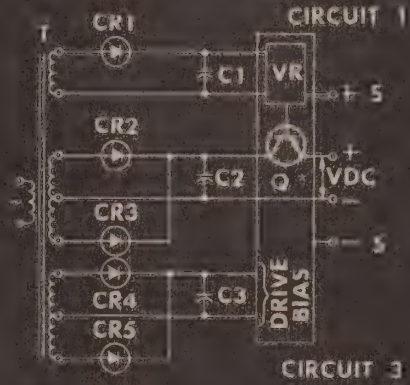
Lambda power kits 4000 series

transformers, capacitors, rectifiers, regulators and circuits

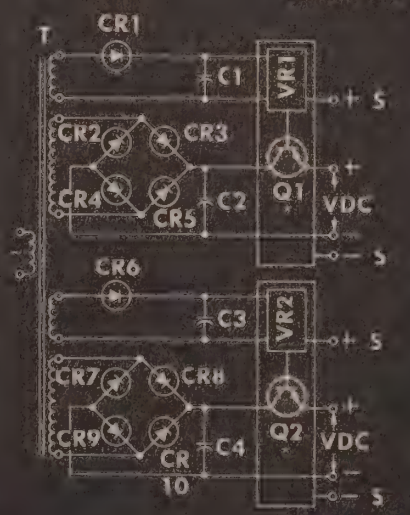
HIGHLY REGULATED POWER SUPPLY CIRCUITS (SIMPLIFIED DIAGRAMS)



CIRCUIT 1



CIRCUIT 3



CIRCUIT 5

*Complete circuit diagrams are provided with kits and components. Lambda does not supply those components shown in shaded areas.

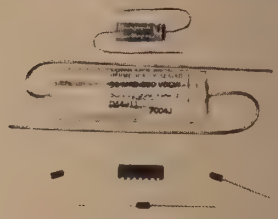
Lambda transformers and chokes are guaranteed for five years.



LPKT
LAMBDA POWER KIT



LPTX
LAMBDA POWER TRANSFORMER



LPCO
CAPACITORS, RECTIFIERS AND REGULATOR

Regulation
0.01% + 1 mV, line or load
Ripple
250 μV RMS, 1 mV pk-pk
DC output voltages
5 to ± 18 Vdc (five ranges)
DC output currents
0.25 to 50 amps (seven ranges)
AC input
105-132 Vac, 57-63 Hz
Temperature coefficient
0.015%/°C
Remote sensing
Remote programming
1000 ohm/v nominal or volt/volt
Series/parallel operation
with similar single or dual units
Automatic current limiting

© United Technical Publicatio

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda power kits 4000 series

power kit and component selection chart

DC OUTPUT CURRENT AND STOCK NUMBERS

DC OUTPUT VOLTAGE	STOCK NUMBER PREFIX	0.25 AMP 1-4	0.25 AMP 5 & UP	0.5 AMP 1-4	0.5 AMP 5 & UP	1.0 AMP 1-4	1.0 AMP 5 & UP	5.0 AMPS 1-4	5.0 AMPS 5 & UP	10.0 AMPS 1-4	10.0 AMPS 5 & UP	25.0 AMPS 1-4	25.0 AMPS 5 & UP	50.0 AMPS 1-4	50.0 AMPS 5 & UP
		4003-1		4005-1		4007-1		4011-1		4015-1		4025-1		4031-3	
5 VDC	LPKT	$40.00	$35.00	$42.00	$37.00	$44.00	$38.50	$77.00	$67.00	$99.00	$89.00	$127.00	$111.00	$212.00	$186.00
	LPTX	20.00	17.50	22.00	19.50	24.00	21.00	53.00	46.00	74.00	67.00	93.00	81.00	162.00	142.00
	LPCO	20.00	17.50	20.00	17.50	20.00	17.50	24.00	21.00	25.00	22.00	34.00	30.00	50.00	44.00
		4053-1		4055-1		4057-1		4061-1		4065-1		4075-1		4081-3	
6 VDC	LPKT	$42.00	$37.00	$44.00	$38.50	$46.00	$40.00	$78.00	$68.00	$100.00	$88.00	$131.00	$115.00	$250.00	$219.00
	LPTX	22.00	19.50	24.00	21.00	26.00	22.50	54.00	47.00	75.00	66.00	97.00	85.00	170.00	149.00
	LPCO	20.00	17.50	20.00	17.50	20.00	17.50	24.00	21.00	25.00	22.00	34.00	30.00	80.00	70.00
		4133-5		4135-5		4137-5		4141-5							
±12 VDC	LPKT	$65.00	$58.00	$70.00	$62.00	$75.00	$64.00	$145.00	$127.00						
	LPTX	25.00	23.00	30.00	27.00	33.00	29.00	95.00	83.00						
	LPCO	40.00	35.00	40.00	35.00	40.00	35.00	50.00	44.00						
		4203-5		4205-5		4207-5		4211-5							
±15 VDC	LPKT	$67.00	$59.00	$72.00	$63.00	$75.00	$66.00	$150.00	$131.00						
	LPTX	27.00	24.00	32.00	28.00	35.00	31.00	100.00	87.00						
	LPCO	40.00	35.00	40.00	35.00	40.00	35.00	50.00	44.00						
		4303-5		4305-5		4307-5		4311-5							
±18 VDC	LPKT	$69.00	$60.00	$75.00	$66.00	$80.00	$70.00	$155.00	$136.00						
	LPTX	29.00	25.00	35.00	31.00	40.00	35.00	105.00	92.00						
	LPCO	40.00	35.00	40.00	35.00	40.00	35.00	50.00	44.00						

OVERVOLTAGE PROTECTOR ACCESSORIES



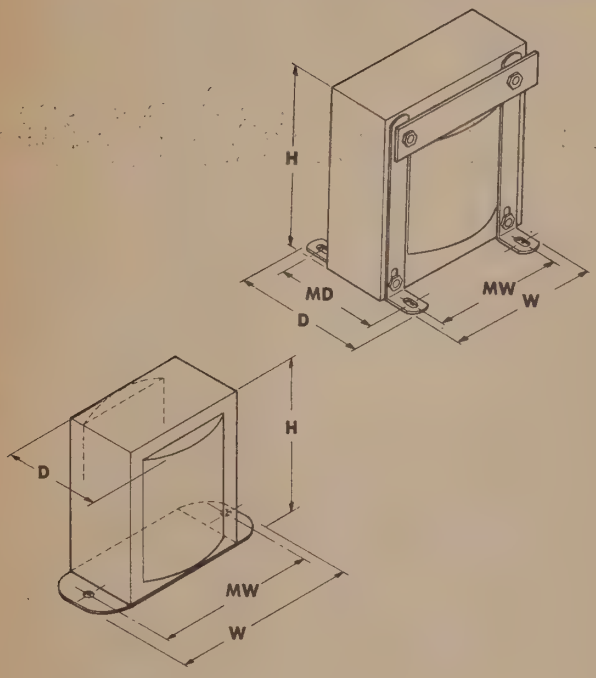
MODEL	ADJ. VOLT RANGE VDC	POWER KIT CURRENTS	PRICE
LC-OV-10	3-24	0.25, 0.5 and 1 amp	$20.00
LM-OV-1	3-8	5 and 10 amps	30.00
LM-OV-2	6-20	5 and 10 amps	30.00
LM-OV-7	3-8	25 and 50 amps	75.00
LM-OV-8	6-20	25 and 50 amps	75.00

© United Technical Publications
Net

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

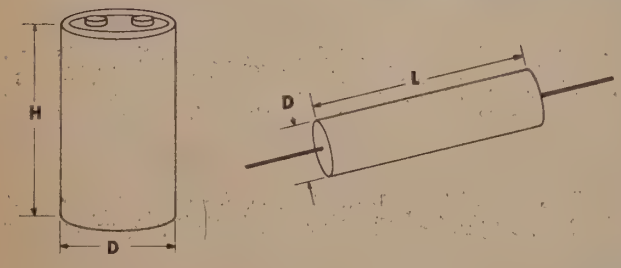
Lambda power kits
Component dimensions

Dimensions of Lambda Transformers & Chokes



SIZE	CASE DIMENSIONS H	W	D	MOUNTING DIMENSIONS MW	MD
A	1 11/16"	2 13/16"	1 7/8"	2 3/8"	
B	2"	3 1/4"	2 1/4"	2 13/16"	
C	2 5/16"	3 23/32"	2 3/8"	3 1/8"	
D	2 5/8"	4"	2 5/8"	3 9/16"	
E	3 1/16"	3 1/16"	3 1/4"	2 1/2"	2 1/2"
F	3 11/32"	3 13/32"	2 3/4"	2 13/16"	2 1/8"
G	3 11/16"	3 25/32"	3 1/4"	3 1/8"	2 1/4"
H	3 31/32"	4 5/32"	3 19/32"	3 7/16"	2 5/8"
I	4 9/32"	4 17/32"	3 9/16"	3 3/4"	2 1/2"
J	4 9/32"	4 17/32"	3 5/8"	3 3/4"	2 3/4"
K	4 9/32"	4 17/32"	4 3/8"	3 3/4"	3 1/8"
L	4 31/32"	5 9/32"	4"	4 3/8"	2 5/8"
M	4 31/32"	5 9/32"	3 3/16"	4 3/8"	2 1/8"
N	5 1/2"	5 9/32"	5"	4 3/8"	3 1/8"
O	5 1/2"	5 9/32"	5 3/8"	4 3/8"	4"
P	5 1/2"	5 9/32"	5 1/2"	4 3/8"	4 1/8"
Q	6 5/8"	6 13/32"	5"	5 5/16"	3 1/2"
R	6 5/8"	6 13/32"	5 3/8"	5 5/16"	3 3/4"
S	6 5/8"	6 13/32"	5 3/4"	5 5/16"	4 1/2"
T	6 5/8"	6 13/32"	6"	5 5/16"	4 7/8"
U	3 31/32"	4 5/32"	3 1/2"	3 7/16"	2 3/8"

Dimensions of Filter Capacitors



SIZE	H	L	D		
a		2 3/4"	1 5/16"		
b		2 3/4"	1 1/16"		
c		3 3/4"	1 1/16"		
d	4 1/4"		2 9/16"		
e	5 3/4"		2 9/16"		
f	5 21/32"		3"		
g	4 1/4"		1 15/32"		
h	3 3/4"		1 15/32"		

Chokes

STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE	STOCK NO. LPFC	SIZE
2007-1	F	2075-1	F	2107-1	F	2157-2	F	2207-3	F	2275-1	S	2365-2	M	2475-2	S
2011-1	U	2061-1	U	2111-1	U	2161-2	U	2211-3	U	2307-3	G	2375-2	S	2507-2	G
2015-1	M	2065-1	M	2115-1	M	2165-2	M	2257-2	G	2311-3	M	2457-2	G	2511-2	M
2025-1	S	2075-1	S	2125-1	S	2175-1	S	2261-2	M	2357-2	G	2461-2	M	2515-2	M
2031-1	S	2081-1	S	2131-1	S	2181-1	S	2265-2	M	2361-2	M	2465-2	M		

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda power kits
Component dimensions

Transformers & Capacitors

STOCK NO.	TRANSFORMER SIZE	CAPACITORS QTY.	CAPACITORS SIZE	STOCK NO.	TRANSFORMER SIZE	CAPACITORS QTY.	CAPACITORS SIZE	STOCK NO.	TRANSFORMER SIZE	CAPACITORS QTY.	CAPACITORS SIZE
1003-1	A	1	b	1455-2	B	1	a	3007-1	C	1	b
1005-1	A	1	b	1457-2	D	1	b	3011-1	I	1	d
1007-1	B	1	b	1461-2	J	1	d	3015-1	K	1	d
1011-1	E	1	d	1465-2	N	1	d	3025-1	O	2	d
1015-1	H	2	d	1475-2	S	2	d	3031-1	S	4	d
1025-1	N	4	d	1507-2	G	1	c	3053-1	A	1	a
1031-1	Q	8	d	1511-2	M	1	c	3055-1	B	1	a
1053-1	A	1	b	1515-2	R	1	c	3057-1	C	1	b
1055-1	A	1	b	2007-1	B	1	c	3061-1	I	1	d
1057-1	B	2	b	2011-1	D	1	d	3065-1	K	1	d
1061-1	E	1	d	2015-1	G	1	d	3075-1	O	2	d
1065-1	H	2	d	2025-1	L	2	c	3081-1	S	4	d
1075-1	N	4	d	2031-1	O	4	d	3133-3	C	2	a
1081-1	Q	8	d	2057-1	B	1	c	3135-3	E	2	a
1103-1	B	1	a	2061-1	D	1	d	3137-3	G	2	b
1105-1	B	1	b	2065-1	G	1	d	3141-3	N	2	d
1107-1	C	1	b	2075-1	M	2	d	3203-3	C	2	a
1111-1	H	1	d	2081-1	O	4	d	3205-3	E	2	a
1115-1	L	1	d	2107-1	C	1	c	3207-3	G	2	b
1125-1	R	2	d	2111-1	G	1	d	3211-3	N	2	d
1131-1	S	4	d	2115-1	I	1	d	3303-3	C	2	a
1133-3	B	2	a	2125-1	N	2	d	3305-3	E	2	a
1135-3	B	2	b	2131-1	S	4	d	3307-3	G	2	b
1137-3	D	2	b	2137-3	C	2	c	3311-3	N	2	d
1141-3	J	2	d	2141-3	H	2	d	4003-1	B	1	a
1153-2	A	1	a	2157-2	C	1	c	4005-1	B	1	a
1155-2	B	1	a	2161-2	G	1	d	4007-1	C	1	b
1157-2	C	1	b	2165-2	J	2	d	4011-1	H	1	d
1161-2	H	1	d	2175-1	O	2	d	4015-1	K	1	d
1165-2	M	1	d	2181-1	T	4	d	4025-1	O	2	d
1175-1	R	2	d	2207-3	D	2	c	4031-1	B	4	d
1181-1	S	4	d	2211-3	I	2	d	4053-1	B	1	a
1203-3	B	2	a	2257-2	D	1	b	4055-1	B	1	a
1205-3	C	2	a	2261-2	G	1	h	4057-1	C	1	b
1207-3	E	2	b	2265-2	L	1	d	4061-1	H	1	d
1211-3	L	2	d	2275-1	R	1	f	4065-1	K	1	d
1253-2	A	1	a	2307-3	D	2	b	4075-1	O	2	d
1255-2	B	1	a	2311-3	I	2	h	4081-3	S	4	c
1257-2	C	1	b	2357-2	D	1	b	4133-5	B	2	a
1261-2	H	1	d	2361-2	I	1	h	4135-5	E	2	a
1265-2	M	1	d	2365-2	M	1	d	4137-5	G	2	b
1275-1	R	2	d	2375-2	R	2	f	4141-5	B	2	d
1303-3	B	2	a	2457-2	D	1	c	4203-5	D	2	a
1305-3	C	2	a	2461-2	I	1	h	4205-5	F	2	a
1307-3	F	2	b	2465-2	N	1	d	4207-5	H	2	b
1311-3	L	2	d	2475-2	S	2	f	4211-5	P	2	d
1355-2	B	1	a	2507-2	D	1	g	4303-5	D	2	a
1357-2	D	1	b	2511-2	N	1	d	4305-5	F	2	a
1361-2	J	1	d	2515-2	P	2	d	4307-5	H	2	b
1365-2	N	1	d	3303-1	A	2	a	4311-5	P	2	d
1375-2	S	2	d	3005-1	B	1	a				

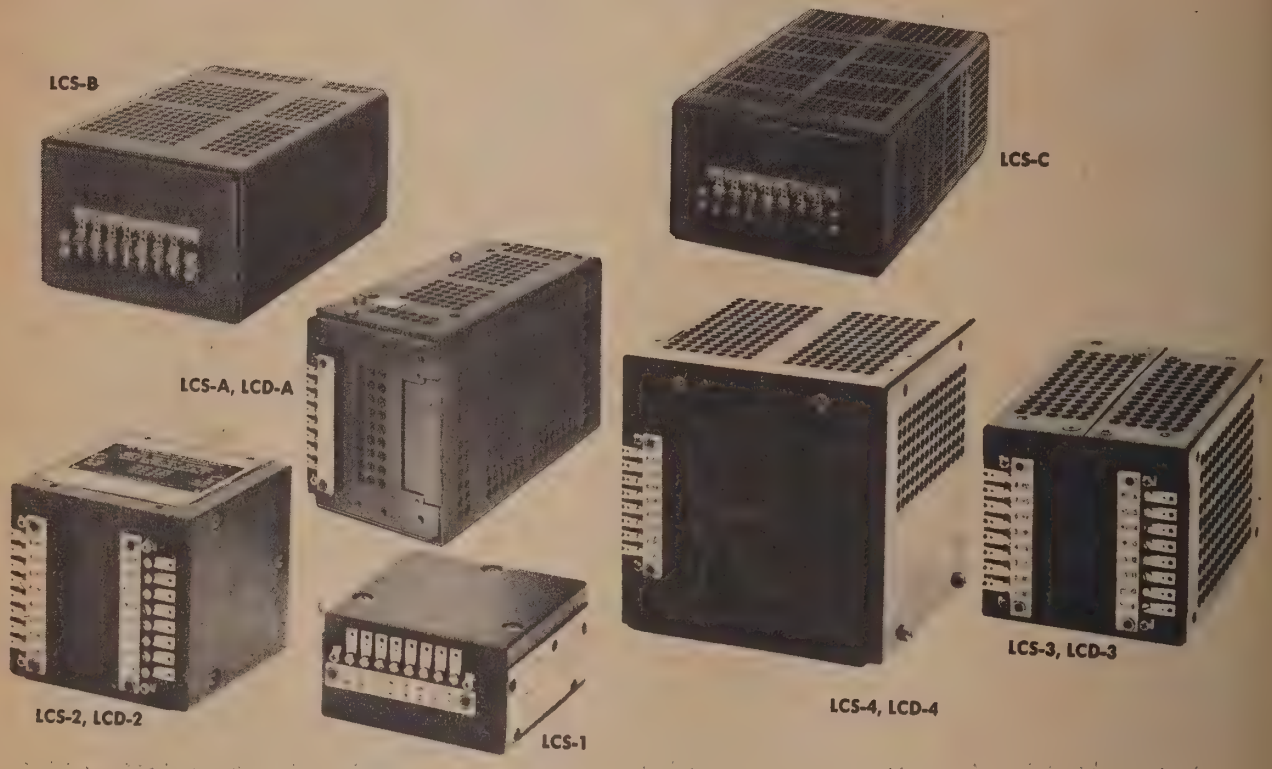
© United Technical Publications

LAMBDA ELECTRONICS CORP.

DISTRIBUTOR DIVISION

Com-Pak Mark II™ LC Series integrated circuit regulated modular power supplies

For O.E.M. systems and test equipment applications



Seven package sizes
Single and dual outputs
0.01% regulation line or load
250 μv rms ripple
Integrated circuit regulation system
Convection-cooled

LC series power supplies are listed in Underwriters' Laboratories Recognized Components Index.

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

OUTSTANDING FEATURES OF THE LC SERIES

All-silicon DC power supply using integrated circuits to provide regulation system
xcept for input and output capacitors, rectifiers and series egulation transistors

Increased reliability
hrough use of integrated circuit which replaces 32 discrete omponents from conventional designs

Convection cooled
no external heat sinking required

Regulation
line or load .01% + 1mv

Ripple and noise
250 μv rms; 1mv p-to-p

Wide input voltage and frequency range
105-132 vac, 47-440Hz
lerate current 10% for 47-53Hz operation, except for LCS-1 eries (see listing). For 360-440Hz operation consult factory.

Wide temperature range
–20°C to +71°C

Temperature coefficient
.01% + 300μv/°C external programing resistor
.015% + 300μv/°C internal programing resistor

Remote programing
1000 ohm/v nominal or volt/volt

Remote sensing

Automatic current limiting

Series/parallel operation
with similar single or dual units

Multi-current-rated

More current per cubic inch

Complete serviceability

Overvoltage protection
available as accessory up to 70 vdc

No overshoot
on turn-on, turn-off or power failure

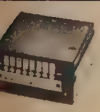
AC input option
add suffix "-V" to model number for operation at 205-265 vac, 47-440Hz, except LCS-1. Derate current 10% for 47-53Hz operation. For 360-440Hz operation consult factory. In U. S. and Canada, add 10% or $10.00 to price, whichever is greater.

Features of dual output models

Independent operation
Independent remote programing
Independent remote sensing
Each supply electrically isolated
and floating with respect to ground

LC SERIES VOLTAGE AND CURRENT RATINGS *
single output wide range models

LCS-1 SINGLE OUTPUT MODELS



3 5/32" x 3 9/32" x 1 21/32"

MODEL	ADJ. VOLT. RANGE VDC	MAX. MA. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-1-01A	0-7	275 (250)	220 (180)	165 (120)	110 (75)	$70
LCS-1-02A	0-18	130 (115)	130 (115)	100 (80)	85 (40)	70
LCS-1-03A	0-32	90 (80)	90 (80)	90 (50)	50 (25)	70
LCS-1-04A	0-60	50 (45)	50 (45)	50 (35)	30 (15)	80
LCS-1-05A	0-120	18 (15)	18 (15)	18 (15)	18 (10)	85

*Bracketed ratings are for 47-53Hz operation.

UNREGULATED POWER SUPPLY



3 5/32" x 3 9/32" x 1 21/32"

LUS-1-06 — 180 VDC — 25 ma up to 71°C at nominal line voltage for use with up to 7 Nixie® tubes. (Nixie is trademark of Burroughs Corp.) — $35

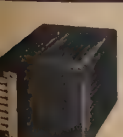
LCS-2 SINGLE OUTPUT MODELS



3 5/32" x 3 9/32" x 3 9/32"

MODEL	ADJ. VOLT. RANGE VDC	MAX. MA. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-2-01	0-7	550	455	350	240	$80
LCS-2-02	0-18	330	275	210	140	80
LCS-2-03	0-32	240	205	155	95	80
LCS-2-04	0-60	145	115	87	57	90
LCS-2-05	0-120	50	50	45	30	90

LCS-3 SINGLE OUTPUT MODELS



3 3/16" x 3 5/16" x 5"

MODEL	ADJ. VOLT. RANGE VDC	MAX. MA. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-3-01	0-7	1200	1000	750	500	$90
LCS-3-02	0-18	750	620	480	320	90
LCS-3-03	0-32	400	350	265	170	90
LCS-3-04	0-60	240	190	140	85	99

*Additional voltage and current ratings available. Consult factory.

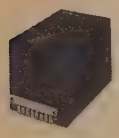
© United Technical Publications

Net

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

LC SERIES VOLTAGE AND CURRENT RATINGS *
single output wide range models

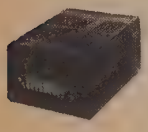
LCS-A SINGLE OUTPUT MODELS (Wide Range)



3 3/16" x 3¾" x 6½"

MODEL	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF [1] 40°C	50°C	60°C	71°C	PRICE
LCS-A-01	0-7	2.0	1.9	1.6	1.1	$99
LCS-A-02	0-18	1.1	1.0	0.9	0.7	99
LCS-A-03	0-32	0.69	0.64	0.60	0.45	99
LCS-A-04	0-60	0.37	0.34	0.31	0.25	99
LCS-A-05	0-120	0.10	0.10	0.10	0.10	109

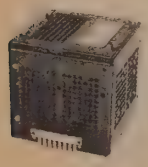
LCS-B SINGLE OUTPUT MODELS



3 3/16" x 4 11/16" x 6½"

MODEL	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-B-01	0-7	3.7	3.3	2.7	1.7	$ 130
LCS-B-02	0-18	2.0	1.8	1.6	1.2	130
LCS-B-03	0-32	1.1	1.0	0.8	0.5	130
LCS-B-04	0-60	0.6	0.55	0.45	0.3	140
LCS-B-05	0-120	0.25	0.25	0.22	0.16	140

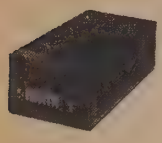
LCS-4 SINGLE OUTPUT MODELS (Wide Range)



4 29/32" x 4 29/32" x 5"

MODEL	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: [1] 40°C	50°C	60°C	71°C	PRICE
LCS-4-01	0-7	3.3	3.0	2.3	1.5	$130
LCS-4-02	0-18	1.8	1.6	1.2	0.8	130
LCS-4-03	0-32	1.0	0.9	0.7	0.5	130
LCS-4-04	0-60	0.55	0.5	0.43	0.3	140
LCS-4-05	0-120	0.25	0.25	0.22	0.16	140

LCS-C SINGLE OUTPUT MODELS

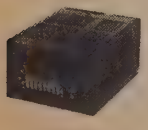


3 3/16" x 4 15/16" x 9⅜"

MODEL	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-C-01	0-7	4.5	4.1	3.8	3.3	$ 150
LCS-C-02	0-18	2.3	2.1	1.9	1.6	150
LCS-C-03	0-32	1.6	1.5	1.4	1.2	150
LCS-C-04	0-60	0.85	0.8	0.74	0.65	165
LCS-C-05	0-120	0.33	0.33	0.33	0.33	180

single output fixed voltage models

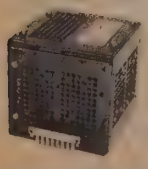
LCS-B SINGLE OUTPUT MODELS



3 3/16" x 4 15/16" x 6½"

MODEL	FIXED VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-B-18	18±5%	2.9	2.5	2.1	1.5	$ 125
LCS-B-20	20±5%	2.7	2.3	2.0	1.4	125
LCS-B-24	24±5%	2.1	2.0	1.8	1.2	125
LCS-B-28	28±5%	1.8	1.7	1.6	1.0	125
LCS-B-36	36±5%	1.4	1.3	1.1	0.7	125
LCS-B-48	48±5%	1.1	1.0	0.9	0.6	140
LCS-B-100	100±5%	0.46	0.46	0.46	0.34	140
LCS-B-120	120±5%	0.40	0.40	0.40	0.30	140
LCS-B-150	150±5%	0.32	0.32	0.32	0.25	150

LCS-4 SINGLE OUTPUT MODELS



4 29/32" x 4 29/32" x 5"

MODEL	FIXED VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: [1] 40°C	50°C	60°C	71°C	PRICE
LCS-4-5	5±5%	4.4	3.7	2.9	1.8	130
LCS-4-6	6±5%	4.0	3.4	2.6	1.5	130

*Additional voltage and current ratings available. Consult factory.

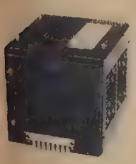
Net

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

LC SERIES VOLTAGE AND CURRENT RATINGS *
single output fixed voltage models

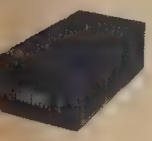
LCS-4 SINGLE OUTPUT MODELS (cont.)



4 29/32" x 4 29/32" x 5"

MODEL	FIXED VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-4-12	12±5%	3.1	2.8	2.2	1.3	130
LCS-4-15	15±5%	2.8	2.6	2.1	1.3	130
LCS-4-20	20±5%	2.4	2.2	1.9	1.1	130
LCS-4-24	24±5%	2.2	1.8	1.5	0.95	130
LCS-4-28	28±5%	2.0	1.6	1.4	0.85	130
LCS-4-36	36±5%	1.8	1.5	1.3	0.85	140
LCS-4-48	48±5%	1.2	1.1	0.9	0.75	140

LCS-C SINGLE OUTPUT MODELS



3 3/16" x 4 15/16" x 9 3/8"

MODEL	FIXED VOLT RANGE VDC	MAX. AMPS. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCS-C-18	18±5%	4.5	4.2	3.8	3.2	$ 150
LCS-C-20	20±5%	4.2	4.0	3.5	3.0	150
LCS-C-24	24±5%	3.6	3.4	3.0	2.5	150
LCS-C-28	28±5%	3.0	2.7	2.6	2.2	150
LCS-C-36	36±5%	2.3	2.2	2.1	1.6	150
LCS-C-48	48±5%	1.8	1.7	1.6	1.3	170
LCS-C-100	100±5%	0.65	0.65	0.65	0.65	170
LCS-C-120	120±5%	0.55	0.55	0.55	0.55	170
LCS-C-150	150±5%	0.42	0.42	0.42	0.42	170

dual output wide range models

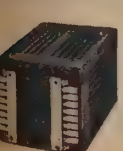
LCD-2 DUAL OUTPUT MODELS



3 5/32" x 3 9/32" x 3 9/32"

MODEL	ADJ. VOLT. RANGE VDC (EACH SIDE)	MAX. MA. AT AMBIENT OF: [1] 40°C	50°C	60°C	71°C	PRICE
LCD-2-11	0-7	300	240	175	115	$125
	0-7	300	240	175	115	
LCD-2-12	0-18	160	130	100	65	125
	0-7	300	240	175	115	
LCD-2-22	0-18	160	130	100	65	125
	0-18	160	130	100	65	
LCD-2-33	0-32	120	95	70	45	125
	0-32	120	95	70	45	
LCD-2-44	0-60	65	52	37	23	170
	0-60	65	52	37	23	
LCD-2-55	0-120	30	30	22	14	170
	0-120	30	30	22	14	

LCD-3 DUAL OUTPUT MODELS



3 3/16" x 3 5/16" x 5"

MODEL	ADJ. VOLT. RANGE VDC	MAX. MA. AT AMBIENT OF: 40°C	50°C	60°C	71°C	PRICE
LCD-3-11	0-7	700	590	480	340	$150
	0-7	700	590	480	340	
LCD-3-12	0-7	700	590	480	340	150
	0-18	400	350	300	210	

*Additional voltage and current ratings available. Consult factory.

© United Technical Publications

Net

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

LC SERIES VOLTAGE AND CURRENT RATINGS *
dual output wide range models

LCD-3 DUAL OUTPUT MODELS

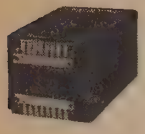
3 3/16" x 3 5/16" x 5"



MODEL	ADJ. VOLT. RANGE VDC	MAX. MA. AT AMBIENT OF: [1] 40°C	50°C	60°C	71°C	PRICE
LCD-3-22	0-18	400	350	300	210	$150
	0-18	400	350	300	210	
LCD-3-33	0-32	225	190	160	120	150
	0-32	225	190	160	120	

LCD-A DUAL OUTPUT MODELS

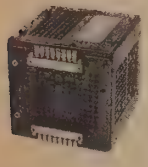
3 3/16" x 3 3/4" x 6 1/2"



MODEL	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: [1] 40°C	50°C	60°C	71°C	PRICE
LCD-A-11	0-7	1.0	0.9	0.7	0.5	$155
	0-7	1.0	0.9	0.7	0.5	
LCD-A-12	0-18	0.5	0.45	0.4	0.3	155
	0-7	1.0	0.9	0.7	0.5	
LCD-A-13	0-32	0.35	0.3	0.25	0.2	155
	0-7	1.0	0.9	0.7	0.5	
LCD-A-22	0-18	0.5	0.45	0.4	0.3	155
	0-18	0.5	0.45	0.4	0.3	
LCD-A-23	0-32	0.35	0.3	0.25	0.2	155
	0-18	0.5	0.45	0.4	0.3	
LCD-A-33	0-32	0.35	0.3	0.25	0.2	155
	0-32	0.35	0.3	0.25	0.2	
LCD-A-44	0-60	0.2	0.18	0.14	0.12	180
	0-60	0.2	0.18	0.14	0.12	

LCD-4 DUAL OUTPUT MODELS

4 29/32" x 4 29/32" x 5"



MODEL	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: [1] 40°C	50°C	60°C	71°C	PRICE
LCD-4-11	0-7	1.8	1.5	1.2	0.7	$190
	0-7	1.8	1.5	1.2	0.7	
LCD-4-12	0-18	1.0	0.8	0.65	0.4	190
	0-7	1.8	1.5	1.2	0.7	
LCD-4-13	0-32	0.6	0.53	0.4	0.24	190
	0-7	1.8	1.5	1.2	0.7	
LCD-4-22	0-18	1.0	0.8	0.65	0.4	190
	0-18	1.0	0.8	0.65	0.4	
LCD-4-23	0-32	0.6	0.53	0.4	0.24	190
	0-18	1.0	0.8	0.65	0.4	
LCD-4-33	0-32	0.6	0.53	0.4	0.24	190
	0-32•	0.6	0.53	0.4	0.24	
LCD-4-44	0-60	0.33	0.3	0.24	0.15	240
	0-60	0.33	0.3	0.24	0.15	
LCD-4-55	0-120	0.12	0.12	0.12	0.075	240
	0-120	0.12	0.12	0.12	0.075	
LCD-4-152	15±5%	1.5	1.3	1.0	0.6	220
FIXED	15±5%	1.5	1.3	1.0	0.6	

OVERVOLTAGE PROTECTOR ACCESSORIES
(Separate OV required for each output)



MODEL	ADJ. VOLT. RANGE VDC	FOR USE WITH	PRICE
LC-OV-10	3-24	LCS-1, LCS-2, LCS-3, LCD-2, LCD-3	$20
LC-OV-11	3-47		20
LC-OV-12	3-70		25
LM-OV-.1	3- 8	Fixed Voltage LCS-A, LCS-4, LCD-4 LCS-B, LCS-C	30
LM-OV- 2	6-20		30
LM-OV- 3	18-70		30
LH-OV- 4	3-24	Wide range LCS-A, LCD-A, LCD-4, LCS-4	35
LH-OV- 5	3-47		35
LH-OV- 6	3-70		35

NOTES: (1) For operation at 360-440Hz consult factory for ratings and specifications.

*Additional voltage and current ratings available. Consult factory.

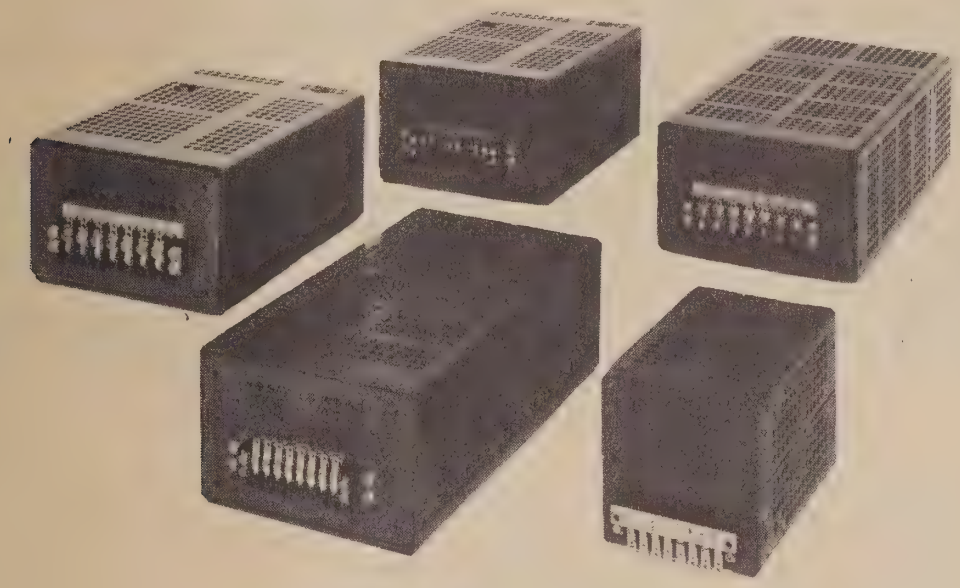
Net

© United Technical Publications

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

LX series modular power supplies

Designed to power operational amplifiers, I-C circuits, transistor circuits...wherever high reliability is required.



LX series modular power supplies

Outstanding features

Single and dual tracking output models

Wide range and fixed voltage models
up to 150 Vdc, up to 9 amperes

Regulation
0.1% line or load

Ripple and noise
1.5 mV RMS; 5 mV pk-pk

Wide input voltage and frequency range
105-132 Vac, 47-440 Hz

Tracking accuracy
1% absolute voltage difference; 0.1% change for all conditions of line, load or temperature

All-silicon DC power supply using integrated circuits to provide regulation system
except for input and output capacitors, rectifiers and series regulation transistors

Increased reliability
through use of integrated circuit which replaces up to 32 discrete components from conventional designs

Convection cooled
no heat sinking or forced air required

Remotely programmable
200 ohms/volt, nominal

Remote sensing
available on all models

Multi-surface mounting
mountable in 3 planes and in any position

Multi-current rated

Completely protected
automatic current limiting and self-resetting thermostats

Overvoltage protection
available with all series up to 70 Vdc rating

No voltage spikes or overshoot
on turn-on, turn-off, or power failure—for maximum load protection

Complete serviceability
all components replaceable

Series operation
Single and dual output models may be connected in series.

5-year guarantee
to full performance specifications, includes parts and labor

© United Technical Publications

LAMBDA ELECTRONICS CORP.

DISTRIBUTOR DIVISION

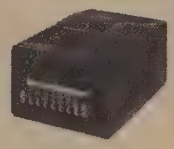
LX series modular power supplies *

Voltage and current ratings

Single output fixed voltage models

LXS-B SINGLE OUTPUT MODELS

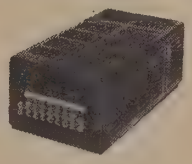
3 3/16" x 4 15/16" x 6 1/2"



MODEL	FIXED VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: (2) 40°C	50°C	60°C	71°C	PRICE
LXS-B-5	5 ±5%	5.8	5.0	4.0	3.0	125
LXS-B-6	6 ±5%	5.5	4.7	3.8	2.9	125
LXS-B-12	12 ±5%	3.8	3.6	3.0	2.2	125
LXS-B-15	15 ±5%	3.2	2.8	2.5	1.5	125

LXS-C SINGLE OUTPUT MODELS

3 3/16" x 4 15/16" x 9 3/8"

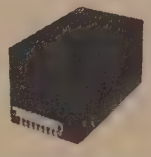


MODEL	FIXED VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: (2) 40°C	50°C	60°C	71°C	PRICE
LXS-C-5	5 ±5%	9.0	8.0	6.8	5.3	150
LXS-C-6	6 ±5%	8.8	7.8	6.7	5.2	150
LXS-C-12	12 ±5%	6.5	6.1	5.5	4.6	150
LXS-C-15	15 ±5%	6.0	5.6	5.1	4.5	150

Dual output adjustable voltage models

LXD-3-152

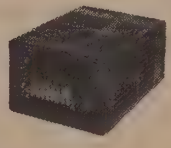
3 3/16" x 3 3/4" x 5"



MODEL	ADJ. VOLT. RANGE VDC	MAX. MA DC AT AMBIENT OF: (2) 40°C	50°C	60°C	71°C	PRICE
LXD-3-152	+ (12 to 15)	400	370	340	300	$ 85
	− (12 to 15)	400	370	340	300	
	can also be used					
LXD-3-152	24-30	400	370	340	300	85

LXD-B DUAL OUTPUT MODELS

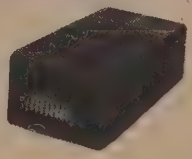
3 3/16" x 4 15/16" x 6 1/2"



MODEL (1)	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: (2) 40°C	50°C	60°C	71°C	PRICE
LXD-B-062	±6 to ±3	2.7 / 2.1	2.4 / 2.0	1.9 / 1.6	1.4 / 1.2	$ 160
LXD-B-152	±15 to ±12	1.6 / 1.4	1.4 / 1.3	1.2 / 1.1	0.7 / 0.6	150

LXD-C DUAL OUTPUT MODELS

3 3/16" x 4 15/16" x 9 3/8"



MODEL (1)	ADJ. VOLT. RANGE VDC	MAX. AMPS. AT AMBIENT OF: (2) 40°C	50°C	60°C	71°C	PRICE
LXD-C-062	±6 to ±3	3.5 / 2.6	3.3 / 2.4	2.7 / 1.9	1.7 / 1.3	$ 170
LXD-C-152	±15 to ±12	2.5 / 2.0	2.3 / 1.8	1.9 / 1.5	1.5 / 1.2	160

NOTES: (1) Only one overvoltage protector accessory is required for both outputs on LXD series power supplies.

(2) For operation at other than 57-63 Hz, consult factory for ratings and specifications.

OVERVOLTAGE PROTECTOR ACCESSORIES

MODEL	ADJ. VOLT. RANGE VDC	FOR USE WITH PACKAGES	PRICE
LC-OV-11*	24-30	3	$20
LM-OV-1	3-8	B, C	30
LM-OV-2	6-20	B, C	30
LM-OV-3	18-70	B, C	30

*Only one OV required for both outputs

***Additional voltage and current ratings available. Consult factory.**

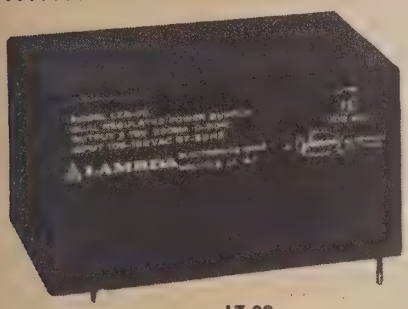
Net

© United Technical Publication

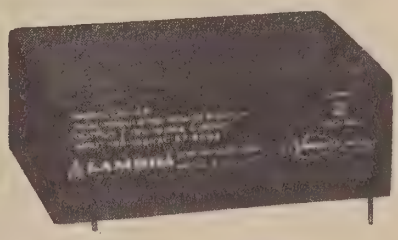
LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

Lambda-Pak™

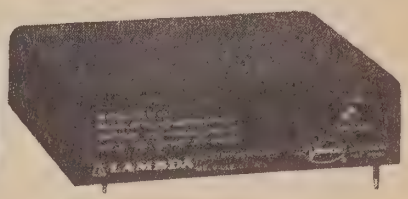
Field repairable "unencapsulated" ac-dc regulated power supplies



LZ-30
$65



LZ-20
$40-$55



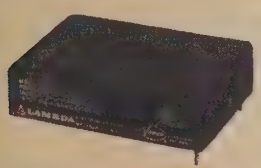
LZ-10
$35

designed to power operational amplifiers, linear and digital integrated circuits and transistor circuitry. Ideal for terminal equipment manufacturers, business machines and other OEM applications where low power, small size, Printed Circuit Board mounting and low costs are essential.

Compare and decide

LAMBDA-PAK SERIES

power supplies for applications requiring commercial quality with a competitive price.

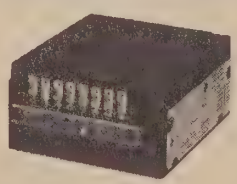


$35.

60-day guarantee

LAMBDA LC/LX/LM SERIES

power supplies for applications requiring the high reliability of industrial and military equipment.



$70.

5-year guarantee

COMPETITOR COMPARISON CHART

Lambda-Pak	Competitors' Model	
YES	NO	Fully repairable
YES	NO	Continuously adjustable voltage
YES	NO	Multi-voltage-rated
YES	NO	Foldback current limiting
YES	NO	Wide input voltage range — 105-132 Vac
YES	NO	Short circuit proof
YES	NO	Vacuum-impregnated transformer
YES	NO	Three different power packages
YES	NO	Single and dual (tracking) outputs
YES	NO	Designed for series operation

© United Technical Publications

Net

LAMBDA ELECTRONICS CORP.

DISTRIBUTOR DIVISION

Lambda-Pak specifications

DC output

Voltage range ..... see charts
Regulated voltage: Regulation.. 0.15% — line or load
Ripple and noise ..... 1.5 mV, 5 mV pk-pk
Temperature coefficient ..... 0.03%/°C
Tracking (dual output models only) ..... 2% absolute voltage difference. 0.2% change for all conditions of line, load and temperature.

AC input

105-132 Vac, 57-63 Hz

Ambient operating temperature range

continuous duty from 0°C to +50°C ambient.

Storage temperature range

−25°C to +85°C

Overload protection

fixed, automatic electronic current limiting circuit limits the output current upon external overloads, including short cuit, thereby providing protection for load as well as po supply.

Input & output connections

printed circuit solder pins on lower surface of unit.

Controls

simple screwdriver voltage adjustment over entire volt range.

Mounting

two 4 x 40 tapped holes on lower surface of unit.

Physical data

Size

LZ-10 Series 2½" x 3½" x ⅞"
LZ-20 Series 2½" x 3½" x 1¼"
LZ-30 Series 2½" x 3½" x 1⅞"

Weight

LZ-10 Series 10 oz. net, 18 oz. ship
LZ-20 Series 17 oz. net, 25 oz. ship
LZ-30 Series 24 oz. net, 32 oz. ship

LZ series voltage and current ratings

Single Output Models

LZ-10 SERIES
2½" x 3½" x ⅞"

MODEL	VOLTAGE[1] VDC	CURRENT mA	PRICE
LZS-10	3	317	$35
LZS-10	4	384	35
LZS-10	5	450	35
LZS-11	10	225	35
LZS-11	12	195	35
LZS-11	15	150	35

LZ-20 SERIES
2½" x 3½" x 1¼"

MODEL	VOLTAGE[1] VDC	CURRENT mA	PRICE
LZS-20	10	247	$55
LZS-20	12	268	55
LZS-20	15	300	55
*LZD-22	24	73	40
*LZD-23	24	129	55
*LZD-22	28	84	40
*LZD-23	28	143	55

LZ-30 SERIES
2½" x 3½" x 1⅞"

MODEL	VOLTAGE[1] VDC	CURRENT mA	PRICE
LZS-30	3	633	$65
LZS-30	4	767	65
LZS-30	5	900	65
LZS-33	10	293	65
LZS-33	12	336	65
LZS-33	15	400	65
*LZD-32	24	186	65
*LZD-32	28	208	65

*Single output ratings for dual output models connected in series

Dual Output Tracking Models

LZ-20 SERIES
2½" x 3½" x 1¼"

MODEL	VOLTAGE[1] VDC	CURRENT mA	PRICE
LZD-21	3	217	$55
	3	217	
LZD-21	4	258	55
	4	258	
LZD-21	5	300	55
	5	300	
LZD-22	10	61	40
	10	61	
LZD-23	10	114	55
	10	114	
LZD-22	12	73	40
	12	73	
LZD-23	12	129	55
	12	129	
LZD-22	15	90	40
	15	90	
LZD-23	15	150	55
	15	150	

LZ-30 SERIES
2½" x 3½" x 1⅞"

MODEL	VOLTAGE[1] VDC	CURRENT mA	PRICE
LZD-31	3	333	$65
	3	333	
LZD-31	4	417	65
	4	417	
LZD-31	5	500	65
	5	500	
LZD-32	10	163	65
	10	163	
LZD-32	12	186	65
	12	186	
LZD-32	15	220	65
	15	220	

NOTES:

(1) All models have adjustable voltage control and for load protection should be set to required voltage before connecting loads.

Lambda-Pak features

Three power packages

Single and dual tracking outputs

Fully repairable

60-day guarantee

only repairable, plastic power supply offering 60-day guarantee that includes material and labor.

Impact resistant, flame retardant plastic housing

Foldback current limited

Continuously adjustable output voltage

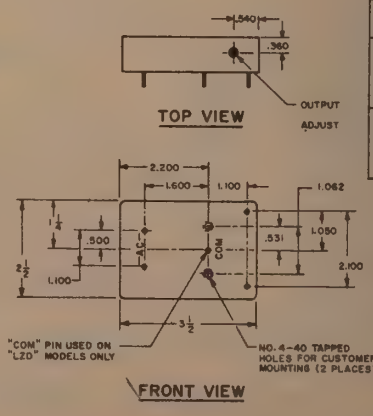
Multi-voltage rated

Ambient operating temperature

continuous duty from 0°C to +50°C

Vacuum-impregnated transformer

MODEL	A
LZS-10 LZS-11	⅞
LZS-20 LZD-21 LZD-22 LZD-23	1¼
LZS-30 LZD-31 LZD-32 LZS-33	1⅞

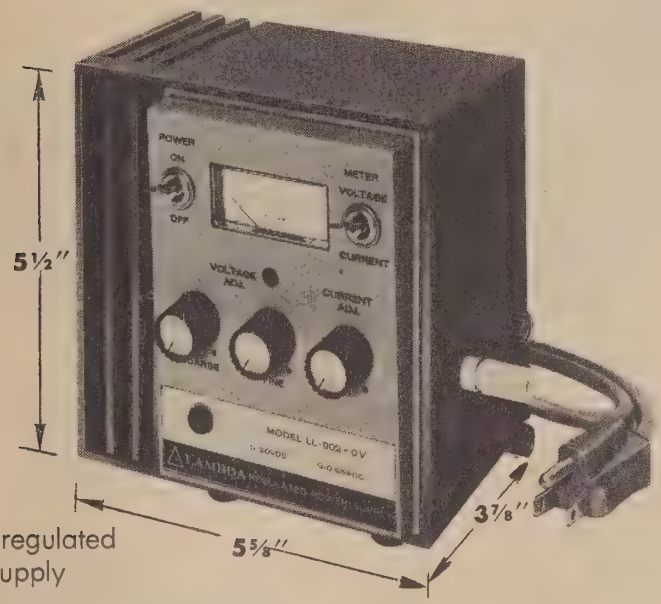


Net

© United Technical Publication

LAMBDA ELECTRONICS CORP.
ISTRIBUTOR DIVISION

LL Series IC regulated bench power supply with built-in, tracking overvoltage protection
0-10 volts, 1 amp, $90 with OV
0-10 volts, 1 amp, $75 less OV



LL series I-C regulated power supply

Also available 0-20, 0-40, 0-120 vdc

Regulation
line 0.01% + 1mv
load 4 mv

Ripple and noise
250 μv rms; 1 mv p-to-p

All silicon DC power supply using integrated circuits to provide regulation system
except for input and output capacitors, rectifiers and series regulation transistors

Multi-position operation
lies flat or stands erect

AC input
05-132 vac 47-440 Hz (Current ratings based on 57-63 Hz.)

Weight
less than 5 lbs.

Output
5-way binding posts

Ambient operating temperature
0—50°C

Temperature coefficient
0.015% + 300 μv/°C

Adjustable current limiting
0% to 110% of rating

Storage temperature
—40°C to +85°C

Convection cooled

Die-cast aluminum construction

No overshoot
on turn-on, turn-off or power failure

Controls
coarse voltage adjust, fine voltage adjust, current adjust, ON/OFF switch, meter function switch.

Indicators
power ON light and dual-function meter

Guaranteed for 5 years material and labor

LL series bench-type supply 5⅜" x 5½" x 3⅞"

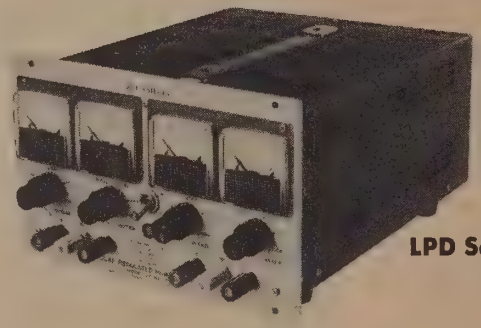
Model	ADJ. VOLT RANGE VDC	CURRENT RANGE(1)	Price
LL-901	0-10	0-1.0 amp	$75
LL-902	0-20	0-0.65 amp	85
LL-903	0-40	0-0.35 amp	85
LL-905	0-120	0-65 ma	99
WITH BUILT-IN TRACKING OVERVOLTAGE PROTECTION			
LL-901-OV	0-10	0-1.0 amp	$90
LL-902-OV	0-20	0-0.65 amp	99
LL-903-OV	0-40	0-0.35 amp	99

NOTES:
(1) Consult factory for operation at 50 Hz or temperatures above 50°C. Ratings apply 0-50°C.
(2) Independently adjustable OV protection available as accessory on LL-901, 902 (LC-OV-10, range 3-24 vdc) and LL-903 (LC-OV-11, range 3-47 vdc) price $20.

LAMBDA ELECTRONICS CORP.
DISTRIBUTOR DIVISION

LP and LPD Series general-purpose single and dual lab supplies


LP Series


LPD Series

Features of LPD series dual output power supply

5 models with two independent DC outputs
up to ±250 vdc, up to 1.7 amps. Either or both outputs may be + or −

Series/parallel operation
of both outputs yields two times the voltage or two times the current—up to 500 volts or up to 3.4 amps.

Auto series/auto parallel (master-slave)
permits tracking to a common reference.

4 meters
provide simultaneous monitoring of both voltage and current.

Regulation
line or load .01% + 1 mv.

Ripple
500 μv rms (1.5 mv p-p)

A-C input
105-132 vac 47-440 Hz (ratings based on 57-63 Hz operation). For operation at 205-265 vac, add suffix "-V" to model numbers and 10% or $25.00 (whichever is greater) to price.

Multi-current-rated

Additional features of LP and LPD series

All silicon semiconductors
Bench or rack use
Remotely programable
Remote sensing
Continuously variable
Designed to meet RFI per MIL-STD-826A
Fungus-proofing option
add suffix "R" to model number and add $15.00 to price.

Overvoltage protection
available as an option up to 70 vdc

LPD dual output models 5 3/16" x 8 3/8" x 10 3/32

Model	Voltage Range Per output/ Outputs in series	MAX AMPS AT AMBIENT OF: (1) Per output. Outputs in parallel				Pr
	VDC	30°C	40°C	50°C	60°C	
*LPD-421-FM	0-±20/0-40	1.7A/3.4A	1.5A/3.0A	1.3A/2.6A	0.9A/1.8A	$2
*LPD-422-FM	0-±40/0-80	1.0A/2.0A	0.85A/1.7A	0.7A/1.4A	0.55A/1.1A	2
*LPD-423-FM	0-±60/0-120	0.7A/1.4A	0.6A/1.2A	0.5A/1.0A	0.4A/0.8A	3
LPD-424-FM	0-±120/0-240	0.38A/0.76A	0.32A/0.64A	0.26A/0.52A	0.20A/0.40A	3
LPD-425-FM	0-±250/0-500	0.13A/0.26A	0.12A/0.24A	0.11A/0.22A	0.10A/0.20A	3

LPD NOTES:
*OVERVOLTAGE PROTECTION AVAILABLE AS AN ACCESSORY. EACH OUTPUT REQUIRES SEPARATE OV ACCESSORY—ADD $35.00 FOR EACH OUTPUT.
(1)CURRENT RATING APPLIES OVER ENTIRE VOLTAGE RANGE. RATINGS BASED ON 57-63 HZ OPERATION.

LP single output models 5 3/16" x 4 3/16" x 10

Model	VOLTAGE RANGE	CURRENT RANGE AT AMBIENT OF (1):				Price
		30°C	40°C	50°C	60°C	
LP-410-FM	0-10 VDC*	0-2A	0-1.8A	0-1.6A	0-1.4A	$140
LP-411-FM	0-20 VDC*	0-1.2A	0-1.1A	0-1.0A	0-0.8A	140
LP-412-FM	0-40 VDC*	0-0.70A	0-0.65A	0-0.60A	0-0.50A	140
LP-413-FM	0-60 VDC*	0-0.45A	0-0.41A	0-0.37A	0-0.33A	140
LP-414-FM	0-120 VDC	0-0.20A	0-0.18A	0-0.16A	0-0.12A	160
LP-415-FM	0-250 VDC	0-80mA	0-72mA	0-65mA	0-60mA	175

LP NOTES:
*OVERVOLTAGE PROTECTION AVAILABLE AS AN ACCESSORY—$35.00 EACH.
CURRENT RATING APPLIES OVER ENTIRE VOLTAGE RANGE.

Overvoltage protectors (accessories)

For use with	Model	ADJ. VOLT RANGE	Price*
LP-410-FM; (0-10VDC)	LH-OV-4	3-24V	$35
LP-411-FM; LPD-421-FM (0-20VDC)	LH-OV-4	3-24V	35
LP-412-FM; LPD-422-FM (0-40VDC)	LH-OV-5	3-47V	35
LP-413-FM; LPD-423-FM (0-60VDC)	LH-OV-6	3-70V	35

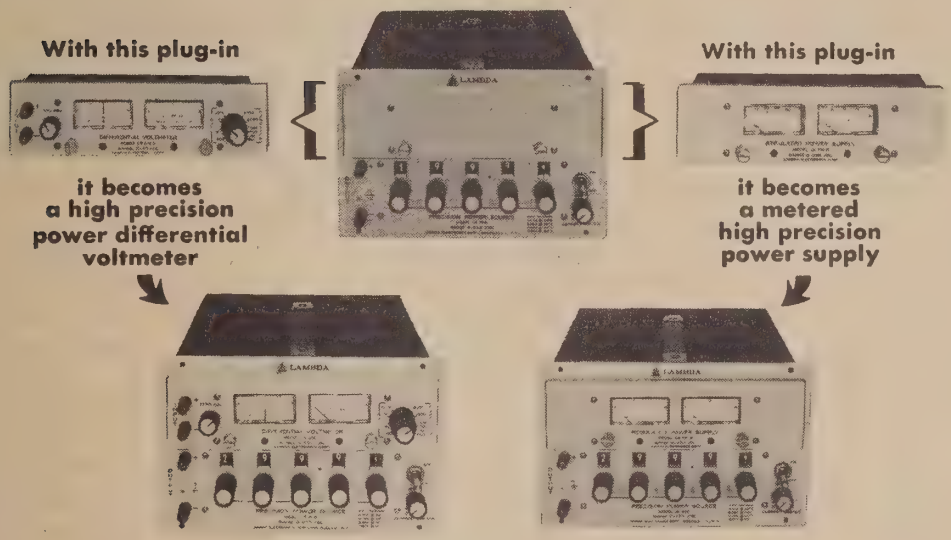
*PRICE IS FOR A SINGLE OVERVOLTAGE ACCESSORY. LPD SERIES MODELS REQUIRE ONE LH-OV FOR EACH OUTPUT.

Net
© United Technical Publicatio

LAMBDA ELECTRONICS CORP.

ISTRIBUTOR DIVISION

Two instruments in one
High-precision differential voltmeter
and high-precision power supply



Features of the high-precision, power, differential voltmeter:

Draw power as you measure voltage...
The first and only differential voltmeter to furnish high stability power output while being used as a voltmeter ...no need for a separate power supply.

Plus all power supply specifications.

Features of the metered, high-precision power source:

Regulation 0.0005% plus 100 μV
best of any high-stability power supply in this price range.

Ripple
35 μv rms; 100 μv p-to-p.

Accuracy
0.01% + 1mv.

2 Meters
nitor voltage and current simultaneously and continuously

Illuminated digital readout

Remotely programable
1000 ohms/volt nominal, or volt/volt

Constant voltage/constant current

Multi-current-rated
for 30°C, 40°C, 50°C, 60°C

Only 5¼" high
convenient half-rack size for rack or bench use.

Stability
0.001% + 100 μv over 8 hour period.

Convection-cooled
no blowers, no external heat sinks.

Auto series/auto parallel
with Master-Slave tracking.

AC input
105-132VAC, 47-440 Hz (derate dc output current 10% at 50 Hz) 205-265vac "V" option at extra charge of 10%.

Twice the power
in a convenient ½-rack package.

All silicon semiconductors
for maximum reliability.

Completely protected
short-circuit proof; continuously adjustable current limiting.

Fungus-proofing option
add suffix "R" to model number and add $20.00 to price.

Basic Non-Metered Model	VOLTAGE RANGE	MAX. AMPS AT AMBIENT OF (1) 30°C	40°C	50°C	60°C	Price [2]	Metered Accessory Model	Price [2]	Diff. VM Accessory Model	Price [2]	Over Volt. Protect. Adj. V. Model	Range	Price
LS-511A	0-10VDC	2.8A	2.5A	2.1A	1.7A	$445	LS-FM1	$55	LS-DM1	$125	LHOV-4	3-24	$35
LS-512A	0-20VDC	1.8A	1.6A	1.3A	1.1A	445	LS-FM2	55	LS-DM2	125	LHOV-4	3-24	35
LS-513A	0-40VDC	1.0A	0.9A	0.75A	0.6A	445	LS-FM3	55	LS-DM3	125	LHOV-5	3-47	35
LS-515A	0-120VDC	0.33A	0.29A	0.25A	0.21A	445	LS-FM5	55	LS-DM5	125			
LS-516A	0-250VDC	0.1A	0.09A	0.08A	0.07A	445	LS-FM6	55	LS-DM6	125			

NOTES: 1. Current rating applies over entire voltage range. Ratings based on 55-65 Hz operation. Derate current 10% for 50 Hz.
2. This price is for non-metered Precision Power Source. Addition of Metered Accessory Plug-In (next two columns) is necessary to have Metered High Precision Power Supply. Addition of Differential Voltmeter Accessory Plug-In to the basic model is necessary for the unit to function as a High Precision Differential Voltmeter.

LAMBDA ELECTRONICS CORP.

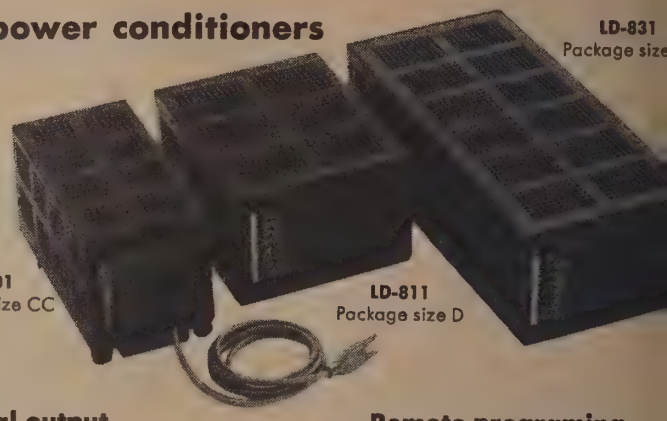
DISTRIBUTOR DIVISION

LD Series AC power conditioners

for use with electronic test equipment, electronic systems, lighting and heating equipment, motor starting controls, measurement instrumentation, CRT displays

1% line and load regulation.
3% harmonic distortion

40 db line isolation. >80% efficiency



LD-831
Package size

LD-801
Package size CC

LD-811
Package size D

Regulation
line or load less than 1%

Remote programing
200 ohms/volt nominal for models LD-802, 812, and 832

Response time
less than 50 msec.

All silicon semiconductors

Convection cooled
no external heat sinks

Sinusoidal output
less than 3% distortion added

High efficiency
greater than 80%

Wide power factor range
0.7 PF leading to 0 PF lagging

Remote sensing

EMI/RFI
designed to meet conducted portions of MIL-STD-461A

Remote programing
LD 802, LD 812 and LD 832

Wide operating temperature range
0 to 71°C

Wide input voltage range
100-132, 180-235, 200-265 vac

Automatic current limiting
protects load as well as power supp

Completely repairable
all components replaceable

Applications for LD series

Power conditioners stabilize ac lines to:

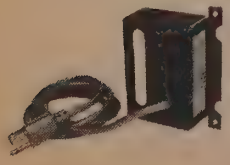
1. extend equipment life of lamps, relays, motors, etc.
2. assure constant speeds for motors and constant lamp intensities.
3. assure steady-state input power for long-term stability measurements and for precise production testing.
4. provide the facility to remotely program line conditions production testing.
5. help stabilize crt displays by providing stable input voltag for triggering circuits.
6. protect equipment against random, high-voltage, transie spikes.

LD series ac power conditioners

	Model (3)	INPUT VAC Resistive Load	INPUT VAC Inductive Load	OUTPUT VAC (Adjustable)	Frequency Hz	MAX. VA AT AMBIENT OF: (1) 40°C	50°C	60°C	71°C	Price
 4 15/16" x 4 15/16" x 9 3/8"	LD-801	100-132	105-132	110-120	57-63	250	200	160	85	$14
	LD-802*	100-132	105-132	100-132	57-63	225	180	130	70	20
	LD-803	180-235	190-235	200-220	57-63	200	165	120	70	20
	LD-803-V (2)	200-265	210-265	220-240	47-53	200	165	120	70	20
4 15/16" x 7 1/2" x 9 3/8"	LD-811	100-132	105-132	110-120	57-63	500	440	300	170	15
	LD-812*	100-132	105-132	100-132	57-63	450	350	270	120	22
	LD-813	180-235	190-235	200-220	57-63	400	320	250	120	22
	LD-813-V (2)	200-265	210-265	220-240	47-53	400	320	250	120	22
 4 15/16" x 7 1/2" x 16 1/2"	LD-831	100-132	105-132	110-120	57-63	1000	800	600	350	23
	LD-832*	100-132	105-132	100-132	57-63	900	725	550	300	27
	LD-833	180-235	190-235	200-220	57-63	800	640	500	280	27
	LD-833-V (2)	200-265	210-265	220-240	47-53	800	640	500	280	27

* Models LD-802, 812, and 832 are remotely programable.

NOTES:
(1) Ratings do not apply for capacitive load; consult factory.
(2) "—V option" units are same as LD-803, 813 & 833 respectively except that internal taps on transformer ar rewired for input frequency change.



Power cord accessory

PCA-1 is a power cord adapter which provides a convenient means of connecting any of the LD serie units to the power line and offers a regulated ac line voltage outlet from the face of the PCA-1.

For 115 vac input only $15.0

Net

© United Technical Publicati

TABTRON

"TECHNICAL APPARATUS BUILDERS"

A Division of Power Alternating Direct Corp.

For all DC Power Requirements write Eng. Dept. Specialists in Design. Mfgrs. of D.C. Power Supplies. "TABTRON"®, "TABPAK"®, "REG-O-TAB®", "REG-O-VAC"®, "TABSTAT"®. "TABGLO"®,"TABLITE"®, "VOLTAB"®,"AMPTAB"®.

PACKAGED AC & DC POWER

TABTRON" VARIABLE DC POWER SUPPLIES, COMPLETELY BUILT, DESIGNED FOR CONTINUOUS SERVICE, READY TO USE, "VARIAC"® VARIABLE TRANSFORMER, ISOLATION CTIFIER TRANSFORMER, FULL WAVE BRIDGE RECTIFIER, METERS, VOLT AND AMP., PILOT LIGHT, SWITCH, TERMINALS AND FUSE. CABINET OR RACK MOUNTED (RP). 5/60Cy INPT. OTHER INPTS TO ORDER. THIS IS A PARTIAL LISTING! WRITE FOR OUR COMPLETE CATALOG!

del	DESCRIPTION Variable DC Volts & Amps Ripple & Regulation	Price
100AY	0 to 6VDC @ 100A	$369
500AY	0 to 9VDC @ 500Amp/4% Rip/3φ inpt	936
10ACE	0 to 12VDC @ 10A/0.1% Rip @ 2A	63
15ARM	0 to 12VDC @ 15A/1% Rip ±5% Reg	207
20A	0 to 12VDC @ 20Amp/int up to 30A	117
50A	0 to 12VDC @ 50Amp	189
100A	0 to 12VDC @ 100Amp	306
200AY	0 to 12VDC @ 200Amp/Inpt 3φ	441
300AY	0 to 12VDC @ 300Amp/inpt 3φ	585
5ACE	0 to 16VDC @ 5A/0.5% Rip	69
50A	0 to 16VDC @ 50Amps	210
200AY	0 to 24VDC @ 200A/4% Rip/3φ inpt	756
5A	0 to 32VDC @ 5Amps	66
5ACC	0 to 32VDC @ 5Amp/0.5% Rip/160Mv	88
5ARC	0 to 28VDC @ 5Amp/0.05% Rip/14Mv	144
12A	0 to 32VDC @ 12Amp	126
12ACC	0 to 32VDC @ 12Amp/0.5% Rip	171
15ARM	0 to 32VDC @ 15Amp/1% Rip/±5% Reg	243

Model	DESCRIPTION Variable DC Volts & Amps Ripple & Regulation	Price
T30V20ACE	0 to 30VDC @ 20Amp/1% Rip @ 5A	$198
T32V24A	0 to 32VDC @ 24Amps	189
T32V24ACC	0 to 32VDC @ 24Amp/0.5% Rip 160Mv	252
T32V30ARM	0 to 32VDC @ 30A/1% Rip/±5% Reg	387
T32V50A	0 to 32VDC @ 50Amps	360
T32V50ACC	0 to 32VDC @ 50A/1% Rip/160Mv	420
T28V100AY	0 to 28VDC @ 100A/4% Rip/inpt 3φ	720
T28V200AY	0 to 28VDC @ 200A/4% Rip/inpt 3φ	819
T32V60ARMY	0 to 32VDC @ 60A/1% Rip ±5% Reg/3φ	666
T48V5ACC	0 to 48VDC @ 5A/0.5% Rip/240Mv	135
T48V10ACC	0 to 48VDC @ 10A/0.5% Rip/240Mv	162
T48V15ARM	0 to 48VDC @ 15A/1% Rip ±5% Reg	342
T60V5ACC	0 to 60VDC @ 5A/0.5% Rip/300Mv	207
T130V2ACC	0 to 130VDC @ 2A/1% Rip/1.3V	119
T120V5ACC	0 to 120VDC @ 5A/1% Rip/1.2V	270
T130V10ACC	0 to 130VDC @ 10A/1% Rip/1.3V	387
T220V10ACC	0 to 220VDC @ 10A/1% Rip/2.2V	495
T300V1ACC	0 to 300VDC @ 1A/0.03% Rip/90Mv	225
T300V2ACC	0 to 300VDC @ 2A/0.03% Rip/90Mv	351

We Manufacture and Rebuild to Your Specifications — We Repair All Power Supplies!

W-COST "TAB-PAKS" AC & DC POWER for PILOT LIGHTS, RELAYS, ANNUNCIATORS & TELEPHONE SYSTEMS!

	16VDC @ 2A & 3, 6, 9, 15, 18VAC/2A ...$39	B24VER	24VDC @ 2Amps ...$18	B24V10BF	24VDC @ 10Amp Filtered ...$81
VER	12VDC @ 2Amp ... 15	B24V2BF	24VDC @ 2Amps Filtered ... 27	B48V1BF	48VDC @ 1A Filtered ... 27
V2BF	12VDC @ 2Amp Filtered ... 22	ABM24V2	24, 12, 6VDC & AC @ 2A ... 45	B48VER	48VDC @ 2Amp ... 40
V1.5ADC	@ 2A & 3, 6, 9, 15, 18VAC/2A... 39	B24VJR	24VDC @ 6Amps ... 32	B48V2BF	48VDC @ 2A Filtered ... 48
VAR	24VDC @ 1Amp ... 16	B24V6BF	24VDC @ 6Amps Filtered ... 45	B115VAR	115VDC @ 1Amp ... 63
24V2	24, 12, 6VDC @ 2A ... 24.60	B24VLR	24VDC @ 12Amps ... 56	B115VER	115VDC @ 2Amp ... 72

INDUSTRIAL BASIC DC SUPPLIES OEM/INBUILT, BENCH OR SPECIAL ORDER RACK MTG. (RP)!

30ACC	6.3VDC @ 30A/1% Ripple ...$ 99	B28V5A	28VDC @ 5A ...$ 43	B115V2.5A	115V @ 2.5A ...$ 81
V12ARC	12VDC @ 12A/1Mv Ripple ... 156	B28V5ACC	28VDC @ 5A/1% Rip ... 60	B115V5A	115V @ 5A ... 120
V24A	12VDC @ 24A ... 98	B28V12A	28VDC @ 12A ... 115	B115V5ACC	115V @ 5A/1% Rip ... 243
V24ACC	12VDC @ 24A/2% Ripple ... 140	B28V12ACC	28VDC @ 12A/1% Rip ... 153	B115V10A	115V @ 10A ... 185
V50A	12VDC @ 50A ... 132	B28V24A	28VDC @ 24A ... 126	B115V10ACC	115V @ 10A/1% Rip ... 336
V50ACC	... 216	B28V24ACC	28VDC @ 24A/1% Rip ... 171	B220V2.5A	$207; B220V5A ... 243
V1ARC	28-24VDC @ 1A/.1% Rip ... 36	B28V50A	28VDC @ 50A ... 200	B220V5ACC	220VDC @ 5A/1% Rip ... 378
V2ARC	28-24VDC @ 2A/.1% Rip ... 54	B28V50AC	28VDC @ 50A/Filtered ... 261	B220V10A	$330; B220V10ACC ... 459

REGULATED FIXED CONSTANT VOLTAGE DC SUPPLIES

1% Ripple & 1% Line Regulation — 100 to 130VAC at 60 cys & 1 Phase

C	4 to 9V @ 3A ...$ 48	F4-9D	4 to 9V @ 7A ...$ 69	F4-9E	4 to 9V @ 14A ...$100	F9-17E	9 to 17V @ 7A ...$100
4½	6V @ 4½A ... 48	F15V8	15V @ 8A ... 84	F28V2	28V @ 2A ... 60	F60V2	60V @ 2A ... 84
16	6V @ 16A ... 84	F15V30	15V @ 30A ... 162	F28V4	28V @ 4A ... 84	F60V4	60V @ 4A ... 108
V2	12V @ 2A ... 48	F18V6	18V @ 6A ... 84	F28V9	28V @ 9A ... 108	F60V8	60V @ 8A ... 171
V4½	12V @ 4½A ... 60	F24V2.1	24V @ 2.1A ... 60	F28V16	28V @ 16A ... 171	F120V.3	120V @ .3A ... 75
V20	12V @ 20A ... 108	F24V4.5	24V @ 4.5A ... 84	F36V3.2	36V @ 3.2A ... 84	F120V.6	120V @ .6A ... 81
V3.5	15V @ 3.5A ... 60	F24V11	24V @ 11A ... 108	F48V2.5	48V @ 2.5A ... 84	F120V2	120V @ 2A ... 108

VARIABLE AC & DC "VOLTAB" SCHOOL - COLLEGE - LAB & INDUSTRIAL AC & DC POWER!

REGULATED DC SUPPLIES "Q" SOLID STATE!

V3AW	5 to 6VDC @ 3A/Regulated 1% ...$ 33	QT30VD2	0 to 25V @ 200Ma/Non-Reg./25Mv. Rip. ...$ 21		
2V1.5A	0 to 12VDC @ 1.5A/Reg. 500Mv ... 27	QT30V1A	1 to 30V @ 1A/Reg. 50Mv* ... 72		
4V1.5A	11 to 14VDC @ 1.5A/Reg. 500Mv ... 22	QT50V1.5	1 to 50VDC @ 1.5A/Reg. 25Mv* ... 120		
5V1.5W	12 to 15VDC @ 1.5A/Reg. 150Mv ... 31	QT50V6AW	5 to 50V @ 6A/Reg. 100Mv* ... 189		
5VD5	1 to 15VDC @ 500Ma/Reg. 50Mv ... 36	QT50V12AW	5 to 50V @ 12A/Reg. 100Mv* ... 279		
6V1A	1 to 16VDC @ 1Amp/Reg. 25Mv ... 43	QT50V25AW	5 to 50V @ 25A/Reg. 100Mv* ... 369		
16VD5	Dual 1 to 16VDC @ 500Ma./Isol/Reg. 25Mv ... 63	QT400VD1	0 to 400VDC @ 100Ma/Reg. 1%* ... 95		
4V1AW	24VDC @ 1Amp/Regulated 1% ... 32	*115-230V @ 50 to 60 Hz			

RCRAFT - MARINE - AUTO - TRUCK - "STANDBY & FAIL-SAFE" - TELEPHONE - COMPUTER - INVERTERS & BAT-RY CHARGERS for NICKEL CADMIUM "NBC", LEAD, SILVER, ALKALI "ABC" AUTOMATIC SENSING to 0.06V!

0	Industrial "C & D" Dry Cell Chgr & Adj-Cell-Rack ...$ 39	NBC75D04	"NICAD" ADJ one to 75 Cells up to 40Ma ...$ 10		
2V10A	Marine 12V/10Amp Chrg Automatic ... 54	NBC25V1A	"NICAD" & other ADJ/1 to 25V up to 1Amp ... 20		
6-8-12K	6-8-12V @ 100 Amp Boost/10A & Trickle ... 66	NBC60VD5A	"NICAD" & other ADJ 1 to 60 Cells to 500Ma ... 36		
0-12L	Inverter & Charger 12V @ 20A & up to 400W/117VAC ... 108	ABC12V4A	Automatic CHG. 12V to 4A & ADJ Trickle ... 50		
0-12M	Inverter & Charger 24V @ 20A & up to 400W/117VAC ... 207	ABC24V4A	Automatic CHG. 24V to 4A & ADJ Trickle ... 72		
2-24VT4A	12 & 24V up to 4A/115VAC/50 to 800 Hz ... 24	ABC12V20A	Automatic CHG. 12V to 20A & ADJ Trickle ... 117		
12A3	6 & 12V to 3A (115 & 230V/50-60 cys) & Trickle ... 15	ABC12V70AR	Truck 12V @ 70Amp & ADJ Float ... 261		
12A5	6 & 12V to 5A (115V/50 to 800 cys) & Trickle ... 28	ABC14V3AR	up to 14V @ 3A & ADJ 20Ma/Float ... 90		
2-24VT5A	12 & 24V to 5A (115V/50 to 800 cys) & Trickle ... 48	ABC14V50AR	up to 14V @ 50A & ADJ to 5A/Float ... 300		
6V3A	Automatic CHG. 6V to 3A & Trickle ... 45	ABC30V8AR	up to 30V @ 8 Amp & Float 0.8A ... 180		

SOLID-STATE INVERTERS, CONVERTERS & DC to DC SUPPLIES!

5L	Inverter 12VDC to 115VAC/SQ.W @ 225 Watts ...$ 45	EC50KL	DC to DC 6 to 12 VDC Converter 50 Watts ...$ 18		
0L	Inverter 12VDC to 115VAC/SQ.W @ 350 Watts ... 70	RC50KL	Regulated DC to DC 6 to 12VDC Converter 50W ... 30		
0L	Inverter 12VDC to 115VAC/SQ.W @ 450 Watts ... 108	C50LM	DC to DC 12 to 24 VDC Converter 50 Watts ... 48		
0M	Inverter 24VDC to 115VAC/SQ.W @ 450 Watts ... 144	RC50LM	Regulated DC to DC 12 to 24VDC Converter 50W ... 72		

We reserve the right to change specifications and prices without notice.

SINCE 1945 RECTIFIER ENGINEERING! AC & DC POWER! OEM MANUFACTURER!

TECHNICAL APPARATUS BUILDERS — A DIVISION OF POWER ALTERNATING DIRECT CORP.

RCA

BATTERIES

RADIO • FLASHLIGHT • FARM • TRANSISTOR HEARING AID • INDUSTRIAL • PHOTO FLASH

JUNE 24, 19

	Type	Optional Distr. Resale Price Ea.	Optional List Price Ea.	Volts	Suggested Current Range mA	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	Standard Package Units	Lbs. (Appr.)	NEDA• Type No.	Replaces Eveready	Burgess	Mall
PORTABLE "A" TYPES	VS004	1.15	1.65	1.5	0-1000	2⅝	2⅝	3 27/32	6	8.5	4	742	4F	M4
	VS034A‡	.13	.20	1.5	0-25	—	⅜	1 31/32	192	7	15F	915	Z	M15
	VS035A‡	.1625	.25	1.5	0-80	—	1 1/32	1 15/16	192	18.5	14F	935	1	M14
	VS036‡	.1625	.25	1.5	0-150	—	1 1/32	2 13/32	192	39	13F	950	2R	M13
	VS065	1.23	1.75	7.5	0-70	2 5/32	1 15/16	3 1/32	12	7.3	9	717	C5	M9
	VS067	1.66	2.50	4.5	0-250	3 15/16	1 3/16	4 3/32	6	6	3	736	F3	—
	VS068‡	1.00	1.50	6	0-250	1 1/32	1 1/32	2 1/32	6	1	2	724	Z4	—
	VS069	1.29	1.95	1.5	0-300	2 25/32	1 1/32	3 1/32	6	3	18	720	2D	—
	VS070	1.29	1.95	1.5	0-250	—	1 1/32	4 1/16	6	4.5	23	960P	8R	—
	VS072	1.66	2.50	4.5	0-150	4 3/32	1 7/16	2 15/16	3	2	19	726	D3	—
	VS129	2.45	3.50	7.5	0-50	3 23/32	5/64	2 27/32	6	2.5	8	713	B5	—
	VS141	1.22	1.75	1.5	0-500	2 13/32	1 3/8	4 5/32	6	4.5	11	W353	2F	—
	VS236‡	.63	.95	1.5	0-300	—	1 1/32	4 3/16	6	2.3	20	964	21R	M20
	VS315▲	1.29	1.95	7.5	0-80	2 3/16	2 1/32	2 13/16	6	4.7	26	707	D5	—
	VS343‡	.19	.30	1.5	0-150	—	1 1/32	2 13/32	192	40	13D	D99	—	—
	VS345	1.15	1.65	6	0-250	2⅝	2⅝	3 27/32	6	8.5	6	744	F4P1	—
	VS734‡	.16	.25	1.5	0-25	—	⅜	1 31/32	192	7	15P	815	920	M15
	VS735‡	.19	.30	1.5	0-80	—	1 1/32	1 15/16	192	17	14P	835	120	M14
	VS736‡	.19	.30	1.5	0-150	—	1 1/32	2 13/32	72	13	13P	850	220	M13
PORTABLE "B" TYPES	VS013	2.97	4.25	45	0-40	3 19/32	1 27/32	5½	6	12.3	202	482	M30	—
	VS014	4.16	5.95	45	0-40	3 3/16	2¼	4½	5	9.5	206	W359	A30	—
	VS015	2.97	4.25	22.5, 45	0-25	3	2 15/16	4⅛	6	7.3	205	738	Z30	—
	VS016▲	2.70	3.85	67.5	0-10	2 13/16	1⅜	3 45/64	12	9.8	200	467	XX45	M20
	VS055▲	2.48	3.75	45	0-10	2 21/32	1	3 1/16	12	6.7	201	455	XX30	—
	VS082▲	2.70	3.85	67.5	0-6	2 13/16	1⅜	2½	6	3.0	203	457	K45	—
	VS084	1.17	1.75	22.5	0-25	1 1/32	⅝	2	12	1	215	412	U15	M21
	VS086▲	1.75	2.50	45	0-4	1¾	⅝	3 1/16	12	1.8	213	415	U30	—
	VS090▲	3.15	4.50	90	0-10	3 23/32	1⅜	3 45/64	6	6.5	204	490	V60	—
	VS125▲	2.77	3.95	67.5	0-10	2 13/16	1⅜	3 23/32	12	9.8	200C	468	V45	—
	VS217▲	3.15	4.50	75	0-10	1 15/16	1 15/32	6 13/32	12	12.6	212	437	XX50	—
	VS218▲	2.70	3.85	67.5	0-8	1 23/32	63/64	5 1/16	12	6.4	211	477	P45	M21
	VS219▲	2.97	4.25	90	0-8	1 31/32	1 1/32	7 15/32	6	4.7	214	479	P60	—
	VS318▲	2.07	2.95	67.5	0-3	1 21/64	63/64	3½	6	1.5	217	416	UX45	—
	VS344	3.47	4.95	45	0-70	3 31/32	2 17/32	5 1/16	6	19.3	207	484	B30	—
HEARING AID TYPES	VS312■	.24	.35	1.4	0-2	—	0.312	0.140	60	3	—	E312	HG312	RM3
	VS400■	.33	.50	1.4	0-7	—	0.455	0.135	60	0.5	1106	E400	HG400	RM4
	VS401■	.62	.95	1.4	0-50	—	0.470	1.130	24	1	910M	E401	HG401	RM4
	VS575■	.24	.35	1.4	0-3	—	0.455	0.132	60	0.5	—	E575	HG575	RM5
	VS625■	.42	.60	1.4	0-5	—	0.615	0.238	40	0.5	—	E625	HG625	RM6
	VS630■	.49	.75	1.4	0-20	—	0.615	0.238	40	0.5	1104	E630	HG630	RM6
	VS675■	.325	.50	1.4	0-10	—	0.455	0.210	60	0.75	—	E675	HG675	RM6
	VS1713	.30	.45	1.5	0-1.5	—	0.310	0.206	60	0.5	—	S13	—	MS1
	VS1741	.30	.45	1.5	0-2.5	—	0.455	0.160	60	0.5	—	S41	—	MS4
	VS1776	.39	.60	1.5	0-10	—	0.455	0.210	60	0.5	—	S76	—	MS7
TYPES FOR TRANSISTOR APPLICATIONS	VS1■	.62	.95	1.4	0-75	—	0.627	0.650	40	2	1100	E1	HG1	RM1
	VS9■	.65	1.00	1.4	0-200	—	0.555	1.968	24	1¾	15M	E9	HG9	ZM9
	VS12■	.99	1.50	1.4	0-250	—	0.640	1.968	10	1¼	1101	E12	HG12	RM1
	VS126■	1.46	2.25	8.4	0-50	—	0.730	2.000	24	2	1611M	E126	H126	TR12
	VS132■	1.14	1.75	2.8	0-75	—	0.662	1.315	10	¾	1200	E132	H132	TR13
	VS133■	1.46	2.25	4.2	0-75	—	0.662	1.965	24	2.3	1306M	E133	H133	TR13
	VS146X■	1.27	1.95	8.4	0-30	1.031	0.660	1.641	24	2.5	1604M	E146X	H146X	TR14
	VS163■	1.62	2.50	4.2	0-50	—	0.662	1.327	10	¾	1305	E163	H163	TR16
	VS164■	1.47	2.25	5.6	0-50	—	0.662	1.767	24	2¼	1404	E164	H164	TR16
	VS165■	1.92	2.95	7	0-50	—	0.662	2.217	10	1	1500	E165	H165	TR16
	VS177■	1.47	2.25	9.8	0-10	—	0.547	1.906	24	1	1606M	E177	H177	TR17
	VS233■	2.60	4.00	4.2	0-60	—	1.016	1.969	10	2.5	1300	E233	H233	TR23
	VS300A	.68	.98	9	0-9	—	1	1 15/16	36	4	1600	226	P6	M16
	VS301	2.31	3.50	3, 6, 9	0-150	8	1 3/16	2 13/16	6	8	1601	2506	D6P1	—
	VS304	1.66	2.50	13.5	0-10	1 1/32	1 1/32	2 1/16	12	2.3	1900	239	XX9	—
	VS305	1.48	2.25	9	0-15	1 1/32	1 1/32	2¾	6	1.7	1602	246	2N6	M16
	VS306	1.66	2.50	9	0-30	2 1/16	2 1/32	3 5/32	6	5.6	1603	276	D6	M16
	VS322	1.36	1.95	9	0-20	1 13/16	1 13/16	2 1/16	12	5.3	1605	266	M6	M16
	VS323	.48	.69	9	0-8	1 1/32	3/32	1 3/32	72	6	1604	216	2U6	M16
	VS324	1.48	2.25	4.5	0-40	1 1/32	1 1/32	2¾	6	1.5	1610	243	2Z3	—
	VS327	.62	.89	9	0-7	—	¾	2	6	0.4	1611	206	L6	M16
	VS329	1.05	1.50	12	0-9	—	1	2 1/16	12	1.8	1810	228	PM8	—
	VS330	1.97	2.95	9	0-80	2 1/16	1 1/32	6¼	6	6.5	1612	2356N	C6X	—
	VS331	3.31	4.95	9	0-30	2 1/32	1¼	7 1/32	6	8¼	1608	2761N	D6S	—
	VS332	.68	.98	4.5	0-12	—	0.662	1.965	12	0.9	1306	333	—	—
	VS334	.155	.25	1.5	0-25	—	⅜	1 31/32	192	7.6	15	1015	930	M15
	VS335	.19	.30	1.5	0-80	—	1 1/32	1 15/16	192	17.6	14	1035	130	M14
	VS336	.19	.30	1.5	0-150	—	1 1/32	2 13/32	192	40	13	1050	230	M13
	VS337	3.31	4.95	4.5	0-200	2 13/16	1¾	8 1/32	6	10.5	1303	2731N	—	—
	VS338	1.66	2.50	6	0-25	1 13/32	47/64	4 1/16	6	1.4	1403	2713N	—	—
	VS339	1.29	1.95	9	0-20	1 13/32	47/64	4 1/16	6	1.5	1613	2709N	—	—
	VS640■	.49	.75	1.4	0-50	—	0.625	0.440	20	¾	1105	E640	HG640	RM6

• National Electronic Distributors Association. ‡ Flashlight Type Terminals. ■ Mercury Types. ▲ 2 Snap Fastene

Trade Discount Applies To List Prices Only

© United Technical Publicati

RCA

BATTERIES

RADIO • FLASHLIGHT • FARM • TRANSISTOR HEARING AID • INDUSTRIAL • PHOTO FLASH

LANTERN TYPES



FARM TYPES

INDUSTRIAL and SPECIAL-PURPOSE TYPES





PHOTO FLASH



ALKALINE TYPES



Type	Optional Distr. Resale Price Ea.	Optional List Price Ea.	Volts	Suggested Current Range mA	Max. Dimensions Inches L.	W. or Dia.	Overall Ht.	Standard Package Units	Lbs. (Appr.)	NEDA• Type No.	Replaces Eveready	Burgess	Mallory
VSPX14	1.27	1.95	2.7	0-5	—	0.660	0.610	20	1.0	—	EPX14	—	—
VSPX23	.62	.95	5.6	0-10	—	0.600	0.787	24	—	—	EPX23	—	—
VS034A♦	.13	.20	1.5	0-25	—	5/16	1 31/32	192	7	15F	915	Z	M15F
VS035A♦	.1625	.25	1.5	0-80	—	1 1/32	1 15/16	192	18.5	14F	935	I	M14F
VS036♦	.1625	.25	1.5	0-150	—	1 11/32	2 13/32	192	39	13F	950	2R	M13F
VS040C	.99	1.49	6	0-250	2 5/8	2 5/8	4 13/32	12	17	908	509	F4H	M908
VS040S	.99	1.49	6	0-250	2 5/8	2 5/8	4 5/16	12	18	915	510S	F4BP	M915
VS073	.095	.15	1.5	0-20	—	0.445	1.180	96	1.5	910	904	N	910F
VS074	.13	.20	1.5	0-20	—	13/32	1 3/4	48	1	24F	912	7	M24F
VS103	4.01	5.98	6	0-1000	8 3/16	2 13/16	6 7/16	4	26	902	706	4F4H	—
VS134	1.00	1.50	3	0-25	1 7/32	5/8	2 23/32	6	0.7	704	750	422	—
VS139	4.86	7.25	7.5	0-1000	7 1/4	4 1/16	6 7/16	4	30	903	715	4F5H	M903
VS140	5.53	8.25	9	0-1000	8 1/32	4 1/16	6 7/16	4	37	904	716	4F6H	M904
VS142	1.66	2.50	4.5	0-25	1 25/32	5/8	2 23/32	10	1.5	705	751	432	—
VS317	2.15	3.25	6	0-500	5 11/32	2 23/32	4 15/16	6	20	918	731	TW1	M918
VS342	2.33	3.50	12	0-250	5 11/32	2 23/32	4 15/16	6	20	926	732	TW2	—
VS343	.22	.35	1.5	0-150	—	1 11/32	2 13/32	192	40	13D	D99	—	—
			A B	A B									
VS022	8.91	11.95	1.5 90	0-300 0-12	15 11/16	4 1/32	6 13/16	1	16.5	413	759	17GD60	—
VS006C	1.05	1.59	1.5	0-1500	—	2 5/8	6 21/32	12	26	906	6GL	6TEL	M906
VS006S	1.05	1.59	1.5	0-1500	—	2 5/8	6 21/32	12	25	905	6IGN	6IGN	M905
VS028	1.48	2.25	4.5	0-50	2 7/16	2/32	3	5	1 1/2	714	781	5360	—
VS029	2.15	2.95	1.5, 3, 4.5, 6, 7.5	0-50	3 25/32	2 7/32	3	5	2 1/2	713	773	5540	—
VS039	3.98	5.98	6	0-1500	10 7/16	2 25/32	7 1/32	4	38	907	1461	S461	M907
VS040C	.99	1.49	6	0-250	2 5/8	2 5/8	4 13/32	12	17	908	509	F4H	M908
VS040S	.99	1.49	6	0-250	2 5/8	2 5/8	4 5/16	12	18	915	510S	F4BP	M915
VS070	1.29	1.95	1.5	0-250	—	1 11/32	4 1/16	6	4.5	23	960P	8R	—
VS083	1.00	1.50	15	0-2.5	1 1/32	5/8	1 29/64	6	0.4	208	411	U10	M208
VS084	1.17	1.75	22.5	0-2.5	1 1/32	5/8	2	12	1	215	412	U15	M215
VS085	1.30	1.95	30	0-2.5	1 1/32	5/8	2 5/16	12	1.3	210	413	U20	M210
VS093	9.07	12.95	300	0-2.5	2 11/16	2 7/32	3 29/32	3	3.2	722	493	U200	—
VS1	.62	.95	1.4	0-75	—	0.627	0.650	40	2	1100	E1	HG1	RM1
VS12	.99	1.50	1.4	0-250	—	0.640	1.968	10	1 1/4	1101	E12	HG12	RM12
VS100	1.48	2.25	3	0-250	2 21/32	1 11/32	4 5/16	5	3.5	701	W352	F2BP	—
VS101	.99	1.49	1.5	0-500	2 5/8	1 5/16	4 1/32	6	7	700	711	2FH	—
VS102	1.61	2.35	22.5	0-40	3 1/2	2 3/32	3 1/16	6	4.6	710	763	4156	—
VS103	4.01	5.98	6	0-1000	8 5/16	2 13/16	6 7/16	4	26	902	706	4F4H	—
VS106	.99	1.49	1.5	0-1000	2 5/8	2 5/8	4 13/32	12	18	900	735	4FH	M900
VS112	3.05	4.35	22.5, 45	0-50	4 3/32	2 5/16	5 7/16	6	20	700	762S	5308	—
VS114	2.69	3.85	22.5, 45	0-20	3 1/16	1 7/8	4 31/32	5	5	711	W350	Z30NX	—
VS127W	8.37	11.95	22.5, 45	0-250	8 1/32	4 1/16	7 5/8	4	44	724	W363F	10308SC	—
VS130	2.15	2.95	1.5, 3, 4.5	0-150	4 7/16	1 13/32	3 1/32	5	4.5	712	761T	2370ST	—
VS131	4.59	6.95	3, 4.5, 6, 9, 10.5, 16.5, 22.5	0-50	4	2 7/16	3 1/8	4	5.0	708	778	5156SC	—
VS132	1.14	1.75	2.8	0-75	—	0.662	1.315	10	3/4	1200	E132	H132	TR132
VS133	1.48	2.25	4.2	0-75	—	0.662	1.965	24	2.3	1306M	E133	H133	TR133
VS134	1.00	1.50	3	0-25	1 7/32	5/8	2 21/32	10	1	704	750	422	—
VS136	2.45	3.50	3	0-500	2 5/8	2 5/8	4 5/16	5	7.5	703	W356	2F2H	—
VS138	2.45	3.50	3	0-1000	3 25/32	2 11/16	5 13/16	5	13.5	901	W357	4F2H	—
VS139	4.86	7.25	7.5	0-1000	7 1/4	4 1/16	6 7/16	4	30	903	715	4F5H	M903
VS140	5.53	8.25	9	0-1000	8 3/4	4 3/16	6 7/16	4	37	904	716	4F6H	M904
VS157W	9.36	13.95	22.5, 45	0-300	8 1/8	4 7/16	7 11/16	4	51	715	W364F	21308SC	—
VS163	1.62	2.50	4.2	0-50	—	0.662	1.327	10	3/4	1305	E163	H163	TR163
VS164	1.47	2.25	5.6	0-50	—	0.662	1.767	24	2 1/4	1404	E164	H164	TR164
VS317	2.15	3.25	6	0-500	5 11/32	2 23/32	4 15/16	6	20	918	731	TW1	M918
VS340	4.66	6.98	12	0-600	10 7/16	2 25/32	7 1/32	4	32	922	1463	2G8H	—
VS342	2.33	3.50	12	0-250	5 11/32	2 23/32	4 15/16	6	20	926	732	TW2	—
VS346	1.36	1.95	4.5	0-50	2 5/16	2/32	3 1/16	10	3	706	703	532	—
VS400	.33	.50	1.4	0-7	—	0.455	0.135	60	1/2	1106	E400	HG400	RM400
VS630	.49	.75	1.4	0-20	—	0.615	0.238	40	1/2	1104	E630	HG630	RM630
VS640	.49	.75	1.4	0-50	—	0.625	0.440	20	3/4	1105	E640	HG640	RM640
VS704	1.00	1.50	15	0-1.5	5/8	1 9/32	1 3/8	12	0.6	220	504	Y10	M50
VS705	1.17	1.75	22.5	0-1.5	5/8	1 9/32	2	12	0.7	221	505	Y15	M505
VS734♦	.16	.25	1.5	0-25	—	5/16	1 31/32	96	3.5	15P	815	920	M15P
VS735♦	.19	.30	1.5	0-80	—	1 1/32	1 15/16	192	17	14P	835	120	M14P
VS736♦	.19	.30	1.5	0-150	—	1 11/32	2 13/32	72	13	13P	850	220	M13P
VS1340-B	.84†	1.25†	1.5	0-5	—	0.288	0.905	2 per card		—	EXP-825	APX825	PX825
VS3204**	2.15	3.25	4.5	0-6	0-6		1 3/8 2 3/4	12	4.9	—	460K	—	—

**Includes one No. 428 lamp. †Per card of 2 batteries.

VS1073	.325	.50	1.5	0-150	—	0.470	1.130	24	.6	910A	E90	AL-N	Mn9100
VS1074	.39	.60	1.5	0-200	—	0.410	1.735	48	2	24A	E92	AL-7	Mn2400
VS1149▲	1.14	1.75	4.5	0-100	—	0.662	1.965	24	2	1306A	523	AL-133	Mn1306
VS1323▲	.975	1.50	9	0-15	—	—	—	24	2.5	—	—	2U6	Mn1604
VS1334	.39	.60	1.5	0-300	—	0.550	1.960	96	5	15A	E91	AL-9	Mn1500
VS1335	.49	.75	1.5	0-500	—	1 1/32	1 15/16	48	8	14A	E93	AL-1	Mn1400
VS1336	.62	.95	1.5	0-1000	—	1 5/16	2 3/8	48	18	13A	E95	AL-2	Mn1300
VS1337	1.14	1.75	4.5	0-70	—	0.665	2.41	10	2	—	531	APX-19	PX19
VS1338	1.14	1.75	4.5	0-70	—	0.662	2.051	10	2	—	—	APX-21	PX21
VS1339	.975	1.50	3	0-70	—	0.665	1.67	10	1	—	532	APX-24	PX24
	RECHARGEABLE												
VS1513-P2	2.34†	3.50†	1.5	0-500	—	1.31	2.37	2 per card		—	—	—	SA-13D
VS1514-B	2.00†	3.00†	1.5	0-250	—	1.31	2.37	2 per card		—	—	—	SA14C
VS1515-B	1.32†	2.00†	1.5	0-75	—	1.31	2.37	2 per card		—	—	—	SA-15AA
VS1560	5.29	7.95	7.5	0-625	2.656	1.531	7.156	1	19.5	—	560	—	—
VS1561	11.29	16.95	15	0-1250	8.313	2.813	5.875	4	25.5	—	561	—	—
VS1563	3.00	4.50	4.5	0-625	—	1.359	7.156	3	11.0	—	563	—	—
VS1564	10.99	16.50	13.5	0-1250	8.313	2.813	5.875	1	24.0	—	564	—	—

r card of 2 batteries.

▲ Alkaline types specially designed for transistor radios.

♦ Flashlight-type terminals.

• National Electronic Distributors Association.

SOLA ELECTRIC STB
DIVISION OF SOLA BASIC INDUSTRIES

SOLATRON® ±½% LINE VOLTAGE REGULATORS

What It Is

The Solatron® LVR is the first regulator to combine in one unit the qualities of **fast response, "tight" voltage regulation, no moving parts, adjustable output, remote sensing, compactness, and high KVA capacity.**

The Solatron is a solid-state device with no moving parts, requiring no adjustment, maintenance, or attention. It combines the ruggedness typical of transformers with the light weight of electronic control circuitry, resulting in a regulator of remarkable compactness. It has great versatility in mounting, and installation.

Solatron® regulators are available as standard units in KVA ranges from ½ to 500 KVA, and yet they furnish a degree of regulation associated in the past with small VA capacity constant-voltage transformers and power supplies.

Units are available for single or three-phase applications, for either delta or wye connection depending on the service available or the load requirements of your equipment.

And What It Does

Regulation: ±0.5% for line changes. ±1% maximum for any combination of line, load, temperature and frequency changes within limits listed below.

Variation limits: line ±10%, or + 10%/—20%. Frequency 57-63 cycles, 47-53 cycles, or 380-420 cycles depending on model chosen (see catalog listings). Load zero to full load. Temperature 15° to 40°C.

Response: correction begins in first ½ cycle and is typically 100% complete in less than 10 cycles of the AC frequency.

Harmonic content: no harmful wave-form distortion.

Adjustable output: output voltage is adjustable ±10% of nominal output voltage.

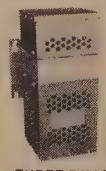
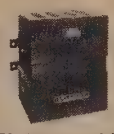
No maintenance: contains no relays, switches, contacts, solenoids, tap, bearings, or other moving parts. No drive motors, servos, or hand cranks. Requires no maintenance: operates completely unattended.

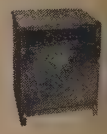
Current capability: withstands high inrush load currents and momentary overloads.

Motor loads: will handle inrush starting current without serious voltage collapse; provides adequate starting torque; no necessity to oversize KVA rating.

Mounting flexibility: may be mounted on wall, floor, or in equipment being regulated. Large terminal compartment, stud or screw-type terminals, knockouts for ease of wiring and installing.

Remote sensing: sensing leads easily connected to load for remote location of Solatron® LVR or for line drop compensation where desired.



SINGLE-PHASE (60 Hz ±3 Hz)

Maximum Output KVA Rating [1]	Nominal Output Voltage [2]	Output Voltage Adjustability [3]	Input Voltage Range [4]	Maximum Harmonic Content [5]	Catalog Number	Approx. Shipping Weight	Suggested User Price F.O.B. Factory
.5	120	108-132	±10%	3%	31-16-150	30	311.85
.5	120	108-132	+10/—20%	5%	33-16-150	40	340.20
1	120	108-132	±10%	3%	31-16-210	40	334.50
1	120	108-132	+10/—20%	5%	33-16-210	58	374.20
2	120	108-132	±10%	3%	31-16-220	55	374.20
2	120	108-132	+10/—20%	5%	33-16-220	100	498.95
3	120	108-132	±10%	7%[6]	31-16-230	78	464.95
3	120	108-132	+10/—20%	5%	33-16-230	130	555.65
5	120	108-132	±10%	7%[6]	31-16-250	100	532.95
5	120	108-132	+10/—20%	5%	33-16-250	185	680.40
7.5	120	108-132	±10%	7%[6]	31-16-275	132	612.35
7.5	120	108-132	+10/—20%	5%	33-16-275	275	827.80
10	120	108-132	±10%	7%[6]	31-16-310	170	680.40
10	120	108-132	+10/—20%	5%	33-16-310	310	918.55
15	120	108-132	±10%	7%[6]	31-16-315	275	850.50
15	120	108-132	+10/—20%	5%	33-16-315	400	1088.65
25	120	108-132	±10%	7%[6]	31-16-325	400	1020.60
25	120	108-132	+10/—20%	5%	33-16-325	520	1445.85
37.5	120	108-132	±10%	8%[6]	31-16-337	525	1247.40
50	120[7]	114-126	±10%	9%	31-16-350-5	1050	2086.55[8]
50	240[7]	228-252	±10%	9%	31-26-350-5	1050	2086.55[8]
75	120[7]	114-126	±10%	9%	31-16-375-5	1625	2613.85[8]
75	240[7]	228-252	±10%	9%	31-26-375-5	1625	2613.85[8]
100	120[7]	114-126	±10%	9%	31-16-410-5	1900	3129.85[8]
100	240[7]	228-252	±10%	9%	31-26-410-5	1900	3129.85[8]
150	120[7]	114-126	±10%	9%	31-16-415-5	2200	3747.65[8]
150	240[7]	228-252	±10%	9%	31-26-415-5	2200	3747.65[8]

THREE-PHASE DELTA (60 Hz ±3 Hz)

Maximum Output KVA Rating 1 9	Nominal Output Voltage 2	Line-to-Line Output Voltage Adjustability	Input Voltage Range	Maximum Harmonic Content	Catalog Number	Approximate Shipping Weight	Suggested User Price F.O.B. Factory
13	208△	188-228	+10/—20%	5%	39-09-313	905	2239.65
17	208△	188-228	+10/—20%	5%	39-09-317	1045	2483.45
26	208△	188-228	+10/—20%	5%	39-09-326	1300	2948.40
43	208△	188-228	+10/—20%	5%	39-09-343	1645	3912.30

Other Capacities available on order from factory. Contact your nearest Sola Electric distributor or representative. (6 to 8 week delivery).

NOTE: 50Hz units are also available.

THREE-PHASE WYE (60 Hz ±3 Hz)

Maximum Output KVA Rating 1	Nominal Output Voltage 2	Line-to-Neutral Output Voltage Adjustability 3	Input Voltage Range 4	Maximum Harmonic Content 5	Catalog Number	Approximate Shipping Weight	Suggested User Price F.O.B. Factory
15	208/120 Y	108-132	+10/—20%	5%	39-06-315	695	1842.75
30	208/120 Y	108-132	+10/—20%	5%	39-06-330	1045	2483.45
45	208/120 Y	108-132	+10/—20%	5%	39-06-345	1300	2948.40

Other Capacities available on order from factory. Contact your nearest Sola Electric distributor or representative. (6 to 8 week delivery).

NOTE: 50 Hz units are also available.

Harmonic Filter Selection

Example: If you select a Solatron catalog number — 31-16-230 — and require a Harmonic filter, find the Catalog number series in chart A, B or C 31-16 and then the catalog number suffix 230. The Harmonic filter in this case would be 34-905.

Auxiliary Harmonic Filters

SELECTION CHART A[4]

Catalog Number Series	Catalog Number Suffix						
	—230	—250	—275	—310	—315	—325	—337
31-16	34-905	34-910	34-910	34-920	34-920	34-930	34-940
31-26	34-905	34-905	34-910	34-910	34-910	34-920	34-930
31-46		34-905	34-905	34-910	34-910	34-910	34-920

SELECTION CHART B (Three Units Required)[6]

Catalog Number Series	Catalog Number Suffix						
	—290	—315	—322	—330	—345	—375	—411
37-06	34-905	34-910	34-910	34-920	34-920	34-930	34-940

SELECTION CHART C (Three Units Required)[6]

Catalog Number Series	Catalog Number Suffix						
	—252	—285	—313	—317	—326	—343	—365
37-29	34-905	34-905	34-910	34-910	34-910	34-920	34-930
37-49		34-905	34-905	34-910	34-910	34-910	34-920

Auxiliary Harmonic Filters

Catalog Number Series	Suffix	USER OEM Contractor 1-9 Units	Catalog Number	Approximate Shipping Weight
34	—905	68.05	34-905	17
	—910	102.05	34-910	22
	—920	170.10	34-920	45
	—930	204.10	34-930	65
	—940	272.15	34-940	80

FOOTNOTES

1. At unity power factor and nominal output voltage. Although the KW efficiency is greater than 90%, the VA efficiency under worst-condition operation can be 60% for +10/—20% input voltage range units.
2. The output voltage regulation is ±0.5% for line voltage changes or ±1% for any combination of line voltage, frequency, load or temperature changes within the limits specified.
3. The output voltage adjustability is accomplished by an internal multi-turn potentiometer. Regulation in accordance with note (2) will be maintained at any output voltage setting within the specified adjustable range.
4. The input voltage range (either ±10% or +10/—20%) is based on the output voltage setting. The output voltage is adjustable ±10% of the rated nominal output by means of an internal multi-turn potentiometer. Therefore, the input voltage range shifts lineally with the setting of this control.
5. Maximum additive RMS harmonic content at nominal frequency.
6. 3% maximum additive RMS harmonic content may be obtained by using an auxiliary harmonic filter. See selection chart A.

   3% maximum additive RMS harmonic content may be obtained by using three auxiliary harmonic filters (one each line-to-neutral). See selection chart B.

   3% maximum additive RMS harmonic content may be obtained by using three auxiliary harmonic filters (one each line-to-line). See selection chart C.
7. Special sensing circuit filters must be ordered when feeding a rectified load. These are furnished at no additional charge.
8. F.O.B. Goldsboro, North Carolina. All other units are F.O.B. Elk Grove Village, Illinois.
9. The lowest line-to-line load should not be less than 70% of the highest line-to-line load, and the highest line-to-line load equal to, or less than, ⅓rd of the three-phase delta nameplate KVA rating. Additionally, the lowest line current should not be less than 90% of the highest line current.

Net © United Technical Publicati

SOLA® CVDC power supplies, available off-the-shelf.

Sola offers a wide range of CVDC type power supplies which are available from stock of your local electronic parts distributor or the factory. These standard designs are available in any quantity and are the result of Sola custom engineering efforts.

Inherently highly reliable, the CVDC supplies are ruggedly built and use simple circuitry. Fast and dependable regulation, current limiting, and high efficiency are provided by the heart of the supply: the famous Sola Constant Voltage Transformer.

CHARACTERISTICS

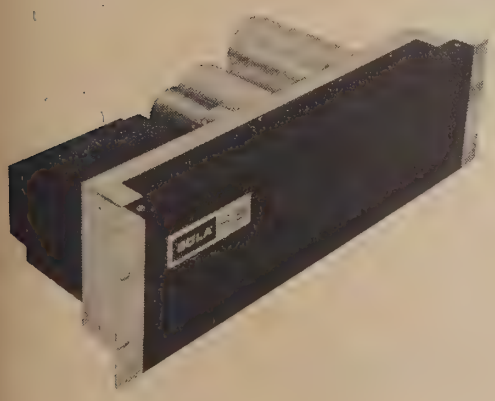
- Fast, dependable line-voltage regulation: within ±1% for fluctuations of ±15%; voltage will return to regulation envelope in approximately 50 milliseconds.
- Load regulation: from 1/2% to 8%, one half to full load.
- Automatic current limiting: short circuit protection; withstands load faults; high overloads cannot damage power supply or equipment components.
- High efficiency: upwards of 75%; low input-power requirements.
- Simplified operation: no adjustments or maintenance; continuous duty.
- Convection cooling.
- Ripple: 1% rms maximum.
- Ambient operating temperature: 50° C maximum.

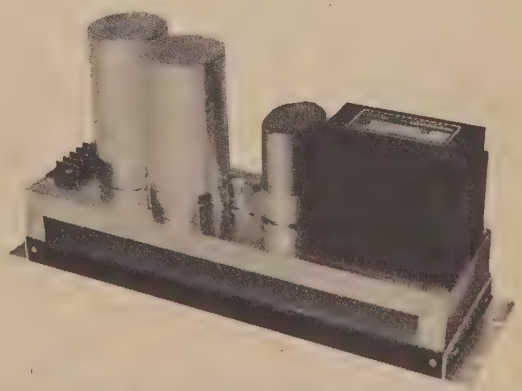
Constant-voltage Sola transformer provides ±1% regulation for line voltage variations as great as ±15%, serves as the heart of CVDC power supplies for voltage-sensitive equipment.

STANDARD CVDC MODELS

(fixed output for pulse, variable, intermittant and fixed loads-inputs 100-130 volts, 60Hz)

CATALOG NO.	OUTPUT RATINGS VOLTS	AMPS	VA	PANEL HT.	WT. LBS.	PRICE 1-4
281513-2	6	10	60	3½	27	$115.50
282123	6	15	90	5¼	38	126.50
281514-2	12	5	60	3½	18	115.50
282124	12	10	120	5¼	31	132.00
281515-2	18	5	90	3½	20	121.00
282125	18	10	180	5¼	45	159.50
281024-1	24	6	144	5¼	30	115.50
282126	24	10	240	5¼	48	137.50
281203	24	15	360	8¾	64	170.50
282127	24	25	600	7	72	222.20
28626-1	28	8	224	5¼	42	132.00
282128	28	15	420	7	55	214.50
281048	48	4	192	5¼	32	121.00
281561	48	10	480	5½	48	170.50
282129	48	20	960	8¾	95	275.00
281125	125	2	250	5¼	44	137.50
281150	150	2	300	5¼	48	143.00
281200	200	1	200	5¼	39	121.00
281250	250	1	250	5¼	45	126.50





SOLA ELECTRIC SB

DIVISION OF SOLA BASIC INDUSTRIES

manufacturers of AC & DC Power Supplies • Sola Constant-Voltage Transformers • Solatron Line-Voltage Regulators • DC-to-AC Inverters • Lighting Ballasts

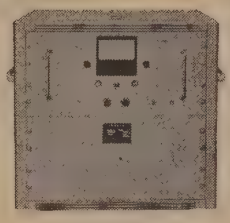
STABILINE® automatic VOLTAGE REGULATORS

- THE MOST EXTENSIVE LINE OF AUTOMATIC VOLTAGE REGULATORS
- RATED OUTPUTS FROM 0.25 TO 275 KVA

Deliver a constant output voltage regardless of variations in inpu voltage or changes in load current. Conservatively rated, ruggedl built, precision products. Submit specifications for ratings desired bu not given in the charts. Input voltage ranges shown are at nomin output voltage; input voltage range shifts with output voltage settin All are cabinet types; those with other construction also are indicate

EMT series

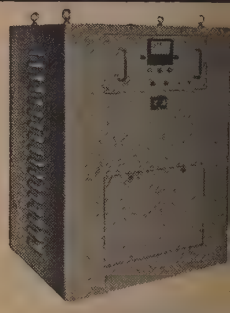
Electro Mechanical Transistorized types in ratings from 2.3 to 118 kva. Control circuit is completely transistorized. POWERKOTE Coils in power section permit higher output ratings. Rated accuracy ±0.75% for all variations of line voltage or load current within stated range of unit.



TYPE EMT4115B

EMS series

Electro Mechanical Transistorized types for single or three phase duty with ratings from 25 to 275 kva. Several types available with individual line control for greater application flexibility. Plug-in transistorized control circuit permits quick replacement in event of malfunction.



TYPE EMS42100



TYPE EMK4105R

EMK series

Electro Mechanical high speed, high accuracy assemblies in ratings of 2.5/5.0 KVA. Accuracy ±1.0% of nominal output voltage.

IES series



TYPE IES9101

Solid-state types with accuracy within 100 millivolts bandwidth, efficiency up to 95%, fast response, low distortion and wide operating frequency range. No vacuum tubes, motors, blowers or relays are used. All units have provision for remote sensing and have removable plug-in solid-state circuit boards.

All-boost Marine

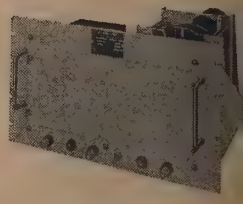
Electro Mechanical Transistorized type EMT10228 is fully enclosed in a weatherproof cabinet. Well suited for marine or industrial applications where equipment must withstand effects of dust and moisture. Has 6 KVA rated output.



TYPE EMT10228

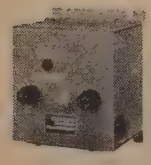
Militarized

Standard Electro Mechanical and Electro Mechanical Transistorized types that meet the requirements of applicable military specifications. Type EMTH41007MH is 3½ x 6 x 4½"; type EM4108MCR fits standard 19" relay rack. Accuracy ±1.0%.



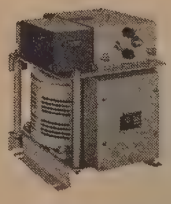
TYPE EM4108MCR

Overvoltage Detector OVK100



TYPE OVK100

Solid-state voltage level detector used with STABILINE Automatic Voltage Regulators. Actuates relay contacts when monitored voltage exceeds preset level. Relay contacts can be used to actuate protective equipment in a latching (relay remains closed) or nonlatching (relay automatically resets) connection. Trip level adjustable from 110 to 150 volts. Adaptable for higher voltage operation.



TYPE EMT4104BUT

Types EMT4104B, (U), (UT)

Have two primary windings for parallel or series (120 or 240 volt) duty. Type EMT4104B is cabinet enclosed; EMT4104BU is of open construction; EMT4104BUT has components screened or enclosed.

THE SUPERIOR ELECTRIC COMPANY

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGE

© United Technical Publicati

EMT SERIES

AL JT GE	OUTPUT VOLTAGE (ADJUSTABLE)	INPUT VOLTAGE RANGE‡‡	MAXIMUM OUTPUT AMPERES	RATED OUTPUT KVA	CORRECTION RATE AT 60 HERTZ (SECONDS/VOLT)	TYPE
0 HERTZ, SINGLE PHASE OPERATION						
	110-120	95-135	20	2.3	0.075	EMT4102B†
			57	6.6	0.075	EMT4106C§
		90-115	52	6.0	0.12	EMT10228
		105-125	114	13.0	0.15	EMT4112B§*
		95-135	144	16.6	0.125	EMT4115B
¶	110-120	108-137	35	4.2	0.10	EMT4104B††
‡	220-240	195-255	36	8.3	0.083	EMT4207B
			93	21.4	0.083	EMT4220
		205-250	130	29.9	0.111	EMT4228C
‡¶	220-240	228-256	35	8.4	0.10	EMT4104B††
	440-480	400-520	20	9.2	0.041	EMT4407B
			45	20.7	0.041	EMT4418B
0 HERTZ, THREE PHASE OPERATION						
‡	220-240	195-255	33	13.1	0.08‖	EMT6210YB
			48	19.1	0.083	EMT6215YB
			63	25.1	0.083	EMT6220YB
			145	57.8	0.25	EMT6245YB
			188	74.9	0.25	EMT6270DB
	440-480	400-520	18	14.3	0.041	EMT6412YB
			24	19.1	0.041	EMT6417YB
			35	27.9	0.041	EMT6425YB
			75	59.8	0.125	EMT6450YB
			100	75.0	0.125	EMT6475YB
		420-500	148	118	0.188	EMT64100YB

EMS SERIES

ERTZ, SINGLE PHASE, 2-WIRE						
5	110-120	103.5-126.5	833	100	0.65	EMS41100
0‡	220-240	218.5-241.5	435	100	0.22	EMS42100‡
0 HERTZ, SINGLE PHASE, 3-WIRE, INDIVIDUAL LINE CONTROL						
120	230-250/115-125	204-276/102-138	104	25.0	.03/.06	EMSI4225
			250	60.0	.03/.06	EMSI4260
	220-240/110-120	228-252/114-126	417	100	.10/.21	EMSI42100††
0 HERTZ, THREE PHASE, SINGLE CONTROL						
0‡	220-240	203-257	339	135	0.28	EMS62135Y‡
0	440-480	445-495	230	180	0.30	EMS64180Y
			347	275	0.30	EMS64275Y
0 HERTZ, THREE PHASE, INDIVIDUAL LINE CONTROL						
120	191-217/115-125	177-239/102-138	250	90.0	.08/.14	EMSI6290Y
		165-233/95-135	525	190	.37/.22	EMSI62190Y††

EMK SERIES

0 HERTZ, SINGLE PHASE						
5	110-120	95-135	23	2.6	0.02	EMK4105†
		105-125	46	5.3	0.04	

IES SERIES

R 60 HERTZ ±10%, SINGLE PHASE						
5	110-120	95-135**	4.4	0.5	—	IES91005
			8.7	1.0	—	IES9101
			26.1	3.0	—	IES9103
			52.2	6.0	—	IES9106
			87.0	10.0	—	IES9110
			130	15.0	—	IES9115
0	220-240	195-255**	13	3.0	—	IES9203
			26.1	6.0	—	IES9206
			43.5	10.0	—	IES9210
			65	15.0	—	IES9215

MILITARIZED TYPES

66 HERTZ, SINGLE PHASE						
20	115-125	105-135	66.6	8.0	0.10	EM4108MCR
0-420 HERTZ, SINGLE PHASE						
15	115	103.5-126.5	6	0.69	0.13▲	EMTH41007MH

‡At 400 hertz. †Also available as rack model (suffix R when ordering). ¶For 60 hertz operation only.
§Can also be operated on an input range of 95 to 135 volts with a rating of 57 amperes, 6.6 kva and a correction rate of 0.075 seconds per volt.
*Also available as rack (suffix R when ordering) or wall mounted (suffix W when ordering) models.
**Unit can be converted for 208 volt operation by simple tap changes. Input and output voltage ranges change proportionally.
‖At nominal output. Shifts with output voltage setting but not proportionally.
††Also available in open construction (suffix U) and with screened and enclosed (suffix UT) construction.
▲At nominal output. Shifts proportionally with output voltage setting.

CTIONS 2100, 3500 AND 5600

STABILINE®

FULL RANGE REGULATOR CONTROLLERS



TYPE FR501MP

For use with any motor-driven POWERSTAT® Variable Transformer to provide full range:

1. REGULATED AC VOLTAGE

A type FR501 or FR501MP STABILINE Full Range Regulator Controller can regulate the output from any motor-driven POWERSTAT Variable Transformer designed for 120 or 240 volt, 50/60/400 hertz, single phase service. For three-phase applications the unit may be used to monitor one line-to-neutral or one line-to-line voltage, depending on the type of variable transformer used. The unit may also be used in 480 volt applications, but when sensing line-to-line voltage, a 480/120 volt step-down transformer, Superior Electric part no. T6026, is required. Output voltage will remain within a 2 volt band when used with 120 volt POWERSTAT Variable Transformers and within a 4 volt band when used with 240 volt POWERSTAT Variable Transformers. The output voltage will remain within the stated bands for any and all variations in line voltage that the variable transformer is capable of correcting and for variations in the control input between 95 and 135 volts.

2. REGULATED AC CURRENT

With the addition of a T6340 transformer and a user supplied current transformer, an FR501 or FR501MP Full Range Regulator Controller can be used with any motor-driven POWERSTAT Variable Transformer to automatically regulate current. The user-supplied current transformer should be of the proper rating to supply 0 to 5 amperes, 10 VA minimum to the transformer. The Full Range Regulator Controller will maintain constant output voltage accurate within ±1% of the maximum current setting. Current can be maintained at any point from zero to maximum.

3. REGULATED DC VOLTAGE

A type FR501DC STABILINE Full Range Regulator Controller is used to provide regulated d-c voltage. Required are a motor-driven POWERSTAT Variable Transformer, an FR501DC Full Range Regulator Controller and a user-supplied d-c power supply. The FR501DC requires 0 to 28 volts d-c, 16 milliamperes to the sensing terminals.

Terado

DEALER NET PRICES

CHARGERS, INVERTERS AND VOLTAGE ADJUSTERS

CHANGES BATTERY CURRENT TO 110 VAC, 60 CYCLE, ±½ CYCLE, REGARDLESS OF LOAD*

CAN BE ADAPTED FOR 50 CYCLE USE †

SOLID STATE

INVERTERS

FREQUENCY STABLE QUAD CONTINENTAL

Transistorized, 1200 watts



Converts 12 VDC to 117 VAC, 60 Hz, 1100 to 1200 watts. Frequency stable within ¼ Hz, not affected by change in input or load. Filtered for sensitive electronic equipment. Operates such equipment as small refrigerators, lights, tape recorders, video cameras and tape recorders, electric tools, laboratory test equipment, television, including color, and portable hospital equipment. Adjustable output control and accurate AC output meter. Sophisticated, solid state design at sensible cost. Variable control head may be installed from main unit with 4 optional plug-in extension cables. Size: 12" w. x 12" l. x 15" h. Shpg. Wt., 140 lbs.
Terado No. 50-110—Net Each..... $610.05

DUAL CONTINENTAL*†

Transistorized, 600 watts

Same as QUAD CONTINENTAL except: 550 to 600 watts capacity. Size 10¾" w. x 13" d. x 6" h. Shpg. Wt., 60 lbs.
Terado No. 50-202—Net Each..... $327.74

CONTINENTAL*†

Transistorized, 300 watts

Same as DUAL CONTINENTAL except: 275-300 watts capacity. Size: 10¾" w. x 6" d. x 6" h. Shpg. Wt., 30 lbs.
Terado No. 50-191—Net Each..... $158.40

ATLAS*†

Transistorized, 200 watts

Same as DUAL CONTINENTAL except: 175-200 watts capacity. Size: 10¾" w. x 6" d. x 6" h. Shpg. Wt., 21 lbs.
Terado No. 50-200—Net Each..... $114.53

TITAN*†

Transistorized, 175 watts

Same as DUAL CONTINENTAL except: less remote control; 150-175 watts capacity; on-off switch; AC receptacle. Size: 10¾" w. x 6" d. x 6" h. Shpg. Wt., 20 lbs.
Terado No. 50-201—Net Each..... $100.51

SUPREME*†

Non-transistorized. Converts 12 VDC to AC. Power output, 175-200 W, filtered. Remote control has variable AC output switch and signal light. Size: 10¾" w. x 6" d. x 6" h. Shpg. Wt., 20 lbs.
Terado No. 50-153—Net Each..... $84.07

RECORDER*†

150-175 watt version of SUPREME, less remote control. Plugs into cigarette lighter. Size: 10¾" w. x 6" d. x 6" h. Shpg. Wt., 21 lbs.
Terado No. 50-175—Net Each..... $76.67

CHIEF*†

Operates tape recorders, power tools, dictation machines, mixers, blenders, etc. Front AC receptacle connects direct to battery. Toggle switch output control. Ventilated steel case. Size: 3½" w. x 6½" d. x 4" h. Shpg. Wt., 8 lbs.
Terado No. 50-137—Input, 6 V; AC power output, 75-100 watts. Net Each..... $53.90
Terado No. 50-138—Input, 12 V; AC power output, 100-125 watts. Net Each..... $53.90

AUTOMATIC*†

Operates automatically from 6 or 12 VDC without vibrator change or switching (6 V, 55-75 watts; 12 V, 85-110 watts). Easy installation into cigarette lighter. For dictation machines, radios, tape recorders, phonographs, heating pads, etc. Steel case. Seal brown baked enamel. Size: 3½" w. x 6½" d. x 4" h. Shpg. Wt., 8 lbs.
Terado No. 50-134—Net Each..... $44.52

SUPER*†

Single input version of AUTOMATIC above. Size: 3½" w. x 6½" d. x 4" h. Shpg. Wt., 8 lbs.
Terado No. 50-126—Input, 6 V; AC power output, 60-75 watts. Net Each..... $38.47
Terado No. 50-127—Input, 12 V; AC Power output, 75-100 watts. Net Each..... $38.47

MASTER*†

Voltage input, 12 V; AC power output, 60-75 watts. Size: 3½" w. x 6½" d. x 4" h. Shpg. Wt., 6 lbs.
Terado No. 50-122—Net Each..... $32.55

ELECTRAL*

Glove compartment size inverter, available in 12 volt input. Easy installation into cigarette lighter. Vinyl coated steel case with leatherette appearance. Size: 3" w. x 2¼" d. x 5½" h. Shpg. Wt., 3 lbs.
Terado No. 50-167—Voltage input, 12 V; AC power output, 42-52 watts. Net Each..... $21.30

SENIOR*

Operates radios, lights, phonographs and small tape recorders. Available in 6 V or 12 V input. Simple to install into cigarette lighter. Aluminum case. Seal brown baked enamel. Size: 2½" w. x 4½" d. x 2¼" h. Shpg. Wt., 3 lbs.
Terado No. 50-115—Voltage input, 6 V; AC power output, 35-40 watts. Net Each..... $18.47
Terado No. 50-116—Voltage input, 12 V; AC power output, 40-50 watts. Net Each..... $18.47

DYNAMO*

Permits operating AC radios and electric shavers on 12 VDC battery. Power output, 25-30 watts. Size: 2" x 2" x 3¾". Shpg. Wt., 2 lbs.
Terado No. 50-197—Net Each..... $13.80

AUTO SHAVER*

Operates all electric shavers. Available in 6 V (10-15 W) or 12 V (15-20 W) input. Plugs into cigarette lighter. Polyethylene non-breakable case. Size: 3⅝" w. x 2¼" d. x 4¼" h. Shpg. Wt., 2 lbs.
Terado No. 50-102—6 V. Net Each..... $11.85
Terado No. 50-103—12 V. Net Each..... $11.85

ULTRA FINE FREQUENCY STABLE INVERTERS

DUAL CONTINENTAL-3

Converts 12 VDC to 110 VAC, 60 Hz, 550-600 watts. Frequency variation plus or minus ⅛ Hz with changing input and load. Ideal for operation of fine or critical equipment as: video-tape equipment and instruments. Includes battery cables, remote control and variable AC output. Size: 10¾"x13"x6"; shipping weight 60 lbs.
Terado No. 50-202-3—Net Each..... $417.64

CONTINENTAL-3

Same as DUAL CONTINENTAL-3 Except 275-300 watts, capacity — Frequency stable to plus or minus ¼ Hz. Size: 10¾"x6"x6"; shipping weight 30 lbs.
Terado No. 50-191-3—Net Each..... $233.40

24 VOLT TRANSISTORIZED INVERTERS WITH ULTRA FINE FREQUENCY CONTROL

DUAL CONTINENTAL — 24 VOLT

Converts 24 VDC to 110 VAC, 60 Hz, 700-800 Watts, Frequency stable to ± ⅛ Hz with changing input and load. Designed for duty in aircraft or other 24 volt D.C. applications. Includes battery cables, remote control and variable A.C. output. Size: 10¾"x13"x7¼": shipping weight 60 lbs.
Terado No. 50-152—Net Each..... $621.23

CONTINENTAL — 24 VOLT

Same as 24 Volt Dual Continental; except 350-400 watt capacity—Frequency stable to ± ¼ Hz; Size: 10¾"x6"x6"; Shipping weight 30 lbs.
Terado No. 50-190—Net Each..... $305.35

BATTERY CHARGERS

DYN-A-MITE

Baked seal brown paint over aluminum case. Charge rate 1 amp, both 6 and 12 volts. Size: 1¾" x 1¾" x 3¼". Wt., 1 lb.
Terado No. 50-186—Net Each..... $7.19

CHARGRITE

Brown baked enamel, ventilated steel case. Charge rate 5 amps. tapers to trickle. 12 volts only. Charge rate meter. Brackets for coiling wire provided. Size: 4"x5"x6". 10 lbs.
Terado No. 50-194—Net Each..... $23.30

TAPERITE

Brown baked enamel case. Charges 6 amps, or in low position charge automatically tapers to 0. Will not overcharge battery; has charge rate meter. Size: 4" x 5" x 6". Wt., 7½ lbs.
Terado No. 50-192—Net Each..... $28.42

CHALLENGER

Brown baked enamel, ventilated steel case. Charge rate 6 amps, both 6 and 12 volts. Charge rate meter. Brackets for coiling wire provided. Size: 4" x 5" x 6". Wt., 5 lbs.
Terado No. 50-189—Net Each..... $23.92

SUPER CHARGER

Brown baked enamel, ventilated steel case. Charge rate 10 amps, both 6 and 12 volts. Color coded meter shows condition of battery and charge rate. Size: 4" x 5" x 6". Wt., 7½ lbs.
Terado No. 50-181—Net Each..... $29.05

POWERHOUSE

Heavy duty, heavy copper clad, ventilated steel case with handle. Full fast 20 amp charge rate on either 6 or 12 volt batteries, plus trickle charge. Full wave type with 4 silicon rectifiers. Complete with charge rate meter and 6 ft. cable with battery clamps. Size: 11" x 6" x 6" Ship. Wt., 20 lbs.
Terado No. 50183—Net Each..... $54.15

VOLTAGE ADJUSTERS

POLARIS & SATURN

For TV, hi-fi and AC motorized equipment. Change high or low voltage over range of 95-135 V to normal. Input: 110 VAC line. Size: 3" x 2¼" x 5½"
Terado No. 50-204 Polaris—Cap., 300 W cont., 500 W int. Wt. 3 lbs. Net Each..... $11.40
Terado No. 50-172 Saturn—Same as Polaris, but with accurate AV voltmeter. Net Each..... $18.77

APPOLLO

Cap. 1200 W Cont. 1500 W int. Wt. 8 lbs. Size: 3½" x 6½" x 4".
Terado No. 50-141—Net Each..... $22.75

KORECT-A-LINE

For CB and Ham radio equipment, monitor and correct abnormal voltage; accurate AC voltmeter. Cap., 300 W cont. Wt. 3 lbs.
Terado No. 50-150—Net Each..... $18.77

INVERTER-CHARGER COMBINATION

Transistorized — Solid State
Frequency Not Controlled

MARK I

Copper baked enameled case. Changes battery voltage to 117 volts, AC capacity 450 to 500 watts. Charges 12 volt storage battery at 20 amps, 10 amps or trickle. Has charge meter. Size: 12½" x 6" x 6". Shpg. Wt., 21 lbs.
Terado No. 50-131—Net Each..... $104.50

MARK II

Same specifications as MARK I above except inverter capacity is 275-300 watts.
Terado No. 50-132—Net Each..... $89.50

12 VDC POWER SUPPLIES with BATTERY CHARGING FEATURE

POWR-MITE

Brown baked enamel, ventilated steel case. Supply and charge rate 10 amps. 12 volts D.C. Filtered for 1 amp. loads. Includes output meter. Size: 3½" x 4" x 6½". Wt. 10 lbs.
Terado No. 50-105—Net Each..... $32.90

POWR-ALL

Same type as Powr-Mite except: Capacity 25 amperes—continuous 40 amps. intermittent. Two complete circuits. SEPARATE CIRCUIT BREAKERS. Battery Charge rate 25 amps. to trickle. Filtered for 1 amp. loads. Size: 12½" x 6" x 6". Wt. 21 lbs.
Terado No. 50-106—Net Each..... $61.20



POLARIS KORECT-A-LIN SATURI



ATLAS TITAN
SUPREME, CONTINENTAL



ELECTRAL



RECORDER



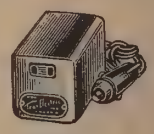
CHIEF



AUTOSHAVER



GALAXY, TEMPEST



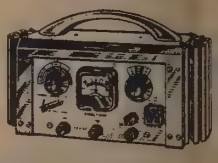
SENIOR, DYNAMO



AUTOMATIC, SUPER AND MASTER



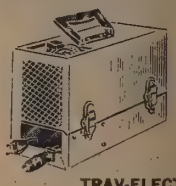
DYN-A-MITE



MARK I MARK II



CHALLENGER, SUPER CHARGER



TRAV-ELECTRIC

PORTABLE 117 VOLT POWER SUPPLY

TRAV-ELECTRIC*†

Operates anything using 117 VAC, 60 Hz, from enclose 25 amp storage battery. Capacity, 125-175 watts. Fre quency stable within ½ Hz with load change. Recharge from AC outlet or car cigarette lighter. Meter show charge rate and hours of output. Size 12" x 5½" x 8" Shpg. Wt., including battery, 36 lbs.
Terado No. 50-160—Net Each..... $74.1

TRANSISTORIZED INVERTERS

Frequency Not Stabilized

GEMINI

(Transistorized, 450 to 500 watts)

Transistorized 12 VDC to 110 VAC. Designed t operate equipment not sensitive to frequency chang Size: 12½" x 6" x 6". Shpg. Wt., 20 lbs. $97.
Terado No. 50-128—Net Each.....
Remote Control No. 50-130—Net Each..... $11.5

FALCON

(Transistorized, 275 to 300 watts)

Transistorized 12 VDC to 110 VAC. Designed t operate equipment not sensitive to frequency chang Size: 12½" x 6" x 6". Shpg. Wt., 20 lbs. $78.
Terado No. 50-129—Net Each.....
Remote Control No. 50-130—Net Each..... $11.5

GALAXY

Transistorized 12 VDC to 110 VAC, 140-175 watts fi tered. Adjustable voltage and frequency. Ideal whe frequency is not critical, Size: 10¾" w. x 6" d. x 6" Shpg. Wt., 9½ lbs. $46.
Terado No. 50-205—Net Each.....

TEMPEST

Transistorized 12 VDC to 110 VAC, 125-150 watt Ideal where frequency is not important. Size: 10¾" w x 6" d. x 6" h. Shpg. Wt., 9½ lbs. $39.
Terado No. 50-170—Net Each.....

TERADO CORPORATION

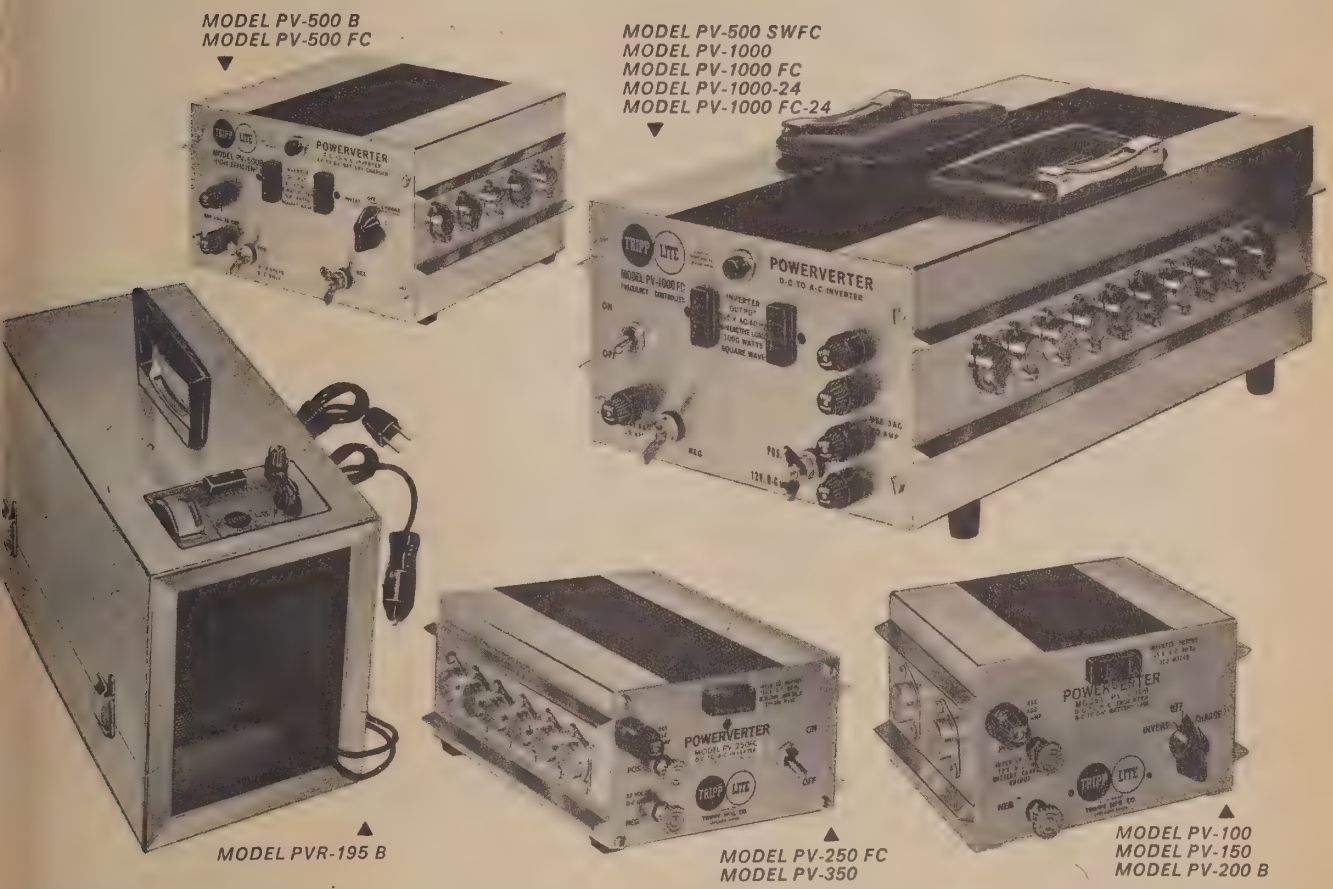
Net

© United Technical Publicati

TRIPP LITE

inverters

SQUARE WAVE AND SINE WAVE MODELS 12 Volt DC—to—117 Volt AC



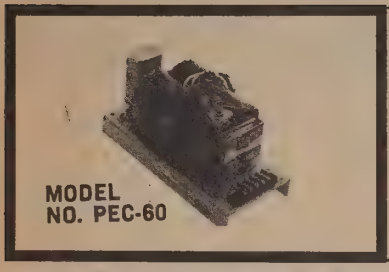
MODEL NO.	MAX. WATTS CONT.	MAX. OUTPUT WATTS (5 MIN)	INPUT AMPS NO LOAD	BATTERY CHARGER	NUMBER XISTOR	FREQUENCY CONTROL	POLARITY PROTECTION	OVER-LOAD PILOT LIGHT	SIZE h x w x d	MISC. INFO.	USER NET
PV-100	100	110	2½		2				3½x6½x5½	Cord & cigar lighter plug-in	$ 29.95
PV-150	150	165	3		2				3½x6½x5½		39.95
PVR-195B	195	195	3	5 amps	4				9½x7 x15	Use any 12V portable battery (not incl.)	73.95
PV-200B	200	220	3	5 amps	4				3½x6½x5½		49.95
PV-350	350	385	4½		8				3½x6½x9		74.95
PV-500B	500	550	4	10 amps	10		X	X	5 x9½x9	High Efficiency	104.50
PV-1000	1000	1100	8		20		X	X	5 x9½x17	High Efficiency	199.00
PV-250FC	250	275	3½		11	X			3½x6½x9		99.95
PV-500FC	500	550	4½		15	X	X	X	5x9½x9		199.95
PV-1000FC	1000	1100	12		27	X	X	X	5x9½x17		299.00
PV-1000FC-24	1000	1100	7		12	X	X	X	5x9½x17		399.00
PV-1000-24	1000	1100	4½		12		X	X	5x9½x17	High Efficiency	299.00
PV-500SWFC	500	500	12		17	X	X	X	5x9½x17	SINE WAVE OUTPUT	299.00

NOTE: Tripp-Lite square wave inverters are recommended for lighting, small power tools, electric razors, tape recorders, radios, TV, phonographs, test equipment, etc.
DO NOT USE with refrigerators, air conditioners, toasters, coffee pots, fry pans, and other heavy current devices.

FAMOUS SINCE 1922 **TRIPP·LITE** WINNER OF TWO WORLDS FAIR AWARDS

WANLASS PARAX

WANLASS PARAFORMER™ PRODUCTS FOR OEM AND SYSTEM APPLICATIONS



MODEL NO. PEC-60

ORDER A PARAFORMER™ TODAY AND SEE FOR YOURSELF

Knowing that every conceptually new component must be carefully tested by prospective users before it can be included within their own equipment. Wanlass Electric has available for immediate delivery a 60 watt Paraformer (Model PEC-60). May we suggest that you buy one of these units and satisfy yourself relative to its amazing properties. When you place your order, be sure to ask for our new book entitled "The Wanlass Paraformer™". This treatise on the subject of parametric power conversion discusses the theory and application of parametric devices and will assist you in evaluating your PEC-60.

PEC-60 SPECIFICATIONS

INPUT VOLTAGE: 115VAC ±10%, 60 Hz, 1φ, (50-15 VAC input voltage range dependent upon load current OUTPUT VOLTAGE: 117 VAC, 60 Hz, 1φ. OUTPU CAPACITY: 60 VA. NOISE ATTENUATION: Over 50 D (0-1MHz). LINE REGULATION: (±10%), ±0.25%. LOA REGULATION: (0-FL), ±1.5%. SIZE (approx.): 9"Lx4"W 4½"H. WEIGHT (approx): 9 LBS. PRICE (including book

(1-9)	$95.00	(25-49)	$85.50
(10-24)	$90.25	(50-99)	$80.75

A.C. PARAMETRIC POWER CONDITIONERS — 60Hz — FILTER/REGULATORS



MODEL NO. PEC-150

SPECIFICATIONS ON MODEL NO. PEC-150 — 150 VA

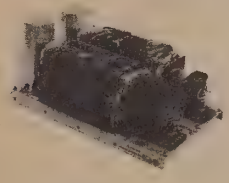
A.C. INPUT: 105-125 V. 1φ, 60 Hz (50-150 VAC Input Voltage Range dependent on lo current.)
A.C. OUTPUT: 117 V. 1φ, 60 Hz, 150VA ●
NOISE ATTENUATION: OVER 50DB (0-1 MHz)
REGULATION: ±0.5% Line; ±2% Load
SIZE & WEIGHT: 5.5"H x 4⅝"Wx14⅛"L. 21 Lbs.
PRICE: (1-9) $150.00 (10-24) $142.50 (25-49) $135.00 (50-99) $127.50



MODEL NO. PEC-500

SPECIFICATIONS ON MODEL NO. PEC-500 — 500 VA

A.C. INPUT: 105-125 V. 1φ, 60 Hz (50-150 VAC Input Voltage Range dependent on lo current.)
A.C. OUTPUT: 117 V. 1φ, 60 Hz, 500 VA
NOISE ATTENUATION: OVER 50DB (0-1 MHz)
REGULATION: ±0.5% Line; ±2% Load
SIZE & WEIGHT: 7.5"H x 5"W x 17"L. 50 Lbs.
PRICE: (1-9) $225.00 (10-24) $213.75 (25-49) $202.50 (50-99) $191.25



MODEL NO. PEC-1000

SPECIFICATIONS ON MODEL NO. PEC-1000 — 1000 VA

A.C. INPUT: 105-125 V. 1φ, 60 Hz (50-150 VAC Input Voltage Range dependent on lo current.)
A.C. OUTPUT: 117 V. 1φ, 60 Hz, 1000 VA
NOISE ATTENUATION: OVER 50DB (0-1 MHz)
REGULATION: ±0.5% Line; ±2% Load
SIZE & WEIGHT: 7.5"H x 10¼"W x 17"L. 90 Lbs.
PRICE: (1-9) $425.00 (10-24) $401.75 (25-49) $382.50 (50-99) $361.3

NOTE: MODELS PEC-2500 & PEC-5000 (2.5 & 5 KVA Paraformers™) are also available and are priced $725.00 and $1,475.00 each respectively.

A.C. PARAMETRIC POWER CONDITIONERS — 400Hz — FILTER/REGULATORS



MODEL NO. PEC-4-75

SPECIFICATIONS ON MODEL NO. PEC-4-75 — 75 VA

A.C. INPUT: 105-125 V. 1φ, 400 Hz (50-150 VAC input Voltage range dependent on lo current.)
A.C. OUTPUT: 117 V. 1φ, 400 Hz, 75 VA
NOISE ATTENUATION: OVER 50DB (0-1 MHz)
REGULATION: ±1% line; ±2.5% load
SIZE & WEIGHT: 5"H x 5"W x 6"L. 7 Lbs.
PRICE: (1-9) $105.00 (10-24) $99.75 (25-49) $94.50 (50-99) $89.25

D.C. PARAMETRIC SWITCHING TYPE POWER SUPPLIES



MODEL NO. PS 5-10
5V @ 0-10A D. C.

MODEL NO. PS 5-10 ONLY $150.00 (1-9 PRICE)

The Wanlass Paraswitcher™ DC power supply is a high performance, 50KH switching power supply incorporating the unique Wanlass Paraformer™ provide noise and transient free DC power for use in all applications. The supp provides high density power (2 watts/cubic inch) at high overall efficiency (ov 70%). Unique protective features inherent to the Paraformer™ componen incorporated in the supply include: overvoltage protection, undervolta protection, and overload protection.

SPECIFICATIONS

Output
Output voltage: 5 volts with ±10% adjustability
Output current: 10 amperes
Regulation Line: ±0.2%
Regulation for 10% to full load: ± 0.2%
Ripple: 10 millivolts RMS
Input:
160 volts DC ± 10% *

Physical Characteristics
Size: 3" x 4" x 2"
Cold plate type heat exchanger
Terminal strip for input and output
General Information
Maximum allowable cold plate temperature for full rated load: 70% typical
Operating Frequency: 50 KHz nominal

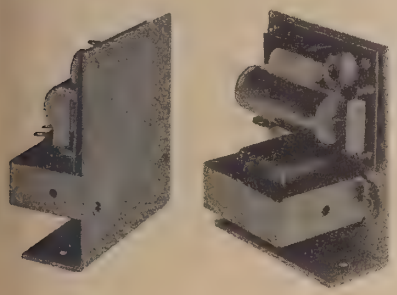
Overvoltage protection: standard feature
Overload protection: standard feature
Undervoltage protection: standard feature
Price — $150.00 unit quantity
Options available
Bolt on finned heat sink — $10.00
*AC input option for AC to DC conversion, 4 420 Hz, single phase, 117 VAC nominal $20.00

Net

© United Technical Publication

WANLASS ALL SILICON SOLID STATE STATIC D.C. POWER SUPPLIES

WANLASS DPS LINE – *Economy O.E.M. D.C. Power Supplies*



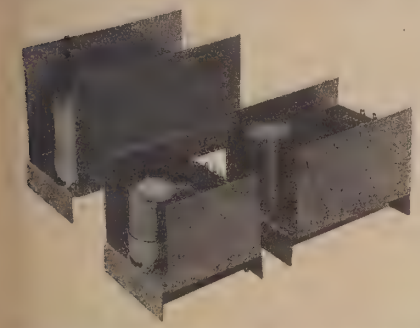
THE EPITOME OF "ECONOMY BY DESIGN"! 5 VOLT, 12 VOLT OR 24 VOLT REGULATED AND FILTERED DC POWER (UP TO 20 WATTS) AT LESS THAN $20.00 IN QUANTITY!*

Operates from 115V ±10% 1 phase 47-63 Hz line, providing ± 1% line and load regulation and filtering of 1% RMS. Provides, 5 or 6V, 12 or 15V or 24V depending upon model selected (see tabulation of models & ratings). Has automatic "fold back" current limiting overload and short circuit protection! Output is floating — either positive or negative may be grounded. Has isolation type power transformer. Self cooled. Dimensions 4" x 2½" x 4½" H. maximum. Weight: less than 2 lbs.

Model No.	Rating	Prices
DPS-1	5/6V @ 3/2.5A	1-9 @ $24.95 10-24 @ $23.70
DPS-2	12/15V @ 1.5/1.2A	25-49 @ $22.45 50-99 @ $21.20
DPS-3	24V @ 1/.8A*	100-999 @ $19.95
DPS-5	5/6V @ 1.5/1A	1-9 @ $19.95 10-24 @ $18.95
DPS-6	12/15V @ .75/.65A	25-49 @ $17.95 50-99 @ $16.95
DPS-7	24V @ .4A	100-999 @ $15.95

*24V unit rated 1A over 115-125VAC line voltage range.
24V unit rated 0.8A over 105-115VAC line voltage range.

WANLASS PHASE II – *Wide Range O.E.M. D.C. Power Supplies*



ECONOMY REGULATED D.C. POWER SUPPLIES FOR MULTI PURPOSE SLOT APPLICATIONS.

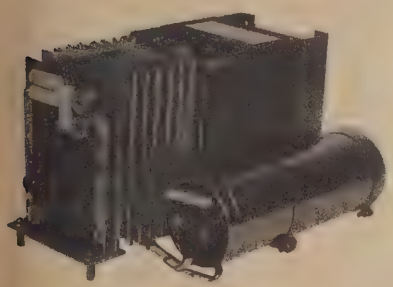
Wanlass Phase II OEM Power Supplies available in four different D.C. output voltage ranges between 3.6 to 60 volts in current/wattage ratings whichever is less of 2.5A/30W.; 5A/60W.; 10A/120W.

Operate from 105-125V., 47-63Hz, 1ϕAC.; regulated ± 1% line and load, 0.1% plus 10 mV RMS ripple; output floating; positive or negative may be grounded; short circuit protected; open chassis construction; adjustable by taps and by fine voltage adjust potentiometer; convection cooled for 0 to 45°C operation.

Model No.	D.C. Output Ratings	Prices
30-OEM-1	3.6-9V @ 2.5A or	1-9 @ $46.00
30-OEM-2	9-17V @ 30W.**	10-24 @ 43.75
30-OEM-3	17-30V @ 30W.	25-49 @ 41.50
30-OEM-4	30-60V @ 30W.	50-90 @ 39.00
		100-999* @ 36.80
60-OEM-1	3.6-9V @ 5A. or	1-9 @ $57.50
60-OEM-2	9-17V @ 60W.**	10-24 @ 54.50
60-OEM-3	17-30V @ 60W.	25-49 @ 51.75
60-OEM-4	30-60V @ 60W.	50-99 @ 49.00
		100-999* @ 46.00
120-OEM-1	3.6-9V @ 10A. or	1-9 @ $86.25
120-OEM-2	9-17V @ 120W.**	10-24 @ 82.00
120-OEM-3	17-30V @ 120W.	25-49 @ 77.75
120-OEM-4	30-60V @ 120W.	50-99 @ 73.50
		100-999* @ 69.00

**WHICHEVER IS LESS

WANLASS "BRUTES" – *High Power D.C. Slot Supplies*



WIDE RANGE (0-50V) HIGH CURRENT (300-1200 WATTS — UP TO 50A.) D.C. POWER SUPPLIES PRICED AT LOWER THAN "FIXED SLOT" PRICES!

300 Watts of 0.1% regulated power as low as $118.00 in quantity!

NOT FREQUENCY SENSITIVE

Operates from 115/230V. ± 10%, 1 phase, 50/60 Hz and is regulated ± 0.1% with ripple of 1% RMS. Adjustable in 2 ranges either 2-25V. and/or 5-50 volts in ratings of 300, 600 or 1200 watts as shown below. Open OEM construction with voltage adjustment potentiometer. Unit features high efficiency, low cost, quiet operation and is frequency insensitive! Adjustable current limiting provides automatic overload and short circuit protection and current regulation ideal for battery charging and other similar constant current applications.

Model No.	Ratings	Prices 1-9	10-24	25-49	50-99	100-99
Brute I	5-50/2-25V @6/12A	$148	$141	$133	$126	$118
Brute II	5-50/2-25V @12/24A	195	185	176	166	156
Brute III	5-50/2-25V @24/50A	315	299	284	268	252

WANLASS MARK III – *Precision Regulated D.C. Power Supply*



IDEAL D.C. SOURCE FOR IC, OP-AMP AND MOS/FETS OR OTHER VOLTAGE SENSITIVE LOADS. HAS "BUILT-IN" OVERVOLTAGE AND OVERLOAD PROTECTION!

Operates from 115/230V., 47-63Hz 1 phase A.C. source and is available for D.C. output voltages of 5, 6, 12, 15, 18, 24 and 28 rated at 5A or 60 watts D.C. (whichever is less) as shown in table below. Regulated ± 0.1% for line and load with ripple typically 1 mV or less RMS at full load. Voltage is adjustable ± 2% (± 20% with proper derating) unit features floating output (either positive or negative output may be grounded), adjustable overvoltage protection and adjustable current limiting for overload. Short circuit proof. 0 to 55°C operating (higher with derating) temperature. Open chassis construction 5.5"H. maximum x 6"L. x 5"W. Weight: 6 lbs.

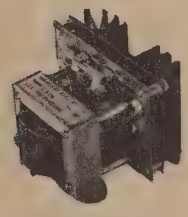
Tabulation of Available Models, Ratings and Prices

Model No.	Ratings	Prices
III OEM 5-5	5V.@ 5 A.	
III OEM 6-5	6V.@ 5 A.	
III OEM 12-5	12V.@ 5 A.	1-9 @ $89.50
III OEM 15-4	15V.@ 4 A.	10-24 @ 85.00
III OEM 18-3	18V.@ 3.3A.	25-49 @ 80.50
III OEM 24-2.5	24V.@ 2.5A.	50-99 @ 76.00
III OEM 28-2	28V.@ 2.1A.	100-999* @ 60.00*

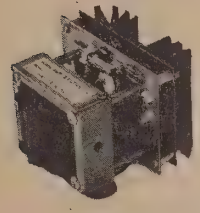
WANLASS CLIP-AC C-3000
117V. A.C. VOLTAGE REGULATORS



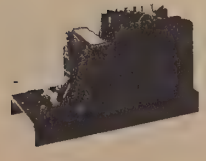
C-3003



C-3006



C-3012



C-3025



C-3050



C-3100

HERE ARE SOME OF THE OUTSTANDING CHARACTERISTICS OF TH WANLASS C-3000 VOLTAGE REGULATORS USING THE CLIP-AC™ PRINCIPLE

C-3000 FEATURES

- Line and Load Regulator
- Wide Input Voltage & Frequency Range
- Peak Clipping Regulation Technique
- Quiet Operation—No Magnetic Noise
- Repairable All Silicon Solid-State Circuits
- High Efficiency
- Suppresses Line Transients
- Excellent Surge Loading Characteristics
- Instantaneous Response
- "Clipped" Sinusoidal Output
- Excellent Temperature Coefficient
- No "Magnetic" Fields Nor RFI

C-3000 APPLICATIONS

- Instruments Pre-Regulator
- Electronic Systems
- Electrical Systems
- Photo-Optical Systems
- Initial Surge Loading Applications
- Motor Starting and Regulation
- All Resistive Loads such as Lighting an Heating

APPLICATION

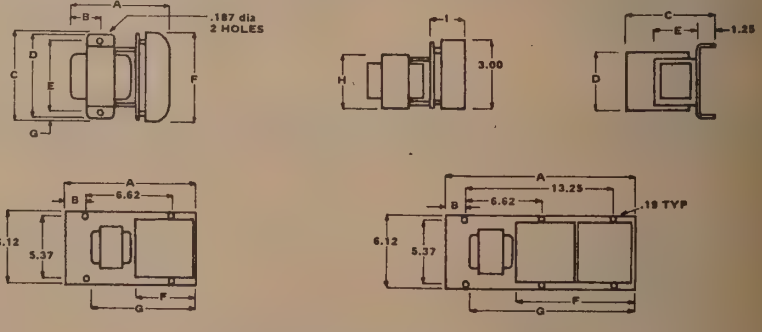
The CLIP-AC™ type AC regulator is the logical successor to the ferroresona transformer for the bulk of the AC regulation requirements for up to 1 KV

	CLIP-AC™ Principle	Ferroresonant Principle
Input Frequency	Wide range acceptable without degradation in regulation (47-420Hz typical)	Single frequency (output voltage shifts 1.5% for 1% change in input frequency)
Line Regulation	Any reasonable degree of precision (0.1% easily achievable)	Cannot be modified (1-3% typical)
Load Regulation	Load compensation circuitry inherent in design (1% typical)	No compensation (5-7% typical)
Power Factor	No problem	Shifts output voltage level appreciably
Phase Shift	None	Appreciable — dependent on load current
Response Time	Typical 10-50 μsec	Typically 25,000 μsec
Cost	Smaller and Cheaper-less	Inherent weight and expense of
Size	material content	iron and copper
Weight	(typically 50%)	

C-3000 SPECIFICATIONS

A.C. INPUT: 100-130V., 1-Phase, 47-420 Hz
A.C. OUTPUT: 117V. nominal (see table of Model Numbers and ratings below)
Surge output rating: 400% of full power rating for 10 seconds
REGULATION (RMS): ±0.5% (for ±10% A.C. line change)
±0.5% (for 10% to full load change)
TYPE OF VOLTAGE REGULATION: True RMS with RMS sensor type reference
REGULATION TECHNIQUE: Peak Clipping
POWER FACTOR REGULATION: ±0.5% (+0.7 to —0.7)
FREQUENCY REGULATION: ±0.5%
EFFICIENCY: 75% minimum at nominal input voltage an full load
PHASE SHIFT: None
RESPONSE TIME: 10-50 microsecond
TEMPERATURE COEFFICIENT: 0.025% per degree C
OPERATING TEMPERATURE: —20°C to +50°C. Convection self-cooling; no external heat sinking required
OVERLOAD PROTECTION: Fused against overloads and short circuits

C-3000 INSTALLATION & DIMENSIONAL DATA



MODEL NUMBERS AND RATINGS

Model No.	Ratings	1-9	10-24	25-49	50-99
C-3003	30VA	$39.00	$37.00	$35.00	$33.00
C-3006	60VA	46.00	43.75	41.50	39.00
C-3012	120VA	51.00	48.50	46.00	43.50
C-3025	250VA	89.50	85.00	80.50	76.00
C-3050	500VA	125.00	118.75	112.50	106.00
C-3100	1000VA	210.00	199.50	189.00	178.50

Also see complete installation and dimensional data contained elsewhere in this bulletin.

TABULATION BLOCK

Model	A	B	C	D	E	F	G	H	I	Wt. Lbs.
C-3003	2.80	.875	4.00	3.25	2.81	1.75	.59	1.93	.75	1.5
C-3006	3.75	1.00	4.12	3.81	3.12	4.12	.50	2.25	1.62	2.5
C-3012	4.50	1.25	4.15	4.00	3.60	4.15	.23	2.62	1.62	3.2
C-3025	9.50	1.44	5.50	4.00	4.38	4.25	6.87			6.5
C-3050	10.88	2.12	7.25	5.00	4.38	5.00	8.25			10.25
C-3100	16.00	1.37	7.25	5.00	5.00	10.40	14.20			17.5

Net

© United Technical Publicati



QST. Ranks high among the leading technical publications of the world. The oldest continuously published radio magazine (it was founded in 1915), its technical articles are aimed at all classes of radio enthusiasts. Construction articles are clearly illustrated with pictures and diagrams. Typography and clarity are tops. General interest articles and special columns abound. Complete advertising coverage. Truly, the "complete magazine on amateur radio." ..... QST and ARRL membership, **$6.50** in USA and Canada (US Funds), **$7.00** Elsewhere.

The RADIO AMATEUR'S HANDBOOK. Internationally recognized as one of the most valuable and widely used books in electronics, the Radio Amateur's Handbook is universally consulted by both amateur and professional alike. Its more than 700 pages are annually revised and modified in the light of current application and technique. The Handbook is found on the desks of executives, engineers, technicians and purchasing agents of the radio industry as often as in the shacks of radio amateurs throughout the world. Twenty-five chapters plus a catalog section including data on all types of vacuum tubes and semiconductors. **$4.50**

HOW TO BECOME A RADIO AMATEUR. Pointing the way for the beginner, tells how to get started in this fascinating hobby. Special emphasis given to the needs of the Novice licensee with several complete simple stations featured **$1.00**

The RADIO AMATEUR'S LICENSE MANUAL. Study guide and reference book, the License Manual points the way toward the coveted amateur license. Complete with typical questions and answers to all of the FCC amateur examinations — it provides an ideal means of self-study and examination. Continually kept up to date. Complete FCC regulations included. **$1.00**

The ARRL ANTENNA BOOK. A complete book on antennas. Its fifteen chapters are divided into two principal divisions: (1) a basic text on antennas and transmission lines, wave propagation and its relationship to antenna design, and the performance characteristics of directive antenna systems, and (2) specific designs for a multitude of antennas for various amateur bands. **$2.50**

The MOBILE MANUAL FOR RADIO AMATEURS. It is a collection of articles on tried and tested equipment that have appeared in QST. Contents include a section on receivers, transmitters, antennas and power supplies. A "must" for anyone interested in the installation, maintenance and operation of mobile stations ... **$2.50**

The RADIO AMATEUR'S OPERATING MANUAL. A ready reference source and guide to good operating practices. Written for the amateur who prides himself on good operating procedures.... **$1.50**

A COURSE IN RADIO FUNDAMENTALS. A complete course of study for use with the Radio Amateur's Handbook, it applies the time-tested principle of "learning by doing." Study assignments, experiments and examination questions make this book equally applicable to individual home study or classroom use..... **$1.00**

HINTS AND KINKS. If you build equipment and operate an amateur radio station you will find Hints and Kinks a mighty valuable book in your shack and workshop. More than 300 practical ideas give you a helping hand at all times..... **$1.00**

UNDERSTANDING AMATEUR RADIO. Written for the beginner. Explains in simple language the elementary principles of electronic and radio circuits, tells how transmitters, receivers and antennas work. Includes complete how-to-build-it information on low cost gear — receivers, phone and code transmitters up to 150 watts, v.h.f., measurements, and easy-to-build antenna systems. A "must" guide for every newcomer in setting up and operating his amateur station **$2.50**

THE RADIO AMATEUR'S V.H.F. MANUAL. A thorough treatment of v.h.f. Contains the first authentic history of v.h.f. ever written. Covers receiving and transmitting principles, techniques and construction; antenna and feed system design, construction and adjustment; u.h.f. and microwaves; test equipment, construction and use; interference, causes and cures; v.h.f. hints and kinks. Emphasis throughout is on tried and tested equipment and practice. A book about things that work and the ideas behind them. **$2.50**

SINGLE SIDEBAND FOR THE RADIO AMATEUR. This third edition of a popular ARRL publication is a digest of the best SSB articles that have appeared in QST. The newcomer to Single Sideband as well as the experienced SSB user will find it indispensable. Includes discussions of theory and practical how-to-build-it descriptions of equipment. Covers reception and transmission. **$3.00**

LEARNING THE RADIOTELEGRAPH CODE. Supplying the key toward mastery of the International Morse Code, this publication trains you to handle the code skillfully and easily. Based on the accepted method of "sound conception," it is a boon to the beginner without access to the help of an experienced operator or code machine. Practical material for both home study and classroom use is included **50c**

ARRL WORLD MAP. Printed in eight colors on heavy map paper with countries clearly outlined. Call letter prefixes printed on the countries and in the margin. Continental boundaries and time zones plainly marked. Thirteen countries have call districts indicated. An equi-distant azimuthal projection centered on Wichita, Kansas. Prepared by ARRL and Rand-McNally. **$2.00**

QST BINDERS. No need to let your copies of QST rest in a disordered pile. . . . A QST Binder will keep them neat and orderly. Sturdy binders hold a one year file, protecting and preserving your copies. QSTs in the Binder open and lie flat at any page permitting quick and easy reference. **$4.00**

ARRL CALCULATORS: Quick as a flash the answer is yours when you use an ARRL Calculator to solve radio problems.

L/C/F, Type A, solves problems of inductance, capacitance, frequency; coil winding data. ..... **Each, $2.00**

Lightning Type B, solves Ohm's Law problems involving resistance, voltage, current, power. ..... **Each, $1.50**

LOG BOOK. Record keeping made easy. Fully ruled 8½ by 11 inch pages with legible headings permitting all necessary entries. Spiral bound to lie flat when open. **50c**

MINILOG. Mobile and portable operational needs are met by this pocket size log. Spiral bound, 4 by 6 inch pages. Headings for all necessary information. **50c**

RADIOGRAMS. First impressions are important. Official ARRL Radiogram Forms add prestige; informs the addressee about amateur radio. ..... Per pad of 70 blanks, **35c**

The AMERICAN RADIO RELAY LEAGUE, Inc.

AUTHORITATIVE HOWARD W. SAMS PUBLICATIONS

AMATEUR RADIO

ABC's OF HAM RADIO (3rd Edition), 20638 $ 2.95
ADVANCED & EXTRA-CLASS AMATEUR LICENSE HANDBOOK, 20649 $ 3.95
AMATEUR RADIO ANTENNAS (2nd Edition), 20611 $ 3.95
AMATEUR RADIO CONSTRUCTION PROJECTS, 20045 $ 3.25
AMATEUR RADIO MOBILE HANDBOOK, 20035 $ 3.50
AMATEUR RADIO SSB GUIDE, 20629 $ 3.95
BUILDING YOUR AMATEUR RADIO NOVICE STATION, 20050 $ 3.75
GENERAL-CLASS AMATEUR LICENSE HANDBOOK (2nd Edition), 20639 $ 3.25
HAM ANTENNA CONSTRUCTION PROJECTS (2nd Edition), 20654 $ 3.95
INTERNATIONAL CODE TRAINING SYSTEM, 20138 $ 7.50
PRACTICAL HAM RADIO PROJECTS, 20042 $ 2.95
SO YOU WANT TO BE A HAM (4th Edition), 20607 $ 4.50
TRANSISTORIZED AMATEUR RADIO PROJECTS, 20570 $ 3.50
TRANSISTOR TRANSMITTERS FOR THE AMATEUR, 20450 $ 3.25
101 EASY HAM RADIO PROJECTS, 20674 $ 3.95
101 QUESTIONS & ANSWERS ABOUT AMATEUR RADIO, 20731 $ 2.95

APPLIANCES, MOTORS and POWER MECHANICS

ABC's OF AIR CONDITIONING, 20725 $ 2.95
ABC's OF ELECTRIC MOTORS AND GENERATORS, 20186 $ 2.95
ABC's OF FLUID POWER, 20519 $ 2.95
CONTROL INSTRUMENT MECHANISMS, 20596 $ 9.95
ELECTRICAL MOTOR CONTROLS AND CIRCUITS, 20163 $ 5.75
ELIMINATING ENGINE INTERFERENCE, 20184 $ 2.75
HOW TO REPAIR MAJOR APPLIANCES (2nd Edition), 20650 $ 4.95
HOW TO REPAIR SMALL APPLIANCES, Vol. 1, 20041 $ 2.95
HOW TO REPAIR SMALL APPLIANCES, Vol. 2, 20524 $ 2.95
INSTRUMENTATION TRAINING COURSE —
Vol. 1—Pneumatic Instruments, 20621 $ 8.95
Vol. 2—Electronic Instruments, 20622 $ 6.95
Both volumes, 20623 $14.50
MOTORCYCLE SERVICE MANUAL (2nd Edition) —
Vol. 1—20665 $ 4.95
Vol. 2—20666 $ 4.95
Both volumes, 20667 $ 9.50
OUTBOARD MOTOR SERVICE MANUAL (4th Edition) —
Vol. 1—Motors under 30 Hp., 20598 $ 4.95
Vol. 2—Motors 30 Hp. and above, 20599 $ 4.95
Both volumes, 20603 $ 9.50
ROCKET AND SPACE SCIENCE SERIES —
Vol. 1—Propulsion, 20386 $ 4.25
Vol. 2—Propellants, 20528 $ 4.25
SMALL ENGINES SERVICE MANUAL (9th Edition), 20734 $ 4.95
SMALL GASOLINE ENGINES TRAINING MANUAL, 20668 $ 5.25
SMALL GASOLINE ENGINES STUDENT'S WORKBOOK, 20697 $ 1.95

AUDIO and HI-FI

ABC's OF ELECTRONIC ORGANS (2nd Edition), 20551 $ 2.95
ABC'c OF HI-FI AND STEREO (2nd Edition), 20539 $ 2.75
ABC's OF TAPE RECORDING (2nd Edition), 20395 $ 2.50
AUDIO AMPLIFIER DESIGN, 20560 $ 4.25
*AUDIO CYCLOPEDIA (2nd Edition), 20675 $29.95
ELECTRIC GUITAR AMPLIFIER HANDBOOK (2nd Edition), 20694 $ 3.95
ELECTRONIC ORGANS, Vol. 1, 20188 $ 5.75
ELECTRONIC ORGANS, Vol. 2, 20754 $ 5.50
F-M MULTIPLEXING FOR STEREO (2nd Edition), 20199 $ 3.95
HI-FI PROJECTS FOR THE HOBBYIST, 20222 $ 2.95
HI-FI STEREO HANDBOOK (3rd Edition), 20565 $ 5.50
HI-FI STEREO SERVICING GUIDE, 20785 $ 3.95
HOW TO BUILD SPEAKER ENCLOSURES, 20520 $ 3.50
INTERMODULATION AND HARMONIC DISTORTION HANDBOOK, 20242 $ 4.25
MEASURING HI-FI AMPLIFIERS, 20561 $ 3.95
PASSIVE AUDIO NETWORK DESIGN, 20031 $ 5.50
RECORD CHANGERS — HOW THEY WORK, 20661 $ 3.95
RECORD CHANGER SERVICING GUIDE, 20730 $ 3.95
TAPE RECORDERS — HOW THEY WORK (2nd Edition), 20445 $ 4.50
TROUBLESHOOTING AUDIO EQUIPMENT, 20525 $ 3.95
101 QUESTIONS & ANSWERS ABOUT HI-FI & STEREO, 20753 $ 3.50

BASIC and HOBBYIST

ABC's OF ELECTRICAL SOLDERING, 20627 $ 2.95
ABC's OF ELECTRICITY, 20263 $ 2.50
ABC's OF ELECTRONICS, 20185 $ 2.50
ABC's OF MODERN RADIO (2nd Edition), 20047 $ 2.95
ABC's OF SHORT-WAVE LISTENING (2nd Edition), 20554 $ 2.50
ABC's OF SILICON CONTROLLED RECTIFIERS, 20124 $ 2.95
BASIC ELECTRICITY/ELECTRONICS —
Vol. 1—Basic Principles and Applications, 20167 $ 4.95
Vol. 2—How AC and DC Circuits Work, 20168 $ 4.95
Vol. 3—Understanding Tube and Transistor Circuits, 20169 $ 4.95
Vol. 4—Understanding and Using Test Instruments, 20170 $ 4.95
Vol. 5—Motors and Generators—How They Work, 20171 $ 4.95
5-volume set, 20172 $19.95
Laboratory Workbook, 20554 $ 4.95
BASIC ELECTRICITY AND INTRO. TO ELECTRONICS (2nd Edition), 20540 $ 4.25
BASIC PIEZOELECTRICITY, 20087 $ 2.95
CREATIVITY, INVENTION, AND PROGRESS, 20709 $ 3.50
ELECTRONIC CIRCUIT ACTION SERIES —
Amplifier Circuit Actions, 20059 $ 3.50
Detector and Rectifier Circuit Actions, 20061 $ 3.50
Oscillator Circuit Actions, 20070 $ 3.50
Radio Circuit Actions, 20073 $ 3.50
Transistor Circuit Actions, 20075 $ 3.50
TV Sync and Deflection Circuit Actions, 20077 $ 3.50
TV Video and Sound Circuit Actions, 20080 $ 3.50
7-Volume set, 20071 $19.95
ELECTRONIC GAMES AND TOYS YOU CAN BUILD, 20183 $ 2.95
ELECTRONIC SERVICING FOR THE BEGINNER, 20090 $ 3.95
ELECTRONICS EXPERIMENTS AND PROJECTS, 20194 $ 2.95
ELECTRONICS IN PHOTOGRAPHY, 20672 $ 3.50
ELECTRONICS FOR THE BEGINNER (2nd Edition), 20684 $ 3.95
*ELECTRONICS FOR THE BEGINNER, 20677 $ 5.25
EXPERIMENTAL ASTRONAUTICS, 20509 $ 3.95
EXPERIMENTAL EARTH SCIENCES, 20601 $ 2.
HAVING FUN IN ELECTRONICS, 20541 $ 3.
HAVING FUN WITH TRANSISTORS, 20433 $ 2.
HOW TO BUILD ELECTRONICS PROJECTS, 20670 $ 2.
HOW TO DETECT AND MEASURE RADIATION, 20024 $ 3.
HOW TO HEAR POLICE, FIRE & AIRCRAFT RADIO, 20781 $ 3.
HOW TO READ SCHEMATIC DIAGRAMS (2nd Edition), 20568 $ 3.
LEARN ELECTRONICS THROUGH TROUBLESHOOTING, 20651 $ 7.
LEARNING ELECTRICITY FUNDAMENTALS (2nd Edition), 20522 $ 6.
NORTH AMERICAN RADIO-TV STATION GUIDE (6th Edition), 20779 $ 2.
NOVEL ELECTRONIC CIRCUITS, 20692 $ 2.
PROJECTS IN BASIC MAGNETISM, 20556 $ 2.
QUESTIONS & ANSWERS ON SHORT-WAVE LISTENING, 20783 $ 3.
SCIENCE PROJECTS IN ELECTRICITY, 20366 $ 3.
SCIENCE PROJECTS IN ELECTRONICS, 20367 $ 3.
SHORT-WAVE LISTENER'S GUIDE (4th Edition), 20798 $ 2.
SOLAR CELL AND PHOTOCELL EXPERIMENTER'S GUIDE, 20312 $ 3.
SWL ANTENNA CONSTRUCTION PROSPECTS, 20766 $ 2.
TAPE RECORDING FOR THE HOBBYIST, 20583 $ 3.
THIS IS ELECTRONICS —
Vol. 1. Basic D-C Principles, 20657 $ 5.
Vol. 2. Basic A-C Principles, 20727 $ 6.
Vol. 3. Circuits, 20759 $ 6.
Vol. 4. Applications, 20760 $ 5.
4-Volume Set, 20761 $23.
TV TUBE SYMPTOMS AND TROUBLES (2nd Edition), 20476 $ 2.
49 EASY ENTERTAINMENT & SCIENCE PROJECTS —
Vol. 1, 20703 $ 2.
Vol. 2, 20704 $ 2.
49 EASY TRANSISTOR PROJECTS, 20617 $ 1.
99 WAYS TO IMPROVE YOUR TV RECEPTION, 20708 $ 2.
101 EASY AUDIO PROJECTS, 20608 $ 3.
101 EASY CB PROJECTS, 20663 $ 3.

CB and COMMUNICATIONS

ABC's OF AVIONICS, 20764 $ 3.
ABC's OF CITIZENS BAND RADIO (2nd Edition), 20019 $ 2.
ABC's OF LASERS AND MASERS (2nd Edition), 20262 $ 2.
ABC's OF MICROWAVES, 20040 $ 2.
ABC's OF RADAR (2nd Edition), 20014 $ 2.
ABC's OF RADIO AND TV BROADCASTING, 20575 $ 2.
ABC's OF TELEMETRY, 20051 $ 2.
AM-FM BROADCAST MAINTENANCE, 20068 $ 3.
AM-FM BROADCAST OPERATIONS, 20066 $ 5.
ANTENNAS AND TRANSMISSION LINES, 20716 $ 7.
*AVIATION ELECTRONICS, 20743 $ 9.
CB RADIO ANTENNAS (2nd Edition), 20567 $ 3.
CB RADIO CONSTRUCTION PROJECTS, 20099 $ 2.
CITIZENS BAND RADIO HANDBOOK (3rd Edition), 20569 $ 4.
CLOSED-CIRCUIT TELEVISION HANDBOOK (2nd Edition), 20726 $ 5.
*CLOSED-CIRCUIT TV FOR ENGINEERS & TECHNICIANS, 20606 $ 8.
COMMUNCATIONS EQUIPMENT SCHEMATIC MANUAL, 20105 $ 3.
FM FROM ANTENNA TO AUDIO, 20723 $ 3.
FIRST-CLASS RADIOTEL. LICENSE HANDBOOK (2nd Edition), 20086 $ 5.
MICROWAVE PRIMER, 20282 $ 4.
*MICROWAVE TEST AND MEASUREMENT TECHNIQUES, 20280 $ 6.
MOBILE AND MARINE STATION LICENSE MANUAL, 20285 $ 7.
MOBILE-RADIO SYSTEMS PLANNING, 20780 $ 4.
MODERN COMMUNICATIONS COURSE — AM Modulation, 20272 $ 5.
RADAR LICENSE ENDORSEMENT HANDBOOK, 20330 $ 3.
RADIO OPERATORS LICENSE HANDBOOK, 20332 $ 3.
SECOND-CLASS RADIOTEL. LICENSE HANDBOOK (3rd Edition), 20316 $ 5.
TELEVISION SYSTEMS MAINTENANCE, 20069 $ 5.
TELEVISION TAPE FUNDAMENTALS, 20065 $ 5.
UHF BUSINESS RADIO HANDBOOK, 20088 $ 3.
UNDERSTANDING AMPLITUDE MODULATION, 20514 $ 3.
WALKIE-TALKIE HANDBOOK, 20572 $ 3.
99 WAYS TO IMPROVE YOUR CB RADIO, 20515 $ 2.
101 QUESTIONS AND ANSWERS ABOUT CB OPERATIONS, 20604 $ 2.
101 Q & A ABOUT FIXED RADIO COMMUNICATIONS, 20584 $ 3.
101 QUESTIONS AND ANSWERS ABOUT CATV AND MATV, 20655 $ 2.

CIRCUITS and COMPONENTS

ABC's OF CAPACITORS, 20097 $ 2.
ABC's OF THERMISTORS, 20765 $ 2.
ABC's OF THERMOCOUPLES, 20586 $ 2.
ABC's OF TRANSFORMERS AND COILS, 20612 $ 2.
ABC's OF TRANSISTORS (2nd Edition), 20440 $ 2.
ABC's OF VARACTORS, 20508 $ 2.
ABCs OF VOLTAGE-DEPENDENT RESISTORS, 20771 $ 2.
APPLICATIONS HANDBOOK FOR ELECTRICAL CONNECTORS, 20161 $ 3.
BRIDGES AND OTHER NULL DEVICES, 20564 $ 3.
DC INSTRUMENTATION AMPLIFIERS, 20231 $ 3.
DESIGN & OPER. OF REGULATED POWER SUPPLIES (2nd Ed.), 20333 $ 3.
DIODE CIRCUITS (2nd Edition), 20558 $ 3.
ELECTRONIC CABLE HANDBOOK, 20160 $ 4.
ELECTRONIC CIRCUIT DESIGN, 20699 $ 3.
ELECTRONIC CORROSION CONTROL FOR BOATS, 20098 $ 2.
FET CIRCUITS, 20585 $ 3.
FREQUENCY CHANGERS, 20196 $ 4.
HANDBOOK OF ELECTRONIC CIRCUITS, 20214 $ 1.
HANDBOOK OF TRANSISTOR CIRCUITS, 20399 $ 5.
INDUSTRIAL TRANSISTOR CIRCUITS, 20245 $ 2.
PRACTICAL DESIGN WITH TRANSISTORS, 20659 $ 5.
PRACTICAL POWER SUPPLY CIRCUITS, 20571 $ 2.
PULSE CIRCUIT TECHNOLOGY, 20307 $ 4.
RTL COOKBOOK, 20715 $ 5.
SILICON CONTROLLED RECTIFIERS, 20526 $ 2.
SOLID-STATE POWER SUPPLIES AND CONVERTERS, 20310 $ 2.
TRANSISTOR AF AND RF CIRCUITS, 20393 $ 3.
TRANSISTOR ETCHED-CIRCUIT PROJECTS, 20398 $ 3.
UNDERSTANDING & USING UNIJUNCTION TRANSISTORS, 20720 $ 2.
UNDERSTANDING ELECTRONIC CIRCUITS, 20484 $ 3.
UNDERSTANDING ELECTRONIC COMPONENTS, 20483 $ 3.
USING & UNDERSTANDING MINIATURE NEON LAMPS, 20698 $ 2.
101 QUESTIONS & ANSWERS ABOUT TRANSISTOR CIRCUITS, 20782 $ 3.

* Indicates hard-cover binding.

Net
© United Technical Publicatio

the most complete book line on ELECTRONICS and related subjects

COMPUTERS

BC's OF COMPUTER PROGRAMMING, 20123 ... $ 2.95
BC's OF COMPUTERS (2nd Edition), 20012 ... $ 2.95
OMPUTER BASICS —
Vol. 1—Introduction to Analog Computers, 20128 ... $ 5.25
Vol. 2—Analog Computers—Mathematics and Circuitry, 20129 ... $ 5.25
Vol. 3—Digital Computers—Mathematics and Circuitry, 20130 ... $ 5.25
Vol. 4—Digital Computers—Storage and Logic Circuitry, 20131 ... $ 5.25
Vol. 5—Analog and Digital Computers—Organization, Programming, and Maintenance, 20132 ... $ 5.25
Vol. 6—Solid-State Computer Circuits, 20133 ... $ 5.25
6-volume set, 20134 ... $27.00
OMPUTER CIRCUIT PROJECTS YOU CAN BUILD, 20084 ... $ 3.25
OMPUTER DICTIONARY, 20102 ... $ 5.50
OMPUTER DICTIONARY, 20103 ... $ 7.95
OMPUTER DICTIONARY AND HANDBOOK, 20104 ... $12.95
OMPUTERS AND ARTIFICIAL INTELLIGENCE, 20757 ... $ 3.95
OMPUTERS SELF-TAUGHT THROUGH EXPERIMENTS, 20106 ... $ 4.25
IGITAL COMPUTERS IN AUTOMATION, 20148 ... $ 4.95
UNDAMENTALS OF DATA PROCESSING, 20156 ... $ 6.95
UNDAMENTALS OF DIGITAL MAGNETIC-TAPE UNITS, 20580 ... $ 2.50
UNDAMENTALS OF DIGITAL COMPUTERS, 20714 ... $ 5.50
OW TO USE INTEGRATED CIRCUIT LOGIC ELEMENTS, 20755 ... $ 3.95

ELECTRONICS

BC's OF ANTENNAS, 20010 ... $ 2.50
BC's OF RADIO FREQUENCY HEATING, 20747 ... $ 2.95
LTERNATING CURRENT FUNDAMENTALS, 20016 ... $ 7.50
LECTRICAL AND ELECTRONIC SIGNS AND SYMBOLS, 20633 ... $ 4.50
LECTRONICS IN OCEANOGRAPHY, 20507 ... $ 5.50
LECTRONIC SYSTS. FOR CONVENIENCE, SAFETY & ENJOYMENT, 20348 ... $ 4.95
LECTRONIC SYSTS. FOR CONVENIENCE, SAFETY & ENJOYMENT, 20347 ... $ 5.95
OW TO BUILD PROXIMITY DETECTORS & METAL LOCATORS, 20305 ... $ 2.95
NVENTORS IDEA BOOK, 20232 ... $ 2.75
ECURITY ELECTRONICS, 20767 ... $ 4.50
PACE-AGE TECHNOLOGY SERIES —
Controlled Guidance Systems, 20573 ... $ 4.95
Inertial Guidance Systems, 20605 ... $ 4.95
Lasers and Masers, 20559 ... $ 4.95
Microminiature Electronics, 20582 ... $ 5.75
Synchros and Servos, 20533 ... $ 4.95
5-volume slipcase set, 20724 ... $24.95
PACE-FLIGHT SIMULATION TECHNOLOGY, 20756 ... $ 4.95
RANSISTOR IGNITION SYSTEMS HANDBOOK, 20238 ... $ 3.75
NDERSTANDING ELECTRONICS UNITS AND STANDARDS, 20610 ... $ 3.50
NDERSTANDING TELEMETRY CIRCUITS, 20518 ... $ 3.95
NDERSTANDING UHF EQUIPMENT, 20557 ... $ 3.50

MATHEMATICS

BC's OF BOOLEAN ALGEBRA (2nd Edition), 20055 ... $ 2.75
LECTRONICS MATH SIMPLIFIED —
Vol. 1, 20267 ... $ 4.95
Vol. 2, 20268 ... $ 4.95
Both volumes, 20266 ... $ 7.95
SSENTIALS OF VECTOR AND PHASE ANALYSIS, 20487 ... $ 2.95
ANDBOOK OF ALGEBRAIC AND TRIGONOMETRIC FUNCTIONS, 20032 ... $ 3.50
ATHEMATICS FOR ELECTRONICS ENGINEERS AND TECHNICIANS, 20274 ... $ 6.95
RACTICE PROBLEMS IN ELECTRONICS CALCULATIONS, 20264 ... $ 4.50
RACTICE PROBLEMS IN NUMBER SYSTEMS, LOGIC, AND BOOLEAN ALGEBRA, 20609 ... $ 3.25
LIDE RULE IN ELECTRONICS, 20532 ... $ 4.25
NDERSTANDING AND USING THE SLIDE RULE, 20371 ... $ 2.50

REFERENCE

LECTRICAL & ELECTRONIC SIGNS & SYMBOLS, 20633 ... $ 4.50
ANDBOOK OF ELECTRONIC TABLES & FORMULAS (3rd Edition), 20648 ... $ 5.50
ANDBOOK OF THE ELEMENTS (2nd Edition), 20563 ... $ 3.50
IANT 48" x 60" 7-COLOR WALL CHART OF THE ELEMENTS, 20419 ... $ 5.95
TT REFERENCE DATA FOR RADIO ENGINEERS, 20678 ... $20.00
ODERN DICTIONARY OF ELECTRONICS (3rd Edition), 20600 ... $ 9.95
ECHNICAL SPELLER AND DEFINITION FINDER, 20352 ... $ 5.50
ECHNICAL SPELLER AND DEFINITION FINDER, 20351 ... $ 6.50
ECHNICAL WRITER'S AND EDITOR'S STYLEBOOK, 20480 ... $ 4.50
ECHNICAL WRITER'S AND EDITOR'S STYLEBOOK, 20479 ... $ 5.50

SEMICONDUCTORS and TUBES

BC's of VACUUM TUBES, 20576 ... $ 2.95
ET PRINCIPLES, EXPERIMENTS, AND PROJECTS, 20594 ... $ 4.95
RACTICAL TRANSISTOR THEORY, 20313 ... $ 2.95
EMICONDUCTOR HANDBOOK, 20620 ... $ 5.75
RANSISTOR FUNDAMENTALS —
Vol. 1—Basic Semiconductor and Circuit Principles, 20641 ... $ 4.50
Vol. 2—Basic Transistor Circuits, 20642 ... $ 4.50
Vol. 3—Electronic Equipment Circuits, 20643 ... $ 4.50
Vol. 4—Digital and Special Circuits, 20644 ... $ 4.50
4-volume slipcase set, 20645 ... $15.95
Transistor Fundamentals Student's Workbook, 20646 ... $ 4.50
RANSISTOR SPECIFICATIONS MANUAL (4th Edition), 20788 ... $ 4.50
RANSISTOR SUBSTITUTION HANDBOOK (10th Edition), 20773 ... $ 1.95
UBE SUBSTITUTION HANDBOOK (13th Edition), 20768 ... $ 1.75
PECIAL TWIN-PAK TUBE SUBSTITUTION HANDBOOK PACKAGE, 20769 ... $ 2.25
ORKSHOP IN SOLID-STATE, 20735 ... $ 9.95
01 QUESTIONS AND ANSWERS ABOUT TRANSISTORS, 20517 ... $ 2.95

SERVICING: Radio, Television and Electronics

M - FM - TV ALIGNMENT, 20602 ... $ 3.95
UTO RADIO SERVICING MADE EASY (2nd Edition), 20719 ... $ 3.95
ENCH SERVICING MADE EASY (2nd Edition), 20658 ... $ 3.95
B RADIO SERVICING GUIDE (2nd Edition), 20722 ... $ 3.95
COLOR-TV SERVICING MADE EASY, Vol. 1, 20135 ... $ 3.95
COLOR-TV SERVICING MADE EASY, Vol. 2, 20523 ... $ 4.95
COLOR-TV TRAINING MANUAL (3rd Edition), 20736 ... $ 6.95
COLOR-TV TROUBLE CLUES, Vol. 1, 20120 ... $ 2.50
COLOR-TV TROUBLE CLUES, Vol. 2, 20121 ... $ 2.95
COLOR-TV TROUBLE CLUES, Vol. 3, 20762 ... $ 3.50
COLOR-TV SERVICING GUIDE, 20358 ... $ 4.25
COLOR-TV WAVEFORM ANALYSIS, 20763 ... $ 3.50
PRACTICAL TRANSISTOR SERVICING (2nd Edition), 20314 ... $ 4.25
PHOTOFACT® TELEVISION COURSE (3rd Edition), 20595 ... $ 4.95
PHOTOFACT® GUIDE TO TV TROUBLES (2nd Edition), 20521 ... $ 4.50
RADIO AND TV TROUBLE CLUES, Vol. 2, 20346 ... $ 2.50
RADIO RECEIVER SERVICING (2nd Edition), 20336 ... $ 4.50
RADIO SERVICE TRAINING MANUAL, 20343 ... $ 5.50
*RADIO SERVICE TRAINING MANUAL, 20342 ... $ 7.50
RECORD CHANGER SERVICING GUIDE, 20730 ... $ 3.95
SERVICING DIGITAL DEVICES, 20618 ... $ 3.50
SERVICING CLOSED-CIRCUIT TELEVISION, 20574 ... $ 4.95
SERVICING UHF TV, 20387 ... $ 3.95
SOLVING TV TOUGH-DOGS (2nd Edition), 20403 ... $ 3.95
SYMFACT® GUIDE TO TV SERVICING, 20597 ... $ 3.50
SYMFACT® GUIDE TO COLOR-TV SERVICING, 20710 ... $ 3.95
TAPE RECORDER SERVICING GUIDE, 20748 ... $ 3.95
TELEVISION SERVICE TRAINING MANUAL (2nd Edition), 20628 ... $ 4.95
TRANSISTOR COLOR-TV SERVICING GUIDE, 20693 ... $ 4.50
TRANSISTOR RADIO SERVICING MADE EASY (2nd Edition), 20442 ... $ 3.50
TRANSISTOR TV SERVICING GUIDE (2nd Edition), 20696 ... $ 3.95
TRANSISTOR-TV SERVICING MADE EASY, 20776 ... $ 4.95
TRANSISTOR TV TRAINING COURSE, 20619 ... $ 3.95
TV DIAGNOSIS AND REPAIR, 20404 ... $ 2.50
TV RECEIVER TUBE USAGE GUIDE, 20468 ... $ 1.95
TV SERVICING GUIDE, 20361 ... $ 3.25
TV SERVICING MADE EASY, 20365 ... $ 3.95
USING SCOPES IN COLOR-TV, 20718 ... $ 3.95
101 QUESTIONS AND ANSWERS ABOUT COLOR-TV, 20624 ... $ 1.75
1 - 2 - 3 - 4 SERVICING AUTOMOBILE STEREO, 20737 ... $ 3.95
1 - 2 - 3 - 4 SERVICING TRANSISTOR COLOR-TV, 20777 ... $ 4.95
101 QUESTIONS & ANSWERS ABOUT AUTO TAPE UNITS, 20671 ... $ 1.75

TEST EQUIPMENT

ABC's OF ELECTRONIC TEST EQUIPMENT, 20660 (2nd Edition) ... $ 2.95
ABC's OF ELECTRONIC TEST PROBES, 20039 ... $ 2.95
*ACOUSTICAL TESTS AND MEASUREMENTS, 20022 ... $ 4.95
DIRECT READOUT METERS, 20158 ... $ 3.75
KNOW YOUR COLOR-TV TEST EQUIPMENT, 20256 ... $ 3.50
KNOW YOUR OSCILLOSCOPE (2nd Edition), 20549 ... $ 3.50
KNOW YOUR SIGNAL GENERATORS, 20255 ... $ 3.25
KNOW YOUR SQUARE-WAVE AND PULSE GENERATORS, 20258 ... $ 3.25
KNOW YOUR SWEEP GENERATORS, 20593 ... $ 3.50
KNOW YOUR TUBE & TRANSISTOR TESTERS, 20630 ... $ 3.50
KNOW YOUR VOM-VTVM (2nd Edition), 20676 ... $ 3.50
SCOPE WAVEFORM ANALYSIS, 20389 ... $ 3.95
SERVICING WITH DIP METERS, 20154 ... $ 3.25
TROUBLESHOOTING WITH THE OSCILLOSCOPE (2nd Edition), 20550 ... $ 4.50
TROUBLESHOOTING WITH THE VOM-VTVM, 20481 ... $ 3.95
UNDERSTANDING ELECTRONIC TEST EQUIPMENT, 20613 ... $ 4.50
USING SCOPES IN TRANSISTOR CIRCUITS, 20662 ... $ 4.50
101 EASY TEST INSTRUMENT PROJECTS, 20673 ... $ 3.25
101 WAYS TO USE YOUR COLOR-TV TEST EQUIPMENT (2nd Ed.), 20417 ... $ 3.50
101 WAYS TO USE YOUR HAM TEST EQUIPMENT (2nd Edition), 20566 ... $ 3.50
101 WAYS TO USE YOUR OSCILLOSCOPE (2nd Edition), 20416 ... $ 3.50
101 MORE WAYS TO USE YOUR SCOPE IN TV (2nd Edition), 20512 ... $ 3.50
101 WAYS TO USE YOUR SIGNAL GENERATOR (2nd Edition), 20548 ... $ 3.50
101 WAYS TO USE YOUR SQUARE-WAVE & PULSE GENERATORS, 20562 ... $ 3.50
101 WAYS TO USE YOUR SWEEP GENERATOR (2nd Edition), 20511 ... $ 3.50
101 WAYS TO USE YOUR VOM AND VTVM (2nd Edition), 20510 ... $ 3.50
101 MORE WAYS TO USE YOUR VOM AND VTVM (2nd Edition), 20513 ... $ 3.50

Famous EDITORS & ENGINEERS (E & E) Books

AMATEUR RADIO INCENT. LICENS. STUDY GUIDE, 2nd Ed., 24004 ... $ 3.25
AMATEUR TESTS AND MEASUREMENTS, 24007 ... $ 5.50
*COMMERCIAL RADIOTEL. LIC. Q & A STUDY GUIDE, 24001 ... $ 6.95
*ELECTRONICS FOR THE AMATEUR, 24022 ... $ 7.95
HAM AND CB ANTENNA DIMENSION CHARTS, 24023 ... $ 1.95
*RADIO HANDBOOK (18th Edition), 24020 ... $13.50
73 DIPOLE AND LONG WIRE ANTENNAS, 24006 ... $ 4.50
73 VERTICAL, BEAM & TRIANGLE ANTENNAS, 24021 ... $ 4.95
*SINGLE SIDEBAND THEORY & PRACTICE, 24014 ... $ 6.95
SURPLUS RADIO CONVERSION MANUAL, Vol. I, 24011 ... $ 3.50
SURPLUS RADIO CONVERSION MANUAL, Vol. II, 24012 ... $ 3.50
SURPLUS RADIO CONVERSION MANUAL, Vol. III, 24013 ... $ 3.50
*RADIO AMATEURS FM REPEATER HANDBOOK, 24008 ... $ 6.95
THE SURPLUS HANDBOOK, Vol. I, 24108 ... $ 3.50
THE VHF AMATEUR, 24005 ... $ 4.50
*TRANSISTOR RADIO HANDBOOK, 24002 ... $ 5.00

POPULAR AUDEL GUIDES*

AIR CONDITIONING, 23159 ... $ 5.95
AUTO ENGINE TUNE UP, 23103 ... $ 5.95
AUTOMOBILE GUIDE, 23015 ... $ 7.95
CARPENTRY AND BUILDING, 23142 ... $ 5.95
ELECTRIC MOTORS, 23150 ... $ 5.95
GAS APPLIANCES AND HEATING, 23104 ... $ 4.25
GUIDE TO THE 1968 NATIONAL ELECTRICAL CODE, 23166 ... $ 6.95
HOME APPLIANCE SERVICING, 23016 ... $ 6.95
HOME REFRIGERATION AND AIR CONDITIONING, 23133 ... $ 6.95
OIL BURNERS, 23151 ... $ 4.95
PRACTICAL ELECTRICITY, 23160 ... $ 5.95
Q & A FOR ELECTRICIANS EXAMINATIONS, 23164 ... $ 3.95
RADIOMAN'S GUIDE, 23163 ... $ 5.95
TELEVISION SERVICE MANUAL, 23162 ... $ 5.95

published by HOWARD W. SAMS & CO., INC.

(Prices higher in Canada)
*Indicates hard-cover binding.

RCA

TECHNICAL LITERATURE

THE MOST AUTHORITATIVE IN THE INDUSTRY

TECHNICAL MANUALS



These 9 easy-to-understand and well illustrated manuals (8¼" x 5¼") cover theory, application and circuits, as well as performance data, for RCA electronic components and devices. Inexpensive and current reference sources on receiving tubes, transmitting tubes, photosensitive devices, transistors, tunnel diodes, and other semiconductor products.

■ **RCA SOLID-STATE HOBBY CIRCUITS MANUAL — HM-90** — 224 pages. A remarkable book for electronic hobbyists, experts, teachers, and students. Features 35 different solid-state circuits. Contains theory, circuit operation, construction practices, and trouble shooting. Price $1.75.*

■ **RCA TRANSISTOR, THYRISTOR AND DIODE MANUAL — SC-14** — This new 656-page manual, the successor to the popular RCA TRANSISTOR MANUAL series, contains text, data, and circuit information on bipolar and MOS transistors, thyristors, silicon rectifiers, and other types of semiconductor diodes. Price $2.50.*

■ **RCA LINEAR INTEGRATED CIRCUIT FUNDAMENTALS — IC-41** (8⅜" x 5⅜") — 352 pages. Well-illustrated manual covering the basic principles involved in the design and application of linear integrated circuits. Includes description of silicon monolithic fabrication process, derivation of design equations and performance criteria, and schematic diagrams and performance data for RCA multiple function silicon integrated circuits for use in a variety of linear applications. Price $2.00.*

■ **RCA SILICON CONTROLLED-RECTIFIER EXPERIMENTER'S MANUAL — KM-71** (8⅜" x 5⅜") — 136 pages. Contains schematic drawings and practical working control circuits which can be made with one or more basic RCA experimenter's kit (KD2105) and two add-on sensor kits (KD2106, KD2110). Also contains basic semiconductor device theory, construction tips, and trouble-shooting procedures. Price 95 cents.*

■ **RCA PHOTOTUBES AND PHOTOCELLS — PT-60.** First edition contains 192 pages on phototubes and photocelis . . . selection chart for multiplier phototubes . . . data for 90 photosensitive devices. Price $1.50.*

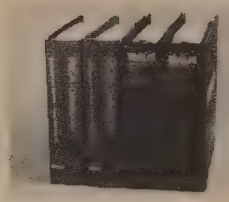
■ **RCA TRANSMITTING TUBES — TT-5.** More than 180 power tubes described in 320 pages . . . circuits for transmitting and industrial applications . . . application guide. Price $1.00.*

■ **RCA POWER CIRCUITS — SP-51** — 448 pages — Contains design information for a broad range of power circuits using RCA silicon transistors, rectifiers, and thyristors (SCR's, triacs, and diacs). Shows design examples and practical circuits. Price $2.00.*

■ **RCA RECEIVING TUBE MANUAL — RC27.** 672 pages containing data for 1400 Tube types including black-and-white and color picture tubes . . . new circuits including parts list . . . 48 page chart streamline data on RCA discontinued and renewal types. Price $2.00.*

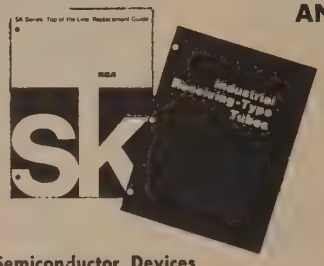
■ **RCA HIGH-SPEED, HIGH-VOLTAGE, HIGH-CURRENT POWER TRANSISTORS — PM-80.** 96 pages of theory and application of RCA medium-frequency power transistors. Covers physical theory, structures, geometries, packaging, critical application-limiting factors, and the operation and requirements of power transistors in typical circuits that illustrate amplification, switching, and control applications. Selection charts are included to facilitate choice of the optimum type of power transistor for a variety of military, industrial, and commercial applications. Price $2.00.*

ELECTRON TUBE HANDBOOK HB-3
SEMICONDUCTOR PRODUCTS DATABOOK SPD-100



Featuring over 7000 pages of design data, these Handbooks represent the most complete and up-to-date reference source for the design engineer. They contain definitive data on over 2300 tubes and semiconductor devices, as well as comprehensive selection and application charts. Frequent mailing service keeps the subscriber up-to-date on the latest new type developments and revisions. Prices for the RCA Electron Tube Handbook and the RCA Semiconductor Products Databook (including subscription service for the first year) are $25 and $20 (foreign $30 and $25), respectively. Both are available at a special rate of $35 (foreign, $40).

RCA CATALOGS AND APPLICATION BOOKLETS



These fact-filled publications are a valuable guide to the practical use of electron tubes, semiconductor products, integrated circuits, memory products, and batteries. Convenient 10⅞" x 8⅜" size handy for 3-ring binders. (For complete technical data on individual RCA tubes and semiconductor devices, RCA Technical Bulletins contain authoritative and up-to-date specifications, and fully descriptive design curves.)

Semiconductor Devices

■ **DESIGN OF TRANSISTOR SWITCHING CIRCUITS FOR DATA-PROCESSING EQUIPMENT — CTG-161.** Price 75 cents.*

■ **GUIDE TO RCA SOLID-STATE PRODUCTS — SPG-201-F.** Price 35 cents.*

■ **MOS FIELD EFFECT TRANSISTORS PRODUCT GUIDE — MOS-160B.** Price 25 cents.*

■ **MOUNTING HARDWARE FOR RCA SEMICONDUCTOR DEVICES — MHI-300B.** Single copy free on request.

■ **PHOTOCELLS — SOLID-STATE PHOTOSENSITIVE DEVICES — CSS-800A.** Price 35 cents.*

■ **POWER TRANSISTORS, TYPICAL AUDIO AMPLIFIER CIRCUITS — ATC-500.** Single copy free on request.

■ **RECTIFIER STACKS AND BRIDGES, DIFFUSED JUNCTION SILICON—SRS-300A.** Price 20 cents.*

■ **RF POWER TRANSISTORS — RFT-700F.** Single copy free on request.

■ **SILICON SIGNAL TRANSISTOR QUICK CROSS-REFERENCE DIRECTORY — PHP-150A.** Price 15 cents.*

■ **SILICON VHF TRANSISTORS APPLICATION GUIDE — 1CE-228.** Price 50 cents.*

■ **THYRISTOR CATALOG — THC-500.** Price 30 cents.

■ **TOP-OF-THE-LINE SOLID-STATE REPLACEMENT GUIDE — SPG-202J.** Price 20 cents.*

■ **TRANSISTORIZED VOLTAGE REGULATOR APPLICATION GUIDE — 1CE-254.** Price 25 cents.*

Integrated Circuits

■ **INTEGRATED CIRCUITS MOUNTING AND CONNECTION TECHNIQUES — 1CE-338.** Single copy free on request.

■ **PRODUCT GUIDE, LINEAR-DIGITAL — CDL-820C.** Price 35 cents.*

■ **MPDTL INTERCHANGEABILITY GUIDE — 1CE-368B.** Single copy free on request.

Electron Tubes

■ **GAS LASER SYSTEMS AND TUBES — PWR-512A.** Single copy free on request.

■ **GUIDE TO RCA INDUSTRIAL TUBE PRODUCTS — TPG-200E.** Single copy free on request.

■ **IMAGE ORTHICONS — CAM-800.** Price 40 cents.*

■ **INDUSTRIAL RECEIVING-TYPE TUBES — RIT-104G.** Price 20 cents.*

■ **NUVISTORS — INDUSTRIAL AND MILITARY — NIT-140.** Price 35 cents.*

■ **PENCIL TUBE CLASSIFICATION CHARTS — MWD-102B.** Single copy free on request.

■ **PHOSPHORS — TPM-1508B.** Single copy free on request.

■ **PHOTOMULTIPLIER TUBES — PIT-700A.** Price 80 cents.*

■ **PICTURE TUBE PRODUCT GUIDE — COLOR AND BLACK & WHITE — PIX-300D.** Price 55 cents.*

■ **POWER TUBES FOR NEW EQUIPMENT DESIGN — PWR-505B.** Price 75 cents.*

■ **PRODUCT GUIDE FOR POWER DEVICES — PWR-506C.** Price 30 cents.*

■ **RECEIVING TUBE AND PICTURE TUBE DIRECT REPLACEMENT GUIDE — ERT-198B.** Price 25 cents.*

■ **RECEIVING TUBES AND PICTURE TUBES — ERT-1275Q.** Price 40 cents.*

■ **MICROWAVE SOLID-STATE DEVICES AND SUBSYSTEMS — MWD-104D.** Single copy free on request.

■ **STORAGE TUBES AND CATHODE RAY TUBES — STC-900B.** Price 20 cents.*

■ **TRAVELING-WAVE TUBE CLASSIFICATION CHARTS — MWD-101D.** Single copy free on request.

■ **VIDICONS — CAM-700A.** Price 60 cents.*

Batteries and Microphones

■ **BATTERIES — BAT-134H.** Price 35 cents.*

■ **BATTERY MANUAL — BDG-111B.** Price 60 cents.*

■ **BATTERY REPLACEMENT GUIDE — BAT-137.** price 25 cents.*

■ **CHOOSING AND USING YOUR MICROPHONE — MIC-640.** Price 25 cents.*

■ **RECHARGEABLE ALKALINE BATTERIES — BAT-135A.** Price 20 cents.*

* Optional Retail Price.

REFERENCE *and* TV SERVICE PUBLICATIONS

■ **RADIOTRON DESIGNER'S HANDBOOK — RDH-905.** Price $7.00.*

■ **TRANSISTOR SERVICING GUIDE — IA1673.** Price $3.50.*

■ **COLOR TV SERVICE HANDBOOKS — IA1553** — 1960 - 1966. Price $1.50.* **1A1759** — 1967 - 1968. Price $2.00.*

■ **FIELD SERVICE GUIDES — RCA COLOR TV RECEIVERS,** 1955 - 1968. **ERT-200,** 1955 - 1966. Price $2.00.* **ERT-201** — 1967 - 1968. Price $1.60.* **ERT-202** — 1969 - 1970. Price $1.90*

■ **COLOR TV TROUBLE SHOOTING PICT-O-GUIDE — 1A1389.** Price $5.75.*

■ **"BY-STAGE" GUIDE TO COLOR-TV RECEIVERS — ERT-205A.** Price 50 cents.*

■ **TV SERVICING — TVS-1032.** Price 50 cents.*

TECHNICAL DATA BULLETINS — Complete authorized information on RCA transmitting tubes and other tubes for communications and industry. Be sure to mention tube-type booklet desired. Single copy on any type free on request.

RCA TEST EQUIPMENT — Individual data bulletins containing complete specifications — electrical and mechanical data, uses, features, etc. — coverin the complete line of precision RCA Test Equipment are available.

Copies of the publications listed above may be obtained from authorized RCA Distributors.

Net

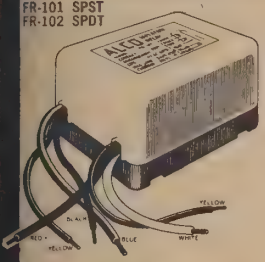
© United Technical Publicatio

ALCOSWITCH®

DIV. OF ALCO ELECTRONIC PRODUCTS, INC.

ALCOSWITCH LOW-VOLTAGE RELAY

FR-101 SPST
FR-102 SPDT



For safety's sake, control circuits should be isolated from power lines and operated at low voltages such as those obtained from a battery or from any **ALCOSWITCH RELAY** described on this page. Several case styles are available, each incorporating similar electrical characteristics and they all perform the same function, but vary in shape to fit your particular needs.

FR-101, FR-102 and FR-105 are permanently wired and occupy a minimum of space in equipment or appliance. **FRE-103** is a self-contained model that readily adapts to a standard AC outlet receptacle for experimental or for quickly assembled remote-control circuit applications. **FRP-104** is the plug-in model which makes use of a standard octal mount and is designed for electronic equipment which requires ready accessibility for ease of maintenance.



FRE-103 SPDT
Plug-In

All units are capable of handling up to 7 Amps @ 117 VAC and may be operated from remote switches located up to several hundred feet away. The remote circuit carries a low voltage which is fully isolated to minimize any possibility of shock hazards.

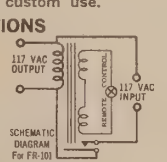
These models illustrated represent "stock relays" available for immediate application, but they may also be supplied with modifications for your special or custom use.



FRP-104 SPDT
Octal

SPECIFICATIONS

Operating Voltage:
80-125 VAC 60 Hz
Primary Coil Current:
Below 40 mA
Secondary Voltage (open):
Below 30 volts
Contact Voltage:
95-125 volts
Insulation Resistance:
Over 30 megohms @ 500 VDC
Dielectric Strength:
One minute @ 1200 VAC
Coil Temperature Ascent:
Under 158°F.
Load — FR-101: 6 amps (pwr Factor 1)
5 amps (pwr Factor .75)
FR-102: 7 amps (pwr Factor 1)
5 amps (pwr Factor .75)
FRE-103: 7 amps (pwr Factor 1)
5 amps (pwr Factor .75)
FRP-104: 7 amps (pwr Factor 1)
5 amps (pwr Factor .75)
FRP-105: 7 amps (pwr Factor 1)
5.5 amps (pwr Factor .75)

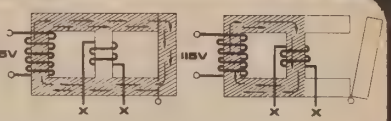


FR-101-230, FR-102-230 & FR-105-230 are 230V Types at 50% of rated power

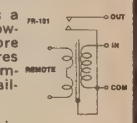


FR-105
SPST

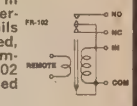
Model	Maximum Control Circuit Resistance
FR-101	1300 ohms
FR-102	300 ohms
FRE-103	400 ohms
FRP-104	150 ohms
FRP-105	280 ohms



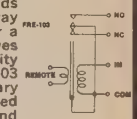
FR-101 SPST BASIC relay has a primary and secondary as a step-down transformer, and a third winding acting as a low-voltage relay. 6-inch pigtail leads extend from the inner core to beyond the polypropylene cover. The inner core measures 1¾" long x 1⅛" wide x 1" high. The basic relay is recommended for installations within the equipment housing. Available for 117 VAC or 230 VAC operation.



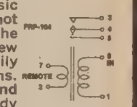
FR-102 SPDT BASIC relay has a SPDT feature and is similar in appearance to the FR-101, but slightly larger. The main difference is the core construction where the FR-102 has two coils — a primary and secondary. When the secondary is shorted, the primary and associated outer core turns into a relay. Complete with dust-proof case and 6-inch pigtail leads. The FR-102 core assembly is the basic unit for all other relays described below. Available for 117 VAC or 230 VAC operation.



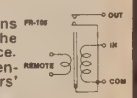
FRE-103 SPDT PLUG-IN relay has a stylized plastic case holds the laminated core inside and also has a patented three-way receptacle on the top portion that allows selection of either a Normally Open or Normally Closed circuit. A side jack serves as a plug-in for a remote switch or sensor. The plug-in capability enables the user to insert the ALCOSWITCH RELAY FRE-103 directly into an AC wall outlet. No other wiring is necessary other than the addition of the remote switch and cord attached to a plug. Complete to operate with plug; less cord and remote switch.



FRP-104 SPDT OCTAL base plug feature is added to the basic ALCOSWITCH RELAY for the industrial user. Wiring is not required for the FRP-104, only for the socket mounted in the panel or equipment. The FRP-104 is protected by a clear-view plastic dust cover. The neat finger-gripping size unit easily plugs into an octal socket for horizontal or vertical installations. The plug-in model makes use of a standard octal mount and is designed for electronic equipment which requires ready accessibility for ease of maintenance.



FR-105 SPST BASIC is similar to the FR-102 in specifications and application, but more compact in width and depth. The black plastic molded case is contoured to conserve space. Equipped with normal 6" leads. This particular unit is generally available from stock and could be tailored to customers' particular needs.

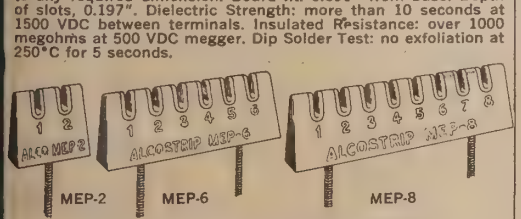


Model	Contacts	Description	One-99	100-499	999-999
FR-101	SPST	Basic Relay for 117 VAC	3.85	3.01	2.62
FR-101-230	SPST	Basic Relay for 230 VAC	4.25	3.32	2.89
FR-102	SPDT	Basic Relay for 117 VAC	4.45	3.47	3.03
FR-102-230	SPDT	Basic Relay for 230 VAC	4.85	3.78	3.30
FRE-103	SPDT	Plug-in	4.95	3.82	3.37
FRP-104	SPDT	Octal	5.45	4.25	3.71
FR-105	SPST	Basic Relay for 117 VAC	3.85	3.01	2.62
FR-105-230	SPST	Basic Relay for 230 VAC	4.25	3.32	2.89



CERAMIC TERMINAL STRIPS

Ceramic-base terminal strips with fired silver, copperplated and tinned terminals to facilitate high-temperature soldering of components and leads. Features permanent bond between metal and ceramic. Standard 2-56 threaded studs are extra long for cutting to any required dimension. Board ht. 0.590" from base. Depth of slots, 0.197". Dielectric Strength: more than 10 seconds at 1500 VDC between terminals. Insulated Resistance: over 1000 megohms at 500 VDC megger. Dip Solder Test: no exfoliation at 250°C for 5 seconds.

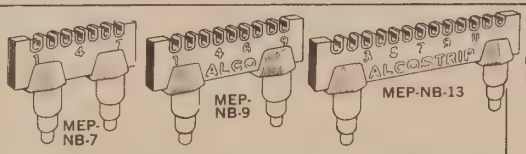


MEP-2 MEP-6 MEP-8

STANDARD TYPES WITH THREAD MOUNTING

Model	No. of Terminal Slots	Size Overall Width	Mtg. Ctrs.	One-24	25-99	100-499	500-999
MEP-2	2	0.650	------	.36	.24	.216	.198
MEP-4	4	1.161	0.512	.45	.30	.27	.248
MEP-6	6	1.673	1.024	.60	.40	.36	.33
MEP-8	8	2.185	1.535	.75	.50	.45	.413
MEP-10	10	2.697	2.047	.87	.58	.522	.479
MEP-12	12	3.209	2.560	.99	.66	.594	.545

ALCOSTRIPS ARE MANUFACTURED UNDER A LICENSE GRANTED BY TEKTRONIX, INC.

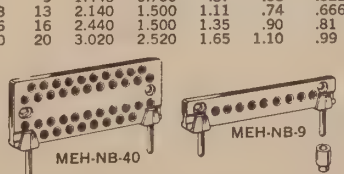


MEP-NB-7 MEP-NB-9 MEP-NB-13

USE WITH MEP-NB SERIES DESCRIBED AT LEFT!

MINIATURE TYPES WITH SNAP MOUNTING

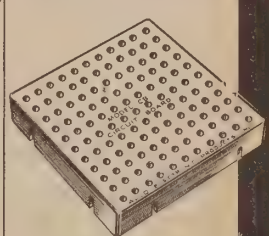
Model	No. of Terminal Slots	Size, Overall Width	Mtg. Ctrs.	One-24	25-99	100-499	500-999
MEP-NB-3	3	0.600	.....	.48	.32	.288	.264
MEP-NB-5	5	0.885	0.490	.66	.44	.396	.363
MEP-NB-7	7	1.165	0.490	.81	.54	.486	.446
MEP-NB-9	9	1.445	0.750	.87	.58	.522	.479
MEP-NB-13	13	2.140	1.500	1.11	.74	.666	.611
MEP-NB-16	16	2.440	1.500	1.35	.90	.81	.743
MEP-NB-20	20	3.020	2.520	1.65	1.10	.99	.908



UNIVERSAL TYPES WITH SNAP MOUNTING

ALCO's new concept allows for horizontal or vertical mounting of terminal strips. Each strip is supplied with 2 types of mounting hardware. The selected positioning of the terminals permits the use of more components in a limited space (either singly or in pairs). Silverplated copper eyelets are swedged to the ceramic base.

Model	No. of Terminal Slots	Size Overall Width	Mtg. Ctrs.	One-24	25-99	100-499	500-999
MEH-NB-9	9	3.000	2.500	.80	.53	.48	.44
MEH-NB-18	18	3.000	2.500	1.45	.96	.87	.798
MEH-NB-19	19	3.000	1.750	1.45	.96	.87	.798
MEH-NB-40	40	3.000	2.500	2.20	1.46	1.32	1.21



Simplify Circuitry With These DESIGN BOARDS and Plug-In Terminal Strips

Ceramic Alcostrips are ideal for breadboarding which may be quickly inserted or removed as desired to simplify circuit design. A mating circuit board measuring only 5" x 6" is provided to form a base for experimental design work. Complete ceramic kit includes 16 strips (8 sizes) and one board.

	One-24	25-99
CB-2 Kit	10.95	7.67
CB-1 Board only	.95	.67

ALCO® ELECTRONIC PRODUCTS, INC.

ALLIED CONTROL ALLIED CONTROL COMPANY INC.

GENERAL PURPOSE RELAYS

THE HI-MAG RELAY WAS DESIGNED SPECIFICALLY FOR APPLICATIONS WHERE INPUT POWER IS AT A PREMIUM. The optimized magnetic circuit generates maximum pull forces, resulting in maximum efficiency. The unique patented hinge assembly assures stability and consistency throughout millions of operations. HI-MAG relays are recognized under the Component Recognition Program of Underwriters' Laboratories (File No. E20604).

- Sensitivity — With only 30 milliwatts per pole, input power loads as high as 150 watts are switched reliably for millions of operations
- Life — 10^8 mechanical operations
- Reliability — Greater reliability is assured by the combination of higher contact pressures (15 grams minimum), maximum input sensitivity, and selection of the contact type best suited to switch the required load
- Interchangeability — HI-MAG relays are form, fit, and functionally equivalent to all existing cradle relays
- Contact Configuration — HI-MAG relays feature contact configurations up to 8 form C

HI-MAG relays are designed for use wherever the combinati of low input power and long life reliability is essential. few of the many diversified and sophisticated applicatio include:

Output and interface circuits for data processing equipmen

Teaching devices

Process control instrumentation

Power supplies

Computer peripheral equipment

Alarm and signal equipment

Airborne instrumentation and navigation

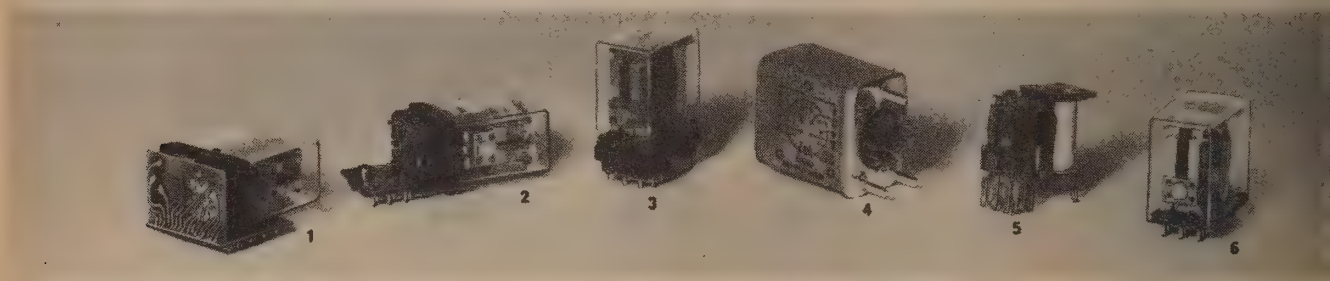
Medical electronics

Telephone interfacing

Communication and test equipment

Office machines

Vending machines

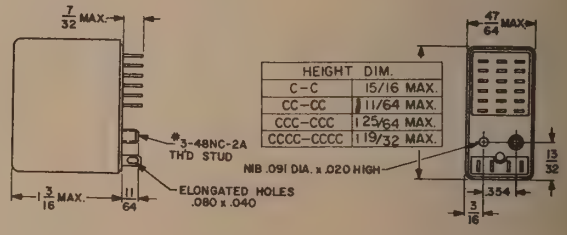


1A ENCLOSURE RIGHT ANGLE IN SOCKET
2A ENCLOSURE RIGHT ANGLE OUT SOCKET
3A ENCLOSURE PC SOCKET
4F ENCLOSURE CHASSIS MOUNT
5C ENCLOSURE PANEL MOUNT
6B ENCLOSURE PC DIRECT MOUNT

DESIGN FEATURES

- Choice of mounting means including socket, solder, PC direct and chassis or panel mount.
- Clear Polycarbonate (Lexan) cover for dust protection.
- Hermetically Sealed for hostile environments.
- Silver, cadmium oxide, gold plated contacts for 5A. switching.
- Bifurcated, silver, gold bonded contacts for dry circuit to 2A. switching.
- Bifurcated crossbar; #1 Alloy for dry circuit applications.
- Single, silver, gold bonded contacts for 2A switching.

DIMENSIONS



HEIGHT DIM.	
C-C	15/16 MAX.
CC-CC	11/64 MAX.
CCC-CCC	1 25/64 MAX.
CCCC-CCCC	1 19/32 MAX.

NEW SOLID STATE HI-MAG TD10 SERIES TIMER

The reliable, low cost, high density package, TD10 Timer utilizes solid state timing networks, featuring repeat accuracy, and Mag Cradle relay output which provides true isolation and high current switching capability.

- Two timing functions; delay to make or interval.
- Repeat accuracy: 2%.
- Time ranges: 0.05 to 300 sec.
- No false operation.
- Internal or external potentiometer.
- Contact configuration — up to 4 Form C.

© United Technical Publicatio

ALLIED CONTROL

ALLIED CONTROL COMPANY INC.

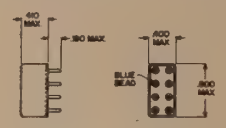
POWER RELAYS

	RELAY TYPE[1]	COIL VOLTAGE OR CURRENT	CONTACTS FORMS	CONTACTS AMPS[2]	COIL POWER AT 25°C	COIL RESIST. OHMS[3]	NET PRICE	OUTLINE DRAWING	DESCRIPTION
BOT (BO not shown)	BO-6A	6v a-c	DPDT	15	5.0 va	1.07	$5.80		Compact, rugged design for industrial control applications.
	BO-6A	24v a-c	DPDT	15	5.0 va	17	5.80		
	BO-6A	115v a-c	DPDT	15	5.0 va	445	5.80		
	BO-6A	220v a-c	DPDT	15	5.0 va	1700	5.92		
	BO-6D	6.3v d-c	DPDT	15	2.5 w	14.2	5.12		
	BO-6D	13.2v d-c	DPDT	15	2.5 w	70	5.12		
	BO-6D	26.5v d-c	DPDT	15	2.5 w	230	5.12		
	BO-6D	115v d-c	DPDT	15	2.5 w	5000	5.70		
	BOT-6A	6v a-c	DPDT	15	5.0 va	1.07	5.50		Compact, rugged design for industrial control applications.
	BOT-6A	24v a-c	DPDT	15	5.0 va	17	5.50		
	BOT-6A	115v a-c	DPDT	15	5.0 va	445	5.50		
	BOT-6A	220v a-c	DPDT	15	5.0 va	1700	5.62		
	BOT-6D	6v d-c	DPDT	15	2.5 w	14.2	4.82		
	BOT-6D	12v d-c	DPDT	15	2.5 w	70	4.82		
	BOT-6D	26.5v d-c	DPDT	15	2.5 w	230	4.82		
	BOT-6D	110v d-c	DPDT	15	2.5 w	5000	5.40		
BOHR	BOHR-6A	115v a-c	DPDT	10	5.0 va	445	11.33		**Vibration:** 10-55 cps at .062" double amplitude **Shock:** 30g operational **Temp:** −55°C to +71.5°C **Weight:** 9.5 ounces max. **Plug-in:** Type BOHRO (not show **Socket:** Any std. RETMA or EIA octal
	BOHR-6D	26.5v d-c	DPDT	10	2.5 w	230	10.88		
	BOHRO-6A	115v a-c	DPDT	15	5.0 va	445	11.33		
	BOHRO-6D	26.5v d-c	DPDT	15	2.5 w	230	10.88		
CNA	CNA-13A	115v a-c	SPST NO DB	25	10.5 va	145	8.60		Heavy duty, compact relay with double break contact construction eliminating pigtails **Terminals:** Coil (1 & 2) 3-32 dia. holes Contacts (3 & 4) 10-32 screw type **Weight:** 9.5 ounces max. **Mounting:** (4) 6-32 elastic stop nuts
	CNAS-13A	115v a-c	SPST NO DB	50	10.5 va	145	10.60		
PB	PB-9A	115v a-c	3PDT	10	6.0 va	380	7.60		Small design with semi-balanced armature construction **Operate:** 25 milliseconds **Release:** 4 milliseconds **Temp:** —55°C to +71.5°C **Weight:** 4.0 ounces max.
	PB-12A	115v a-c	4PDT	10	6.0 va	380	8.10		
PO-9	PO-9A	24v a-c	3PDT	15	10.5 va	8.0	7.03		Low cost, compact, multi pole **Terminals:** .079 x .164 hook, tin dipped **Weight:** 7.5 ounces max. **Mounting[5]:** (4) 6-32 tapped holes (as shown) Type PON-(4) 6-32 elastic stop nuts
	PO-9A	115v a-c	3PDT	15	10.5 va	145.0	7.03		
	PO-9D	13.2v d-c	3PDT	15	2.5 w	70	6.71		
	PO-9D	24v d-c	3PDT	15	2.5 w	230	6.71		
	PO-9D	115v d-c	3PDT	15	2.5 w	5000	7.38		
PO-12	PO-12A	115v a-c	4PDT	15	10.5 va	145	7.90		Low cost, compact, multi pole **Terminals:** .079 x .164 hook, tin dipped **Weight:** 8.0 ounces max. **Mounting[5]:** (4) 6-32 tapped holes (as shown) Type PON-(4) 6-32 elastic stop nuts
	PO-12D	13.2v d-c	4PDT	15	2.5 w	70	7.44		
	PO-12D	24v d-c	4PDT	15	2.5 w	230	7.44		

ALLIED CONTROL

ALLIED CONTROL COMPANY INC.

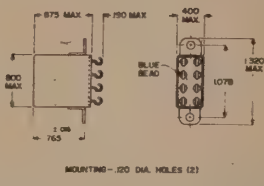
SENSITIVE and PLATE CIRCUIT RELAYS

RELAY TYPE[1]	COIL VOLTAGE OR CURRENT	CONTACTS FORMS	CONTACTS AMPS[2]	COIL POWER AT 25°C	COIL RESIST. OHMS[3]	NET PRICE	OUTLINE DRAWING	DESCRIPTION
S								
S6A1	26.5v d-c	DPDT	2	1w	700	$9.91		Half crystal can relay in al welded construction with solder hook or plug in terminals. **Weight:** 0.3 ounce
S6H3	26.5v d-c	DPDT	2	1w	700	9.91		
SL6A1	26.5v d-c	DPDT	2	1w	700	9.91		
SL6H3	26.5v d-c	DPDT	2	1w	700	9.91		

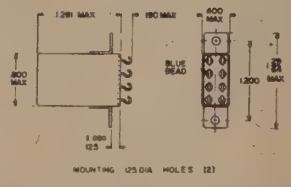


NOTE: relay conforms to MIL-R-5757/9

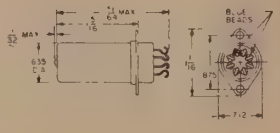
SUBMINIATURE TYPE RELAYS

RELAY TYPE[1]	COIL VOLTAGE OR CURRENT	CONTACTS FORMS	CONTACTS AMPS[2]	COIL POWER AT 25°C	COIL RESIST. OHMS[3]	NET PRICE	OUTLINE DRAWING	DESCRIPTION
WKJ								
WKJ-6D	6v d-c	DPDT	3	1.5 w	40	$ 8.25		**Vibration:** 20g to 2000 cps **Shock:** 100g operational **Operate:** 5 milliseconds **Release:** 3 milliseconds **Temp:** 65°C to +125°C **Weight:** 0.5 ounces max. **Plug-in:** Type WKJO (not shown) **Socket:** Amel type HRC-1 or equivalent
WKJ-6D	12v d-c	DPDT	3	1.5 w	150	8.25		
WKJ-6D	26.5v d-c	DPDT	3	1.5 w	600	8.25		
WKJ-6D	48v d-c	DPDT	3	1.5 w	2320	8.75		
WKJ-6D	115v d-c	DPDT	3	1.5 w	10000	10.17		
WKJO-6D	26.5v d-c	DPDT	3	1.5 w	600	8.25		

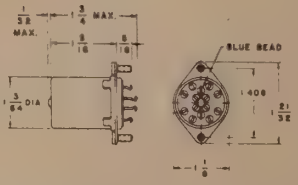


WJS								
WJS-3D	3.2 ma d-c	SPDT	3	25 mw	2500	$11.57		**Vibration:** 15g to 2000 cps **Shock:** 50g operational **Operate:** 15 milliseconds **Release:** 10 milliseconds **Temp:** −65°C to +125°C **Weight:** 1.0 ounces max. **Welded Construction**
WJS-3D	2.2 ma d-c	SPDT	3	25 mw	5000	11.57		
WJS-3D	1.6 ma d-c	SPDT	3	25 mw	10000	13.50		
WJS-6D	4.0 ma d-c	DPDT	3	40 mw	2500	11.83		
WJS-6D	2.8 ma d-c	DPDT	3	40 mw	5000	11.83		
WJS-6D	2.0 ma d-c	DPDT	3	40 mw	10000	13.83		

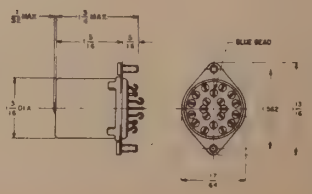


MH-6								
MH-6D	26.5v d-c	DPDT	5	1.75 w	400	$14.25		**Vibration:** 15g to 1000 cps **Shock:** 50g operational **Operate:** 8 milliseconds **Release:** 5 milliseconds **Temp. MH:** —55°C to +85°C **MHB:** —65°C to +125°C **Weight:** 2.0 ounces max. **Mounting:** (2) 0.125 dia. holes
MHB-6D	26.5v d-c	DPDT	5	1.25 w	325	14.25		



MH-12*								
MH-12D	26.5v d-c	4PDT	5	2.5 w	300	$20.90		**Vibration** 15g to 1000 cps **Shock:** 50g operational **Operate:** 10 milliseconds **Release:** 5 milliseconds **Temp. MH:** —55°C to +85°C **MHB:** —65°C to +125°C **Weight:** 3.0 ounces max. **Mounting:** (3) 6-32 NC-2A thd. studs
MHB-12D	26.5v d-c	4PDT	5	3.0 w	250	20.90		



MH-18*								
MH-18D	26.5v d-c	6PDT	5	3.0 w	240	$23.75		**Vibration** 15g to 1000 cps **Shock:** 50g operational **Operate:** 10 milliseconds **Release:** 5 milliseconds **Temp. MH:** —55°C to +85°C **MHB:** —65°C to +125°C **Weight:** 4.2 ounces max. **Mounting:** (3) 6-32 NC-2A thd. studs
MHB-18D	26.5v d-c	6PDT	5	3.5 w	200	23.75		



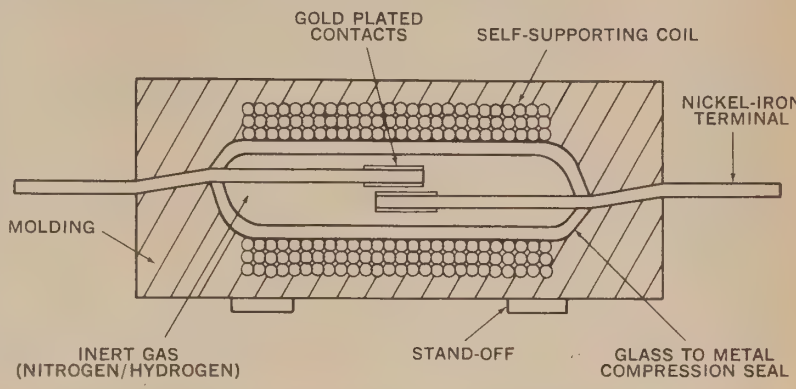
Net

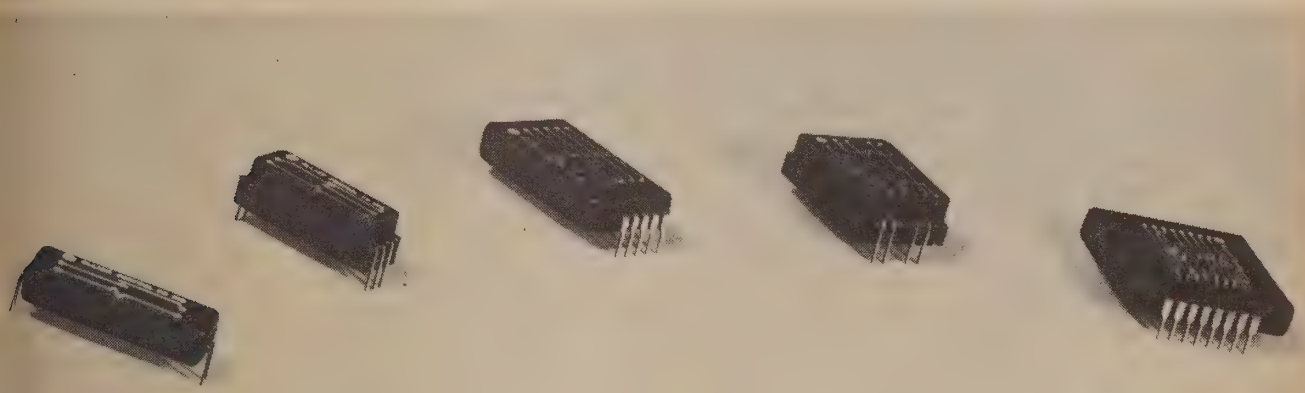
© United Technical Publicatio

ALLIED CONTROL ALLIED CONTROL COMPANY INC.

TRI-R DUAL IN-LINE REED RELAYS

- High speed — operate and release time in micro-seconds.
- Low profile — permits 0.5″ PC board stacking.
- Long life — 100 million operations at low level. 20 million operations at 10 watts.
- Total encapsulation — eliminates reed breakage even under severe shock.
- Magnetic and/or electrostatic shielding for high density packaging.
- Solid state circuitry — for input/output protection.
- Color coding — for identification of switching modes.
- Choice of terminal patterns and schematics.
- Self supporting coil — maximum coil efficiency.





SPECIAL FEATURES

he standard IC terminals of the RD Series reed relays are rranged in a 1.3 x 0.1″ pattern assuring trouble-free auto-natic loading of the device. An infinite number of schematics ermits practical and economical PC board layouts.

The round wire terminals of the RF Series relays, positioned in the recessed sections of the molded relay body, are spaced 1.0 x 0.1″. Lead protection is provided without sacrificing the ability of spot testing from either side of the PC board.

APPLICATIONS

ata processing — input/output accessories.

Vhere time restrictions are less critical.

Vhere higher work loads of readout devices must be handled.

Vhere gathering or collection of input data from transducers r sensors is followed by a reduction of the electrical data to usable form (visual displays, charts, printed records).

Vhere contact loads are highly variable.

Vhere the data gathered is a low level signal generated by ensors or strain gages, whereas the correction and control unctions require power switching.

est equipment — oscilloscopes, digital voltmeters, recorders. or switching and counting.

Production test equipment — components testers, sub-assembly checkout. For sequential checking of parameters to preset limits on an accept/reject basis, or punch cards for future reference.

Coin operated machines — vending machines, juke boxes. For programming, sequencing, and/or selecting.

Business machines — teletypewriters, card readers, tape and card punchers.

For routing, sequencing, memory, selection, computing.

Alarm systems — fire alarm, burglar alarm.

For interfacing low signal sensors with power output.

THERMOSTATIC **AMPERITE** DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT



STANDARD

AMPERITE THERMOSTATIC DELAY RELAYS

Amperite Thermostatic Delay Relays are manufactured on automatic high production equipment — resulting a low price — and top quality. Quality is not sacrificed at any point. For example, although contacts are rated 3 amps, 10 amp contacts are actually used. Similarly with all other parts—only the best available are used.

Amperite Thermostatic Delay Relays are actuated by a heater . . . and therefore can be used on A.C., D.C., pulsating current. Being hermetically sealed, Amperite Relays are not affected by altitude, moisture, or other atmospheric conditions. REPLACED AS EASILY AS A RADIO TUBE.

CIRCUITS SPST: Available only — normally open or normally closed.

HEATER VOLTAGES AVAILABLE: 2.5, 5.0, 6.3, 12.6, 26, 50, 115V.
For 220V use a 6000 ohm-5 watt resistor in series, with 115V heater.

HEATER WATTAGE: Standard and Miniature Relays—all voltages—2.3w prox. All heaters may be operated continuously. Heaters will not be damaged by a 50% voltage overload for duration of 1 hour or less.

Amperite Delay Relays are recognized under component program of Underwriters' Laboratories, Inc. for all voltages up to and including 115V.



MINIATURE

VARIATION OF DELAY WITH HEATER VOLTAGE

FIG. 1—Effect of change in heater voltage on delay in seconds. Only low voltage heaters (2.5 to 26 V.) incorporate heater voltage regulations as shown in diagram.

For 22 to 30 V. supply: We recommend Amperite Delay Relays with 26 V. heaters for airplanes and similar power supplies. These heaters are regulated for battery variation of 22 to 30 V. as shown in this diagram.

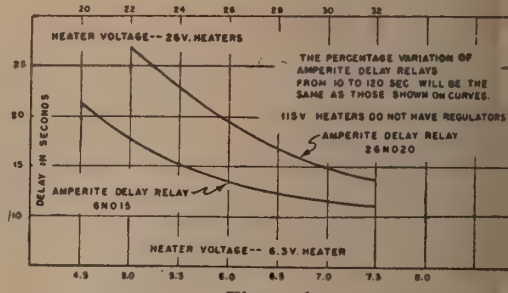


Figure 1

CONTACT RATING

	Delay	Contact Rating Non-Inductive	DC Voltage Breakdown Contact-to-Contact	Heater-to-Contact
STANDARD	2 to 10 Sec.	115V - 3a AC	250V	500V
RELAYS	15 to 180 Sec.	115V - 3a AC	800V	800V
		220V - 1a AC	800V	800V
MINIATURE	2 to 10 Sec.	115V - 2a AC	250V	500V
RELAYS	15 to 120 Sec.	115V - 2a AC	800V	800V
		220V - 1a AC	800V	800V
FLASHERS		- ½a AC		

AMBIENT TEMPERATURES: Relays are compensated for temperatures of −55° to +80°C. (Relays can be operated from −80°C to +125°C without damage). Low voltage heaters 26V or less have better ambient compensation than relays with 115V heaters. If the relays are actually to be used over ambients of −55°C to +80°C it is advisable to have each relay tested at the factory over the ambient. A nominal charge is made for this service.

CONTACT DROP: — 0.1V — Prox. at 1A.

DELAYS AVAILABLE:—From 2 to 180 seconds. Relays can be used in series to obtain longer delays. The delay of any individual relay up to 120 seconds can be increased up to 25% by using a resistor in series with the heater. Delays above 120 seconds cannot be increased. Relays with short delays such as 2 to 5 seconds can be increased 50%.

LIFE of any individual relay will depend on the service the contacts are subjected to. With a 115V — 2A A.C. non inductive load the contacts will withstand at least 250,000 operations. SHELF LIFE of Amperite Delay Relays is over 10 years.

CONTACT FLUTTER:—If encountered, this can be eliminated by flashing approximately 1 amp. through the contacts a dozen times. Contacts of Amperite Delay Relays clean up and get better with use because of the oxygen free atmosphere. **Relay Contacts should not be used on voltages above 220V.**

FOR INSTANTANEOUS RECYCLE AND ELIMINATION OF CHATTER

For instantaneous recycle and elimination of chatter. Cannot be used with Sensitive Relays.

Magnetic Relay requires extra N.O. contact as shown at "E".

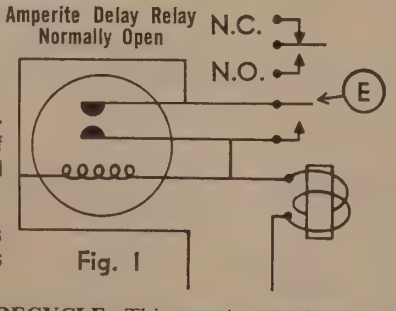


Fig. 1

For instantaneous recycle and elimination of chatter when Sensitive Relay is used.

Magnetic Relay requires an extra SPDT contact as shown at "F".

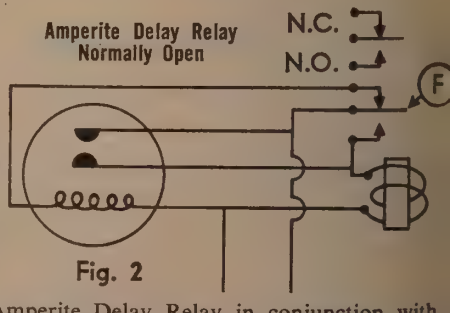


Fig. 2

INSTANTANEOUS RECYCLE: This can be obtained by using a normally open Amperite Delay Relay in conjunction with a Magnetic Relay as shown above. If normally closed is required — use a **normally open** Amperite Delay Relay — and use the contacts on the magnetic relay. Choose the Amperite Delay Relay for the voltage required and the delay required (e.g. — 115N030 — would be used on 115 volt supply — for a 30 second delay).

LONG CYCLE RELAYS: are also available. For example, Amperite Delay Relay 115N07T has a delay in closing of 3 to 7 seconds. After heater is disconnected, contacts will remain closed for 30 seconds minimum. Write us about your requirements.

© United Technical Publications

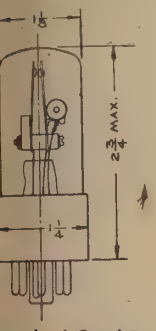
THERMOSTATIC AMPERITE DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT

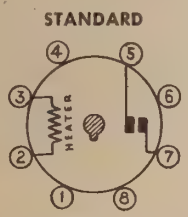
BREAKING D.C. CURRENT: When Relay contacts open D.C. above 50 volts, a condenser of approximately 0.5 uf with resistor in series with it must be connected across the contacts. Arc suppressors can also be used.

INDUCTIVE A.C. LOADS: When breaking an inductive A.C. load, use a condenser of .01 to .1 mfd. across contacts. In some cases, putting a 20,000 ohm, 5w resistor across the contacts reduces the arcing considerably.

Relay contacts should not be used on voltages over 220V.



Standard Octal Base



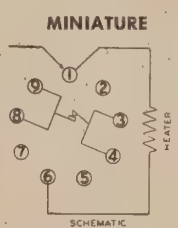
Bottom View
Schematic Diagram

SPECIFICATIONS:

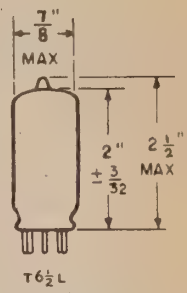
Base Wiring:
Standard Radio Octal:
Prongs 2-3-heater;
Prongs 5-7-contacts.

Base Wiring:
9-Pin Miniature:
Prongs 1-6 heater;
Prongs 3-4, 1 contact;
Prongs 8-9, 2nd contact

Amperite Delay Relays are recognized under component program of Underwriters' Laboratories, Inc. for all voltages up to and including 115V.



Bottom View
Schematic Diagram



9-Pin Miniature Base

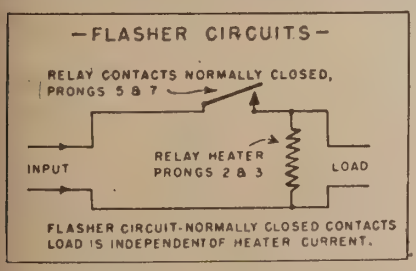
STANDARD AND MINIATURE TYPES OF AMPERITE DELAY RELAYS AND FLASHERS... Net $2.40 each

STANDARD RELAYS: Available in 2 to 180 Seconds Delay. MINIATURE RELAYS: Available in 2 to 120 Seconds Delay.

Types shown in Bold type in the chart below are more popular relays and are more readily available.

MINIATURE TYPES: Designated by letter T (e.g. 6N05T)

Delay-Seconds	Tolerance Seconds at 20°C	NORMALLY OPEN CONTACTS — HEATER VOLTAGES							NORMALLY CLOSED CONTACTS — HEATER VOLTAGES						
		2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	50 V.	115 V.	2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	50 V.	115 V.
2	± 1½	2N02	5N02	6N02	12N02	26N02	50N02	115N02	2C2	5C2	6C2	12C2	26C2	50C2	115C2
3	± 1½	2N03	5N03	**6N03**	12N03	**26N03**	50N03	**115N03**	2C3	5C3	**6C3**	12C3	**26C3**	50C3	**115C3**
5	± 2½	2N05	5N05	**6N05**	12N05	**26N05**	50N05	**115N05**	2C5	5C5	**6C5**	12C5	**26C5**	50C5	**115C5**
8	± 3	2N08	5N08	**6N08**	12N08	**26N08**	50N08	**115N08**	2C8	5C8	**6C8**	12C8	**26C8**	50C8	**115C8**
10	± 4	2N010	5N010	**6N010**	12N010	**26N010**	50N010	**115N010**	2C10	5C10	**6C10**	12C10	**26C10**	50C10	**115C10**
15	± 4	2N015	5N015	**6N015**	12N015	**26N015**	50N015	**115N015**	2C15	5C15	**6C15**	12C15	**26C15**	50C15	**115C15**
20	± 5	2N020	5N020	**6N020**	12N020	**26N020**	50N020	**115N020**	2C20	5C20	**6C20**	12C20	**26C20**	50C20	**115C20**
30	±10	**2N030**	**5N030**	**6N030**	**12N030**	**26N030**	50N030	**115N030**	2C30	5C30	**6C30**	12C30	**26C30**	50C30	**115C30**
45	±10	2N045	5N045	**6N045**	12N045	**26N045**	50N045	**115N045**	2C45	5C45	**6C45**	12C45	**26C45**	50C45	**115C45**
60	±15	**2N060**	5N060	**6N060**	12N060	**26N060**	50N060	**115N060**	2C60	5C60	**6C60**	12C60	**26C60**	50C60	**115C60**
75	±15	2N075	5N075	**6N075**	12N075	**26N075**	50N075	**115N075**	2C75	5C75	**6C75**	12C75	**26C75**	50C75	**115C75**
90	±20	2N090	5N090	**6N090**	12N090	**26N090**	50N090	**115N090**	2C90	5C90	**6C90**	12C90	**26C90**	50C90	**115C90**
120	±35	2N0120	5N0120	**6N0120**	12N0120	**26N0120**	50N0120	**115N0120**	2C120	5C120	**6C120**	12C120	**26C120**	50C120	**115C120**
150	±35	2N0150	5N0150	**6N0150**	12N0150	**26N0150**	50N0150	**115N0150**	2C150	5C150	**6C150**	12C150	**26C150**	50C150	**115C150**
180	±45	2N0180	5N0180	**6N0180**	12N0180	**26N0180**	50N0180	**115N0180**	2C180	5C180	**6C180**	12C180	**26C180**	50C180	**115C180**



Flashers operate approximately ⅓ on, ⅔ off. The percentage time on can be increased by reducing voltage of heater.

115V Flashers available ONLY in quantities of 12 or less. Cannot be supplied in production quantities.

Normally closed flashers are standard, and are indicated by the letter "F." The number following letter "F" denotes flashes per minute. *For example a 6F30 flasher,* has 6.3V heater, normally closed 30 FPM with a ± 15 flashes per minute tolerance. A 6F30T, would be the same type but in 9-pin miniature. Flashers are available from *30 to 90 Flashes per minute* with tolerances as shown in the chart below:

FLASHERS have contact rating of ½a 115V AC, non-inductive.

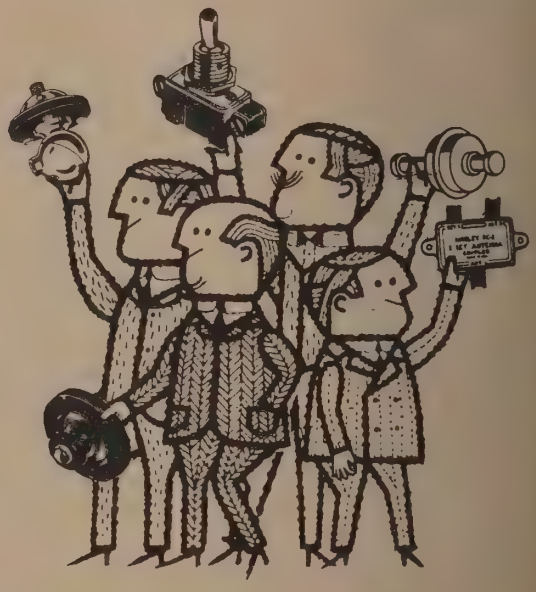
Tol. FPM — 20°C	Standard Flashers Available		
30 ± 15	6F30	26F30	115F30
45 ± 15	6F45	26F45	115F45
60 ± 20	6F60	26F60	115F60
75 ± 20	6F75	26F75	
90 ± 25	6F90	26F90	

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*

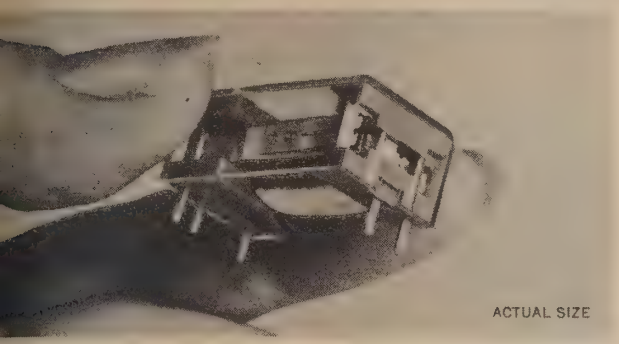


- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

American Zettler, inc.

RELAYS

ERIES AZ 530-THINPAK™ MINIATURE RELAY



ACTUAL SIZE

FEATURES

- 0.415" high for 0.6" standard pc board spacing
- Up to 2 Amp SPDT contacts
- 0.1" Terminal Grid spacing
- Insulation resistance greater than 10^{10} ohms
- Contact resistance less than 50×10^{-3}
- No phenolic insulation used

ENERAL DESCRIPTION

The AZ miniature THINPAK relay, Model 530, as been designed for applications with either de-anding space limitations, such as 0.6" center-to-nter PC card mounting, or operating requirements at cannot be met by reed relays or conventional ntact type relays. The high pressure SPDT 1 or amp contacts operating at 26 VDC enables the it to switch capacitance or lamp loads with cur-nt spikes that would normally weld the contacts of reed relays. The high sensitivity of 125 mW pull-in, long life and insulation resistance of more than 10^{10} ohms make it an ideal unit for galvanic separation between electronic circuits. The AZ-530 THINPAK is available in standard coil voltages from 6 to 115 VDC with an operate and release time of less than 2 ms. It has PC terminals in 0.10" grid spacing. A clear plastic dust cover with a mylar bottom plate is provided.

ELECTRICAL SPECIFICATIONS

Contact Rating — noninductive load
Light Duty (Code 1): Fine silver goldplated
1 Amp @ 26 VDC or
0.5 Amp @ 115-VAC
Medium Duty (Code 2): Silver Cadmium-Oxide goldplated
2 Amp @ 26 VDC or
1 Amp @ 115 VAC

Life Expectancy — Mechanical Operations: 10^7
Operations at Rated Load: 10^5

Contact Resistance — 50 milliohms max. initially

Operate Time — < 5 ms at 2 times must operate voltage or current

Release Time — < 2 ms at 2 times must operate voltage or current

Contact Bounce — at 10 mA contact current:
2 ms max. at operate N. O. side
3 ms max. at release N. C. side

Capacity — typical: NC to Movable 0.6 pF
NO to Movable 0.9 pF
contact to coil 12 pF

Dielectric Strength — 500 Vrms across contact gap and contact to coil

Insulation Resistance — 10,000 Megohms min. @ 20° C, 100 VDC, 50% RH

Drop Out — 10% minimum of must operate voltage or current.

Coil Power — Pick UP typical: light duty contact 125 mW
medium duty contact 250 mW
Max. Continuous Dissipation: 1.6 W
@ 20° C (68° F)
1.2W
@ 40° C (105° F)
Temperature Rise: approx. 55° C per Watt

Coil Temperature — Max. 105° C (220° F)

Ambient Temperature —
Operating: −55° C (−72° F) to 80° C (175°F)
@ nominal operating voltage
Storage: −55° C (−72° F) to 105° C (220°F)

Vibration — 0.062 DA @ 10-55 Hz

Shock — 20 g

Enclosure — Clear plastic cover with mylar bottom plate

Terminals — Printed circuit board terminals goldplated in 0.10" standard grid space

Weight — Approx. 10 gr.

andard Relays with light duty contact

Nom. Coil VDC	Max. Contin. VDC	Resist. OHMS ±10%	Must Operate* mA	Must Operate* VDC	PART NO.	Net 1-24 Pcs.
6	9.7	66	49	3.6	AZ 530-12-1	$2.36
12	21.8	330	22.5	8.3	AZ 530-08-1	2.36
24	37	950	13	13.8	AZ 530-06-1	2.53
48	68	4700	6.2	32.6	AZ 530-04-1	2.94
60	104	7600	5	42.6	AZ 530-035-1	3.41
115	145	14500	3.6	58.6	AZ 530-03-1	3.93

Standard Relays with medium duty contact

Nom. Coil VDC	Max. Contin. VDC	Resist. OHMS ±10%	Must Operate* mA	Must Operate* VDC	PART NO.	Net 1-24 Pcs.
6	8.2	47	83	4.8	AZ 530-13-2	$2.47
12	17	200	41	9.2	AZ 530-09-2	2.47
24	37	950	18.3	19.5	AZ 530-06-2	2.64
48	66	3000	11	37	AZ 530-045-2	3.06
60	82	4700	8.7	46	AZ-530-04-2	3.52
115	145	14500	5	82	AZ 530-03-2	3.98

ll values at 20° C.
elay will pull in with less than "must operate" value.
here will be a change of less than 10% in must operate if several relays are mounted close together.
ote: To fasten relay on PC board do not bend contact terminals as this damages adjustment! Use coil terminals only. After soldering relay to board, do not dip the board into a cleaning solution.
Solder temperature: Max. 270° C (500° F)
Solder time: Max. 5 sec.

American Zettler, inc.

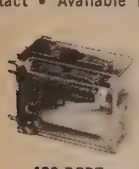
American Zettler, inc.

STANDARD AZ 420 AND 430 SERIES RELAYS

General purpose miniature relays in plastic dust cover — Interchangeable with other cradle type relays — Combination sol and plug-in terminals. UL-version listed under UL Component Recognition File E43203.

SERIES AZ 420 — MINIATURE GENERAL PURPOSE RELAYS — UP TO 6 FORM C

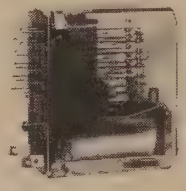
• International Standard type • Combination plug in/wire or PC terminals • Low level bifurcated, 2 amp or 5 amp contacts • Life expectancy more than 100 million operations • Form A, B, C and D contacts are available • Molded cradle eliminates phenolic dust inside the relay • Balanced, spring-held armature allows dependable operation in any position • Round core and larger coil volume provides more pull force, eliminating expensive, sensitive version • Slim profile mounting with right-angle socket • Sockets are of unbreakable fiberglass-filled base and have unique knife-type connectors for dependable contact • Available from stock.



420-DPDT

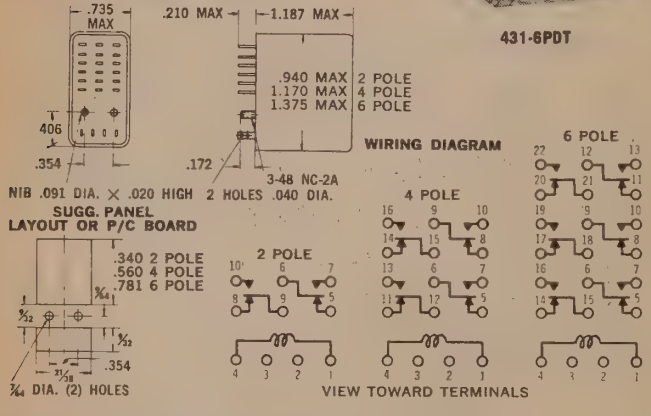


421-4PDT



431-6PDT

DIMENSIONS (inches)



ELECTRICAL SPECIFICATIONS

CONTACT RATING — noninductive load
Light Duty (Code L): Fine silver goldplated — low level to 2 amps @ 26 VDC or 1 amp @ 115 VAC
Heavy Duty (Code H): Silver cadmium oxide — 5 amp @ 26 VDC or 3 amp @ 115 VAC (other contact material available)
LIFE EXPECTANCY — Mechanical Operations: 10^8 — Operations at Rated Load: 10^5
CONTACT RESISTANCE — 50 milliohms max. initially — 200 milliohms at end of life
OPERATE TIME — at two times "must operate" voltage or current: 8ms
RELEASE TIME — at two times "must operate" voltage or current: ≦ 3ms
CONTACT BOUNCE — at 10 ma contact current: 2 ms max. at operate, N.O. contacts 3 ms max. at release, N.C. contacts
DIELECTRIC STRENGTH — 1000 V rms; 500 V rms across contact gap
INSULATION RESISTANCE — 1000 megohms minimum @ 25°C, 100 VDC, 50% RH
COIL TEMPERATURE — Max. 105°C (220°F)
AMBIENT TEMPERATURE — Operating: −55°C (−72°F) to 80°C (175°F) @ nominal operating voltage
Storage: −55°C (−72°F) to 105°C (220°F)
VIBRATION — Operating: .062 DA @ 5-55 Hz; 10g @ 55-110 Hz
Non Operating: 10g @ 5-500 Hz
SHOCK — Operating: 20g @ 11 ms — Non Operating: 30g @ 11 ms
WEIGHT — 23 to 35 grams (approx. 1 oz.)

CONTACTS RATED 2 AMPS FINE SILVER GOLD PLATED

AZ Type	Coil Specifications: Nominal Voltage (Volts)	Must Operate (mA)	Resistance (Ohms)	Contacts	NET Price 1 (Dolla
AZ 420-15-4L	6 DC	37	52	DPDT	3.4
AZ 420-1011-4L	12 DC	20	185	DPDT	3.4
AZ 420-70-4L	24 DC	12	700	DPDT	3.4
AZ 420-56-4L	48 DC	5.4	2.5K	DPDT	3.4
AZ 420-035-4L	115 DC	2.4	15K	DPDT	5.2
AZ 421-15-1L	6 DC	57	52	4PDT	3.8
AZ 421-1011-1L	12 DC	30	185	4PDT	3.8
AZ 421-70-1L	24 DC	18	700	4PDT	3.8
AZ 421-56-1L	48 DC	8.3	2.5K	4PDT	3.8
AZ 421-035-1L	115 DC	3.5	15K	4PDT	5.6
AZ 431-18-1L	6 DC	106	25	6PDT	4.9
AZ 431-13-1L	12 DC	59	90	6PDT	4.9
AZ 431-80-1L	24 DC	29	430	6PDT	4.9
AZ 431-06-1L	48 DC	13.5	1.8K	6PDT	4.9
AZ 431-04-1L	115 DC	6.5	9K	6PDT	5.9

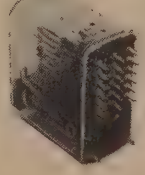
BIFURCATED CONTACTS RATED 2 AMPS FINE SILVER GOLD PLATED

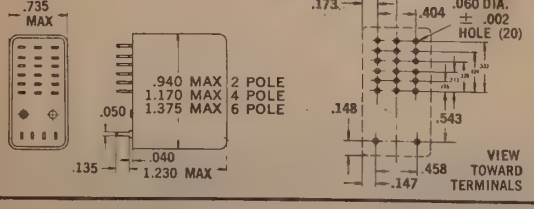
AZ Type	Coil Specifications: Nominal Voltage (Volts)	Must Operate (mA)	Resistance (Ohms)	Contacts	NET Price 1 (Dolla
AZ-420-15-40L	6 DC	49.3	52	DPDT	3.85
AZ 420-1011-40L	12 DC	26.6	185	DPDT	3.85
AZ 420-70-40L	24 DC	16	700	DPDT	3.85
AZ 420-56-40L	48 DC	7	2.5K	DPDT	3.85
AZ 420-035-40L	115 DC	3.2	15K	DPDT	5.60
AZ 421-15-10L	6 DC	76	52	4PDT	4.40
AZ 421-1011-10L	12 DC	40	185	4PDT	4.40
AZ 421-70-10L	24 DC	24	700	4PDT	4.40
AZ 421-56-10L	48 DC	11.1	2.5K	4PDT	4.40
AZ 421-035-10L	115 DC	4.7	15K	4PDT	6.15
AZ 431-18-10L	6 DC	140	25	6PDT	5.65
AZ 431-13-10L	12 DC	78	90	6PDT	5.65
AZ 431-80-10L	24 DC	38	430	6PDT	5.65
AZ 431-06-10L	48 DC	18	1.8K	6PDT	5.65
AZ 431-04-10L	115 DC	8.5	9K	6PDT	6.65

CONTACTS RATED 5 AMPS SILVER CADMIUM

AZ 420-15-4H	6 DC	49.3	52	DPDT	3.55
AZ 420-1011-4H	12 DC	26.6	185	DPDT	3.55
AZ 420-70-4H	24 DC	16	700	DPDT	3.55
AZ 420-56-4H	48 DC	7	2.5K	DPDT	3.55
AZ 420-035-4H	115 DC	3.2	15K	DPDT	5.30
AZ 421-15-1H	6 DC	76	52	4PDT	4.10
AZ 421-1011-1H	12 DC	40	185	4PDT	4.10
AZ 421-70-1H	24 DC	24	700	4PDT	4.10
AZ 421-56-1H	48 DC	11.1	2.5K	4PDT	4.10
AZ 421-035-1H	115 DC	4.7	15K	4PDT	5.85
AZ 431-18-1H	6 DC	140	25	6PDT	5.35
AZ 431-13-1H	12 DC	78	90	6PDT	5.35
AZ 431-80-1H	24 DC	38	430	6PDT	5.35
AZ 431-06-1H	48 DC	18	1.8K	6PDT	5.35
AZ 431-04-1H	115 DC	8.5	9K	6PDT	6.35

PRINTED CIRCUIT TYPES AZ428, AZ429, AZ439





CONTACTS RATED 2 AMPS FINE SILVER GOLD PLATED

AZ Type	Coil Specifications: Nominal Voltage (Volts)	Must Operate (mA)	Resistance (Ohms)	Contacts	NET Price 1-2 (Dollars)
AZ 428-15-4L	6 DC	37	52	DPDT	3.45
AZ 428-1011-4L	12 DC	20	185	DPDT	3.45
AZ 428-70-4L	24 DC	12	700	DPDT	3.45
AZ 428-56-4L	48 DC	5.4	2.5K	DPDT	3.45
AZ 428-035-4L	115 DC	2.4	15K	DPDT	5.20
AZ 429-15-1L	6 DC	57	52	4PDT	3.85
AZ 429-1011-1L	12 DC	30	185	4PDT	3.85
AZ 429-70-1L	24 DC	18	700	4PDT	3.85
AZ 429-56-1L	48 DC	8.3	2.5K	4PDT	3.85
AZ 429-035-1L	115 DC	3.5	15K	4PDT	5.55
AZ 439-18-1L	6 DC	106	25	6PDT	4.95
AZ 439-13-1L	12 DC	59	90	6PDT	4.95
AZ 439-80-1L	24 DC	29	430	6PDT	4.95
AZ 439-06-1L	48 DC	13.5	1.8K	6PDT	4.95
AZ 439-04-1L	115 DC	6.5	9K	6PDT	5.90

Also available with 2 amp bifurcated contacts or 5 amp heavy duty contacts

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Net

© United Technical Publicati

American Zettler, inc.

SOCKETS FOR MINIATURE GENERAL PURPOSE RELAYS — AZ 420, 421, 431 AND ACCESSORIES

PART NO.	NO. OF POLES	DIMENSIONS (inches)	SUGGESTED PANEL LAYOUT OR P/C BOARD †	
ST-140-A1 FOR AZ 420	2	DIAGRAM A SOCKET FOR WIRING OR PC	2 POLE 1 11/32 4 POLE 3/4 6 POLE 2 3/32 2 POLE 4 POLE 6 POLE	ACTUAL SIZE 4 POLE
ST-141-A1 FOR AZ 421	4			
ST-345-A1 FOR AZ 431	6			
ST-342-A1 FOR AZ 420	2	DIAGRAM B RIGHT-ANGLE SOCKET FOR PC	2 POLE 4 POLE 6 POLE	ACTUAL SIZE 4 POLE
ST-350-A1 FOR AZ 421	4			
N.A.	6			
ST-349-A1 FOR AZ 420	2	DIAGRAM C RIGHT-ANGLE SOCKET FOR PC	2 POLE 4 POLE 6 POLE	ACTUAL SIZE 4 POLE
ST-343-A1 FOR AZ 421	4			
ST-354-A1 FOR AZ 431	6	*PINS ON 4 POLE SOCKET ONLY		

TOLERANCES: ±.010 Standard sockets have silver-plated terminals and are dipped in flux for easy machine soldering.
Hole numbers correspond with relay wiring diagram.

ORDER INFORMATION

AZ Type	Description	Diagram Identification	Contacts	NET Price 1-24 (Dollars)
ST-140-A1	Socket	A	DPDT	.45
ST 342-A1	Right Angle for PC	B	DPDT	1.85
ST 349-A1	Right Angle for PC	C	DPDT	1.85
ST 140-1	Retainer		DPDT	.07
ST 141-A1	Socket	A	4PDT	.55
ST 343-A1	Right Angle for PC	C	4PDT	2.15
ST 350-A1	Right Angle for PC	B	4PDT	2.15
ST 141-1	Retainer		4PDT	.07

AZ Type	Description	Diagram Identification	Contacts	NET Price 1-24 (Dollars)
ST 345-A1	Socket	A	6PDT	.75
ST 354-A1	Right Angle for PC	C	6PDT	2.45
ST 345-1	Retainer		6PDT	.07
ST 140-2	Ground Clip for all			.10

Order socket, retainer and grounding clip (if desired) by separate part numbers. To specify sockets with gold plated terminals, substitute -A2 for -A1.

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

American Zettler, inc.

STANDARD AZ 480 SERIES

Enclosed plug-in version with octal type sockets (8 or 11 pins) or open type with wire terminals, silver cadmium-oxide 10 Am contacts in SPDT through 4PDT. AC or DC coils. UL-version listed under UL Component Recognition File E44211.

ENCLOSED, OCTAL PLUG-IN, AC ACTUATED

AZ Type	Coil Specifications: Voltage, VAC (Volts) Nominal	Max.	Min.	Nominal Current (mA)	Contacts	NET Price 1-24 (Dollars)
AZ 481-2-1	6 AC	9	5	410	SPDT	5.48
AZ-481-3-1	12 AC	19	10	205	SPDT	5.48
AZ 481-4-1	24 AC	37	21	100	SPDT	5.48
AZ 481-7-1	120 AC	184	102	20	SPDT	5.65
AZ 481-2-2	6 AC	9	5	410	DPDT	5.95
AZ 481-3-2	12 AC	19	10	205	DPDT	5.95
AZ 481-4-2	24 AC	37	21	100	DPDT	5.95
AZ 481-7-2	120 AC	184	102	20	DPDT	6.00
AZ 481-2-3	6 AC	9	5	410	3PDT	7.45
AZ 481-3-3	12 AC	19	10	205	3PDT	7.45
AZ 481-4-3	24 AC	37	21	100	3PDT	7.45
AZ 481-7-3	120 AC	184	102	20	3PDT	7.60

OPEN, WIRE TERMINALS, AC ACTUATED

AZ Type	Coil Specifications: Voltage, VAC (Volts) Nominal	Max.	Min.	Nominal Current (mA)	Contacts	NET Price 1-24 (Dollars)
AZ 483-2-1	6 AC	9	5	410	SPDT	3.21
AZ 483-3-1	12 AC	19	10	205	SPDT	3.21
AZ 483-4-1	24 AC	37	21	100	SPDT	3.21
AZ 483-7-1	120 AC	184	102	20	SPDT	3.30
AZ 483-2-2	6 AC	9	5	410	DPDT	3.80
AZ 483-3-2	12 AC	19	10	205	DPDT	3.80
AZ 483-4-2	24 AC	37	21	100	DPDT	3.80
AZ 483-7-2	120 AC	184	102	20	DPDT	3.90
AZ 483-2-3	6 AC	9	5	410	3PDT	4.25
AZ 483-3-3	12 AC	19	10	205	3PDT	4.25
AZ 483-4-3	24 AC	37	21	100	3PDT	4.25
AZ 483-7-3	120 AC	184	102	20	3PDT	4.30
AZ 483-2-8	6 AC	9	5	410	4PDT	5.35
AZ 483-3-8	12 AC	19	10	205	4PDT	5.35
AZ 483-4-8	24 AC	37	21	100	4PDT	5.35
AZ 483-7-8	120 AC	184	102	20	4PDT	5.40

SERIES AZ 480 — GENERAL PURPOSE RELAYS — 10 AMP CONTACTS

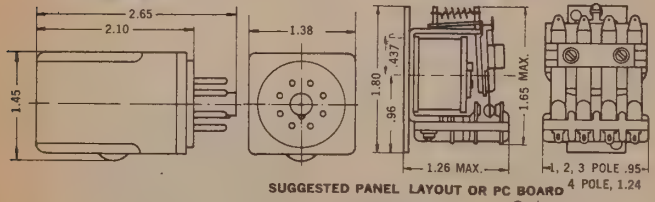


AZ 480 & AZ 481

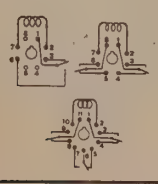


AZ 482 & AZ 483

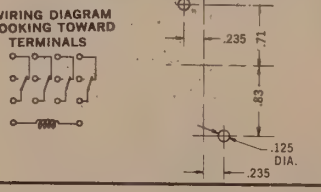
DIMENSIONS



SUGGESTED PANEL LAYOUT OR PC BOARD



WIRING DIAGRAM LOOKING TOWARD TERMINALS



ENCLOSED, OCTAL PLUG-IN, DC ACTUATED

AZ Type	Coil Specifications: Voltage, VAC (Volts) Nominal	Max.	Min.	Resistance (Ohms) ±10%	Contacts	NET Price 1-24 (Dollars)
AZ 480-2-1	6 DC	9	4.5	32	SPDT	5.48
AZ 480-3-1	12 DC	19	9	130	SPDT	5.48
AZ 480-4-1	24 DC	37	18	500	SPDT	5.48
AZ 480-6-1	48 DC	75	36	2,100	SPDT	5.80
AZ 480-9-1	110 DC	165	83	10,500	SPDT	5.95
AZ 480-2-2	6 DC	9	4.5	32	DPDT	5.95
AZ 480-3-2	12 DC	19	9	130	DPDT	5.95
AZ 480-4-2	24 DC	37	18	500	DPDT	5.95
AZ 480-6-2	48 DC	75	36	2,100	DPDT	6.12
AZ 480-9-2	110 DC	165	83	10,500	DPDT	6.45
AZ 480-2-3	6 DC	9	4.5	32	3PDT	7.45
AZ 480-3-3	12 DC	19	9	130	3PDT	7.45
AZ 480-4-3	24 DC	37	18	500	3PDT	7.45
AZ 480-6-3	48 DC	75	36	2,100	3PDT	7.65
AZ 480-9-3	110 DC	165	83	10,500	3PDT	7.95

OPEN, WIRE TERMINALS, DC ACTUATED

AZ Type	Coil Specifications: Voltage, VAC (Volts) Nominal	Max.	Min.	Resistance (Ohms) ±10%	Contacts	NET Price 1-24 (Dollars)
AZ 482-2-1	6 DC	9	4.5	32	SPDT	3.20
AZ 482-3-1	12 DC	19	9	130	SPDT	3.20
AZ 482-4-1	24 DC	37	18	500	SPDT	3.20
AZ 482-6-1	48 DC	75	36	2,100	SPDT	3.43
AZ 482-9-1	110 DC	165	83	10,500	SPDT	3.78
AZ 482-2-2	6 DC	9	4.5	32	DPDT	3.55
AZ 482-3-2	12 DC	19	9	130	DPDT	3.55
AZ 482-4-2	24 DC	37	18	500	DPDT	3.55
AZ 482-6-2	48 DC	75	36	2,100	DPDT	3.80
AZ 482-9-2	110 DC	165	83	10,500	DPDT	4.12
AZ 482-2-3	6 DC	9	4.5	32	3PDT	4.10
AZ 482-3-3	12 DC	19	9	130	3PDT	4.10
AZ 482-4-3	24 DC	37	18	500	3PDT	4.10
AZ 482-6-3	48 DC	75	36	2,100	3PDT	4.28
AZ 482-9-3	110 DC	165	83	10,500	3PDT	4.40
AZ 482-2-8	6 DC	9	4.5	32	4PDT	4.80
AZ 482-3-8	12 DC	19	9	130	4PDT	4.80
AZ 482-4-8	24 DC	37	18	500	4PDT	4.80
AZ 482-6-8	48 DC	75	36	2,100	4PDT	5.20
AZ 482-9-8	110 DC	165	83	10,500	4PDT	5.40

ELECTRICAL SPECIFICATIONS

CONTACT RATING — 10 amp @ 115 volts AC 60 Hz non inductive
CONTACT MATERIAL — Silver-cadmium-oxide
CONTACT ARRANGEMENT — 1, 2, 3 and 4 form C (up to 4PDT)
LIFE EXPECTANCY — Mechanical: 10 million operations
Rated Load: ¼ million operations
DIELECTRIC STRENGTH — 1500 v rms
500 v rms across contact gap
INSULATION RESISTANCE — 100 megohms minimum
COIL VOLTAGE — to 280 volts AC
COIL POWER — Nominal — DC: 1.2 watts — AC: 2.5 VA
Max. Continuous Dissipation: 2.5 watts @ 35°C (95°F) ambient
AMBIENT TEMPERATURE — Open relay −45°C (−50°F) to +70°C (158°F) [at nominal operate voltage]
Enclosed relay −45°C (−50°F) to +50°C (125°F) [at nominal operate voltage]
OPERATE TIME — Less than 15ms at nominal operate voltage (DC coils only)
RELEASE TIME — Less than 8ms at nominal operate voltage (DC coils only)
WEIGHT — Open relay: 2.3 oz (65 gr) — Enclosed relay: 3 oz (85 gr)
TERMINALS — Open relay: pierced solder lugs
Enclosed relay: octal plug-in
MOUNTING — See mechanical specifications
ENCLOSURE: Heat and shock resistant clear plastic

SENSITIVE RELAYS — AZ 484 — DC ACTUATED, ENCLOSED PLUG-IN ONLY

ELECTRICAL SPECIFICATIONS

CONTACT RATING — 2 amp @ 30 VDC or 70 VAC non inductive

COIL POWER — 125m Watt SPDT — 250m Watt DPDT — 375m Watt 3PDT

OPERATE TIME — Less than 16ms at nominal power

RELEASE TIME — Less than 12ms at nominal power

TERMINALS — Plug in only

All other data see standard relays

AZ Type	Coil Specifications: Resistance (Ohms) ±5%	Voltage (Volts)	Must Operate Current (mA)	Nom. Voltage (Volts)	Contacts	NET Price 1-24 (Dollars)
Coil power: 125m Watt						
AZ 484-1-1	2500	20	7.2	27	SPDT	5.80
AZ 484-2-1	5000	27	5	36	SPDT	5.90
AZ 484-3-1	10,000	40	3.6	52	SPDT	6.20
Coil power: 250m Watt						
AZ 484-1-2	2500	27	10	36	DPDT	6.20
AZ 484-2-2	5000	40	7.2	52	DPDT	6.30
AZ 484-3-2	10,000	55	5	74	DPDT	6.60
Coil power: 375m Watt						
AZ 484-1-3	2500	34	12.3	45	3PDT	7.60
AZ 484-2-3	5000	49	8.7	65	3PDT	7.70
AZ 484-3-3	10,000	68	6.2	90	3PDT	8.05

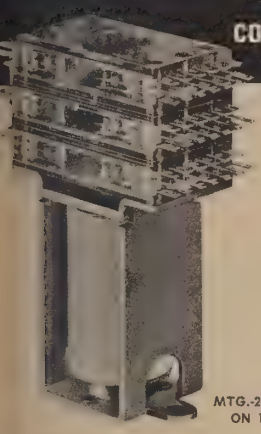
ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Net

© United Technical Publication

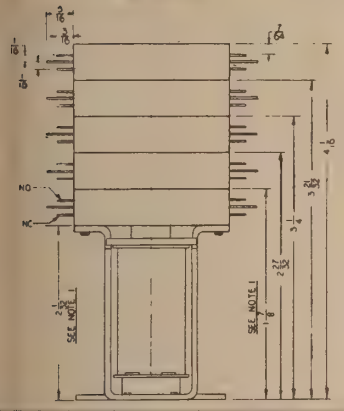
electronic controls, inc.

T-BAR® Switch/Relays



T-BARS are for switching more circuits in less space ...up to 60 circuits simultaneously!

MTG.-2-#6-32 NF HOLES ON 1.375 CENTERS

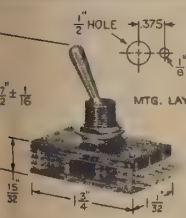


SERIES 801 T-BAR RELAY COIL CHARACTERISTICS*

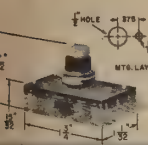
	12 POLES 1 WAFER RELAY Wt: 4.5 oz.			24 POLES 2 WAFER RELAYS Wt: 6.75 oz.			36 POLES 3 WAFER RELAYS Wt: 7.25 oz.			48 POLES*** 4 WAFER RELAYS Wt: 8.5 oz.			60 POLES 5 WAFER RELAYS Wt: 9 oz.		
Voltage	Resistance Ohms	Current Amps	Power Watts	Resistance Ohms	Current Amps	Power Watts	Resistance Ohms	Current Amps	Power Watts	Resistance Ohms	Current Amps	Power Watts	Resistance Ohms	Current Amps	Power Watts
6 VDC	11.9	0.504	3.01	11.09	0.541	3.24	7	0.857	5.06	5.5	1.09	6.54	5.5	1.09	6.54
12 VDC	49.1	0.244	2.96	45	0.267	3.19	28	0.429	5.16	22	.545	6.54	22	.545	6.54
24 VDC	193	0.124	2.98	174	0.138	3.32	111	0.216	5.15	94	.255	6.12	94	.255	6.12
28 VDC	258	0.109	3.03	227	0.123	3.44	150	0.187	5.23	120	.233	6.52	120	.233	6.52
48 VDC	778	0.062	2.98	674	0.071	3.41	438	0.110	5.26	350	.137	6.58	350	.137	6.58
110 VDC	3963	0.028	3.05	3450	0.032	3.54	2355	0.047	5.18	1930	.057	6.27	1930	.057	6.27
115 VAC**	3963	0.024	2.80	3450	0.027	3.10	2355	0.041	4.72	1930	.049	5.62	1930	.049	5.62

*All characteristics are nominal and subject to normal manufacturing tolerances, other voltages available on special order.
**115 VAC units are made with a full wave bridge rectifier and use the same coils as listed under 110 VDC units.
***Four-wafer relays with all "A" form contacts use three-wafer relay coils.
NOTE 1: ONE WAFER RELAYS USE A SHORTER ACTUATOR ASS'Y. — INSTEAD OF 2-1/32 AS SHOWN, THE ACTUATOR IS 1-15/32 HIGH.

SERIES 802 Bat Handle T-Bar Switches



SERIES 803 Push Button Switch



Series 802 & 803

No. of Poles	Weights Oz. Approx.
12	2.0
24	2.5
36	3.0

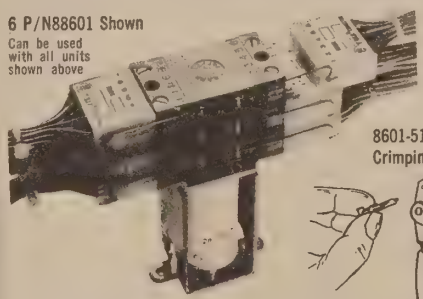
Ganged T-Bar Switches



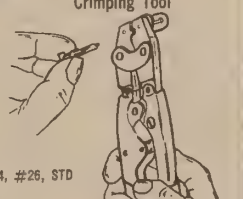
Toggles may be ganged for controlling additional circuits . . . 48, 72, 108, etc. Shown here, 108 poles.

T-BAR Connectors save time and reduce installation costs using individual snap-in crimp terminals crimped to pre-stripped wire and then snapped into a contact block, which forms the connector. The connector is pushed onto the wafer terminals, eliminating soldering. Because we offer a connector, rather than a receptacle, harness work can be completed outside the chassis and therefore no fancy chassis work is required to accept a receptacle. It not only makes the metal work simpler, but it also saves layout engineering and drafting time. Since T-Bar Switch/Relays are so easily mounted, they are often found on the back of meter panels or on their own brackets.

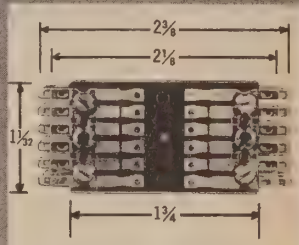
6 P/N88601 Shown
Can be used with all units shown above



8601-51 Crimping Tool



PHYSICAL PROPERTIES:
Wire Accommodated: (1) #18, #20, #22, #24, #26, STD (2) #22, #24, #26 STR
Connector Material: Nylon Zytel or Lexan®
Snap-in Contact Material: Phosphor Bronze
Snap-in Contact Finish: Tin Plated (other on request)
Retaining Clip Material: Stainless Steel
Connector Weight: Approximately 0.3 oz.



GENERAL FEATURES:

The series 801 T-Bar Relays are solenoid actuated multi-pole relays with a unique design permitting stack-up of enclosed contact "wafers." Each wafer has a maximum of 12 pole double throw contacts thereby allowing ECI to supply the 801 relay with any combination from 4 to 60 poles.

CONTACT RATING:
3 amp, resistive load 150 watt maximum make or break;
5 amp, 500 watt maximum carry.

CONTACT MATERIAL:
Gold bonded, fine silver, standard. Others available on special order.

CONTACT FORMS:
"A" single throw N.O.
"B" single throw N.C.
"C" double throw, break before make
"D" double throw, make before break

NUMBER OF POLES (RELAYS):
One Wafer — 12 poles
Two Wafers — 24 poles
Three Wafers — 36 poles
Four Wafers — 48 poles
Five Wafers — 60 poles ("A" form only)

OPERATE VOLTAGE:
Min. voltage: 80% of nominal at 25°C

RELEASE VOLTAGE:
Max. voltage: 20% of nominal at 25°C

OPERATE TIME:
One Wafer Relay — 15 ms. max.
Two Wafer Relay — 25 ms. max.
Three Wafer Relay — 30 ms. max.
Four Wafer Relay — 35 ms. max.
Five Wafer Relay — 40 ms. max.

RELEASE TIME:
5 ms. max. (36 pole) — 10 ms. max. (12 pole)

TERMINALS:
Solder tab that also mates with T-Bar connector P/N 88601 (two required per wafer)

ENCLOSURE:
Contacts enclosed in dust tight plastic enclosure that is separated from the actuator assembly. Withstands Mil. Std. — 202 method 106B moisture resistance test.

LIFE:
Mechanical — 20,000,000 operations minimum for relay
Electrical — 20,000,000 operations minimum at 100 milliamps to 100,000 minimum at 5 amps, 150 watts resistive load.

DIELECTRIC:
1000 vrms terminals to case at sea level and 25°C
1000 vrms terminal to terminal at sea level and 25°C
1000 vrms coil to case at sea level and 25°C

TEMPERATURE RANGE:
—55°C to +85°C

INSULATION RESISTANCE:
5,000 megohms @ 25°C minimum

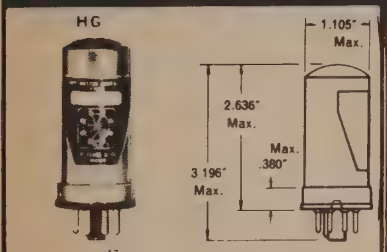
ORDERING INFORMATION:
Specify Series No. — number of poles plus contact form letter-coil voltage. For example a 36 pole double throw relay with a 24 VDC coil is: 801-36C-24

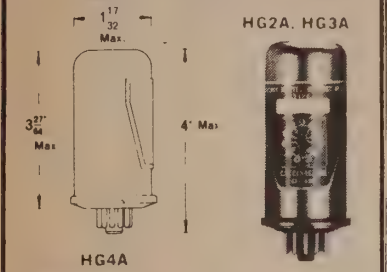
T-Bar
SWITCHING TECHNOLOGY DIV.
electronic controls, inc.

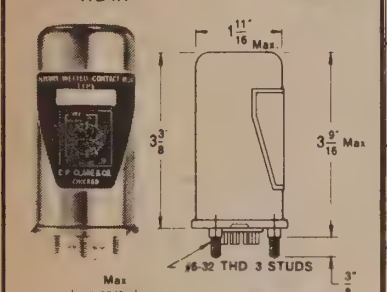
Manufactured under 1 or more of the following patents: 3,206,990, 3,226,508

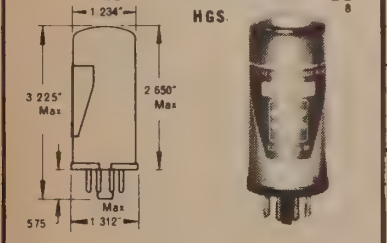
® "T-Bar" — Reg. T.M.

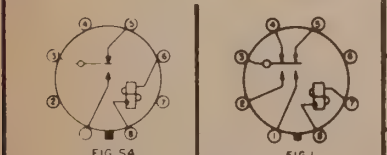
MERCURY-WETTED CONTACT RELAYS

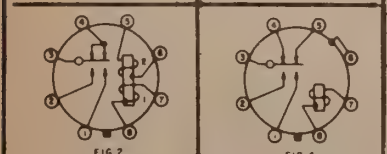


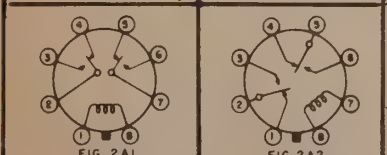


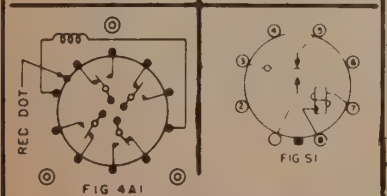












HG Series

HG relays have SPDT make-before-break form D contacts rated at 5 amps, 500 volts, 250 VA max. Operating time can be as short as 2 milliseconds. The Series **HG2** relay utilizes two switch capsules to furnish DPDT, operating time can be as short as 2¼ milliseconds. Series **HG3** relay utilizes three capsules providing 3 PDT, operating time can be as short as 2½ milliseconds. Series **HG4** relay utilizes four capsules providing 4 PDT, operating time can be as short as 3¾ milliseconds. Life expectancy is 22 x 10^9 at specified ratings. Resistance, ±10% tolerance at 25 degrees C. Typical applications include computers, data logging and low-level dry circuits.

Part No.	Coil Resistance	Must Operate Current (ma-dc)	Must Release Current (ma-dc)	Must Operate Voltage (vdc)	Max. Voltage (vdc)	Base Figure	PRICES 1-9	10-24	25-49	50-99	100
HG-1019	40	67	30	2.9	11	4	$17.10	$12.83	$11.97	$11.12	$10.26
HG-1012	130	37	16	5.4	20	4	17.10	12.83	11.97	11.12	10.26
HG-1026	500	20	8.7	11	39	1	17.10	12.83	11.97	11.12	10.26
HG-1004	700	19	8.3	15	45	1	17.10	12.83	11.97	11.12	10.26
HG-1042	1000	15	6.6	17	55	1	17.10	12.83	11.97	11.12	10.26
HG-1001	2500	10	4.4	28	87	1	17.45	14.83	12.22	11.34	10.47
HG-1002	4000	7.5	3.3	33	110	1	10.45	7.84	7.32	6.79	6.27
HG-1017	4000	7.5	3.3	33	110	4	18.00	13.50	12.60	11.70	10.80
HG-1009	7000	5.8	2.6	45	145	1	18.00	13.50	12.60	11.70	10.80
HG-1011	11,000	5.0	2.2	61	180	1	18.00	13.50	12.60	11.70	10.80
HG-1024	25,000	3.4	1.5	94	275	1	18.00	13.50	12.60	11.70	10.80
HG-1003†	700/3300	32/13	14/4.9	25/47	46/99	2	19.75	14.81	13.83	12.84	11.85
HG2A-1042	140	67	28	10	24	2A1	27.75	20.81	19.43	18.04	16.65
HG2A-1003	315	44	19	15	36	2A2	27.75	20.81	19.43	18.04	16.65
HG2A-1017	500	35	15	19	45	2A2	27.75	20.81	19.43	18.04	16.65
HG2A-1009	700	31	13	24	53	2A1	27.75	20.81	19.43	18.04	16.65
HG2A-1002	700	31	13	24	53	2A2	27.75	20.81	19.43	18.04	16.65
HG2A-1015	1250	22	9.3	30	71	2A2	27.75	20.81	19.43	18.04	16.65
HG2A-1068	2500	17	7.0	46	100	2A1	27.75	20.81	19.43	18.04	16.65
HG2A-1001	5000	11	4.7	62	142	2A1	27.75	20.81	19.43	18.04	16.65
HG2A-1004	5000	11	4.7	62	142	2A2	27.75	20.81	19.43	18.04	16.65
HG2A-1013	10,000	8.6	3.6	94	200	2A2	27.75	20.81	19.43	18.04	16.65
HG3A-1004	315	44	19	15	36	2A1	36.00	27.00	25.20	23.40	21.60
HG3A-1006	500	35	15	19	45	2A2	36.00	27.00	25.20	23.40	21.60
HG3A-1002	700	31	13	24	53	3A1	36.00	27.00	25.20	23.40	21.60
HG3A-1008	1250	22	9.3	30	71	3A1	36.00	27.00	25.20	23.40	21.60
HG3A-1005	2500	17	7.0	46	100	3A1	36.00	27.00	25.20	23.40	21.60
HG3A-1003	5000	11	4.7	62	142	3A1	36.00	27.00	25.20	23.40	21.60
HG3A-1010	10,000	8.6	3.6	94	200	3A1	36.00	27.00	25.20	23.40	21.60
HG4A-1011	390	42	18	18	40	4A1	46.30	34.73	32.41	30.95	27.78
HG4A-1001	700	35	15	27	53	4A1	46.30	34.73	32.41	30.95	27.78
HG4A-1007	1400	23	9.9	35	75	4A1	46.30	34.73	32.41	30.95	27.78
HG4A-1003	4000	16	6.7	69	126	4A1	46.30	34.73	32.41	30.95	27.78
HG4A-1005	10,000	8.6	3.7	94	200	4A1	46.30	34.73	32.41	30.95	27.78

HGS Series

HGS Mercury-wetted relay offer increased speed and reliability along with high sensitivity. **HGS 1000** Series provide SPDT make-before-break and **HGS 5000** Series provides SPDT break-before-make. Both are rated at 2 amps, 500 Volts, 100 VA max. Operate time as fast as 1 millisecond. Standard design available only in single element assemblies, they come in the following, single side stable, bi-stable and chopper. Life expectancy is 22 x 10^9 at specified ratings.

Part No.	Coil Resistance	Must Operate Current (ma-dc)	Must Release Current (ma-dc)	Must Operate Voltage (vdc)	Max. Voltage (vdc)	Base Figure	PRICES 1-9	10-24	25-49	50-99	100
HGS-1015‡	90	6.3	1.1	.63	13	S1	$14.15	$10.61	$ 9.91	$ 9.20	$ 8.49
HGS-1045‡	350	3.6	0.61	1.4	26	S1	14.15	10.61	9.91	9.20	8.49
HGS-1018‡	500	2.9	0.50	1.6	31	S1	14.15	10.61	9.91	9.20	8.49
HGS-1009‡	600	2.9	0.69	1.9	34	S1	14.15	10.61	9.91	9.20	8.49
HGS-1046‡	700	2.9	0.49	2.2	37	S1	14.15	10.61	9.91	9.20	8.49
HGS-1014‡	1000	2.2	0.38	2.4	44	S1	14.15	10.61	9.91	9.20	8.49
HGS-1006‡	2500	1.4	0.17	3.9	70	S1	14.50	10.88	10.15	9.43	8.70
HGS-1005‡	4000	1.25	0.25	5.5	90	S1	15.10	11.33	10.57	9.82	9.06
HGS-1048‡	4000	1.25	0.25	5.5	90	S4	15.10	11.33	10.57	9.82	9.06
HGS-1016‡	7000	0.87	0.14	6.7	118	S1	15.10	11.33	10.57	9.82	9.06
HGS-1017‡	11,000	0.72	0.12	8.7	148	S1	15.10	11.33	10.57	9.82	9.06
HGS-1113*	1000	‡1.2		1.4	45	S1	14.15	10.61	9.91	9.20	8.49
HGS-1114*	2500	‡0.82		2.3	70	S1	14.50	10.88	10.15	9.43	8.70
HGS-1026*	4000	‡0.48		2.1	90	S1	15.10	11.33	10.57	9.82	9.06
HGS-1056*	7000	‡0.48		3.7	118	S1	15.10	11.33	10.57	9.82	9.06
HGS-1096*	25,000	‡0.29		3.0	223	S1	15.10	11.33	10.57	9.82	9.06
HGS-1004§	600			6.3 Vac		S1	14.75	11.06	10.33	9.59	8.85
HGS-5011‡	350	3.6	0.61	1.4	26	S1	14.15	10.61	9.91	9.20	8.49
HGS-5015‡	1000	2.2	0.38	2.4	44	S1	14.15	10.61	9.91	9.20	8.49
HGS-5003‡	2500	1.4	0.17	3.9	70	S1	14.50	10.88	10.15	9.43	8.70
HGS-5008‡	4000	1.25	0.25	5.5	90	S5	15.10	11.33	10.57	9.82	9.06
HGS-5047‡	11,000	0.72	0.12	8.7	148	S1	15.10	11.33	10.57	9.82	9.06
HGS-5016‡	25,000	0.52	0.09	14.3	224	S1	15.10	11.33	10.57	9.82	9.06
HGS-5006*	1000	1.2		1.4	45	S1	14.15	10.61	9.91	9.20	8.49
HGS-5004*	4000	0.48		2.1	90	S1	15.10	11.33	10.57	9.82	9.06
HGS-5017§	600			6.3 Vac		S1	14.75	11.06	10.33	9.59	8.85

† Double Wound. ‡ Single Side Stable. * Bi-Stable. †* Bi-Stable Double Wound. § Chopper.

C. P. CLARE & CO.

Net

© United Technical Publications

MERCURY-WETTED CONTACT RELAYS

HGP





FIG 1

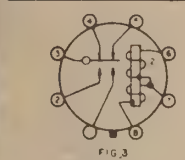


FIG 3

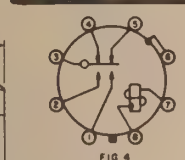
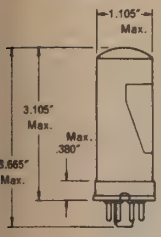


FIG 4

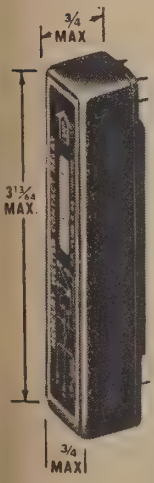


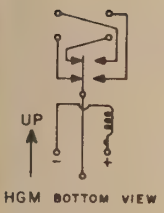
HGP Series

HGP is similar to the HG series except for the inclusion of permanent magnets making a slight increase in height. Magnets provide single-side-stable, bi-stable and chopper operations. Contacts are SPDT make-before-break rated at 5 amps, 500 Volts, 250 VA maximum with operate time as short as 2 milliseconds. Life expectancy is 22 x 10^9 at specified rating.

Part No.	Coil Resistance	Must Operate Current (ma-dc)	Must Release Current (ma-dc)	Must Operate Voltage (vdc)	Max. Voltage (vdc)	Base Figure	PRICES 1-9	10-24	25-49	50-99	100
HGP-1001‡	90	16	1.3	1.6	16	1	$18.55	$13.91	$12.99	$12.06	$11.13
HGP-1005‡	1000	5.6	0.4	6.2	55	1	18.55	13.91	12.99	12.06	11.13
HGP-1002‡	4000	3.0	0.24	13	110	1	19.90	14.93	13.93	12.94	11.94
HGP-1008‡	4000	4.7	1.7	21	110	1	19.90	14.93	13.93	12.94	11.94
HGP-1055‡	7000	2.2	0.19	17	145	1	19.90	14.93	13.93	12.94	11.94
HGP-1052‡	11,000	1.9	0.21	23	180	1	19.90	14.93	13.93	12.94	11.94
HGP-1050‡	25,000	1.3	0.15	36	275	1	19.90	14.93	13.93	12.94	11.94
HGP-1006†‡	700/3300	14/5.7	2.8	11/21	46/99	1	21.60	16.20	15.12	14.04	12.96
HGP-1047*	600	±3.4		±2.2	43	1	18.55	13.91	12.99	12.06	11.13
HGP-1003*	4000	±1.5		±6.6	110	1	19.90	14.93	13.93	12.94	11.94
HGP-1012†	700/3300	6.0/2.4		4.6/3.7	46/99	3	21.60	16.20	15.12	14.04	12.96
HGP-1031†*	7500/7500	±1.7/1.7		±14/14	150/150	3	21.60	16.20	15.12	14.04	12.96
HGP-1028§	500			6.3 VAC		4	19.20	14.40	13.44	12.48	11.52
HGP-1009§	4000			18.5 VAC		4	20.50	15.38	14.35	13.33	12.30

HGM



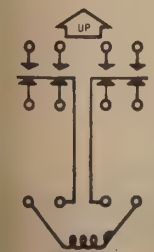


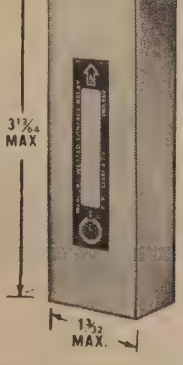
HGM Series

HGM relays are Clare standard HG switch capsules in module form, are provided with plated steel covers for excellent mechanical protection and magnetic shielding. The standard HG switch in the HGM is not polarity sensitive. Contacts are SPDT make-before-break rated at 5 amps, 500 Volts, 250 VA maximum. Life expectancy is 22 x 10^9 at specified ratings.

Part No.	Coil Resistance	Must Operate Current (ma-dc)	Must Release Current (ma-dc)	Must Operate Voltage (vdc)	Max. Voltage (vdc)	PRICES 1-9	10-24	25-49	50-99	100
HGM-1005	40	119	52	5.24	12.6	$13.30	$ 9.98	$ 9.31	$ 8.65	$ 7.98
HGM-1008	150	53	23	8.75	24	13.30	9.98	9.31	8.65	7.98
HGM-1002	450	32.9	14.5	16.3	42	13.30	9.98	9.31	8.65	7.98
HGM-1001	750	18.6	8.2	15.4	55	13.30	9.98	9.31	8.65	7.98
HGM-1012	1100	21.6	9.5	26.2	66	13.30	9.98	9.31	8.65	7.98

HG2M





HG2M Series

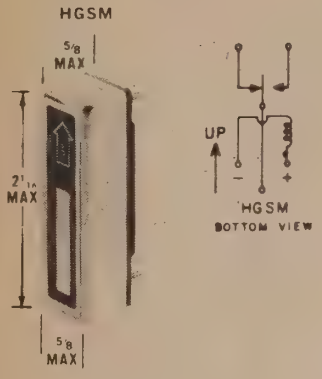
HG2M has the same characteristics as the HGM but contains 2 capsules to give you double-pole, double-throw configuration make-before-break. This results in saving space and cost over single element units. Contacts are rated at 5 amps 500 Volts, 100 VA maximum with life expectancy of 22 x 10^9.

Part No.	Coil Resistance	Must Operate Current (mA-dc)	Must Release Current (mA-dc)	Must Operate Voltage (Vdc)	Max. Voltage (Vdc)	PRICES 1-9	10-24	25-49	50-99	100
HG2M-1007	90	82.2	28.6	8.2	19	$18.65	$13.99	$13.06	$12.12	$11.19
HG2M-1008	350	42.0	14.6	16.2	37	18.65	13.99	13.06	12.12	11.19
HG2M-1020	580	32.5	11.2	20.7	48	18.65	13.99	13.06	12.12	11.19
HG2M-1026	1250	23.0	8.0	31.8	70	18.65	13.99	13.06	12.12	11.19

© United Technical Publications

Net

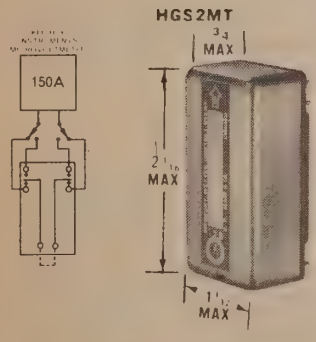
MERCURY-WETTED CONTACT RELAYS



HGSM Series

HGSM Relay modules for Printed Circuit Board mounting are available in **HGSM 1000** series SPDT make-before-break **HGSM 5000** series SPDT break-before-make. Contacts are rated in 2 amps, 500 Volts, 100 VA maximum at rated load. Maximum dissipation 2 watts continuous at 25 degrees C. The temperature rise is 30 degrees C per watt at 25 degrees C ambient. Life expectancy is 22 x 10^9.

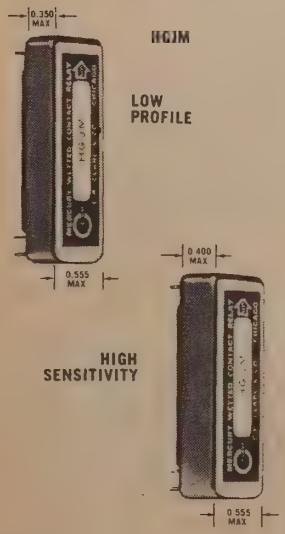
Part No.	Coil Resistance	Must Operate Current (ma-dc)	Must Release Current (ma-dc)	Must Operate Voltage (vdc)	Max. Voltage (vdc)	PRICES 1-9	10-24	25-49	50-99	100
HGSM-1005‡	65	37.4	6.2	2.7	11.4	$11.45	$ 8.59	$ 8.02	$ 7.44	$ 6.87
HGSM-1007‡	90	37.7	6.3	3.8	13.4	11.45	8.59	8.02	7.44	6.87
HGSM-1009‡	275	17.0	2.8	5.2	23.4	11.45	8.59	8.02	7.44	6.87
HGSM-1010‡	450	12.9	2.1	6.4	30.00	11.45	8.59	8.02	7.44	6.87
HGSM-1011‡	675	11.6	1.9	8.6	36.7	11.45	8.59	8.02	7.44	6.87
HGSM-1002‡	940	10.1	1.7	10.5	43.3	11.45	8.59	8.02	7.44	6.87
HGSM-1001‡	1425	8.3	1.4	13	53.4	11.45	8.59	8.02	7.44	6.87
HGSM-1003‡	2400	7.35	1.2	20.6	69.2	11.45	8.59	8.02	7.44	6.87
HGSM-1063†*	460/460	±7.8/7.8		±3.95/3.95	30.3/30.3	12.20	9.15	8.54	7.93	7.32
HGSM-1016†*	1100/1100	7.25/5.7		8.77/6.9	46.9/46.9	12.20	9.15	8.54	7.93	7.32
HGSM-5021‡	65	37.4	6.2	2.7	11.4	11.45	8.59	8.02	7.44	6.87
HGSM-5035‡	275	17.0	2.8	5.2	23.4	11.45	8.59	8.02	7.44	6.87
HGSM-5009‡	450	12.9	2.1	6.4	30.0	11.45	8.59	8.02	7.44	6.87
HGSM-5010‡	675	11.6	1.9	8.6	36.7	11.45	8.59	8.02	7.44	6.87
HGSM-5011‡	940	10.1	1.7	10.5	43.3	11.45	8.59	8.02	7.44	6.87
HGSM-5001‡	1425	8.3	1.4	13	53.4	11.45	8.59	8.02	7.44	6.87
HGSM-5002‡	1950	7.5	1.2	17.6	62.4	11.45	8.59	8.02	7.44	6.87
HGSM-5064‡	2400	7.35	1.2	20.6	69.2	11.45	8.59	8.02	7.44	6.87
HGSM-5003†*	1100/1100	±7.25/5.7		±8.77/6.9	46.9/46.9	12.20	9.15	8.54	7.93	7.32



HGS2MT

Mercury-wetted relay is designed to minimize the noise and thermal problems of low level switching circuits. They are capable of handling the input switching functions for any type of reasonable high speed, low level data acquisition system. Contacts are rated at 2 amps 500 Volts, 100 VA maximum DPDT. Form C break-before-make. Life expectancy 22 x 10^9.

Part No.	Nominal Volts (dc)	Coil Resistance	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)	PRICES 1-9	10-24	25-49	50-99	100
HGS2MT-5001	6	130	3.0	0.5	$22.15	$16.61	$15.51	$14.40	$13.29
HGS2MT-5008	12	520	5.3	1.1	26.25	19.69	18.38	17.06	15.75
HGS2MT-5009	24	2200	11.0	2.2	26.25	19.69	18.38	17.06	15.75



HGJM

A breakthrough in mercury-wetted contact relays when compared to industry standards. Noise is a mere 15 microvolts at 4 ms after coil energization with 10kHz bandwidth, less than 5 microvolts at 5 ms. Faster response, the relay is ultra-stable to 250 Hz, and the response time approaches one millisecond. Available in low profile (.350″H) for ½″ board centers and high sensitivity (.400″H) models. SPDT contacts rated 2 amperes at 500 volts maximum (100 VA max. either AC or DC).

Part No.	Nominal Volts (dc)	Coil Resistance (ohms)	Must Operate Voltage (dc)	Must Release Voltage (dc)	PRICES 1-9	10-24	25-49	50-99	100
0.350″ Low Profile Single Side Stable									
HGJM 51131J00	5.0	68	2.7	0.57	$13.20	$9.95	$9.24	$8.58	$7.92
HGJM 51131N00	12.0	400	6.4	1.5	13.20	9.95	9.24	8.58	7.92
HGJM 51131R00	24.0	1425	12.5	2.65	13.20	9.95	9.24	8.58	7.92
HGJM 51131V00	48.0	6100	24.5	5.4	13.20	9.95	9.24	8.58	7.92
0.400″ High Sensitivity Single Side Stable									
HGJM 51111K00	5.0	125	2.81	0.61	12.60	9.60	8.82	8.19	7.56
HGJM 51111P00	12.0	685	7.25	1.88	12.60	9.60	8.82	8.19	7.56
HGJM 51111T00	24.0	2680	13.9	3.05	12.60	9.60	8.82	8.19	7.56
HGJM 51111W00	48.0	9850	27.1	6.15	12.60	9.60	8.82	8.19	7.56

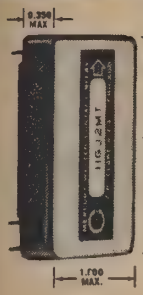
† Double Wound. ‡ Single Side Stable. * Bi-Stable. †* Bi-Stable Double Wound. § Chopper.

Net

© United Technical Publications

MERCURY-WETTED CONTACT RELAYS
MERCURY DISPLACEMENT RELAYS

HGJ2MT



LOW PROFILE



HIGH SENSITIVITY

HGJ2MT

The HGJ2MT has the same outstanding characteristics as the HGJM but gives you two capsules for DPDT configurations. This compact packaging saves both space and money. Both contacts rated 2 amperes at 500 volts max. (100 VA either AC or DC).

Part No.	Nominal Volts (dc)	Coil Resistance (ohms)	Must Operate Voltage (dc)	Must Release Voltage (dc)	PRICES 1-9	10-24	25-49	50-99	100
0.350" Low Profile Single Side Stable									
HGJ2MT 51231E00	5.0	27	2.6	.54	$25.40	$19.15	$17.78	$16.51	$15.24
HGJ2MT 51231K00	12.0	230	6.0	1.36	25.40	19.15	17.78	16.51	15.24
HGJ2MT 51231N00	24.0	800	12.0	2.4	25.40	19.15	17.78	16.51	15.24
HGJ2MT 51231R00	48.0	2850	23.0	4.65	25.40	19.15	17.78	16.51	15.24
0.400" High Sensitivity Single Side Stable									
HGJ2MT 51211G00	5.0	55	2.60	0.55	24.35	18.35	17.05	15.83	14.61
HGJ2MT 51211L00	12.0	370	6.65	1.41	24.35	18.35	17.05	15.83	14.61
HGJ2MT 51211P00	24.0	1370	12.8	2.80	24.35	18.35	17.05	15.83	14.61
HGJ2MT 51211T00	48.0	5300	25.5	5.55	24.35	18.35	17.05	15.83	14.61



MR-11

MINIATURE "MR" SERIES
20 AMPERES — 120 VAC
(CSA Listed)

Compact units capable of handling loads nearly twice that of equal size ordinary armature type units. Hermetically sealed, mercury-to-mercury contacts. No contacts to pit, stick or corrode. Full 20 ampere rating (per pole) at 120 Vac with inductive or resistive loads.

Coil current at 120 V, 60 Hz:
MR-1, -2, .042A;
MR-11, .084A;
MR-111, .120A.

Dimensions (H x W x D):
MR-1, 3¼" x 1⅞" x 1½";
MR-2, 4" x 1⅞" x 1½";
MR-11, 4½" x 3" x 2";
MR-111, 5" x 3¼" x 2¾".



EM-111

"EM" SERIES
35 AMPERES — 120 VAC
(UL and CSA Listed)

Rated 35A (per pole) at 120 Vac. Coil operating at 120 Vac 60 Hz: EM-1, EM-2, .050A; EM-11, .120A; EM-111, .200A.

Dimensions (H x W x D):
EM-1, 4½"; x 2⅝" x 2⅜";
EM-2, 5⅛" x 2⅝" x 2⅜";
EM-11, 5⅜" x 3⅜" x 2½";
EM-111, 6¼" x 4" x 3⅜".



HD-111

"HD" SERIES
60 AMPERES — 120 VAC
(CSA Listed)

Type HD load rated 60A for 120 Vac and 35A for 230 Vac, 60 Hz. per pole. Coils — 120 Vac 60 Hz.

Dimensions (H x W x D):
HD-1, 5¼" x 4" x 2⅜";
HD-2, 5¼" x 4" x 2⅜";
HD-11, 5¾" x 4" x 2½";
HD-111, 6¼" x 4" x 3⅜".



"100"

"100" RELAY
100 AMPERES — 120 VAC
(CSA Listed)

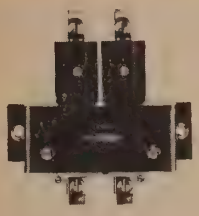
Rated 100A at 120 Vac or 12kW resistive load capacity. Coil operating current, .260A. Coils, 120 Vac, 60 Hz.

Dimensions: 6½" H x 3¼" W x 3½" D.

TYPE	DESCRIPTION	1-9	10-49	50-99
MR-1	Normally Open, SPST	$13.35	$11.68	$11.50
MR-2	Normally Closed, SPST	13.90	12.16	10.95
MR-11	2-Pole, Both N.O.	24.75	21.65	19.23
MR-111	3-Pole, All N.O.	35.60	31.15	28.00
EM-1	Single Pole, N.O.	$15.10	$13.20	$11.88
EM-2	Single Pole, N.C.	16.50	14.45	13.00
EM-11	2-Pole, Both N.O.	29.20	25.52	23.00
EM-111	3-Pole, All N.O.	42.40	37.10	33.37
HD-1	Single Pole, N.O.	$22.35	$19.50	$17.56
HD-2	Single Pole, N.C.	22.50	19.68	17.73
HD-11	2-Pole, Both N.O.	40.50	35.40	31.90
HD-111	3-Pole. All N.O.	57.50	50.25	45.30
100	Single Pole, N.O.	$43.10	$37.70	$33.91

© United Technical Publications

MERCURY DISPLACEMENT RELAYS



A-11



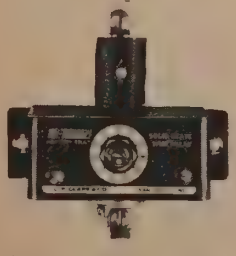
B-1



H-1



S-1



TD

"HI-POWER" Encapsulated Relays

High performance relays have hermetically sealed steel shells with ceramic lined electrode chamber, epoxy insulation. Similar to our standard mercury displacement relays, but with higher current capacity, maximum reliability. Impervious to physical or thermal shock, moisture and dirt. Types S and T completely epoxy encapsulated. Rated to switch loads up to 550 volts AC. Coils — 120 Vac, 60 Hz. Special coil voltage available.

	SIZES:	TYPE	DESCRIPTION	1-9	10-49	50-99
TYPE **A**						
25 AMPERES/120 Vac	4 3/16" x 3" x 2 1/4"	A-1	Single Pole, N.O.	$21.10	$18.47	$16.62
25 AMPERES/240 Vac	4 3/16" x 3" x 2 1/4"	A-2	Single Pole, N.C.	25.10	22.00	19.80
	4 3/16" x 4 3/8" x 2 5/16"	A-11	2-Pole, Both N.O.	40.75	35.60	32.10
	4 3/16" x 4 5/16" x 3 7/16"	A-111	3-Pole, All N.O.	54.75	47.90	43.10
TYPE **B**						
50 AMPERES/120 Vac	4 3/4" x 3" x 2 1/4"	B-1	Single Pole, N.O.	$24.65	$21.60	$19.40
35 AMPERES/240 Vac	4 3/4" x 4 3/8" x 2 5/16"	B-11	2-Pole, Both N.O.	48.00	42.00	37.80
	4 3/4" x 4 5/16" x 3 7/16"	B-111	3-Pole, Both N.O.	68.50	60.00	54.00
TYPE **H**						
100 AMPERES/120 Vac	6 3/4" x 4" x 3 5/8"	H-1	Single Pole, N.O.	$64.50	$56.50	$50.70
90 AMPERES/240 Vac	6 3/4" x 6 1/2" x 4"	H-11	2-Pole, Both N.O.	129.00	113.00	101.50
	6 3/4" x 6 1/2" x 5 1/4"	H-111	3-Pole, All N.O.	181.00	158.10	142.50
COMPLETELY ENCAPSULATED						
TYPE **S** 25 AMPERES 120 Vac load rating	3 1/2" x 1 3/4" x 2"	S-1	Single Pole, N.O.	$23.00	$20.10	$18.10
TYPE **T** 50 AMPERES 120 Vac load rating	3 7/8" x 2 1/4" x 2 3/8"	T-1	Single Pole, N.O.	28.50	25.00	22.45
Epoxy cast block construction: molded terminals. No enclosure required.						

TD "HI-POWER" Time Delay Relays

Single-pole, N.O. mercury-to-mercury contacts. The solid-state time delay circuit automatically resets upon completion of the delay. Load contacts are totally isolated from the delay circuit and are capable of switching loads to 60kW. Range, −10° to +65°C. Repeatability, ±2%. Epoxy-clad, hermetically sealed construction. Delay operates from 120 Vac. Preset or adjustable time delays from 100 ms to 120 seconds are offered.

AMPERES AT:	
120 VAC	550 VAC
25	15
50	25
100	70

TYPE	DESCRIPTION	1-9	10-49	50-99
TD-A-1	.5-60S-120 Vac	$32.20	$28.20	$25.35
TD-B-1	.5-60S-120 Vac	35.75	31.30	28.10
TD-H-1	.5-60S-120 Vac	75.50	66.00	59.50

CLARE APPLICATION ENGINEERING SERVICE

Clare distributor stock items shown in this section will handle most relay applications. Clare also provides **free** application engineering assistance for your switching problems, usually saving valuable engineering time. They will also save you work and worry — and probably money, too. If you have a problem — get Clare's suggestions.

Detailed Data Sheets on stock and special relay types are available on request. Call or write Clare.

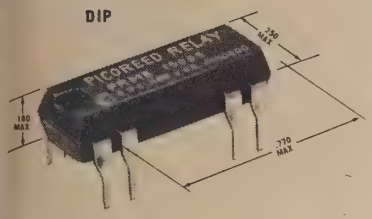
C. P. CLARE & CO.

Net

© United Technical Publications

REED RELAYS

DIP



DIP Picoreed® Series PRME

Clare's new TO-116 case DIP Picoreed Relay provides sealed contacts in an epoxy molded package for optimum environmental performance. The DIP Picoreed is ideal for electronic process control equipment applications and they can be operated by integrated circuits with 65 mW outputs. Available with one Form A contact.

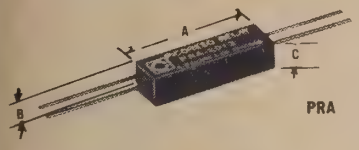
High speed — up to 600 μs operate time, including bounce, at nominal coil power.
Contact rating — 0.5 amperes max., 100 volts max., 10 VA max.
1.5 ampere max., carry load
Life expectancy — 100 x 10^6 operations at low-level loads.
5 x 10^6 operations at 28 Vdc, 0.125 ampere.

* The 5 volts series of DIP Picoreed relays have been designed especially for compatibility with standard 5 volt DTL and TTL logic families. These relays have a must operate voltage value of 3.5 volts @ +25°C.

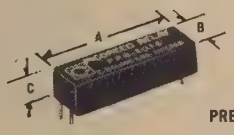
Part Number	Nominal Voltage	Coil Resistance	PRICES 1-9	10-24	25-99	100-249	250
PRME 1A005	5	380					
PRME 1A006	6	380		Prices Available on Request			
PRME 1A012	12	530					
PRME 1A024	24	2000					

MOLDED 1 FORM A LOW PROFILE

A	B	C
.781"	.187"	.250"



PRA



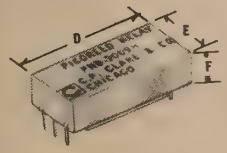
PRB

Picoreed Series PRB and PRA

The Clare **Picoreed** relays represent a state-of-the-art advancement in sealed contact reed relays; they are the fastest and smallest reed-contact relays made. Their response time, physical size, sensitivity, and reliability characteristics combine to give the **Picoreed** complete electrical and packaging compatibility with IC solid-state devices. These characteristics provide an answer for economical and reliable solid-state input-output isolation buffering.
High speed — up to 500 μs operate time, including bounce, at nominal coil power.
Contact rating — 0.5 amperes max., 100 volts max., 10 VA max.
2.0 ampere max., carry load.
Life expectancy — 100 x 10^6 operations at low-level loads. .
5 x 10^6 operations at 28 Vdc, 0.125 ampere.

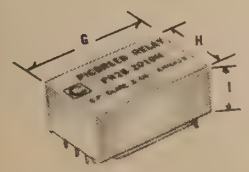
* The 5 volts series of **Picoreed** relays have been designed especially for compatibility with standard 5 volt DTL and TTL logic families. These relays have a must operate voltage values of 3.75 volts @ +25°C.

PRB Series has straight pin. High sensitive relays allow P.C.B. spacing of .500 inch centers. H in part number denotes more sensitive unit. Low profile units allow .375 spacing. Molded **PRA & PRB Series** has axial or P.C.B. leads, available in one Form A only.



LOW PROFILE

Form	D	E	F
2A	.80	.38	.225
3A	.80	.48	.225
4A	.80	.58	.225
5A	.80	.68	.225
6A	.80	.78	.225



HIGH SENSITIVITY

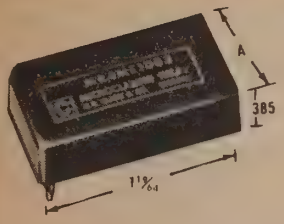
Form	G	H	I
1A	.80	.38	.350
2A	.80	.48	.350
3A	.80	.58	.350
4A	.80	.68	.350
5A	.80	.78	.350

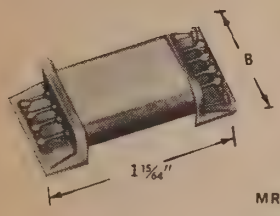
Part Number	Nom. Voltage	Coil Resistance	Contact Form	PRICES 1-9	10-24	25-99	100-249	250
LOW PROFILE								
PRB-2010 PRA-2010	6	387	1A	$3.60	$3.31	$3.02	$2.74	$2.52
PR2B-2007	6	136	2A	3.65	3.36	3.07	2.77	2.56
PR3B-2006	6	117	3A	4.95	4.55	4.16	3.76	3.47
PR4B-2005	6	88	4A	6.30	5.80	5.29	4.79	4.41
PR5B-2005	6	105	5A	7.60	6.99	6.38	5.78	5.32
PRB-2013 PRA-2013	12	1200	1A	3.60	3.31	3.02	2.74	2.52
PR2B-2011	12	740	2A	3.65	3.36	3.07	2.77	2.56
PR3B-2009	12	483	3A	4.95	4.55	4.16	3.76	3.47
PR4B-2008	12	351	4A	6.30	5.80	5.29	4.79	4.41
PR5B-2008	12	419	5A	7.60	6.99	6.38	5.78	5.32
PRB-2016 PRA-2016	24	5380	1A	4.65	4.28	3.91	3.53	3.26
PR2B-2014	24	3042	2A	4.65	4.28	3.91	3.53	3.26
PR3B-2013	24	2254	3A	5.75	5.29	4.83	4.37	4.03
PR4B-2012	24	1856	4A	6.90	6.35	5.80	5.24	4.83
PR5B-2011	24	1424	5A	8.25	7.59	6.93	6.27	5.78
HIGH SENSITIVITY								
PRB-2009H	6	535	1A	2.45	2.54	2.31	2.09	1.93
PR2B-2007H	6	297	2A	3.75	3.45	3.15	2.85	2.63
PR3B-2006H	6	228	3A	5.05	4.65	4.24	3.84	3.54
PR4B-2005H	6	155	4A	6.30	5.80	5.29	4.79	4.41
PR5B-2005H	6	180	5A	7.65	7.04	6.42	5.82	5.36
PRB-2013H	12	2870	1A	2.45	2.54	2.31	2.09	1.93
PR2B-2010H	12	1180	2A	3.75	3.45	3.15	2.85	2.63
PR3B-2009H	12	877	3A	5.05	4.65	4.24	3.84	3.54
PR4B-2008H	12	663	4A	6.30	5.80	5.29	4.79	4.41
PR5B-2008H	12	771	5A	7.65	7.04	6.42	5.82	5.36
PRB-2016H	24	11900	1A	5.25	4.83	4.41	3.99	3.68
PR2B-2013H	24	3780	2A	4.75	4.37	3.99	3.61	3.33
PR3B-2013H	24	4700	3A	6.15	5.66	5.17	4.67	4.31
PR4B-2012H	24	3620	4A	7.25	6.67	6.09	5.51	5.08
PR5B-2011H	24	3150	4A	8.35	7.68	7.01	6.35	5.85
LOW PROFILE								
PRB-3010 PRA-3010	5*	387	1A	4.10	3.77	3.44	3.12	2.87
PR2B-3007	5*	136	2A	4.10	3.77	3.44	3.12	2.87
PR3B-3006	5*	117	3A	5.45	5.01	4.58	4.14	3.82
PR4B-3005	5*	88	4A	6.80	6.26	5.71	5.17	4.76
PR5B-3005	5*	105	5A	8.15	7.50	6.85	6.19	5.71
HIGH SENSITIVITY								
PRB-3009H	5*	535	1A	2.75	2.53	2.31	2.09	1.93
PR2B-3007H	5*	297	2A	4.10	3.77	3.44	3.12	2.87
PR3B-3006H	5*	228	3A	5.45	5.01	4.58	4.14	3.82
PR4B-3005H	5*	155	4A	6.80	6.26	5.71	5.17	4.76
PR5B-3005H	5*	180	5A	8.15	7.50	6.85	6.19	5.71

© United Technical Publications

Net

CLARE REED RELAYS TELEPHONE RELAYS





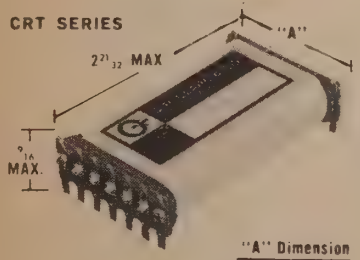
	A	B
Form 1A	13/32	11/32
Form 2A	33/64	29/64
Form 4A	45/64	21/32
Form 3A	39/64	35/64

MicroClareed Series MRMC and MRME

The Clare **MRME** and **MRMC** MicroClareed relays offer you the same high standard Clareed relays in only one-fifth the size. They provide isolation between coil and contacts. They are immune to false operation by the type of transients that affect solid state devices. They are insensitive to overload transients that would damage a solid state device. They offer switching speed as fast as 500 microseconds, which is fully compatible with other mechanics of process control. Type **MRME** is an epoxy molded module and Type **MRMC** is an open type module. Both types are designed for printed circuit board application. Operation and internal construction of both types are the same. Contacts rated at 15 VA maximum ¾ amp maximum.

Part No.	Volts	Coil Resistance	Contact Form	PRICES 1-9	10-24	25-99	100-249	250
MRME-1041	6	218	1A	$4.35	$4.00	$3.65	$3.31	$3.05
MR2ME-1041	6	168	2A	5.45	5.01	4.58	4.14	3.82
MR3ME-1041	6	125	3A	6.45	5.93	5.42	4.90	4.52
MR4ME-1041	6	95	4A	7.60	6.99	6.38	5.78	5.32
MRME-1042	12	790	1A	4.35	4.00	3.65	3.31	3.05
MR2ME-1042	12	635	2A	5.45	5.01	4.58	4.14	3.82
MR3ME-1042	12	510	3A	6.45	5.93	5.42	4.90	4.52
MR4ME-1042	12	410	4A	7.60	6.99	6.38	5.78	5.32
MRME-1043	24	3060	1A	5.00	4.60	4.20	3.80	3.50
MR2ME-1043	24	2580	2A	6.05	5.57	5.08	4.60	4.24
MR3ME-1043	24	1950	3A	7.05	6.49	5.92	5.36	4.94
MR4ME-1043	24	1500	4A	7.60	6.99	6.38	5.78	5.32
MRME-1044	48	12200	1A	7.30	6.72	6.13	5.55	5.11
MR2ME-1044	48	9450	2A	7.55	6.95	6.34	5.74	5.29
MR3ME-1044	48	7450	3A	8.00	7.36	6.72	6.08	5.60
MR4ME-1044	48	5750	4A	8.40	7.73	7.06	6.38	5.88
MRMC-1041	6	218	1A	3.50	3.22	2.94	2.66	2.45
MR2MC-1041	6	168	2A	4.45	4.09	3.74	3.38	3.12
MR3MC-1041	6	125	3A	5.50	5.06	4.62	4.18	3.85
MR4MC-1041	6	95	4A	6.55	6.03	5.50	4.98	4.59
MRMC-1042	12	790	1A	3.50	3.22	2.94	2.66	2.45
MR2MC-1042	12	635	2A	4.45	4.09	3.74	3.38	3.12
MR3MC-1042	12	510	3A	5.50	5.06	4.62	4.18	3.85
MR4MC-1042	12	410	4A	6.55	6.03	5.50	4.98	4.59
MRMC-1043	24	3060	1A	4.15	3.82	3.49	3.15	2.91
MR2MC-1043	24	2580	2A	5.15	4.74	4.33	3.91	3.61
MR3MC-1043	24	1950	3A	6.05	5.57	5.08	4.60	4.24
MR4MC-1043	24	1500	4A	6.55	6.03	5.50	4.98	4.59
MRMC-1044	48	12200	1A	6.50	5.98	5.46	4.94	4.55
MR2MC-1044	48	9450	2A	6.70	6.16	5.63	5.09	4.69
MR3MC-1044	48	7450	3A	7.15	6.58	6.01	5.43	5.01
MR4MC-1044	48	5750	4A	7.60	6.99	6.38	5.78	5.32

CRT SERIES



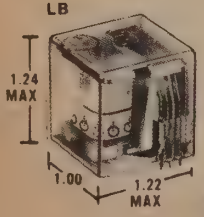
"A" Dimension	
Form 1A	5/8
Form 2A	27/32
Form 4A	1 1/32
Form 6A	1 49/64

Clareed — CRT Series

Ultra reliable reed relays for printed circuit boards. Reed contacts are sealed in an inert gas atmosphere within a glass tube. Coils wound on molded bobbins capable of accepting up to six Clareed switch capsules. The standard Clareeds are Form A. Life expectancy is over 20 million operations at rated load. Contacts rated at 15 VA Maximum, non-inductive, 1 amp maximum, 250 Volts maximum with carry load 5 amps maximum (not switched).

Part No.	Volts	Coil Resistance	Contact Form	PRICES 1-9	10-24	25-99	100-249	250
CRT-1007	6	160	1A	$3.20	$2.94	$2.69	$2.43	$2.24
CR2T-1004	6	88	2A	4.20	3.86	3.53	3.19	2.94
CR4T-1105	6	56	4A	5.80	5.34	4.87	4.41	4.06
CR6T-1003	6	31	6A	7.15	6.58	6.01	5.43	5.01
CRT-1010	12	600	1A	3.20	2.94	2.69	2.43	2.24
CR2T-1006	12	235	2A	4.20	3.86	3.53	3.19	2.94
CR4T-1107	12	136	4A	5.80	5.34	4.87	4.41	4.06
CR6T-1006	12	120	6A	7.15	6.58	6.01	5.43	5.01
CRT-1013	24	2500	1A	3.70	3.40	3.11	2.81	2.59
CR2T-1010	24	1400	2A	4.55	4.19	3.82	3.46	3.19
CR4T-1111	24	835	4A	5.70	5.24	4.79	4.33	3.99
CR6T-1009	24	510	6A	7.15	6.58	6.01	5.43	5.01
CRT-1016	48	9450	1A	4.65	4.28	3.91	3.53	3.26
CR2T-1013	48	5400	2A	5.70	5.24	4.79	4.33	3.99
CR4T-1113	48	2195	4A	5.80	5.34	4.87	4.41	4.06
CR6T-1012	48	1900	6A	7.60	6.99	6.38	5.78	5.32

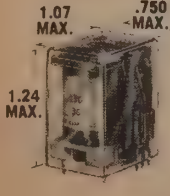
LB



LBP



LA



LA/LB Series — New (Telephone Relays)

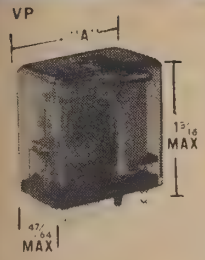
Designed for the used who must have high quality at a reasonable price. The **LA** relays have 4PDT contacts and the **LB/LBP** relays have 6PDT contacts. These miniature relays have extraordinary switching capacity and versatility for their size. Contacts rated 2 amps at 28V dc with a life of 100 million operations (Mechanical). **LA/LB Series** is for direct P.C.B. mounting; and the **LBP Series** is for direct plug into socket mounting. These relays are ideal components for military, industrial and commercial application.

Part Number	Volts	Coil Resistance	Contact Form	PRICES 1-9	10-24	25-99	100-249	250
LB0060A00, LBP0060A00	6	35	6 Form C	$ 5.75	$ 5.18	$ 4.89	$ 4.31	$4.03
LB0060B00, LBP0060B00	12	130	6 Form C	5.75	5.18	4.89	4.31	4.03
LB0060D00, LBP0060D00	24	590	6 Form C	5.75	5.18	4.89	4.31	4.03
LB0060N00, LBP0060N00	48	2100	6 Form C	6.00	5.40	5.10	4.50	4.20
RP-15450G5 Socket, Solder lug form LBP				1.27	.98	.90	.82	.78
RP-15450G6 Socket, PCB for LBP				1.27	.98	.90	.82	.78
LA0040A00	6	35	4 Form C	5.15	4.64	4.38	3.86	3.61
LA0040B00	12	130	4 Form C	5.15	4.64	4.38	3.86	3.61
LA0040D00	24	590	4 Form C	5.15	4.64	4.38	3.86	3.61
LA0040N00	48	2100	4 Form C	5.40	4.86	4.59	4.05	3.78

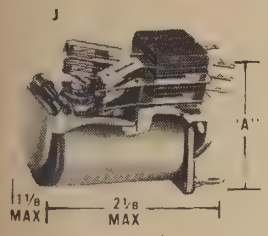
Net

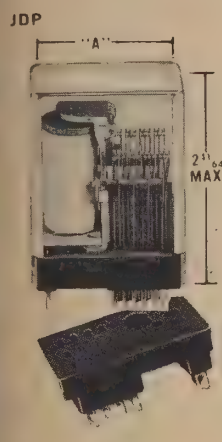
© United Technical Publications

TELEPHONE RELAYS
TO-5 TYPE RELAYS



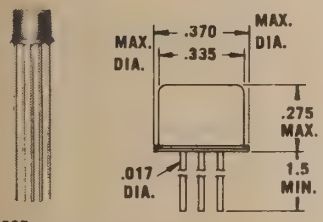
"A" Dimension	
Form 2C	31/32
Form 4C	13/16
Form 6C	1 27/64

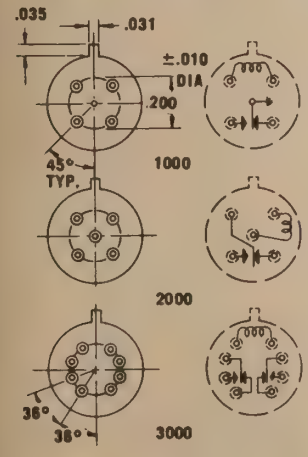




"A" Dimension	
Form 2C	1 15/32
Form 4C	1 15/32
Form 6C	1 21/32

"A" Dimension	
Form 2C	1 23/32
Form 4C	1 23/32
Form 6C	2 1/64





VP Series (Telephone Relays)

Has contact configuration of 2 P., 4 P., 6 P. DT; contacts rated at 1 amp 100 volts 30 watts D.C. resistive load. Operating temperature −40°C to +80°C. Operating time is 3-13 milliseconds. **VP** is protected from dust and contamination by a polycarbonate cover. Can be used for P.C.B. mounting with socket. Typical applications are business machines, process controls, communication equipment, digital instruments and many others.

Part Number	Volts	Coil Resistance	Contact Form	PRICES 1-9	10-24	25-49	50-99	100
VP2CAB12	12	185	DPDT	$2.95	$2.66	$2.51	$2.21	$2.07
VP4CAB12	12	185	4 PDT	3.45	3.11	2.93	2.59	2.42
VP6CAB12M	12	110	6 PDT	4.25	3.83	3.61	3.19	2.98
VP2CAB26	26	700	DPDT	2.95	2.66	2.51	2.21	2.07
VP4CAB26	26	700	4 PDT	3.45	3.11	2.93	2.59	2.42
VP6CAB26M	26	530	6 PDT	4.25	3.83	3.61	3.19	2.98
VP2CAB47	47	2500	DPDT	2.95	2.66	2.51	2.21	2.07
VP4CAB47	47	2500	4 PDT	3.45	3.11	2.93	2.59	2.42
VP6CAB47M	47	1700	6 PDT	4.25	3.83	3.61	3.19	2.98
VP2CAB120	120	15,000	DPDT	3.95	3.56	3.36	2.96	2.77
VP4CAB120	120	15,000	4 PDT	4.40	3.96	3.74	3.30	3.08
VP6CAB120M	120	11,750	6 PDT	4.95	4.46	4.22	3.71	3.47
VP2-111PC Socket, PCB RP 15223-5				.55	.50	.47	.41	.39
VP2-111W Socket, Solder Lug RP 15223-2				.55	.50	.47	.41	.39
VP4-111PC Socket, PCB RP 15223				.65	.59	.55	.49	.46
VP4-111W Socket, Solder Lug RP 15223-1				.65	.59	.55	.49	.46
VP6-111PC Socket, PCB RP 15223-7				.75	.68	.64	.56	.53
VP6-111W Socket, Solder Lug RP 15223-6				.75	.68	.64	.56	.53

J & JDP Series (Telephone Relays)

Compact, industrial telephone-type relay, for applications ranging from simple switching in alarm circuits to complex computer functions. Switch combination of 2, 4, 6 pole DT with contacts rated at 4 amps 150 watts with an operate time of 5 milliseconds minimum. Mechanical life of 70 x 10^6 operations. **Series JDP** is dust cover enclosed, socket with soldering lug terminals. **Series J** is open type.

Part Number	Volts	Coil Resistance	Contact Form	PRICES 1-9	10-24	25-49	50-99	100
J242C24	24	500	DPDT	$6.90	$6.21	$5.86	$5.17	$4.83
J244C24	24	500	4 PDT	9.50	8.55	8.08	7.13	6.65
J246C24	24	300	6 PDT	11.65	10.49	9.90	8.74	8.16
J482C24	48	1300	DPDT	6.95	6.26	5.91	5.21	4.87
J484C24	48	1300	4 PDT	9.65	8.69	8.20	7.24	6.76
J486C24	48	1000	6 PDT	11.70	10.53	9.95	8.78	8.19
J1102C24	110	6500	DPDT	7.20	6.48	6.12	5.40	5.04
J1104C24	110	6500	4 PDT	10.00	9.00	8.50	7.50	7.00
J1106C24	110	5000	6 PDT	12.00	10.80	10.20	9.00	8.40
JDP242C24	24	500	DPDT	8.25	7.43	7.01	6.19	5.78
JDP244C24	24	500	4 PDT	10.90	9.81	9.27	8.18	7.63
JDP246C24	24	300	6 PDT	13.55	12.20	11.52	10.16	9.49
JDP482C24	48	1300	DPDT	8.35	7.52	7.10	6.26	5.85
JDP484C24	48	1300	4 PDT	11.00	9.90	9.35	8.25	7.70
JDP486C24	48	1000	6 PDT	13.65	12.29	11.60	10.24	9.56
JDP1102C24	110	6500	DPDT	8.65	7.78	7.35	6.49	6.05
JDP1104C24	110	6500	4 PDT	11.30	10.17	9.60	8.47	7.91
JDP1106C24	110	5000	6 PDT	13.90	12.51	11.82	10.43	9.73

Type TF — TO-5 Military Type

The Clare TF relay is a TO-5 transistor case relay engineered to meet or exceed Mil-R-5757/38 and 40. The relay offers you a dependable relay which combines electromechanical performance with packaging compatible with solid state circuitry. Operating temperature range is from −65 degrees C to +125 degrees C, with a 2.0 MS maximum operate time. Must operate voltage at +25°C is 13.0 VDC. All with 1.5″ straight leads.

Part No.	Coil Resistance	CONTACTS Arrangements	CONTACTS Rated in Amps	Nom. Voltage	PRICES 1-24	25-49	50-99	100
TF1201T00*	2000	SPDT	1	26.5	$19.00	$18.05	$17.10	$16.15
TF2201T00†	2000	SPDT	1	26.5	21.00	19.95	18.90	17.85
TF3201R00†	1560	DPDT	1	26.5	27.50	26.15	24.75	23.38

Type TFC — TO-5 Commercial Type

The Clare TFC industrial relay is a TO-5 transistor case relay with the consistent high standards of the well-known Clare Military type relay. Operating temperature range is from −55 degrees C +75 degrees C with a 4.0 MS maximum operate time. Must operate voltage at +25°C is 17.0 VDC. All with 1.5″ straight leads.

Part No.	Coil Resistance	CONTACTS Arrangements	CONTACTS Rated in Amps	Nom. Voltage	PRICES 1-24	25-49	50-99	100
TFC1201T00*	2000	SPDT	1	26.5	$16.50	$15.65	$14.85	$14.05
TFC2201T00†	2000	SPDT	1	26.5	18.25	17.30	16.40	15.50
TFC3201R00†	1560	DPDT	1	26.5	24.00	22.80	21.60	20.40

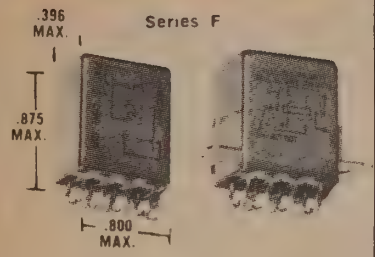
* Movable contact connected to case

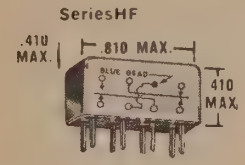
† All contacts insulated from case

© United Technical Publications

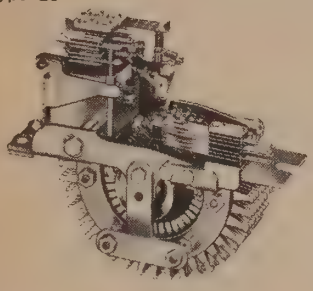
Net

MILITARY TYPE RELAYS
STEPPING SWITCHES

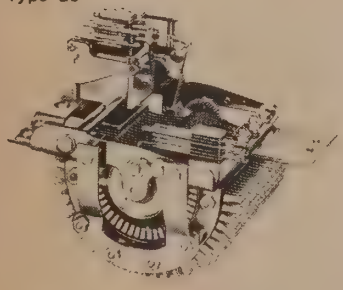




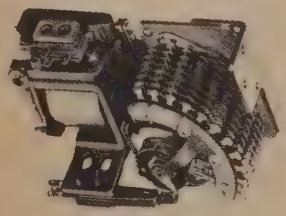
Type 20



Type 26



Type 210



Type 211



Type F & HF

Clare provides full and half-size military-type relays of unusual versatility, capable of reliable long life operation under adverse environments. These relays are ideal for use in industrial application as well as airborne and aerospace. Relays employ a rigid frame to maintain permanent alignment of all elements. Contact arrangement are 2 form C. These relays are manufactured to meet Mil-R-5757/10 and 5757/19.

Part No.	D.C. Volt	Coil Resistance	CONTACTS Arrangements	CONTACTS Rated in Amps	Terminal Type	Enclosure Variations	PRICES 1-9	10-24	25-99	100-249	250
"TYPE F"											
RP7631G12	26.5	675	DPDT	2	S.H.	Side Plate Mtg	$11.00	$ 9.90	$ 9.35	$ 8.25	$ 7.70
RP7632G1	26.5	675	DPDT	2	S.H.	Std Ear Brkts	11.00	9.90	9.35	8.25	7.70
RP7633G4	26.5	675	DPDT	2	S.H.	Stud Mtg Top	11.00	9.90	9.35	8.25	7.70
RP7640G1	26.5	675	DPDT	2	S.H.	Stud Mtg Side	11.00	9.90	9.35	8.25	7.70
RP7641G2	26.5	675	DPDT	2	3" Leads	Plain Case	11.00	9.90	9.35	8.25	7.70
RP7641G8	26.5	675	DPDT	2	3/16" Plug in	Plain Case	11.00	9.90	9.35	8.25	7.70
RP9809G1	26.5	675	DPDT	2	3/16" Plug in	Std Ear Brkts	11.00	9.90	9.35	8.25	7.70
RP9817G1(B)	26.5	675	DPDT	2	S.H.	Std Ear Brkts	12.00	10.80	10.20	9.00	8.40
RP9817G1	26.5	675	DPDT	2	S.H.	Std Ear Brkts	11.00	9.90	9.35	8.25	7.70
RP9895G3	26.5	675	DPDT	2	3" Leads	Side Plate Mtg	11.00	9.90	9.35	8.25	7.70
RP9896G9	26.5	675	DPDT	2	S.H.	Side Plate Mtg	11.00	9.90	9.35	8.25	7.70
"TYPE HF"											
HF1201D00	26.5	1250	DPDT	2	3/16" Plug in	Plain Case	15.00	13.50	12.75	11.25	10.50
HF1201K00	26.5	700	DPDT	2	3/16" Plug in	Plain Case	15.00	13.50	12.75	11.25	10.50
HF1205K00	26.5	700	DPDT	2	3/16" Plug in	Std Ear Brkts	15.00	13.50	12.75	11.25	10.50
HF1301K00	26.5	700	DPDT	2	3" Leads	Plain Case	15.00	13.50	12.75	11.25	10.50

Stepping Switches

Clare stepping switches offer an economical answer to switching problems by providing the most working capacity in the smallest space.

Type 20 offers up to 16 levels of 20 points or 12 levels of 40 points with a life expectancy of 50 million steps at 16 levels. Contacts rated at 0.1 amps 115 VAC or 30 VDC with carry of 3 amps. Operate time of approx. 20 MS at 25 degrees C. Release time approx. 10 MS at 25 degrees C. Standard terminals are solder lug.

Type 26 has the same characteristic as above but has the capability of 16 levels of 26 points or 10 levels of 52 points.

Type 210 offers up to 12 levels of 10 points with life expectancy of 100 million steps at 12 levels. Contacts rated at 0.1 amps 115 VAC or 30 VD resistive will carry 3 amps; operate time is approx. 20 MS at 25 degrees C. Standard terminals are solder lug.

Type 211 has the same characteristic as above but has the capability of 12 levels of 11 points.

ALL SWITCHES LISTED ARE NON-BRIDGING WITH 1C OFF-NORMAL CONTACTS AND 1C INTERRUPTER CONTACTS.

RP8047 Rectifier Unit $6.70 **RP9466 Lube Kit $5.60** **RP11375 Tool Kit $28.00**

Part No.	D.C. Volts	Coil Resistance	No. of Levels	No. of Points	Overall Dimensions H	W	D	PRICES 1-9	10-24	25-99	100
20-2404	24	35	4	20	4 5/8	5 5/16	2 1/8	$31.90	$30.31	$28.71	$27.12
20-2408	24	35	8	20	4 5/8	5 5/16	2 1/8	40.75	38.71	36.68	34.64
20-2412	24	20	12	20	4 5/8	5 5/16	2 3/4	51.45	48.88	46.31	43.73
20-2416	24	20	16	20	4 5/8	5 5/16	3 7/16	62.25	59.14	56.03	52.91
20-2428	24	35	8	40	4 5/8	5 5/16	3 7/16	62.25	59.14	56.03	52.91
20-11004	110	600	4	20	4 5/8	5 5/16	2 1/8	31.90	30.31	28.71	27.12
20-11008	110	600	8	20	4 5/8	5 5/16	2 1/8	40.75	38.71	36.68	34.64
20-11012	110	400	12	20	4 5/8	5 5/16	2 3/4	51.45	48.88	46.31	43.73
26-2403	24	35	3	26	4 7/8	6 5/16	2 1/2	31.10	29.55	27.99	26.44
26-2404	24	35	4	26	4 7/8	6 5/16	2 1/2	33.20	31.54	29.88	28.22
26-2406	24	35	6	26	4 7/8	6 5/16	2 1/2	37.45	35.58	33.71	31.83
26-2410	24	20	10	26	4 7/8	6 5/16	2 1/2	48.50	46.08	43.65	41.23
26-2416	24	20	16	26	4 7/8	6 5/16	3 1/2	63.30	60.14	56.97	53.81
26-11004	110	600	4	26	4 7/8	6 5/16	2 1/2	33.20	31.54	29.88	28.22
26-11006	110	600	6	26	4 7/8	6 5/16	2 1/2	37.45	35.58	33.71	31.83
26-11010	110	400	10	26	4 7/8	6 5/16	2 1/2	48.50	46.08	43.65	41.23
26-11016	110	400	16	26	4 7/8	6 5/16	3 1/2	63.30	60.14	56.97	53.81
26-11026	110	600	6	52	4 7/8	6 5/16	2 3/4	53.10	50.45	47.79	45.14
26-110210	110	400	10	52	4 7/8	6 5/16	4 1/16	72.25	68.64	65.03	61.41
210-2402	24	24	2	10	2 3/4	4 5/16	1 13/64	20.10	19.10	18.09	17.09
210-2403	24	24	3	10	2 3/4	4 5/16	1 13/64	21.35	20.28	19.22	18.15
210-2406	24	24	6	10	2 3/4	4 5/16	1 13/16	25.75	24.46	23.18	21.89
210-2409	24	20	9	10	2 3/4	4 5/16	2 5/16	32.25	30.64	29.03	27.41
210-2412	24	20	12	10	2 3/4	4 5/16	2 13/16	36.90	35.06	33.21	31.37
210-11002	110	600	2	10	2 3/4	4 5/16	1 13/64	20.10	19.10	18.09	17.09
210-11003	110	600	3	10	2 3/4	4 5/16	1 13/64	21.35	20.28	19.22	18.15
210-11006	110	600	6	10	2 3/4	4 5/16	1 13/16	25.75	24.46	23.18	21.89
210-11012	110	400	12	10	2 3/4	4 5/16	2 13/16	36.90	35.06	33.21	31.37
211-2402	24	24	2	11	2 3/4	4 5/16	1 13/64	20.10	19.10	18.09	17.09
211-2403	24	24	3	11	2 3/4	4 5/16	1 13/64	21.35	20.28	19.22	18.15
211-2406	24	24	6	11	2 3/4	4 5/16	1 13/16	25.75	24.46	23.18	21.89
211-2409	24	20	9	11	2 3/4	4 5/16	2 5/16	32.25	30.64	29.03	27.41
211-2412	24	20	12	11	2 3/4	4 5/16	2 13/16	36.90	35.06	33.21	31.37
211-11002	110	600	2	11	2 3/4	4 5/16	1 13/64	20.10	19.10	18.09	17.09
211-11003	110	600	3	11	2 3/4	4 5/16	1 13/64	21.35	20.28	19.22	18.15
211-11006	110	600	6	11	2 3/4	4 5/16	1 13/16	25.75	24.46	23.18	21.89
211-11012	110	400	12	11	2 3/4	4 5/16	2 13/16	36.90	35.06	33.21	31.37

C. P. CLARE & CO.

Net

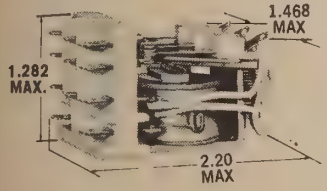
© United Technical Publications

GENERAL PURPOSE RELAYS

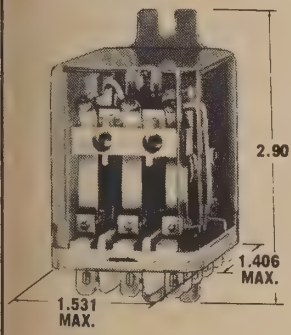


GPI

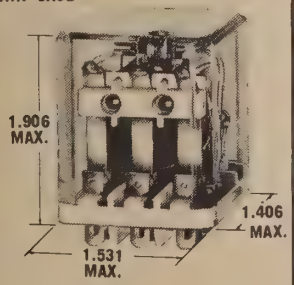
GP2 OPEN



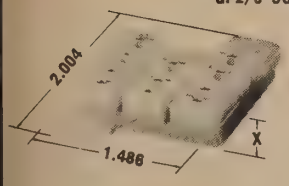
GP3 BRACKET CASE



GP3 PLAIN CASE



GP2/3 SOCKET



	X
GPS 3003	.294"
GPS 3001	.542"

GP1 Series — General Purpose

GP1 Relays are miniature 4PDT relays available for AC or DC operation with dust cover enclosure built to meet UL Component recognition. Contacts are fine silver-gold flashed, rated 3 amps at 30 VDC or 120 VAC resistive. Life expectancy in excess of 100 million operations AC. Solder terminals are standard. Sockets come in both solder terminals and printed circuit.

Part No.	Volts	Coil Resistance	CONTACTS Arrangement	CONTACTS Rated in Amps	PRICES 1-24	25-49	50-99	100-249	250-499	500
GP1R11A0000	6 AC	10.5	4 PDT	3	$5.00	$4.85	$4.55	$3.75	$3.50	$3.10
GP1R11A1000	12 AC	43	4 PDT	3	5.00	4.85	4.55	3.75	3.50	3.10
GP1R11A2000	24 AC	160	4 PDT	3	5.00	4.85	4.55	3.75	3.50	3.10
GP1R11A6000	120 AC	3900	4 PDT	3	5.20	5.05	4.75	3.95	3.70	3.30
GP1R11D0000	6 DC	40	4 PDT	3	4.30	4.00	3.75	3.40	3.00	2.80
GP1R11D1000	12 DC	160	4 PDT	3	4.30	4.00	3.75	3.40	3.00	2.80
GP1R11R2000	24 DC	650	4 PDT	3	4.30	4.00	3.75	3.40	3.00	2.80
GP1R11D3000	48 DC	2600	4 PDT	3	4.40	4.10	3.85	3.50	3.10	2.90
GP1R11D4000	90 DC	9000	4 PDT	3	4.60	4.20	3.95	3.60	3.20	3.00
GP1R11D5000	110 DC	11,000	4 PDT	3	4.85	4.45	4.20	3.85	3.45	3.25
GPS1001 (Socket, .375 Long Solder Lug)					.60	.57	.54	.42	.39	.38
GPS1002 (Socket, .187 Long Solder Lug)					.60	.57	.54	.42	.39	.38
GPS1003 (Socket, PCB)					.60	.57	.54	.42	.39	.38

GP2 and GP3 Relays

The GP2 (open) and GP3 (Lexan® dust cover) Relays are designed to meet UL bulletin 508 requirements. The rugged AC or DC relays are available in SPDT, DPDT & 3PDT configurations with Gold flashed Silver Cadmium Oxide contacts rated at either 10 amperes at 28 Vdc resistive or 120/300 Vac, .8 power factor. The GP2 and GP3 plain case models are available with matching molded nylon sockets for plug-in applications. The GP3 bracket case model is available for direct chassis mounting only. Mechanical life expectancy is 100 million operations, electrical life 100,000 operations minimum at rated load. .187" quick connect terminals standard.

GP2 OPEN RELAY

Part No.	Voltage	Action	1-24	25-49	50-99	100-249	250-499	500
GP2R211AA0000	6V ac	SPDT	$3.00	$2.85	$2.70	$2.10	$1.95	$1.72
GP2R211AA1000	12V ac	SPDT	3.00	2.85	2.70	2.10	1.95	1.72
GP2R211AA2000	24V ac	SPDT	3.00	2.85	2.70	2.10	1.95	1.72
GP2R211AA6000	120V ac	SPDT	3.00	2.85	2.70	2.10	1.95	1.72
GP2R211AA7000	240V ac	SPDT	3.30	3.14	2.97	2.31	2.15	1.89
GP2R211AD0000	6V dc	SPDT	2.85	2.71	2.57	2.00	1.85	1.64
GP2R211AD1000	12V dc	SPDT	2.85	2.71	2.57	2.00	1.85	1.64
GP2R211AD2000	24V dc	SPDT	2.85	2.71	2.57	2.00	1.85	1.64
GP2R211AD5000	110V dc	SPDT	3.35	3.18	3.02	2.35	2.18	1.93
GP2R221AA0000	6V ac	DPDT	3.60	3.42	3.24	2.52	2.34	2.08
GP2R221AA1000	12V ac	DPDT	3.60	3.42	3.24	2.52	2.34	2.08
GP2R221AA2000	24V ac	DPDT	3.60	3.42	3.24	2.52	2.34	2.08
GP2R221AA6000	120V ac	DPDT	3.60	3.42	3.24	2.52	2.34	2.08
GP2R221AA7000	240V ac	DPDT	3.95	3.71	3.56	2.77	2.57	2.28
GP2R221AD0000	6V dc	DPDT	3.25	3.09	2.93	2.28	2.11	1.87
GP2R221AD1000	12V dc	DPDT	3.25	3.09	2.93	2.28	2.11	1.87
GP2R221AD2000	24V dc	DPDT	3.25	3.09	2.93	2.28	2.11	1.87
GP2R221AD5000	110V dc	DPDT	3.70	3.52	3.33	2.59	2.41	2.13
GP2R231AA0000	6V ac	3PDT	4.05	3.85	3.65	2.84	2.63	2.33
GP2R231AA1000	12V ac	3PDT	4.05	3.85	3.65	2.84	2.63	2.33
GP2R231AA2000	24V ac	3PDT	4.05	3.85	3.65	2.84	2.63	2.33
GP2R231AA6000	120V ac	3PDT	4.05	3.85	3.65	2.84	2.63	2.33
GP2R231AA7000	240V ac	3PDT	4.30	4.09	3.87	3.01	2.80	2.47
GP2R231AD0000	6V dc	3PDT	3.70	3.52	3.33	2.59	2.41	2.13
GP2R231AD1000	12V dc	3PDT	3.70	3.52	3.33	2.59	2.41	2.13
GP2R231AD2000	24V dc	3PDT	3.70	3.52	3.33	2.59	2.41	2.13
GP2R231AD5000	110V dc	3PDT	4.05	3.85	3.65	2.84	2.63	2.33

GP3

Plain Case	Bracket Case	Voltage	Action	1-24	25-49	50-99	100-249	250-499	500
GP3R211AA0000	GP3R211NA0000	6V ac	SPDT	$3.15	$2.95	$2.84	$2.21	$2.05	$1.81
GP3R211AA1000	GP3R211NA1000	12V ac	SPDT	3.15	2.95	2.84	2.21	2.05	1.81
GP3R211AA2000	GP3R211NA2000	24V ac	SPDT	3.15	2.95	2.84	2.21	2.05	1.81
GP3R211AA6000	GP3R211NA6000	120V ac	SPDT	3.15	2.95	2.84	2.21	2.05	1.81
GP3R211AA7000	GP3R211NA7000	240V ac	SPDT	3.45	3.28	3.10	2.41	2.24	1.98
GP3R211AD0000	GP3R211ND0000	6V dc	SPDT	3.00	2.85	2.70	2.10	1.95	1.72
GP3R211AD1000	GP3R211ND1000	12V dc	SPDT	3.00	2.85	2.70	2.10	1.95	1.72
GP3R211AD2000	GP3D211ND2000	24V dc	SPDT	3.00	2.85	2.70	2.10	1.95	1.72
GP3R211AD5000	GP3R211ND5000	110V dc	SPDT	3.50	3.32	3.15	2.45	2.27	2.01
GP3R221AA0000	GP3R221NA0000	6V ac	DPDT	3.80	3.61	3.42	2.66	2.47	2.18
GP3R221AA1000	GP3R221NA1000	12V ac	DPDT	3.80	3.61	3.42	2.66	2.47	2.18
GP3R221AA2000	GP3R221NA2000	24V ac	DPDT	3.80	3.61	3.42	2.66	2.47	2.18
GP3R221AA6000	GP3R221NA6000	120V ac	DPDT	3.80	3.61	3.42	2.66	2.47	2.18
GP3R221AA7000	GP3R221NA7000	240V ac	DPDT	4.15	3.94	3.73	2.90	2.70	2.39
GP3R221AD0000	GP3R221ND0000	6V dc	DPDT	3.40	3.23	3.06	2.38	2.21	1.95
GP3R221AD1000	GP3R221ND1000	12V dc	DPDT	3.40	3.23	3.06	2.38	2.21	1.95
GP3R221AD2000	GP3R221ND2000	24V dc	DPDT	3.40	3.23	3.06	2.38	2.21	1.95
GP3R221AD5000	GP3R221ND5000	110V dc	DPDT	3.90	3.70	3.51	2.73	2.53	2.24
GP3R231AA0000	GP3R231NA0000	6V ac	3PDT	4.25	4.04	3.82	2.97	2.76	2.44
GP3R231AA1000	GP3R231NA1000	12V ac	3PDT	4.25	4.04	3.82	2.97	2.76	2.44
GP3R231AA2000	GP3R231NA2000	24V ac	3PDT	4.25	4.04	3.82	2.97	2.76	2.44
GP3R231AA6000	GP3R231NA6000	120V ac	3PDT	4.25	4.04	3.82	2.97	2.76	2.44
GP3R231AA7000	GP3R231NA7000	240V ac	3PDT	4.55	4.32	4.09	3.18	2.96	2.62
GP3R231AD0000	GP3R231ND0000	6V dc	3PDT	3.90	3.70	3.51	2.73	2.53	2.24
GP3R231AD1000	GP3R231ND1000	12V dc	3PDT	3.90	3.70	3.51	2.73	2.53	2.24
GP3R231AD2000	GP3R231ND2000	24V dc	3PDT	3.90	3.70	3.51	2.73	2.53	2.24
GP3R231AD5000	GP3R231ND5000	110V dc	3PDT	4.25	4.04	3.82	2.97	2.76	2.44
GPS3001	Solder Terminal Socket			.69	.66	.62	.48	.45	.40
GPS3003	Printed Circuit Terminal Socket			.79	.75	.71	.55	.51	.45

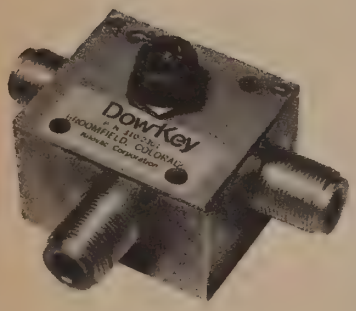
© United Technical Publications

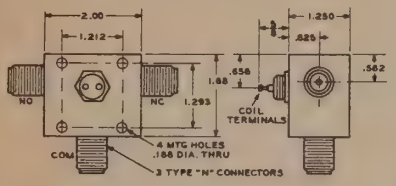
Net

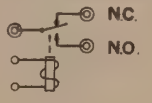
DowKey
SUBSIDIARY OF KILOVAC CORPORATION

Kilovac Vacuum Relays • Penta RF Power Tubes • Dow-Key Coaxial Relays

SERIES 310 SPDT
Vacuum Coaxial Relay







FEATURES – Series 310 Relays have high power handling capability in a small package, with continuous powe rating of 3000 watts at frequencies up to 30 MHz. At 400 MHz, the relay will carry 1000 watts. Reliab vacuum-enclosed contacts minimize losses and noise.

SPECIFICATIONS

Operating Time . . . . . 6 ms max.

ELECTRICAL DATA

Peak Voltage
- *At 30 MHz* . . . . . 1500 V
- *At 400 MHz* . . . . . 1000 V

Peak Current –1 μ Sec Pulse
- *At 30 MHz* . . . . . 40 amps
- *At 400 MHz* . . . . . 10 amps

MECHANICAL DATA

Weight . . . . . 8 oz
Life expectancy . . . . . 10^6 cycles
Finish
- *Connectors* . . . . . Silver plate
- *Block* . . . . . Silver plate

ENVIRONMENTAL DATA
(Per MIL-S-3928)

Shock . . . . . 50 g's -11 ms
Vibration (Test condition A) . . . . 10 g's to 2000 Hz
Temperature . . . . . -55°C to +85°C
Salt Spray . . . . . 48 Hrs
Humidity . . . . . 10 days

ORDERING INFORMATION

After selecting connector type from the Connector & P/N Table, replace XX shown in the Part Number column with the two digits of the selected coil voltage, shown in the Part No. Digits column of the Coil Characteristics Table.

EXAMPLE: *310-2302 is SPDT Relay with BNC connectors and 26 VDC Coil.*

CONNECTORS AND PART NUMBERS

Connector Type	Part Number
N	310-XX01
BNC*	310-XX02
TNC*	310-XX03
C	310-XX06
SC	310-XX53
HN	310-XX51

*Reduced power limits when using these connectors.

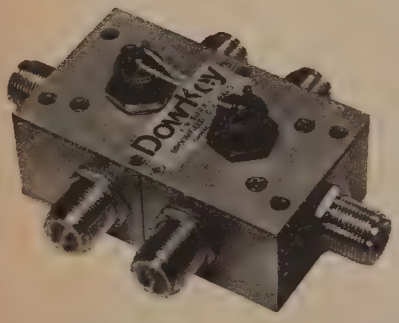
ELECTRICAL CHARACTERISTICS

Freq. MHz	VSWR	Isolation Loss	Insertion Loss	RF Power Rating
30	1.05	35 db min.	.1 db typ.	3 KW
400	1.10	20 db typ.	.1 db typ.	1 KW

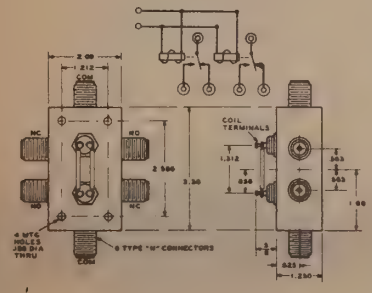
COIL CHARACTERISTICS
(Part No. Digits to replace XX on Connector Part No.)

Part No. Digits	Nominal Volt	Voltage Range	Resistance Ohms ±10 %
21	6 VDC	4.5-7	15
22	12 VDC	9-14	120
23	26 VDC	19-31	338
24	48 VDC	38-54	1000
25	110 VDC	90-125	6000
26	115 VAC	90-130	6000*

**Divide resistance by 2 on parallel coil units.*
***Requires external diode bridge.*



SERIES 313 DPDT
Transfer/Crossover Coaxial Vacuum Relay



FEATURES – The Series 313 are remote operation ruggedly constructed Transfer Relays designed for high power–high voltage operation. The Series 313 also features Kilovac vacuum-enclosed contacts for high reliability, low contact resistance and long life. It is intended for interchanging two transmitters between an antenna and a dummy load, reversing feed phase for directional antennas, and similar applications. It is capable of handling 3 KW at 30 MHz.

SPECIFICATIONS

Operating Time . . . . . .6 ms. max.

ELECTRICAL DATA

Impedance . . . . . 50 ohms
VSWR (at 30 MHz) . . . . . 1.1 max.
Insertion Loss . . . . . .2 db max.
Isolation Loss (at 30 MHz) . . . . . 35 db min.
RF Power Rating . . . . . 3 KW
Peak Voltage . . . . . 1500 V
Peak Current 1 μ Sec Pulse . . . . . 40 amp

MECHANICAL DATA

Weight . . . . . 12 oz.
Life expectancy . . . . . 10^6 cycles
Finish
- *Connectors* . . . . . Silver Plate
- *Block* . . . . . Silver Plate

ENVIRONMENTAL DATA
(Per MIL-S-3928)

Shock . . . . . 50 g's 11 ms.
Vibration (Test condition A) . . . 10 g's to 2000 cycles
Temperature . . . . . -55°C to +85°C
Salt Spray . . . . . 48 Hrs.
Humidity . . . . . 10 days

ORDERING INFORMATION

After selecting connector type from the Connector & P/N Table, replace XX shown in the Part Number column with the two digits of the selected coil voltage, shown in the Part No. Digits column of the Coil Characteristics Table.

EXAMPLE: *313-2302 is a Transfer/Crossover Coaxial Relay with BNC connectors and 26 VDC Coil.*

CONNECTORS AND PART NUMBERS

Connector Type	Part Number
N	313-XX01
BNC*	313-XX02
TNC*	313-XX03
C	313-XX06
SC	313-XX53
HN	313-XX51

*Reduced power limits when using these connectors.

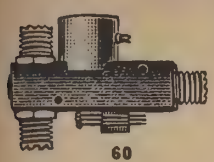
COIL CHARACTERISTICS
(Part No. Digits to replace XX on Connector Part No.)

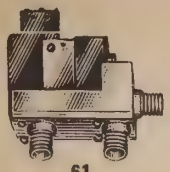
Part No. Digits	Nominal Volt	Voltage Range	Resistance * Ohms ±10 %
21	6 VDC	4.5-7	15
22	12 VDC	9-14	120
23	26 VDC	19-31	338
24	48 VDC	38-54	1000
25	110 VDC	90-125	6000
26	115 VAC	90-130	6000**

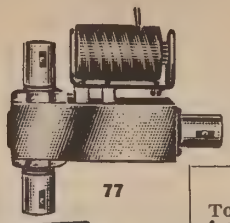
**Divide resistance by 2 on parallel coil units.*
***Requires external diode bridge.*

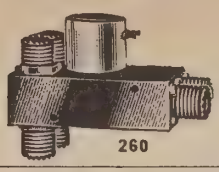
© United Technical Publications

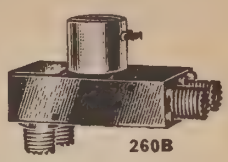
DOW-KEY COAXIAL RELAYS, SWITCHES AND CONNECTORS


60

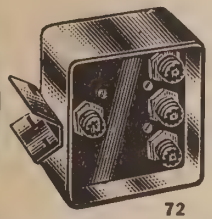

61

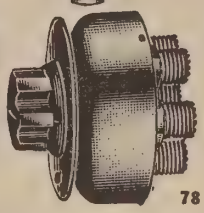

77


260


260B


71


72


78

60 SERIES SPDT TYPES

Remote-operation SPDT coaxial relays for low-level to 1-kW operation. Available with 2 Form C auxiliary contacts, and with high isolation "G" connector at NC or receive position in transmit-receive applications. The "G" connector increases isolation to greater than −100 dB at up to 500 MHz, reduces the power rating to 20 W, and increases VSWR above 400 MHz. Range, 0 to 1000 MHz (UHF types not recommended for use above 400 MHz). RF power rating, 1 kW to 100 MHz; 750 W at 400 MHz; 500 W at 1000 MHz. VSWR, 1.05:1 0–50 MHz; 1.3:1 at 1000 MHz. Impedance, 50 ohms. Body size, 3.00″ x 0.88″ x 0.88″. **Specify Coil Voltage:** 6, 12, 26, 48 or 110 VDC; or 115, 220, 6 or 24 VAC. **See Coil Voltage Table.**

Dow-Key Model	Conn. Type	With 2 Form C Aux Contacts	Net Each, Lots of 1-4	5-9	10-24	25-49
60-XX04*	UHF	No	$14.85	$13.50	$12.15	$10.80
60-XX0442*	UHF	Yes	16.50	15.00	13.50	12.00
60-XX28*†	UHF	No	16.35	14.85	13.35	11.90
60-XX2842*†	UHF	Yes	18.00	16.35	14.70	13.10
60-XX02*	BNC	No	16.60	15.05	13.55	12.05
60-XX0242*	BNC	Yes	18.25	16.55	14.90	13.25
60-XX26*†	BNC	No	18.05	16.40	14.80	13.15
60-XX2642*†	BNC	Yes	19.70	17.90	16.15	14.35
60-XX19	Solder	No	16.10	14.60	13.15	11.70
60-XX1942	Solder	Yes	17.75	16.10	14.50	12.90
60-XX35†	Solder	No	17.55	15.95	14.35	12.80
60-XX3542†	Solder	Yes	19.20	17.45	15.70	14.00

61 SERIES SPDT TYPES

Small switches for military and severe environmental requirements. Withstand applicable requirements of MIL-S-3928B specifications. Balanced armature actuator prevents contact chatter under high-frequency vibration and severe shock. Offered with many connector types and 1 or 2 Form C microswitch aux contacts. RF power rating, 150 W to 50 MHz; 75 W at 1000 MHz. VSWR, 1.03:1 0–50 MHz; 1.18:1 at 1000 MHz. Operating time, 15 msec max. Aux contact rating, 5 A at 115 VAC. Life expectancy, 1,000,000 cycles. Body size, 1.58″ x 0.64″ x 1.20″ h. max. Wt., 3½ to 4 oz. **Specify Coil Voltage:** 6, 12, 26, 48 or 110 VDC; or 115 VAC. **See Coil Voltage Table.**

Dow-Key Model	Conn. Type	With Aux Cont. 1 Form C	With Aux Cont. 2 Form C	Net Each, Lots of 1-4	5-9	10-24	25-49
61-XX02*	BNC	No	No	$28.95	$26.30	$23.70	$21.05
61-XX0212*	BNC	Yes	No	29.80	27.05	24.35	21.65
61-XX0222*	BNC	No	Yes	30.60	27.80	25.05	22.25
61-XX03	TNC	No	No	28.95	26.30	23.70	21.05
61-XX0312	TNC	Yes	No	29.80	27.05	24.35	21.65
61-XX0322	TNC	No	Yes	30.60	27.80	25.05	22.25
61-XX19	Solder	No	No	27.20	24.75	22.25	19.80
61-XX1912	Solder	Yes	No	28.05	25.50	22.95	20.40
61-XX1922	Solder	No	Yes	28.85	26.25	23.60	21.00

77 SERIES SPDT TYPES

Medium-size, lightweight, low-priced coaxial switches for industrial and less critical military uses. T-shaped connector configuration has common connector at one end and NO and NC types 180° apart at other. Available with or without 1 Form C aux contact. RF power rating, 150 W to 50 MHz; 60 W at 1200 MHz. Impedance, 50 ohms. Size, 1.88″ x 0.68″ x 0.68″. Weight, 3 oz. (Other specifications similar to 61 Series above.) **Specify Coil Voltage:** 6, 12, 26, 48 or 110 VDC (115 VAC available at additional cost). **See Coil Voltage Table.**

Dow-Key Model	Conn. Type	With 1 Form C Aux Cont.	Net Each, Lots of 1-4	5-9	10-24	25-49
77-XX0202*	BNC	No	$11.50	$10.50	$ 9.45	$8.40
77-XX0232*	BNC	Yes	12.75	11.60	10.45	9.30
77-XX0302	TNC	No	11.50	10.50	9.45	8.40
77-XX0332	TNC	Yes	12.75	11.60	10.45	9.30
77-XX0902	Phono	No	10.50	9.60	8.65	7.70
77-XX0932	Phono	Yes	11.75	10.70	9.65	8.60

*Available with mating plugs; prices on request. †With NC "G" connector as described.

Space does not permit listing various modifications or variations of the standard relays shown. The following types and variations of relays however, are also available.
1. Additional types of coaxial connectors on many relays.
2. 72-ohm type in some relays (50-ohm standard).
3. Gold plated contacts and others (silver contacts standard).

COIL VOLTAGE TABLE

To specify voltage desired, substitute two digits (21 thru 29) from this table for **XX** in the Dow-Key Model No.; e.g., 260-XX04 with 6 VDC coil becomes 260-2104, etc.

Model No. Digits	Nominal Voltage	Model No. Digits	Nominal Voltage	Model No. Digits	Nominal Voltage
21	6 VDC	24	48 VDC	27	220 VAC
22	12 VDC	25	110 VDC	28	6 VAC
23	26 VDC	26	115 VAC	29	24 VAC

260/260B SERIES DPDT TYPES

Remote-operation switches for low-level to 1-kW operation. The 260B Series is a standard DPDT switch with six connectors; 260B Series similar but has internal connection between its NC contacts, leaving only four connectors; 260B is widely used for inserting a circuit element between two normally connected elements (e. g., inserting power amplifier between exciter and antenna). RF power rating, 1 kW to 100 MHz; 750 W at 400 MHz. VSWR, 1.05:1 0–50 MHz; 1.06:1 100 MHz; 1.12:1 at 400 MHz. Impedance, 50 ohms. Aux contacts rated 5 A, 115 VAC. Operating time 25 msec approx. Life, 1,000,000 cycles. With UHF connectors (others available). Body size, 3.00″ x 1.75″ x 0.88″. Weight, 12 oz. approx. **Specify Coil Voltage:** 6, 12, 26, 84 or 100 VDC; or 115, 220, 6 or 24 VAC. **See Coil Voltage Table.**

Dow-Key Model	With 2 Form C Aux Contacts	Net Each, Lots of 1-4	5-9	10-24	25-49
260-XX04	No	$24.75	$22.50	$20.25	$18.00
260-XX0442	Yes	26.40	24.00	21.60	19.20
260B-XX04	No	23.90	21.75	19.55	17.40
260B-XX0442	Yes	25.55	23.25	20.90	18.60

71/72 SERIES MULTI-POSITION TYPES

Weatherproof, high power switches for switching antennas, transmitters or receivers up to 500 MHz. Separate actuating coil for each position. RF power rating, 1 kW to 200 MHz; 750 W at 500 MHz. VSWR, 1.06:1 0–50 MHz; 1.3:1 at 500 MHz. Impedance, 50 ohms. Operating time, 25 msec approx. Life, 500,000 cycles per position. With UHF connectors (BNC, C, N, TNC connectors available). Body size, 71 Series, 4″ x 3.5″ x 2.62″; 72 Series, 5.75″ dia. x 2.75″ d. Wt., 71 Series, 3 lbs. approx.; 72 Series, 1½ lbs. approx. **Specify Coil Voltage:** 6, 12, 26, 48 or 110 VDC; or 115, 220, 6 or 24 VAC. **See Coil Voltage Table.**

Dow-Key Model	Description	Net Each, Lots of 1-4	5-9	10-24	25-49
71-XX0401	SP6T shorting	$57.75	$52.50	$47.25	$42.00
71-XX0402	SP6T non-shorting	61.85	56.25	50.60	45.00
72-XX0401	SP3T shorting	27.20	24.75	22.25	19.80
72-XX0402	SP3T non-shorting	31.35	28.50	25.65	22.80

78 SERIES MULTI-POSITION TYPES

Manually operated switches with true coaxial switching members (not wafer switches). Useful frequency range, 0 to 500 MHz. RF power rating, 1.5 kW at 50 MHz; 1 kW at 100 and 400 MHz. VSWR, 1.05:1 at 50 MHz; 1.15:1 at 400 MHz. Impedance, 50 ohms. Crosstalk, 60 dB at 50 MHz; 45 dB at 400 MHz. Insertion loss, .03 dB at 50 MHz; .05 dB at 400 MHz. Dial plate and knob included. With UHF connectors (also available with BNC, C, N, TNC connectors). Size, 3″ dia. x 1″ deep. Weight, 10 oz. approx.

Dow-Key Model	Function	Net Each, Lots of 1-4	5-9	10-24	25-49
78-0204	SPDT	$14.00	$12.75	$11.45	$10.20
78-0304	SP3T	14.45	13.10	11.80	10.50
78-0404	SP4T	15.05	13.80	12.40	11.05
78-0604	SP6T	15.65	14.25	12.80	11.40
78-0704	D&DT	17.65	16.10	14.50	12.90
78-0904	Transfer	16.65	15.20	13.70	12.20

UHF CONNECTORS AND ADAPTERS


A B C D E F

Types C-201, C-60P and C-60PT have UHF female or male connector to solder terminal, and mount through panels ⅛″ thick max. C-201 mounts through ⅝″ hole. C-60P mounts into ⅝-24 tapped hole or through ⅝″ hole. C-60PT similar to C-60P except Teflon* insulation and better impedance match.

*Registered DuPont TM.

Dow-Key Model	Fig.	Description	Lg., in.	Net Each, Lots of 1-4	5-9	10-24	25-49
A-F2	A	UHF double male	1.00	$0.76	$0.69	$0.62	$0.54
C-60P	B	UHF panel-mount female	1.19	.69	.63	.57	.50
C-60PT	B	UHF panel-mount female	1.19	.99	.90	.81	.72
C-201	C	UHF panel-mount male	1.40	1.07	.97	.87	.78
A-202	D	UHF double female	1.12	.82	.75	.67	.60
A-210	E	UHF fem. to male phono	1.30	1.24	1.12	1.01	.90
A-211	F	UHF male to male phono	1.34	1.32	1.20	1.08	.96

© United Technical Publications

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



RBM CONTROLS
ESSEX INTERNATIONAL, INC.

CONTENTS

1

ALTERNATING CURRENT CONTROLS

Page

rices 1, 2, 3, 4
esign Application Data 5
lounting Dimensions 17, 18
IL/CSA Listings 19
bsolete Listing 19
roduction No. vs. Catalog No. Cross Ref. .. 19, 20

eneral Purpose Relay
- Type 84 7
- Type 91 7
- Type 92 7
- Type 93 6
- Type 987 8

Page

Power Relay
- Type 129 8
- Type 129AR 8

Power Contactor
- Type 143 8
- Type 75 9
- Type 80 9
- Type 85 9
- Type S30 9
- Type S40 9

Industrial Contactor
- Type C10 10

Page

- Type C15 10
- Type C30 10
- Type C50R 10

Reversing Contactor
- Type CR15 11
- Type CR30 11

Replacement Parts
- Type C 11

Time Delay Relay
- Type 59 12
- Type 84T 12
- Type 187 12

DIRECT CURRENT CONTROLS

Page

rices 1, 2, 3, 4
esign Application Data 5
lounting Dimensions 17, 18
IL/CSA Listings 19
bsolete Listing 19
roduction No. vs. Catalog No. Cross Ref. .. 19, 20

General Purpose Relay
- Type 84D 7
- Type 91D 7
- Type 92D 7
- Type 93 6

Page

Power Relay
- Type 60 13
- Type 150 12

Power Contactor
- Type 70 13

Miniature Sensitive
- Type MS25 (open) 14
- Type MS25P (plug-in) 14
- Type MS40 (open) 14
- Type MS50 (open) 15

Page

- Type MS50P (plug-in) 15
- Type MS64 (enclosed) 14

Glass Reed Switch
- Type BRM Miniature 16
- Type BRS Standard 16
- Type TRM Miniature 16

Glass Reed Relay
- Type BRMR Miniature 16
- Type BRSR Standard 16
- Type TRMR Miniature 16

FACTORY PRICES

PRODUCTION PART NUMBER IS RBM MANUFACTURING NUMBER WHICH IS STAMPED ON EACH UNIT

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
59-901	59-21	3.42	3.08	2.74	2.40	2.26	2.18
59-902	59-20	4.12	3.71	3.30	2.89	2.84	2.72
59-903	59-22	4.12	3.71	3.30	2.89	2.84	2.72
60-901	60-108025-0	3.24	2.92	2.60	2.27	2.14	1.90
60-902	60-111025-0	3.32	2.99	2.66	2.33	2.19	1.95
60-903	60-117025-0	3.78	3.41	3.03	2.65	2.50	2.21
70-901	70-108224-5	4.00	3.60	3.20	2.80	1.70	1.70
70-902	70-111224-5	4.00	3.60	3.20	2.80	1.89	1.89
70-903	70-117224-5	4.00	3.60	3.20	2.80	1.95	1.95
70-904	70-120224-5	4.00	3.60	3.20	2.80	2.04	2.04
70-905	70-108221-5	6.90	6.21	5.52	4.83	3.18	3.18
70-906	70-111221-5	6.90	6.21	5.52	4.83	3.36	3.36
70-907	70-117221-5	6.90	6.21	5.52	4.83	3.59	3.59
70-908	70-120221-5	6.90	6.21	5.52	4.83	3.77	3.77
70-909	70-308221-5	10.50	9.45	8.40	7.35	5.18	5.18
70-910	70-311221-5	10.50	9.45	8.40	7.35	5.33	5.33
70-911	70-317221-5	10.50	9.45	8.40	7.35	5.55	5.55
70-912	70-320221-5	10.50	9.45	8.40	7.35	5.62	5.62
70-913	70-108225-5	4.00	3.60	3.20	2.80	1.53	1.53
70-914	70-111225-5	4.00	3.60	3.20	2.80	1.73	1.73
70-915	70-117225-5	4.00	3.60	3.20	2.80	1.81	1.81
70-916	70-120225-5	4.00	3.60	3.20	2.80	1.90	1.90
70-917	70-108226-5	4.00	3.60	3.20	2.80	1.53	1.53
70-918	70-111226-5	4.00	3.60	3.20	2.80	1.73	1.73
70-919	70-117226-5	4.00	3.60	3.20	2.80	1.81	1.81
70-920	70-120226-5	4.00	3.60	3.20	2.80	1.90	1.90

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
70-921	70-308224-5	9.40	8.46	7.52	6.58	4.33	4.33
70-922	70-311224-5	9.40	8.46	7.52	6.58	4.63	4.63
70-923	70-317224-5	9.40	8.46	7.52	6.58	4.70	4.70
70-924	70-320224-5	9.40	8.46	7.52	6.58	4.78	4.78
75-901	75-840301-2906A	4.59	4.14	3.68	3.22	2.74	2.74
75-902	75-840301-2910A	4.59	4.14	3.68	3.22	2.74	2.74
75-903	75-840301-2913A	4.59	4.14	3.68	3.22	2.74	2.74
75-904	75-250301-2506A	4.59	4.14	3.68	3.22	2.74	2.74
75-905	75-250301-2510A	4.59	4.14	3.68	3.22	2.74	2.74
75-906	75-250301-2513A	4.59	4.14	3.68	3.22	2.74	2.74
80-901	80-312111-1000	7.27	6.55	5.82	5.09	4.75	4.75
80-902	80-312131-1000	7.27	6.55	5.82	5.09	4.75	4.75
80-904	80-312171-1000	7.27	6.55	5.82	5.09	4.75	4.75
84-901	84-20405-101	3.06	2.76	2.45	2.15	1.98	1.38
84-902	84-20105-101	3.06	2.76	2.45	2.15	1.98	1.38
84-903	84-20205-101	3.37	3.04	2.70	2.36	2.18	1.52
84-904	84-20305-101	3.67	3.31	2.94	2.57	2.38	1.66
84-905	84-20406-301	3.32	2.99	2.66	2.33	2.15	1.50
84-906	84-20106-301	3.37	3.04	2.70	2.36	2.18	1.52
84-907	84-20206-301	3.65	3.29	2.92	2.56	2.36	1.64
84-908	84-20306-301	4.00	3.60	3.20	2.80	2.59	1.81
84-912	84-20102-101	3.03	2.73	2.43	2.13	1.96	1.37
84-913	84-20202-101	3.29	2.97	2.64	2.31	2.13	1.48

Consult your RBM Controls authorized distributor for factory prices in larger quantities.

2 **RBM CONTROLS**
ESSEX INTERNATIONAL, INC.

FACTORY PRICES

PRODUCTION PART NUMBER IS RBM MANUFACTURING NUMBER WHICH IS STAMPED ON EACH UNIT

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
84-914	84-20302-101	3.65	3.29	2.92	2.56	2.36	1.64
84-916	84-20103-301	3.29	2.97	2.64	2.31	2.13	1.48
84-917	84-20203-301	3.60	3.24	2.88	2.52	2.33	1.62
84-918	84-20303-301	3.90	3.51	3.12	2.73	2.52	1.76
84-922	84-50102-101	2.98	2.69	2.39	2.09	1.93	1.35
84-923	84-50202-101	2.98	2.69	2.39	2.09	1.93	1.35
84-924	84-50302-101	3.70	3.30	2.96	2.59	2.39	1.67
84-926	84-50103-301	3.32	2.99	2.66	2.33	2.15	1.50
84-927	84-50203-301	3.60	3.24	2.88	2.52	2.33	1.62
84-928	84-50303-301	3.98	3.59	3.19	2.79	2.57	1.79
84D-902	84-31506-301	3.37	3.04	2.70	2.36	2.18	1.52
84D-903	84-31106-301	3.37	3.04	2.70	2.36	2.18	1.52
91-180-1	None	.60	.54	.48	.42	.39	.37
91-901	91-132006-13000	5.87	5.29	4.70	4.11	2.66	2.35
91-902	91-131006-13000	6.47	5.83	5.18	4.53	2.93	2.59
91-903	91-133006-13000	6.33	5.70	5.07	4.44	2.87	2.53
91-904	91-192006-13000	5.79	5.22	4.64	4.06	2.62	2.32
91-905	91-191006-13000	5.99	5.40	4.80	4.20	2.71	2.39
91-906	91-193006-13000	6.27	5.65	5.02	4.39	2.84	2.51
91-907	91-192006-19000	5.34	4.81	4.28	3.74	2.42	2.14
91-908	91-191006-19000	5.69	5.13	4.56	3.99	2.58	2.27
91-909	91-193006-19000	5.99	5.40	4.80	4.20	2.71	2.39
91D-912	91-227004-22000	5.78	5.21	4.63	4.05	2.62	2.31
91D-913	91-222004-22000	5.79	5.22	4.64	4.06	2.62	2.32
92-901	192-321111-11607	7.31	6.58	5.85	5.12	3.31	2.92
92-902	192-311111-11607	7.22	6.50	5.78	5.06	3.27	2.89
92-903	192-331111-11607	7.50	6.75	6.00	5.25	3.40	3.00
92-904	192-321177-11607	6.96	6.27	5.57	4.88	3.16	2.78
92-905	192-311177-11607	6.78	6.11	5.43	4.75	3.07	2.71
92-906	192-331177-11607	7.59	6.84	6.08	5.32	3.44	3.04
92D-912	192-373333-33507	7.13	6.42	5.71	5.00	3.23	2.85
92D-913	192-323333-33507	7.22	6.50	5.78	5.06	3.27	2.89
93-153-1	None	.60	.54	.48	.42	.39	.37
93-901	93-208030-13000B	3.42	3.08	2.74	2.40	2.00	1.64
93-902	93-208303-13000B	4.15	3.74	3.32	2.91	2.34	1.92
93-903	93-208333-13000B	4.62	4.16	3.70	3.24	2.60	2.14
93-904	93-202030-13300B	3.42	3.08	2.74	2.40	2.02	1.66
93-905	93-202303-13300B	4.15	3.74	3.32	2.91	2.34	1.92
93-906	93-202333-13300B	4.62	4.16	3.70	3.24	2.60	2.14
93-907	93-201030-13000B	3.42	3.08	2.74	2.40	2.02	1.66
93-908	93-201303-13000B	4.15	3.74	3.32	2.91	2.34	1.92
93-909	93-201333-13000B	4.62	4.16	3.70	3.24	2.60	2.14
93-910	93-203030-13000B	3.84	3.46	3.08	2.69	2.28	1.87
93-911	93-203303-13000B	4.57	4.12	3.66	3.20	2.62	2.15
93-912	93-203333-13000B	5.04	4.54	4.04	3.53	2.88	2.37
93-913	93-508030-13300B	3.26	2.94	2.61	2.29	2.02	1.66
93-914	93-508303-13300B	3.68	3.32	2.95	2.58	2.34	1.92
93-915	93-508333-13300B	4.20	3.78	3.36	2.94	2.60	2.14
93-916	93-507030-13300B	3.26	2.94	2.61	2.29	2.02	1.66
93-917	93-507303-13300B	3.68	3.32	2.95	2.58	2.34	1.92
93-918	93-507333-13300B	4.20	3.78	3.36	2.94	2.60	2.14
93-919	93-502030-13300B	3.26	2.94	2.61	2.29	2.02	1.66
93-920	93-502303-13300B	3.68	3.32	2.95	2.58	2.34	1.92
93-921	93-502333-13300B	4.20	3.78	3.36	2.94	2.60	2.14
93-922	93-501030-13300B	3.89	3.51	3.12	2.73	2.46	2.02
93-923	93-501303-13300B	4.47	4.03	3.58	3.13	2.80	2.30
93-924	93-501333-13300B	4.83	4.45	3.87	3.39	3.05	2.51
93-931	93-208090-13000A	3.36	3.03	2.69	2.36	2.06	1.69
93-932	93-208909-13000A	4.05	3.65	3.24	2.84	2.44	2.00
93-933	93-208999-13000A	4.47	4.03	3.58	3.13	2.79	2.29
93-934	93-202090-13300A	3.36	3.03	2.69	2.36	2.06	1.69
93-935	93-202909-13300A	4.05	3.65	3.24	2.84	2.44	2.00
93-936	93-202999-13300A	4.47	4.03	3.58	3.13	2.79	2.29

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
93-937	93-201090-13000A	3.36	3.03	2.69	2.36	2.07	1.70
93-938	93-201909-13000A	4.05	3.65	3.24	2.84	2.45	2.01
93-939	93-201999-13000A	4.47	4.03	3.58	3.13	2.80	2.30
93-940	93-203090-13000A	3.78	3.41	3.03	2.65	2.32	1.91
93-941	93-203909-13000A	4.47	4.03	3.58	3.13	2.72	2.23
93-942	93-203999-13000A	4.89	4.41	3.92	3.43	2.97	2.44
93-943	93-508090-13300A	3.36	3.03	2.69	2.36	2.07	1.70
93-944	93-508909-13300A	4.02	3.62	3.22	2.82	2.44	2.00
93-945	93-508999-13300A	4.47	4.03	3.58	3.13	2.79	2.29
93-946	93-507090-13300A	3.36	3.03	2.69	2.36	2.07	1.70
93-947	93-507909-13300A	4.02	3.62	3.22	2.82	2.44	2.00
93-948	93-507999-13300A	4.47	4.03	3.58	3.13	2.79	2.29
93-949	93-502090-13300A	3.36	3.03	2.69	2.36	2.07	1.70
93-950	93-502909-13300A	4.02	3.62	3.22	2.82	2.44	2.00
93-951	93-502999-13300A	4.47	4.03	3.58	3.13	2.76	2.27
93-952	93-501090-13300A	4.15	3.74	3.32	2.91	2.51	2.06
93-953	93-501909-13300A	4.79	4.32	3.84	3.36	2.90	2.38
93-954	93-501999-13300A	5.33	4.80	4.27	3.74	3.23	2.65
93-964	93-202090-30300A	3.36	3.03	2.69	2.36	2.07	1.70
93-965	93-202909-30300A	4.05	3.65	3.24	2.84	2.46	2.02
93-966	93-202999-30300A	4.47	4.03	3.58	3.13	2.81	2.31
93-967	93-201090-30000A	3.36	3.03	2.69	2.36	2.07	1.70
93-968	93-201909-30000A	4.05	3.65	3.24	2.84	2.46	2.02
93-969	93-201999-30000A	4.47	4.03	3.58	3.13	2.81	2.31
93-976	93-507090-30300A	3.36	3.03	2.69	2.36	2.07	1.70
93-977	93-507909-30300A	4.05	3.65	3.24	2.84	2.46	2.02
93-978	93-507999-30300A	4.47	4.03	3.58	3.13	2.81	2.31
93-979	93-502090-30300A	3.36	3.03	2.69	2.36	2.07	1.70
93-980	93-502909-30300A	4.47	4.03	3.58	3.13	2.46	2.02
93-981	93-502999-30300A	4.47	4.03	3.58	3.13	2.81	2.31
93-985	93-207030-13000B	3.42	3.08	2.74	2.40	2.02	1.66
93-986	93-207303-13000B	4.15	3.74	3.32	2.91	2.34	1.92
93-987	93-207333-13000B	4.62	4.16	3.70	3.24	2.60	2.14
93-988	93-207090-13000A	3.36	3.03	2.69	2.36	2.06	1.69
93-989	93-207909-13000A	4.05	3.65	3.24	2.84	2.44	2.00
93-990	93-207999-13000A	4.47	4.03	3.58	3.13	2.79	2.29
93-991	93-207090-30000A	3.36	3.03	2.69	2.36	2.07	1.70
93-992	93-207909-30000A	4.05	3.65	3.24	2.84	2.46	2.02
93-993	93-207999-30000A	4.47	4.03	3.58	3.13	2.81	2.31
93P-901	93-208030-70000B	5.78	5.21	4.63	4.05	3.32	2.72
93P-902	93-208303-60000B	6.46	5.82	5.17	4.53	3.99	3.28
93P-903	93-208333-90000B	8.04	7.24	6.44	5.63	4.69	3.86
93P-904	93-202030-70300B	5.78	5.21	4.63	4.05	3.33	2.74
93P-905	93-202303-60300B	6.46	5.82	5.17	4.53	3.99	3.28
93P-906	93-202333-90300B	8.04	7.24	6.44	5.63	4.69	3.86
93P-907	93-201030-70000B	5.78	5.21	4.63	4.05	3.26	2.68
93P-908	93-201303-60000B	6.46	5.82	5.17	4.53	3.96	3.26
93P-909	93-201333-90000B	8.04	7.24	6.44	5.63	4.69	3.86
93P-910	93-203030-70000B	6.20	5.58	4.96	4.34	3.60	2.95
93P-911	93-203303-60000B	6.88	6.20	5.51	4.82	4.26	3.50
93P-912	93-203333-90000B	8.46	7.62	6.77	5.93	4.98	4.10
93P-913	93-508030-70300B	5.73	5.16	4.59	4.02	3.32	2.72
93P-914	93-508303-60300B	6.41	5.77	5.13	4.49	4.01	3.31
93P-915	93-508333-90300B	7.98	7.19	6.39	5.59	4.69	3.86
93P-916	93-507030-70300B	5.73	5.16	4.59	4.02	3.32	2.72
93P-917	93-507303-60300B	6.41	5.77	5.13	4.49	4.01	3.31
93P-918	93-507333-90300B	7.98	7.19	6.39	5.59	4.69	3.86
93P-919	93-502030-70300B	5.73	5.16	4.59	4.02	3.32	2.72
93P-920	93-502303-60300B	6.41	5.77	5.13	4.49	3.99	3.28
93P-921	93-502333-90300B	7.98	7.19	6.39	5.59	4.69	3.86
93P-922	93-501030-70300B	6.36	5.73	5.09	4.46	3.77	3.10
93P-923	93-501303-60300B	7.04	6.34	5.64	4.93	4.44	3.65
93P-924	93-501333-90300B	8.61	7.75	6.89	6.03	5.15	4.24
93P-931	93-208090-70000A	5.73	5.16	4.59	4.02	3.36	2.76

Consult your RBM Controls authorized distributor for factory prices in larger quantities.

Net

© United Technical Publications

PRODUCTION PART NUMBER IS R B M MANUFACTURING NUMBER WHICH IS STAMPED ON EACH UNIT

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
93P-932	93-208909-60000A	6.36	5.73	5.09	4.46	4.07	3.35
93P-933	93-208999-90000A	7.88	7.10	6.31	5.52	4.87	4.00
93P-934	93-202090-70300A	5.73	5.16	4.59	4.02	3.36	2.76
93P-935	93-202909-60300A	6.37	5.74	5.10	4.46	4.07	3.35
93P-936	93-202999-90300A	7.88	7.10	6.31	5.52	4.87	4.00
93P-937	93-201090-70000A	5.73	5.16	5.59	4.02	3.36	2.76
93P-938	93-201909-60000A	6.36	5.73	5.09	4.46	4.07	3.35
93P-939	93-201999-90000A	7.88	7.10	6.31	5.52	4.89	4.02
93P-940	93-203090-70000A	5.67	5.11	4.54	3.97	3.36	2.79
93P-941	93-203909-60000A	6.78	6.11	5.43	4.75	4.07	3.35
93P-942	93-203999-90000A	8.30	7.47	6.64	5.81	4.87	4.00
93P-943	93-508090-70300A	5.67	5.11	4.54	3.97	3.36	2.79
93P-944	93-508909-60300A	6.30	5.67	5.04	4.41	4.07	3.35
93P-945	93-508999-90300A	7.83	7.05	6.27	5.49	4.90	4.03
93P-946	93-507090-70300A	5.67	5.11	4.54	3.97	3.36	2.79
93P-947	93-507909-60300A	6.30	5.67	5.04	4.41	4.07	3.35
93P-948	93-507999-90300A	7.83	7.05	6.27	5.49	4.87	4.00
93P-949	93-502090-70300A	5.67	5.11	4.54	3.97	3.36	2.79
93P-950	93-502909-60300A	6.30	5.67	5.04	4.41	4.07	3.35
93P-951	93-502999-90300A	7.98	7.19	6.39	5.59	4.69	3.86
93P-952	93-501090-70300A	5.78	5.21	4.63	4.05	3.26	2.68
93P-953	93-501909-60300A	6.66	6.00	5.33	4.67	3.65	3.00
93P-954	93-501999-90300A	8.46	7.62	6.77	5.93	5.33	4.38
93P-955	93-207030-70000B	5.05	4.55	4.04	3.54	2.77	2.28
93P-956	93-207303-60000B	5.66	5.10	4.53	3.97	3.11	2.55
93P-957	93-207333-90000B	6.35	5.72	5.08	4.45	3.49	2.86
93P-958	93-20709C-70000A	4.47	4.03	3.58	3.13	2.81	2.31
93P-959	93-207909-60000A	5.84	5.26	4.68	4.09	3.21	2.63
93P-960	93-207999-90000A	6.68	6.02	5.35	4.68	3.67	3.01
93Q-901	93-208030-25000B	3.94	3.55	3.16	2.76	2.41	1.98
93Q-902	93-208303-25000B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-903	93-208333-25000B	5.25	4.73	4.20	3.58	3.01	2.48
93Q-904	93-202030-25300B	3.94	3.55	3.16	2.76	2.41	1.98
93Q-905	93-202303-25300B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-906	93-202333-25300B	5.25	4.73	4.20	3.68	3.01	2.48
93Q-907	93-201030-25000B	3.78	3.41	3.03	2.65	2.41	1.98
93Q-908	93-201303-25000B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-909	93-201333-25000B	5.25	4.73	4.20	3.68	3.01	2.48
93Q-910	93-203030-25000B	4.36	3.93	3.49	3.06	2.67	2.20
93Q-911	93-203303-25000B	5.15	4.64	4.12	3.61	3.02	2.49
93Q-912	93-203333-25000B	5.67	5.11	4.54	3.97	3.29	2.70
93Q-913	93-508030-25300B	3.78	3.41	3.03	2.65	2.41	1.98
93Q-914	93-508303-25300B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-915	93-508333-25300B	4.83	4.35	3.87	3.39	3.01	2.48
93Q-916	93-507030-25300B	3.78	3.41	3.03	2.65	2.41	1.98
93Q-917	93-507303-25300B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-918	93-507333-25300B	4.83	4.35	3.87	3.39	3.01	2.48
93Q-919	93-502030-25300B	3.78	3.41	3.03	2.65	2.41	1.98
93Q-920	93-502303-25300B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-921	93-502333-25300B	4.83	4.35	3.87	3.39	3.01	2.48
93Q-922	93-501030-25300B	4.65	4.18	3.72	3.25	2.86	2.35
93Q-923	93-501303-25300B	5.15	4.64	4.12	3.61	3.21	2.63
93Q-924	93-501333-25300B	5.46	4.92	4.37	3.83	3.46	2.84
93Q-931	93-208090-25000A	3.89	3.51	3.12	2.73	2.45	2.01
93Q-932	93-208909-25000A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-933	93-208999-25000A	5.10	4.59	4.08	3.57	3.19	2.62
93Q-934	93-202090-25300A	4.05	3.65	3.24	2.84	2.45	2.01
93Q-935	93-202909-25300A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-936	93-202999-25300A	5.10	4.59	4.08	3.57	3.19	2.62
93Q-937	93-201090-25000A	4.05	3.65	3.24	2.84	2.45	2.01
93Q-938	93-201909-25000A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-939	93-201999-25000A	5.10	4.59	4.08	3.57	3.18	2.61

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
93Q-940	93-203090-25000A	4.31	3.88	3.45	3.02	2.73	2.24
93Q-941	93-203909-25000A	5.04	4.54	4.04	3.53	3.11	2.55
93Q-942	93-203999-25000A	5.52	4.97	4.42	3.87	3.46	2.84
93Q-943	93-508090-25300A	4.05	3.65	3.24	2.84	2.45	2.01
93Q-944	93-508909-25300A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-945	93-508999-25300A	5.10	4.59	4.08	3.57	3.19	2.62
93Q-946	93-507090-25300A	4.05	3.65	3.24	2.84	2.45	2.01
93Q-947	93-507909-25300A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-948	93-507999-25300A	5.10	4.59	4.08	3.57	3.19	2.62
93Q-949	93-502090-25300A	4.05	3.65	3.24	2.84	2.45	2.01
93Q-950	93-502909-25300A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-951	93-502999-25300A	5.10	4.59	4.08	3.57	3.19	2.62
93Q-952	93-501090-25300A	4.79	4.32	3.84	3.36	2.90	2.38
93Q-953	93-501909-25300A	5.67	5.11	4.54	3.97	3.29	2.70
93Q-954	93-501999-25300A	6.60	5.94	5.28	4.62	3.64	2.99
93Q-955	93-207030-25000B	3.94	3.55	3.16	2.76	2.31	1.90
93Q-956	93-207303-25000B	4.73	4.26	3.79	3.32	2.76	2.27
93Q-957	93-207333-25000B	5.25	4.73	4.20	3.68	3.01	2.48
93Q-958	93-207090-25000A	3.89	3.51	3.12	2.73	2.45	2.01
93Q-959	93-207909-25000A	4.62	4.16	3.70	3.24	2.84	2.34
93Q-960	93-207999-25000A	5.10	4.59	4.08	3.57	3.19	2.62
129-901	129990-1220	4.13	3.72	3.31	2.90	2.60	2.14
129-902	129115-6880Z	4.11	3.70	3.29	2.89	2.59	2.13
129-903	129115-6810Z	4.35	3.92	3.48	3.05	2.74	2.25
129-904	129115-6830Z	4.62	4.16	3.70	3.24	2.91	2.39
129-905	129990-1230	5.20	4.68	4.16	3.64	3.28	2.69
129-906	129117-5480Z	5.11	4.60	4.09	3.58	3.22	2.65
129-907	129117-5410Z	5.37	4.84	4.30	3.76	3.39	2.78
129-908	129117-5430Z	5.71	5.14	4.57	4.00	3.60	2.96
129-911	129115-7180Z	4.08	3.68	3.27	2.86	2.55	2.09
129-912	129115-7110Z	4.26	3.84	3.41	2.99	2.69	2.21
129-913	129115-7130Z	4.55	4.10	3.64	3.19	2.87	2.36
129-914	129117-6780Z	5.20	4.68	4.16	3.64	3.28	2.69
129-915	129117-6710Z	5.44	4.90	4.36	3.81	3.43	2.82
129-916	129117-6730Z	5.64	5.08	4.52	3.95	3.56	2.92
129AR-901	129515-3180Z	6.13	5.52	4.91	4.30	3.86	3.17
129AR-902	129505-3110Z	6.40	5.76	5.12	4.48	4.03	3.31
129AR-903	129505-3130Z	6.66	6.00	5.33	4.67	4.20	3.45
129AR-904	129517-5380Z	7.17	6.46	5.74	5.02	4.53	3.72
129AR-905	129507-5310Z	7.46	6.72	5.97	5.23	4.71	3.86
129AR-906	129507-5330Z	7.75	6.98	6.20	5.43	4.88	4.02
143-901	143-121520-14400A	4.78	4.31	3.83	3.35	2.85	2.85
143-902	143-121120-14400A	4.78	4.31	3.83	3.35	2.85	2.85
143-903	143-121220-14400A	4.78	4.31	3.83	3.35	2.85	2.85
143-914	143-621520-14400A	8.00	7.20	6.40	5.60	4.80	4.80
143-915	143-621120-14400A	8.00	7.20	6.40	5.60	4.80	4.80
143-916	143-621220-14400A	8.00	7.20	6.40	5.60	4.80	4.80
150-901	150-13	3.00	2.70	2.40	2.10	1.75	1.36
150-902	150-10	3.00	2.70	2.40	2.10	1.75	1.36
150-903	150-20	3.00	2.70	2.40	2.10	1.75	1.36
150-904	150-19	3.45	3.11	2.76	2.42	2.10	1.55
150-905	150-8	3.45	3.11	2.76	2.42	2.10	1.55
150-906	150-9	3.45	3.11	2.76	2.42	2.10	1.55
187-901	187-290201-1	14.06	12.66	11.25	9.85	8.52	7.00
187-902	187-290201-3	15.00	13.50	12.00	10.50	8.60	7.11
987-902	98756-7160	4.10	3.69	3.28	2.87	2.38	2.10
987-903	98756-6142	4.20	3.78	3.36	2.94	2.62	2.31
987-904	98756-3194	4.44	4.00	3.56	3.11	2.75	2.42
987-906	98706-7162	4.22	3.80	3.38	2.96	2.46	2.17
987-907	98706-6144	4.35	3.92	3.48	3.05	2.65	2.34
987-908	98706-3196	4.55	4.10	3.64	3.19	2.71	2.39
987-910	98750-7161	4.66	4.20	3.73	3.27	3.00	2.65
987-911	98750-6143	4.79	4.32	3.84	3.36	3.11	2.74
987-912	98750-3195	4.99	4.50	4.00	3.50	3.22	2.84

Consult your RBM Controls authorized distributor for factory prices in larger quantities.

4 **RBM CONTROLS** ESSEX INTERNATIONAL, INC.

FACTORY PRICES

PRODUCTION PART NUMBER IS R B M MANUFACTURING NUMBER WHICH IS STAMPED ON EACH UNIT

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
BRM-902	96-311001-	1.25	1.13	1.00	.88	.74	.62
BRMR1-901	97-101700-16	5.11	4.60	4.09	3.58	2.17	1.91
BRMR1-902	97-101700-17	5.16	4.65	4.13	3.62	2.18	1.93
BRMR1-903	97-101700-18	5.26	4.74	4.21	3.69	2.24	1.97
BRMR2-901	97-104700-20	7.15	6.44	5.72	5.01	3.20	2.82
BRMR2-902	97-104700-21	7.18	6.47	5.75	5.03	3.20	2.83
BRMR2-903	97-104700-22	7.24	6.52	5.80	5.07	3.25	2.87
BRS-901	98-611002	1.25	1.13	1.00	.88	.60	.60
BRSR1-901	99-401242-3	4.77	4.30	3.82	3.34	2.62	2.31
BRSR1-902	99-401242-4	4.83	4.35	3.87	3.39	2.64	2.33
BRSR1-903	99-401242-5	4.87	4.39	3.90	3.41	2.77	2.44
BRSR2-901	99-404242-6	6.22	5.60	4.98	4.36	3.84	3.38
BRSR2-902	99-404242-7	6.28	5.66	5.03	4.40	3.89	3.43
BRSR2-903	99-404242-8	6.33	5.70	5.07	4.44	3.97	3.50
CA-901	45997-23	5.76	3.24	—	—	—	—
CA-902	45997-24	7.80	4.40	—	—	—	—
CA-903	45997-30	10.40	5.85	—	—	—	—
CA-904	45997-29	9.66	5.44	—	—	—	—
C10-901	109214-105	12.60	11.34	10.08	8.82	8.68	8.54
C10-902	109214-101	12.60	11.34	10.08	8.82	8.68	8.54
C10-903	109214-102	12.60	11.34	10.08	8.82	8.68	8.54
C15-901	109202-105	18.72	16.85	14.98	13.11	12.90	12.69
C15-902	109202-101	18.72	16.85	14.98	13.11	12.90	12.69
C15-903	109202-102	18.72	16.85	14.98	13.11	12.90	12.69
C30-901	109196-105	19.95	17.96	15.96	13.97	9.15	9.05
C30-902	109196-101	19.95	17.96	15.96	13.97	9.15	9.05
C30-903	109196-102	19.95	17.96	15.96	13.97	9.15	9.05
C50R-901	109423-705	27.90	25.11	22.32	19.53	12.85	12.65
C50R-902	109423-701	27.90	25.11	22.32	19.53	12.85	12.65
C50R-903	109423-702	27.90	25.11	22.32	19.53	12.85	12.65
CR15-901	109203-101	40.73	36.66	32.59	28.52	28.05	27.61
CR15-902	109203-102	40.73	36.66	32.59	28.52	28.05	27.61
CR30-901	109197-101	49.28	44.36	39.43	34.50	33.79	33.25
CR30-902	109197-102	49.28	44.36	39.43	34.50	33.79	33.25
MC-901	45225-5	4.68	2.64	—	—	—	—
MC-902	45225-1	4.68	2.64	—	—	—	—
MC-903	45225-2	4.68	2.64	—	—	—	—
MC-904	45225-3	4.68	2.64	—	—	—	—
MC-905	45225-4	4.68	2.64	—	—	—	—
MC-911	45225-35	4.68	2.64	—	—	—	—
MC-912	45225-31	4.68	2.64	—	—	—	—
MC-913	45225-32	4.68	2.64	—	—	—	—
MC-914	45225-33	4.68	2.64	—	—	—	—
MC-915	45225-34	4.68	2.64	—	—	—	—
MS25-901	62-981	2.29	2.07	1.84	1.61	1.15	1.09
MS25-902	62-982	2.34	2.11	1.88	1.64	1.17	1.12
MS25-903	62-983	2.60	2.34	2.08	1.82	1.30	1.24
MS25-904	62-984	2.43	2.19	1.95	1.71	1.22	1.16
MS25-905	62-985	2.86	2.58	2.29	2.01	1.43	1.37
MS25-906	62-986	3.39	3.06	2.72	2.38	1.70	1.62
MS25P-901	62-551	5.10	4.59	4.08	3.57	2.55	2.43
MS25P-902	62-552	5.14	4.63	4.12	3.60	2.58	2.46
MS25P-903	62-553	5.41	4.87	4.33	3.79	2.71	2.58
MS25P-904	62-554	5.24	4.72	4.20	3.67	2.62	2.50
MS25P-905	62-555	5.67	5.11	4.54	3.97	2.84	2.71
MS25P-906	62-556	6.20	5.58	4.96	4.34	3.10	2.96

Standard Catalog Number	Production Part Number	FACTORY PRICES 1/24	25/49	50/99	100/249	250/499	500/999
MS40-901	61-360	2.11	1.90	1.69	1.48	1.06	1.01
MS40-902	61-361	2.18	1.97	1.75	1.53	1.09	1.04
MS40-903	61-362	2.18	1.97	1.75	1.53	1.09	1.04
MS40-904	61-363	2.26	2.04	1.81	1.59	1.13	1.08
MS40-905	61-364	2.26	2.04	1.81	1.59	1.13	1.08
MS40-906	61-365	2.35	2.12	1.88	1.65	1.18	1.13
MS40-907	61-366	2.44	2.20	1.96	1.71	1.23	1.17
MS40-908	61-367	2.67	2.41	2.14	1.87	1.33	1.27
MS40-909	61-368	2.89	2.61	2.32	2.03	1.45	1.38
MS50-901	62-931	4.36	3.93	3.49	3.06	2.18	2.08
MS50-902	62-932	4.36	3.93	3.49	3.06	2.18	2.08
MS50-903	62-933	4.63	4.17	3.71	3.25	2.32	2.21
MS50-904	62-934	4.86	4.38	3.89	3.41	2.43	2.32
MS50-905	62-935	5.13	4.62	4.11	3.60	2.57	2.45
MS50-906	62-936	5.66	5.10	4.53	3.97	2.83	2.70
MS50-921	62-941	5.53	4.98	4.43	3.88	2.76	2.63
MS50-922	62-942	5.53	4.98	4.43	3.88	2.76	2.63
MS50-923	62-943	5.60	5.04	4.48	3.92	2.80	2.67
MS50-924	62-944	6.03	5.43	4.85	4.22	3.02	2.88
MS50-925	62-945	6.31	5.67	5.07	4.41	3.15	3.01
MS50-926	62-946	6.83	6.14	5.49	4.78	3.41	3.26
MS50P-901	62-561	8.05	7.25	6.44	5.64	4.02	3.84
MS50P-902	62-562	8.05	7.25	6.44	5.64	4.02	3.84
MS50P-903	62-563	8.32	7.49	6.66	5.83	4.16	3.97
MS50P-904	62-564	8.55	7.70	6.84	5.99	4.42	4.08
MS50P-905	62-565	8.83	7.95	7.07	6.19	4.41	4.21
MS50P-906	62-566	9.35	8.42	7.48	6.55	4.67	4.46
MS50P-921	62-571	9.88	8.90	7.91	6.92	4.94	4.71
MS50P-922	62-572	9.88	8.90	7.91	6.92	4.94	4.71
MS50P-923	62-573	9.96	8.97	7.97	6.98	4.98	4.75
MS50P-924	62-574	10.44	9.40	8.35	7.31	5.23	4.98
MS50P-925	62-575	10.88	9.78	8.70	7.62	5.45	5.20
MS50P-926	62-576	11.75	10.67	9.45	8.23	5.88	5.60
MS64-901	64-901	2.21	1.99	1.77	1.55	1.11	1.06
MS64-902	64-902	2.27	2.05	1.82	1.59	1.14	1.09
MS64-903	64-903	2.50	2.25	2.00	1.75	1.25	1.19
MS64-904	64-904	2.69	2.43	2.16	1.89	1.35	1.29
MS64-911	64-911	2.27	2.05	1.82	1.59	1.14	1.09
MS64-912	64-912	2.34	2.11	1.88	1.64	1.17	1.12
MS64-913	64-913	2.56	2.31	2.05	1.80	1.28	1.22
MS64-914	64-914	2.76	2.49	2.21	1.94	1.38	1.32
RP-901	45997-32	4.28	2.42	—	—	—	—
RP-902	45997-31	6.92	3.90	—	—	—	—
RP-903	45997-33	7.83	4.41	—	—	—	—
S30-901	109660-1051	11.55	10.40	9.24	8.09	6.45	6.45
S30-902	109660-1011	11.55	10.40	9.24	8.09	6.45	6.45
S30-903	109660-1021	11.55	10.40	9.24	8.09	6.45	6.45
S40-901	109710-1051	13.10	11.79	10.48	9.17	8.90	8.90
S40-902	109710-1011	13.10	11.79	10.48	9.17	8.90	8.90
S40-903	109710-1021	13.10	11.79	10.48	9.17	8.90	8.90
TRM-901	96-5	5.00	4.50	4.00	3.50	3.22	2.84
TRMR1-901	97-1	10.07	9.07	8.06	7.05	4.67	4.12
TRMR1-902	97-2	10.12	9.11	8.10	7.09	4.69	4.13
TRMR1-903	97-3	10.22	9.20	8.18	7.16	4.74	4.18
TRMR2-901	97-4	14.59	13.14	11.68	10.22	8.13	7.17
TRMR2-902	97-5	14.62	13.16	11.70	10.24	8.13	7.17
TRMR2-903	97-6	14.68	13.22	11.75	10.28	8.16	7.20

Consult your RBM Controls authorized distributor for factory prices in larger quantities.

Net

© United Technical Publication

RBM CONTROLS
ESSEX INTERNATIONAL, INC.

A.C. ENGINEERING DESIGN DATA

Type	Magnet Coil Rating (Volt Amperes) Inrush	Sealed Nom.	Sealed Max.	Operation in % of Nom. Coil Rating Pick-up	*Max. Safe Operate	Breakdown Voltage All Terminals - 60 cy. RMS Opposite Polarity	Open Contacts Same Polarity	To Ground	Contact Material Power Rating	Pilot Rating	Electrical Life Oper. At Rated Load	Oper. Per Min.	**Mechanical Life Oper. At No Load	Oper. Per Min.	Maximum Operating Ambient Degrees Fahrenheit
59	No Magnet Coil			85%	110%	1500	1000	1500	—	Fine Silver	100,000	1	1,000,000	1	140
75	16	10	12	85%	110%	1500	1000	1500	Silver Alloy	—	†100,000	6	1,000,000	60	140
80	27	15.6	17	85%	110%	1500	1500	1500	Silver Alloy	—	†100,000	3	1,000,000	60	130
84	4	2.8	3	85%	110%	1500	1000	1500	Silver Alloy	Fine Silver	100,000	6	1,000,000	60	140
84T	9	2.8	3	85%	110%	1500	1000	1500	—	Gold Alloy	100,000	6	1,000,000	60	140
85	90	19	23	85%	110%	2200	2200	2200	Silver Alloy	—	†100,000	6	500,000	10	130
91	22	8	10	85%	110%	1500	1000	1500	Fine Silver	•Gold Alloy	†100,000	6	750,000	60	130
92	24	8.9	12	85%	110%	1500	1000	1500	Fine Silver	•Gold Alloy	†100,000	6	750,000	60	130
93	4.5	3.0	4	85%	110%	1500	1000	1500	Fine Silver	•Gold Alloy	100,000	6	10,000,000	60	160
129	10	4.5	5	85%	110%	1500	1000	1500	Silver Alloy	—	†100,000	3	500,000	60	130
129AR	10	4.5	5	85%	110%	1500	1000	1500	Silver Alloy	—	†100,000	3	500,000	60	130
143	24	8.9	12	85%	110%	1500	1000	1500	Silver Alloy	—	†100,000	6	500,000	30	130
187	1.3	1.3	1.5	85%	110%	1000	1000	1000	—	Silver Alloy	†100,000	6	10,000,000	60	150
987	9	5.5	6.5	85%	110%	1500	1000	1500	Fine Silver	•Gold Alloy	100,000	6	1,000,000	60	140
C	90	18	21	85%	110%	2200	2200	2200	Silver Alloy	—	†100,000	6	1,000,000	10	130
CR	90	18	21	85%	110%	2200	2200	2200	Silver Alloy	—	†100,000	6	1,000,000	10	130
S	50	14.5	17	85%	110%	2200	2200	2200	Silver Alloy	—	†100,000	6	500,000	10	130

* Magnet coils designed for continuous duty. Do not operate at rate higher than indicated under Mechanical Life.

** Based on steady state test under laboratory environmental conditions. Consult factory if application involves unusual load, speed of operation, off-on ratio, environmental or operating conditions. Electric life substantially greater when operated below rated load.

† Load tests — making inrush ratings (0.4 to 0.5 P.F.) — breaking 125% continuous rating (0.65 to 0.8 P.F.).

• Cross-bar contacts.

D.C. ENGINEERING DESIGN DATA

Type	Nominal Magnetic Coil Rating (Watts)	Operation in % of Nom. Coil Rating Pick-up	*Max. Safe Operate	Breakdown Voltage All Terminals - 60 cy. RMS Opposite Polarity	Open Contacts Same Polarity	To Ground	Contact Material Power Rating	Pilot Rating	Electrical Life Oper. At Rated Load	Oper. Per Min.	**Mechanical Life Oper. At No. Load	Oper. Per Min.	Maximum Operating Ambient Degrees Fahrenheit
60	2	75%	110%	1000	1000	1000	Fine Silver	—	100,000	4	250,000	4	122
70	9	75%	110%	500	500	500	Copper or Silver	—	100,000	4	250,000	4	122
84D	3	75%	110%	1500	1000	1500	—	Silver Alloy	100,000	6	1,000,000	60	140
91D	6.5	75%	110%	1500	1000	1500	Fine Silver	—	100,000	6	750,000	60	140
92D	7	75%	110%	1500	1000	1500	Fine Silver	—	100,000	6	750,000	60	140
93	1.5	75%	110%	1500	1000	1500	Fine Silver	•Gold Alloy	100,000	6	10,000,000	60	160
150	2	75%	110%	500	500	500	Silver Alloy	—	500,000	12	1,000,000	12	122
BRM	Switch Only—No Magnet Coil			500	250	250	—	Special Alloy	5,000,000	60	2,000,000,000	7200	185
BRMR1	0.100	60%	110%	500	250	250	—	Special Alloy	2,000,000	60	2,000,000,000	7200	185
BRMR2	0.150	60%	110%	500	250	250	—	Special Alloy	2,000,000	60	2,000,000,000	7200	185
BRS	Switch Only—No Magnet Coil			500	500	250	—	Special Alloy	20,000,000	60	2,000,000,000	7200	185
BRSR1	0.125	75%	110%	500	500	250	—	Special Alloy	20,000,000	60	2,000,000,000	7200	185
BRSR2	0.250	75%	110%	500	500	250	—	Special Alloy	20,000,000	60	2,000,000,000	7200	185
All Type MS	Current Sensitive			1000	1000	1000	—	•Gold Alloy	100,000	60	10,000,000	180	185
TRM	Switch Only—No Magnet Coil			250	250	250	—	Special Alloy	2,000,000	60	2,000,000,000	7200	185
TRMR1	0.150	70%	110%	250	250	250	—	Special Alloy	2,000,000	60	2,000,000,000	7200	185
TRMR2	0.250	70%	110%	250	250	250	—	Special Alloy	2,000,000	60	2,000,000,000	7200	185

* Magnet coils designed for continuous duty. Do not operate at rate higher than indicated under Mechanical Life.

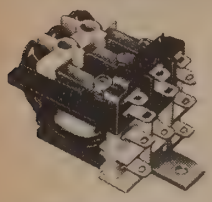
** Based on steady state test under laboratory environmental conditions. Consult factory if application involves unusual load, speed of operation, off-on ratio, environmental or operating conditions. Electric life substantially greater when operated below rated load.

• Cross-bar contacts.

© United Technical Publications

A.C.-D.C. GENERAL PURPOSE RELAYS

TYPE 93

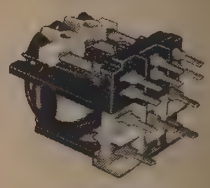


Solder Terminals (Fig. 1a)

Solder terminal type has combined front, single hole screw and stud mounting, screw and stud included. All terminals out front. One piece molded bobbin and terminal board construction. Highly resistant to arc tracking. Printed circuit type may be controlled by SCR if firing angle, is no more than 10 degrees.*

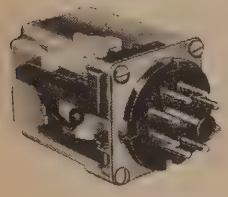
Size: 1 13/16" x 1 3/16" x 1 5/16" U.L. and C.S.A.

TYPE 93



Printed Circuit (Fig. 1b)

TYPE 93P

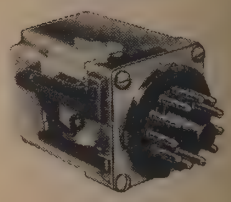


8 Pin Plug-In (Fig. 2)

8 pin octal base for single and two pole. 11 pin base for three pole. High impact case. Standard pin connections.

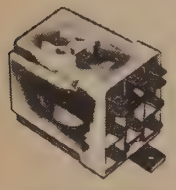
Size: 2 1/8" x 1 7/16" x 1 7/16". U.L. and C.S.A.

TYPE 93P



11 Pin Plug-In (Fig. 2)

TYPE 93Q



Quick Connect (Fig. 3)

Enclosed quick connect type designed for front mounting or polarized socket mounting. For socket mounting use 93-153-1 socket kit. Front mounting relay has .20 x .187 terminals. High impact case.

Size: 2 1/8" x 1 7/16" x 1 7/16". U.L. and C.S.A.

TYPE 93Q



Relay Receptacle 93-153-1

A.C. CONTACT RATINGS

A.C. Voltage	Fine Silver Button		Gold-Alloy Cross Bar	
	Inductive	Resistive	Inductive	Resistive
120	1/6 H.P.	10 Amp.	1/10 H.P.	5 Amp.
240	1/3 H.P.	5 Amp.	1/6 H.P.	3 Amp.

D.C. CONTACT RATINGS

Button @ 28 V.D.C.	Cross Bar @ 28 V.D.C.
5 Amp. Resistive	5 Amp. Resistive
Consult Factory on U.L. and C.S.A.	

Coil Voltage	D.C. Resistance in Ohms @ 25°C	Contact Form	Open Type: Solder Terminals (Fig. 1a) 10 Amp. Button Contacts Catalog Number	Open Type: Solder Terminals (Fig. 1a) 5 Amp. Cross-Bar Contacts Catalog Number	Open Type: Printed Circuit (Fig. 1b) 5 Amp. Cross-Bar Contacts Catalog Number	Enclosed Type: Plug-In (Fig. 2) 10 Amp. Button Contacts Catalog Number	Enclosed Type: Plug-In (Fig. 2) 5 Amp. Cross-Bar Contacts Catalog Number	Enclosed Type: Quick Connect Terminals (Fig. 3) 10 Amp. Button Contacts Catalog Number	Enclosed Type: Quick Connect Terminals (Fig. 3) 5 Amp. Cross-Bar Contacts Catalog Number
6 (50/60 CY.)	3.5	1PDT	93-901	93-931	—	93P-901	93P-931	93Q-901	93Q-931
		2PDT	93-902	93-932	—	93P-902	93P-932	93Q-902	93Q-932
		3PDT	93-903	93-933	—	93P-903	93P-933	93Q-903	93Q-933
12 (50/60 CY.)	14	1PDT	93-985	93-988	*93-991	93P-955	93P-958	93Q-955	93Q-958
		2PDT	93-986	93-989	*93-992	93P-956	93P-959	93Q-956	93Q-959
		3PDT	93-987	93-990	*93-993	93P-957	93P-960	93Q-957	93Q-960
24 (50/60 CY.)	55	1PDT	93-904	93-934	*93-964	93P-904	93P-934	93Q-904	93Q-934
		2PDT	93-905	93-935	*93-965	93P-905	93P-935	93Q-905	93Q-935
		3PDT	93-906	93-936	*93-966	93P-906	93P-936	93Q-906	93Q-936
120 (50/60 CY.)	1400	1PDT	93-907	93-937	*93-967	93P-907	93P-937	93Q-907	93Q-937
		2PDT	93-908	93-938	*93-968	93P-908	93P-938	93Q-908	93Q-938
		3PDT	93-909	93-939	*93-969	93P-909	93P-939	93Q-909	93Q-939
208/240 (50/60 CY.)	4850	1PDT	93-910	93-940	—	93P-910	93P-940	93Q-910	93Q-940
		2PDT	93-911	93-941	—	93P-911	93P-941	93Q-911	93Q-941
		3PDT	93-912	93-942	—	93P-912	93P-942	93Q-912	93Q-942
6 D.C.	24	1PDT	93-913	93-943	—	93P-913	93P-943	93Q-913	93Q-943
		2PDT	93-914	93-944	—	93P-914	93P-944	93Q-914	93Q-944
		3PDT	93-915	93-945	—	93P-915	93P-945	93Q-915	93Q-945
12 D.C.	96	1PDT	93-916	93-946	*93-976	93P-916	93P-946	93Q-916	93Q-946
		2PDT	93-917	93-947	*93-977	93P-917	93P-947	93Q-917	93Q-947
		3PDT	93-918	93-948	*93-978	93P-918	93P-948	93Q-918	93Q-948
24 D.C.	384	1PDT	93-919	93-949	*93-979	93P-919	93P-949	93Q-919	93Q-949
		2PDT	93-920	93-950	*93-980	93P-920	93P-950	93Q-920	93Q-950
		3PDT	93-921	93-951	*93-981	93P-921	93P-951	93Q-921	93Q-951
110 D.C.	8000	1PDT	93-922	93-952	—	93P-922	93P-952	93Q-922	93Q-952
		2PDT	93-923	93-953	—	93P-923	93P-953	93Q-923	93Q-953
		3PDT	93-924	93-954	—	93P-924	93P-954	93Q-924	93Q-954

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

© United Technical Publication

RBM CONTROLS
ESSEX INTERNATIONAL, INC.

A.C. - D.C. GENERAL PURPOSE RELAYS

TYPE 84



FIGURE 1

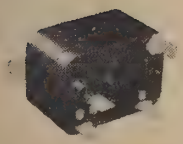


FIGURE 2

SIZE 2⅜" x 1⅝" x 1½"

- Totally Enclosed
- Low Cost
- Screw or ¼" Quick Connect Termination
- Hardware Included
- Operates Any Position
- Isolated Coil
- I or T Mounting Brackets
- A.C. Coils Rated 50/60 cy
- U.L. and C.S.A.

SINGLE POLE NORMALLY OPEN and SINGLE POLE DOUBLE THROW

Coil Voltage A.C.	Catalog Number Figure 1		Contact Rating 125/250 V.A.C.	
	1PNO	1PDT	Inductive	Resistive
6	84-901	84-905	N.O. 8 Amps. Continuous 25 Amps. Inrush D.T. 8 Amps. Continuous 18 Amps. Inrush	N.O. 16 Amps. Continuous D.T. 8 Amps. Continuous
24	84-902	84-906		
120	84-903	84-907		
230/240	84-904	84-908		
Coil Voltage A.C.	**Catalog Number Figure 2**			
	1PNO	1PDT		
24	84-912	84-916		
120	84-913	84-917		
230/240	84-914	84-918		
24	84-922	84-926	3 Amps. @ 125 V.A.C. or 1.5 Amps. @ 250 V.A.C. Pilot Duty	
120	84-923	84-927		
230/240	84-924	84-928		

Coil Voltage D.C.	Resistance in Ohms @ 25°C	Catalog Number Figure 1	D.C. Contact Rating Inductive	
			Voltage	Current
12	90	84D-902	12	3 Amp.
24	280	84D-903	24	1.5 Amp.

TYPE 91



SEPARATE 91-180-1 SOCKET AND TERMINAL KIT
SIZE 2⅛" x 1⅞" x 2⅜"

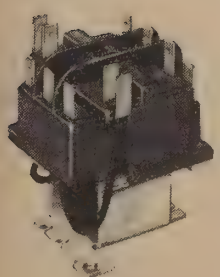
- ¼" Quick Connect Termination
- U.L. and C.S.A.
- Enclosed Contacts
- Operates Any Position
- Solenoid Action
- Wiring Terminals Included
- A.C. Coils Rated 50/60 cy.
- Can Be Panel Mounted

TWO POLE DOUBLE THROW

Coil Voltage A.C.	Catalog Number	Circuit Rating Terminals		Power Rating (A)	
		1-2-3	4-5-6	Inductive	Resistive
24	91-901	(A)	(A)	12 Amp. Cont. 60 Amp. Inrush 125 V.A.C. 6 Amp. Cont. 35 Amp. Inrush 250 V.A.C.	15 Amp. 277 V.A.C. Max.
120	91-902				
230/240	91-903				
24	91-904	(A)	(B)		
120	91-905				
230/240	91-906				
24	91-907	(B)	(B)	Pilot Rating (B)	
120	91-908			Inductive	Resistive
230/240	91-909			125 V.A. 1/10 H.P. 125/250 V.A.C.	3 Amp. 277 V.A.C. Max.

Coil Voltage D.C.	Catalog Number	Resistance in Ohms @ 25°C	D.C. Contact Rating - Resistive
6	91D-911	7	10 Amps. @ 32 V. Max.
12	91D-912	29	
24	91D-913	115	

TYPE 92



SIZE 2⅜" x 2⅜" x 2¾"

- ¼" Quick Connect Termination
- U.L. and C.S.A.
- Enclosed Contacts Operates Any Position
- Solenoid Action
- Wiring Terminals Included
- Manual Operating Button
- A.C. Coils Rated 50/60 cy

THREE POLE DOUBLE THROW

Coil Voltage A.C.	Catalog Number	Circuit Rating			Power Rating (A)	
		X	Y	Z	Inductive	Resistive
24	92-901	(A)	(A)	(A)	12 Amp. Cont. 60 Amp. Inrush 125 V.A.C. 6 Amp. Cont. 35 Amp. Inrush 250 V.A.C.	15 Amp. 277 V.A.C. Max.
120	92-902					
230/240	92-903					
24	92-904	(A)	(B)	(A)		
120	92-905					
230/240	92-906					
24	92-907	(B)	(A)	(B)	Pilot Rating (B)	
120	92-908				Inductive	Resistive
230/240	92-909				120 V.A. 1/10 H.P. 125/250 V.A.C.	3 Amp. 277 V.A.C. Max.
24	92-910	(B)	(B)	(B)		
120	92-911					
230/240	92-912					

Coil Voltage D.C.	Catalog Number	Resistance in Ohms @ 25°C	D.C. Contact Rating - Resistive
6	92D-911	6.5	10 Amps. @ 32 V. Max.
12	92D-912	26	
24	92D-913	104	

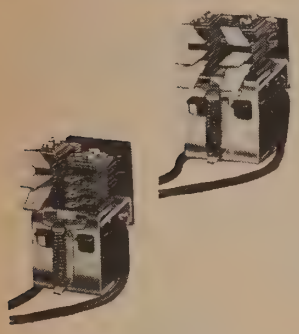
DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

© United Technical Publications

8 **RBM CONTROLS** ESSEX INTERNATIONAL, INC.

A.C. GENERAL PURPOSE RELAYS

TYPE 987



SIZE 2⅛" x 1" x 2"

- 9" Lead Wire Coil
- Front or Rear Mounting
- Hardware Included
- Quick Connect Terminals on 15 Amp Poles
- Solder Terminals on 3 Amp Poles

TWO POLE and THREE POLE DOUBLE THROW

Coil Voltage 60 cy.	Contact Form	Catalog Number	Contact Rating — Non-Inductive 125/250 V.A.C.	
			Left Stack	Right Stack
24	2PDT	987-902	SPDT - 15 AMP.	SPDT - 3 AMP.
120	2PDT	987-903		
240	2PDT	987-904		
24	2PDT	987-906	SPDT - 15 AMP.	SPDT - 15 AMP.
120	2PDT	987-907		
240	2PDT	987-908		
24	3PDT	987-910	SPDT - 15 AMP.	2PDT - 3 AMP.
120	3PDT	987-911		
240	3PDT	987-912		

A.C. POWER RELAYS

TYPE 129

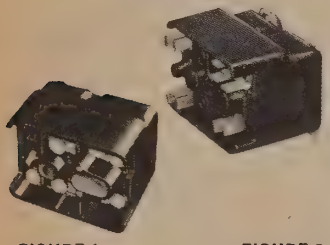


FIGURE 1 FIGURE 2

SIZE 2⅜" x 1⅞" x 1⅞"

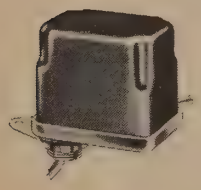
- Double-Break Contacts
- Totally Enclosed
- Hi-Impact Case
- Screw or ¼" Quick Connect Termination
- Hardware Included
- U.L. and C.S.A.
- Non-Positional

SINGLE POLE NORMALLY OPEN and SINGLE POLE DOUBLE THROW

Coil Voltage (50/60 cy.)	Catalog Number				Contact Rating 250 V.A.C. Max.	
	Figure 1		Figure 2			
	1PNO	†1PDT	1PNO	†1PDT	Inductive	Resistive
6	129-901	129-905	—	—	18 Amp. Continuous 1 H.P.-125 V. 2 H.P.-250 V.	18 Amp. Continuous
24	129-902	129-906	129-911	129-914		
120	129-903	129-907	129-912	129-915		
208/230	129-904	129-908	129-913	129-916		

† All contact terminals must be wired same polarity.

TYPE 129AR



SIZE 2¾" x 2¼" x 3¼"

- Totally Enclosed
- Hi-Impact Case
- Double-Break Contacts
- Easy to Mount
- U.L. and C.S.A.
- Pre-Wired
- No Enclosure Required
- Low Cost

SINGLE POLE NORMALLY OPEN and SINGLE POLE DOUBLE THROW

Coil Voltage (50/60 cy.)	Catalog Number		Contact Rating — 250 V.A.C. Max.	
	1PNO	†1PDT	Inductive	Resistive
24	129AR-901	129AR-904	18 Amp. Continuous 1 H.P.-120 V. 2 H.P.-250 V.	18 Amp. Continuous
120	129AR-902	129AR-905		
208/230	129AR-903	129AR-906		

FITS ANY ½" KNOCK-OUT. MEETS STANDARD CODE REQUIREMENTS. Underwriters Lab. white card listed. File E12139D 184N13.13 7/17/63. Aluminum die-cast base and bushing. High impact phenolic enclosure. Locknuts and position locking washer included. Color coded 8" lead wires.

† All contact terminals must be wired same polarity.

A.C. POWER CONTACTORS

TYPE 143



SIZE 3¼" x 2⅜" x 2½"

- Straight-Through Wiring
- Low Cost
- Auxiliary Quick-Connect Terminals
- U.L. and C.S.A.
- Hardware Included
- Screw Power Terminals For #10 Solid Wire Max.
- 25 Amp Unit Has Cover
- Double-Break Contacts

TWO POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating	
		Inductive	Resistive
24	143-901	18 Amp. Cont. 90 Amp. Inrush @ 277 V.A.C. Per Pole	25 Amp. @ 277 V.A.C. Per Pole
120	143-902		
208/240	143-903		
24	143-914	25 Amp. Cont. 150 Amp. Inrush @ 277 V.A.C. Per Pole	35 Amp. @ 277 V.A.C. Per Pole
120	143-915		
208/240	143-916		

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

© United Technical Publicatio

RBM CONTROLS
ESSEX INTERNATIONAL, INC.

A.C. POWER CONTACTORS

TYPE 75

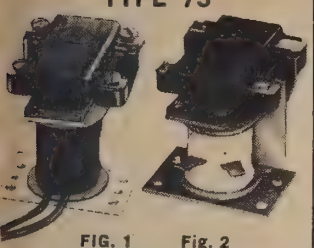


FIG. 1 Fig. 2
SIZE 2½" x 2⅛" x 2¼"

- Screw Power Termination #8 Solid Wire Max.
- 13" Lead Wire or Quick Connect Coil Terminals
- Hardware Included

TWO POLE NORMALLY OPEN

Coil Voltage (60 cy.)	Catalog Number Fig. 1	Catalog Number Fig. 2	Contact Rating (A.C.) Inductive	Contact Rating (A.C.) Resistive
24	75-901	75-904	1 H.P. Per Pole 115/230 V. 2 Pole Rating 2 H.P. — 230 V. or 18 Amp. Cont. 90 Amp. Inrush	25 Amp. 240 V. Per Pole
115/120	75-902	75-905		
230/240	75-903	75-906		

TYPE 80



SIZE 3⅛" x 2⅝" x 2⅞"

- Screw Power Termination #8 Solid Wire Max.
- Double-Break Contacts
- Hi-Dielectric
- 9" Coil Leads
- Mount as Shown
- Low Cost

TWO POLE NORMALLY OPEN

Coil Voltage (60 cy.)	Catalog Number	Contact Rating (A.C.) Inductive
24	80-901	25 Amp. Continuous 150 Amp. Inrush 250 V. Max.
120	80-902	
240	80-904	

TYPE 85



SIZE 3½" x 3⅛" x 2⅝"

- Screw Terminals
- #8 Solid Wire Max.
- Double Break Contacts
- ¼" Auxiliary Wiring Terminals
- Straight-Thru Wiring
- Hi-Dielectric Materials

THREE POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.) — Inductive 250 V.	Contact Rating (A.C.) — Inductive 600 V.
24	85-901	25 Amp. Cont. 150 Amp. Inrush	12.5 Amp. Cont. 75 Amp. Inrush
120	85-902		
208/240	85-903		

TYPE S30



SIZE 3⅞" x 2⅜" x 2½"

- Solenoid Action
- Enclosed Contacts
- Resilient Mounting
- Screw Power Termination For #8 Solid Wire Max.
- Epoxy Coil
- Hi-Dielectric
- Double Break Contacts

THREE POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.) — Inductive Voltage	Continuous	Inrush
24	S30-901	250 600	30 Amp. 15 Amp.	180 Amp. 90 Amp.
115	S30-902			
230	S30-903			

TYPE S40



SIZE 3⅞" x 2¾" x 2½"

- Pressure Power Termination For #6 Solid Wire Max.
- Solenoid Action
- Enclosed Contacts
- Resilient Mounting
- Hi-Dielectric
- Epoxy Coil
- Double Break Contacts

THREE POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.) Inductive
24	S40-901	40 Amp. Continuous 200 Amp. Inrush 250 V. Max.
115	S40-902	
230	S40-903	

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGES 17 — PRICES PAGES 1, 2, 3, 4

A.C. INDUSTRIAL CONTACTORS

UNIQUE DESIGN PERMITS COMMON BASE, COIL & MAGNET FOR CONTACTOR RATINGS FROM 10 TO 50 AMPERES • DOUBLE BREAK "NO-KISS" CONTAC ACTION • REPLACEABLE CONTACTS & COIL • EPOXY SEALED MOLDED MAGNET COIL HOUSING • LAMINATED CORROSION RESISTANT E-TYPE MAGNET SELF-ALIGNING ARMATURE • HI-DIELECTRIC ARC RESISTANT MOLDED CONTACT BLOCK & CARRIER • 50/60 CYCLE MAGNET COIL • RESILIENT MOUNTIN

TYPE C10



SIZE 3⅝" x 2¾" x 3⅜"

10 Amp.
600 Volts

•

Pressure Type
Power Terminals
#10 Solid Wire Max.

•

All Contacts
Convert to N.C.
See Page 11

•

Double Break
Contacts

FOUR POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.)		
			Horsepower	
		Voltage	Single Phase	Three Phase
24	C10-901	110	½	¾
		220	¾	1
110	C10-902	600	1	1
		Resistive		
220	C10-903	10 Amp. 600 V. Max. (Per Pole)		

TYPE C15



SIZE 3⅝" x 2¾" x 3⅜"

15 Amp.
600 Volts

•

Pressure Type
Power Terminals
#10 Solid Wire Max.

•

All Contacts
Convert to N.C.
See Page 11

•

Double Break
Contacts

FOUR POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.)		
			Horsepower	
		Voltage	Single Phase	Three Phase
24	C15-901	110	1	1½
		220	1½	2
110	C15-902	600	1½	2
		Resistive		
220	C15-903	15 Amp. 600 V. Max. (Per Pole)		

TYPE C30



SIZE 3⅝" x 2¾" x 3⅜"

30 Amp.
600 Volts

•

Pressure Type
Power Terminals
#8 Solid Wire Max.

•

Double Break
Contacts

FOUR POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.)		
			Horsepower	
		Voltage	Single Phase	Three Phase
24	C30-901	110	2	3
		220	3	7½
110	C30-902	600	5	10
		Resistive		
220	C30-903	30 Amp. — 600 V. Max. (Per Pole)		

TYPE C50R



SIZE 3⅝" x 2¾" x 3⅜"

50 Amp.
480 Volts

•

Pressure Type
Power Terminals
#6 Stranded Wire
Max.

•

Double Break
Contacts

FOUR POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.)
24	C50R-901	Resistive Only For Electric Heating 50 Amp. — 480 Volt Max.
110	C50R-902	
220	C50R-903	

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

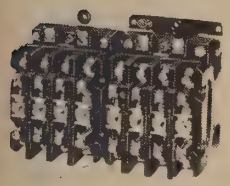
© United Technical Publicatio

RBM CONTROLS
ESSEX INTERNATIONAL, INC.

A.C. REVERSING CONTACTORS

TWO TYPE C CONTACTORS MOUNTED SIDE BY SIDE ON COMMON STEEL BASE • RESILIENT MOUNTING • HARDENED STEEL MECHANICAL INTERLOCK PREVENTS SIMULTANEOUS CLOSING OF BOTH CONTACTORS • NO CROSS-PHASE WIRING • SUITABLE FOR MOTOR REVERSING & TRANSFORMER TAP CHANGING APPLICATION.

TYPE CR15



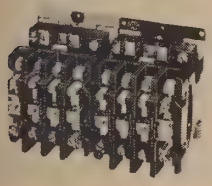
SIZE 3⅝" x 5¹⁄₁₆" x 3⅜"

15 Amp.
600 Volt
•
Pressure Type
Power Terminals
#10 Solid Wire Max.
•
All Contacts
Convert to N.C.
See Below
•
Double Break
Contacts

FOUR POLE NORMALLY OPEN REVERSING

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.)		
		Voltage	Horsepower	
			Single Phase	Three Phase
110	CR15-901	110	1	1½
220	CR15-902	220	1½	2

TYPE CR30

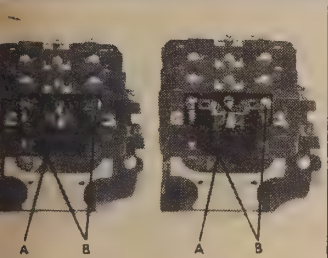


SIZE 3⅝" x 5¹⁄₁₆" x 3⅜"

30 Amp.
600 Volt
•
Double Break
Contacts

FOUR POLE NORMALLY OPEN REVERSING

Coil Voltage (50/60 cy.)	Catalog Number	Contact Rating (A.C.)		
		Voltage	Horsepower	
			Single Phase	Three Phase
110	CR30-901	110	2	3
220	CR30-902	220	3	7½



Normally Open Normally Closed

CONVERSION INSTRUCTIONS

All 10 and 15 ampere contact assemblies on RBM standard type C contactors are normally open. To convert to normally closed, use screwdriver. No special parts needed.

1. Remove movable contact assembly and lock washer by backing off terminal nut "A".
2. Loosen screws "B" and remove stationary contact assemblies.
3. Invert movable contact assembly, and replace on contactor with flat "I" spring resting on contact block. Contacts facing out.
4. Remove screws "B" from, and reinsert into opposite end of, stationary contact assembly. Re-install stationary contact assemblies; holding contacts in alignment with movable contacts while tightening screws.

TYPE C REPLACEMENT PARTS

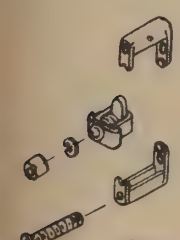


Figure 1 *

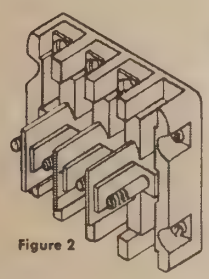


Figure 2

MAGNET COILS — Figure 4

Voltage (50/60 cy.)	*Standard		*Special	
	Catalog Number	Replaces	Catalog Number	Replaces
24	MC-901	45225-5	MC-911	45225-35
110	MC-902	45225-1	MC-912	45225-31
220	MC-903	45225-2	MC-913	45225-32
440	MC-904	45225-3	MC-914	45225-33
550	MC-905	45225-4	MC-915	45225-34

* Do not substitute standard for special coils or vice versa.

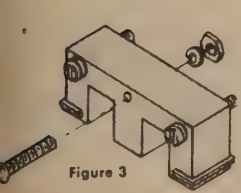


Figure 3

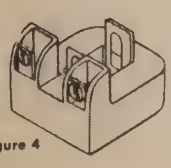


Figure 4

4 Moveable — 8 Stationary per kit.

CONTACT ASSEMBLIES — Figure 1

USED ON TYPE	CATALOG NUMBER	CONTACT RATING	REPLACES
C10, C15, CR15	CA-901	15 Amp.	45997-3 45997-4
C30, CR30	CA-902	30 Amp	45997-5
C5CR	CA-903	50 Amp Resistive	45997-22
†109153 †109453	CA-904	30 Amp - 4 Pole 50 Amp - 2 Pole	45997-16 45997-20

** Reversing type — 2 sets required. † Not standard catalog items.

ARMATURE & MAGNET Figure 3

Catalog Number
RP-901

CONTACT BLOCK & CARRIER — Figure 2

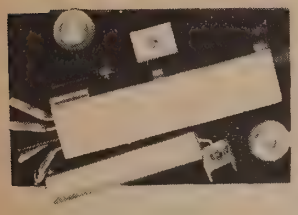
4 Pole	5 Pole
Catalog Number	Catalog Number
RP-902	RP-903

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

12 RBM CONTROLS
ESSEX INTERNATIONAL, INC.

A.C. TIME DELAY RELAYS

TYPE 59



SIZE 3⅜" x 2⅛" x ⅞"

Ambient Compensated
•
¼" Quick-Connect Termination
•
Wire Terminals Included
•
Resilient Mounting
•
Non-Positional

THERMAL TYPE
SINGLE POLE NORMALLY OPEN

FIXED TIME DELAY TO CLOSE — AFTER ENERGIZATION — 15 TO 45 SECS

Operating		Catalog Number	Contact Rating
Voltage (50/60 cy.)	Watts		
24	3.0	59-901	3 Amp. 125/250 V.A.C. Pilot Duty
115/120	7.0	59-902	
230/240	10.0	59-903	

Reset time — approx. 60 seconds.

TYPE 84T



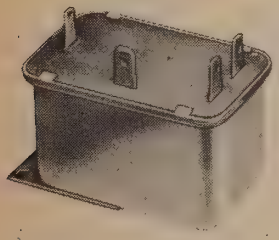
SIZE 2⅝" x 2¼" x 1½"

Fixed Timing
•
¼" Quick-Connect Termination
•
Wiring Terminals Included
•
Totally Enclosed
•
Approx. Reset Time 4 Seconds

RECTIFIER/CAPACITOR TYPE
SINGLE POLE DOUBLE THROW

Coil (50/60 cy.)	Contact Action		Catalog Number	Time Delay in Seconds ±25%	Contact Rating (A.C.) Inductive
	Delay After Coil Energized	Delay After Coil De-Energized			
115/120	X	—	84TE-902	2	3 Amp. 125 1.5 Amp. 250 Continuous
230/240	X	—	84TE-903	2	
115/120	—	X	84TD-902	2	
230/240	—	X	84TD-903	2	

TYPE 187



SIZE 3" x 1¾" x 2¼"

Metal Case
•
Totally Enclosed
•
Flat Bracket
•
¼" Quick-Connect Termination
•
Repeat ±2% @ 25°C and Nom. Voltage

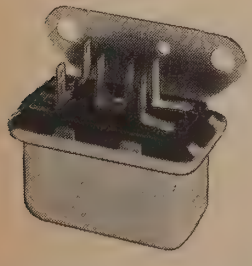
SOLID STATE — FIELD ADJUSTABLE TYPE
SINGLE POLE NORMALLY OPEN

Coil Voltage (50/60 cy.)	Time Delay on Pick-up	Catalog Number	Contact Rating
			Inductive
24 V.	.5 - 90 seconds	187-901	1 Amp. @ 120 V.A.C
120 V.	.5 - 90 seconds	187-902	

Hidden trimming resistor for tamper-proof field timing adjustment. Reset t
100 M.S. Can use Types 93, 84, 91, 92, 129, 143 or 75 as slave relay.

TYPE 150 D.C. POWER RELAYS

TYPE 150



SIZE 2¼" x 1½" x 2"

Metal Case
•
Totally Enclosed
•
Isolated Coil
•
Side Bracket
•
¼" Quick-Connect Termination
•
Hardware Included
•
Low Cost

SINGLE POLE NORMALLY OPEN

D.C. Coil Voltage	Resistance in Ohms	Catalog Number	Contact Rating	
			Voltage	Current
6	11	150-901	6	25 Amp.
12	44	150-902	12	25 Amp.
24	176	150-903	24	12 Amp.

SINGLE POLE DOUBLE THROW

D.C. Coil Voltage	Resistance in Ohms	Catalog Number	Contact Rating	
			Voltage	Current
6	11	150-904	6	15 Amp.
12	44	150-905	12	15 Amp.
24	176	150-906	24	7.5 Amp.

ESSEX
RBM controls
RBM CONTROLS

STANDARD CATALOG CONTRO
immediately available
at FACTORY PRICES

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

© United Technical Publicat

RBM CONTROLS
ESSEX INTERNATIONAL, INC.

TYPE 60 D.C. POWER RELAYS

TYPE 60



SIZE 2⅞" x 1⅛" x 2⅝"

- Metal Case
- Totally Enclosed
- Isolated Coil
- Screw Terminals
- Screws Included
- Low Cost

SINGLE POLE NORMALLY OPEN

Coil Voltage (D.C.)	Resistance In Ohms @ 25°C	Catalog Number	Contact Rating D.C. Inductive	
			Voltage	Current
6	11	60-901	6	15 Amp.
12	35	60-902	12	15 Amp.
24	160	60-903	24	7.5 Amp.

TYPE 70 D.C. POWER CONTACTORS

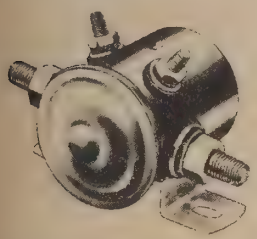
ON-TURNING STUDS • DRAWN STEEL
UST PROOF ENCLOSURE • COPPER STUD
OWER & COIL TERMINALS • DOUBLE
REAK ROTATING DISC MOVABLE CON-
ACT • SOLENOID ACTUATED • SUGGESTED
OUNTING — CAP DOWN

CONTACT RATING

D.C. INDUCTIVE LOAD — 36 V. MAX.

Voltage (D.C.)	Normally Open		Normally Closed	
	Continuous	Inrush	Continuous	Inrush
6	80 Amp.	300 Amp.	60 Amp.	100 Amp.
12	80 Amp.	150 Amp.	60 Amp.	60 Amp.
24-36	50 Amp.	50 Amp.	30 Amp.	30 Amp.

4 TERMINAL



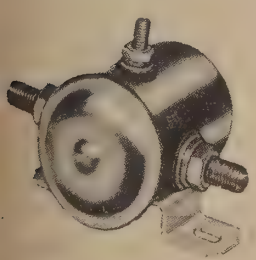
SIZE 2½" x 3½" x 2½"

- Four Terminal
- Isolated Coil
- Silver or Copper Contacts
- Hardware Included
- Continuous Duty Coil
- Ease In Wiring

SINGLE POLE NORMALLY OPEN

Coil Voltage (D.C.)	Resistance in Ohms @ 25°C	Catalog Number	Contact Material
6	4	70-901	Copper
12	19	70-902	
24	60	70-903	
36	114	70-904	
6	4	70-905	Silver
12	19	70-906	
24	60	70-907	
36	114	70-908	

3 TERMINAL



SIZE 2½" x 3½" x 2½"

- Three Terminal
- Continuous Duty Coil
- Copper Contacts
- Hardware Included
- Coil Common to Case or Coil Common to Battery
- Rugged Construction

SINGLE POLE NORMALLY OPEN

Coil Voltage (D.C.)	Resistance in Ohms @ 25°C	Catalog Number	Contact Material
6	4	70-913	Copper — Coil Grounded to Case
12	19	70-914	
24	60	70-915	
36	114	70-916	
6	4	70-917	Copper — Coil Common to Load
12	19	70-918	
24	60	70-919	
36	114	70-920	

6 TERMINAL



SIZE 3⅜" x 3¹⁵⁄₁₆" x 2½"

- Six Terminal
- Continuous Duty Coil
- Isolated Coil
- Hardware Included
- Choice of 2 Types Contacts

SINGLE POLE DOUBLE THROW

Coil Voltage (D.C.)	Resistance in Ohms @ 25°C	Catalog Number	Contact Material
6	4	70-909	N.O. and N.C. Silver
12	19	70-910	
24	60	70-911	
36	114	70-912	
6	4	70-921	N.O. Copper and N.C. Silver
12	19	70-922	
24	60	70-923	
36	114	70-924	

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

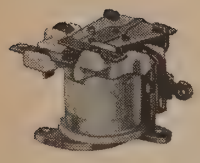
14 **RBM CONTROLS** ESSEX INTERNATIONAL, INC.

MINIATURE D.C. SENSITIVE RELAYS

SINGLE POLE DOUBLE THROW — TWO POLE DOUBLE THROW — THREE POLE DOUBLE THROW

Electrical Life				Mechanical Life	Operate Time (Incl. Bounce)	Vibration	Shock	Operating Ambient
NON-INDUCTIVE LOAD	0.5 Amp.	1.0 Amp.	2.0 Amp.	100,000,000 At 180 Operations Per Minute (No Load)	20 Milliseconds	2G 10-55 Cycles	2G Operate 10G Non-Operate	−55°C to +85°C
NUMBER OPERATIONS	1,000,000	300,000	100,000					

TYPE MS40



SIZE 1⅛" x 1⅛" x 1⁵⁄₁₆"

Solder Terminals • 4-40 Mounting • Armature Common to Frame • Long Life • Low Cost

SINGLE POLE DOUBLE THROW — OPEN TYPE

Contact Rating	Coil Power	
2 Amp. Non-Inductive 28 V.D.C. — 115 V.A.C.	Minimum Required	0.050 Watts
	Maximum Capacity	1.0 Watts

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	250	MS40-901
13.5 MA.	10 MA.	500	MS40-902
11.0 MA.	8.2 MA.	750	MS40-903
12 V.	9.0 V.	1000	MS40-904
7.7 MA.	5.8 MA.	1500	MS40-905
6.0 MA.	4.5 MA.	2500	MS40-906
4.3 MA.	3.2 MA.	5000	MS40-907
24 V.	18.0 V.	7500	MS40-908
2.9 MA.	2.2 MA.	10000	MS40-909

*D.O. Approx. 35% of PU. †Nominal ±10%.

TYPE MS64

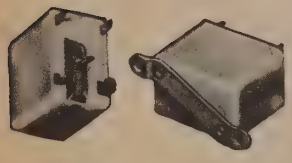


FIG. 1 FIG. 2

SIZE 1³⁄₁₆" x ¾" x 1⅛"

Printed Circuit Terminals or Bracket Mounting • Isolated Contacts • Snap-on Cover • Molded Construction

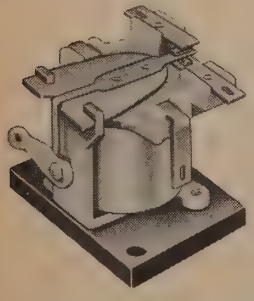
SINGLE POLE DOUBLE THROW — ENCLOSED TYPE

Contact Rating	Coil Power	
2 Amp. Non-Inductive 28 V.D.C. — 115 V.A.C.	Minimum Required	0.050 Watts
	Maximum Capacity	1.0 Watts

D.C. Magnet At 25°C				
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number Fig. 1	Catalog Number Fig. 2
6 V.	4.5 V.	400	MS64-901	MS64-911
12 V.	9.0 V.	1600	MS64-902	MS64-912
24 V.	18.0 V.	6500	MS64-903	MS64-913
3. MA.	2.3 MA.	10000	MS64-904	MS64-914

*D.O. Approx. 35% of PU. †Nominal ±10%.

TYPE MS25



SIZE 1³⁄₁₆" x 1½" x 1⁷⁄₁₆"

Solder Terminals • Isolated Contacts • Insulating Fiber Base

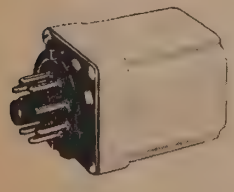
SINGLE POLE DOUBLE THROW — OPEN TYPE

Contact Rating	Coil Power	
2 Amp. Non-Inductive 28 V.D.C. — 115 V.A.C.	Minimum Required	0.040 Watts
	Maximum Capacity	1.5 Watts

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	510	MS25-901
12 V.	9.0 V.	2025	MS25-902
24 V.	18.0 V.	8100	MS25-903
3.7 MA.	2.8 MA.	5000	MS25-904
2.7 MA.	2.0 MA.	10000	MS25-905
2.1 MA.	1.6 MA.	15000	MS25-906

*D.O. Approx. 35% of PU. †Nominal ±10%.

TYPE MS25P



SIZE 2" x 1⅜" x 1⅜"

8 Pin Plug-In • Isolated Contacts • High Impact Case

SINGLE POLE DOUBLE THROW — PLUG-IN

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	510	MS25P-901
12 V.	9.0 V.	2025	MS25P-902
24 V.	18.0 V.	8100	MS25P-903
3.7 MA.	2.8 MA.	5000	MS25P-904
2.7 MA.	2.0 MA.	10000	MS25P-905
2.1 MA.	1.6 MA.	15000	MS25P-906

*D.O. Approx. 35% of PU. †Nominal ±10%.

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

© United Technical Publicat

RBM CONTROLS
ESSEX INTERNATIONAL, INC.

MINIATURE D.C. SENSITIVE RELAYS

TYPE MS50



SIZE 1⅝" x 1⅛" x 1¼"

Solder Terminals
•
Isolated Contacts

TWO POLE DOUBLE THROW — OPEN TYPE

Contact Rating	Coil Power	
2 Amp. Non-Inductive 28 V.D.C. — 115 V.A.C.	Minimum Required	0.125 Watts
	Maximum Capacity	1.5 Watts

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	160	MS50-901
12 V.	9.0 V.	650	MS50-902
24 V.	18.0 V.	2600	MS50-903
6.7 MA.	5.0 MA.	5000	MS50-904
4.7 MA.	3.5 MA.	10000	MS50-905
3.9 MA.	2.9 MA.	15000	MS50-906

*D.O. Approx. 35% of PU. †Nominal ±10%.

TYPE MS50P



SIZE 2" x 1⅜" x 1⅜"

8 Pin Plug-In
•
Isolated Contacts
•
High Impact Case

TWO POLE DOUBLE THROW — PLUG-IN

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	160	MS50P-901
12 V.	9.0 V.	650	MS50P-902
24 V.	18.0 V.	2600	MS50P-903
6.7 MA.	5.0 MA.	5000	MS50P-904
4.7 MA.	3.5 MA.	10000	MS50P-905
3.9 MA.	2.9 MA.	15000	MS50P-906

*D.O. Approx. 35% of PU. †Nominal ±10%.

TYPE MS50



SIZE 1⅝" x 1⅛" x 1¼"

Solder Terminals
•
Isolated Contacts

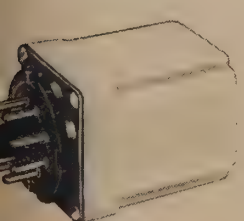
THREE POLE DOUBLE THROW — OPEN TYPE

Contact Rating	Coil Power	
2 Amp. Non-Inductive 28 V.D.C. — 115 V.A.C.	Minimum Required	0.200 Watts
	Maximum Capacity	1.5 Watts

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	100	MS50-921
12 V.	9.0 V.	400	MS50-922
24 V.	18.0 V.	1600	MS50-923
8.5 MA.	6.4 MA.	5000	MS50-924
6.0 MA.	4.5 MA.	10000	MS50-925
4.9 MA.	3.7 MA.	15000	MS50-926

*D.O. Approx. 35% of PU. †Nominal ±10%.

TYPE MS50P



SIZE 2" x 1⅜" x 1⅜"

11 Pin Plug-In
•
Isolated Contacts
•
High Impact Case

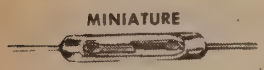
THREE POLE DOUBLE THROW — PLUG-IN

D.C. Magnet Coil At 25°C			
Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	Catalog Number
6 V.	4.5 V.	100	MS50P-921
12 V.	9.0 V.	400	MS50P-922
24 V.	18.0 V.	1600	MS50P-923
8.5 MA.	6.4 MA.	5000	MS50P-924
6.0 MA.	4.5 MA.	10000	MS50P-925
4.9 MA.	3.7 MA.	15000	MS50P-926

*D.O. Approx. 35% of PU. †Nominal ±10%.

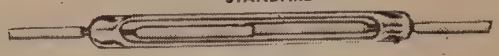
DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

BRM-902 MINIATURE



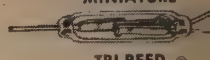
BI-REED ®

BRS-901 STANDARD



BI-REED ®

TRM-901 MINIATURE



TRI-REED ®

Contact Form		Single Pole Normally Open						Single Pole Double Throw		
Miniature or Standard		Miniature			Standard			Miniature		
Catalog Number		BRM-902			BRS-901			TRM-901		
Non-Inductive Contact Rating	Make and Break	15 VA. A.C. — 5 Watts D.C. ¼ Amp. Maximum up to 250 Volts			15 VA. A.C. — 15 Watts D.C. 1.0 Amp. Maximum up to 250 Volts			15 VA. A.C. — 5 Watts D.C. ¼ Amp. Maximum up to 125 V. A.C. or 32 V. D.C.		
	No Make or Break	1.0 Amp. 250 V.			5 Amp. 250 V.			1 Amp. 125 V. A.C. or 32 V. D.C.		
Contact Life Based on 10 Ohm Miss Test	Resistive Load (D.C.)	10 Micro-Amp. @ 10 Milli-Volts	⅛ Amp. @ 32 Volts		10 Micro-Amp. @ 10 Milli-Volts	⅛ Amp. @ 32 Volts		10 Micro-Amp. @ 10 Milli-Volts	⅛ Amp. @ 32 Volts	
	Number Operations	100,000,000	10,000,000		200,000,000	125,000,000		100,000,000	10,000,000	
Approximate Overall Dimensions		Over Leads	Glass Length	Glass Diameter	Over Leads	Glass Length	Glass Diameter	Over Leads	Glass Length	Glass Diameter
		1.5″	0.75″	0.100″	3.35″	2.1″	0.200″	1.5″	0.60″	0.125″
Weight		0.315 Grams			2.5 Grams			0.295 Grams		
Minimum Breakdown Voltage (60 cy. R.M.S.)		250 V.			500 V.			250 V.		
Minimum Insulation Resistance (Megohms)		500 K.			500 K.			100 K.		
Initial Contact Resistance (Milliohms Max.)		150			50			150		
Maximum Operate Time (Milliseconds)		Pull-In (Including Bounce)		Release	Pull-In (Including Bounce)		Release	Pull-In (Including Bounce)		Release
		1.0		0.5	2.0		0.5	1.0		0.5
Ampere-Turns To Operate		Pull-In			Pull-In			Pull-In		
		Nominal	Minimum	Drop Out	Nominal	Minimum	Drop Out	Nominal	Minimum	Drop Out
		50 ±15	20	50% of P.U.	100 ±15	60	30% of P.U.	50 ±15	35	70% of P.
Nominal Coil Power		0.335 Watts			0.360 Watts			0.335 Watts		
Vibration		15G — 2000 C.P.S.			20G — 750 C.P.S.			15G — 2000 C.P.S.		
Shock (JAN S-44)		50G (Min.)			40G (Min.)			50G (Min.)		
Ambient Temperature Range		−55° to +85°C			−55° to +85°C			−55° to +85°C		
Standard Test Coil Specifications See Page 18	Wire Size	#44			#36			#44		
	Number Turns	10,000			10,000			10,000		
	Tube I.D.	0.150″			0.210″			0.150″		
	Tube O.D.	0.200″			0.375″			0.200″		
	Tube Length	0.75″			1.75″			0.75″		

TYPE BRMR MINIATURE

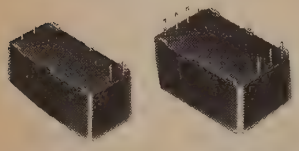


FIGURE 1 FIGURE 2

SIZE Fig. 1 - 1¾₆₄″ x 5/16″ x 35/64″
SIZE Fig. 2 - 1¾₆₄″ x 47/64″ x 35/64″
PLUS LEADS

See BRM-902 For Contact Rating

•

Operate Time 1 M.S. Including Bounce

•

Release Time 0.5 M.S. Max.

•

Magnetically Shielded

Coil Power	Nominal Voltage	Max. Pick-up Voltage	Minimum Drop-out Voltage	Max. Pick-up Current	Resistance in Ohms ±10%	Catalog Number
SINGLE POLE NORMALLY OPEN — Figure 1						
1.0 Watts Max. @ 25°C	6 V.	3.25 V.	0.8 V.	27.0 MA.	105	BRMR1-9
	12 V.	6.5 V.	1.0 V.	15.5 MA.	420	BRMR1-9
	28 V.	15.2 V.	2.5 V.	6.5 MA.	2350	BRMR1-9
TWO POLE NORMALLY OPEN — Figure 2						
1.5 Watts Max. @ 25°C	6 V.	3.25 V.	0.8 V.	46.5 MA.	70	BRMR2-9
	12 V.	6.5 V.	1.0 V.	25.2 MA.	280	BRMR2-9
	28 V.	15.2 V.	2.5 V.	9.8 MA.	1540	BRMR2-9

TYPE TRMR MINIATURE



FIGURE 1 FIGURE 2

SIZE Fig. 1 - 1¾₆₄″ x 5/16″ x 35/64″
SIZE Fig. 2 - 1¾₆₄″ x 47/64″ x 35/64″
PLUS LEADS

See TRM-901 For Contact Rating

•

Operate Time 1 M.S. Including Bounce

•

Release Time 0.5 M.S. Max.

•

Shielded

Coil Power	Nominal Voltage	Max. Pick-up Voltage	Minimum Drop-out Voltage	Max. Pick-up Current	Resistance in Ohms ±10%	Catalog Number
TRUE FORM — SINGLE POLE DOUBLE THROW — Figure						
1.0 Watts Max. @ 25°C	6 V.	4 V.	1.5 V.	42 MA.	105	TRMR1-9
	12 V.	8 V.	3 V.	21 MA.	420	TRMR1-9
	28 V.	19 V.	6 V.	8 MA.	2350	TRMR1-9
TRUE FORM — TWO POLE DOUBLE THROW — Figure						
1.5 Watts Max. @ 25°C	6 V.	4 V.	1.5 V.	64 MA.	70	TRMR2-9
	12 V.	8 V.	3 V.	32 MA.	280	TRMR2-9
	28 V.	19 V.	6 V.	12 MA.	1540	TRMR2-9

TYPE BRSR STANDARD

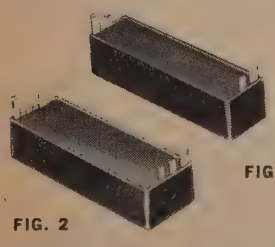


FIG. 1

FIG. 2

SIZE Fig. 1 - 2.55″ x .675″ x .625″
SIZE Fig. 2 - 2.55″ x .925″ x .625″

See BRS-901 For Contact Rating

•

Operate Time 2 M.S. Including Bounce

•

Release Time 0.5 M.S. Max.

•

Shielded

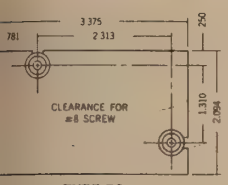
Coil Power	Nominal Voltage	Max. Pick-up Voltage	Minimum Drop-out Voltage	Max. Pick-up Current	Resistance in Ohms ±10%	Catalog Number
SINGLE POLE NORMALLY OPEN						
3.0 Watts Max. @ 25°C	6 V.	4.5 V.	0.55 V.	43.0 MA.	115	BRSR1-9
	12 V.	9.0 V.	1.10 V.	22.5 MA.	445	BRSR1-9
	28 V.	18.0 V.	2.50 V.	7.8 MA.	2550	BRSR1-9
TWO POLE NORMALLY OPEN						
3.2 Watts Max. @ 25°C	6 V.	4.5 V.	0.51 V.	86.5 MA.	58	BRSR2-9
	12 V.	9.0 V.	1.00 V.	45.0 MA.	220	BRSR2-9
	28 V.	18.0 V.	2.10 V.	13.3 MA.	1500	BRSR2-9

DESIGN DATA PAGE 5 — MOUNTING DIMENSIONS PAGE 17 — PRICES PAGES 1, 2, 3, 4

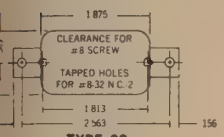
© United Technical Publi

MENSIONS ARE APPROX. CONSULT FACTORY FOR EXACT DIMENSIONS.

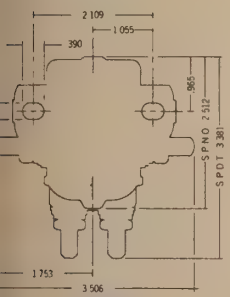
*ASTERISK DENOTES BOTTOM VIEW—ALL OTHERS TOP VIEW



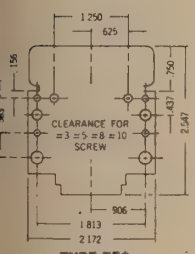
TYPE 59



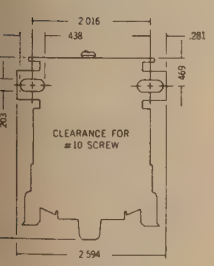
TYPE 60



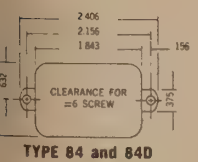
TYPE 70



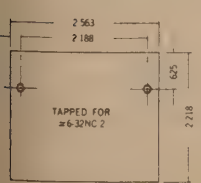
TYPE 75*



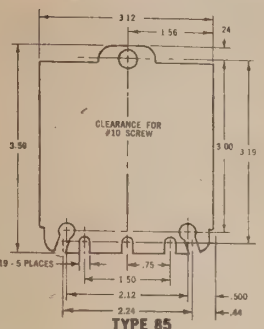
TYPE 80



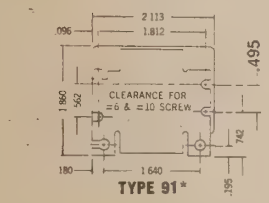
TYPE 84 and 84D



TYPE 84T and 84TE

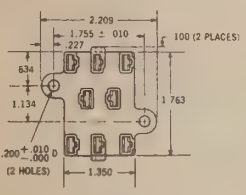


TYPE 85

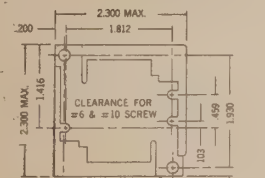


TYPE 91*

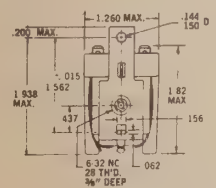




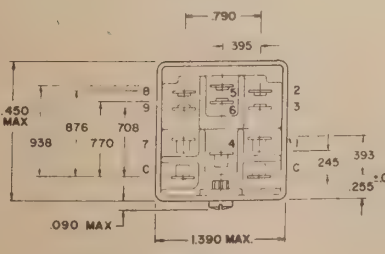
TYPE 91 SOCKET



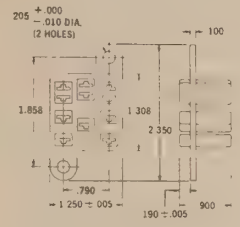
TYPE 92* and 92D*



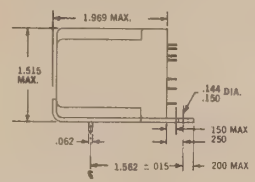
TYPE 93*
SOLDER TERMINAL



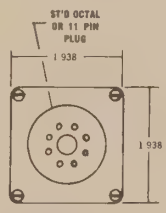
TYPE 93
PRINTED CIRCUIT



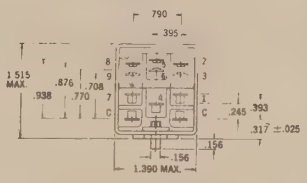
TYPE 93Q SOCKET



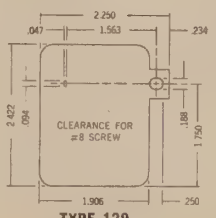
TYPE 93Q SIDE VIEW



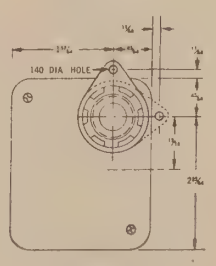
TYPE 93P



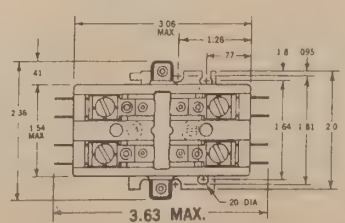
TYPE 93Q*



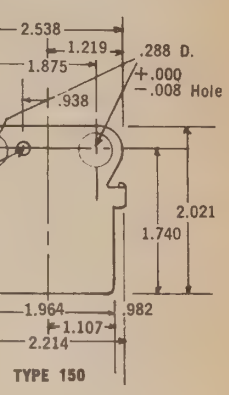
TYPE 129



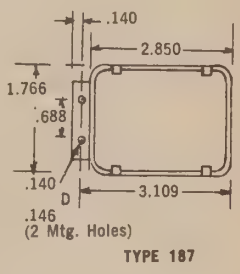
TYPE 129AR



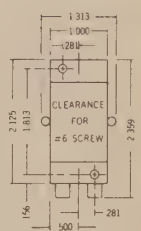
TYPE 143



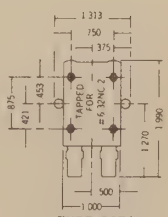
TYPE 150



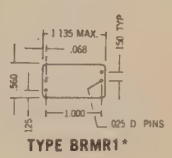
TYPE 187



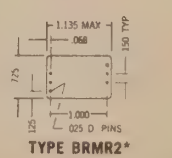
TYPE 987*
FRONT



TYPE 987*
REAR



TYPE BRMR1*



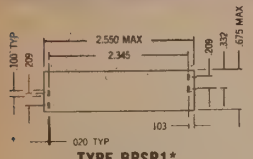
TYPE BRMR2*

Continued on page 18

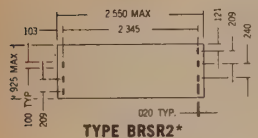
MOUNTING DIMENSIONS

DIMENSIONS ARE APPROX. CONSULT FACTORY FOR EXACT DIMENSIONS

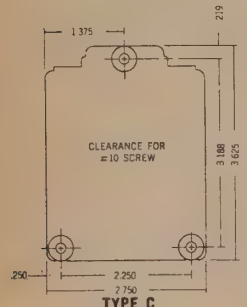
* ASTERISK DENOTES BOTTOM VIEW — ALL OTHERS TOP VIEW



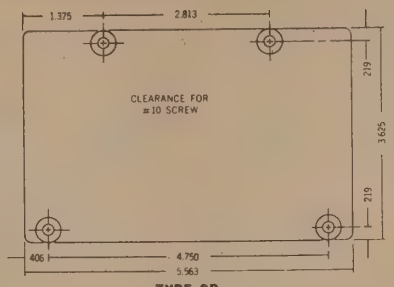
TYPE BRSR1*



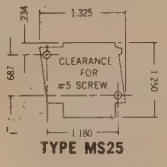
TYPE BRSR2*



TYPE C



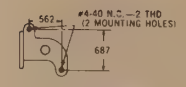
TYPE CR



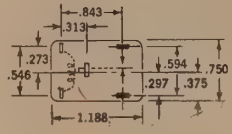
TYPE MS25



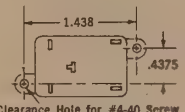
TYPE MS25P
TYPE MS50P (2 Pole)



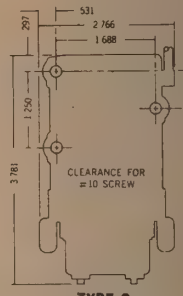
TYPE MS40 - MS50



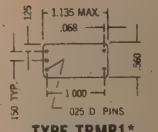
TYPE MS84
P.C. MTG.



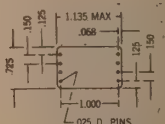
TYPE MS84
BRACKET MTG.



TYPE S



TYPE TRMR1*



TYPE TRMR2*

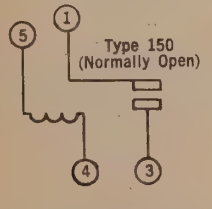
TERMINAL ARRANGEMENTS

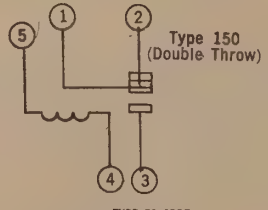
TYPE 91 CONTACT TERMINAL ARRANGEMENT

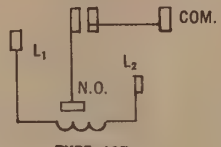
Mounting Hole Side			Coil Terminal Side		
1	2	3	4	5	6
COMMON	N.C.	N.O.	COMMON	N.C.	N.O.

TYPE 92 CONTACT TERMINAL ARRANGEMENT

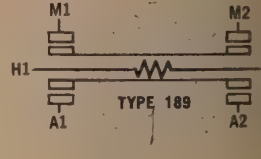
Cricuit-X			Circuit-Y			Circuit-Z		
C1	NC2	NO3	C4	NC5	NO6	C7	NC8	NO9

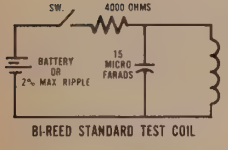




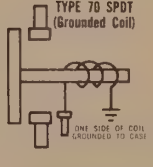


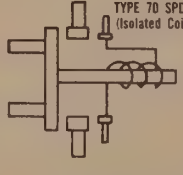
TYPE 187

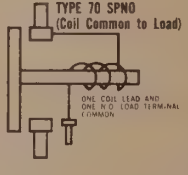


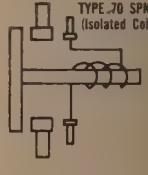


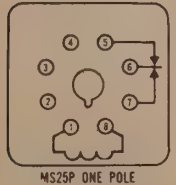
BI-REED STANDARD TEST COIL



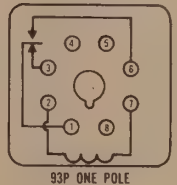




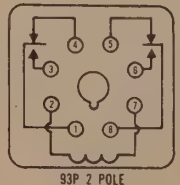




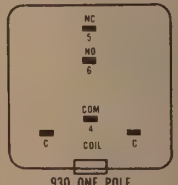
MS25P ONE POLE



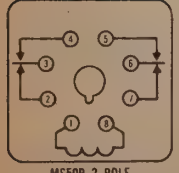
93P ONE POLE



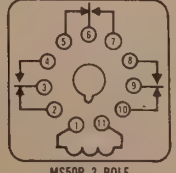
93P 2 POLE



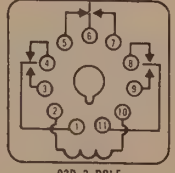
93Q ONE POLE



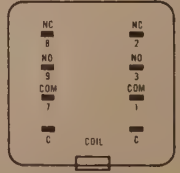
MS50P 2 POLE



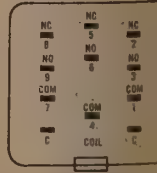
MS50P 3 POLE



93P 3 POLE



93Q 2 POLE



93Q 3 POLE

ALL ENCLOSED RELAYS HAVE CIRCUIT DIAGRAMS STAMPED ON UNIT

© United Technical Publicati

When requiring U.L. and/or C.S.A. approval, refer to the file number which will save you time and money. Approval is simplified when product includes components having prior approvals. Regulations then require that a component be checked only for the application within its approved ratings. If a component does not have prior approval — the component must undergo complete testing to determine if it meets U.L. requirements. This entails added expense and time.

The following A.C. Controls have U.L. and C.S.A. recognition.

RBM Type	*U.L. Recognition File #	*C.S.A. Recognition File #
59	E34447	None
75	E12139	LR13360
80	E12139	LR13360
84	E12139 or E22381	LR13360
85	E12139	LR13360
91	E12139	LR13360

RBM Type	*U.L. Recognition File #	*C.S.A. Recognition File #
92	E12139	LR13360
93	E12139	LR13360-31
129	E12139	LR13360
129AR	E12139	LR13360
S30	E12139	LR13360
S40	E12139	LR13360

U.L. and C.S.A. listing covers RBM production part number stamped on relay. Production part number (not standard catalog part number) should be submitted with file number. RBM will supply report date when required.

CONSULT FACTORY FOR POSSIBLE U.L. AND C.S.A. RECOGNITION FOR OTHER THAN ABOVE.

OBSOLETE LISTING

The following standard catalog controls are obsolete as of 3/1/69. Units will be available until 2/28/70 from Chicago warehouse subject to prior sale or discontinuance from RBM production.

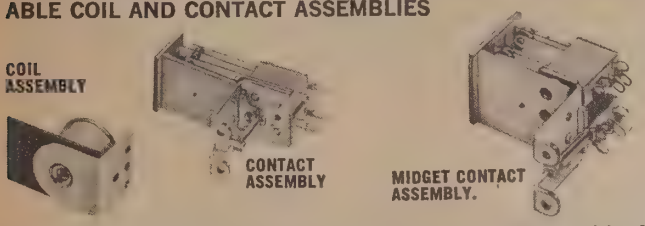
Catalog Number	Production Part Number
59-904	59-24
59-905	59-23
59-906	59-19
ABRMR1-903	97-701360-138
ABRMR1-901	97-701360-151
ABRMR1-902	97-701360-152
OBRSR1-903	99-801170-185
OBRSR1-902	99-801170-186
OBRSR1-901	99-801170-187
OBRSR1-907	99-803971-266
OBRSR1-908	99-803971-267

Catalog Number	Production Part Number
OBRSR1-909	99-803971-268
OBRSR2-903	99-804170-195
OBRSR2-902	99-804170-196
OBRSR2-901	99-804170-197
OBRSR3-903	99-807170-205
OBRSR3-902	99-807170-206
OBRSR3-901	99-807170-207
142TE-901	142-133023-40024
142TE-911	142-133026-40025
142TE-921	142-133027-40026
142TE-903	142-134023-40021

Catalog Number	Production Part Number
142TE-913	142-134026-40022
142TE-923	142-134027-40023
142TE-902	142-163023-40027
142TE-912	142-163026-40028
142TE-922	142-163027-40029
143-912	143-321120-14400A
143-913	143-321220-14400A
143-911	143-321520-14400A
129TD-901	129990-1260
129TD-902	129990-1270

GUARDIAN® ELECTRIC *General Purpose Relays*

SERIES 200 RELAY WITH COMPLETELY INTERCHANGEABLE COIL AND CONTACT ASSEMBLIES



The coil consists of the coil and field piece; the contact assembly consists of switch blades, armature, return spring and mounting bracket. The Guardian Midget Contact Assembly is interchangeable with the standard Series 200 contact assembly. Available with SPDT, DPDT or 4PDT contact switch assemblies, each suitable for use with any AC or DC coil.

SERIES 200 RELAY

Guardian No.	Volts	Coil	Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
200-6A	6	AC	$2.04	$1.84	$1.73	$1.43	$1.33
200-12A	12	AC	2.04	1.84	1.73	1.43	1.33
200-24A	24	AC	2.04	1.84	1.73	1.43	1.33
200-120A	115	AC	2.37	2.13	2.01	1.66	1.54
200-240A	230	AC	3.14	2.83	2.67	2.20	2.04
200-6D	6	DC	2.20	1.98	1.87	1.54	1.43
200-12D	12	DC	2.20	1.98	1.87	1.54	1.43
200-24D	24	DC	2.20	1.98	1.87	1.54	1.43
200-32D	32	DC	2.20	1.98	1.87	1.54	1.43
200-110D	110	DC	2.92	2.63	2.48	2.04	1.90
200-5,000D	†	DC	2.53	2.28	2.15	1.77	1.64
200-10,000D	†	DC	2.92	2.63	2.48	2.04	1.90

† Plate Circuit

CONTACT SWITCH ASSEMBLIES

Guardian No.	Type	Cont. Amps	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
200-1	Standard	8	SPDT	$1.76	$1.58	$1.50	$1.23	$1.14
200-2	Standard	8	DPDT	2.31	2.08	1.96	1.62	1.50
200-4	Standard	12.5	DPDT	2.59	2.33	2.20	1.81	1.68
200-5	Standard	8	4PDT	4.07	3.66	3.46	2.85	2.65
200-M1	Midget	10	SPDT	1.65	1.49	1.40	1.16	1.07
200-M2	Midget	10	DPDT	2.04	1.84	1.73	1.43	1.33
200-M5	Midget	8	4PDT	3.30	2.97	2.81	2.31	2.15

CONTACT SWITCH PARTS

Guardian No.	Type	Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
200-3	Standard	$1.76	$1.58	$1.50	$1.23	$1.14
200-M3	Midget	1.76	1.58	1.50	1.23	1.14

Use contact switch parts 200-3 for adding poles to contact switch assemblies 200-1 and 200-2. Use midget contact switch parts 200-M3 for adding poles to midget contact switch assemblies 200-M1 and 200-M2.



SERIES 640U—645U
ALL PURPOSE ECONOMY RELAY
10 AMPERE

A compact, lightweight relay capable of unusually heavy power control for its size. Long life, high quality relay available in a variety of AC and DC voltages with a selection of contact combinations. All contact ratings are 10 amps. Contact ratings at 60 cycles. 120V. non-inductive load. 8-32 single screw, center pole mounting. Shpg. wt., 3.5 oz.

*U/L Recognized Component File #E-17260

SIZE: 1 1/16" x 1 1/2" x 1"				QUANTITIES Net Each, Lots of				
Guardian No.	Coil Res.	Coil Voltage	Cont. Comb.	1-24	25-49	50-99	100-249	250 up
IR-640U-A-24A	24	24AC	SPST*	$3.19	$2.87	$2.71	$2.23	$2.07
IR-640U-C-24A	24	24AC	SPDT	3.47	3.12	2.95	2.43	2.26
IR-640U-2C-24A	24	24AC	DPDT	3.74	3.37	3.18	2.62	2.43
IR-640U-4C-24A	24	24AC	4PDT	5.50	4.95	4.68	3.85	3.58
IR-640U-A-120A	550	120AC	SPST*	3.19	2.87	2.71	2.23	2.07
IR-640U-C-120A	550	120AC	SPDT	3.47	3.12	2.95	2.43	2.26
IR-640U-2C-120A	550	120AC	DPDT	3.74	3.37	3.18	2.62	2.43
IR-640U-4C-120A	550	120AC	4PDT	5.50	4.95	4.68	3.85	3.58
IR-640U-2C-240A	2950	240AC	DPDT	4.62	4.16	3.93	3.23	3.00
IR-645U-A-6D	12	6DC	SPST*	3.19	2.87	2.71	2.23	2.07
IR-645U-C-6D	12	6DC	SPDT	3.47	3.12	2.95	2.43	2.26
IR-645U-2C-6D	12	6DC	DPDT	3.74	3.37	3.18	2.62	2.43
IR-645U-4C-6D	12	6DC	4PDT	5.50	4.95	4.68	3.85	3.58
IR-645U-A-12D	50	12DC	SPST*	3.19	2.87	2.71	2.23	2.07
IR-645U-C-12D	50	12DC	SPDT	3.47	3.12	2.95	2.43	2.26
IR-645U-2C-12D	50	12DC	DPDT	3.74	3.37	3.18	2.62	2.43
IR-645U-4C-12D	50	12DC	4PDT	5.50	4.95	4.68	3.85	3.58
IR-645U-A-24D	200	24DC	SPST*	3.19	2.87	2.71	2.23	2.07
IR-645U-C-24D	200	24DC	SPDT	3.47	3.12	2.95	2.43	2.26
IR-645U-2C-24D	200	24DC	DPDT	3.74	3.37	3.18	2.62	2.43
IR-645U-4C-24D	200	24DC	4PDT	5.50	4.95	4.68	3.85	3.58
IR-645U-A-110D	4000	110DC	SPST*	3.74	3.37	3.18	2.62	2.43
IR-645U-C-110D	4000	110DC	SPDT	4.07	3.66	3.46	2.85	2.65
IR-645U-2C-110D	4000	110DC	DPDT	4.34	3.91	3.69	3.04	2.82
IR-645U-4C-110D	4000	110DC	4PDT	5.78	5.20	4.91	4.05	3.76

*Normally open

SERIES 220 HEAVY DUTY INDUSTRIAL AC RELAY
20 AMPERE



This rugged unit makes and breaks up to 20 amps, a 240 volts. Armature is equipped with phenolic contac mounting block carrying 3/16" dual contacts. Phenolic i tested at 1500 volts breakdown to ground. Contacts ar silver alloy. Relay is available in dual SPST, normall open contact combination only. Contact rating 20 amp at 60 cycles, 230V., AC, non-inductive load. Mounting Mounting holes—clearance for 8-32 with 2 1/32" centers Shpg. wt., 5.5 oz.

SIZE: 3" x 1 7/8" x 1 3/4"				QUANTITIES Net Each, Lots of				
Guardian No.	Coil Voltage	Coil Res.	Cont. Comb.	1-24	25-49	50-99	100-249	250 up
IR-220-A-24A	24AC	25	SPST*	$4.95	$4.46	$4.21	$3.47	$3.22
IR-220-A-120A	120AC	600	SPST*	5.56	5.00	4.73	3.89	3.61
IR-220-A-240A	240AC	2,500	SPST*	6.11	5.50	5.19	4.28	3.97

*Normally Open

SERIES 240U—245U 15 AMPERE RELAY



Designed for contact ratings up to 15 amps, Guardian series 240 AC and 245 DC relays are compact, reliable inexpensive. Factory pretested and adjusted to be ready for assembly into your product. Contact rating is 1 amp, 120V., 60 cycles non-inductive load. Easy assembly with 8-32 single-screw, center-hole mounting. Shpg wt., 4.5 oz.

*U/L Recognized Component File #E-23524A

SIZE: (4PDT) 2 23/32" x 1 3/32" x 2 1/16"				QUANTITIES Net Each, Lots of				
Guardian No.	Coil Res.	Coil Voltage	Cont. Comb.	1-24	25-49	50-99	100-249	250 up
240-A-24A	24	24AC	SPST*	$3.47	$3.12	$2.95	$2.43	$2.26
240-2C-24A	24	24AC	DPDT	4.35	3.92	3.70	3.05	2.83
240-4C-24A	24	24AC	4PDT	6.38	5.74	5.42	4.47	4.15
240-A-120A	550	120AC	SPST*	3.47	3.12	2.95	2.43	2.26
240-2C-120A	550	120AC	DPDT	4.35	3.92	3.70	3.05	2.83
240-4C-120A	550	120AC	4PDT	6.38	5.74	5.42	4.47	4.15
245-A-6D	12	6DC	SPST*	3.47	3.12	2.95	2.43	2.26
245-2C-6D	12	6DC	DPDT	4.35	3.92	3.70	3.05	2.83
245-4C-6D	12	6DC	4PDT	6.38	5.74	5.42	4.47	4.15
245-A-12D	50	12DC	SPST*	3.47	3.12	2.95	2.43	2.26
245-2C-12D	50	12DC	DPDT	4.35	3.92	3.70	3.05	2.83
245-4C-12D	50	12DC	4PDT	6.38	5.74	5.42	4.47	4.15
245-A-24D	200	24DC	SPST*	3.47	3.12	2.95	2.43	2.26
245-2C-24D	200	24DC	DPDT	4.35	3.92	3.70	3.05	2.83
245-4C-24D	200	24DC	4PDT	6.38	5.74	5.42	4.47	4.15

*Normally open

SERIES 625 PLATE CIRCUIT DC RELAY — 10 AMPERE



Has extra long coil for greater sensitivity. Adaptable to voltage operation as well as sensitive plate circuit control installations. Coil impregnated for reliability and longer life. Average power requirement, 0.2 watt. Contacts, fine silver. Contact ratings, 10 amps. Mounting One 8-32 (NC-2) center hole. Shpg. wt., 5.5 oz.

SIZE: 2 1/8" x 2" x 1 1/2"				QUANTITIES Net Each, Lots of				
Guardian No.	Oper. Mils	Coil Res.	Cont. Comb.	1-24	25-49	50-99	100-249	250 up
IR625-2.5	9 M.A.	2,500	DPDT	$4.90	$4.41	$4.17	$3.43	$3.19
IR625-5	6.3 M.A.	5,000	DPDT	5.23	4.71	4.45	3.66	3.40
IR625-10	4.5 M.A.	10,000	DPDT	6.38	5.74	5.42	4.47	4.15

SERIES 1640—1645
ENCLOSED PLUG-IN RELAY — 4PDT
5 AMPERE



An efficient relay with 4PDT switching enclosed in a transparent lightweight Lexan case of high impact strength, unaffected by weather and resistant to temperatures of up to 200°F.

20 pin octal plug. Contacts rated for 5 AMPS at 60 cycles, 120VAC, Non-Inductive.

U/L Recognized Component File #E-17260

SIZE: 2 7/8" x 1 3/4" x 2 3/8"		QUANTITIES Net Each, Lots of				
Guardian No.	1-24	25-49	50-99	100-249	250 up
1640-4C-24A	$12.25	$11.02	$10.41	$9.80	$8.57
1640-4C-120A	12.50	11.25	10.62	9.85	8.65
1645-4C-24D	12.25	11.02	10.41	9.80	8.57

Net
© United Technical Publication

SERIES 900 & 910 10 AMP RELAY*



- *U/L Recognized Component
- Designed with reduced number of parts for long, trouble-free service
- Has keyed and locked lifters

Series 910 is exactly the same as the 900 relay, both electrically and mechanically, but with 3/16" quick disconnects instead of soldered termination.

ependable, low cost, DPDT relay featuring new, trouble-free design that incorporates a minimum of parts. Contacts all rated 10 amps, 120V., AC resistive oad. Has molded switches, one-piece mounting clip and return spring; molded obbin and coil cover. Average shpg. wt., 6 oz.

SIZE: 2 11/16" x 1 11/16" x 1 25/32"			QUANTITIES		
Guardian No.	Coil Res.	Coil Voltage	Net Each, Lots of 1-9	10-24	25-49
900-2C-24A	24	24AC	$1.90	$1.80	$1.65
900-2C-120A	550	115AC	1.90	1.80	1.65
900-2C-240A	2950	230AC	1.90	1.80	1.65
905-2C-6D	8	6DC	1.90	1.80	1.65
905-2C-12D	32	12DC	1.90	1.80	1.65
905-2C-24D	130	24DC	1.90	1.80	1.65
910-2C-24A	24	24AC	1.90	1.80	1.65
910-2C-120A	550	115AC	1.90	1.80	1.65
910-2C-240A	2950	230AC	1.90	1.80	1.65
915-2C-6D	8	6DC	1.90	1.80	1.65
915-2C-12D	32	12DC	1.90	1.80	1.65
915-2C-24D	130	24DC	1.90	1.80	1.65

U/L Recognized Component File #E-23524B

urther savings are available when Series 900 relays are purchased in ulk packs of 50 units. Relays are supplied nested in new convenient form fitted" assembly line trays . . . one package of 50—$76.50 ea.; and up—$67.00 ea.

SERIES 1200—1205 SMALL SIZE — EFFICIENT MEDIUM POWER AC-DC RELAY—10 AMPERE

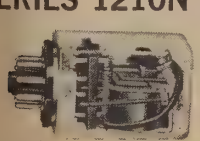


Small-sized, highly efficient relay applicable to automation, communications, remote control switching devices and experimental uses. Heavy solder lug type terminals molded in phenolic block, with barriers for over-surface insulation. Contacts rated 10 amps at 60 cycles, 115V., AC, non-inductive oad. Mounting: Single mounting hole, 6-32 tap. Shpg. wt., 2.5 oz.

U/L Recognized Component File #E-17260A

SIZE: 1 5/8" x 1" x 1 1/4"				QUANTITIES					
Guardian No.	Coil Res.	Coil Voltage	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-up
1200-2C-6A	8	6AC	DPDT	$4.13	$3.72	$3.51	$2.89	$2.68	$2.48
1200-3C-6A	4	6AC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80
1200-2C-24A	59	24AC	DPDT	4.13	3.72	3.51	2.89	2.68	2.48
1200-3C-24A	50	24AC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80
1200-2C-120A	1,190	120AC	DPDT	4.13	3.72	3.51	2.89	2.68	2.48
1200-3C-120A	1,000	120AC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80
1200-2C-240A	5,340	240AC	DPDT	4.40	3.96	3.74	3.08	2.86	2.64
1200-3C-240A	4,750	240AC	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
1205-2C-6D	18	6DC	DPDT	3.74	3.37	3.18	2.62	2.43	2.24
1205-3C-6D	18	6DC	3PDT	4.24	3.82	3.60	2.97	2.76	2.54
1205-2C-12D	75	12DC	DPDT	3.74	3.37	3.18	2.62	2.43	2.24
1205-3C-12D	75	12DC	3PDT	4.24	3.82	3.60	2.97	2.76	2.54
1205-2C-24D	300	24DC	DPDT	3.74	3.37	3.18	2.62	2.43	2.24
1205-3C-24D	300	24DC	3PDT	4.24	3.82	3.60	2.97	2.76	2.54
1205-2C-110D	6,500	110DC	DPDT	4.13	3.72	3.51	2.89	2.68	2.48
1205-3C-110D	6,500	110DC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80

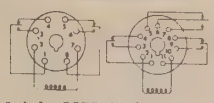
SERIES 1210N ENCLOSED PLUG-IN AC RELAY WITH BUILT-IN NEON LAMP TO INDICATE CIRCUIT FAULTS — 10 AMPERE



This plug-in relay utilizes a miniature neon lamp connected across coil terminals. The lamp lights each time the coil is energized, or indicates a circuit fault when lamp is "dark". Ideal for detecting circuit faults in relay banks, lass arrangements, or where relays are visibly located at intermediate switching points of the circuitry. Precludes the use of circuit testers. Available with pin octal plug for DPDT and 11 pin for 3PDT. Contacts rated 10 amps at 120V., C. 60 cycles, non-inductive load. Shpg. wt., 3.5 oz.

SIZE: 2 23/32" x 1 3/8" x 1 3/4"				QUANTITIES				
Guardian No.	Coil Voltage	Coil Res.	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
1210N-2C-120A	120AC	1,100	DPDT	$7.43	$6.69	$6.32	$5.20	$4.83
1210N-3C-120A	120AC	1,100	3PDT	8.80	7.92	7.48	6.16	5.72





8 pin for DPDT 11 pin for 3PDT

SERIES 1210—1215 ENCLOSED PLUG-IN RELAY — 10 AMPERE

A powerful and economical relay enclosed in a transparent, lightweight Lexan case which has high impact strength is unaffected by weather, and is resistant to temperatures of 200°F. Relay available with 8 pin octal plug for DPDT and 11 pin for 3PDT. Contacts rated for 10 amps at 60 cycles, 120V., AC, non-inductive load.

Shpg. wt., 3.5 oz.

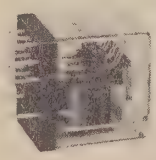
*U/L Recognized Component File #E-17260A (5 amp only)

SIZE: 2 23/32" x 1 3/8" x 1 3/8"				QUANTITIES					
Guardian No.	Coil Voltage	Coil Res.	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-up
1210-2C-6A	6AC	33	DPDT	$6.60	$5.94	$5.61	$4.62	$4.29	$3.96
1210-3C-6A	6AC	33	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1210-2C-24A	24AC	54	DPDT	6.60	5.94	5.61	4.62	4.29	3.96
1210-3C-24A	24AC	54	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1210-2C-120A	120AC	1,100	DPDT	6.60	5.94	5.61	4.62	4.29	3.96
1210-3C-120A	120AC	1,100	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1210-2C-240A	240AC	5,000	DPDT	6.88	6.19	5.85	4.82	4.47	4.13
1210-3C-240A	240AC	5,000	3PDT	8.53	7.68	7.25	5.97	5.54	5.12
1215-2C-6D	6DC	18	DPDT	6.60	5.94	5.61	4.62	4.29	3.96
1215-3C-6D	6DC	18	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1215-2C-12D	12DC	75	DPDT	6.60	5.94	5.61	4.62	4.29	3.96
1215-3C-12D	12DC	75	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1215-2C-24D	24DC	300	DPDT	6.60	5.94	5.61	4.62	4.29	3.96
1215-3C-24D	24DC	300	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1215-2C-110D	110DC	6,500	DPDT	7.15	6.44	6.08	5.01	4.65	4.29
1215-3C-110D	110DC	6,500	3PDT	8.80	7.92	7.48	6.16	5.72	5.28

ENCLOSED PLATE CIRCUIT PLUG-IN RELAY

SIZE: 2 23/32" x 1 3/8" x 1 3/8"				QUANTITIES					
Guardian No.	Coil Mils	Coil Res.	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-up
1215-2C-2.5	10 MA	2,500	DPDT	$6.82	$6.14	$5.80	$4.77	$4.43	$4.09
1215-3C-2.5	12 MA	2,500	3PDT	7.98	7.18	6.78	5.59	5.19	4.78
1215-2C-5	7.2 MA	5,000	DPDT	6.93	6.24	5.89	4.85	4.50	4.15
1215-3C-5	8.5 MA	5,000	3PDT	8.25	7.43	7.01	5.78	5.36	4.95
1215-2C-10	5 MA	10,000	DPDT	7.15	6.44	6.08	5.01	4.65	4.29
1215-3C-10	5 MA	10,000	3PDT	8.53	7.68	7.25	5.97	5.54	5.11

SERIES 1220 AC—1225 DC



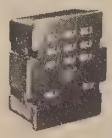
Modern design of this relay has become the standard of the industry. Series 1220 and 1225 are reduced in height and cost by eliminating the radio-type plug and all the wiring between the relay and the plug. These series use the terminal panel itself as the male plug. Famous "UNI-GUARD" continuous-loop moving blades eliminate soldered connections. Cover snap-locks in place with a flush fit that guards against shorting. Universal terminals function as solder-lug, .110" quick connect, or socket plug-in. Mounting bracket for above chassis installation included with each relay. Contacts will safely switch 10 amperes at 120 VAC non-inductive in most applications and are U/L approved at 7 amperes.

U/L Recognition File #E-23524.

SIZE: 1 3/32" x 1 11/16" x 1 5/16"				QUANTITIES					
Guardian No.	Coil Voltage	Coil Res.	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-up
IR-1220-2C-24A	24AC	54	DPDT	$4.40	$3.96	$3.74	$3.08	$2.86	$2.64
IR-1220-2C-120A	120AC	1,100	DPDT	4.40	3.96	3.74	3.08	2.86	2.64
IR-1220-2C-240A	240AC	5,000	DPDT	4.68	4.21	3.98	3.28	3.04	2.80
IR-1220-3C-6A	6AC	3.3	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
IR-1220-3C-24A	24AC	54	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
IR-1220-3C-120A	120AC	1,100	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
IR-1220-3C-240A	240AC	5,000	3PDT	5.23	4.71	4.45	3.66	3.40	3.13
IR-1225-2C-6D	6DC	18	DPDT	4.40	3.96	3.74	3.08	2.86	2.64
IR-1225-2C-12D	12DC	75	DPDT	4.40	3.96	3.74	3.08	2.86	2.64
IR-1225-2C-24D	24DC	300	DPDT	4.40	3.96	3.74	3.08	2.86	2.64
IR-1225-2C-110D	110DC	6,500	DPDT	4.68	4.21	3.98	3.28	3.04	2.80
IR-1225-3C-6D	6DC	18	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
IR-1225-3C-12D	12DC	75	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
IR-1225-3C-24D	24DC	300	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
IR-1225-3C-110D	110DC	6,500	3PDT	5.23	4.71	4.45	3.66	3.40	3.13

IR-1220 SOCKETS

1-9—Net 65¢ each 10-up—Net 60¢ each



SOC-1

The 1220 snap-in socket has U/L component recognition when used with Guardian Relays. Socket terminal lugs can be soldered to or will accept AMP Series 110 quick connects.



SOC-2

GUARDIAN® ELECTRIC *Relays*

SERIES 1220M AC—1225M DC

MANUAL RESET RELAY



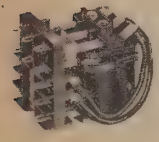
Basic size and cost advantages of the Series 1220 AC and 1225 DC are obtainable off-the-shelf in a manual reset version. Height and cost are reduced through the elimination of the radio-type octal plug and the wiring between the relay and the plug. Unit is built to meet U/L requirements and features the "UNI-GUARD" continuous-loop moving blades. Double pole double throw contacts transfer when coil is energized, locking in the transferred position without further coil energy. Lock is released and contacts re-transfer **only** when manual reset button is pressed.

Size: 2" x 1 1/16" x 1 3/16" — QUANTITIES

Guardian No.	Coil Voltage	Coil Res.	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
IR-1220M-2C-24A	24A	54	DPDT	$6.05	$5.45	$5.14	$4.24	$3.93
IR-1220M-2C-120A	120A	1110	DPDT	6.05	5.45	5.14	4.24	3.93
IR-1225M-2C-24D	24D	300	DPDT	6.05	5.45	5.14	4.24	3.93

SERIES 1240—1245

NEW SMALL, EFFICIENT MEDIUM POWER RELAY—10 AMPERE

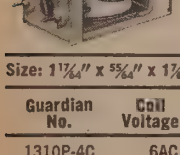


Highly efficient relay for communications, automation, remote control switching circuits and laboratory applications. All terminals are solder lug type and molded in phenolic panel block for coils as well as contacts. Barriers in panel block raised to meet U/L over-surface spacing; U/L insulation throughout. Contacts rated 10 amps at 60 cycles, 120 VAC, non-inductive load. Mounting: Single mounting hole, 6-32 tap. Shpg. wt., 2.5 oz.

Size: 1 45/64" x 1 1/8" x 1 1/4" — QUANTITIES

Guardian No.	Coil Res.	Coil Voltage	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500 up
1240-2C-6A	8	6AC	DPDT	$4.13	$3.72	$3.51	$2.89	$2.68	$2.48
1240-3C-6A	4	6AC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80
1240-2C-24A	59	24AC	DPDT	4.13	3.72	3.51	2.89	2.68	2.48
1240-3C-24A	50	24AC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80
1240-2C-120A	1190	120AC	DPDT	4.13	3.72	3.51	2.89	2.68	2.48
1240-3C-120A	1000	120AC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80
1240-2C-240A	5340	240AC	DPDT	4.40	3.96	3.74	3.08	2.86	2.64
1240-3C-240A	4750	240AC	3PDT	4.95	4.46	4.21	3.47	3.22	2.97
1245-2C-6D	18	6DC	DPDT	3.74	3.37	3.18	2.62	2.43	2.24
1245-3C-6D	18	6DC	3PDT	4.24	3.82	3.60	2.97	2.76	2.54
1245-2C-12D	75	12DC	DPDT	3.74	3.37	3.18	2.62	2.43	2.24
1245-3C-12D	75	12DC	3PDT	4.24	3.82	3.60	2.97	2.76	2.54
1245-2C-24D	300	24DC	DPDT	3.74	3.37	3.18	2.62	2.43	2.24
1245-3C-24D	300	24DC	3PDT	4.24	3.82	3.60	2.97	2.76	2.54
1245-2C-110D	6500	110DC	DPDT	4.13	3.72	3.51	2.89	2.68	2.48
1245-3C-110D	6500	110DC	3PDT	4.68	4.21	3.98	3.28	3.04	2.80

SERIES 1310P—1315P



NEW ADDITION TO MINIATURE RELAY—PRINTED CIRCUIT TERMINATION

4PDT...5 Amp Plug-in Relay available AC or DC. Contacts rated 5 amps at 30VDC or 120VAC resistive. Heat resistant, Lexan cover. Life in excess of 100 million operations. Weight: 1⅛ oz.

Size: 1 17/64" x 55/64" x 1 17/64" — QUANTITIES

Guardian No.	Coil Voltage	1-24	25-49	Net Each, Lots of 50-99	100-249	250-499	500 up
1310P-4C	6AC	$5.50	$4.95	$4.44	$3.85	$3.58	$3.30
1310P-4C	12AC	5.50	4.95	4.44	3.85	3.58	3.30
1310P-4C	24AC	5.50	4.95	4.44	3.85	3.58	3.30
1310P-4C	120AC	5.85	5.26	4.68	4.09	3.80	3.51
1315P-4C	6DC	4.50	4.05	3.60	3.15	2.93	2.70
1315P-4C	12DC	4.50	4.05	3.60	3.15	2.93	2.70
1315P-4C	24DC	4.50	4.05	3.60	3.15	2.93	2.70
1315P-4C	120DC	5.25	4.72	4.20	3.67	3.41	3.15

SERIES 1310—1315



LONG LIFE 4 PDT, 5 AMP-MINIATURE RELAY

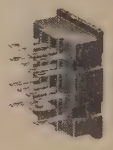
4PDT...5 AMP Plug-In Relay available AC or DC. Contacts rated 5 amps at 30VDC or 120VAC resistive. Heat resistant, Lexan cover. Life in excess of 100 million operations. Weight: 1⅛ oz.

*U/L and CSA Recognized File #E-23524

Size: 1 17/64" x 55/64" x 1 17/64". — QUANTITIES

Guardian No.	Coil Voltage	1-24	25-49	Net Each, Lots of 50-99	100-249	250-499	500 u
1310-4C	6AC	$5.50	$4.95	$4.44	$3.85	$3.58	$3.30
1310-4C	12AC	5.50	4.95	4.44	3.85	3.58	3.30
1310-4C	24AC	5.50	4.95	4.44	3.85	3.58	3.30
1310-4C	120AC	5.85	5.26	4.68	4.09	3.80	3.51
1315-4C	6DC	4.50	4.05	3.60	3.15	2.93	2.70
1315-4C	12DC	4.50	4.05	3.60	3.15	2.93	2.70
1315-4C	24DC	4.50	4.05	3.60	3.15	2.93	2.70
1315-4C	110DC	5.25	4.72	4.20	3.67	3.41	3.15

1310 SOCKET

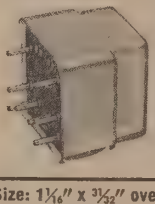


Select either the 1310-1 ST Series Relay Socket wi solder terminals or the 1310-2 PC Relay Socket wi printed circuit terminals for mounting your miniatu relays. Panel cutout for socket should measure 1.01 x .858" with .025" radii at all four corners.

1310—1 ST Series Relay Socket (SOLDER TERMINALS) ..... 60¢ e

1310—2 PC Series Relay Socket (PRINTED CIRCUIT) ..... 60¢ e

SERIES 1350PC—1355PC



NEW PRINTED CIRCUIT RELAYS 2PDT SWITCHING

For low power solid state circuitry. All terminals on .1 grid spacing for standard printed circuit board. Solde right on PC board. Conform to UL requirements for Offic Appliances and Business Equipment. 1 watt normal powe ...3500 OHMS coil resistance (120 VAC-60 Hz). Mechat ical life in excess of 10 million operations. 3 amp resi tive 115V 60 Hz contact rating. DPDT switching.

Size: 1 1/16" x 3/32" overall. — QUANTITIES

Guardian No.	Coil Voltage	1-24	25-49	Net Each, Lots of 50-99	100-249	250 up
IR-1350PC-2C-24A	24AC	$4.20	$3.78	$3.57	$3.36	$2.94
IR-1350PC-2C-120A	120AC	4.55	4.09	3.87	3.64	3.18
IR-1355PC-2C-6D	6DC	4.20	3.78	3.57	3.36	2.94
IR-1355PC-2C-12D	12DC	4.20	3.78	3.57	3.36	2.94
IR-1355PC-2C-24D	24DC	4.20	3.78	3.57	3.36	2.94

SPECIAL PURPOSE RELAYS

SERIES X-300ER

ELECTRICAL RESET OVERLOAD RELAY



Applicable for use in industrial panel insta lation, provides precise protection from cu rent surges and continuous overloads. R mote panel installation of control potentiometer simplifies adjustment of rela to operate on any current value from 250 to 750 milliamperes, DC. Auxiliar SPDT switch for pilot light indication of "overload" or "clear" position. Rese relay can be operated from any point convenient to operator. Insulation betwee coil and ground rated at 3,000 VAC. Shpg. wt., 13 oz.

Size: 4¾" x 2" x 1 15/16" — QUANTITIES

Guardian No.	Reset Coil	1-24	25-49	Net Each, Lots of 50-99	100-249	250 up
X-300ER	6VAC	$11.00	$9.90	$9.35	$7.70	$7.15



SERIES 805

32 POLE GROUP SELECTOR RELAY

Group selector relay can simultaneously make common u to 32 circuits. All circuits insulated from ground. Contac blades molded in thermosetting phenolic. All contactin members completely enclosed. Shipping weight 6 oz.

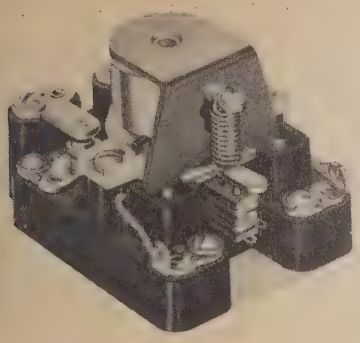
Size: 2 3/32" x 1 17/32" x 2 1/8" — QUANTITIES

Guardian No.	Coil Voltage	Coil Res.	1-24	25-49	Net Each, Lots of 50-99	100-249	250 up
IR-805-S	24VDC	72	$5.50	$4.95	$4.68	$3.85	$3.58

Net

© United Technical Publication

POWER RELAY GROUP



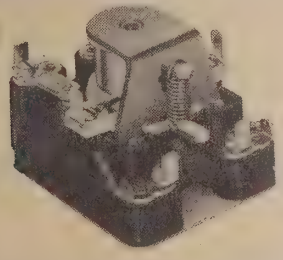
DPDT

NEW 2600U—2605U 25 AMPERE

ew line of power relays with double pole double throw contacts rated at 25 mperes. Inverted coil construction protects armature and contacts from in-dvertent mechanical damage or electrical shorting. Series 2600U-DPDT-AC oils are rated for continuous duty at 240 VAC, with 75% power factor; operating ower requirement is 9.5 volt amperes, 60 cycles. Series 2600U and 2605U have asily accessible screw type terminals as pictured; also available are ¼" AMP uick connect terminals as pictured on series 2620U and 2625U below. (Purchase 600—Q.C. terminal kit for easy "do-it-yourself" conversion.) "Press to Test" rmature lever makes for convenient manual circuit testing. Recessed SPDT uxiliary switch as illustrated is not included but is simple to mount and may e purchased separately if needed; auxiliary switch has solder lug blade tails nd is rated for 10 ampere operation. These new 25 ampere power relays are ery compact with a shipping weight of only 8 ounces. For mounting there are wo .196" diameter holes in the base; these are located on 1⅞" centers.

IZE: 3⅝" x 2½" x 1⅛"		QUANTITIES				
		Net Each, Lots of				
Guardian No.	Volts	1-24	25-49	50-99	100-249	250 up
2600U-DPDT-24A	24AC	$7.43	$6.69	$6.32	$5.20	$4.83
2600U-DPDT-120A	120AC	7.43	6.69	6.32	5.20	4.83
2600U-DPDT-240A	240AC	7.81	7.03	6.64	5.47	5.08
2605U-DPDT-12D	12DC	7.43	6.69	6.32	5.20	4.83
2605U-DPDT-24D	24DC	7.43	6.69	6.32	5.20	4.83
2605U-DPDT-110D	110DC	7.81	7.03	6.64	5.47	5.08

NEW 2620U—2625U 25 AMPERE



DPST—N.O.

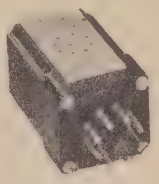
ompatible line of power relays with double pole single throw contacts (normally pen). Same inverted coil construction as for double throw units above. Im-ortant note: Series 2620U and 2625U are manufactured with the easily acces-ible screw type terminals as pictured on series 2600U and 2605U above. The ¼" AMP quick connect terminals pictured here are available in the 2600-Q.C. erminal kit for easy "do-it-yourself" installation. Same "Press to Test" arma-ure lever as for 2600U and 2605U shown above. Auxiliary switch described bove may be added if desired. Overall dimensions, shipping weight and nounting provisions are identical to the compatible DPDT units of the 2600U nd 2605U series.

IZE: 3⅝" x 2½" x 1⅛"		QUANTITIES				
		Net Each, Lots of				
Guardian No.	Volts	1-24	25-49	50-99	100-249	250 up
2620U-DPST-24A	24AC	$5.65	$5.09	$4.80	$3.96	$3.67
2620U-DPST-120A	120AC	5.65	5.09	4.80	3.96	3.67
2620U-DPST-240A	240AC	6.15	5.54	5.23	4.31	4.00
2625U-DPST-12D	12DC	5.70	5.13	4.85	3.99	3.71
2625U-DPST-24D	24DC	5.70	5.13	4.85	3.99	3.71
2625U-DPST-110D	110DC	6.15	5.54	5.23	4.31	4.00
2600U-SPDT-Aux.-SW	—	1.49	1.34	1.27	1.04	.97
2600U-QC. Terminal Kit	—	.74	.67	.63	.52	.48

SOLID STATE RELAYS

SERIES 6100—6300





Universal AC or DC control voltage with complete circuit isolation from load switching circuit. Externally adjustable pull-in voltage level from 80-130 volts AC or DC, with close differential between pull-in and drop-out where accurate voltage sensing is required. Control of high inrush lamp, inductive or normal resistive loads from 10 ma to 3 amps. Internal filtering prevents random turn-on of "off" contacts.

"O"—Designates Octal Plug "T"—Designates .110 QC base

			QUANTITIES		
			Net Each, Lots of		
Guardian No.	Size	Wt.	1-49	50-99	100 up
6100-THA-1 Amp-SPST N.O.	2"x1⅛"x1 1/16"	4 oz.	$17.95	$16.16	$15.26
6110-OHA-1 Amp-SPST N.O.	2¾"x1⅜"x1⅜"	4 oz.	18.50	16.65	15.73
6100-THC-1 Amp-SPDT	2"x1⅛"x1 1/16"	4 oz.	22.95	20.66	19.51
6110-OHC-1 Amp-SPDT	2¾"x1⅜"x1⅜"	4 oz.	23.50	21.15	19.98
6300-THA-3 Amp-SPST N.O.	3"x1⅛"x1 1/16"	8 oz.	20.45	18.40	17.38
6310-OHA-3 Amp-SPST N.O.	3 3/16"x1 15/16"x1 15/16"	8 oz.	20.95	18.86	17.81
6300-THC-3 Amp-SPDT	3"x1⅝"x1¾"	8 oz.	27.45	24.71	23.33
6310-OHC-3 Amp-SPDT	3 3/16"x1 15/16"x1 15/16"	8 oz.	28.95	26.06	24.61

INTERLOCK RELAYS

1200/1200



SIZE: 1 1/16" x 1¾" x 2⅞"

1200/1200UB



SIZE: 1 13/16" x 1⅜" x 3 3/16"
(U-Shape Bracket)

Two interlocking AC relays in sturdy metal frame bracket. Used to maintain circuits continuously without coil power consumption. Units are electrically pulse operated with mechanical hold and electrical release. Contacts rated for 10 amps, at 60 cycles, 120V., AC, non-inductive load. Coil resistance is 1,100 ohms. Shpg. wt., 5.5 oz.

				QUANTITIES				
				Net Each, Lots of				
Guardian No.	Cont. Comb.	Coil Voltage	1-24	25-49	50-99	100-249	250 up
IR-1200/1200-4C-120A	4PDT	120AC	$10.40	$9.36	$8.84	$8.32	$7.28
IR-1200/1200UB-4C-120A	4PDT	120AC	10.40	9.36	8.84	8.32	7.28

SERIES 1220/1220



ENCLOSED INTERLOCK

For an enclosed interlock or electrical reset relay the Guardian Series 1220/1220 has all the mounting and cost advantages of the Series 1220 and Series 1225. Double pole double throw contacts on relay transfer when relay coil is energized, locking in the transferred position without further coil energy. Lock is released and contacts re-transfer **only** when interlock (reset) magnet is energized. Contacts are rated for 10 amperes at 120 VAC non-inductive.

SIZE: 3⅜" x 1 13/16" x 1⅞"				QUANTITIES				
				Net Each, Lots of				
Guardian No.	Coil Voltage	Coil Res.	Cont. Comb.	1-24	25-49	100-249	250-499	500-up
IR-1220/1220-2C-24A	24A	54	DPDT	$13.75	$12.38	$11.69	$9.63	$8.94
IR-1220/1220-2C-120A	120A	1110	DPDT	13.75	12.38	11.69	9.63	8.94
IR-1225/1225-2C-24D	24D	300	DPDT	13.75	12.38	11.69	9.63	8.94

© United Technical Publications

GUARDIAN® ELECTRIC *Solenoids*

MOST COMPLETE DISTRIBUTOR LINE!

Select from 126 different Guardian solenoids! The Guardian line now includes U-Frame, Box-Frame, and Laminated types as well as Tubular types. Many are available in both pull type and push type, AC or DC, in a range of voltages, for use in either intermittent or continuous duty applications. Several items in the line are furnished complete with a single pole double throw switch which functions simultaneously with the mechanical movement of the plunger linkage.

NOTE: In determining whether to select your solenoid for intermittent or continuous duty, consider the following:

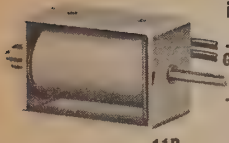
1. Intermittent duty solenoids are generally stron er and will do more work in terms of "lift".

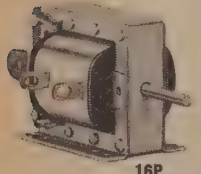
2. However, intermittent duty solenoids shoul not be energized for more than 5 consecutive mi utes, or be permitted to rise more than 85°C. abov 24°C. ambient, without giving them sufficient tim to cool between operation cycles or periods of ene gization.

3. Continuous duty types are designed with a higt er coil resistance so that they will not rise more tha 85°C. above the 24°C. ambient temperature whe operated within maximum lift and stroke rating shown herein.

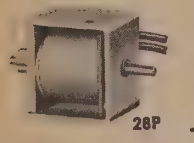
PUSH TYPE SOLENOIDS—NEW!

The popular Guardian Box-Frame solenoids 11 and 28 are now available as PUSH types under the number 11P and 28P for either AC or DC operation. Guardian's famous Laminated solenoids 16 and 18 are for A operation only and they are introduced as PUSH types under the numbers 16P and 18P. For all push type sole noids in the table below the lengths of the push rods are equal to the *maximum* stroke length specified. Spec ify Guardian No., duty, and AC or DC coil voltage when ordering.


11P

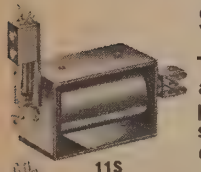

16P

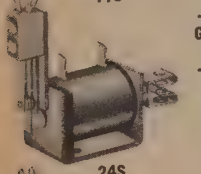

18P


28P

Guardian No.	Duty	Coil Voltage	Ohms	LIFTS AND STROKES (Minimum)	LIFTS AND STROKES (Maximum)	BODY SIZE, INCHES L. x W. x H.	Shipg Wt. Ozs.	NET EACH, LOTS OF: 1-24	25-49	50-99	100-249	250-499	500-up
11P	Inter	24AC	3.5	20 oz. at 1/8"	4.8 oz. at 1"	1 5/16 x 1 27/32 x 1 3/16	7.5	$3.97	$3.62	$3.45	$2.93	$2.76	$2.58
11P	Cont	24AC	8	9.6 oz. at 1/8"	0.8 oz. at 1"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
11P	Inter	120AC	85	20 oz. at 1/8"	4.8 oz. at 1"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
11P	Cont	120AC	200	9.6 oz. at 1/8"	0.8 oz. at 1"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
11P	Inter	6DC	2	32 oz. at 1/8"	1.6 oz. at 3/4"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
11P	Cont	6DC	4.5	20 oz. at 1/8"	0.8 oz. at 3/4"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
11P	Inter	24DC	31	32 oz. at 1/8"	1.6 oz. at 3/4"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
11P	Cont	24DC	72	20 oz. at 1/8"	0.8 oz. at 3/4"	1 5/16 x 1 27/32 x 1 3/16	7.5	3.97	3.62	3.45	2.93	2.76	2.58
16P	Inter	120AC	41	90 oz. at 1/8"	30 oz. at 3/4"	1 5/8 x 1 1/4 x 1 1/2	7.5	4.55	4.15	3.94	3.34	3.13	2.93
16P	Cont	120AC	85	50 oz. at 1/8"	10 oz. at 3/4"	1 5/8 x 1 1/4 x 1 1/2	7.5	4.55	4.15	3.94	3.34	3.13	2.93
18P	Inter	120AC	8.8	280 oz. at 1/8"	80 oz. at 1"	2 1/2 x 1 13/16 x 2 1/16	16.5	5.99	5.54	5.17	4.34	4.07	3.79
18P	Cont	120AC	19.7	145 oz. at 1/8"	40 oz. at 1"	2 1/2 x 1 13/16 x 2 1/16	16.5	5.99	5.54	5.17	4.34	4.07	3.79
28P	Inter	24AC	7.5	28 oz. at 1/16"	4 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	3.97	3.62	3.45	2.93	2.76	2.58
28P	Cont	24AC	17.4	16 oz. at 1/16"	2 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	3.97	3.62	3.45	2.93	2.76	2.58
28P	Inter	120AC	220	28 oz. at 1/16"	4 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	4.25	3.88	3.69	3.50	2.94	2.75
28P	Cont	120AC	400	16 oz. at 1/16"	2 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	4.25	3.88	3.69	3.50	2.94	2.75
28P	Inter	6DC	3.3	28 oz. at 1/16"	1.6 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	3.73	3.41	3.25	2.76	2.60	2.43
28P	Cont	6DC	7.7	19 oz. at 1/16"	0.8 oz. at 3/8"	1 1/8 x 13/16 x 1 3/16	3.5	3.73	3.41	3.25	2.76	2.60	2.43
28P	Inter	12DC	13	28 oz. at 1/16"	1.6 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	3.73	3.41	3.25	2.76	2.60	2.43
28P	Cont	12DC	27	19 oz. at 1/16"	0.8 oz. at 3/4"	1 1/8 x 13/16 x 1 3/16	3.5	3.73	3.41	3.25	2.76	2.60	2.43
28P	Inter	24DC	50	28 oz. at 1/16"	1.6 oz. at 1/2"	1 1/8 x 13/16 x 1 3/16	3.5	3.73	3.41	3.25	2.76	2.60	2.43
28P	Cont	24DC	104	19 oz. at 1/16"	0.8 oz. at 3/8"	1 1/8 x 13/16 x 1 3/16	3.5	3.73	3.41	3.25	2.76	2.60	2.43

SOLENOID SWITCHES


11S


24S


28S

The very widely used Guardian Box-Frame solenoids 11 and 28 as well as the U-Frame 24 have been function ally enhanced by the addition of a single pole double throw switch actuated by a push rod affixed to the plunger. Respective type numbers for the solenoid switches are 11S, 28S and 24S. All switches in the solenoid switch line are rated for 10 amperes at 120 VAC. Specify Guardian No., duty, and AC or DC coil voltage when ordering.

Guardian No.	Duty	Coil Voltage	Ohms	LIFTS AND STROKES (Minimum)	LIFTS AND STROKES (Maximum)	BODY SIZE, INCHES L. x W. x H.	Shipg Wt. Ozs.	NET EACH, LOTS OF: 1-24	25-49	50-99	100-249	250-499	500-up
11S	Inter	115AC	85	25 oz. at 1/8"	6 oz. at 1"	2 3/16 x 1 5/16 x 2 15/64	7.5	$4.56	$4.10	$3.88	$3.65	$3.19	$2.95
11S	Cont	115AC	200	12 oz. at 1/8"	1 oz. at 1"	2 3/16 x 1 5/16 x 2 15/64	7.5	4.56	4.10	3.88	3.65	3.19	2.95
11S	Inter	24DC	31	40 oz. at 1/8"	2 oz. at 3/4"	2 3/16 x 1 5/16 x 2 15/64	7.5	4.56	4.10	3.88	3.65	3.19	2.95
11S	Cont	24DC	72	25 oz. at 1/8"	1 oz. at 3/4"	2 3/16 x 1 5/16 x 2 15/64	7.5	4.56	4.10	3.88	3.65	3.19	2.95
24S	Inter	115AC	310	16 oz. at 1/16"	3 oz. at 3/8"	1 13/16 x 27/32 x 2 3/4	3	4.85	4.36	4.12	3.87	3.39	3.15
24S	Cont	115AC	500	10.5 oz. at 1/16"	2 oz. at 5/8"	1 13/16 x 27/32 x 2 3/4	3	4.85	4.36	4.12	3.87	3.39	3.15
24S	Inter	24DC	52	36 oz. at 1/16"	3 oz. at 1/2"	1 13/16 x 27/32 x 2 3/4	3	4.85	4.36	4.12	3.87	3.39	3.15
24S	Cont	24DC	114	18 oz. at 1/16"	0.5 oz. at 1/2"	1 13/16 x 27/32 x 2 3/4	3	4.85	4.36	4.12	3.87	3.39	3.15
28S	Inter	24DC	50	35 oz. at 1/16"	2 oz. at 1/2"	1 3/16 x 1 5/16 x 2 15/16	3.5	4.33	3.89	3.63	3.46	3.02	2.81
28S	Cont	24DC	104	24 oz. at 1/16"	1 oz. at 3/8"	1 3/16 x 1 5/16 x 2 15/16	3.5	4.33	3.89	3.63	3.46	3.02	2.81

Net

© United Technical Publication

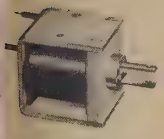
PULL TYPE SOLENOIDS

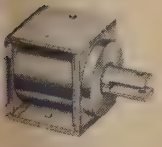
Guardian's greatest selection of U-Frame, Box-Frame, and Laminated styles. Be sure to specify Guardian No., duty, and AC or DC coil voltage when ordering.

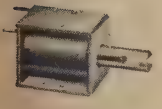
Guardian No.	Duty	Coil Voltage	Ohms	LIFTS AND STROKES (Minimum)	LIFTS AND STROKES (Maximum)	BODY SIZE, INCHES L. x W. x H.	Shipg Wt. Ozs.	NET EACH, LOTS OF: 1-24	25-49	50-99	100-249	250-499	500-up
1A1	Inter	120AC	300	8 oz. at 1/8"	2 oz. at 1/2"	1 3/4 x 1 5/16 x 1 1/16	4.5	$3.47	$3.12	$2.95	$2.43	$2.26	$2.08
1A1	Cont	120AC	675	3 oz. at 1/8"	0.5 oz. at 3/8"	1 3/4 x 1 5/16 x 1 1/16	4.5	3.47	3.12	2.95	2.43	2.26	2.08
1A1	Inter	24DC	42.6	5 oz. at 1/8"	1 oz. at 3/8"	1 3/4 x 1 5/16 x 1 1/16	4.5	3.19	2.86	2.70	2.23	2.07	1.91
1A1	Cont	24DC	74.4	2 oz. at 1/8"	0.5 oz. at 1/4"	1 3/4 x 1 5/16 x 1 1/16	4.5	3.19	2.86	2.70	2.23	2.07	1.91
1A1	Inter	115DC	803	5 oz. at 1/8"	1 oz. at 3/8"	1 3/4 x 1 5/16 x 1 1/16	4.5	3.75	3.38	3.19	2.63	2.44	2.25
1A1	Cont	115DC	2070	2 oz. at 1/8"	0.5 oz. at 1/4"	1 3/4 x 1 5/16 x 1 1/16	4.5	3.75	3.38	3.19	2.63	2.44	2.25
2	Inter	120AC	60	33 oz. at 1/8"	9 oz. at 7/8"	1 5/16 x 1 7/16 x 1 5/8	10	4.05	3.65	3.44	2.84	2.63	2.43
2	Cont	120AC	166	10.5 oz. at 1/8"	3 oz. at 7/8"	1 5/16 x 1 7/16 x 1 5/8	10	4.05	3.65	3.44	2.84	2.63	2.43
2HD	Inter	120AC	36	38 oz. at 1/8"	16 oz. at 3/4"	1 13/16 x 1 7/16 x 1 11/16	13	9.53	8.58	8.10	6.67	6.19	5.71
2HD	Cont	120AC	113	17 oz. at 1/8"	4 oz. at 3/4"	1 13/16 x 1 7/16 x 1 11/16	13	9.53	8.58	8.10	6.67	6.19	5.71
2HD	Inter	24DC	20	100 oz. at 1/8"	5 oz. at 3/4"	1 13/16 x 1 7/16 x 1 11/16	13	9.82	8.84	8.35	6.87	6.38	5.89
2HD	Cont	24DC	64	50 oz. at 1/8"	1 oz. at 3/4"	1 13/16 x 1 7/16 x 1 11/16	13	9.82	8.84	8.35	6.87	6.38	5.89
3HD	Inter	24DC	21	160 oz. at 1/16"	8 oz. at 3/4"	1 25/32 x 1 7/16 x 1 5/8	14	6.60	5.94	5.61	4.62	4.29	3.96
3HD	Cont	24DC	52	100 oz. at 1/16"	3 oz. at 3/4"	1 25/32 x 1 7/16 x 1 5/8	14	6.60	5.94	5.61	4.62	4.29	3.96
4	Inter	120AC	37	24 oz. at 1/8"	22 oz. at 1"	2 1/16 x 1 7/16 x 1 5/8	14.5	4.62	4.16	3.93	3.23	3.00	2.77
4	Cont	120AC	133	8 oz. at 1/8"	6 oz. at 1"	2 1/16 x 1 7/16 x 1 5/8	14.5	4.62	4.16	3.93	3.23	3.00	2.77
4	Inter	24DC	15	110 oz. at 1/8"	4 oz. at 1"	2 1/16 x 1 7/16 x 1 5/8	14.5	4.62	4.16	3.93	3.23	3.00	2.77
4	Cont	24DC	4	55 oz. at 1/8"	2.5 oz. at 7/8"	2 1/16 x 1 7/16 x 1 5/8	14.5	4.62	4.16	3.93	3.23	3.00	2.77
4	Inter	115DC	346	90 oz. at 1/8"	4 oz. at 1"	2 1/16 x 1 7/16 x 1 5/8	14.5	4.91	4.42	4.17	3.44	3.19	2.94
4	Cont	115DC	1300	55 oz. at 1/8"	2.5 oz. at 7/8"	2 1/16 x 1 7/16 x 1 5/8	14.5	4.91	4.42	4.17	3.44	3.19	2.94
4HD	Inter	120AC	15	107 oz. at 1/16"	30 oz. at 1 1/4"	2 3/16 x 1 7/16 x 1 5/8	15	7.05	6.35	5.99	4.94	4.58	4.23
4HD	Cont	120AC	53	26 oz. at 1/8"	8 oz. at 1 1/4"	2 3/16 x 1 7/16 x 1 5/8	15	7.05	6.35	5.99	4.94	4.58	4.23
4HD	Inter	24DC	15	156 oz. at 1/8"	21 oz. at 3/4"	2 3/16 x 1 7/16 x 1 5/8	15	7.05	6.35	5.99	4.94	4.58	4.23
4HD	Cont	24DC	30	70 oz. at 1/8"	4 oz. at 3/4"	2 3/16 x 1 7/16 x 1 5/8	15	7.05	6.35	5.99	4.94	4.58	4.23
4HD	Inter	115DC	350	156 oz. at 1/8"	21 oz. at 3/4"	2 3/16 x 1 7/16 x 1 5/8	15	7.05	6.35	5.99	4.94	4.58	4.23
4HD	Cont	115DC	1200	70 oz. at 1/8"	4 oz. at 3/4"	2 3/16 x 1 7/16 x 1 5/8	15	7.05	6.35	5.99	4.94	4.58	4.23
11	Inter	24AC	3.5	25 oz. at 1/8"	6 oz. at 1"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Cont	24AC	8	12 oz. at 1/8"	1 oz. at 1"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Inter	120AC	85	25 oz. at 1/8"	6 oz. at 1"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Cont	120AC	200	12 oz. at 1/8"	1 oz. at 1"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Inter	6DC	2	40 oz. at 1/8"	2 oz. at 3/4"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Cont	6DC	4.5	25 oz. at 1/8"	1 oz. at 3/4"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Inter	24DC	31	40 oz. at 1/8"	2 oz. at 3/4"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
11	Cont	24DC	72	25 oz. at 1/8"	1 oz. at 3/4"	1 7/8 x 1 5/16 x 1 3/16	7.5	3.47	3.12	2.95	2.43	2.26	2.08
12	Inter	120AC	100	32 oz. at 1/8"	4 oz. at 1"	1 5/8 x 1 1/4 x 1 3/16	6	4.91	4.42	4.16	3.44	3.19	2.94
12	Cont	120AC	150	22 oz. at 1/8"	3 oz. at 7/8"	1 5/8 x 1 1/4 x 1 3/16	6	4.91	4.42	4.16	3.44	3.19	2.94
14	Inter	120AC	11	110 oz. at 1/8"	52 oz. at 1 1/2"	2 1/16 x 1 13/16 x 2 1/16	9	6.64	5.98	5.64	4.65	4.32	3.98
14	Cont	120AC	18	65 oz. at 1/8"	37 oz. at 1 1/2"	2 1/16 x 1 13/16 x 2 1/16	9	6.64	5.98	5.64	4.65	4.32	3.98
16	Inter	120AC	41	90 oz. at 1/8"	30 oz. at 3/4"	1 5/8 x 1 1/4 x 1 1/2	7.5	4.05	3.65	3.44	2.84	2.63	2.43
16	Cont	120AC	85	50 oz. at 1/8"	10 oz. at 3/4"	1 5/8 x 1 1/4 x 1 1/2	7.5	4.05	3.65	3.44	2.84	2.63	2.43
16	Inter	240AC	200	90 oz. at 1/8"	30 oz. at 3/4"	1 5/8 x 1 1/4 x 1 1/2	7.5	4.33	3.90	3.68	3.03	2.81	2.59
16	Cont	240AC	350	50 oz. at 1/8"	10 oz. at 3/4"	1 5/8 x 1 1/4 x 1 1/2	7.5	4.33	3.90	3.68	3.03	2.81	2.59
18	Inter	120AC	8.8	280 oz. at 1/8"	80 oz. at 1"	2 1/2 x 1 13/16 x 2 1/16	16.5	5.49	4.94	4.67	3.84	3.57	3.29
18	Cont	120AC	19.7	145 oz. at 1/8"	40 oz. at 1"	2 1/2 x 1 13/16 x 2 1/16	16.5	5.49	4.94	4.67	3.84	3.57	3.29
18	Inter	240AC	45	280 oz. at 1/8"	80 oz. at 1"	2 1/2 x 1 13/16 x 2 1/16	16.5	5.98	5.20	4.91	4.05	3.76	3.58
18	Cont	240AC	78	145 oz. at 1/8"	40 oz. at 1"	2 1/2 x 1 13/16 x 2 1/16	16.5	5.98	5.20	4.91	4.05	3.76	3.58
22	Inter	6DC	4	24 oz. at 1/16"	1 oz. at 3/8"	1 1/4 x 3/4 x 3/4	2.5	3.23	2.91	2.75	2.26	2.10	1.93
22	Cont	6DC	9	13 oz. at 1/16"	0.5 oz. at 1/4"	1 1/4 x 3/4 x 3/4	2.5	3.23	2.91	2.75	2.26	2.10	1.93
22	Inter	24DC	60	24 oz. at 1/16"	1 oz. at 7/16"	1 1/4 x 3/4 x 3/4	2.5	3.23	2.91	2.75	2.26	2.10	1.93
22	Cont	24DC	144	13 oz. at 1/16"	0.5 oz. at 3/8"	1 1/4 x 3/4 x 3/4	2.5	3.23	2.91	2.75	2.26	2.10	1.93
24	Inter	120AC	310	16 oz. at 1/16"	3 oz. at 5/16"	1 1/4 x 27/32 x 1	3	3.75	3.38	3.19	3.00	2.44	2.25
24	Cont	120AC	500	10.5 oz. at 1/16"	2 oz. at 5/16"	1 1/4 x 27/32 x 1	3	3.75	3.38	3.19	3.00	2.44	2.25
24	Inter	24DC	52	36 oz. at 1/16"	3 oz. at 1/2"	1 1/4 x 27/32 x 1	3	3.75	3.38	3.19	3.00	2.44	2.25
24	Cont	24DC	114	18 oz. at 1/16"	0.5 oz. at 1/2"	1 1/4 x 27/32 x 1	3	3.75	3.38	3.19	3.00	2.44	2.25
26	Inter	120AC	140	28 oz. at 1/16"	3 oz. at 7/8"	1 3/4 x 7/8 x 1 5/16	4	3.96	3.56	3.37	2.77	2.57	2.37
26	Cont	120AC	250	13 oz. at 1/16"	4 oz. at 5/8"	1 3/4 x 7/8 x 1 5/16	4	3.96	3.56	3.37	2.77	2.57	2.37
26	Inter	24DC	36	65 oz. at 1/16"	3 oz. at 3/4"	1 3/4 x 7/8 x 1 5/16	4	3.75	3.38	3.19	2.63	2.44	2.25
26	Cont	24DC	85	36 oz. at 1/16"	1.5 oz. at 1/2"	1 3/4 x 7/8 x 1 5/16	4	3.75	3.38	3.19	2.63	2.44	2.25
28	Inter	24AC	7.5	35 oz. at 1/16"	5 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.47	3.12	2.95	2.43	2.26	2.08
28	Cont	24AC	17.4	20 oz. at 1/16"	2.5 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.47	3.12	2.95	2.43	2.26	2.08
28	Inter	120AC	220	35 oz. at 1/16"	5 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.75	3.38	3.19	3.00	2.44	2.25
28	Cont	120AC	400	20 oz. at 1/16"	2.5 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.75	3.38	3.19	3.00	2.44	2.25
28	Inter	6DC	3.3	35 oz. at 1/16"	2 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.23	2.91	2.75	2.26	2.10	1.93
28	Cont	6DC	7.7	24 oz. at 1/16"	1 oz. at 3/8"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.23	2.91	2.75	2.26	2.10	1.93
28	Inter	12DC	13	35 oz. at 1/16"	2 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.23	2.91	2.75	2.26	2.10	1.93
28	Cont	12DC	27	24 oz. at 1/16"	1 oz. at 3/8"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.23	2.91	2.75	2.26	2.10	1.93
28	Inter	24DC	50	35 oz. at 1/16"	2 oz. at 1/2"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.23	2.91	2.75	2.26	2.10	1.93
28	Cont	24DC	104	24 oz. at 1/16"	1 oz. at 3/8"	1 1/8 x 1 5/16 x 1 3/16	3.5	3.23	2.91	2.75	2.26	2.10	1.93


1A1 AC or DC

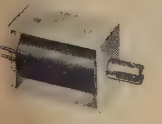

2AC

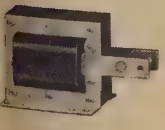

2HD AC or DC

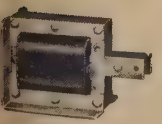

3HD DC


4 AC or DC

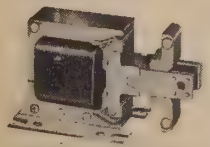

4HD AC or DC

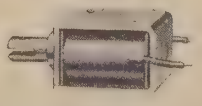

11 AC or DC

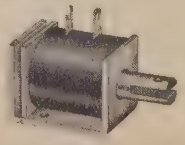

12 AC


14 AC


16 AC


18 AC


22 DC


24 AC or DC


26 AC or DC


28 AC or DC

© United Technical Publications

Net

GUARDIAN® ELECTRIC *Solenoids & Switches*

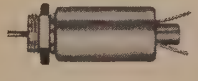
PULL TYPE TUBULAR SOLENOIDS



The clean design of Guardian's tubular solenoids permits side-by-side mounting with ease. The threaded bushing is inserted through the mounting hole and secured with the hex nut furnished with the solenoid. Units available with lifts up to 11 lbs. Life at rated load 10 million operations minimum. Each unit furnished with an "L" shaped bracket for surface mounting. Some of the typical applications are Computers, Aircraft and Missiles, Office Equipment, and Copy Machines.

Guardian No.	Duty	Coil Voltage	LIFTS AND STROKES (Minimum)	(Maximum)	BODY SIZE, INCHES L. x Dia.	Ohms	Watts	Shipg Wt. Ozs.	NET EACH, LOTS OF: 1-24	25-49	50-99	100-249	250-499	500-up
T3.5 x 9	— Inter —	24DC	11 oz. at 1/32"	.5 oz. at 1/2"	1 1/8 x 7/16	57	10	3.5	$3.10	$2.79	$2.64	$2.48	$2.17	$2.01
T3.5 x 9	— Cont —	24DC	8 oz. at 1/32"	.25 oz. at 5/16"		195	3	3.5	3.20	2.88	2.72	2.57	2.24	2.08
T4 x 7	— Inter —	24DC	10 oz. at 1/32"	.5 oz. at 1/4"	7/8 x 1/2	82	7	3.5	4.20	3.78	3.57	3.36	2.94	2.73
T4 x 7	— Cont —	24DC	4 oz. at 1/32"	.25 oz. at 5/32"		240	2.4	3.5	4.30	3.87	3.65	3.44	3.01	2.80
T4 x 12	— Inter —	24DC	15 oz. at 1/32"	.5 oz. at 5/8"	1 1/2 x 1/2	48	12	3.5	4.50	4.05	3.83	3.60	3.15	2.92
T4 x 12	— Cont —	24DC	6 oz. at 1/32"	.25 oz. at 5/16"		220	2.6	3.5	4.60	4.14	3.91	3.68	3.22	3.05
T4 x 16	— Inter —	24DC	17 oz. at 1/32"	.5 oz. at 1 3/16"	2 x 1/2	29	20	3.5	4.80	4.32	4.08	3.84	3.36	3.12
T4 x 16	— Cont —	24DC	10 oz. at 1/32"	.5 oz. at 7/8"		145	4	3.5	4.90	4.41	4.15	3.92	3.43	3.18
T6 x 12	— Inter —	24DC	35 oz. at 1/16"	1 oz. at 5/8"	1 1/2 x 3/4	48	12	5	5.00	4.50	4.25	4.00	3.50	3.25
T6 x 12	— Cont —	24DC	20 oz. at 1/16"	1 oz. at 1/2"		125	4.8	5	5.10	4.59	4.33	4.08	3.57	3.31
T8 x 9	— Inter —	24DC	50 oz. at 1/16"	1 oz. at 9/16"	1 1/8 x 1	30	19	6	5.15	4.63	4.38	4.12	3.60	3.35
T8 x 9	— Cont —	24DC	15 oz. at 1/16"	1 oz. at 3/8"		130	4.5	6	5.20	4.68	4.42	4.16	3.64	3.38
T8 x 16	— Inter —	24DC	80 oz. at 1/16"	2 oz. at 1 1/4"	2 x 1	15	38	6	5.40	4.86	4.59	4.32	3.78	3.51
T8 x 16	— Cont —	24DC	40 oz. at 1/16"	2 oz. at 11/16"		95	6	6	5.50	4.95	4.65	4.40	3.85	3.57
T12 x 13	— Inter —	24DC	150 oz. at 1/8"	4 oz. at 7/8"	1 5/8 x 1 1/2	14	40	7	6.50	5.85	5.52	5.20	4.55	4.22
T12 x 13	— Cont —	24DC	48 oz. at 1/8"	1 oz. at 3/4"		90	6.6	7	6.70	6.03	5.69	5.36	4.69	4.35
T12 x 19	— Inter —	24DC	175 oz. at 1/8"	6 oz. at 1 1/2"	2 3/8 x 1 1/2	9.5	60	8	7.10	6.39	6.03	5.68	4.97	4.61
T12 x 19	— Cont —	24DC	80 oz. at 1/8"	1 oz. at 1 1/4"		59	10	8	7.20	6.48	6.12	5.76	5.04	4.68

PUSH TYPE TUBULAR SOLENOIDS—NEW!



Now, several of the most popular tubular solenoids have been designed for push type operation. The T3.5, T4 (in two lengths) and the T6 have been fitted with non-magnetic metal push rods which push out from the threaded mounting end of the solenoid and are designated as TP3.5, TP4, and TP6 types. Note that in tubular solenoid construction the push types are equal in "lift" to their pull type counterparts. For all push type tubular solenoids in the table below the lengths of the push rods are the same as the **maximum** stroke lengths specified. Hex nuts as well as "L" shaped brackets for either panel or surface mounting are furnished.

Guardian No.	Coil Voltage	LIFTS AND STROKES (Minimum)	(Maximum)	L. x Dia.	Ohms	Watts		NET EACH, LOTS OF 1-24	25-49	50-99	100-249	250-499	500-up
TP3.5 x 9 —	Inter — 24DC	11 oz. at 1/32"	0.5 oz. at 1/2"	1 1/8 x 7/16	57	10	3.5	$3.60	$3.29	$3.14	$2.98	$2.67	$2.51
TP3.5 x 9 —	Cont — 24DC	8 oz. at 1/32"	.25 oz. at 5/16"	1 1/8 x 7/16	195	3	3.5	3.70	3.38	3.22	3.07	2.74	2.58
TP4 x 12 —	Inter — 24DC	15 oz. at 1/32"	0.5 oz. at 5/8"	1 1/2 x 1/2	48	12	3.5	5.00	4.55	4.33	4.10	3.65	3.42
TP4 x 12 —	Cont — 24DC	6 oz. at 1/32"	.25 oz. at 5/16"	1 1/2 x 1/2	220	2.6	3.5	5.10	4.64	4.41	4.18	3.72	3.55
TP4 x 16 —	Inter — 24DC	17 oz. at 1/32"	0.5 oz. at 1 3/16"	2 x 1/2	29	20	3.5	5.30	4.82	4.58	4.34	3.86	3.62
TP4 x 16 —	Cont — 24DC	10 oz. at 1/32"	0.5 oz. at 7/8"	2 x 1/2	145	4	3.5	5.40	4.91	4.66	4.42	3.93	3.68
TP6 x 12 —	Inter — 24DC	35 oz. at 1/16"	1 oz. at 5/8"	1 1/2 x 3/4	48	12	5	5.50	5.00	4.75	4.50	4.00	3.75
TP6 x 12 —	Cont — 24DC	20 oz. at 1/16"	1 oz. at 1/2"	1 1/2 x 3/4	125	4.8	5	5.60	5.09	4.83	4.58	4.07	3.81

NEW PUSH BUTTON SWITCH BANKS



Sleek, compact design, features four push buttons on 5/8" centers. Each button actuates four double throw switches with 1½ ampere contacts. Unit has four #6-32 tapped mounting holes on 7/8" x 2 13/16" centers. Switch terminals are .110" quick connect for .016" female receptacle (AMP #42415). Each push button has a 28 Volt lamp no. G.L.-04 and a replaceable white translucent face. Also available in replacement kits: red or green translucent faces and clear faces. Long life: 100,000 mechanical operations. Versatile functions available: **INTERLOCK** Only one button at a time may be pushed, resetting to normal any button previously pushed. **NON-LOCK** Each button has momentary action, returning to normal when pressure is released; two or more buttons may be pushed simultaneously. **PUSH TO LOCK/PUSH TO RELEASE** Each button locks in actuated position or resets to normal upon alternate pushes; each button independent of others; two or more buttons may be actuated or reset simultaneously. **THREE LOCK/MOMENTARY-RESET** One end button and both middle buttons lock when pushed individually or simultaneously; other end button has momentary action, returning to normal when pressure is released and resetting to normal any other buttons previously locked. Shipping weight: 7 oz.

SIZE: 3 25/32" x 3 1/8" x 1"		QUANTITIES NET EACH, LOTS OF 1-24	25-49	50-99	100-249
Guardian No.	Descrip.				
IL-04-4C	Interlock	$19.45	$17.60	$15.50	$14.50
NL-04-4C	Non-Lock	19.45	17.60	15.50	14.50
PL/PR-04-4C	Push/Lock Push/Release	19.45	17.60	15.50	14.50
3L/MR-04-4C	3 Lock Momentary Reset	19.45	17.60	15.50	14.50
REPLACEMENT KITS					
R.T.-04	Red Translucent (4 faces)	$ 1.00	$ .90	$ .75	$ .60
G.T.-04	Green Trans. (4 faces)	1.00	.90	.75	.60
C.P.-04	Clear Plastic (4 faces)	1.00	.90	.75	.60
G.L.-04	28 volt lamp (box of 4)	2.25	2.00	1.85	1.75

MULTICOLOR ILLUMINATED LEVER SWITCHES



Bushing mounted illuminated lever switches capable of mounting vertically on 1¾" centers and horizontally on ¾" centers. Mount in panels up to 1/8" thick with behind panel size .750" x 1.334" x 2.380" max. Supplied with 28 volt lamp and red and green insertable color filters. (Center position on 3 position switches remains clear). Available in Locked-off-Locked (LOL), Locked-Locked (LL), and Locked-Momentary (LM) in either 4 or 10 amps, (110VAC Resistive). Other switching position configurations possible with easily replaceable cams. Cam kits include cams capable of converting to LOL, MOM, LL, ML, LM, OL, LO, MOL, LOM. Terminals, .110 quick-disconnect.

Guardian No.	NET EACH, LOTS OF 1-24	25-49	50-99	100-249
LOL-2C-10 Amp	$4.00	$3.60	$3.40	$3.20
LL-2C-10 Amp	4.00	3.60	3.40	3.20
LM-2C-10 Amp	4.00	3.60	3.40	3.20
LOL-4C-4 Amp	4.95	4.45	4.15	3.70
LL-4C-4 Amp	4.95	4.45	4.15	3.70
LM-4C-4 Amp	4.95	4.45	4.15	3.70

CAM KIT—18 inserts for 9 switching positions; 1-9 $1.70; 10 & up $1.60.

COLOR FILTER/LAMP KIT . . . 28 volt lamp; socket; retainer clip; 2 red, 2 green filters. 1-9 $1.10; 10 & up $1.00.

Net

© United Technical Publications

GUARDIAN® ELECTRIC *Steppers*

STEPPING CONTROLS

or accurate sequence selecting, pulse multiplying, pulse dividing, circuit select-ng, automatic homing, remote homing, counting and latching. Guardian steppers re specified for automatic control of electrically operated business machines. ccumulators (coin and other), animated displays, electrical scoreboards, auto-natic overhead garage doors, assembly line controls, automatic packaging oading) controls, sump pump controls, commercial slide projectors, among thers. All Guardian steppers except Series 705 are intermittent duty. All are irect-drive units with switching operations completed upon energization.



PC

CONTINUOUS ROTATION



MC

The circuit selection wiper on Continuous Rotation Steppers moves in one direction only, upon energization of the step coil. This type of stepper is vailable in standard 24 point (MC) or 40 point (PC). The Guardian MC Midget ontinuous Rotation Stepper is particularly adaptable to repetitive sequence unctions. The 24 bridging contact deck is evenly divisible by eight possible equences. The PC stepper features self-stepping speeds up to 30 steps per econd and mechanical life expectancy of over 4,000,000 steps. The circuit electing wiper on Electrical Reset Steppers can be reset to zero or home from ny desired position, by energization of the reset magnet. They are frequently mployed to record counts by various numerical groups, then resetting utomatically.



PER

ELECTRICAL RESET



MER

Type MER. A direct drive (steps on energization) with positive mechanical reset interlock actuated by the reset magnet and unlocked on the first energization of the step magnet. Assures ositive reset on as short a pulse as one-hundredth of a second. By interonnecting two or more Steppers, count can be increased to any desired total ounting by tens, or any convenient multiple. Will control a sequence of operaon and then automatically reset to starting position.

ype PER. Operation same as MER but with up to 36 active contacts.

Type MER-SOL



ll features of the widely used Guardian MER 24 point lectrical reset stepper... PLUS Solenoid "lifts" wiper ontacts when stepping to reduce friction... and arcing. ncreased contact ratings to 5 amps resistive at 120 olts AC. Increased function capability. Increased de-endability. Increased life expectancy — now up to 0,000,000 steps. Compact design.



MAS

ADD AND SUBTRACT



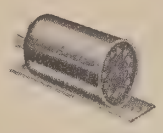
PAS

Add and subtract steppers are basically continuous rotation types with the added feature of being able to reverse the movement of the selecting wiper when required.

ype MAS A midget add and subtract stepper incorporating a cam actuated vitch which operates at zero position. Used primarily to indicate a zero bal-nce between pulses supplied to the "add" coil as compared to pulses received the "subtract" coil.

ype PAS New Bi-directional steppers whereby the selector wiper moves either rection depending on which of the coils are energized. Supplied with .057" a. Amp quick-connect terminals arranged in circle on deck, and also includes form "C" cam switch.

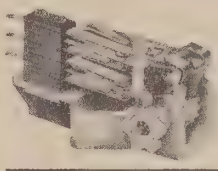
ROTOMITE STEPPER SERIES 705



An entirely new concept in stepper design, the Guardian "Rotomite" is first with maximum stepper control in minimum space. Offering high contact rating of 3 amps resistive, 1 amp inductive (50% PF). Featuring **continuous duty operation** with life well in excess of one million steps, the completely enclosed Rotomite is geared for continuous rotation of 12 positions. A few Rotomite applications presently include computers, business machines, lighting and vending controls, counting and sorting devices, and model trains. Shpg. wt., 5 oz.

SIZE: 2" Long x 1 3/16" Dia.			QUANTITIES				
Guardian No.	No. Points	Coil Voltage	NET EACH, LOTS OF 1-24	25-49	50-99	100-249	250-up
IR-705-12P-6D	12	6DC	$7.26	$6.53	$6.17	$5.08	$4.72
IR-705-12P-12D	12	12DC	7.26	6.53	6.17	5.08	4.72
IR-705-12P-24D	12	24DC	7.26	6.53	6.17	5.08	4.72

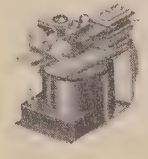
SERIES 660—665 SEQUENCE STEPPER



Intended to perform switching operations in a repetitive transfer sequence. Each electrical impulse moves the switch contacts to the opposite position in the sequence. Applications include lights, signs, motors, appliances and similar units. Contacts rated up to 12½ amps, 120V., 60 cycles, non-inductive load. Shpg. wt., 8 oz. Mounting: 4 holes 8-32 (NC-2B).

SIZE: (DPDT) 3" x 1¾" x 2 1/16"			QUANTITIES				
Guardian No.	Coil Voltage	Cont. Comb.	Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
660-C-24A	24AC	SPDT	$7.54	$6.77	$6.41	$5.28	$4.90
660-2C-24A	24AC	DPDT	8.14	7.33	6.92	5.70	5.29
660-4C-24A	24AC	4PDT	11.83	10.65	10.06	8.28	7.69
660-C-120	115VAC	SPDT	7.54	6.77	6.41	5.28	4.90
660-2C-120	115VAC	DPDT	8.14	7.33	6.92	5.70	5.29
660-4C-120	115VAC	4PDT	11.83	10.65	10.06	8.28	7.69
665-C-24D	24DC	SPDT	7.54	6.77	6.41	5.28	4.90
665-2C-24D	24DC	DPDT	8.14	7.33	6.92	5.70	5.29
665-4C-24D	24DC	4PDT	11.83	10.65	10.06	8.28	7.69

SERIES 640L ON/OFF STEPPER



New, improved Midget Latching Stepper with all the features of the Series 640. Single coil. SPST or SPDT contact combinations. Recommended for positive on/off control of positioning devices, remote controls, lighting circuits and many additional applications. Impulse as short as 20 MS energizes coil to reverse position of snap-action switches. Holds last position of switch with coil de-energized. Contacts rated for 5 amps at 120 VAC, 60 Hz, non-inductive load. Power requirement: 6VA. Solder lug terminals for coils and contacts. Mounting: Single mounting hole tapped 8-32 (NC-2B).

SIZE: 1 29/32" x 1 7/32" x 1 13/16"			QUANTITIES				
Guardian No.	Cont. Comb.	Coil Voltage	NET EACH, LOTS OF 1-24	25-49	50-99	100-249	250-up
IR-640L-A-120A	SPST	120AC	$4.90	$4.41	$4.17	$3.43	$3.19
IR-640L-C-120A	SPDT	120AC	5.23	4.71	4.45	3.66	3.40

All stepper contact points are rated 1½ amps resistive, at 120 V., 60 cps. Coil* Voltages are 120 AC, 60 Hz and 24 DC.

Guardian No.	Watts	Volt Amperes	No. of Points	No. of Active Contacts	Max. Steps per Second	Shipping Weight Ounces	SIZE Length	Width	Height	QUANTITIES Net Each, Lots of 1-24	25-49	50-99	100-249	250 up
IR-PC-120AC	30	40	40	40	20	17	3 3/8	3 3/8	3 1/32	$21.95	$19.76	$18.66	$15.37	$14.27
IR-MC-120AC	17	30	24	24	20	9½	3¼	3	2 3/16	16.25	14.63	13.81	11.38	10.56
IR-PER-120AC	35-7**	50-10**	40	36	20	22	3	3 3/8	3 5/16	28.90	26.00	24.57	20.23	18.79
MER-120AC	20-8**	35- 9**	24	22	20	11½	2 3/16	3 5/16	2 3/16	17.35	15.62	14.75	12.15	11.28
MER-24DC	20-8**	35- 9**	24	22	20	11½	2 3/16	3 5/16	2 3/16	17.35	15.62	14.75	12.15	11.28
MER-SOL-120AC	20-8	20- 9	24	22	20	14	4 3/8	3 5/16	2 3/16	24.75	22.28	21.04	17.33	16.09
MER-SOL-24DC	20-8	20- 9	24	22	20	14	4 3/8	3 5/16	2 3/16	24.75	22.28	21.04	17.33	16.09
IR-MAS-120AC	9	12	30	****	10	11	3¼	3 1/8	1 13/16	19.00	17.00	16.15	13.30	12.35
IR-PAS-120VAC	35	50	40	40***	29	22	3¼	3 3/8	3 5/16	28.90	26.00	24.57	20.23	18.79

NOTE—*Steppers will operate satisfactorily at 15% below or 10% above rated voltage. **Listings are for stepping coil and reset coil, respectively. ***Includes Zero (0) position. ****Zero (0) position switch only.

GUARDIAN CALIFORNIA
SOLID STATE CONTROLS

MET SERIES TIME DELAY



The MET Series of Time Delays are designed to replace many expensive units now on the market, they offer close tolerance repeatability at a low price. Designed for on-operate and on-release, with a range of .5 to 300 seconds, these low cost Time Delays provide an output of 10 amp resistive, 120 VAC, 50-60 Hz and operate on inputs of 120 VAC, 50-60 Hz, 24 VAC, 50-60 Hz or 24 VDC, polarity protected. These new Time Delays feature accuracy of ±10% of nominal setting over voltage and temperature range, repeatability to 1% within fixed conditions, a single turn potentiometer and time delays of .5 to 100 and 100 to 300 seconds over a temperature range of 0°C to 55°C.

O in part number indicates delay on operate, R delay on release.

Size: 1.90" x 2.40" x 3.50"			QUANTITIES			
Guardian No.	Volts	Delay Range	Net Each, Lots of 1-24	25-49	50-99	100-up
MET-O-100-24A	24 VAC	.5 to 100 sec.	$18.00	$17.10	$16.20	$13.50
MET-O-300-24A	24 VAC	100 to 300	19.10	18.15	17.20	14.30
MET-O-100-120A	120 VAC	.5 to 100	17.60	16.70	15.85	13.20
MET-O-300-120A	120 VAC	100 to 300	19.10	18.15	17.20	14.30
MET-O-100-24D	24 VDC	.5 to 100	18.00	17.10	16.20	13.50
MET-O-300-24D	24 VDC	100 to 300	19.10	18.15	17.20	14.30
MET-R-100-24A	24 VAC	.5 to 100 sec.	26.20	24.90	23.60	19.65
MET-R-300-24A	24 VAC	100 to 300	26.90	25.55	23.95	20.20
MET-R-100-120A	120 VAC	.5 to 100	25.50	24.25	22.95	19.24
MET-R-300-120A	120 VAC	100 to 300	26.25	24.95	23.65	19.70
MET-R-100-24D	24 VDC	.5 to 100	26.20	24.90	23.60	19.65
MET-R-300-24D	24 VDC	100 to 300	26.90	25.55	23.95	20.20

BDT SERIES TIME DELAY

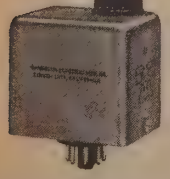




A new commercial Time Delay with unusual features which include operation on high or low line, replaceable electro-mechanical relay, repeatability, temperature stability and small size. The Time Delay incorporates all silicon transistor circuits that operate over a wide input range of 75-125 VAC, 50-60 Hz and draw only 5 ma prior to time out. 24 VDC units also available. Enclosed in a standard relay housing, terminated with an octal plug (8 pin), they are available with time delay periods from 1-10 to 10-60 seconds, adjustable. The BDT Series is one of the smallest internally adjustable time delays on the market, and very competitively priced. BDT Time Delays are designed to operate in the most severe industrial applications. The solid state circuit, by design, is immune to most transient noise found on commercial power lines. Voltage up to 2500 volts peak (short duration) can be tolerated without damage or malfunction. In the area of machine control, where large numbers of control cycles are expected the BDT Series offers another advantage, the ability to replace the internal relay. The solid state timing control has the minimum capability of $5x10^7$ operations under normal conditions.

SIZE: 1.39" x 1.45" x 2.15"			QUANTITIES			
Guardian No.	Volts	Delay Range	Net Each, Lots of 1-24	25-49	50-99	100-up
IR-BDT-0-10-120V	120 VAC	1 to 10 sec.	$17.10	$16.25	$15.40	$12.80
IR-BDT-0-60-120V	120 VAC	10 to 60	17.60	16.75	15.85	13.20
IR-BDT-0-10-24V	24 VDC	1 to 10	16.90	16.05	15.20	12.65
IR-BDT-0-60-24V	24 VDC	10 to 60	17.10	16.25	15.40	12.80

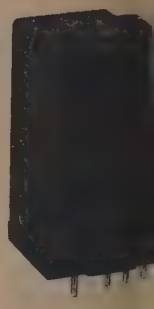
TDO SERIES TIME DELAY



Series TDO incorporates many features of more expensive units, but is most economical, offering contacts rated at 5 amps, DPDT, 120 VAC with adjustable delay of 0.5 to 30 seconds on attract with a ten turn potentiometer. Repeatability is within 5% after a line interruption of 100 milliseconds. Standard unit available is 120 VAC.

SIZE: 2.06" x 2.62" x 3.00"			QUANTITIES		
Guardian No.	Volts	Delay Range	Net Each, Lots of 1-49	50-99	100 & up
TDO62C30-115A	120 VAC	.5 to 30 sec.	$16.32	$15.69	$14.12

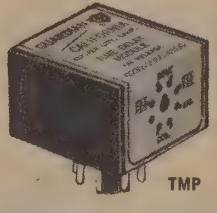
TD SERIES TIME DELAY



Series TD is the most accurate and compact time-delay relay available from stock. Six models provide adjustable delays from 1 to 180 seconds with 24 VDC or 120 VAC inputs. A 15 turn potentiometer provides high adjustment resolution. The TD series is accurate to 5% of nominal setting over its complete temperature and voltage range. Repeatability is 2% after a line interruption of 50 MS. Delays are on attract with 3PDT contacts rated at 10 amps resistive.

SIZE: 2.06" x 2.62" x 3.00"			QUANTITIES		
Guardian No.	Volts	Delay Range	Net Each, Lots of 1-49	50-99	100 &
TD33C15-24D	24 VDC	1 to 15 sec.	$24.20	$21.88	$19.6
TD33C60-24D	24 VDC	10 to 60	25.19	22.67	20.4
TD33C180-24D	24 VDC	50 to 180	32.09	29.88	26.9
TD63C15-120A	120 VAC	1 to 15	29.70	26.73	24.0
TD63C60-120A	120 VAC	10 to 60	30.06	27.54	24.7
TD63C180-120A	120 VAC	50 to 180	36.85	33.16	29.8

TMP & TMT SERIES TIMING MODULES



TMP



TMT

Series TMP/TMT Time Delay Modules are available in "on operate" and "o release" configurations with two time delays and three standard input voltag ranges. Time delay is externally adjustable within two ranges from ½ to 10 seconds and 100 to 300 seconds. Repeatability is ±1% under normal cond tions. Life expectancy is one million cycles. Standard input voltages are 2 VAC, 120 VAC and 24 VDC. TMP is terminated in an octal plug for quick moun ing and remote control of relay and other switching devices. The TMT "Fla Pack" package was designed to accept Guardian relays mounted to it, or t allow the stacking of modules for extension of timing periods, or direct in stallation into a printed circuit board.

O in part number indicates delay on operate, R delay on release.

SIZE: 1.50" x 1.50" x 1.00"			QUANTITIES		
Guardian No.	Volts	Time Range	Net Each, Lots of 1-49	50-99	100-up
IR-TMT-0-100-24D	24VDC	.5-100 sec.	$11.59	$11.10	$10.41
IR-TMT-0-300-24D	24VDC	100-300	14.76	14.14	13.26
IR-TMT-0-100-24A	24VAC	.5-100	12.37	11.86	11.12
IR-TMT-0-300-24A	24VAC	100-300	15.55	14.90	13.97
IR-TMT-0-100-120A	120VAC	.5-100	11.59	11.10	10.41
IR-TMT-0-300-120A	120VAC	100-300	14.76	14.14	13.26
IR-TMT-R-100-24D	24VDC	.5 to 100	15.60	14.94	14.01
IR-TMT-R-300-24D	24VDC	100 to 300	18.72	17.94	16.82
IR-TMT-R-100-24A	24VAC	.5 to 100	16.07	15.39	14.43
IR-TMT-R-300-24A	24VAC	100 to 300	19.19	18.38	17.24
IR-TMT-R-100-120A	120VAC	.5 to 100	15.60	14.94	14.01
IR-TMT-R-300-120A	120VAC	100 to 300	18.72	17.94	16.82

Relay illustrated with Model TMT not included in TMT prices.

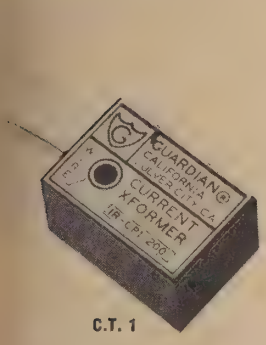
SIZE: 2.00" x 2.00" x .63"			QUANTITIES		
Guardian No.	Volts	Time Range	Net Each, Lots of 1-49	50-99	100-up
IR-TMP-0-100-24D	24VDC	.5 to 100	$12.91	$12.37	$11.60
IR-TMP-0-300-24D	24VDC	100 to 300	15.25	14.61	13.70
IR-TMP-0-100-24A	24VAC	.5 to 100	13.41	12.85	12.05
IR-TMP-0-300-24A	24VAC	100 to 300	15.75	15.09	14.15
IR-TMP-0-100-120A	120VAC	.5 to 100	12.91	12.37	11.60
IR-TMP-0-300-120A	120VAC	100 to 300	15.25	14.61	13.70
IR-TMP-R-100-24D	24VDC	.5 to 100	17.48	16.65	15.71
IR-TMP-R-300-24D	24VDC	100 to 300	19.86	19.02	17.84
IR-TMP-R-100-24A	24VAC	.5 to 100	17.95	17.20	16.13
IR-TMP-R-300-24A	24VAC	100 to 300	20.16	19.31	18.11
IR-TMP-R-100-120A	120VAC	.5 to 100	17.48	16.75	15.71
IR-TMP-R-300-120A	120VAC	100 to 300	19.86	19.02	17.84

Net

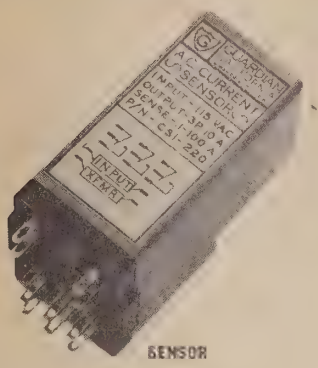
© United Technical Publication

GUARDIAN CALIFORNIA
SOLID STATE CONTROLS

PROTECTIVE SENSORS



C.T. 1



SENSOR

A complete line of industrial sensors is available from GUARDIAN® including 3-phase (IR-AV2), Close Differential (IR-VS3), Over-Voltage (IR-VS1), Under-Voltage (IR-VS2), 4 wire Phase Sequence (IR-PR1), Adjustable Frequency (IR-FS1) and AC Current Sensors (CS1 & CT1). These sensors are bi-products of designs for military application with solid state networks. The relay is 3PDT 10 amps resistive with either 24VDC or 120 VAC available. Mounting is by socket, chassis mount or directly into a printed circuit (110). Temperature range is from 0°C to +50°C. Life is 100,000 operations minimum and protection for transient voltages is to 600 volts for the 3 phase model, 2500 volts for all others. All units come with a dust cover enclosure except the CT1 series which is a transfer molded part.

SIZE SENSOR: 1.70″ x 1.57″ x 3.00″
SIZE: CT1 1.25″ x 1.87″ x 1.00″

QUANTITIES

Guardian No.	Nominal Input	Current Sensing Range	Net Each, Lots of 1-24	25-49	50-99	100-249
IR-CS1-220	90-125VAC, 50-60 Hz		$31.20	$29.64	$28.08	$23.40
IR-CT1-201		.1 to 1.5 amps, 50-60 Hz	10.50	9.95	9.45	7.86
IR-CT1-202		1 to 10 amps, 50-60 Hz	9.60	9.12	8.65	7.20
IR-CT1-203		5 to 50 amps, 50-60 Hz	9.60	9.12	8.65	7.20
IR-CT1-204		10 to 100 amps, 50-60 Hz	9.60	9.12	8.65	7.20

Guardian No.	Nominal Input	Sense Point	Differential	Net Each, Lots of 1-49	50-99	100-up
IR-AV2-611	120 VAC, 60 Hz			$34.20	$32.49	$30.78
IR-AV2-621	120 VAC, 400 Hz			34.20	32.49	30.78
IR-VS3-610	120 VAC, 60 Hz	105-130 VAC	2.5-15 VAC	54.80	52.06	49.32
IR-VS3-620	120 VAC, 400 Hz	105-130 VAC	2.5-15 VAC	54.80	52.06	49.32
IR-VS3-300	24 VDC	23-32 VDC	1-5 VDC	53.40	50.73	48.06
IR-VS3-410	24 VAC, 60 Hz	23-32 VAC	1-5 VAC	54.15	51.44	48.73
IR-VS3-420	24 VAC, 400 Hz	23-32 VAC	1-5 VAC	54.15	51.44	48.73

Guardian No.	Nominal Input	Adjustable Voltage Range	Net Each, Lots of 1-49	50-99	100-up
IR-VS1-610	120 VAC, 60 Hz	90-130 VAC	$42.90	$40.76	$38.61
IR-VS1-620	120 VAC, 400 Hz	90-130 VAC	42.90	40.76	38.61
IR-VS1-300	24 VDC	18-32 VDC	41.70	39.62	37.53
IR-VS1-410	24 VAC, 60 Hz	18-32 VAC	42.15	40.04	37.93
IR-VS1-420	24 VAC, 400 Hz	18-32 VAC	42.15	40.04	37.93
IR-VS2-610	120 VAC, 60 Hz	90-130 VAC	42.90	40.76	38.61
IR-VS2-620	120 VAC, 400 Hz	90-130 VAC	42.90	40.76	38.61
IR-VS2-300	24 VDC	18-32 VDC	41.70	39.62	37.53
IR-VS2-410	24 VAC, 60 Hz	18-32 VAC	42.15	40.04	37.93
IR-VS2-420	24 VAC, 400 Hz	18-32 VAC	42.15	40.04	37.93
IR-PR1-610	120 VAC, 60 Hz		33.95	32.25	30.55
IR-PR1-620	120 VAC, 400 Hz		39.95	37.95	35.95

Guardian No.	Nominal Input	Adjustable Frequency Range	Net Each, Lots of 1-49	50-99	100-up
IR-FS1-610	120 VAC, 60 Hz	45-66 Hz	$55.20	$52.44	$49.68
IR-FS1-620	120 VAC, 400 Hz	360-440 Hz	55.20	52.44	49.68
IR-FS2-610	120 VAC, 60 Hz	45-66 Hz	55.20	52.44	49.68
IR-FS2-620	120 VAC, 400 Hz	360-440 Hz	55.20	52.44	49.68

LEVEL DETECTORS



LDT


LDP

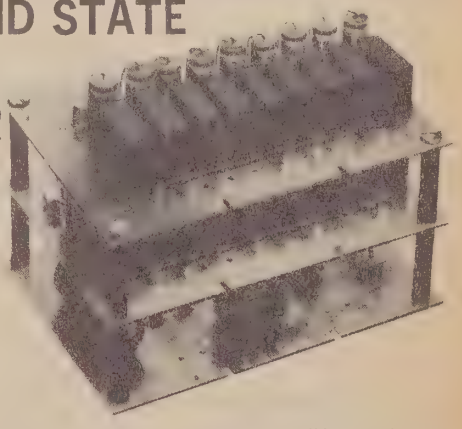
A new, inexpensive Voltage Level Detector with unusual operating characteristics is now in production. These molded modules incorporate circuits comprised of silicon semiconductor devices to form a peak detecting voltage differential amplifier, signal amplifier and a solid state output switch suitable for driving a number of GUARDIAN® relays. The unit's sense level is adjustable (either fixed or variable) over ranges of 85-135 VAC, 50-60 Hz, 20-30 VAC, 50-60 Hz, 20-30 VDC, 180-250 VAC, 50-60 Hz by external resistance. This broad adjustment range permits operation as either an under or over level detector. Two units may be used to form band pass or pedestal level sensing. When used with GUARDIAN® CALIFORNIA TMT/TMP timing modules, they provide inexpensive time delayed voltage detection systems that allow them to ignore normal line fluctuations. Transient suppressed, they will withstand 2500 V peak (short duration) without damage or malfunction. On DC units, transient protection is 600 volts.

SIZE: LDT—2.00″ x 2.00″ x 6.3″
SIZE: LDP—1.50″ x 1.50″ x 1.00″

QUANTITIES

Guardian No.	Volts	Net Each, Lots of 1-24	25-49	50-99	100-249
LDT-100-24A	24VAC	$14.80	$14.06	$13.30	$11.10
LDT-100-120A	120VAC	14.80	14.06	13.30	11.10
LDT-100-240A	240VAC	19.20	18.40	17.10	16.65
LDT-100-24D	24VDC	15.10	14.35	13.60	11.35
LDP-100-24A	24VAC	17.90	17.00	16.10	13.45
LDP-100-120A	120VAC	17.90	17.00	16.10	13.65
LDP-100-240A	240VAC	22.30	20.90	19.10	18.30
LDP-100-24D	24VDC	17.55	16.70	15.80	13.15

SLS SOLID STATE LOGIC STEPPER



The SLS 100 Series Solid State Steppers are the only power solid state steppers to accept either high level or logic level inputs with high noise immunity for industrial applications. The output of each step is a 120 VAC 2½ amp switch. They are modularly constructed so that many configurations can be accomplished from stacked modules. Standard "off the shelf" models have ten or twenty steps. Units may be obtained with pulsers to make them self-stepping steppers. They can be cascaded or paralleled to perform complex switching and control functions. GUARDIAN® CALIFORNIA's new Steppers are built for operation on input power of 120 VAC, 50-60 Hz or 400 Hz and 24 VDC. All solid state construction offers the advantages of mechanical noise free operation and, under proper operating conditions, practically unlimited life.

SIZE: 4.00″ x 6.00″ x 4.06″

QUANTITIES

Guardian No.	Volts	Steps	Net Each, Lots of 1-24	25-49	50-99	100-up
SLS110-2A111*	120VAC	10	$130.00	$123.50	$117.00	$97.50
SLS110-1A211*	24VDC	10	112.00	106.40	100.80	84.00
SLS120-2A111*	120VAC	20	225.00	214.25	202.95	169.15
SLS120-1A211*	24VDC	20	189.40	181.95	170.45	142.05
SLS110-2S111**	120VAC	10	137.50	130.15	122.62	107.75
SLS110-1S211**	24VDC	10	119.50	113.05	106.42	89.25
SLS120-2S111**	120VAC	20	232.50	221.90	208.57	174.40
SLS120-1S211**	24VDC	20	196.90	188.60	176.07	147.30
SLS Connector Kit			1.00			

*A in part number indicates step advance by either mechanical switch closure or D.C. Pulse

**S indicates self-stepping.

All units come with Molex connector terminations (3 sets required for 10 step unit).

© United Technical Publications

RELAYS WITH EXTRA DIMENSION

TO-5 MICROMINIATURE RELAYS — SERIES MA AND MS

NEW

Product Bulletin 90

All welded, DPDT relays manufactured in accordance with MIL-R-5757.

CONTACT RATING

1 ampere at 32 volts DC max, low level 0 to 0.1 ampere at 50 mV DC or AC, minimum current per MIL-R-5757/40 and /70.

UNIQUE PROCESSING TECHNIQUES ENSURE LONG LIFE

All handling and processing techniques are fully controlled and documented. Complete identification and traceability records are maintained. All parts are 100 percent inspected and cleaned prior to assembly. Critical assembly and inspection stations are housed within laminar flow work stations.

HI-G'S CLEANING PROCESS REMOVES ALL TYPES OF CONTAMINATES

A unique cleaning system entirely housed in a laminar flow bench utilizing vapor degreasing, ultrasonic agitation, spray cleaning, and use of solvents with an organic base, water and detergent is capable of removing organic as well as inorganic soils. A special spray cleaning process using a highly volatile solvent is used as a final cleanup of the completed assembly.

VACUUM DEGASSING

After final cleaning, the relays are immediately placed into a vacuum outgassing station. The vacuum system is fully protected against contamination with molecular sieve traps, liquid nitrogen, and water cooled optical baffles. A high temperature vacuum oven with controls capable of maintaining temperature limits and gradients within ±1°C is connected to the pumping station. Relays are outgassed above 200°C at vacuum levels of 10^{-6} torr (0.001 micron) for 16 hours.



FULL SIZE

FINAL SEAL OPERATION

At the conclusion of the outgassing cycle, the open relays are passed from the vacuum oven through an interlock into an atmospheric controlled dry box. The back filling gas is continuously recirculated through an inert gas purification system, capable of changing the entire volume of gas within the dry box every 5 minutes. Within the dry box is a projection seal welder, which hermetically seals the housing to the relay assembly.

FINAL TEST

All relays are checked for contact resistance, pull in and drop out, dielectric strength, insulation resistance, contact bounce, operate and release time, and coil resistance. Additionally, each relay is submitted to a 5000 cycle low level miss test.

ELECTRICAL CHARACTERISTICS

Sensitivity at 25°C: MA Series — 125 mW.
MS Series — 65 mW.

Life: 50,000 operations at min current loads.
100,000 operations min at max rated load.
1,000,000 operations min at low level.

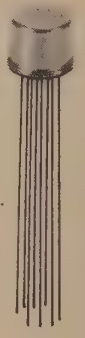
Overload: 2 amps at 32 VDC for 100 operations min.

Contact Resistance: (a) 100 milliohms initial at rated load.
(b) 200 milliohms after rated life.
(c) 3Ω max during min current life. 0.5Ω after life.
(d) 50Ω max at 15 μA and 15 mV rms.

Contact Bounce: 1.5 ms max.

Operate Time: 2.0 ms max at nom coil voltage at 25°C (MA Series).
4.0 ms max at nom coil voltage at 25°C (MS Series).

Release Time: 1.5 ms at 25°C (MA Series).
2.0 ms max at 25°C (MS Series).



Dielectric Strength: 500 V rms between all mutually insulated points at sea level.

Insulation Resistance: 5000 MΩ min between mutually insulated terminals.

ENVIRONMENTAL CHARACTERISTICS

Temperature Range: −65°C to +125°C.

Vibration: 0.5" DA from 5-34 Hz, 30 G from 34-3000 Hz, 10 μs max contact opening.

Shock: 75 G (11 ms duration), saw tooth, 10 μs max contact opening.

Acceleration: 100 G.

Leakage Rate: 1×10^{-8} cc/s max.

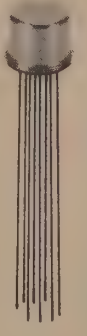
WEIGHT

Series MA: 2.9 grams max.

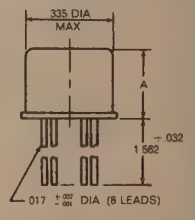
Series MS: 4.5 grams max.

SERIES MA Long Lead Part No.	Plug In Part No.	DC Coil Voltage Max	DC Coil Voltage Nom	DC Coil Resistance Ohms ±10% at 25°C	Max DC Pull-In Voltage at 125°C	Max DC Drop-Out Voltage
MAW-6	MAP-6	8	6	98	4.5	3.2
MAW-9	MAP-9	12	9	220	6.8	4.9
MAW-12	MAP-12	16	12	390	9.0	6.5
MAW-18	MAP-18	24	18	880	13.5	10.0
MAW-26	MAP-26	32	26.5	1560	18.0	13.0

SERIES MS Long Lead Part No.	Plug In Part No.	DC Coil Resistance Ohms ±10% at 25°C	Min DC Pull-In Current mA	Min DC Drop-Out Current mA	Max Continuous Voltage at 125°C
MSW-200	MSP-200	200	17.3	1.7	10
MSW-850	MSP-850	850	8.4	0.8	21
MSW-3.3K	MSP-3.3K	3300	4.3	0.4	41
MSW-6.5K	MSP-6.5K	6500	3.0	0.3	57
MSW-11K	MSP-11K	11000	2.4	0.2	75



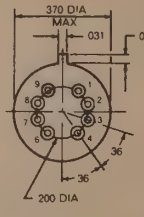
ENCLOSURE AND HEADER STYLES:



DIMENSION A

Series MA = 0.275 max
Series MS = 0.375 max

NOTE: Terminal numbers are for reference only and do not appear on part.



BOTTOM VIEW



ELECTRICAL DIAGRAM

Authorized Hi-G Relay Distributors are located throughout the U.S. and Canada.

© United Technical Publications

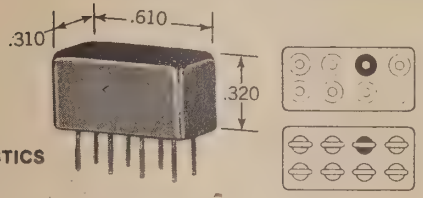
RELAYS WITH EXTRA DIMENSION

NEW

the MINI- G™

.150 GRID RELAY — SERIES G Product Bulletin 95

All welded, DPDT relay manufactured in accordance with MIL-R-5757.



ELECTRICAL CHARACTERISTICS

Sensitivity at 25°C: 135 mW.

Life: 100,000 operations min at rated load and 125°C.

Overload: 2 amps at 30 VDC for 100 operations min.

Contact Resistance: (a) 50 milliohms initial at rated load.
(b) 150 milliohms after rated life.
(c) 3Ω max during min current life.
(d) 50Ω max at 10 mA and 30 mV rms.

Contact Bounce: 1.2 ms max measured at 100 mA at 6 VDC.

Operate Time: 4.0 ms max at nom coil voltage at 25°C (including bounce)

Release Time: 4.0 ms max at 25°C (including bounce)

Dielectric Strength: 500 V rms between all mutually insulated points at sea level; 750 V rms between contacts and case.

Insulation Resistance: 1000 MΩ min between mutually insulated terminals.

CONTACT RATING

1 ampere resistive at 30 volts DC max, 0.125 ampere resistive at 115 volts rms, 400 Hz, case grounded, low level 0 to 0.1 ampere at 50 mV DC or AC, minimum current per MIL-R-5757/37.
2 ampere resistive at 30 volts DC max (50,000 operations min)

ENVIRONMENTAL CHARACTERISTICS

Temperaure Range: −65°C to +125°C.

Vibration: 0.5″ DA from 5-34 Hz, 30 G from 34-3000 Hz, 10 μs max contact opening.

Shock: 100 G (11 ms duration), saw tooth, 10 μs max contact opening.

Acceleration: 100 G.

Leakage Rate: 1×10^{-8} cc/s max.

WEIGHT

0.13 oz.

Voltage Code	DC Coil Voltage		DC Coil Resistance Ohms ±10% at 25°C	Max DC Pull-In Voltage at 125°C	Max DC Drop-Out Voltage at 25°C
	max	nom			
106	8	6	56	3.6	1.6
112	16	12	210	7.2	3.2
126	32	26.5	1350	18.0	8.1

™ *Trademark pending registration*

QPL PRODUCTS

The following relays are manufactured to meet the requirements of MIL-R-5757.

HALF SIZE CRYSTAL CAN RELAY — SERIES 2K-2299

Hi-G Part Number	MIL Part Number	MIL Type Designation
2K-2299-1	M5757/9-001	RY4XX4B3L11
2K-2299-2	M5757/9-002	RY4XX4B3L12
2K-2299-3	M5757/9-003	RY4YY4B3P11
2K-2299-4	M5757/9-004	RY4YY4B3P12

Coil resistance 700 ohms ±15% @ 25°C
Pull-in 18 Vdc max. } over temperature range
Drop-out 1.5 Vdc min. }
Temperature range −65°C to +125°C
Contact bounce 1 ms max.
Operate and release time 4 ms max.
Vibration 20G @ 10-2000 Hz
Shock 100 G

CRYSTAL CAN RELAY SERIES 2B-1506

Coil resistance 675 ohms ±10% @ 25°C
Pull-in 18 Vdc max. } over temperature range
Drop-out 1.5 Vdc min. }
Temperature range −65°C to +125°C
Operate and release time 6 ms max
Vibration 20 G @ 10-2000 Hz
Shock 100 G

Hi-G Part Number	MIL Part Number	Hi-G Part Number	MIL Part Number	Hi-G Part Number	MIL Part Number	Hi-G Part Number	MIL Part Number
2B-1506-1	M5757/10-001	2B-1506-12	M5757/10-012	2B-1506-23	M5757/10-023	2B-1506-35	M5757/10-035
2B-1506-2	M5757/10-002	2B-1506-13	M5757/10-013	2B-1506-24	M5757/10-024	2B-1506-36	M5757/10-036
2B-1506-3	M5757/10-003	2B-1506-14	M5757/10-014	2B-1506-25	M5757/10-025	2B-1506-37	M5757/10-037
2B-1506-4	M5757/10-004	2B-1506-15	M5757/10-015	2B-1506-26	M5757/10-026	2B-1506-38	M5757/10-038
2B-1506-5	M5757/10-005	2B-1506-16	M5757/10-016	2B-1506-27	M5757/10-027	2B-1506-39	M5757/10-039
2B-1506-6	M5757/10-006	2B-1506-17	M5757/10-017	2B-1506-28	M5757/10-028	2B-1506-40	M5757/10-040
2B-1506-7	M5757/10-007	2B-1506-18	M5757/10-018	2B-1506-29	M5757/10-029	2B-1506-41	M5757/10-041
2B-1506-8	M5757/10-008	2B-1506-19	M5757/10-019	2B-1506-30	M5757/10-030	2B-1506-42	M5757/10-042
2B-1506-9	M5757/10-009	2B-1506-20	M5757/10-020	2B-1506-31	M5757/10-031	2B-1506-43	M5757/10-043
2B-1506-10	M5757/10-010	2B-1506-21	M5757/10-021	2B-1506-32	M5757/10-032	2B-1506-44	M5757/10-044
2B-1506-11	M5757/10-011	2B-1506-22	M5757/10-022	2B-1506-33	M5757/10-033	2B-1506-141	M5757/10-141
				2B-1506-34	M5757/10-034		

Authorized Hi-G Relay Distributors are located throughout the U.S. and Canada.

© United Technical Publications

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

GENERAL PURPOSE RELAYS



MINIATURE OPEN TYPE (SERIES MK)

Open type relay in standard contact arrangements up to 3PDT. 5 or 10 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Factory adjusted to pull in at 75% max. of nominal voltage D.C. and 80% max. of nominal voltage A.C. Designed to pass 1,000 volt A.C. Hipot test between all elements.

PLATE CIRCUIT RELAYS 5 amp. open type

	2500Ω	5000Ω	10,000Ω	20,000Ω
* MKC-1 SPDT	$3.15	$3.25	$3.80	$4.05
* MKC-2 DPDT	3.65	3.80	4.30	4.55
* MKC-3 3PDT	4.10	4.20	4.75	5.00

*10 amp models ask for series MKCO

	5 amp contact rating	6, 12, 24, 115V	220V
AC	* MK1A SPDT	$3.10	$3.55
	* MK2A DPDT	3.75	4.15
	* MK3A 3PDT	4.15	4.55

	5 amp contact rating	6, 12, 24V	110V
DC	* MK1D SPDT	$3.05	$3.45
	* MK2D DPDT	3.40	3.85
	* MK3D 3PDT	3.85	4.25

All models available in 10 amps. DIMENSIONS: 1-11/16 × 1-3/16 × 29/32
* All models available in 10 amps. Ask for series MKO.



MINIATURE PLUG-IN (SERIES MKP)

Plug-in type relay, same factory tested, quality features as above. Will operate continuously in ambient temperature ranges of 45° to 75°C. for D.C. coils and −45° to 55°C. for A.C. coils. Metal or clear C-11 Styrene dust cover.

PLATE CIRCUIT RELAYS 5 amp. enclosed type

	2500Ω	5000Ω	10,000Ω	20,000Ω
* MKF-1 SPDT	$5.90	$6.00	$6.40	$6.65
* MKF-2 DPDT	6.30	6.40	6.80	7.10
* MKF-3 3PDT	7.75	7.90	8.40	8.65

*10 amp models ask for series MKFO

	5 amp contact rating	6, 12, 24, 115V	220V
AC	* MKP1A SPDT	$5.45	$5.90
	* MKP2A DPDT	6.05	6.45
	* MKP3A 3PDT	7.50	7.95

	5 amp contact rating	6, 12, 24V	110V
DC	* MKP1D SPDT	$5.40	$5.85
	* MKP2D DPDT	6.00	6.40
	* MKP3D 3PDT	7.45	7.90

*All models available in 10 amps. Ask for series MKH. DIMENSIONS: 2-1/4 × 1-5/8 × 1-3/8



MINIATURE MULTIPLE LEAF (SERIES MW)

A small, versatile relay available in a variety of contact configurations consisting of forms A, B, C or D (make before break), up to a maximum of 12 springs. Coils can be supplied for operation on D.C. or A.C. 60 cps. Operation on 400 cps. source is available with self-contained rectifiers on relays with covers.

	10 amp contact rating	6, 12, 24, 115V	220V
AC	MW1A SPDT	$2.70	$3.10
	MW2A DPDT	3.30	3.75
	MW3A 3PDT	3.80	4.20
	MW14A 4PDT	6.35	6.75

		6, 12, 24V	110V
DC	MW1D SPDT	$2.60	$3.10
	MW2D DPDT	3.25	3.65
	MW3D 3PDT	3.75	4.15
	MW14D 4PDT	6.35	6.80

DIMENSIONS: 1-17/32 × 1-21/32 × 1-0



SPOTLIGHT RELAYS (SERIES A)

High quality, general purpose plug-in relay with built-in circuit indicator lamp. Available in C-11 Styrene colored cases for circuit identification or in metal can. Saves panel space, reduces costly labor.

	5 amp contact rating	6, 12, 24, 115V	220V
AC	* A-1A SPDT	$6.40	$6.85
	* A-2A DPDT	7.00	7.40
	* A-3A 3PDT	8.45	8.85

		6, 12, 24V	110V
DC	* A-1D SPDT	$6.35	$6.75
	* A-2D DPDT	6.95	7.35
	* A-3D 3PDT	8.40	8.80

All models available in 10 amps. AH series.
DIMENSIONS: 2-1/4 × 1-3/8 × 1-3/8



SPOTLIGHT RELAYS. LOW COST. (SERIES ATR)

A plug-in relay which is identical in construction to our miniaturized low profile SERIES MKTR (see page 3) but with built-in circuit indicator lamp. It can be used in conjunction with our 92-67 or 92-82 sockets and 91-49 spring clip.

	5 amp contact rating	6, 12, 24, 115V	220V
AC	* ATR1A SPDT	$5.25	$5.60
	* ATR2A DPDT	5.90	6.30
	* ATR3A 3PDT	6.35	6.80

	5 amp contact rating	6, 12, 24V	110V
DC	* ATR1D SPDT	$5.15	$5.55
	* ATR2D DPDT	5.55	6.00
	* ATR3D 3PDT	6.05	6.45

* All models available in 10 amps AHTR Series.
DIMENSIONS: 1-3/16 × 1-3/8 × 1-3/8

*UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

© United Technical Publication

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

GENERAL PURPOSE RELAYS



PRINTED CIRCUIT or TAPER TAB (SERIES MKT)

Printed circuit type relay incorporating coil, frame and load contacts of standard Series MK. Connector lugs fit standard amp terminal #41355. Series MKTE is the MKT with plastic dust cover. Available with studs for chassis mount or taper tab connectors. Price same as MKTR .

	5 amp contact rating	6, 12, 24, 115V	220V
AC	* MKT1A SPDT	$3.25	$3.65
	* MKT2A DPDT	3.95	4.35
	* MKT3A 3PDT	4.40	4.85
		6, 12, 24V	110V
DC	* MKT1D SPDT	3.20	$3.60
	* MKT2D DPDT	3.60	4.05
	* MKT3D 3PDT	4.10	4.50

DIMENSIONS: 2-1/32 × 1-7/32 × 29/32

Also in 10 amps: *Series MKTO

Plate circuit relay: *Series MKTC 5 amps *Series MKTCO 10 amps



QUICK CONNECT TERMINAL RELAYS (SERIES MKA)

Quick connect terminal type miniature relay incorporating coil, frame and load contacts of the standard Series MK. The connector lugs fit standard .110" quick connect terminals.

(SERIES MKD

The MKD has the same quality features as our SERIES MK (see page 1) but the panel is wider and .187 quick connect lugs are used throughout the series. This is also an open type relay.

	5 amp contact rating	6, 12, 24, 115V	220V
AC	MKA1A SPDT	$3.25	$3.65
	MKA2A DPDT	3.95	4.35
	MKA3A 3PDT	4.40	4.85
DC	MKA1D SPDT	$3.20	$3.60
	MKA2D DPDT	3.60	4.05
	MKA3D 3PDT	4.10	4.50

Al DIMENSIONS: 29/32 × 1-7/32 × 1-11/16

Also in 10 amps: Series MKAO

Plate circuit relay: Series MKAC 5 amps Series MKACO 10 amps



SERIES MKD. OPEN TYPE WITH .187 QUICK CONNECT LUGS

	5 amp contact rating	6, 12, 24, 115V	220V
AC	MKD-1A SPDT	$3.25	$3.65
	MKD-2A DPST	3.95	4.35
	MKD-3A 3PDT	4.40	4.80

	5 amp contact rating	6, 12, 24V	110V
DC	MKD-1D SPDT	$3.20	$3.60
	MKD-2D DPDT	3.60	4.05
	MKD-3D 3PDT	4.10	4.50

SERIES MKDO. OPEN TYPE WITH .187 QUICK CONNECT LUGS

	10 amp contact rating	6, 12, 24, 115V	220V
AC	MKDO-1A SPDT	$3.30	$3.75
	MKDO-2A DPDT	4.05	4.45
	MKDO-3A 3PDT	4.55	5.00

	10 amp contact rating	6, 12, 24V	110V
DC	MKDO-1D SPDT	$3.25	$3.65
	MKDO-2D DPDT	3.75	4.15
	MKDO-3D 3PDT	4.25	4.65

SERIES MKDC. PLATE CIRCUIT RELAYS WITH .187 QUICK CONNECT LUGS

5 amp open type	2500Ω	5000Ω	10,000Ω	20,000Ω
MKDC-1 SPDT	$3.30	$3.45	$4.05	$4.30
MKDC-2 DPDT	3.85	4.00	4.55	4.85
MKDC-3 3PDT	4.25	4.60	5.00	5.25

10 amp open type	2500Ω	5000Ω	10,000Ω	20,000Ω
MKDCO-1 SPDT	$3.35	$3.50	$4.10	$4.35
MKDCO-2 DPDT	3.95	4.10	4.65	4.95
MKDCO-3 3PDT	4.40	4.75	5.15	5.40





MINIATURE PLUG-IN *LOW PROFILE LOW COST*

(SERIES MKTR)

Despite its compact size this new totally enclosed, low cost, low profile miniature relay has not compromised the high quality of its progenitor the Series MK open relay. The low mounting profile (dust cover included) has been made possible by incorporating the frame of the relay with the connector-header. Thus a certain basic hardware has been eliminated resulting in important size reduction. Versatility is also assured since the standard terminals can be used with Amp snap-on connectors, printed circuits, or plug-in receptacles. Also available with studs for chassis mounting. Termination can be used for soldered connections. The plug-in-receptacle is true 10 ampere construction. Lugs can be used for either solder or snap-on connections.

	5 amp contact rating	6, 12, 24, 115V	220V
AC	* MKTR1A SPDT	$4.25	$4.65
	* MKTR2A DPDT	4.95	5.35
	* MKTR3A 3PDT	5.40	5.85
		6, 12, 24V	110V
DC	* MKTR1D SPDT	$4.20	$4.60
	* MKTR2D DPDT	4.60	5.05
	* MKTR3D 3PDT	5.10	5.50

DIMENSIONS: 1-27/32 × 1-3/8 × 1-3/8

Also in 10 amps: *Series MKTRO

Plate circuit relay: *Series MKTRC 5 amps *Series MKTRCO 10 amps

Spotlight relay: *Series ATR5 amps

With or without colored dust cover *Series AHTR 10 amps

92-67 RECEPTACLE .30 net.

92-82 Clip-on Receptacle .50

91-49 Hold down Spring .12

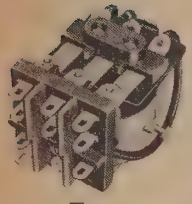
*UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

GENERAL PURPOSE RELAYS

NEW MINIATURE SENSITIVE RELAYS (SERIES SK) 60 MILLIWATTS PER POLE



Type SK

Type SKA

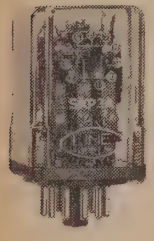
This entire series of SK type relays is identical in construction to our MK series miniature relays, with one essential difference —the special alloy used in pole and frame increases the magnetic flux many times thus making the relays very sensitive to ve low power levels—only 60 milliwatts per pole.

SERIES SK OPEN TYPE 5 AMPS

	up to 2500Ω	5000Ω	10,000Ω	15,000Ω	20,000Ω
* SK-1 SPDT	$4.15	$4.25	$4.80	$4.80	$5.05
* SK-2 DPDT	4.65	4.80	5.30	5.30	5.55
* SK-3 3PDT	5.10	5.20	5.75	5.75	6.00

SERIES SKT PRINTED CIRCUIT TYPE 5 AMPS

	up to 2500Ω	5000Ω	10,000Ω	15,000Ω	20,000
* SKT-1 SPDT	$4.30	$4.45	$5.10	$5.10	$5.3
* SKT-2 DPDT	4.85	5.00	5.55	5.55	5.8
* SKT-3 3PDT	5.25	5.40	6.00	6.00	6.2



SERIES SKA OPEN TYPE 5 AMPS .110 QUICK CONNECT LUGS

	up to 2500Ω	5000Ω	10,000Ω	15,000Ω	20,000Ω
* SKA-1 SPDT	$4.30	$4.45	$5.05	$5.05	$5.30
* SKA-2 DPDT	4.85	5.00	5.55	5.55	5.85
* SKA-3 3PDT	5.25	5.60	6.00	6.00	6.25

SERIES SKD OPEN TYPE 5 AMPS .187 QUICK CONNECT LUGS

	up to 2500Ω	5000Ω	10,000Ω	15,000Ω	20,000
SKD-1 SPDT	$4.30	$4.45	$5.05	$5.05	$5.3
SKD-2 DPDT	4.85	5.00	5.55	5.55	5.8
SKD-3 3PDT	5.25	5.60	6.00	6.00	6.2

SERIES SKP PLUG-IN PLASTIC HOUSING 5 AMPS



	up to 2500Ω	5000Ω	10,000Ω	15,000Ω	20,000Ω
* SKP-1 SPDT	$6.90	$7.00	$7.40	$7.40	$7.65
* SKP-2 DPDT	7.30	7.40	7.80	7.80	8.10
* SKP-3 3PDT	8.75	8.90	9.40	9.40	9.65

PRINTED CIRCUIT TYPE ENCLOSED

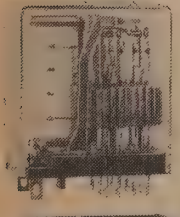
* SKTE1 SPDT	$5.30	$5.45	$6.05	$6.30
* SKTE2 DPDT	5.85	6.00	6.55	6.85
* SKTE3 3PDT	6.25	6.60	7.00	7.25

SERIES SKTR LOW COST PLATE CIRCUIT RELAYS

PLUG-IN TYPE

5 AMP. DC	Up to 2500Ω	5000Ω	10,000Ω	20,000
* SKTR1 SPDT	$5.30	$5.45	$6.05	$6.3
* SKTR2 DPDT	5.85	6.00	6.55	6.8
* SKTR3 3PDT	6.25	6.60	7.00	7.2

NEW MINIATURE CRADLE TYPE RELAYS (SERIES JMR) AND (SERIES JMRB BIFURCATED)





The JMR is an imported miniature cradle type relay incorporating a unique reed hinge. The reed hinge eliminates the possibility of binding and wear, thereby providing exceptional long life.
All contact connections are molded directly through the base; the only solder connections in the relay are those to the coil.
The JMR features gold diffused, silver contacts which are suitable for low level as well as full rated 5 amp. loads. The relay is enclosed in a high impact polycarbonate housing and the relay base is black bakelite. All internal phonoelic spacers are baked and out-gassed prior to assembly, thereby assuring reliable operation under the most adverse conditions.

Model Number	Poles	6, 12, 24 VDC	48 VDC	110 VDC
JMR- 2D	2PDT	$3.30	$3.35	$4.70
JMR-14D	4PDT	3.80	3.85	5.05

Model Number	Poles	6, 12, 24 VDC	48 VDC	110 VDC
JMRB- 2D	2PDT	$3.60	$3.65	$5.00
JMRB-14D	4PDT	4.20	4.25	5.45

*UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

Net

© United Technical Publication

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

GENERAL PURPOSE RELAYS



MINIATURE 4-POLE RELAY * (SERIES JA)

The series JA is a high quality, miniature 4PDT relay for AC or DC operation. The JA relay features nylon dust cover, gold flashed fine silver contacts rated at 3 amps. This imported relay features exceptional quality and rugged design to meet the most exacting requirements. It is excellent for computers, logic systems and data processing. Standard configuration features solder terminals and 3-48, 23/64" mounting stud. Can be used with our 92-79 solder lug socket or 92-80 P.C. socket (50c each)

	Voltage	Resistance	Nominal Power	Price
DC	6 VDC	40 OHMS	800 MW	$4.10
	12 VDC	160 OHMS	800 MW	4.10
	24 VDC	650 OHMS	800 MW	4.10
	48 VDC	2500 OHMS	800 MW	4.20
	110 VDC	10000 OHMS	800 MW	4.90
AC	6 VAC	10.5 OHMS	1.1 VA	$4.40
	12 VAC	43 OHMS	1.1 VA	4.40
	24 VAC	160 OHMS	1.1 VA	4.40
	115 VAC	3900 OHMS	1.1 VA	4.90



MEDIUM POWER RELAY OPEN TYPE (SERIES LR)

Open type, heavy-duty type relay designed for many applications. Standard fine silver contacts rated at 10 amperes, optional Silver Cadmium load contacts rated at 15 amps. Ambient temperature operating range, continuous duty: A.C., —45° to 55°C.; D.C., —45° to 75°C.

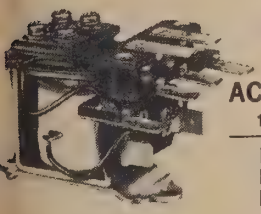
AC

10 amp contact rating	6, 12, 24, 115V	220V
LR1A SPDT	$4.00	$4.20
LR2A DPDT	4.85	5.05
LR12A SPDT-DB(15A)	5.05	5.25

DC

10 amp contact rating	6, 12, 24V	110V
LR1D SPDT	$3.80	$4.00
LR2D DPDT	4.65	4.85
LR12D SPDT-DB(15A)	5.85	5.05

DIMENSIONS: 2-3/8 × 1-1/2 × 1-21/32



NEW

MEDIUM POWER RELAY OPEN TYPE (SERIES LRT)

Same quality features of the LR series (above) but in a special configuration utilizing .250 quick connect terminals.

AC

10 amp contact rating	6, 12, 24, 115V	220V
LRT-1A SPDT	$4.50	$4.70
LRT-2A DPDT	5.35	5.55
LRT-12A SPDT-DB	5.55	5.75

DC

10 amp contact rating	6, 12, 24V	110V
LRT-1D SPDT	$4.30	$4.50
LRT-2D DPDT	5.15	5.35
LRT-12D SPDT-DB	5.35	5.55



MEDIUM POWER RELAY PLUG-IN TYPE (SERIES LRP)

This relay is available in either metal or plastic enclosures, equipped with a standard octal plug in header for single and double pole types. Eleven pin headers are also available. The standard LRP plastic enclosure is a clear C-11 Styrene, colors are available at no extra charge. Female sockets for 8 and 11 pin headers are also available.

AC

10 amp contact rating	6, 12, 24, 115V	220V
LRP1A SPDT	$7.00	$7.10
LRP2A DPDT	8.20	8.50
LRP12A SPDT-DB(15A)	8.80	9.00

DC

10 amp contact rating	6, 12, 24V	110V
LRP1D SPDT	$6.80	$7.00
LRP2D DPDT	8.00	8.40
LRP12D SPDT-DB(15A)	8.70	8.80

DIMENSIONS: 3-1/4 × 1-15/16 × 1-15/16



HEAVY DUTY RELAY OPEN TYPE (SERIES LG)

Open type relay, specifically designed for extremely heavy-duty applications. Standard Fine Silver load contacts are rated at 15 amps. with optional Silver Cadmium Oxide contacts where larger inrush loads are encountered. Loads are rated at 115/60 non-inductive. All load contacts are factory gold-flashed to prevent contact oxidation prior to use.

AC

15 amp contact rating	6, 12, 24, 115V	220V
LG1A SPDT	$4.30	$4.50
LG2A DPDT	4.85	5.05
LG3A 3PDT	5.40	5.60

DC

15 amp contact rating	6, 12, 24V	110V
LG1D SPDT	$4.20	$4.40
LG2D DPDT	4.75	4.95
LG3D 3PDT	5.30	5.60

DIMENSIONS: 1-1/2 × 2-3/8 × 1-13/16

UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

© United Technical Publications

Net

LINE ELECTRIC COMPANY

LINE RELAYS

RELAYS • BUZZERS • FOOT SWITCHES

GENERAL PURPOSE RELAYS



HEAVY DUTY RELAY PLUG-IN TYPE (SERIES LGP)

Plug-in type relay, with same quality features as above. Also available in either metal or clear bLC-11 Styrene enclosure. Ambient temperature operating range, continuous duty; A.C., —45° to 55°C.; D.C.,—45° to 75°C.

AC

10 amp contact rating	6, 12, 24, 115V	220V
LGP1A SPDT	$7.30	$7.50
LGP2A DPDT	7.85	8.05
LGP3A 3PDT	8.40	8.60

DC

10 amp contact rating	6, 12, 24V	110V
LGP1D SPDT	$7.20	$7.40
LGP2D DPDT	7.75	8.05
LGP3D 3PDT	8.40	8.60



HEAVY DUTY POWER RELAYS* (SERIES STA)

A 25 amp. power relay ideally suited for starting motors up to 1 hp, elevator controls, and many other applications which require high current or high voltage switching with maximum dependability. One piece molded base, sturdy two-hole mounting. Top removable coil.

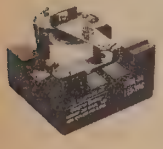
Available with one or two auxiliary 5 ampere contacts.

† * CSA UL

*See new miniature power relay (series PF) on Pg. 7 of this listing.

	25 amp contact rating	6, 12, 24, 115V	220V
AC	†* STA2A DPDT	$7.20	$7.60
	STA3A (1. aux. con.)	10.75	11.05
	STA14A (2. aux. con.)	14.25	14.65
		6, 12, 24VDC	110VDC
DC	†* STA2D DPDT	$7.20	$7.60
	STA3D (1. aux. con.)	9.75	10.05
	STA14D (2. aux. con.)	12.25	12.65

DIMENSIONS: 2-1/2 × 2-15/16 × 3-3/8



HEAVY DUTY POWER RELAYS (SERIES STM)

Same quality features as Series ST, but assembled on a compact base. Available with one or two auxilliary 5 amp contacts.

AC

25 amp contact rating	6, 12, 24, 115V	220V
† STM1A SPDT	$4.85	$5.25
† STM4A SPST NO	4.50	4.90
† STM5A DPST NO	5.10	5.50
† STM7A SPST NC	4.50	4.90
† STM10A SPST NO DB	4.75	5.15

STMC AVAILABLE WITH 1 AUX. CON.
STMCC AVAILABLE WITH 2 AUX. CON.

DC

25 amp contact rating	6, 12, 24V	110V
† STM1D SPDT	$4.85	$5.25
† STM4D SPST NO	4.50	4.90
† STM5D DPST NO	5.10	5.50
† STM7D SPST NC	4.50	4.90
† STM10D SPST NO DB	4.75	5.50

DIMENSIONS: 2-1/8 × 2-1/2 × 2-5/16

† CSA

MECHANICAL LATCH RELAYS



OPEN TYPE (SERIES RL)

Open type for use where a sustained relay closure is required, and current drain of a relay coil is to be eliminated. Incorporates two coils, one to close load contacts, the other to reset them. Requires only momentary electrical contact to operate or release. Provides positive mechanical latch, eliminating chatter during sustained relay closure.

AC

5 amp contact rating	6, 12, 24, 115V	220V
RL1A SPDT	$7.15	$8.00
RL2A DPDT	8.25	9.00
RL3A 3PDT	9.15	9.95
RL14A 4PDT	10.45	11.30
RL15A 5PDT	11.45	12.30
RL16A 6PDT	12.55	13.35

DC

5 amp contact rating	6, 12, 24V	110V
RL1D SPDT	$6.50	$7.75
RL2D DPDT	7.50	8.75
RL3D 3PDT	8.50	9.75
RL14D 4PDT	9.50	10.75
RL15D 5PDT	10.50	11.75
RL16D 6PDT	11.50	12.75

Available in 10 amp contact rating. ASK FOR SERIES RLO DIMENSIONS: 2-11/16 × 1-3/4 × 1-3/4



PLUG-IN TYPE (SERIES RLP)

Plug-in type, same factory-tested quality features as above. Available in clear C-11 Styrene enclosure up to 5PDT.

AC

5 amp contact rating	6, 12, 24, 115V	220V
RLP1A SPDT	$9.40	$10.25
RLP2A DPDT	10.50	11.30
RLP3A 3PDT	14.75	15.60
RLP14A 4PDT	16.15	17.00
RLP15A 5PDT	17.25	18.00

DC

5 amp contact rating	6, 12, 24V	110V
RLP1D SPDT	$8.75	$10.05
RLP2D DPDT	9.85	11.15
RLP3D 3PDT	14.10	15.40
RLP14D 4PDT	15.55	16.80
RLP15D 5PDT	16.65	17.90

All models available 3PDT, 4PDT, 5PDT, and in 10 amp contact rating. ASK FOR SERIES RL

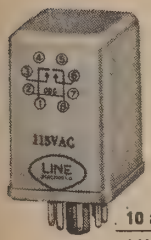
Net

© United Technical Publication

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

HERMETICALLY SEALED RELAYS



PLUG-IN TYPE (SERIES HKP)

The Series HKP relay incorporates the basic MK frame into hermetically sealed plug-in configuration. All units are thoroughly vacuum baked and out-gassed and back filled with nitrogen before sealing. The HK series will fit any standard octal based receptacle and is in the classification of a general purpose relay.

PLATE CIRCUIT RELAYS 5 Amp

	2500Ω	5000Ω	10,000Ω	20,000Ω
HKF1 SPDT	$8.90	$9.00	$9.40	$9.65
HKF2 DPDT	9.30	9.40	9.80	10.10
HKF3 3PDT	10.75	10.90	11.40	11.65

	10 amp contact rating	6, 12, 24,115V	220V
AC	HKH1A SPDT	$8.50	$8.95
	HKH2A DPDT	9.15	9.55
	HKH3A 3PDT	10.60	11.10

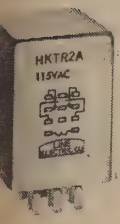
	10 amp contact rating	6, 12, 24V	110V
DC	HKH1D SPDT	$8.45	$8.90
	HKH2D DPDT	9.10	9.50
	HKH3D 3PDT	10.60	10.95

DIMENSIONS: 2-1/16 x 1-21/32 x 1-7/16

PLUG-IN TYPE. LOW COST

(Series HKTR. 5 AMP) (Series HKTRO. 10 AMP)

These relays are hermetically sealed counterparts of our MKTR relays (see page 3) but they are especially designed for use with our 92-67 socket. Low profile general purpose applications.



	10 amp contact rating	6, 12, 24, 115V	220V
AC	HKTRO-1A SPDT	$ 8.50	$ 8.95
	HKTRO-2A DPDT	9.15	9.55
	HKTRO-3A 3PDT	10.60	11.10

	10 amp contact rating	6, 12, 24V	110V
DC	HKTRO-1D SPDT	$ 8.45	$ 8.90
	HKTRO-2D DPDT	9.10	9.50
	HKTRO-3D 3PDT	10.60	10.95

PRINTED CIRCUIT TYPE. LOW COST

(Series HKT. 5 AMP) (Series HKTO. 10 AMP)

The same construction as HKTR and HKTRO (on left) but especially designed for use on printed circuit boards, mounting by means of .030 diameter pins.

	10 amp contact rating	6, 12, 24, 115V	220V
AC	HKTO-1A SPDT	$ 8.25	$ 8.65
	HKTO-2A DPDT	9.70	10.10
	HKTO-3A 3PDT	10.25	10.65

	10 amp contact rating	6, 12, 24V	110V
DC	HKTO-1D SPDT	$ 8.20	$ 8.60
	HKTO-2D DPDT	9.50	9.90
	HKTO-3D 3PDT	10.10	10.50

REED RELAYS — 3 STANDARD TYPES

In computer, data processing and guidance system development, design engineers are enthusiastically applying dry reed relays in place of switching diodes. The reasons: miniature profile—life expectancy exceeding 100,000,000 operations—less heat generated compared with switching diodes—3 millisecond operating time and very high resistance in the open contact stage.

To efficiently serve the growing demand for dry reed relays in these and other applications, Line Electric now stocks these 3 standard types for immediate delivery in prototype quantities.

Open Coil Type—Series FR

6 VDC & 12 VDC & 24 VDC. 6 Contact Arrangements

FR1-SPDT, $ 5.50 ea. FR4-SPST NO, $3.30 ea.
FR2-2PDT, $ 9.00 ea. FR5-2PST NO, $4.50 ea.
FR3-3PDT, $12.75 ea. FR6-3PST NO, $5.50 ea.

Plug-In Type—Series FRP

6 VDC & 12 VDC & 24 VDC. 6 Contact Arrangements

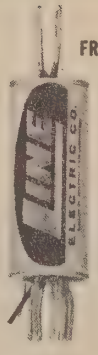
FRP1-SPDT, $ 8.50 ea. FRP4-SPST NO, $6.00 ea.
FRP2-2PDT, $12.00 ea. FRP5-2PST NO, $7.50 ea.
FRP3-3PDT, $16.00 ea. FRP6-3PST NO, $8.50 ea.

Lug Mount Type—Series FRA

6 VDC & 12 VDC & 24 VDC. 2 Contact Arrangements

FRA1-SPDT, $7.50 ea. FRA4-SPST NO, $4.50 ea.

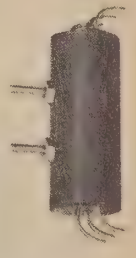
FR



FRP



FRA



SPECIFICATIONS

CONTACT RATING
10 volt-amperes resistive
3 watts D.C. resistive

MAXIMUM CURRENT
0.5 amperes

DIELECTRIC STRENGTH
250 volts
60 cps R.M.S.

MAXIMUM VOLTAGE
110 volts

LIFE EXPECTANCY
Rated load - - -
1 x 10^8 operations
Dry circuit - - -
100 x 10^6 operations

OPERATE TIME
3 milliseconds maximum, including bounce

CONTACT RESISTANCE
50 millohms

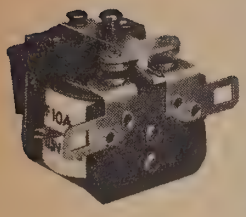
INSULATION RESISTANCE
1000 megohms minimum

RELEASE TIME
5 milliseconds maximum, including bounce

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

NEW MINIATURE POWER RELAY (SERIES PF)



The PF Series Relays are especially designed for applications where limited space is a factor. This relay, although small in size, is ideally suited for heavy duty industrial control applications where long life and fast action are a requirement. The PF Relay is supplied with ¼" quick connect terminals on the contacts for ease of installation. Other type terminals are available upon request. Consult factory for details.

CONTACTS

Material ¼" dia. silver cadmium oxide gold flashed.
Contact Terminals ¼" quick connect. Pierced for soldering.

COILS

Dielectric Strength 750 V.R.M.S.
Nominal Power D.C. relays - 1.1 watts avg.
A.C. relays - 2.5 volt amps avg.
Over-Voltage D.C. - 140% of nominal. A.C. - 125% of nominal.
Operate Time 15 milliseconds or less.
Weight 3 ounces
Temperature Range —40° C. to +50° C.
Coil Terminals Solder type.

25 amp. contact rating	6-12-24-115V	220
AC PF10A SPST-NO-DB	$3.90	$4.3
DC PF10D SPST-NO-DB	3.70	4.3

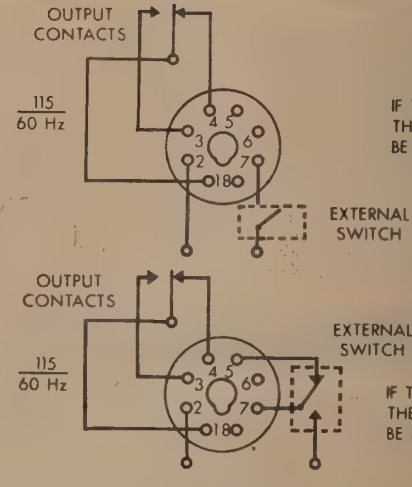
SOLID STATE TIME DELAY RELAY ADJUSTABLE PLUG-IN TYPE (SERIES VTL)

GENERAL DESCRIPTION

The essential difference between solid state electronic timers and other types is the absence of mechanical moving parts within the controlling circuit. For this reason they often require less installation space than the equivalent electro-mechanical models, while delivering longer performance.

Today the incorporation of solid state electronic time controls in original equipment is an indication of advanced engineering design, a strong factor in influencing preference for your company's products. We invite your inquiries.

The Series VTL Time Delay Relay provides an adjustable time delay between the closure of 115 VAC input voltage to the subsequent actuation of a set of SPDT load contacts.





TECHNICAL SPECIFICATIONS

The Series VTL Time Delay Relay has a setting potentiometer with slotted shaft and locking device for adjusting time delay

1. 115 VAC input.
2. Isolated load contacts SPDT.
3. Load capacity 10 amperes non-inductive rated at 115 VAC.
4. Terminals — standard 8 pin octal plug.
5. Temperature range — 30°F. to +120°F.
6. Power consumption 2.0 VA at 115 VAC.
7. Repeat accuracy ±5% of full scale at 115 ±4% VAC.

MODEL	MIN. SETTING	MAX. SETTING
VTL-1S	.2 sec.	1 second
VTL-5S	.5 sec.	5 seconds
VTL-15S	1.0 sec.	15 seconds
VTL-30S	2.0 sec.	30 seconds
VTL-60S	4.0 sec.	60 seconds

PRICE . . . 18.00

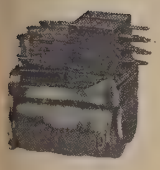
Net

© United Technical Publication

LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

MINIATURE TELEPHONE RELAYS



(SERIES GT)

Fast acting miniature telephone type relay. Highly versatile, supplied in contact arrangements up to 6PDT, and in a variety of styles including open, dust cover, and hermetically sealed. Factory will supply enclosure details.

AC

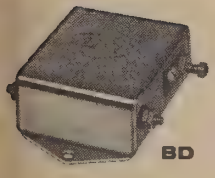
	6, 12, 24V	115V
GT1A SPDT	$5.55	$5.95
GT2A DPDT	6.50	6.75
GT3A 3PDT	7.00	7.45
GT14A 4PDT	7.40	7.85
GT15A 5PDT	8.10	8.50
GT16A 6PDT	8.80	9.30

DC

	6, 12, 24V	110V
GT1D SPDT	$3.55	$4.00
GT2D DPDT	4.50	4.75
GT3D 3PDT	5.00	5.45
GT14D 4PDT	5.40	5.85
GT15D 5PDT	6.10	6.50
GT16D 6PDT	6.80	7.30

DIMENSIONS: Max. 1-9/16 × 17/32 × 3/4

BUZZERS D.C. - A.C.



BD



BDH

VARIABLE SOUND AND PITCH D.C. - A.C.

The series BD buzzers are designed for use in offices, plants, etc., where quality, good appearance and dependable operation is demanded. Three sizes of buzzers are available, each size varying in tone and volume of sound. However, the volume of sound and pitch of each size buzzer can be varied by means of double, locking adjustments. The three sizes of buzzers are equipped with phospher bronze springs and pure hard-drawn silver contacts. They are bug and dust-proof with tight-fitting polished chrome covers.

Model No.	6-8VDC	12VDC	24VDC	48VDC
BD-0	$3.25	$3.50	$3.75	$5.25
BD-1	3.15	3.25	3.40	4.80
BD-2	3.25	3.50	3.75	5.20

(BD-0 Low tone, BD-1 Medium tone, BD-2 Loud tone)

Hermetic Seal				
BDH	8.50	9.00	9.50	10.00

DIMENSIONS: BD0—1-21/32 × 1-15/32 × 1/2
BD1—2-1/8 × 1-29/32 × 19/32
BD2—3 × 2-1/2 × 7/8
BDH—1-9/16 × 3-13/16 × 2-13/16



MD



MB

AC BUZZERS

Available for 6, 12, 24, 115, 220, and 440 volts A.C. 60 cps operation, these buzzers are ideally suited for paging, warning, starting and dismissal signals. These buzzers are a non-contact type therefore suitable for continuous duty, providing a clear, penetrating signal.



MC



MA

	6, 12, 24, 115 VAC/60 cy	220VAC/60 cy
* MA	$2.25	$2.80
* MB	2.50	3.05
* MC	3.15	3.70
* MD	1.60	2.40
MCH Hermetic Seal	10.00	11.00

PEDALINE FOOT SWITCH



The Pedaline is a compact light weight foot operated switch. The single switch type weighs only 7 ounces; the double switch type 7½ ounces. Baked on light gray hammertone enamel finish with black foot pad. Available with a single pole snap action switch or two single pole double throw switches which operate in sequence.

#PL1 single switch only	$3.15
* #PL-1C single switch w/line cord	$4.45
#PL5 double switch	$4.80
#PL-5C double switch w/line cord	$5.65

DIMENSIONS: 3-1/2 × 2-5/8 × 1

* UL

SINGER

LINE ELECTRIC COMPANY

UNDERWRITERS LABORATORIES COMPONENT RECOGNITION

© United Technical Publications

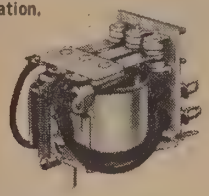
Net

Magnecraft® general purpose relays

IN STOCK FOR IMMEDIATE DELIVERY

class 88 open type

SPDT, DPDT, 3PDT — 10 amps.
AC or DC operation.



- Small Size: 1 11/16 x 1 3/16 x 1 1/4"
- Silver alloy, gold-flashed, contacts rated at 10 amps at 115 VAC or 32 VDC resistive load.
- Solder terminals for easy wiring.
- Easy mounting: One #6-32 tapped mounting hole with locating boss.
- Rugged hinge-pin armature for long life and stability of operation.
- Weight: 2 oz. approx.

Stock Part No.	Contacts 10 Amps.	COIL †Volt or ††Curr.	COIL *Res. Ohms	COIL Nominal Power	Prices 1-9
Alternating Current Voltage Actuated					
W88AX1	SPDT	6VAC			4.02
W88AX2		12VAC			4.02
W88AX3		24VAC		3 VA	4.02
W88AX4		115VAC			4.02
W88AX34		230VAC			4.54
W88AX5	DPDT	6VAC			4.70
W88AX6		12VAC			4.70
W88AX7		24VAC		3 VA	4.70
W88AX8		115VAC			4.70
W88AX32		230VAC			5.22
W88AX9	3PDT	6VAC			5.24
W88AX10		12VAC			5.24
W88AX11		24VAC		3 VA	5.24
W88AX12		115VAC			5.24
W88AX36		230VAC			5.78
Direct Current Voltage Actuated					
W88X2	SPDT	6VDC	25		3.60
W88X3		12VDC	100	1.5W	3.60
W88X4		24VDC	400	1.5W	3.60

Stock Part No.	Contacts 10 Amps.	COIL †Volt or ††Curr.	COIL *Ohms	COIL Nominal Power	Price 1-9
Direct Current Voltage Actuated Cont'd.					
W88X5	SPDT	110VDC	8000		4.24
W88X6	DPDT	6VDC	25		4.16
W88X7		12VDC	100		4.16
W88X8		24VDC	400	1.5W	4.16
W88X9		110VDC	8000		4.80
W88X10	3PDT	6VDC	25		4.64
W88X11		12VDC	100		4.64
W88X12		24VDC	400	1.5W	4.64
W88X13		110VDC	8000		5.24
DC Current Actuated For Plate Circuit Operation					
W88X14	SPDT	7.2 MA	2500		4.12
W88X15		5.0 MA	5000	125MW	4.22
W88X16		3.6 MA	10000		4.68
W88X17	DPDT	10 MA	2500		4.42
W88X18		7.2 MA	5000	250MW	4.52
W88X19		5.0 MA	10000		4.96
W88X20	3PDT	12.3 MA	2500		4.88
W88X21		8.7 MA	5000	375MW	5.00
W88X22		6.1 MA	10000		5.44

class 88CP plug in

AC or DC operation.
Crackproof, see through plastic dust cover.
SPDT, DPDT, 3PDT — 10 amps.



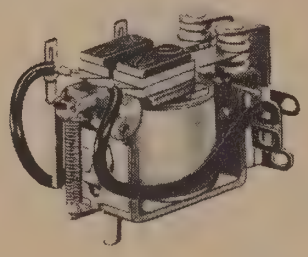
- Size: 2 1/8 x 1 3/8 x 1 3/8"
- Silver alloy, gold-flashed, contacts rated 10 amps at 115 volts AC or 32 volts DC, resistive load.
- Furnished with 8 or 11 pin std. octal plug.
- Rugged hinge-pin armature for long life and stability of operation.
- Weight: 3 oz. approx.

Stock Part No.	Contacts 10 Amps.	COIL †Volt or ††Curr.	COIL *Res. Ohms	COIL Nominal Power	Plug	Prices 1-9
Alternating Current Voltage Actuated						
W88ACPX1	SPDT	6VAC				6.17
W88ACPX2		12VAC				6.17
W88ACPX3		24VAC		3 VA	8-pin	6.17
W88ACPX4		115VAC				6.17
W88ACPX76		230VAC				6.94
W88ACPX5	DPDT	6VAC				6.91
W88ACPX6		12VAC				6.91
W88ACPX7		24VAC		3 VA	8-pin	6.91
W88ACPX8		115VAC				6.91
W88ACPX32		230VAC				7.69
W88ACPX9	3PDT	6VAC				8.59
W88ACPX10		12VAC				8.59
W88ACPX11		24VAC		3 VA	11-pin	8.59
W88ACPX12		115VAC				8.59
W88ACPX39		230VAC				9.36
Direct Current Voltage Actuated						
W88CPX1	SPDT	6VDC	25			5.94
W88CPX2		12VDC	100	1.5W	8-pin	5.94
W88CPX3		24VDC	400	1.5W	8-pin	5.94

Stock Part No.	Contacts 10 Amps.	COIL †Volt or ††Curr.	COIL *Res. Ohms	COIL Nominal Power	Plug	Price 1-9
Direct Current Voltage Actuated Cont'd.						
W88CPX4	SPDT	110VDC	8000			6.5
W88CPX5	DPDT	6VDC	25			6.5
W88CPX6		12VDC	100			6.5
W88CPX7		24VDC	400	1.5W	3-pin	6.5
W88CPX8		110VDC	8000			7.1
W88CPX9	3PDT	6VDC	25			8.1
W88CPX10		12VDC	100			8.1
W88CPX11		24VDC	400	1.5W	11-pin	8.1
W88CPX12		110VDC	8000			8.7
DC Current Actuated For Plate Circuit Operation						
W88CPX13	SPDT	7.2 MA	2500			6.4
W88CPX14		5.0 MA	5000	125MW	8-pin	6.6
W88CPX15		3.6 MA	10000			7.0
W88CPX16	DPDT	10 MA	2500			6.9
W88CPX17		7.2 MA	5000	250MW	8-pin	7.0
W88CPX18		5.0 MA	10000			7.4
W88CPX19	3PDT	12.3 MA	2500			8.4
W88CPX20		8.7 MA	5000	375MW	11-pin	8.5
W88CPX21		6.1 MA	10000			9.0

class 88R power relays

DPDT 15 amps AC or DC operation.

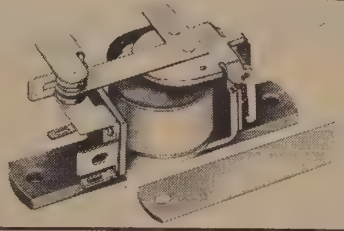


- Small Size: 1 7/8 x 1 3/16 x 1 3/32"
- Silver alloy, gold-flashed, contacts, rated at 15 amps at 115 volts AC, or 32 volts DC, resistive load.
- Solder terminals for easy wiring.
- Easy mounting: One #6-32 tapped mounting hole with locating boss.
- Designed for high current switching in small space.
- Rugged hinge pin armature for long life and stability of operation.
- Weight: 3 oz. approx.

Stock Part No.	Contacts 15 Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
W88ARX-2	DPDT	12VAC	—	3VA	6.87
W88ARX-3		24VAC	—		6.87
W88ARX-4		115VAC	—		7.05
W88RX-2	DPDT	12VDC	100	1.5W	6.80
W88RX-3		24VDC	400		6.80

class 88K low cost relays

SPDT 15 amps AC or DC operation.

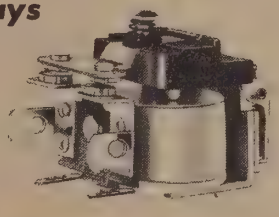


- Size: 2 5/8 x 1 3/16 x 1 1/4"
- Silver alloy, gold-flashed, contacts, SPDT rated at 15 amps, 115 volts AC or 32 VDC, resistive load.
- Mounting base insulator furnished.
- Terminals accept AMP Faston 250 Quick-Disconnect receptacles for contacts, 110 Series for coil, or equivalent, or solder connection can be used.
- Weight: 3 ozs. approx.

Stock Part No.	Contacts 15 Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
W88AKX-1	SPDT	24VAC	—	3VA	5.12
W88AKX-2		115VAC	—		5.12
W88AKX-3		230VAC	—		6.20
W88KX-1	SPDT	6VDC	25	1.5W	4.90
W88KX-2		12VDC	100		4.90
W88KX-3		24VDC	400		4.90
W88KX-4		110VDC	8000		5.68

class 88KD low cost power relays

50 amps SPST-NO-DM, 1 HP. AC or DC operation.



- Size: 1 15/16 x 1 1/16 x 1 1/2"
- 50 amp resistive, heavy duty silver alloy contacts for power switching.
- Terminals accept AMP Faston 250 Quick-Disconnect receptacles for contacts, 110 Series for coil, or equivalent, or solder connections can be used.
- Easy mounting: One #6-32 tapped mounting hole and locating boss.

Stock Part No.	Contacts 50 Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
W88KDX-1	SPST-NO-DM	6VDC	25	1.5W	4.70
W88KDX-2		12VDC	100		4.70
W88KDX-3		24VDC	400		4.70
W88KDX-4		110VDC	8000		5.58
W88KADX-1	SPST-NO-DM	24VAC	—	3VA	5.30
W88KADX-2		115VAC	—		5.30
W88KADX-3		230VAC	—		5.68

*Resistance Values ±10% at 25°C.
†Voltage Specified Relays pull in at 80% of nominal or less for DC relays and 85% of nominal or less for AC relays at 25°C.
††Current Specified Relays pull in at Specified Value or less.

MAGNECRAFT® ELECTRIC COMPANY

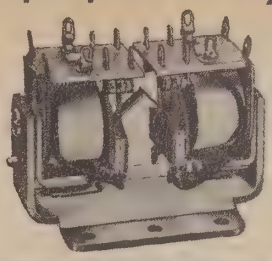
Net

© United Technical Publications

Magnecraft® general purpose relays

N STOCK FOR IMMEDIATE DELIVERY

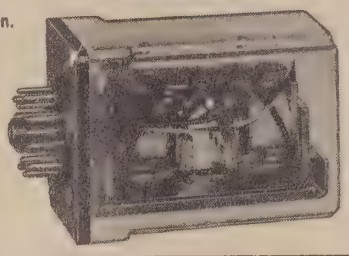
:lass 88L latching relay



.C or DC operation — 4PDT and 6PDT — 10 amps.

- Size: 3 x 1¾ x 1 15/16"
- Combination of two Class 88 Relays with interlocking latch-in levers mounted on a common base.
- Each armature latches when pulled in. Energizing one armature releases or resets the other.
- Silver alloy, gold-flashed, contacts rated 10 amps at 115 volts AC or 32 VDC resistive load.
- Easy mounting with clearance holes for six #6-32 screws.
- Rugged hinge pin armature for long life and stability of operation.
- Weight: 6½ oz. approx.

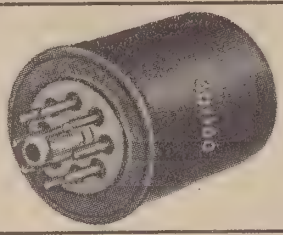
class 88LCP enclosed plug-in latching relays — 4 PDT 10 amp



AC or DC operation.

- Size: 2⅜ x 1¾ x 3 1/16"
- Enclosure: Crackproof, see-through plastic dust cover.
- Mounting: 20-pin octal style plug mates with std. amphenol 77-MIP-20 socket.
- Weight: 8 oz. approx.

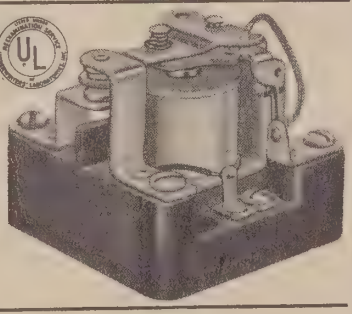
class 88HP hermetically sealed plug-in relay



AC or DC operation — DPDT or 3PDT — 10 amps.

- Size: 2 1/32 x 1 1/16 dia.
- Hermetically sealed to afford maximum protection against severe ambient conditions.
- Silver alloy contacts, gold-flashed, rated 10 amps at 115 volts AC or 32 volts DC, resistive load.
- Mounting: Standard 8 or 11-pin octal style plug.
- Weight: 5 oz. approx.

class 99 heavy duty power relays, UL listed

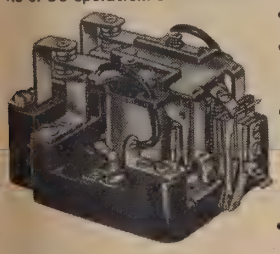


AC or DC operation — 25 amps 1 HP.
SPDT, DPST-NO, and DPDT.

- Size: SPDT — 2½ x 2½ x 2 3/16", DPST-NO — 2½ x 2½ x 2⅜", DPDT — 3 3/16 x 2½ x 2⅜"
- Oversize silver alloy, gold-flashed contacts, rated at 25 amps at 115 VAC or 32 VDC, resistive load, or 1 HP, AC.
- Heavy duty hinge-pin armature for long life and stability of operation. Screw type terminals and molded phenolic base.
- Easy mounting: Two 7/32" diameter clearance holes on 1⅞" centers.

class 99/power relay with aux. contacts

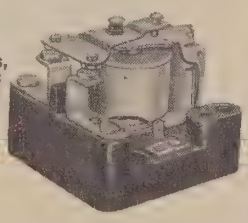
AC or DC operation. DPDT with SPDT Aux. contacts.



- Size: 4 3/32 x 2½ x 2⅜"
- Basic Class 99 Relay, equipped w/SPDT Auxiliary Contacts.
- DPDT power contacts rated 25 amps or 1 HP, SPDT auxiliary contacts rated 5 amps at 115 VAC or 32 VDC
- Screw type terminals.

class 99D power relay

50 amps — SPST-NO-DM — 2 HP.



- Size: 2½ x 2½ x 2 3/32"
- AC or DC operation
- Oversize silver alloy, gold-flashed, contacts, rated at 50 amps at 115 VAC or 32 VDC resistive load, or 2 HP.

class 99S space saver power relay

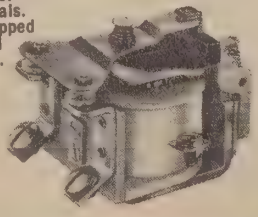
25 amps — SPDT — 1 HP.



- Size: 2⅞ x 2 x 1 15/16"
- Power switching in small space.
- One #6-32 tapped mtg. hole and locating boss.
- AC or DC operation.
- Screw terminals.
- SPDT silver alloy, gold-flashed, contacts rated at 25 amps or 1 HP.

class 99SD space saver power relay

50 amps — SPST-NO-DM — 2 HP.



- Size: 2½ x 2 x 1 15/16"
- 50 amp switching in small space.
- Screw terminals.
- One #6-32 tapped mtg. hole and locating boss.
- AC or DC operation.

*Resistance Values ±10% at 25°C.
†Voltage Specified Relays pull in at 80% of nominal or less for DC relays and 85% of nominal or less for AC relays at 25°C.

Stock Part No.	Contacts 10 Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
CLASS 88L					
W88ALX-2	4PDT	6VAC	—	6VA prox.	11.98
W88ALX-3		24VAC	—		11.98
W88ALX-4		115VAC	—		11.98
W88ALX-5	6PDT	6VAC	—	6VA prox.	14.46
W88ALX-6		24VAC	—		14.46
W88ALX-7		115VAC	—		14.46
W88LX-1	4PDT	6VDC	12	3W	10.91
W88LX-2		12VDC	50		10.91
W88LX-3		24VDC	200		10.91
W88LX-4		110VDC	4000		12.26
W88LX-5	6PDT	6VDC	12	3W	13.28
W88LX-6		12VDC	50		13.28
W88LX-7		24VDC	200		13.28
W88LX-8		110VDC	4000		14.63
CLASS 88LCP					
W88ALCPX-10	4PDT (20 Pins)	6VAC	—	6VA prox.	17.25
W88ALCPX-11		24VAC	—		17.25
W88ALCPX-12		115VAC	—		17.25
W88LCPX-9	4PDT (20 Pins)	6VDC	12	3W	15.99
W88LCPX-10		12VDC	50		15.99
W88LCPX-11		24VDC	200		15.99
W88LCPX-12		110VDC	4000		16.26
CLASS 88HP					
W88AHPX-21	DPDT	6VAC	—	3VA	11.30
W88AHPX-22		12VAC	—		11.30
W88AHPX-23		24VAC	—		11.30
W88AHPX-24		115VAC	—		11.30
W88HPX-32	DPDT	6VDC	25	1.5W	10.77
W88HPX-33		12VDC	100		10.77
W88HPX-34		24VDC	400		10.77
W88HPX-35		110VDC	8000		11.92
W88AHPX-36	3PDT	115VAC	—	3VA	13.43
W88HPX-51		24VDC	400	1.5W	12.88

Stock Part No.	Contacts 25 Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
CLASS 99					
W99AX-1	SPDT	24VAC	—	3VA	5.66
W99AX-2		115VAC	—		5.68
W99AX-3		230VAC	—		5.86
W99X-1	SPDT	6VDC	18	2.0W	5.42
W99X-2		12VDC	70		5.42
W99X-3		24VDC	290		5.44
W99X-4		110VDC	6000		5.83
W99AX-8	DPST-NO	24VAC	—	3VA	6.65
W99AX-9		115VAC	—		6.67
W99AX-10		230VAC	—		6.85
W99X-9	DPST-NO	6VDC	18	2.0W	6.36
W99X-10		12VDC	70		6.36
W99X-11		24VDC	290		6.38
W99X-12		110VDC	6000		6.77
W99AX-4	DPDT	24VAC	—	3VA	8.43
W99AX-5		115VAC	—		8.43
W99AX-6		230VAC	—		8.63
W99AX-7**		440VAC	—		8.68
W99X-5	DPDT	6VDC	18	2.0W	8.12
W99X-6		12VDC	70		8.12
W99X-7		24VDC	290		8.14
W99X-8		110VDC	6000		8.53
W99AX-15‡	DPDT (Relay)	115VAC	—	3VA	10.43
W99AX-16‡		230VAC	—		10.63

**W99AX-7 440VAC relay not UL Listed.
‡With Aux. contacts

Stock Part No.	Contacts	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
CLASS 99D					
W99ADX-1	SPST-NO-DM 50 Amps	24VAC	—	3VA	5.64
W99ADX-2		115VAC	—		5.64
W99ADX-3		230VAC	—		5.85
W99DX-1	SPST-NO-DM 50 Amps	6VDC	18	2.0W	5.35
W99DX-2		12VDC	70		5.35
W99DX-3		24VDC	290		5.37
W99DX-4		110VDC	6000		5.74
CLASS 99S					
W99SAX-1	SPDT 25 Amps at 115VAC	24VAC	—	3VA	7.35
W99SAX-2		115VAC	—		7.40
W99SAX-3		230VAC	—		7.62
W99SX-1	SPDT 25 Amps at 115VAC	6VDC	18	2.0W	7.11
W99SX-2		12VDC	70		7.13
W99SX-3		24VDC	290		7.15
W99SX-4		110VDC	6000		7.47
CLASS 99SD					
W99SADX-1	SPST-NO-DM 50 Amps at 115VAC	24VAC	—	3VA	6.26
W99SADX-2		115VAC	—		6.34
W99SADX-3		230VAC	—		6.56
W99SDX-1	SPST-NO-DM 50 Amps at 115VAC	6VDC	18	2.0W	6.10
W99SDX-2		12VDC	70		6.10
W99SDX-3		24VDC	290		6.14
W99SDX-4		110VDC	6000		6.44

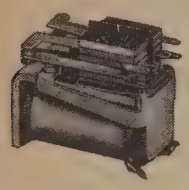
© United Technical Publications

Magnecraft® telephone type relays

IN STOCK FOR IMMEDIATE DELIVERY

class 33

Sub-miniature 1/16 x 1¼ x 1¼"



- DPDT — 4PDT, 3 amp contacts.
- Hinge pin assures long life.
- Telephone type switching versatility.
- Fast operate and release time.
- Rigid mount — Four 4-40 mtg. holes.
- Weight: 1 oz.

class 33HS

Miniature Hermetically Sealed
Hermetically Sealed to Afford Maximum Protection Against Severe Ambient Conditions.



- Size: 31/32 x 1 11/32 x 1 41/64"
- DPDT — 4PDT 5 amp contacts.
- Telephone versatility and reliability.
- High resistance to shock and vibration.
- Widely used in military and civilian equipment.
- #4-40 3 stud mtg. — 8 or 14 pin solder terminal header.
- Weight: 3 oz.

Stock Part No.	Contacts Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
CLASS 33					
W33X237	DPDT 3 Amps	6VDC	17	2.0W	4.87
W33X238		12VDC	75		4.87
W33X239		24VDC	280		4.92
W33X240		110VDC	6500		5.50
W33X241	4PDT 3 Amps	6VDC	17	2.0W	6.58
W33X242		12VDC	75		6.58
W33X243		24VDC	280		6.63
W33X244		110VDC	6500		7.23
CLASS 33HS					
W33HSX177	DPDT 5 Amps	6VDC	17	2.0W	13.21
W33HSX178		12VDC	75		13.21
W33HSX179		24VDC	280		13.26
W33HSX180		110VDC	6500		13.87
W33HSX181	4PDT 5 Amps	6VDC	17	2.0W	16.65
W33HSX182		12VDC	75		16.65
W33HSX183		24VDC	280		16.70
W33HSX184		110VDC	6500		17.36

class 77CS

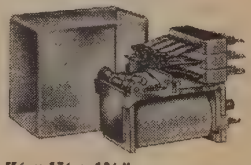


Miniature 5 amp 4PDT
See-thru Dust Cover and Sockets

- Size: 5/64 x 1 7/64 x 1 3/32"
- 70-161-1 solder terminal socket with retainer .58¢.
- 70-161-3 printed circuit terminal socket .58¢.

class 77PC

Miniature Printed Circuit Mtg.
5 amp 4PDT, See-thru Dust Cover



- Size: 5/64 x 1 7/64 x 1 3/32"
- Telephone type relays having greater contact forces, precision hinge-pin armature and unitized design assuring stabilized operation over very long life. Printed circuit type is assembled directly to P.C. board. Solder type can be soldered to directly or used with solder or P.C. socket.

CLASS 77CS

77CS Socket Terminal					
W77CSX-1‡	4PDT 5 Amps	6VDC	40	1.0W	5.30
W77CSX-2‡		12VDC	160		5.30
W77CSX-3‡		24VDC	600		5.40
W77CSX-4‡		48VDC	2500		5.55
W77CSX-5‡		110VDC	10000		5.97
W77ACSX-1‡		115VAC	—	3VA	5.96

CLASS 77PC

Stock Part No.**	†Nom. Coil Volt.	Coil Ohms	Prices 1-9
W77PCX-12	6VDC	40	5.60
W77PCX-13	12VDC	160	5.60
W77PCX-14	24VDC	600	5.69
W77PCX-15	48VDC	2500	5.84
W77PCX-16	110VDC	10000	6.25

** Do not order this part no. when socket is required.
‡ When relays are required to plug into sockets 70-161-1, 70-161-3, order from this table only. Sockets ordered separately.

class 22CP

Plug-in Removable Dust Cover
Hinge Pin Telephone Type Relay

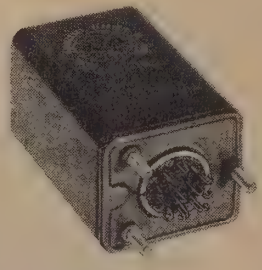
- Small: 1 7/16 x 1 41/64 x 3 33/32"
- 5 amp, DPDT, 3PDT — AC DC types.
- Long life and stable operation.
- Std. 8 or 11 pin octal plug.



class 22HS

Hermetically Sealed 5 amp 4PDT AC DC Types

- Small: 1 7/16 x 1 5/8 x 2 11/16"
- Long life hinge pin construction.
- Herm. sealed against severe ambient cond.
- #6-32 — 3 stud mtg.
- 14 pin solder terminals.



CLASS 22CP

Stock Part No.	Contacts 5 Amps	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
Alternating current voltage actuated					
W22ACPX60	DPDT	115VAC	—	5VA	10.23
Direct current voltage actuated					
W22CPX49	DPDT	12VDC	80	2.0W	9.85
W22CPX50		24VDC	375	1.5W	9.90
W22CPX51		110VDC	8000	1.5W	11.14
W22CPX54	3PDT	24VDC	375	1.5W	11.92
W22CPX56	DPDT	4.5MA	10000	200MW	11.14

CLASS 22HS

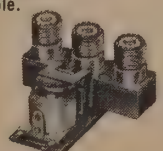
Alternating current voltage actuated					
W22AHSX32	4PDT	115VAC	—	5VA	17.30
Direct current voltage actuated					
W22HSX144	4PDT	6VDC	20	2.0W	17.00
W22HSX145		12VDC	80	2.0W	17.00
W22HSX146		24VDC	375	1.5W	17.05

Magnecraft® coaxial relays

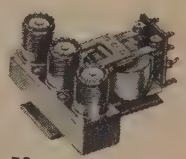
IN STOCK FOR IMMEDIATE DELIVERY

class 128

- Size: 2 7/8 x 2 5/8 x 1 7/16"
- SPDT RF switching silver alloy contacts.
- Rated 100 watts of RF power.
- Impedance matched to 50 ohms cable.
- Equipped with std. UHF connectors.
- VSWR 1.25: 1 max. from 0 to 500 MC.
- Operate Time: 25 ms. max.
- Long life hinge pin construction.
- Coaxial cavity, machined brass, with removable plug, for contact inspection.
- AC or DC operation.
- Release Time: 25 ms. max.
- 4-40 thd. — 4 mtg. holes.



CLASS 128
Coaxial Relay



CLASS 128
Coaxial Relay
with 10 amp DPDT
Aux. Contacts

CLASS 128

Stock Part No.	Coaxial Contacts	COIL †Volts	COIL *Ohms	Nominal Power	Prices 1-9
Class 128 Relay					
W128AX-7	SPDT	115VAC	—	3VA	18.47
W128X-9	SPDT	12VDC	100	1.5W	18.13
W128X-10	SPDT	24VDC	400	1.5W	18.20
Class 128 Relay with DPDT Auxiliary Contacts					
W128AX-11	SPDT	115VAC	—	3VA	20.85
W128X-14	SPDT	12VDC	100	1.5W	20.02
W128X-15	SPDT	24VDC	400	1.5W	20.08

*Resistance Values ±10% at 25°C.
†Voltage Specified Relays pull in at 80% of nominal or less for DC relays and 85% of nominal or less for AC relays at 25°C.
††Current Specified Relays pull in at Specified Value or less.

MAGNECRAFT ELECTRIC COMPANY

Net

© United Technical Publications

Magnecraft® miniature dry reed relays

IN STOCK FOR IMMEDIATE DELIVERY

class 101M & 104M

Miniature 1 x ½ x 7/16"



- 101M — SPST-NO — 10 VA @ .05 amp.
- 104M — SPDT — 3 VA @ .25 amp.
- In-line axial lead.
- Molded bobbin.
- Nom. Power: 101M, 600 MW 104M, 500 MW.
- Life: 10 x 10⁶ at rated load.
- Weight: 1 oz. approx.

class 101EP & 104EP

Miniature 1 x 7/16" dia.



- 101EP — SPST-NO — 10 VA @ .5 amp.
- 104EP — SPDT — 3 VA @ .25 amp.
- In-line axial lead.
- Encapsulated.
- Nom. Power: 600 MW.
- Life: 10 x 10⁶ at rated load.
- Weight: 1 oz. approx.

class 101PC & 104PC



Size 1
SPST-NO or SPDT
1½ x ½ x 7/16"

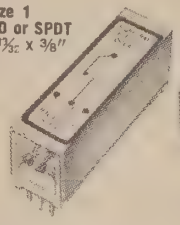


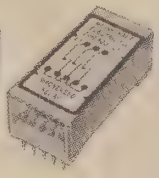
Size 2
DPST-NO or DPDT
1½ x 1 1/16 x 9/16"

- 101PC — 10 VA @ .5 amp.
- SPST-NO — DPST-NO.
- 104PC — 3 VA @ .25 amp.
- SPDT, DPDT.
- Encapsulated — Printed circuit mtg.
- Nom. Power: Size 1: 600 MW Size 2: 900 MW.
- Life: 10 x 10⁶ at rated load.
- Weight: 1 oz. approx.

class 101MPC & 104MPC

Size 1
SPST-NO or SPDT
1⅛ x 13/32 x ⅜"





Size 2
3PST-NO or DPDT
1⅛ x 3 3/64 x ⅜"

- 101MPC — 10 VA @ .5 amp.
- SPST-NO or 3PST-NO.
- 104MPC — 3 VA @ .25 amp.
- SPDT or DPDT.
- Printed circuit mtg. — Low profile.
- Nom. Power: Size 1: 500 MW Size 2: 700MW.
- Life: 10 x 10⁶ at rated load.
- Weight: Size 1: 1 oz. Size 2: 2 oz. approx.

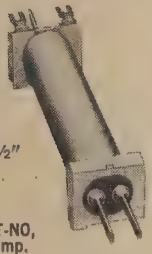
Stock Part No.	Contacts	COIL — DC ‡MA	†Volts	*Ohms	Prices 1-24
W101MX-1	SPST-NO	—	6	100	2.20
W101MX-2		—	12	250	2.25
W101MX-3		—	24	500	2.25
W101MX-4		9	—	2500	2.43
W104MX-1	SPDT	—	6	100	5.63
W104MX-2		—	12	250	5.68
W104MX-3		—	24	500	5.68
W104MX-4		9	—	2500	5.87
W101EPX-5	SPST-NO	—	6	65	3.62
W101EPX-6		—	12	225	3.62
W101EPX-7		—	24	1000	4.24
W101EPX-8		8	—	5000	4.68
W104EPX-2	SPDT	—	6	65	7.37
W104EPX-3		—	12	225	7.37
W104EPX-4		—	24	1000	8.05
W104EPX-5		8	—	5000	8.55
W101PCX-5	SPST-NO Size 1	—	6	65	5.11
W101PCX-6		—	12	250	5.16
W101PCX-7		—	24	1000	5.26
W101PCX-8		8	—	5000	5.68
W104PCX-7	SPDT Size 1	—	6	65	10.07
W104PCX-8		—	12	225	10.12
W104PCX-9		—	24	1000	10.22
W104PCX-10		8	—	5000	10.64
W101PCX-9	DPST-NO Size 2	—	6	40	7.15
W101PCX-10		—	12	150	7.18
W101PCX-11		—	24	650	7.24
W101PCX-12		8	—	5000	7.69
W104PCX-3	DPDT Size 2	—	6	40	14.59
W104PCX-4		—	12	150	14.62
W104PCX-5		—	24	650	14.68
W104PCX-6		8	—	5000	15.13
W101MPCX-1	SPST-NO	—	6	70	3.60
W101MPCX-2		—	12	300	3.60
W101MPCX-3		—	24	1100	3.63
W101MPCX-4		—	48	4300	3.77
W104MPCX-1	SPDT Size 1	—	6	70	6.82
W104MPCX-2		—	12	300	6.83
W104MPCX-3		—	24	1100	6.85
W104MPCX-4		—	48	4300	6.98
W101MPCX-5	3PST-NO Size 2	—	6	50	6.75
W101MPCX-6		—	12	220	6.75
W101MPCX-7		—	24	850	6.77
W101MPCX-8		—	48	3300	6.85
W104MPCX-5	DPDT Size 2	—	6	50	11.62
W104MPCX-6		—	12	220	11.63
W104MPCX-7		—	24	850	11.65
W104MPCX-8		—	48	3300	11.73

Magnecraft® standard reed relays

IN STOCK FOR IMMEDIATE DELIVERY

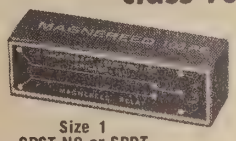
class 102M & 103M

Size
2⅛ x 19/32 x ½"

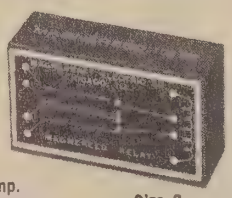


- 102M — SPST-NO, 15 VA @ 1 amp.
- 103M — SPDT, 10 VA @ .5 amp.
- In-line axial lead.
- Molded bobbin.
- Nom. Power: 300 MW.
- Life: 20 x 10⁶ at rated load.
- Weight: 1 oz. approx.

class 102PC & 103PC



Size 1
SPST-NO or SPDT
2¼ x 21/32 x 5/8"



Size 2
DPST-NO or DPDT
2¼ x 1¼ x 5/8"

- 102PC — 15 VA @ 1 amp.
- SPST-NO or DPST-NO.
- 103PC — 10 VA @ .5 amp.
- SPDT or DPDT.
- Encapsulated — Printed circuit mtg.
- Nom. Power: Size 1: 400 MW. Size 2: 700 MW.

Life: 20 x 10⁶ at rated load.
Weight: Size 1: 1 oz. — Size 2: 2 oz.

class 102MPC & 103MPC

- 102MPC — 15 VA @ 1 amp.
- Size 1: SPST-NO — Size 2: 3PST-NO — Size 3: 6PST-NO.
- 103MPC — 10 VA @ .5 amp.
- Size 1: SPDT — Size 2: DPDT — Size 3: 4PDT.
- Printed circuit mtg. — low profile.
- Nom. Power: Size 1: 500 MW — Size 2: 750 MW — Size 3: 1.5 W.

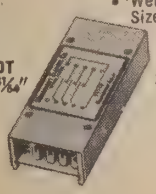
Life: 20 x 10⁶ at rated load.

- Weight: Size 1: 1 oz. — Size 2: 2 oz. — Size 3: 3 oz. approx.

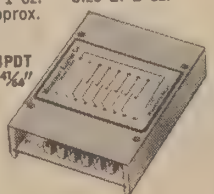
Size 1
SPST-NO or SPDT
2⅝ x ¾ x 45/64"



Size 2
3PST or DPDT
2⅝ x 1 13/16 x 45/64"



Size 3
6PST-NO or 4PDT
3⅝ x 1 31/32 x 45/64"



Stock Part No.	Contacts	COIL — DC ‡MA	†Volts	*Ohms	Prices 1-24
W102MX-1	SPST-NO	40	—	100	2.18
W102MX-2		—	6	200	2.25
W102MX-3		—	12	500	2.25
W102MX-4		—	24	2000	2.47
W102MX-5		5.5	—	5000	2.63
W103MX-1	SPDT	—	6	200	4.23
W103MX-2		—	12	500	4.23
W103MX-3		—	24	2000	4.45
W103MX-4		5.5	—	5000	4.62
W102PCX-1	SPST-NO Size 1	—	6	100	4.77
W102PCX-2		—	12	400	4.83
W102PCX-3		—	24	1500	4.87
W102PCX-4		6.5	—	5000	5.32
W103PCX-1	SPDT Size 1	—	6	100	7.22
W103PCX-2		—	12	400	7.27
W103PCX-3		—	24	1500	7.32
W103PCX-4		6.5	—	5000	7.76
W102PCX-5	DPST-NO Size 2	—	6	50	6.22
W102PCX-6		—	12	200	6.28
W102PCX-7		—	24	800	6.33
W102PCX-8		9	—	5000	6.78
W103PCX-5	DPDT Size 2	—	6	50	10.77
W103PCX-6		—	12	200	10.79
W103PCX-7		—	24	800	10.84
W103PCX-8		9	—	5000	11.31
W102MPCX-5	SPST-NO	140	—	30	3.29
W102MPCX-6		—	6	70	3.29
W102MPCX-7		—	12	250	3.29
W102MPCX-8		—	24	1000	3.29
W102MPCX-9		—	48	4000	3.46
W102MPCX-10		9	—	7000	4.14
W102MPCX-48	3PST-NO	—	6	50	5.62
W102MPCX-49		—	12	175	5.63
W102MPCX-50		—	24	750	5.77
W102MPCX-51		—	48	3000	5.97
W102MPCX-52	6PST-NO	—	6	25	9.18
W102MPCX-53		—	12	100	9.30
W102MPCX-54		—	24	375	9.35
W102MPCX-55		—	48	1500	9.43
W103MPCX-1	SPDT	140	—	30	5.83
W103MPCX-2		—	6	70	5.83
W103MPCX-3		—	12	250	5.83
W103MPCX-4		—	24	1000	5.83
W103MPCX-5		—	48	4000	6.00
W103MPCX-6		9	—	7000	6.68
W103MPCX-30	DPDT	—	6	50	8.33
W103MPCX-31		—	12	175	8.33
W103MPCX-32		—	24	750	8.47
W103MPCX-33		—	48	3000	8.67
W103MPCX-34	4PDT	—	6	25	14.60
W103MPCX-35		—	12	100	14.70
W103MPCX-36		—	24	375	14.77
W103MPCX-37		—	48	1500	14.88

*Resistance Values ±10% at 25°C.
†Voltage Specified Relays pull in at 80% of nominal or less for DC relays at 25°C.
††Current Specified Relays pull in at Specified Value or less.

© United Technical Publications

Magnecraft® reed relays

IN STOCK FOR IMMEDIATE DELIVERY

IC compatible reed relays

class/101M & 104M

SPST-NO, 101M — 10 VA @ 0.5 amp.
SPDT, 104M — 3 V @ 0.25 amp.
In-Line Axial Lead.
Molded Bobbin.

Nom. Power: 40 MW (Sensitive).
Life: 5 x 10^6 at rated load.
Weight: 1 oz. approx.



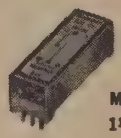
Miniature Size
2¼ x ½ x 7/16"

Stock Part No.	Contacts	Max. Pick-up Voltage	COIL — DC Volts	COIL — DC *Ohms	Prices 1-24
CLASS 101M					
W101MX-35	SPST-NO	4VDC	5	500	2.68
W101MX-41		2.4VDC	3	250	2.68
CLASS 104M					
W104MX-9	SPDT	4VDC	5	500	6.20
W104MX-10		2.4VDC	3	250	6.20
CLASS 101MPC					
W101MPCX-104	SPST-NO	4VDC	5	450	4.12
CLASS 104MPC					
W104MPCX-46	SPDT	4VDC	5	300	7.53

class 101MPC & 104MPC

SPST-NO 101MPC — 10 VA @ 0.5 amp.
SPDT 104MPC — 3 VA @ 0.25 amp.
Printed Circuit — Low Profile.
Molded Bobbin and Steel Cover.

Nom. Power: 101MPC 40 MW, 104MPC 50 MW.
Life: 5 x 10^6 at rated load.
Weight: 1 oz. approx.



Miniature Size
1⅛ x 13/32 x 3/8"

class 105MPC

SPST-NO 0.1 VA @ 10 MA.
Printed Circuit Mtg. — Low Profile.
Molded Bobbin — Steel Cover.

Nom. Power: 300 MW.
Life: 25 x 10^6 at rated load.
Weight: 1 oz. approx.



Micro-Miniature
5/8 x 5/16 x 11/32"

Stock Part No.	Contacts	‡MA	†Volts	COIL — DC *Ohms	Prices 1-24
W105MPCX-1	SPST-NO	—	6	120	5.45
W105MPCX-2		—	12	500	5.47
W105MPCX-3		—	24	2000	5.58

class 105EP

SPST-NO 0.1 VA @ 10 MA.
Encapsulated-In-Line
Axial Leads.

Nom. Power: 400 MW.
Life: 10 x 10^6 at rated load.
Weight: 1 oz. approx.



Micro-Miniature
7/16 x ¼" dia.

W105EPX-1	SPST-NO	—	6	90	6.18
W105EPX-2		—	12	350	6.18
W105EPX-3		—	24	1300	6.30

class 101MPC low cost!

SPST-NO 10VA @ .5 amp.
Printed Circuit Mtg.
Molded Bobbin.

Nom. Pow: 500MW
Life: 5 x 10^6 at rated load.
Weight: 1 oz. approx.



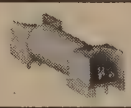
Miniature Size
1⅛ x ⅜ x 3/8"

W101MPCX-122	SPST-NO	—	6	70	2.65
W101MPCX-123	.5 amp	—	12	300	2.65
W101MPCX-124		—	24	1100	2.65

class 102MPC low cost!

SPST-NO 15VA @ 1 amp.
Printed Circuit Mtg.
Molded Bobbin.

Nom. Pow: 500MW
Life: 20 x 10^6 at rated load
Weight: 1 oz. approx.

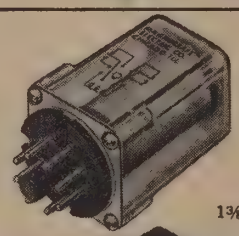


Small Size
2⅝ x ⅝ x 23/32"

W102MPCX-146	SPST-NO	—	6	70	2.50
W102MPCX-147	1 amp	—	12	250	2.50
W102MPCX-145		—	24	1000	2.50

class 103CP plug-in mtg.

10 VA @ 0.5 amp.
DPDT or 3PDT.
8 or 11 Pin Octal Style Plug.
Nom. Power: DPDT 500 MW — 3PDT 800 MW.
Life: 25 x 10^6 at rated load.
Weight: 5 oz. approx.

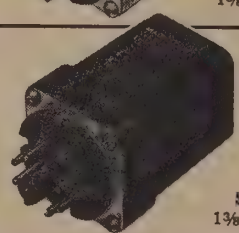


Small Size
1⅜ x 1⅜ x 2⅜"

Stock Part No.	Contacts	‡MA	†Volts	COIL — DC *Ohms	Prices 1-24
W103CPX-7	DPDT	—	6	75	12.92
W103CPX-8		—	12	300	12.95
W103CPX-9		—	24	1000	13.01
W103CPX-10		8	—	5000	13.57
W103CPX-11	3PDT	—	6	40	16.77
W103CPX-12		—	12	150	16.83
W103CPX-13		—	24	650	16.95
W103CPX-14		10	—	5000	17.50

††class 103LCP plug-in mtg.

Latching-Bi-Stable.
SPDT 10 VA @ 0.2 amp.
Single and Double Wound Coils.
8 or 11 Pin Octal Style Plug.
Nom. Power: Single Coil 150 MW — Double Coil 300 MW.
Life: 25 x 10^6 at rated load.
Weight: 5 oz. approx.

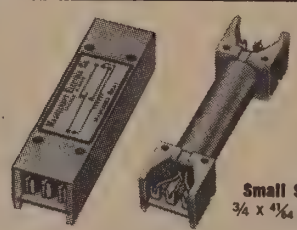


Small Size
1⅜ x 1⅜ x 2 11/16"

Stock Part No.	Contacts				
Single Wound Coils					
W103LCPX-7	SPDT	—	6	250	8.30
W103LCPX-8		—	12	1000	8.33
W103-LCPX-9		—	24	4000	8.57
W103LCPX-10		4	—	7000	8.80
Double Wound Coils					
W103LCPX-11	SPDT	—	6	120/120	9.87
W103LCPX-12		—	12	460/460	9.97
W103LCPX-13		—	24	1800/1800	10.02
W103LCPX-14		8	—	3000/3000	10.32

††class 103LMPC

Latching-Bi-Stable.
SPDT 10 VA @ 0.2 amp.
Single and Double Wound Coils.
Molded Bobbin and Steel Cover.
Printed Circuit Mtg. — Low Profile.
Nom. Power: Single Coil 150 MW — Double Coil 300 MW.
Life: 25 x 10^6 at rated load.
Weight: 1 oz. approx.

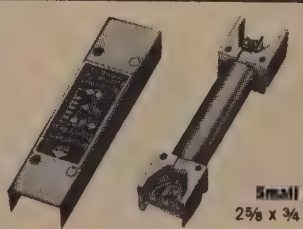


Small Size
¾ x 41/64 x 2⅝"

Stock Part No.	Contacts				
Single Wound Coils					
W103LMPCX-3	SPDT	40	—	70	7.07
W103LMPCX-4		—	6	250	7.07
W103LMPCX-5		—	12	1000	7.07
W103LMPCX-6		—	24	4000	7.26
W103LMPCX-7		4	—	7000	8.01
Double Wound Coils					
W103LMPCX-8	SPDT	80	—	30/30	8.22
W103LMPCX-9		—	6	120/120	8.33
W103LMPCX-10		—	12	460/460	8.33
W103LMPCX-11		—	24	1800/1800	9.00
W103LMPCX-12		8	—	3000/3000	10.04

††class 133LMPC

Latching-Bi-Stable.
SPDT 50 VA @ 2 amp.
Mercury Wetted Contacts.
Single and Double Wound Coils.
Molded Bobbin — Steel Cover.
Printed Circuit Mtg.
Nom. Power: Single Coil 150 MW — Double Coil 300 MW.
Life: 25 x 10^6 at rated load.



Small Size
2⅝ x ¾ x 41/64"

Stock Part No.	Contacts				
Single Wound Coils					
W133LMPCX-17	SPDT	40	—	70	9.87
W133LMPCX-18		—	6	250	9.88
W133LMPCX-19		—	12	1000	9.92
W133LMPCX-20		—	24	4000	10.07
W133LMPCX-21		4	—	7000	10.17
Double Wound Coils					
W133LMPCX-22	SPDT	80	—	30/30	11.23
W133LMPCX-23		—	6	120/120	11.25
W133LMPCX-24		—	12	460/460	11.32
W133LMPCX-25		—	24	1800/1800	11.42
W133LMPCX-26		8	—	3000/3000	11.50

*Resistance Values ±10% at 25°C. †Voltage Specified Relays pull in at 80% of nominal or less for DC relays at 25°C. ††Single Wound Coil — Switching by reversing polarity. Double Wound Coil — Switching by use of dual input. ‡Current specified relays pull-in at specified values or less.

MAGNECRAFT® ELECTRIC COMPANY

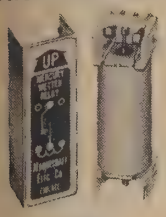
Net

© United Technical Publications

Magnecraft® mercury wetted relays

IN STOCK FOR IMMEDIATE DELIVERY

class 131MPC



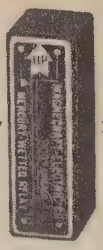
Size 1
SPST-NO
1⅛ x 13/32 x 3/8"



Size 2
DPST-NO
1⅛ x 3¾ x 3/8"

28 VA @ 1 amp.
Miniature.
Mercury Wetted Contacts.
Molded Bobbin and Steel Cover.
Printed Circuit Mtg. —
Low Profile.
Operating Position: Upright.
Nom. Power: Size 1 — 500 MW,
Size 2 — 700 MW.
Life: 25 x 10⁶ at rated load.
Wt. Size 1: 1 oz. — Size 2: 2 oz.

class 131PC



Size 1
SPST-NO
1½ x ½ x 5/16"



Size 2
DPST-NO
1½ x 1 1/16 x 5/16"

28 VA @ 1 amp.
Encapsulated — Miniature.
Mercury Wetted Contacts.
Printed Circuit Mtg. —
Low Profile.
Operation Position: Upright.
Nom. Power: Size 1 — 600 MW,
Size 2 — 900 MW.
Life: 25 x 10⁶ at rated load.
Wt. Size 1: 1 oz. — Size 2: 2 oz.

class 132MPC & 133MPC

132MPC — SPST-NO — 50 VA @ 3 amp.
133MPC — SPDT — 50 VA @ 2 amp.
Operating Position: Upright.
Printed Circuit Mtg.

Molded Bobbin and Steel Cover.
Nom. Power: 500 MW.
Life: 25 x 10⁶ at rated load.
Weight: 2 oz. approx.



Size
2⅝ x ¾ x 4 1/64"

Stock Part No.	Contacts	COIL—DC †Volts	COIL—DC *Ohms	PRICES 1-24
W131MPCX-2	SPST-NO	6	70	6.40
W131MPCX-3		12	300	6.48
W131MPCX-4		24	1100	6.53
W131MPCX-5		48	4300	6.98
W131MPCX-6	DPST-NO	6	50	11.53
W131MPCX-7		12	220	11.58
W131MPCX-8		24	850	11.65
W131MPCX-9		48	3300	11.93

Stock Part No.	Contacts	COIL—DC ††MA	COIL—DC †Volts	COIL—DC *Ohms	PRICES 1-24
W131PCX-8	SPST-NO	—	6	65	8.38
W131PCX-9		—	12	250	8.44
W131PCX-10		—	24	1000	8.55
W131PCX-11		8	—	5000	9.01
W131PCX-12	DPST-NO	—	6	40	10.62
W131PCX-13		—	12	150	10.66
W131PCX-14		—	24	650	10.71
W131PCX-15		8	—	5000	11.21
W132MPCX-1	SPST-NO	140	—	30	5.83
W132MPCX-2		—	6	70	5.83
W132MPCX-3		—	12	250	5.83
W132MPCX-4		—	24	1000	5.83
W132MPCX-5		—	48	4000	6.00
W132MPCX-6		9	—	7000	6.68
W133MPCX-1	SPDT	140	—	30	8.42
W133MPCX-2		—	6	70	8.42
W133MPCX-3		—	12	250	8.42
W133MPCX-4		—	24	1000	8.42
W133MPCX-5		—	48	4000	8.60
W133MPCX-6		9	—	7000	9.35

Magnecraft® high voltage reed relays

IN STOCK FOR IMMEDIATE DELIVERY

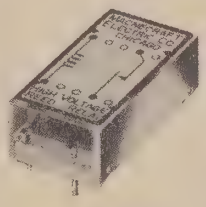
class 101VM

Miniature
1 x ½ x 7/16"



1,000 volts Peak @
.001 amp.
SPST-NO — Hi-Voltage.
In-Line Axial Leads.
Molded Bobbin.
Nom. Power 600 MW.
Life: 1 x 10⁶ at rated load.
Weight: 1 oz. approx.

class 101VMPC



1,000 volts Peak @ .001 amp.
SPST-NO — Hi-Voltage.
Printed Circuit Mtg. —
Low Profile.
Nom. Power: 700 MW.
Life: 1 x 10⁶
at rated load.
Weight: 2 oz. approx.

Miniature
1⅛ x 3¾ x 3/8"

class 102V

Small
4½ x 1 5/16 x 7/8"



5,000 volts Peak or 50 VA @ 3 amp.
SPST-NO or SPST-NC.
Solder Terminals.
Nom. Power: SPST-NO — 500 MW, SPST-NC — 225 MW.
Life: 10 x 10⁶ at rated load.
Weight: 3 oz. approx.

class 102HV & 102UHV

Molded Case — Encapsulated.
102HV — 10,000 volts Peak
@ .001 amp.
102UHV — 20,000 volts Peak
@ .001 amp.
SPST-NO — Hi-Voltage.
102HV Solder Terminals —
102UHV 6" Coil Leads.
Nom. Power: 1.5 W.
Life: 1 x 10⁶ at rated load.
Weight: 2 oz. approx.



Small
4½ x 7/8 x ¾"

Stock Part No.	Contacts	COIL — DC ‡MA	COIL — DC †Volts	COIL — DC *Ohms	Prices 1-24
W101VMX-1	SPST-NO	—	6	100	10.90
W101VMX-2		—	12	250	10.92
W101VMX-3		—	24	500	10.93
W101VMX-4		9	—	2500	11.12
W101VMPCX-1	SPST-NO	—	6	50	11.90
W101VMPCX-2		—	12	220	11.97
W101VMPCX-3		—	24	850	12.00
W101VMPCX-4		—	48	3300	12.22
W102VX-49	SPST-NO	—	6	70	13.69
W102VX-50		—	12	250	13.73
W102VX-51		—	24	1000	13.78
W102VX-52		—	48	4000	14.15
W102HVX-1	SPST-NO	—	6	25	19.88
W102HVX-2		—	12	100	19.88
W102HVX-3		—	24	400	19.88
W102UHVX-1	SPST-NO	—	6	25	33.62
W102UHVX-2		—	12	100	33.62
W102UHVX-3		—	24	400	33.62

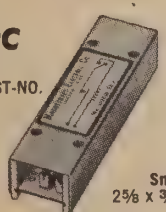
Stock Part No.	Contacts	COIL — DC †Volts	COIL — DC *Ohms	Nominal Power	Prices 1-24
W102VX-55	SPST-NC	24	2900	225mw	16.76

Magnecraft® power reed relays

IN STOCK FOR IMMEDIATE DELIVERY

class 102RMPC

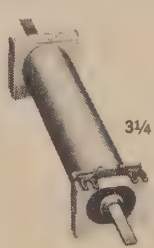
100 VA @ 3 amps — SPST-NO.
Printed Circuit Mtg. —
Low Profile.
Molded Bobbin and
Steel Cover.
Nom. Power:
500 MW.
Weight: 1 oz.
approx.



Small
2⅝ x ¾ x 4 1/64"

class 102RM

100 VA @ 3 amps —
SPST-NO.
Molded Bobbin.
In-Line Axial Leads
Nom. Power: 300 MW.
Weight: 1 oz. approx.



Small
3¼ x 1 9/32 x ½"

Stock Part No.	Contacts	COIL — DC ‡MA	COIL — DC †Volts	COIL — DC *Ohms	Prices 1-24
W102RMPCX-1	SPST-NO	—	6	70	7.87
W102RMPCX-2		—	12	250	7.88
W102RMPCX-3		—	24	1000	7.93
W102RMPCX-4		—	48	4000	8.18
W102RMX-5	3-amps.	—	6	200	4.18
W102RMX-6		—	12	500	4.22
W102RMX-7		—	24	2000	4.33
W102RMX-8		—	48	5000	4.53

*Resistance Values ±10% at 25°C.
†Voltage Specified Relays pull in at 80% of nominal or less for DC relays at 25°C.
††Current Specified Relays pull in at Specified Value or less.

MAGNECRAFT® ELECTRIC COMPANY

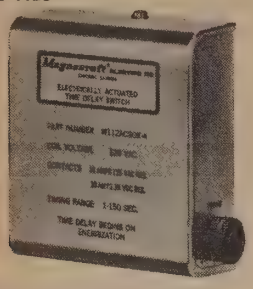
© United Technical Publications

Magnecraft® time delay relays and switches

IN STOCK FOR IMMEDIATE DELIVERY

air dashpot time delay relay

CLASS 112C



Size 3¾6 x 4¾6 x 1¾4"

- DPDT 10 amp output contacts.
- ±10% repeat accuracy.
- Adjustable delay 1 to 150 sec.
- Mounting: Two 3/16" holes on 3" centers.
- Air dashpot delay mechanism.
- Weight: 20 oz. approx.

CLASS 113C



Size 3⅝ x 2¼6 x 1³²⁄₃₂"

- SPDT 10 amp output contacts.
- Manually operated.
- Push button . . . release bottom . . . time delay is on adjustable delay 1 to 180 sec.
- Weight: 8 oz. approx.

CLASS 112M
±10% Repeat Accuracy



Size 4½ x 4½2 x 1½"

- DPDT 10 amp output contacts.
- ±10% repeat accuracy.
- Adjustable delay 1 to 150 sec.
- Mounting: Six 3/16" holes ½" x 4⅛" centers.
- Air dashpot delay mechanism
- Weight: 14 oz. approx.

Stock Part No.	Contacts 10 Amps	COIL †Volts	COIL *Ohms	Prices 1-9
		SLOW OPERATE		
W112ACSOX-4	DPDT	120VAC	—	24.30
W112CSOX-3		24VDC	80	24.30
		SLOW RELEASE		
W112ACSRX-4	DPDT	120VAC	—	24.30
W112CSRX-3		24VDC	80	24.30

Operate and release delay adjustable 1-150 sec.

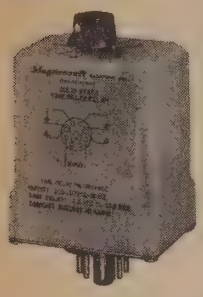
Stock Part No.	Contacts 10 Amps	COIL †Volts	COIL *Ohms	Adjustment Type	Prices 1-9
		SLOW OPERATE			
W112MASOX-1	DPDT	120VAC	—	Knob	28.23
W112MASOX-2		120VAC	—	Screw	28.23
W112MSOX-2	DPDT	24VDC	80	Knob	28.23
W112MSOX-3		24VDC	80	Screw	28.23
		SLOW RELEASE			
W112MASRX-1	DPDT	120VAC	—	Knob	28.23
W112MASRX-2		120VAC	—	Screw	28.23
W112MSRX-1	DPDT	24VDC	80	Knob	28.23
W112MSRX-2		24VDC	80	Screw	28.23

Operate and Release Delay Adjustable 1-150 seconds.

Stock Part No.	Contact Comb.	Contact Rating	Timing Range	Button Diameter	Prices 1 — 9
W113CX-1	SPDT	10 Amps	1-180 Sec.	½" Dia.	12.96

solid state (hybrid) time delay relays

CLASS 211CP



- Size 2⅞ x 2⅜ x 1¾".
- DPDT 10 amp output contacts.
- ±5% repeat accuracy.
- Adjustable delay up to 300 sec.
- 8 or 11 pin octal style plug.
- Solid state timing circuit.
- Weight: 10 oz. approx.

Stock Part No.	Contacts 10 Amps	Coil Voltage	Time Delay	Prices 1-9
		Operate Delay		
W211ACPSOX-18	DPDT	120 VAC	.2-1 Second	$18.98
W211ACPSOX-5			1-10 Second	18.98
W211ACPSOX-7			1-180 Second	18.98
W211ACPSOX-8			2-300 Second	18.98
W211CPSOX-10	DPDT	24 VDC	.2-1 Second	18.98
W211CPSOX-1			1-10 Second	18.98
W211CPSOX-3			1-180 Second	18.98
W211CPSOX-4			2-300 Second	18.98
		Release Delay		
W211ACPSRX-14	DPDT WD-12	120 VAC	.2-1 Second	22.93
W211ACPSRX-5			1-10 Second	22.93
W211ACPSRX-7			1-180 Second	22.93
W211ACPSRX-8			2-300 Second	22.93
W211CPSRX-9	DPDT WD-12	24 VDC	.2-1 Second	22.93
W211CPSRX-1			1-10 Second	22.93
W211CPSRX-3			1-180 Second	22.93
W211CPSRX-4			2-300 Second	22.93

CLASS 211M
±5% Repeat Accuracy



- Size 4½ x 4½2 x 1½".
- DPDT 10 amp output contacts.
- ±5% repeat accuracy.
- Adjustable delay up to 300 sec.
- Mounting: Six 3/16" holes ½" x 4⅛" centers.
- Solid state timing circuit.
- Weight: 10 oz. approx.

Stock Part No.	Cont. 10 Amp	Nominal Voltage	Timing Range	Prices 1-9
		TIME DELAY ON OPERATE		
W211MASOX-1	DPDT	120 VAC	.2-1	$24.56
W211MASOX-2			1.0-10	24.56
W211MASOX-3			1.0-180	24.56
W211MASOX-4			2.0-300	24.56
W211MSOX-1	DPDT	24 VDC	.2-1	24.56
W211MSOX-2			1.0-10	24.56
W211MSOX-3			1.0-180	24.56
W211MSOX-4			2.0-300	24.56
		TIME DELAY ON RELEASE		
W211MASRX-1	DPDT	120 VAC	.2-1	28.92
W211MASRX-2			1.0-10	28.92
W211MASRX-3			1.0-180	28.92
W211MASRX-4			2.0-300	28.92
W211MSRX-1	DPDT	24 VDC	.2-1	28.92
W211MSRX-2			1.0-10	28.92
W211MSRX-3			1.0-180	28.92
W211MSRX-4			2.0-300	28.92

printed circuit mounting

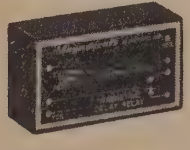
CLASS 502PCSO & 503PCSO



Size 2¼ x 1¼ x ¾"

- 15 VA @ 1 amp SPST-NO, 10 VA @ .5 amp SPDT reed output contacts.
- Repeat Accuracy: Slow operate ±5%.
- Adjustable delay up to 5 minutes, using a remote pot, or fixed resistor.
- Printed circuit mtg.
- Encapsulated solid state timing circuit.

CLASS 502PCSR & 503PCSR



Size 2¼ x 1¼ x ¾"

- 15 VA @ 1 amp SPST-NO, 10 VA @ .5 amp SPDT reed output contacts.
- Repeat Accuracy: Slow release ±2%
- Adjustable delay up to 5 minutes, using a remote pot, or fixed resistor.
- Printed circuit mtg.
- Encapsulated solid state timing circuit.

SLOW OPERATE

Stock Part No.	Volts DC ± 15%	Timing Range	*External Adjustment	Prices 1-9
		SPST-NO (Form A)		
W502PCSOX-2	12	100 m sec. to 100 sec.	60K ohm/sec.	18.96
W502PCSOX-3	24	100 m sec. to 100 sec.	60K ohm/sec.	18.96
W502PCSOX-5	12	3 sec. to 5 min.	10K ohm/sec.	21.30
W502PCSOX-6	24	3 sec. to 5 min.	10K ohm/sec.	21.30
		SPDT (Form C)		
W503PCSOX-2	12	100 m sec. to 100 sec.	60K ohm/sec.	20.82
W503PCSOX-3	24	100 m sec. to 100 sec.	60K ohm/sec.	20.82
W503PCSOX-5	12	3 sec. to 5 min.	10K ohm/sec.	22.31
W503PCSOX-6	24	3 sec. to 5 min.	10K ohm/sec.	22.31

SLOW RELEASE

Stock Part No.	Volts DC ± 15%	Timing Range	*External Adjustment	Prices 1-9
		SPST-NO (Form A)		
W502PCSRX-2	12	200 m sec. to 100 sec.	25K ohm/sec.	26.73
W502PCSRX-3	24	200 m sec. to 100 sec.	25K ohm/sec.	26.73
W502PCSRX-5	12	1 sec. to 5 min.	6.5K ohm/sec.	29.84
W502PCSRX-6	24	1 sec. to 5 min.	6.5K ohm/sec.	29.84
		SPDT (Form C)		
W503PCSRX-2	12	200 m sec. to 100 sec.	25K ohm/sec.	28.59
W503PCSRX-3	24	200 m sec. to 100 sec.	25K ohm/sec.	28.59
W503PCSRX-5	12	1 sec. to 5 min.	6.5K ohm/sec.	31.70
W503PCSRX-6	24	1 sec. to 5 min.	6.5K ohm/sec.	31.70

*External Resistor and/or switch, not furnished.

surface mounting with screw type terminals



CLASS 212M
±1% Repeat Accuracy

Size 4½ x 4½2 x 1½"

- DPDT 10 amp output contacts.
- ±1% repeat accuracy.
- Adjustable delay up to 500 sec.
- Mounting: Six 3/16" holes ½" x 4⅛" centers.
- Solid state timing circuit
- Weight: 10 oz. approx.

Stock Part Number	Input Voltage	Time Delay	Mode Of Operation	Prices 1 — 9
W212MASOX-2	120VAC	.5 - 10 Sec.	Slow Operate	36.15
W212MASOX-3	120VAC	5 - 100 Sec.	Slow Operate	37.74
W212MASOX-4	120VAC	50 - 500 Sec.	Slow Operate	43.24
W212MASRX-2	120VAC	.5 - 10 Sec.	Slow Release	42.06
W212MASRX-3	120VAC	5 - 100 Sec.	Slow Release	43.82
W212MASRX-4	120VAC	50 - 500 Sec.	Slow Release	49.73

*Resistance Values ±10% at 25°C.
†Voltage Specified Relays pull in at 80% of nominal or less for DC relays and 85% of nominal or less for AC relays at 25°C.

Net

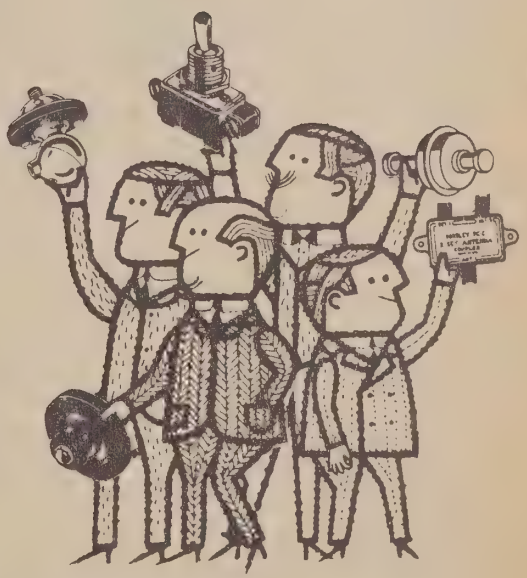
© United Technical Publications

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*

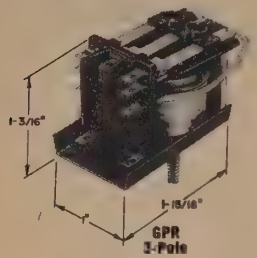


- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

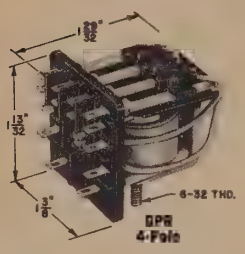
OHMITE general purpose relays

MODEL GPR — INDICATOR, PLATE, THYRATRON AND LATCHING VERSIONS IN UNENCLOSED AND ENCLOSED TYPES

Simple, rugged, low cost relays handling substantial power for small size. Uncomplicated design provides unusual flexibility for making and changing connections and mounting. Stock includes relays in versatile enclosures, some with indicator light, a plate, thyratron and latching versions. Wide commercial a industrial use where economy and versatility are important.



GPR
3-Pole



GPR
4-Pole

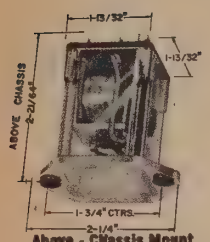
UNENCLOSED RELAYS

Basic (Unenclosed) Relay: All connections terminate on barrier-type terminal panel on combination solder — quick-connect (push-on) lugs which accept AMP 110 female connectors. The terminal panel is conveniently incorporated into printed circuit boards. Fixed contacts are integral inlay on terminal itself. Normally furnished with a 6-32 x ½" mounting stud and non-turn boss (or lug for 4-pole relays). A 6-32 threaded hole is optional. Unenclosed relays can also be mounted by plugging their panels into Ohmite SOG sockets. See "Socket" below.

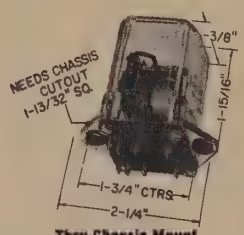
Contact Ratings: Two ratings — fine sil contacts, 5 amps at 115 VAC or 32 VDC sistive; silver-cadmium contacts, 10 am

Insulation: Tested at 1500 VAC.

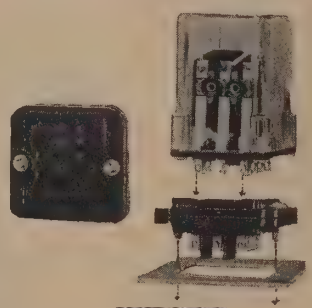
Coil Wattage: 1.4 watts DC operation; watts (2.0 volt-amps) AC except 2.4 wa (3.70 volt-amps) for 4-pole AC and AC lat ing relays.

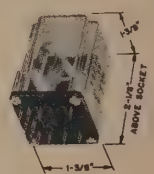


Above - Chassis Mount
GPRTA



Thru-Chassis Mount
GPRTT


SOGPR Sockets



For Socket Mount
GPRTS



For Octal Plug
GPRTP

ENCLOSED RELAYS

(GPRTA-, GPRTT-, GPRTS-, GPRTP-)
Four types of clear plastic enclosures as follows:

Chassis Mounting Types: "GPRTA"—("Terminals-Above-Chassis" type) has terminal panel opposite to mounting flange; "GPRTT" —("Terminals-Through-Chassis" type) has terminal panel on same end as mounting flange, requires chassis cutout; "GPRTS" type (Terminals for Socket Use) is similar to GPRTT but has no mounting flanges. It is intended strictly for plug-in mounting in Ohmite socket "SOGPR" (see "Socket" below).

Plug Base Type: "GPRTP" — employs octal plug for 1 and 2 pole relays; 11-pin plug for 3-pole. The octal plug base is integral with relay for rigidity — is designed with recessed pins which meet UL spacing requirements (150V).

Socket (SOGPR): Unique socket fits the terminal panels of all GPR relays and provides over-the-surface spacing to meet UL requirements for 150 volts. Requires chassis cut-out to mount. Hold down springs (see illustration) for unenclosed and enclosed relays, are provided with each socket but are not required except under conditions of vibration or shock. Socket solder terminals will also accept AMP 11 quick-connectors. See socket listings.

SOCKETS FOR GPR, GPRTS RELAYS

For up to 3PDT: 1¾" square, requires 1¼" x 1½" cutout.* 2 holes (for No. 6 screws) on 1⅜" centers.
Catalog No. SOGPR-9



For 4-pole models, 1¾" x 2", requires 1½" x 1½" cutout.* 2 holes (for No. 6 screws) on 1⅜" centers.
Catalog No. SOGPR-12



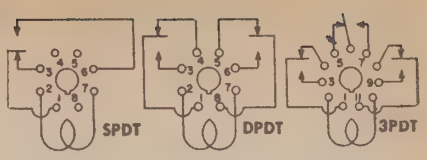
*Std. punches and dies from Ward Machinery Co., Chicago. No. 28, Style 22N, 1¼ x 1½, for SOGPR-9: No. 28, Style 14R, 1½ x 1½, for SOGPR-12

Indicator Relay: Incorporates light bulb to indicate energized condition of coil. Stocked only in GPRTP enclosures described in preceding. Neon bulb furnished with coil ratings 70 volts and above; incandescent bulbs for coil ratings below 70 volts.

UL & CSA Approval: Column heads in the stock tables carry the UL (Underwriters' Laboratories) or CSA symbol (Canadian Standards Association) where applicable. The gray tint in the column indicates the relays are recognized under the "UL components program." The acceptability of such relays by UL depends upon their combination with other equipment such as sockets etc.

© United Technical Publications

OHMITE general purpose relays



Plug wiring schemes for plug base (GPRTP) relays

MODEL GPR — CONTINUED
STOCK GPR RELAYS*

Contacts	COIL DATA Volts	Amps	Ohms	5 AMP. CONTACTS: UL SP UNENCLOSED Cat. No.[1] Prefix GPRX	ABOVE CHASSIS MTG. ENCLOSED Cat. No.[1] Prefix GPRTAX-†	THRU-CHASSIS MTG. ENCLOSED Cat. No.[1] Prefix GPRTTX-†	SOCKET MOUNT ENCLOSED (for SOGPR Socket)‡ UL SP Cat. No.[1] Prefix GPRTSX-	PLUG BASE MT. ENCLOSED Cat. No.[1] Prefix GPRTPX-	10 AMP. CONTACTS: UL SP UNENCLOSED Cat. No.[1] Prefix GPRX-	SOCKET MOUNT ENCLOSED (for SOGPR Socket)‡ SP Cat. No.[1] Prefix GPRTSX-	PLUG BASE MT. ENCLOSED SP Cat. No.[1] Prefix GPRTPX-	INDICA-TOR-PLUG BASE ENCLOSED Cat. No.[1] Prefix GPRTPX-
SPDT	6VAC	.334	4.2	(-3T)	(-3T)	(-3T)		(-3T)	(-203T)		(-203T)	
DPDT	6VAC	.334	4.2	-6T	(-6T)	(-6T)	(-6T)	-6T	(-206T)	(-206T)	-206T	(-291T)
3PDT	6VAC	.334	4.2	(-9T)	(-9T)	(-9T)	(-9T)	-9T	(-209T)	(-209T)	209T	
4PDT	6VAC	.650	2.5	-403T			(-403T)		(-433T)	(-433T)		
SPDT	12VAC	.167	17	(-12T)	(-12T)	(-12T)		(-12T)	(-212T)		(-212T)	
DPDT	12VAC	.167	17	-15T	(-15T)	(-15T)	(-15T)	-15T	(-215T)	(-215T)	-215T	(-292T)
3PDT	12VAC	.167	17	(-18T)	(-18T)	(-18T)	(-18T)	-18T	(-218T)	(-218T)	(-218T)	
4PDT	12VAC	.309	10	(-406T)			(-406T		(-436T)	(-436T)		
SPDT	24VAC	.084	65	(-21T)	(-21T)	(-21T)		(-21T)	(-221T)		(-221T)	
DPDT	24VAC	.084	65	**-24T**	**-24T**	(-24T)	(-24T)	-24T	(-224T)	(-224T)	**-224T**	(-293T)
3PDT	24VAC	.084	65	(-27T)	-27T	(-27T)	(-27T)	-27T	(-227T)	(-227T)	**-227T**	
4PDT	24VAC	.155	40	-409T			(-409T)		(-439T)	(-439T)		
SPDT	115VAC	.0174	1600	(-30T)	(-30T)	(-30T)		(-30T)	-230T		-230T	
DPDT	115VAC	.0174	1600	**-33T**	-33T	(-33T)	(-33T)	**-33T**	-233T	**-233T**	**-233T**	**-294T**
3PDT	115VAC	.0174	1600	-36T	-36T	(-36T)	(-36T)	**-36T**	(-236T)	(-236T)	**-236T**	
4PDT	115VAC	.0325	1000	-412T			**-412T**		**-442T**	**-442T**		
SPDT	230VAC	.0087	7000	(-39T)	(-39T)	(-39T)		(-39T)	(-239T)		(-239T)	
DPDT	230VAC	.0087	7000	-42T	(-42T)	(-42T)	(-42T)	-42T	-242T	(-242T)	-242T	(-295T)
3PDT	230VAC	.0087	7000	(-45T)	-45T	(-45T)	(-45T)	-45T	(-245T)	(-245T)	-245T	
4PDT	230VAC	.0147	4000	(-415T)			(-415T)		(-445T)	(-445T)		
SPDT	6VDC	.23	26	(-48T)	(-48T)	(-48T)		(-48T)	(-248T)		(-248T)	
DPDT	6VDC	.23	26	-51T	(-51T)	(-51T)	**-51T**	-51T	(-251T)	(-251T)	-251T	(-296T)
3PDT	6VDC	.23	26	(-54T)	(-54T)	(-54T)	(-54T)	-54T	(-254T)	(-254T)	-254T	
4PDT	6VDC	.23	26	(-418T)			(-418T)		(-448T)	(-448T)		
SPDT	12VDC	.114	105	-57T	(-57T)	(-57T)		(-57T)	(-257T)		(-257T)	
DPDT	12VDC	.114	105	**-60T**	-60T	(-60T)	(-60T)	-60T	**-260T**	(-260T)	-260T	(-297T)
3PDT	12VDC	.114	105	**-63T**	(-63T)	(-63T)	(-63T)	**-63T**	(-263T)	(-263T)	-263T	
4PDT	12VDC	.114	105	-421T			(-421T)		(-451T)	(-451T)		
SPDT	24VDC	.060	400	-66T	(-66T)	(-66T)		(-66T)	(-266T)		(-266T)	
DPDT	24VDC	.060	400	**-69T**	(-69T)	(-69T)	(-69T)	**-69T**	(-269T)	(-269T)	**-269T**	(-298T)
3PDT	24VDC	.060	400	-72T	(-72T)	(-72T)	-72T	-72T	(-272T)	(-272T)	**-272T**	
4PDT	24VDC	.060	400	-424T			(-424T)		-454T	**-454T**		
SPDT	110VDC	.0110	10,000	(-75T)	(-75T)	(-75T)		(-75T)	(-275T)		(-275T)	
DPDT	110VDC	.0110	10,000	(-78T)	(-78T)	(-78T)	(-78T)	-78T	(-278T)	(-278T)	-278T	(-299T)
3PDT	110VDC	.0110	10,000	**-81T**	-81T	-81T	**-81T**	-81T	-281T	(-281T)	-281T	
4PDT	110VDC	.0110	10,000	(-427T)			-427T		-457T	-457T		
Approx. weight				2.5 oz.	3.0 oz.	3.0 oz.	3.0 oz.	3.5 oz.	2.5 oz.	3.5 oz.	3.5 oz.	3.5 oz.

*Column heads carry symbols to indicate UL or CSA (Canadian Standards Assn.) approval. The grey tint indicates that relay is recognized under UL "components program" (File No. E33069, Guide No. 380W1.14C, Assignment No. 62C3559A). CSA File No. is 21309. See explanation in "UL and CSA Approval."

†4-Pole GPRTS relays are not covered by CSA.

‡GPRTA and GPRTT types as listed by UL, differ slightly from the stock versions above and consequently, are made to order. These UL versions have a "U" added to the catalog number, such as in "GPRTAU." They also have CSA approval.

STOCK GPR PLATE CIRCUIT RELAYS — 5 AMP CONTACTS

Plate Relays: Feature same physical construction as standard general purpose relays but are adjusted for greater sensitivity and can be used as electronic circuit controls, i.e., in the plate circuits of standard vacuum tubes.

Contacts	COIL DATA Ohms	Pull-in Max. ma.	UL UNENCLOSED Cat. No.[1] Prefix GPRX-	ABOVE CHASSIS MTG. ENCLOSED Cat. No.[1] Prefix GPRTAX-†	THRU-CHASSIS MTG. ENCLOSED Cat. No.[1] Prefix GPRTTX-†	SOCKET MOUNT ENCLOSED (for SOGPR Socket)‡ UL Cat. No.[1] Prefix GPRTSX-	UL SP PLUG BASE MT. ENCLOSED Cat. No.[1] Prefix GPRTPX-
SPDT	2500	7.2	-82T	(-82T)	(-82T)		(-82T)
DPDT	2500	10	(-83T)	(-83T)	(-83T)		-83T
3PDT	2500	12.3	(-84T)	(-84T)	(-84T)		-84T
4PDT	2500	15.0	(-463T)			(-463T)	
SPDT	5000	5	(-85T)	(-85T)	(-85T)		(-85T)
DPDT	5000	7.2	(-86T)	(-86T)	(-86T)		**-86T**
3PDT	5000	8.7	(-87T)	(-87T)	(-87T)		(-87T)
4PDT	5000	11	(466T)			(-466T)	
SPDT	10,000	3.6	(-88T)	(-88T)	(-88T)		(-88T)
DPDT	10,000	5	-89T	(-89T)	(-89T)		-89T
3PDT	10,000	6.1	(-90T)	(-90T)	(-90T)		**-90T**
4PDT	10,000	7.5	(-469T)			(-469T)	
Approx. weight			2.5 oz.	3.0 oz.	3.0 oz.	3.0 oz.	3.5 oz.

Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

© United Technical Publications

OHMITE general purpose relays

Thyratron Plate Relay: Designed specifically for plate circuit of thyratron tubes 2050 and 2D21 with 115 VAC supply (see diagram). Also suitable for operation in series with silicon controlled rectifiers from a 115 VAC supply. Ready to work, no capacitors or adjustments required, no chatter. Available unenclosed and in most GPR enclosures.



Relay in circuit Showing Thyratron

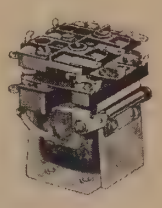
STOCK GPR THYRATRON RELAYS

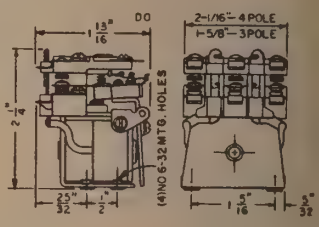
	5 AMP CONTACTS					10 AMP CONTACTS		
Contacts	UNENCLOSED Cat. No.[1] Prefix GPRX-	ABOVE CHASSIS MTG. ENCLOSED Cat. No.[1] Prefix GPRTAX-†	THRU-CHASSIS MTG. ENCLOSED Cat. No.[1] Prefix GPRTTX-†	SOCKET MOUNT ENCLOSED (for SOGPR Socket)‡ Cat. No.[1] Prefix GPRTSX-	PLUG BASE MT. ENCLOSED Cat. No.[1] Prefix GPRTPX-	UNENCLOSED Cat. No.[1] Prefix GPRX-	SOCKET MOUNT ENCLOSED (for SOGPR Socket)‡ Cat. No.[1] Prefix GPRTSX-	PLUG BASE MT. ENCLOSED Cat. No.[1] Prefix GPRTPX-
SPDT	-191T	(-191T)	(-191T)		(-191T)	(-391T)		(-391T)
DPDT	-192T	(-192T)	(-192T)		(-192T)	-392T		(-392T)
3PDT	(-193T)	(-193T)	(-193T)		(-193T)	(-393T)		(-393T)
4PDT	(-473T)			(-473T)		(-483T)	(-483T)	

MODEL DO RELAYS AC or DC

Particularly adaptable to aircraft and mobile equipment applications where severe shock and vibration are encountered. Design of molded parts around contact arms protects against mechanical injury. Stocked in 3-pole or 4-pole type, and also in hermetic enclosures and in latching types.

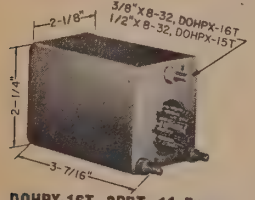
Coil Wattage: 3.00 watts, DC operation; 6.00 watts, 60 cycle AC. Maximum temperature rise 45°C, DC operation; 75°C, AC.
Coil Operating Voltage: Any voltage up to 230 VDC or 440 VAC, 60 cycle. Stock voltages in table.
Contacts: 10 amps nominal. Ratings are for 115 VAC or 32 VDC, resistive load.
Weight: Unenclosed 3-pole, 5 oz.; 4-pole, 6 oz.



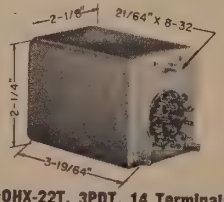


DO RELAYS IN HERMETIC ENCLOSURES

Stock DO relays with 115 volt coil in hermetically sealed metal enclosures, filled with dry nitrogen. Enclosures provide protection for relay under most adverse ambient conditions. Both 3 and 4-pole DO relays are supplied in these enclosures with plug (DOHPX-) or solder terminal (DOHX-) connectors as illustrated. See listings in stock table above.
Weights: 3-pole hermetic relay approx. 14 oz.; 4-pole approx. 15 oz.



DOHPX-16T, 3PDT, 11 Prongs
DOHPX-15T, 4PDT, 20 Prongs

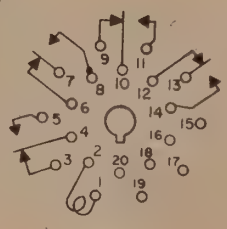


DOHX-22T, 3PDT, 14 Terminals
DOHX-23T, 4PDT, 14 Terminals

WIRING FOR PLUG-BASE STOCK DO RELAYS



DOHPX-16T
Mates with Amphenol 77 MIP 11 Socket



DOHPX-15T
Mates with Amphenol 77 MIP 20 Socket

STOCK DO RELAYS — 10 AMP CONTACTS*

Catalog No.[1]	Type‡	Volts	Coil Data Amps	DC Ohms
UNENCLOSED				
DOX-50T	3PDT	6VAC	2.33	0.36
(DOX-183T)	4PDT	6VAC	2.33	0.36
(DOX-49T)	3PDT	12VAC	1.28	1.40
(DOX-184T)	4PDT	12VAC	1.28	1.40
DOX-181T	3PDT	24VAC	.57	5.50
(DOX-185T)	4PDT	24VAC	.57	5.50
(DOX-226T)	DPST*	115VAC	.110	145.0
(DOUX-34§)	DPST*	115VAC	.110	145.0
DOX-227T	3PST	115VAC	.110	145.0
(DOUX-28§)	3PST	115VAC	.110	145.0
DOX46T	3PDT	115VAC	.110	145.0
(DOUX-30§)	3PDT	115VAC	.110	145.0
DOX-228T	4PST	115VAC	.110	145.0
(DOUX-31§)	4PST	115VAC	.110	145.0
DOX-53T	4PDT	115VAC	.110	145.0
(DOUX-33§)	4PDT	115VAC	.110	145.0
DOX-61T	3PDT	230VAC	.070	550.0
(DOX-130T)	4PDT	230VAC	.070	550.0
(DOX-145T)	3PDT	6VDC	.487	12.3
(DOX-186T)	4PDT	6VDC	.487	12.3
DOX-51T	3PDT	12VDC	.231	51.8
DOX-102T	4PDT	12VDC	.231	51.8
DOX-141T	3PDT	24VDC	.105	230.0
DOX-137T	4PDT	24VDC	.105	230.0
DOX-93T	3PDT	110VDC	.022	5,000
DOX-187T	4PDT	110VDC	.022	5,000
(DOX-182T)	3PDT	220VDC	.014	16,100
(DOX-188T)	4PDT	220VDC	.014	16,100
IN HERMETIC ENCLOSURE				
(DOHPX-16T)	3PDT	115VAC	.110	145.0
(DOHPX-15T)	4PDT	115VAC	.110	145.0
(DOHX-22T)	3PDT	115VAC	.110	145.0
DOHX-23T	4PDT	115VAC	.110	145.0

*Except DOX-226T, DOUX-34 20 amps, double break contacts.
‡All single-throw (- - ST) relays are normally open.
§Listed by UL.

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

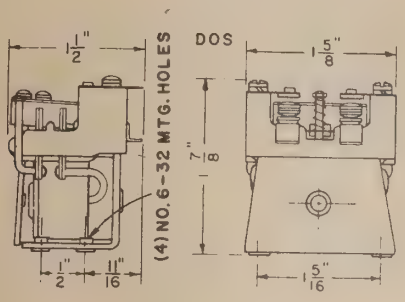
© United Technical Publications

OHMITE general purpose relays

MODEL DOS RELAYS AC or DC

Wide application, general purpose relay, compact and lightweight. Handles loads usually demanded of much larger relays. Meets rigorous aircraft relay standards.





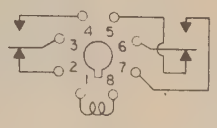
Coil Wattage: 2.5 watts, DC operation; 3 watts, 60 cycle AC. Maximum temperature rise 45°C, DC operation; 65°C, AC.

Coil Operating Voltage: Any voltage up to 230 VDC or 440 VAC, 60 cycles. Table lists stock voltages.

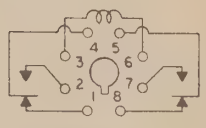
Contacts: 15 amps nominal. Rating is for 115 VAC or 32 VDC, resistive load.

Weight: Unenclosed, 4 ounces.





WIRING FOR PLUG-BASE STOCK DOS RELAYS



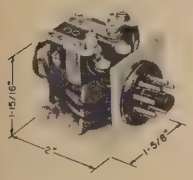
DOS RELAYS WITH PLUG-BASE OR IN DUST-TIGHT OR HERMETIC ENCLOSURES

DOS relays with 115 volt AC coils are available from stock with a standard octal plug base, unenclosed (DOSPX-1T) or with an octal plug base and drawn aluminum, removable dust-tight enclosure (DOSEPX-5T).

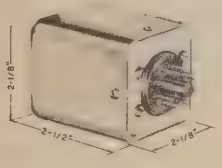
Weights: 8 oz. each.

Hermetically Sealed non-removable enclosures, filled with dry nitrogen, are also available to provide protection under adverse ambient conditions. DOS relays with 115 volt AC or DC coils are provided in these enclosures with either octal plug (DOSHPX-) or solder-terminal (DOSHX-) connectors as illustrated. See listings and prices in DOS stock table.

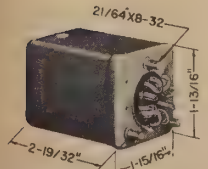
Weights: 8 oz. each approx.



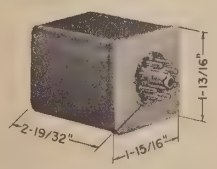
DOSPX-1T
Octal Plug-Base



DOSEPX-5T
Octal Plug Base with Dust Cover



Hermetic Enclosures with 8 Terminals
DOSHX-39T, 115VDC
DOSHX-40T, 115VAC



Hermetic Enclosures with Octal Plugs
DOSHPX-46T, 115VDC
DOSHPX-47T, 115VAC

STOCK DOS RELAYS — 15 AMP CONTACTS*

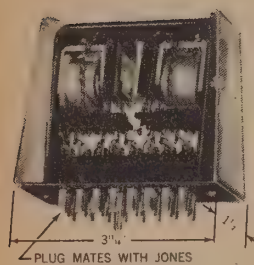
Catalog No.[1]	Type‡	Volts	Coil Data Amps	DC Ohms
UNENCLOSED				
(DOSX-229T)	SPST*	6VAC	.890	1.07
(DOSX-230T)	DPST	6VAC	.890	1.07
(DOSX-30T)	DPDT	6VAC	.890	1.07
DOSX-16T	DPDT	12VAC	.460	4.20
(DOSX-231T)	SPST*	24VAC	.269	15.5
DOSX-232T	DPST	24VAC	.269	15.5
DOSX-162T	DPDT	24VAC	.269	15.5
DOSX-233T	SPST*	115VAC	.043	450
(DOSUX-34§)	SPST*	115VAC	.043	450
DOSX-234T	DPST	115VAC	.043	450
(DOSUX-31§)	DPST	115VAC	.043	450
DOSX-7T	DPDT	115VAC	.043	450
(DOSUX-33§)	DPDT	115VAC	.043	450
(DOSX-235T)	SPST*	230VAC	.030	1,450
(DOSX-236T)	DPST	230VAC	.030	1,450
DOSX-12T	DPDT	230VAC	.030	1,450
DOSX-158T	DPDT	6VDC	.450	13.4
DOSX-66T	DPDT	12VDC	.210	56.2
DOSX-9T	DPDT	24VDC	.105	230.0
DOSX-237T	SPST*	110VDC	.022	5,000
(DOSX-238T)	DPST	110VDC	.022	5,000
DOSX-59T	DPDT	110VDC	.022	5,000
(DOSX-177T)	DPDT	220VDC	.013	16,400
WITH PLUG BASE				
DOSPX-1T	DPDT	115VAC	.043	450
WITH DUST COVER				
DOSEPX-5T	DPDT	115VAC	.043	450
IN HERMETIC ENCLOSURE				
DOSHX-40T	DPDT	115VAC	.043	450
DOSHPX-47T	DPDT	115VAC	.043	450
(DOSHX-39T)	DPDT	110VDC	.022	5,000
(DOSHPX-46T)	DPDT	110VDC	.022	5,000

*Except relays with * which have double-break contacts — 25 amp rating.
‡Single throw relays (- - ST) are normally open.
§Listed by UL.

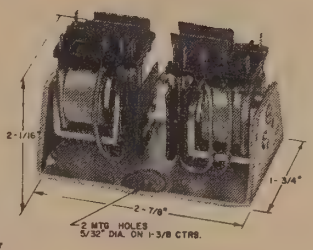
Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

© United Technical Publications

OHMITE latching relays



Enclosed Latching Relay (GPRLETP)



6PDT Latching Relay (GPRLE)

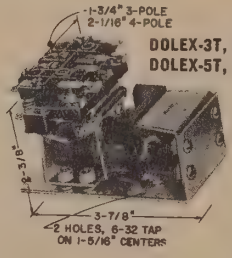
Latching Relay: Consists of two GPR relays with armatures linked so that the n.o. contacts of one are mechanically latched in closed position when, and after, this relay is energized. When 2nd relay is energized, first relay restores and latches 2nd. Permits switching of twice the number of circuits and holding without coil current. Unenclosed type "GPRLE." Enclosed type "GPRLETP" in clear plastic case with Jones plug P-324-SB fitting S-324-AB socket.

STOCK GPR LATCHING RELAYS — 5 AMP CONTACTS

Total Contacts	COIL DATA — (Each Coil) Volts	Amps	Ohms	Unenclosed GPRLE†	Enclosed Plug-Base GPRLETP†
4PDT	6VAC	.650	2.5	(GPRLEX-1T)	(GPRLETPX-1T)
6PDT	6VAC	.650	2.5	(GPRLEX-2T)	(PGRLETPX-2T)
4PDT	12VAC	.309	10.0	GPRLEX-3T	(GPRLETPX-3T)
6PDT	12VAC	.309	10.0	GPRLEX-4T	(GPRLETPX-4T)
4PDT	24VAC	.155	40.0	(GPRLEX-5T)	GPRLETPX-5T
6PDT	24VAC	.155	40.0	(GPRLEX-6T)	(GPRLETPX-6T)
4PDT	115VAC	.0325	1000	**GPRLEX-7T**	**GPRLETPX-7T**
6PDT	115VAC	.0325	1000	(GPRLEX-8T)	**GPRLETPX-8T**
4PDT	230VAC	.0147	4000	(GPRLEX-9T)	(GPRLETPX-9T)
6PDT	230VAC	.0147	4000	(GPRLEX-10T)	GPRLETPX-10T
4PDT	6VDC	.23	26	(GPRLEX-11T)	(GPRLETPX-11T)
6PDT	6VDC	.23	26	(GPRLEX-12T)	(GPRLETPX-12T)
4PDT	12VDC	.114	105	(GPRLEX-13T)	(GPRLETPX-13T)
6PDT	12VDC	.114	105	(GPRLEX-14T)	GPRLETPX-14T
4PDT	24VDC	.060	400	**GPRLEX-15T**	**GPRLETPX-15T**
6PDT	24VDC	.060	400	(GPRLEX-16T)	**GPRLETPX-16T**
4PDT	110VDC	.0110	10,000	(GPRLEX-17T)	GPRLETPX-17T
6PDT	110VDC	.0110	10,000	(GPRLEX-18T)	GPRLETPX-18T
Approx. weight				7.0 oz.	11.3 oz.

*Column heads carry symbols to indicate UL or CSA (Canadian Standar Assn.) approval. The gray tint indicates that relay is recognized under t "components program" (File No. E33069, Guide No. 380W1.14C, Assig ment No. 62C3559A). CSA File No. is 21309. See explanation in "UL a CSA Approval."

MODEL DO LATCHING RELAY (DOLEX-)



Consists of Model DO relay and a "reset magnet" with both armatures mechanically latched so that the normally open contacts of the relay remain closed when the relay energizing voltage is removed. The relay releases to normal position when the reset co is pulsed. Permits "holding" of circui without continuous coil current. Coi of stock units (both relays and res coils) are 115 VAC. Available with or 4-pole DO relays

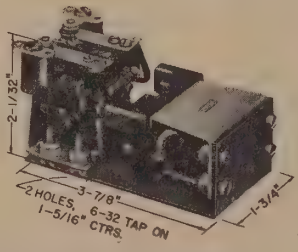
Weights: 3-pole — 16.5 oz.; 4-pole — 17 oz.

LATCHING TYPE

Catalog No.[1]	Type	Volts	Coil Data † Amps	DC Ohms
DOLEX-3T	3PDT	115VAC	.110	145.0
DOLEX-5T	4PDT	115VAC	.110	145.0

†Coil data applies to relay part of latching assembly. Reset magnet operates 115VAC, 60 cycle also.

MODEL DOS LATCHING RELAY (DOSLEX-)



Consists of Model DOS relay and a "reset magnet" with both armatures mechanically latched so that the normally open contacts of the relay remain closed when the relay energizing voltage is removed. The relay releases to normal position when the reset coil is pulsed. Permits "holding" of circuits without continuous coil current. Coils of stock units (both relay and reset magnet) are 115VAC.

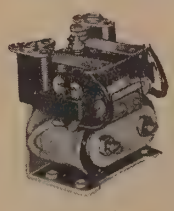
Weight: 14.2 oz.

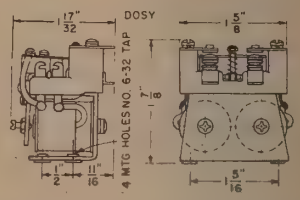
LATCHING TYPE

Catalog No.[1]	Type	Volts	Coil Data Amps †	DC Ohms
DOSLEX-1T	DPDT	115VAC	.043	450

†Coil data applies to relay part of latching assembly. Reset magnet operates on 115 VAC, 60 cycle also.

MODEL DOSY RELAY FOR PLATE CIRCUITS





Similar in construction to Model DOS relay but equipped with twin coils for increase sensitivity. The DOSY relay is adaptable to a wide range of electronic control appli cations such as plate circuit controls, or as overload or underload controls in D.C circuits to signal attainment of predetermined current levels.

Coil Wattage: 1.00 watt, with maximum temperature rise of 45°C. Lower wattages available.

Contacts: Stock combinations as listed. Ratings are for 115 VAC or 32 VDC, resistive load.

Weight: Approximately 4½ ounces.

Catalog No.[1]	Type	Coil Data DC Ohms	Max. Pull-in Current	Contact Amps
DOSYX-67T	DPDT	10,000	8 MA	15
(DOSYX-68T)	DPDT	5,000	11 MA	15
DOSYX-69T	SPDT	10,000	5 MA	15
(DOSYX-70T)	SPDT	5,000	7 MA	15

[1] **Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stockin distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.**

© United Technical Publication

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

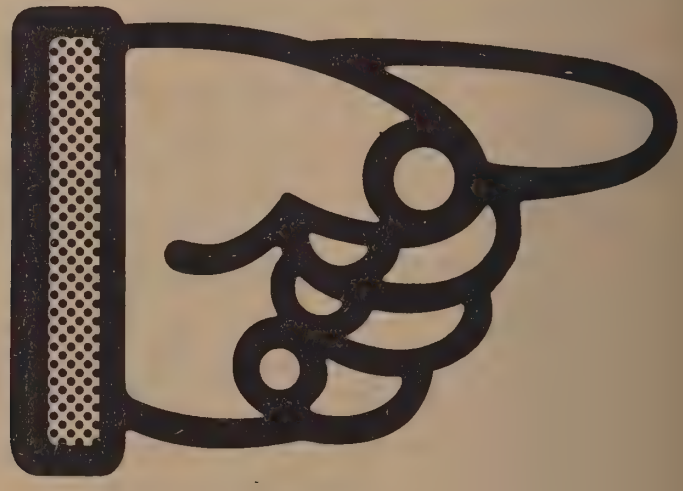
1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC MASTER
A United Technical Publication

Pass the inventory buck



© United Technical Publicatio

The brass has passed the word about inventories, right? Cut down. Tight money and stratospheric interest rates—you know the story.

Cut inventories . . . but don't run out! That's the dilemma. A knotty problem.

Perhaps this suggestion will offer you a partial solution: Let a distributor carry your inventory of electronic parts. Here is how it works:

You need 100 Potter & Brumfield relays a week to meet production schedules. You normally order a six months' supply, 2,600. Freight, cost of possession, warehousing—all must be added to the initial cost of the components.

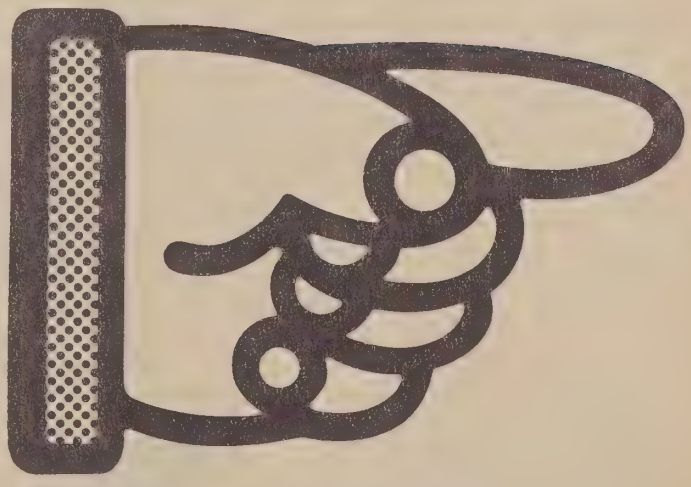
Now, instead of placing an order with the factory, you order from an Authorized P&B Distributor. He'll have 100 relays on your receiving dock every Tuesday. Or any other day you specify. Every week.

No freight to pay. No warehousing costs. No cost of possessing a big inventory of relays. Your product lines are protected.

Makes sense?

Give it a try. And remember, when you specify P&B relays, you select from the greatest number of standard relays in the industry. More types, more variations. Best of all, your P&B distributor will stock 'em for you.

The brass will be proud of you.



The P&B relays on the following **23 pages** are all available off the shelf from your P&B distributor. But, if you don't see what you want . . . ask him.

AMF | POTTER & BRUMFIELD

QUALITY RELAYS
FOR EVERY APPLICATION

AMF | POTTER & BRUMFIELD

ALPHABETICAL INDEX

Relay	Page	Relay	Page	Relay	Page	Relay	Page	Relay	Pa
AB	8	HP	2	KM	11	MC	13	R10	
ABC	8	HP Socket	2	KR3-H	5	MDP	15	R10 Sockets	
AP	10	JDT	17	KRP3-H	5	MG	13	R12	21,
BS	13	JM Series	18, 19	KRP	5	MH	13	R12 Sockets	
BS Cover	13	JR, JRA, JRM	16	KRP-N	5	ML	12	R40	
BU	10	JRL	17	KRP Spring	3	MR	9	R40 Sockets	
CD, CH, CK	20, 21, 22	KA, KAP	3	KT	11	MR Cover	9	RS	
CU, CL, CJ	20, 23	KB, KBP	10	KUL	11	MS	11	SA	
CS	Back Page	KCP	12	KUL Socket	11	MS Cover	11	SC, SCG	
FC, FL	14	KCP Spring	3	KUP	8	P Case	5	SL, SLG	
GA	2	KDP	3	KUP Sockets	8	PC	11	SM	
GB	11	KDP Socket	3	KUP Spring	3	PM	9	SS	
GF	8	KHU, KHP, KHS	4	LB	12	PM Cover	9	TL	
GM	10	KHU Spring	3	LM	12	PR	9	TM	
GP	10	KL	4	LS, LSP	13	PR Cover	9		
HC, HCM	14	KLT	4	MB	13	PW	12		

ACCESSORIES *(See listing on page indicated for minimum quantity order.)*

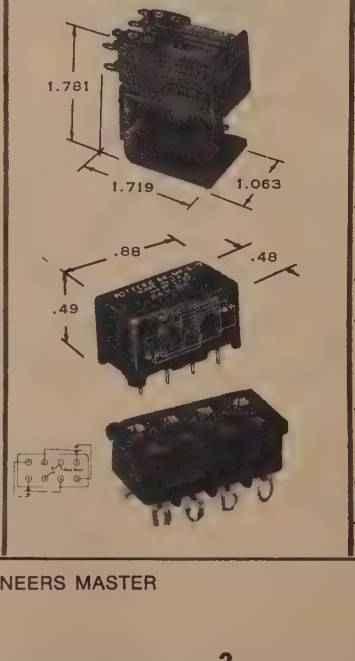
Designator	Relay Accessory	Page	Designator	Relay Accessory	Page	Designator	Relay Accessory	P
9HP1	HP Solder terminal socket	2	9KU4	KUP Screw terminal socket	8	9XR12-1	R12, 2PDT Solder terminal socket	
9KA1	KAP Hold down spring	3	9KU5	KUP Quick-connect terminal socket	8	9XR12-2	R12, 2PDT Printed circuit socket	
9KD2	KDP Solder terminal socket	3	9KUL21	KUL Hold down spring	11	9XR40-1	R40, 4PDT Right angle, PC socket	
9KD3	KDP Hold down spring	3	9PM1	PM Adapter plate	9	9XR40-2	R40, 4PDT Vertical, PC socket	
9KH1	KH Solder terminal socket	4	9PM2	PM Plastic dust cover	9	9XR40-3	R40, 4PDT Chassis mount, solder socket	
9KH2	KH printed circuit terminal socket	4	9XR10-1	R10, 2PDT Solder terminal socket	6	35D013	PR Metal dust cover	
9KH3	KH Hold down spring	4	9XR10-2	R10, 4PDT Solder terminal socket	6	35D070	"P" Case, 8-pin plug	
9KR15	KCP/KRP Hold down spring	3	9XR10-3	R10, 6PDT Solder terminal socket	6	35D072	"P" Case, 11-pin plug	
9KU1	KUP Pierced, solder terminal socket	8	9XR10-4	R10, 2PDT Printed circuit socket	6	35D130	MS/MR dust cover	
9KU2	KUP Printed circuit socket	8	9XR10-5	R10, 4PDT Printed circuit socket	6	35D188	BS Metal dust cover, small	
9KU3	KUP Hold down spring	3	9XR10-6	R10, 6PDT Printed circuit socket	6	35D227	PM Metal dust cover	

GA SERIES Low cost, all purpose, multiple contact, voltage switching relay. Used for many industrial control applications. Tinned, pierced solder type terminals. Contacts: Silver, designed for maximum self-cleaning action. Mounting: No. 8-32 tapped core with locating boss. Weight: 3½ ozs.

See GF Series for similar relays having 10 amp ratings.

HP SERIES This commercial miniature relay is recommended for applications requiring high reliability in minimum space, such as TV cameras, dictating machines, desk top computers, copying machines and others. For circuit board or socket mounting and encased in a nylon heat-sealed (non hermetic) cover, the HP is a half crystal case size relay with terminals on a .200" grid. Weight: .3 oz.

9HP1 solder terminal socket and retainer for HP relay.
Box of 10 **Net $4.75**



GENERAL PURPOSE RELAYS

TYPE	COILS		CONTACTS			SUGG RE- SALE PRIC
	Voltage or Current	Res. In Ohms	Nom. Power	Arrange-ment	Amp Rat-ing	
GA11A	6V 12V 24V 120V	1.7 6.8 24 690	6VA	DPDT	5	$3.8 3.8 3.8 3.8
GA11D	6V 12V 24V 110V	18 72 288 6,050	2.0W	DPDT	5	3.8 3.8 3.8 4.3
GA14A	24V 120V	24 690	6VA	3PDT	5	4.6 4.6
GA17A	6V 12V 24V 120V 240V	1.7 6.8 24 690 2,950	6VA	4PDT	5	5.5 5.5 5.5 5.5 5.9
GA17D	6V 12V 24V 110V	18 72 288 6,050	2.0W	4PDT	5	5.5 5.5 5.5 6.0
HP11D§	12V 24V	218 870	.662W	DPDT	2	8.35 8.35

§ Enclosed Relay

EEM File System Sec. 4500 · ELECTRONIC ENGINEERS MASTER

© United Technical Publicatio

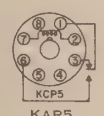
POTTER & BRUMFIELD RELAYS

KA AND KAP SERIES Small, low cost, highly efficient general purpose relays for handling light power loads such as small motors, solenoids and other relays, and general automation work. All KA and KAP relays with "Y" suffix bear CSA listing (File No. LR-15734) and carry U/L component recognition (File No. E22575). Mechanical life expectancy: 10 million operations. Duty: Continuous. Contacts: Movable, Gold-flashed silver; stationary, Silver overlay.

The KA is the open version of this series. Mounting: One No. 6-32 threaded stud and locating tab on .438 centers. Wt: 2 ozs. The KAP is the enclosed model and is protected by a clear polycarbonate dust cover. Terminals: 8 or 11-pin plug. Weight: 3 ozs.

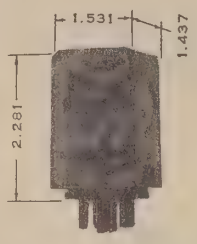
"G" suffix indicates silver-cadmium oxide contacts on movable rated 10 amps.





KAP5


KAP11





KAP14

HOLD DOWN SPRINGS
Designed to insure secure mounting of relays in any position. Will accommodate machine screws or rivets.

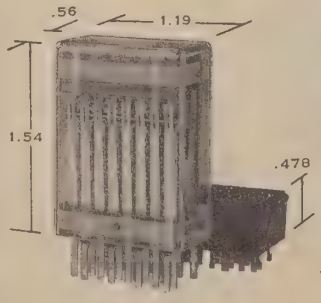
For KAP relays: (shown above)
KA1 50 per box **NET $5.80**
For KCP and KRP relays (pages 10 and 5)
KR15 50 per box **NET $5.80**
For KUP plain case relays (page 6)
KU3 50 per box **NET $5.25**



KDP SERIES This compact, general purpose DPC relay offers 8 Form C (8PDT) switching with bifurcated gold over silver contacts rated 1 amp @ 30V DC, resistive, or 0.5 amp @ 120V AC. Designed for dense packaging applications, the KDP provides electrical isolation on both the input and switching sides. Operate speed is 15 milliseconds @ nominal voltage @ 25°C. Mechanical life expectancy: in excess of 10 million operations. Duty: Continuous. Enclosure: Clear polycarbonate dust cover. Mounting: Solder terminal sockets with snap-lock spring for front insertion into chassis or panel. Approximate weight without socket: 1.3 ozs.

KD2 Solder terminal sockets
Box of 10 **NET $9.50**
KD3 Hold down springs
Box of 50 **NET $5.50**

NEW



GENERAL PURPOSE RELAYS						
TYPE	COILS			CONTACTS		SUGG. RESALE PRICE
	Input	Res. in Ohms	Nom. Power	Arrang.	Amp Rating	
KA5AY	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	SPDT	5	$3.70 3.70 3.70 3.70 4.20
KA5AG	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	SPDT	10	3.75 3.75 3.75 3.75 4.25
KA5DY	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	SPDT	5	3.55 3.55 3.55 4.25
KA5DG	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	SPDT	10	3.60 3.60 3.60 4.30
KA11AY	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	DPDT	5	4.50 4.50 4.50 4.50 4.90
KA11AG	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	DPDT	10	4.60 4.60 4.60 4.60 5.00
KA11DY	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	5	3.95 3.95 3.95 4.65
KA11DG	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	10	4.10 4.10 4.10 4.80
KA14AY	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	3PDT	5	4.90 4.90 4.90 4.90 5.40
KA14AG	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	3PDT	10	5.10 5.10 5.10 5.10 5.60
KA14DY	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	3PDT	5	4.45 4.45 4.45 5.15
KA14DG	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	3PDT	10	4.65 4.65 4.65 5.35
KAP5AG§	24V 120V	75 2,250	2VA	SPDT	10	6.40 6.40
KAP5DG§	24V 110V	472 10,000	1.2W	SPDT	10	6.30 7.00
KAP11AY§	24V 120V 240V	75 2,250 9,110	2VA	DPDT	5	7.05 7.05 7.45
KAP11AG§	6V 24V 120V	6 75 2,250	2VA	DPDT	10	7.15 7.15 7.15
KAP11DG§	24V 110V	472 10,000	1.2W	DPDT	10	7.10 7.80
KAP11DY§	12V 24V 110V	120 472 10,000	1.2W	DPDT	5	7.00 7.00 7.70
KAP14AY§	24V 120V 240V	75 2,250 9,110	2VA	3PDT	5	8.70 8.70 9.10
KAP14AG§	24V 120V	75 2,250	1.2W	3PDT	10	8.85 8.85
KAP14DG§	24V 110V	472 10,000	1.2W	3PDT	10	8.80 9.50
KAP14DY§	12V 24V 110V	120 472 10,000	1.2W	3PDT	5	8.60 8.60 9.30
KDP29D11§	24V	580	1W	8PDT	.5	9.35

§ Enclosed Relay

See ordering information on page 2.

POTTER & BRUMFIELD RELAYS

KHU/KHP/KHS SERIES Small, rugged, 4PDT available for AC or DC operation. Only KHU relays are recognized under the Component Program of Underwriters' Laboratories, Inc. KHU has clear polycarbonate and KHP has nylon dust cover; KHS is hermetically sealed in metal enclosure. These relays are designed to meet the exacting requirements of data processing, computer and process control applications. Contacts are gold-flashed silver rated 3 amps @ 30V DC or 120V AC, resistive, for 100,000 operations. "12" suffix indicates silver-cadmium oxide contacts. Mounting: Solder terminals with a No. 3-48 stud .312" long. Adaptable to sockets (below) with printed circuit or solder lug terminals. Weights without sockets; KHU or KHP 1⅛ ozs.; KHS 1⅝ ozs.

KHU/KHP hold down spring (similar to KCP-KRP shown on page 3).

9KH3 50 per box, weight 3 ozs. **Net $5.50**

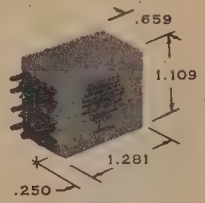
9KH1 Solder terminal sockets and retainers, **Box of 10 Net $6.60**

9KH2 Printed circuit terminal sockets, **Box of 10 Net $6.60**

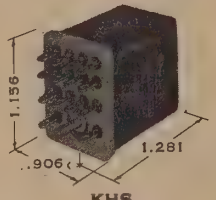
Weight per box, 4 ozs.



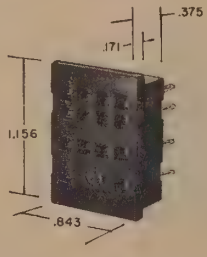
KHU

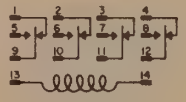


KHP



KHS





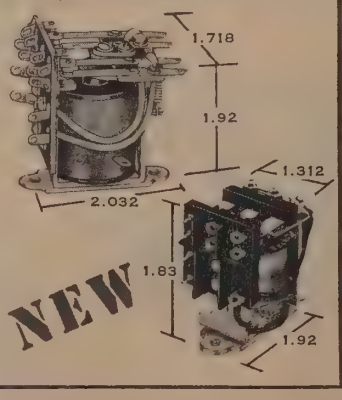
GENERAL PURPOSE RELAYS

TYPE	COILS Input	Res. In Ohms	Nom. Power	CONTACTS Arrang.	Amp. Rating	Sugg. Resale Price
KHU17A11§	6V 12V 24V 120V	10.5 43 160 3,900	1.2VA	4PDT	3	$ 5.55 5.55 5.55 6.05
KHU17D11§	6V 12V 24V	40 160 650	900MW	4PDT	3	5.05 5.05 5.05
KHU17D11§	48V 90V 110V	2,600 9,000 11,000	900MW	4PDT	3	5.25 5.90 5.90
KHU17D12§	24V	650	900MW	4PDT	3	5.20
KHU17D12§	110V	11,000	900MW	4PDT	3	6.05
KHP17A11§	6V 12V 24V 120V	10.5 43 160 3,900	1.2VA	4PDT	3	5.55 5.55 5.55 6.05
KHP17A12§	120V	3,900	1.2VA	4PDT	3	6.20
KHP17D11§	6V 12V 24V	40 160 650	900MW	4PDT	3	5.05 5.05 5.05
KHP17D11§	48V 90V 110V	2,600 9,000 11,000	900MW	4PDT	3	5.25 5.90 5.90
KHP17D12§	24V	650	900MW	4PDT	3	5.20
KHP17D12§	110V	11,000	900MW	4PDT	3	6.05
KHP17D13§	24V	650	900MW	4PDT	3	7.10
KHS17A11†	6V 12V 24V 120V	10.5 43 160 3,900	1.2VA	4PDT	3	9.55 9.55 9.55 9.90
KHS17A12†	120V	3,900	1.2VA	4PDT	3	10.10
KHS17D11†	6V 12V 24V 110V	40 160 650 11,000	900MW	4PDT	3	8.55 8.55 8.55 9.40
KHS17D12†	24V	650	900MW	4PDT	3	8.70

SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

KL SERIES 4PDT relay has high dielectric phenolic insulation and affords broad versatility and utility. Widely used in such applications as industrial controls, elevator controls, communications equipment and electronic measuring devices. Contacts rated 5 amperes @ 120 volts AC, 50/60 Hz resistive are available. Mounting: All models — two No. 6-32 tapped holes on 1.438" centers. Weight: 5 ozs.

KLT SERIES relays are designed for DC applications that require sensitive coils to operate in transistor circuits. Contact arrangements to 3PDT are rated 3 amperes at 120 volts AC, 50/60 Hz resistive. Coils are designed for continuous duty @ 6 Watts @ +25° on open types. Expected life is 10 million mechanical operations. Mounting: Same as KL Series. Weight: Approximately 4 ozs.



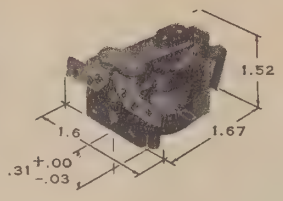
KL17A	6V 12V 24V 120V	2.25 7.8 33 760	2.9VA	4PDT	5	7.35 7.35 7.35 7.35
KL17D	6V 12V 24V 110V	36 140 600 10.000	1.0W	4PDT	5	6.95 6.95 6.95 7.65
KLT5D	12V 24V	1,080 4.320	132mW	SPDT	3	4.20 4.20
KLT11D	6V 12V 24V 48V	200 810 3,240 13.000	178mW	DPDT	3	5.35 5.35 5.35 5.75
KLT14D	12V 24V	540 2.160	266mW	3PDT	3	5.95 5.95

§ Enclosed Relay † Sealed Relay See ordering information on page

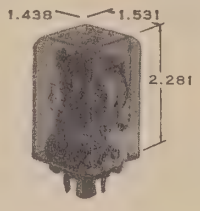
© United Technical Publicati

OTTER & BRUMFIELD RELAYS

KR3-H SERIES Ruggedly constructed but of mall size, KR3-H is a heavy duty relay especially esigned for applications where limited space is factor. Its heavy duty copper-alloy movable ontact carrier has twin silver-cadmium oxide ontacts rated 20 amps @ 120V AC 60 Hz, re-istive, or 28V DC; 1 HP 120/240V 60 Hz. Con-act arrangement is 1 Form X (SPST-NO-DB) nly. Terminals: suitable for .250" quick connect, lso solder; for contacts: solder only for coil. ize: 1.6" x 1.671" x 1.52". Seated height: 1.21". Mounting: One No. 6-32 stud and locating tab n .437" center. Weight: 2 ozs.



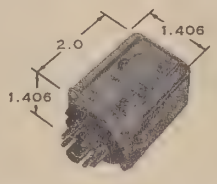
RP3-H SERIES All electrical specifications sted above for the KR3-H series relays apply to he KRP3-H. However, the KRP3-H is enclosed a clear polycarbonate dust cover and features n octal plug-in base. Weight: Approximately 3 zs.



KRP3AH



RP SERIES Versatile, multi-contact arrange-ent. Enclosed in a clear polycarbonate dust over. Standard 8-pin octal-type plug for KRP5 nd KRP11, 11-pin for KRP-14. Weight: Approx. ozs. Contacts: 5 amp, Gold flashed silver, 10 mp silver-cadmium oxide. See KCP-KRP hold own spring for special mounting applications. ee KRP-N indicator lamp relay for current onitoring applications.



KRP5 KRP11 KRP14



RP-N INDICATOR AMP RELAY A general purpose relay incorpo-ating a lamp to indicate current or voltage availa-ility in power circuit. Contacts: Silver-cadmium xide. Enclosures: Clear, polycarbonate dust over. Mounting: Standard octal plug.

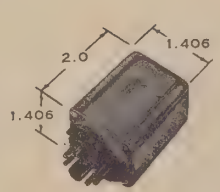
Veight: Approx. 3 ozs.

Hold down spring (Please see Page 3).



P"—CASE A clear polycarbonate case for ounting rectifiers, capacitors, resistors, or a mbination of these. Available with octal-type ug with 8 or 11-pins. Comes complete with four rews. Weight: .5 ozs. each. See KCP-KRP Hold own Spring for special mounting applications.

5D070 Case (8-pin plug)	**NET $.65**
5D072 Case (11-pin plug)	**NET $.80**



GENERAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		SUGG. RE-SALE PRICE
	Input	Res. In Ohms	Nom. Power	Arrang.	Amp. Rating	
KR3AH	12V 24V 120V	21 75 2,250	2VA	SPST-NO-DM	20	$4.55 4.55 4.55
KR3DH	12V 24V 110V	120 472 10,000	1.2W	SPST-NO-DM	20	4.35 4.35 4.95
KRP3AH§	12V 24V 120V	21 75 2,250	2VA	SPST-NO-DM	20	7.35 7.35 7.35
KRP3DH§	12V 24V 110V	120 472 10,000	1.2W	SPST-NO-DM	20	7.10 7.10 7.80
KRP5A§	6V 24V 120V	6 75 2,250	2VA	SPDT	5	6.30 6.30 6.30
KRP5AG§	6V 24V 120V	6 75 2,250	2VA	SPDT	10	6.45 6.45 6.45
KRP5D§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	SPDT	5	6.25 6.25 6.25 6.95
KRP5DG§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	SPDT	10	6.40 6.40 6.40 7.10
KRP11A§	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	DPDT	5	7.00 7.00 7.00 7.00 7.45
KRP11AG§	6V 12V 24V 120V 240V	6 12 75 2,250 9,110	2VA	DPDT	10	7.25 7.25 7.25 7.25 7.70
KRP11D§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	5	6.95 6.95 6.95 7.65
KRP11DG§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	10	7.20 7.20 7.20 7.90
KRP14A§	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	3PDT	5	8.70 8.70 8.70 8.70 9.15
KRP14AG§	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	3PDT	10	9.05 9.05 9.05 9.05 9.50
KRP14D§	6V 12V 24V 110V	32.1 120 472 10,000	1.2VA	3PDT	5	8.60 8.60 8.60 9.30
KRP14DG§	6V 12V 24V 110V	32.1 120 472 10,000	1.2VA	3PDT	10	8.95 8.95 8.95 9.65
KRP11AN§	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	DPDT	10	8.30 8.30 8.30 8.30 8.75
KRP11DN§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	10	8.20 8.20 8.20 8.95
KRP14AN§	6V 12V 24V 120V 240V	6 21 75 2,250 9,110	2VA	3PDT	10	10.10 10.10 10.10 10.10 10.55

§ Enclosed Relay

See ordering information on page 2.

R10-E1 SERIES DC operated industrial relays provide sensitivity of 125 mw per pole. DPDT to 6PDT contact arrangements are available with three contact styles for 100 mA 2 amps or 5 amps. Operating temperature is −55°C to +72°C. U/L File No. 42810. Solder terminals, No. 3-48 stud or plug-in sockets are available for relay mounting (see sockets below). Wire retainer and pre-installed grounding provision included with sockets. R10-E1-Z SERIES has bifurcated low level contacts. "J" Sensitive Current Adjustment: 85 mw (DPDT); 175 mw (4PDT).

R10-E2 SERIES offers printed circuit board mounting without socket, no mounting stud. Weight: .8 to 1.4 ozs.

9XR10-1 Solder terminal sockets and retainers for 2PDT R10 relays,
Box of 10 **NET $5.50**

9XR10-2 Solder terminal sockets and retainers for 4PDT R10 relays,
Box of 10 **NET $7.00**

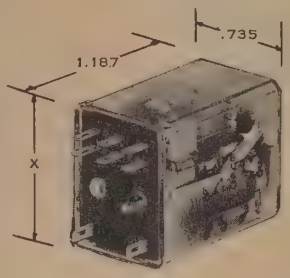
9XR10-3 Solder terminal sockets and retainers for 6PDT R10 relays,
Box of 10 **NET $9.00**

9XR10-4 Printed circuit pin terminal sockets and retainers for 2PDT R10 relays,
Box of 10 **NET $5.50**

9XR10-5 Printed circuit pin terminal sockets and retainers for 4PDT R10 relays,
Box of 10 **NET $7.00**

9XR10-6 Printed circuit pin terminal sockets and retainers for 6PDT R10 relays,
Box of 10 **NET $9.00**

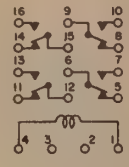
NEW



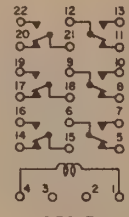
X = .950 (2PDT)
1.165 (4PDT)
1.375 (6PDT)



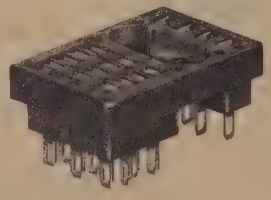
2 POLE

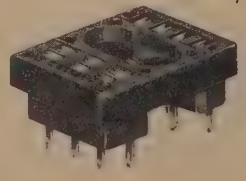


4 POLE



6 POLE





GENERAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		SUGG RE- SALE PRIC
	Input	Res. in Ohms	Nom. Power	Arrang.	Amp Rat- ing	
R10-E1-Y2						
-V52	6VDC	52	500 mW	2PDT	2	$3.2
-V185	12VDC	185				3.2
-V700	24VDC	700				3.2
-V2.5K	48VDC	2500				3.2
-V15.0K	115VDC	15,000				4.9
R10-E1-Y4						
-V52	6VDC	52	500 mW	4PDT	2	3.6
-V185	12VDC	185				3.6
-V700	24VDC	700				3.6
-V2.5K	48VDC	2500				3.6
-V15.0K	115VDC	15,000				5.3
R10-E1-Y6						
-V25	6VDC	25	850 mW	6PDT	2	4.6
-V90	12VDC	90				4.6
-V430	24VDC	430				4.6
-V1.5K	48VDC	1500				4.6
-V9.0K	115VDC	9000				5.5
R10-E1-X2						
-V52	6VDC	52	500 mW	2PDT	5	3.3
-V185	12VDC	185				3.3
-V700	24VDC	700				3.3
-V2.5K	48VDC	2500				3.3
-V15.0K	115VDC	15,000				5.0
R10-E1-X4						
-V52	6VDC	52	500 mW	4PDT	5	3.8
-V185	12VDC	185				3.8
-V700	24VDC	700				3.8
-V2.5K	48VDC	2500				3.8
-V15.0K	115VDC	15,000				5.5
R10-E1-X6						
-V25	6VDC	25	850 mW	6PDT	5	5.0
-V90	12VDC	90				5.0
-V430	24VDC	430				5.0
-V1.5K	48VDC	1500				5.0
-V9.0K	115VDC	9000				5.9
R10-E1-X2						
-115VAC	115VAC			2PDT	5	4.5
R10-E1-X4						
-115VAC	115VAC			4PDT	5	5.4
R10-E1-Z2						
-V52	6VDC	52	500 mW	2PDT	100 mA	3.6
-V185	12VDC	185				3.6
-V700	24VDC	700				3.6
-V2.5K	48VDC	2500				3.6
-V15.0K	115VDC	15,000				5.3
R10-E1-Z4						
-V52	6VDC	52	500 mW	4PDT	100 mA	4.1
-V185	12VDC	185				4.1
-V700	24VDC	700				4.1
-V2.5K	48VDC	2500				4.1
-V15.0K	115VDC	15,000				5.8
R10-E1-Z6						
-V25	6VDC	25	850 mW	6PDT	100 mA	5.3
-V90	12VDC	90				5.3
-V430	24VDC	430				5.3
-V1.5K	48VDC	1500				5.3
-V9.0K	115VDC	9000				6.2
R10-E1-Y2						
-J2.5K	5.8mA	2500	85 mW	2PDT	2	3.5
-J5.0K	4.1mA	5000				4.0
-J10.0K	3.1mA	10,000				4.4
R10-E1-Y4						
-J2.5K	8.4mA	2500	175 mW	4PDT	2	3.9
-J5.0K	6.2mA	5000				4.4
-J10.0K	4.5mA	10,000				4.8
R10-E1-Z4						
-J1.0K	13.0mA	1000	175 mW	4PDT	100 mA	4.4
-J2.5K	8.4mA	2500				4.4
-J5.0K	6.2mA	5000				4.9
R10-E2-Y2						
-V185	12VDC	185	500 mW	2PDT	2	3.2
-V700	24VDC	700				3.2
R10-E2-Y4						
-V185	12VDC	185	500 mW	4PDT	2	3.6
-V700	24VDC	700				3.6
R10-E2-Z4						
-V185	12VDC	185	500 mW	4PDT	100 mA	4.1
-V700	24VDC	700				4.1

See ordering information on page

© United Technical Publicatio

OTTER & BRUMFIELD RELAYS

40 SERIES SLIMLINE DC operated 4PDT lays are designed for printed circuit board use. ovide low profile—only .43" thick. Allows easy C board layout and .6" board mounting centers. vitching range is from true dry circuit to 5 mperes in a variety of contact styles. A wide nge of coil voltages offered. Pull-in power: 400 w.

40-E1 SERIES provides solder terminals or ug-in socket mounting. (See sockets below.) furcated contacts for low level applications ailable or with cross bar contacts for dry cir- it use.

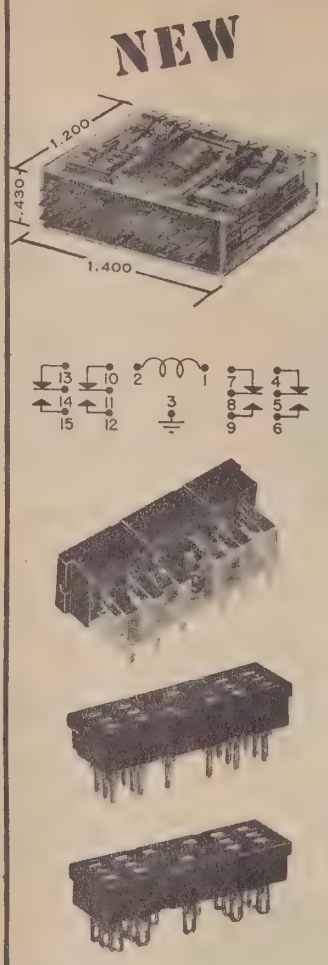
40-E2 SERIES has printed circuit pins for verti- l mounting.

40-E3 SERIES is equipped for mounting flat a printed circuit board. Weight: .8 to 1.05 ozs.

XR40-1 Right angle sockets with printed circuit n terminals for R40 Slimline relays, retainers cluded,
ox of 10 **NET $13.50**

XR40-2 Vertical socket with printed circuit pin rminals for R40 Slimline relays, retainers cluded,
ox of 10 **NET $9.50**

XR40-3 Chassis mount socket with solder termi- als for R40 Slimline relays, retainers and ounting clip included,
ox of 10 **NET $10.00**



GENERAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		SUGG. RE-SALE PRICE
	Input	Res. In Ohms	Nom. Power	Arrang.	Amp Rating	
R40-E1-X4						
-V200	12VDC	200	400 mW	4PDT	5	$5.60
-V800	24VDC	800				5.60
R40-E1-Y4						
-V50	6VDC	50				5.35
-V200	12VDC	200				5.35
-V800	24VDC	800	400 mW	4PDT	2	5.35
-V3.2K	48VDC	3.2K				5.35
R40-E1-Z4						
-V200	12VDC	200	400 mW	4PDT	100mA	5.85
-V800	24VDC	800				5.85
R40-E1-L4						
-V200	12VDC	200				6.80
-V800	24VDC	800	400 mW	4PDT	500μA	6.80
-V3.2K	48VDC	3.2K				6.80
R40-E2-X4						
-V50	6VDC	50				5.60
-V200	12VDC	200	400 mW	4PDT	5	5.60
-V800	24VDC	800				5.60
R40-E2-Y4						
-V200	12VDC	200	400 mW	4PDT	2	5.35
-V800	24VDC	800				5.35
R40-E2-Z4						
-V200	12VDC	200				5.85
-V800	24VDC	800	400 mW	4PDT	100mA	5.85
-V3.2K	48VDC	3.2K				5.85
R40-E3-X4						
-V200	12VDC	200	400 mW	4PDT	5	5.60
-V800	24VDC	800				5.60
R40-E3-Y4						
-V200	12VDC	200				5.35
-V800	24VDC	800	400 mW	4PDT	2	5.35
-V3.2K	48VDC	3.2K				5.35
R40-E3-Z4						
-V200	12VDC	200				5.85
-V800	24VDC	800	400 mW	4PDT	100mA	5.85
-V3.2K	48VDC	3.2K				5 85
R40-E3-L4						
-V200	12VDC	200				6.80
-V800	24VDC	800	400 mW	4PDT	500μA	6.80
-V3.2K	48VDC	3.2K				6.80

POTTER & BRUMFIELD RELAYS

otter & Brumfield offers from its Parelco Opera- ons these reliable, high quality, general purpose lays and time delays for customer selection—

R10 DC OPERATED INDUSTRIAL SERIES • R12 DC TIME DELAY SERIES • R40 DC SLIMLINE SERIES

ORDERING INFORMATION

To select your relay:

1. Decide on terminal type and mounting.
2. Select rating and contact arrangement.
3. Choose the proper coil resistance.
4. Pick a mating socket, if needed.

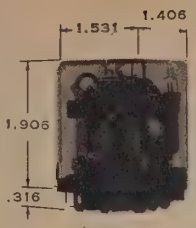
EXAMPLES:

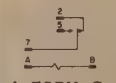
R10	**E1**	**Y4**	**V700**	**9XR10-2 Socket**
R10 Type Relay with Transparent Enclosure	Plug-in Solder Terminals and Mounting Stud	4 Form C Contacts Rated 2 Amps	700 ohm coil for 24V DC Operation or **J2.5K** Sensitive Current Adjustment	Chassis Mount Socket for a 4 Form C Relay
R12	**30**	**12**	**X2**	**E1**
R12 Time Delay (See listing on page 23.)	Time Delay Range 1-30 Seconds	Line Voltage 12V DC	5 amp Contacts 2 Form C	Solder Terminals Stud or Socket Mounting
R40	**E1**	**Z4**	**V200**	**9XR40-1 Socket**
R40 Slimline Series Relay	Plug-in Solder Terminals	.100 amp Contacts 4 Form C Bifurcated	200 Ohm Coil for 12V DC Operation	Right Angle Printed Circuit Socket

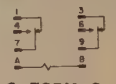
POTTER & BRUMFIELD RELAY

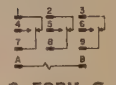
KUP SERIES This reliable 10-ampere relay for industrial control is available with a socket that is also rated 10 amperes. The .187″ terminals of the relay are of the quick-connect/solder type. Sockets are priced separately. The KUP is enclosed in a clear polycarbonate dust cover. Silver-cadmium oxide contacts assure long contact life. Operation: Continuous.

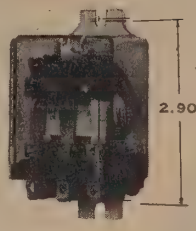
KUP SERIES with slotted flange case for direct-to-chassis mounting. Identical in both electrical and mechanical specifications as the KUP described above, except that they are not suitable for socket mounting. The .187″ terminals are of the quick-connect/solder type. Slot width: .156″. Weight: 3 ozs. All models are recognized under the Component Program of Underwriters' Laboratories, Inc. (File No. E29244)




1 FORM C


2 FORM C


3 FORM C



9KU1 pierced solder terminal socket for KUP plain case relays. Rated 10 amperes; molded nylon. Two .165″ dia. mounting holes.

Box of 5 **NET $3.95**

9KU2 printed circuit pin terminal sockets for KUP relays. Will accept .187″ terminals of KUP in plain case. Molded nylon. Two .165″ dia. mounting holes.

Box of 5 **NET $4.75**

9KU3 Hold down spring (see page 3).

9KU4 Screw terminal socket for KUP plain case 2 Form C (2PDT) relay only. The nylon socket (accepts .187″ terminals) is riveted to the bakelite frame that provides screw terminals.

Box of 5 **NET $13.15**

9KU5 sockets with .187″ quick-connect terminals. Two .165″ dia. mounting holes.

Box of 5 **NET $6.30**

All sockets except 9KU5 are included in the U/L Component Recognition of the KUP relays.



9KU1
9KU2
9KU5


9KU4

SUITABLE FOR DPDT RELAY ONLY.

GENERAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		SU R SA PR
	Input	Res. in Ohms	Nom. Power	Arrang.	Amp Rating	
KUP5A15§	6V 12V 24V 120V 240V	5.1 21 75 2,250 9,110	2VA	SPDT	10	$4. 4. 4. 4. 4.
KUP5D15§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	SPDT	10	3. 3. 3. 4.
KUP11A15§	6V 12V 24V 120V 240V	5.1 21 75 2,250 9,110	2VA	DPDT	10	5. 5. 5. 5. 5.
KUP11D15§	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	10	4. 4. 4. 5.
KUP14A15§	6V 12V 24V 120V 240V	4.2 18 72 1,700 7,200	2.75VA	3PDT	10	5. 5. 5. 5. 6.
KUP14D15§	6V 12V 24V 110V	32.1 120 472 10.000	1.2W	3PDT	10	5. 5. 5. 5.
KUP5A55§ *	120V	2,250	2VA	SPDT	10	4.
KUP5D55§ *	24V	472	1.2W	SPDT	10	3.
KUP11A55§ *	24V 120V	75 2,250	2VA	DPDT	10	5. 5.
KUP11D55§ *	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	DPDT	10	4. 4. 4. 5.
KUP14A55§*	6V 12V 24V 120V 240V	4.2 18 72 1,700 7,200	2.75VA	3PDT	10	5. 5. 5. 5. 6.
KUP14D55§*	6V 12V 24V 110V	32.1 120 472 10,000	1.2W	3PDT	10	5. 5. 5. 5.

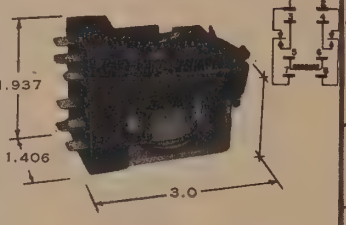
*KUP55 with slotted flange case.

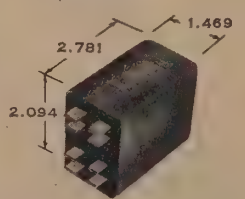
SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERI

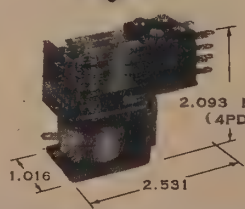
AB SERIES For appliance and general purpose applications where rugged construction, long life and quiet operation are required. All equipped with terminals to fit snap-on connectors and may be applied to printed circuits using dip soldering. Snap-on screw adaptors packed with each relay. All AC models are recognized under the Component Program of U/L (File No. E29244) and are CSA listed (File No. LR-15734). Mounting: Two No. 8-32 tapped holes, on 1¼″ centers. Silver contacts. Weight: Approx. 5 ozs.

ABC SERIES Medium duty power relay with dust cover. For small motors, industrial control and similar applications. All equipped with terminals to fit snap-on connectors and may be applied to printed circuits using dip soldering. Snap-on screw adaptors packed with each relay. All AC models are recognized under the Component Program of U/L (File No. E29244) and are CSA listed (File No. LR-15734). Mounting: One No. 8-32 threaded stud ⅜″ long and locating tab on .562″ centers. Contacts: Silver. Weight: Approx. 7 ozs.

GF SERIES Medium duty power relay for industrial control applications. Long contact arms have silver contacts rated at 10 amps at 120V AC or 28VDC, resistive. Contacts have excellent wipe or self-cleaning action. Tinned, pierced solder terminals. Mounting: 8-32 tapped core with locating boss. Weight: 4.75 ozs. (See GA series on page 2 for similar voltage actuated relays.)







POWER RELAYS

TYPE	COILS			CONTACTS		SU R SA PR
	Input	Res. in Ohms	Nom. Power	Arrang.	Amp. Rating	
AB11AY	6V 24V 120V 240V	1.3 23 510 2,050	6.4VA	DPDT	10	$6. 6. 6. 6.
AB11D	12V 24V 110V	72 288 6,050	2W	DPDT	10	6. 6. 6.
ABC11AY	6V 24V 120V 240V	1.3 23 510 2,050	6.4VA	DPDT	10	7. 7. 7. 7.
ABC11D	6V 12V 24V 110V	18 72 288 6,050	2W	DPDT	10	7. 7. 7. 7.
GF17A	12V 24V 120V 240V	6.8 24 690 2,950	6VA	4PDT	10	7. 7. 7. 8.
GF17D	6V 12V 24V 110V	18 72 288 6,050	2W	4PDT	10	7. 7. 7. 8.

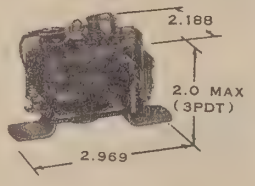
§ Enclosed Relay

See ordering information on page

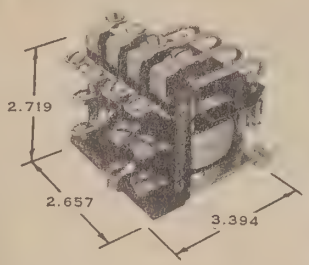
© United Technical Publica

POTTER & BRUMFIELD RELAYS

MR SERIES A medium duty power relay that can handle small motors, transmitters, and general purpose applications. Mounting: Two .156" dia. holes on 2.250" centers for MR 3 and 11, 2.625" centers for MR 5 and 14. Contacts: Silver. Weight: 4 ozs.
MS/MR Metal dust cover similar to PM/PR shown below. Weight: 7.5 ozs.
5D130 fits MS/MR **NET $2.20**



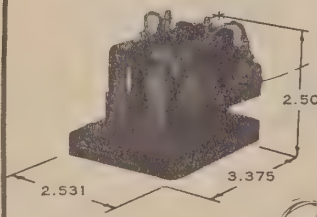
PM SERIES A compact 4PDT power relay for polyphase and heavy duty switching applications. Screw terminals. Has silver-cadium oxide contacts rated at 25 amps at 240V, 50/60 Hz resistive AC, 1 HP per movable arm at 120V or 240V, AC single phase, U/L (File No. E22575) and CSA* listed, except 480V. Mounts by one front key-hole and two rear channel slots for 8-32 screws on 2" x 2.5" triangular centers. Weight: 4 ozs.



PM1 Adaptor plates for mounting PM on PR mounting holes.
Box of 10 **NET $1.75**
Enclosures for PM relay—see below.



PR SERIES Heavy duty relay for industrial control applications requiring long life and fast action. Heavy duty screw-type terminals. All AC and DC models except PR11AL5 carry U/L (File No. E22575) and CSA* listing. Mounting: Two .188" dia. holes on 1.875" centers. Weight: 1 ozs. max. Contacts: Silver. Enclosure: See "PR" cover. The PR11AL5 relay is equipped with silver SPDT auxiliary contacts rated at 5 amps.§



§Open only, auxiliary contact equipped relay will not fit inside cover.



PM AND PR DUST COVERS These dust covers have a sheet metal base with knockouts for .5" dia. conduit and an aluminum cover fitted with two screws. Finished in gray hammertone. Mounting: Three No. 10 holes on 1.875" x 4.125" centers. Approx. weight: 1 lb.

PM:
L: 5.313 MAX.
W: 3.812 MAX.
H: 3.812 MAX.

PR:
L: 5.312 MAX.
W: 3.175 MAX.
H: 3.125 MAX.

5D227 Metal cover for PM only **NET $3.45**
PM2 Plastic dust cover for PM only, box of 4 **NET $1.90**
5D013 Metal cover for PR only **NET $3.45**



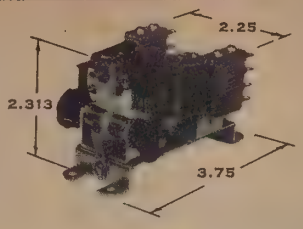
POWER RELAYS

TYPE	COILS Input	COILS Res. In Ohms	Nom. Power	CONTACTS Arrang.	CONTACTS Amp Rating	SUGG. RESALE PRICE
MR3A	6V 24V 120V	2.75 50 1.250	3.25VA	SPST-NO-DM	10	$4.50 4.50 4.50
MR3D	6V 12V 24V	24 96 360	1.6W	SPST-NO-DM	10	4.10 4.10 4.10
MR5A	6V 12V 24V 120V 240V	2.75 13.25 50 1,250 4,600	3.25VA	SPDT	8	4.05 4.05 4.05 4.05 4.50
MR5D	6V 12V 24V 110V	24 96 360 8,000	1.6W	SPDT	8	3.75 3.75 3.75 4.30
MR11A	6V 12V 24V 120V 240V	2.75 13.25 50 1,250 4,600	3.25VA	DPDT	8	5.70 5.70 5.70 5.70 6.15
MR11D	6V 12V 24V 110V	24 96 360 8,000	1.6W	DPDT	8	5.40 5.40 5.40 5.95
MR14A	6V 12V 24V 120V 240V	2.75 13.25 50 1,250 4,600	3.25VA	3PDT	8	6.80 6.80 6.80 6.80 7.25
MR14D	6V 12V 24V 110V	24 96 360 8,000	1.6W	3PDT	8	6.40 6.40 6.40 6.95
PM17AY	6V 12V 24V 120V 240V	.37 1.4 5 120 587	14VA	4PDT	25	14.30 14.30 14.30 14.30 14.85
PM17A	480V	1,790	14VA	4PDT	25	15.75
PM17DY	6V 12V 24V 110V	8.2 33 132 2,760	4.4W	4PDT	25	13.65 13.65 13.65 14.25
PR1AY	24V	12	9.8VA	SPST-NO	25	4.70
PR3AY	6V 12V 24V 120V 208V 240V	.86 3.2 12 290 850 1,200	9.8VA	SPST-NO-DM	25	4.80 4.80 4.80 4.80 5.30 5.30
PR3DY	6V 12V 24V 110V	18 71 288 6,050	2W	SPST-NO-DM	25	4.80 4.80 4.80 5.50
PR5AY	6V 12V 24V 120V 208V 240V	.86 3.2 12 290 850 1,200	9.8VA	SPDT	25	5.05 5.05 5.05 5.05 5.55 5.55
PR5DY	6V 12V 24V 110V	18 71 288 6,050	2W	SPDT	25	5.05 5.05 5.05 5.75
PR7AY	6V 12V 24V 120V 208V 240V	.86 3.2 12 290 850 1,200	9.8VA	DPST-NO	25	5.65 5.65 5.65 5.65 6.15 6.15
PR7DY	6V 12V 24V 110V	18 71 288 6,050	2W	DPST-NO	25	5.70 5.70 5.70 6.40
PR11AY	6V 12V 24V 120V 208V 240V 480V	.86 3.2 12 290 850 1,200 4,500	9.8VA	DPDT	25	7.45 7.45 7.45 7.45 7.95 7.95 9.05
PR11AL5	6V 12V 24V 120V 240V	.86 3.2 12 290 1,200	9.8VA	DPDT	20	9.45 9.45 9.45 9.45 9.95
PR11DY	6V 12V 24V 110V	18 71 288 6,050	2W	DPDT	25	7.45 7.45 7.45 8.15

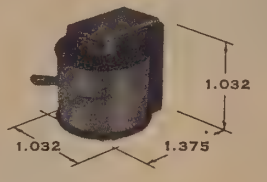
Canadian Standards Association File No. LR-15734

See ordering information on page 2.

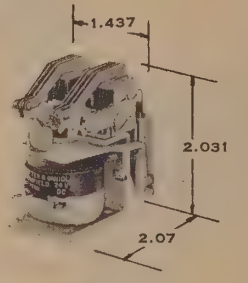
AP SERIES RATCHET, IMPULSE A reliable compact unit for applications requiring on-off or reversing action on alternate operations. Positive ratchet operation at all speeds on impulses as short as 60 ms. Intermittent operation only. Mounting: Three .156″ dia. holes on 3.375″ x .875″ triangular centers. Contacts: Silver. Weight: 7 ozs. Coils for intermittent duty only.



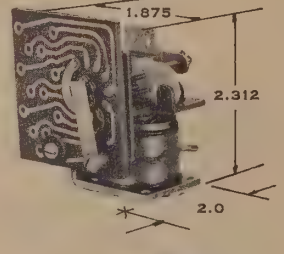
BU BUZZER AC operated coil with a spring steel armature which buzzes when coil is energized. Used extensively in test equipment, laboratories and a host of other applications where a small light weight, dependable buzzer is required. Recognized under the Component Program of Underwriters' Laboratories, Inc. (File No. S1154). Weight: 1⅝ ozs. Mounting: No. 6-32 tapped core.



GM SERIES Unusually versatile switching makes this impulse/sequencing relay especially suitable for single coil latching. The 2 Form C contact arrangement is switched alternately by cam action during drop-out of the armature. It can also be furnished with additional 2 Form C auxiliary contacts (designated by "L"). AC version operates on a 50% coil duty cycle (5 Min. max.). Mounting: 8-32 tapped core with locating boss. Weights: With aux. contacts 4¾ ozs. Without aux. contacts 4 ozs.

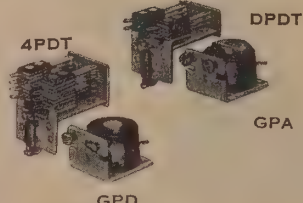


The **GM1N10** and **GM1N12** AC or DC use the basic GM structure with uni-directional printed circuit boards with 10 or 12-steps, respectively. The board is attached to an extension of the ratchet shaft. The movable contact arm advances one position each time the armature drops out. Contact rating: .25 amps. Contact arrangement: SP-10 pos. and SP-12 pos. Size: 2.312″ x 1.875″ x 2″.

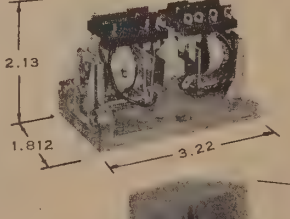


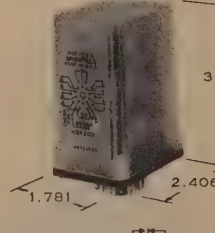
GP SERIES Separate AC and DC coils to match with 2PDT or 4PDT switches. AC coils (GPA) available in 6, 12, 24, 120 and 240 volts. DC coils (GPD) available in 6, 12, 24 and 110 volts; current coils: 2,500, 5,000 and 10,000 ohms. Contacts: Silver.

GP11 Switch Assembly DPDT 5 amps **$2.00**
GP17 Switch Assembly 4PDT 5 amps **3.40**

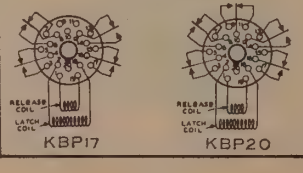


KB SERIES LATCHING RELAY Both release and trip coils must be for the same voltage. One coil operates relay to set latch and other coil releases it. Ideal for memory work and overload applications. Operates on momentary impulse to either coil. Mounting: Two .156″ dia. holes on 1.375″ centers. Weight: 6 ozs. Contacts: Silver, rated 5 amps; "G" suffix indicates silver-cadium oxide contacts on movables rated 10 amps. AC relays with 5 amp. Contacts are recognized under Component Program of Underwriters' Laboratories, Inc. (File No. 29244) and are CSA* listed. AC coil for intermittent duty only.





KBP SERIES LATCHING RELAY Enclosed in a translucent polypropylene dust cover, the KBP is furnished with 20-pin octal-type plugs for socket mounting. Contact arrangements of 4PDT and 5PDT are available. Otherwise all specifications are identical to the KB series described above. U/L component recognition does not apply to the KBP series. Weight: 8 ozs.



SPECIAL PURPOSE RELAYS

TYPE	COILS Input	COILS Res. in Ohms	COILS Nom. Power	CONTACTS Arrang.	CONTACTS Amp Rating	SUG RE SAL PRIC
AP11A	6V 12V 24V 120V 240V	.6 2.28 8.8 240 900	18.5VA	DPDT	5	$10. 10. 10. 10. 10.
AP11D	6V 24V 110V	4.0 65 1,350	9W	DPDT	5	10. 10. 10.
AP17A	24V 120V	8.8 240	18.5VA	4PDT	5	12. 12.
AP17D	12V 24V 110V	15.5 65 1,350	9W	4PDT	5	12. 12. 13.
BU	6V 12V 24V 120V	2.7 13.2 50 1,250	4.6VA	—	—	2. 2. 2. 2.
GM11A	24V 120V	16 420	9.4VA	DPDT	3	8. 8.
GM11AL11	120V	420	9.4VA	DPDT/DPDT	3	11.
GM11D	12V 24V 110V	36 144 3,050	4W	DPDT	3	8. 8. 8.
GM11DL11	12V 24V	36 144	4W	DPDT/DPDT	3	11. 11.
GM1N10A GM1N12A GM1N10D GM1N12D	120V 120V 24V 24V	510 510 144 144	9.4VA 9.4VA 4W 4W	SP-10 pos. SP-12 pos. SP-10 pos. SP-12 pos.	.25	10. 10. 10. 10.
GPA	6V 12V 24V 120V 240V	1.7 6.8 24 690 2,950	6VA	None	—	1. 1. 1. 1. 2.
GPD	— — — 6V 12V 24V 110V	2,500 5,000 10,000 18 72 288 6,050	— — — 2W 2W 2W 2W	None	—	1. 2. 2. 2. 2. 2. 3.
KB17AY	6V 12V 24V 120V 240V	2.3 10 42 1,030 4,100	5VA	4PDT	5	12. 12. 12. 12. 13.
KB17AG	6V 12V 24V 120V 240V	2.3 10 42 1,030 4,100	5VA	4PDT	10	12. 12. 12. 12. 13.
KB17D	6V 12V 24V 110V	13.1 52 230 4,560	2.7W	4PDT	5	10. 10. 10. 12.
KB17DG	6V 12V 24V 110V	13.1 52 230 4,560	2.7W	4PDT	10	11. 11. 11. 12.
KB23AY	24V 120V	27 700	7.8VA	6PDT	5	14. 14.
KB23AG	24V 120V	27 700	7.8VA	6PDT	10	14. 14.
KB23D	24V	230	2.7W	6PDT	5	13.
KB23DG	24V 110V	230 4,560	2.7W	6PDT	10	13. 15.
SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING						
KBP17A§	120V	1,030	5VA	4PDT	5	17.
KBP17AG§	120V	1,030	5VA	4PDT	10	17.
KBP17D§	24V	230	2.7W	4PDT	5	15.
KBP17DG§	12V 24V	52 230	2.7W	4PDT	10	16. 16.
KBP20A§	120V	700	7.8VA	5PDT	5	17.
KBP20AG§	120V	700	7.8VA	5PDT	10	17.
KBP20DG§	12V 24V	52 230	2.7W	5PDT	10	17. 17.

*Canadian Standards Association File No. LR-15734

See ordering information on page

© United Technical Publicati

)OTTER & BRUMFIELD RELAYS

M SERIES Subminiature relay for applications quiring unusually small relays with up to 3- ›les. Contacts: Silver. Withstands 30g mechan- al shock and .06″ excursion 10 to 55 Hz echanical vibration. Used extensively in small ısiness machines, alarm systems, automatic toys d communications systems. Mounting: One 2- tapped core and locating .062″ dia. half-punch .187″ centers. Solder terminals. Weight: .58 ozs.

T SERIES ANTENNA SWITCHING RELAY lass base insulation for minimum RF loss to vitch 300 ohm line. Mounting: One No. 6-32 readed stud and locating tab on .438″ centers. ontacts: Gold-flashed silver. Weight: 1½ ozs.

UL SERIES Small, magnetic latching relay quiring approximately half the space needed r mechanical latching relays. Designed for ntinuous duty in applications demanding good emory stability, the KUL is ideal for machine ols, process controls and business machines. PDT or DPDT silver-cadmium oxide contacts e rated 10 amps @ 28V DC, resistive or 120V C, 80% P.F. Recognized under U/L Compo- nt Program, File No. E22575. All AC DPDT lays include diodes inside the clear polycar- nate dust cover. "S" suffix indicates single coil. eset on single coil relays is accomplished by versing voltage polarity. Mounting: Various amp rated nylon sockets available (see KU ckets page 8). Weight: 3.4 ozs.

KUL21 Hold down springs.

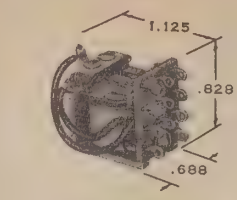
ox of 25 **NET $4.50**

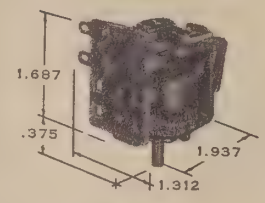
IS SERIES MOTOR STARTING RELAYS or starting capacitor start, induction-run motors. perates on back EMF of start winding. Arma- re gap can be altered to change pick-up. ecognized under Component Program of Un- erwriters' Laboratories, Inc. (File No. 29245). ounting: Two .156″ dia. holes on 1.563″ centers. ontacts: ¾ HP, fine silver; 3 HP, silver cad- ium. Weight: 5 ozs. max. MS/MR Metal dust ver similar to PM/PR shown on page 9. 3.625″ 2.375″ x 2.594″. Weight: 7.5 ozs.

D130 fits MS/MR **NET $2.20**

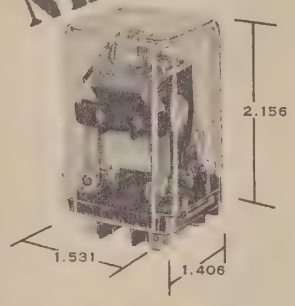
C SERIES Single coil impulse latching relay for -off and current reversal switching on alternate lses. Mounting: Two .156″ dia. holes on 2.625″ nters. Weight: 5 ozs. Contacts: Gold-flashed ver-cadmium oxide. Coils for intermittent duty ly.

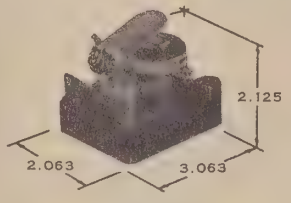
A SERIES STEPPING SWITCH A twelve po- ion stepping relay with printed circuit strips to vitch currents up to 250 milliamps. Armature- iven pawl operates a ratchet wheel to drive the ovable contact in steps of 30 degrees over 12 sitions. Used widely for audio-level switching TV remote control units, scoreboards and ocess controls. Mounting: Two 6-32 holes on 313″ centers. Weight: 4 ozs. AC coil for inter- ttent duty only.

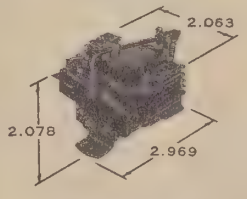


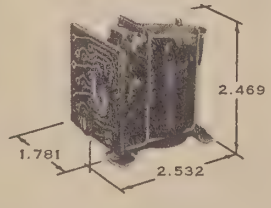


NEW









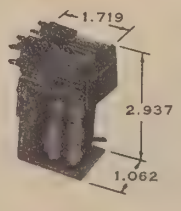
SPECIAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		SUGG. RE-SALE PRICE
	Input	Res. in Ohms	Nom. Power	Arrange.	Amp. Rating	
KM5D	6V 12V 24V	36 144 500	1.1W	SPDT	2	$4.00 4.00 4.00
KM11D	6V 12V 24V	36 144 500	1.1W	DPDT	2	4.40 4.40 4.40
KM14D	6V 12V 24V	36 144 500	1.1W	3PDT	2	5.05 5.05 5.05
KT11A	6V 120V	6 2,250	2VA	DPDT	5	4.30 4.30
KT11D	6V 12V	32.1 120	1.2W	DPDT	5	4.30 4.30
KUL5A15S	120V	3,700	—	SPDT	10	6.30
KUL5D15S	24V	472	1.2W	SPDT	10	5.45
KUL11A15S	12V 24V 120V	37 176 3,700	—	DPDT	10	7.10 7.10 7.10
KUL11D15S	12V 24V	120 472	1.2W 1.2W	DPDT	10	6.05 6.05
MS2AY	120V 240V	530 2,100	5.9VA	SPST-NC	¾ HP	4.20 4.70
MS4AY	120V 240V	530 2,100	5.9VA	SPST-NC-DB	3 HP	4.90 5.40
PC11A	6V 12V 24V 120V	.6 2.28 8.8 240	18.5VA	DPDT	7.5	6.55 6.55 6.55 6.55
PC11D	6V 12V 24V	4 15.5 65	9W	DPDT	7.5	6.30 6.30 6.30
PC17A	24V 120V	8.8 240	18.5VA	4PDT	7.5	9.00 9.00
PC17D	24V	65	9W	4PDT	7.5	8.80
SA-1N-12A	120V	140	20VA	12 Steps	.25	7.70

SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

SENSITIVE RELAYS

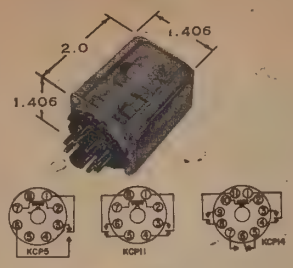
B SERIES (See GA series page 2 for similar ltage actuated relays.) Sensitivity 115 milliwatts r single pole and 275 milliwatts for 4 pole. Me- um cost, high quality relay. Pick-up is not ad- stable. Mounting: No. 8-32 tapped core and cating boss. Contacts: Silver. Weight: Approxi- ately 5 ozs.



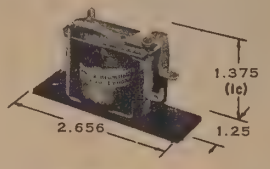
TYPE	COILS			CONTACTS		SUGG. RE-SALE PRICE
	Input	Res. in Ohms	Nom. Power	Arrange.	Amp. Rating	
GB5D	6.8mA 4.8mA 3.4mA	2,500 5,000 10,000	115mW	SPDT	5	$3.95 4.15 4.65
GB11D	7mA 5mA 3.53mA	2,500 5,000 10,000	125mW	DPDT	5	5.55 5.75 6.25
GB17D	10.5mA 7.4mA 5.25mA	2,500 5,000 10,000	275mW	4PDT	5	6.60 6.80 7.30

POTTER & BRUMFIELD RELAYS

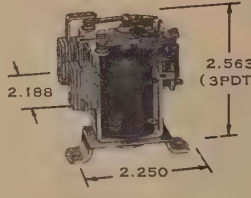
KCP SERIES Low cost sensitive relay enclosed in clear polycarbonate cover. Sensitivity 125 mw single pole; 250 mw double pole; 375 mw three pole. Mounting: Standard octal plug-in type. Eight pin for KCP5 and KCP11. Eleven pin for KCP14. Contacts: Gold-flashed silver. Weight: Approximately 3 ozs. Use KCP-KRP hold down spring when vibration is a factor or when using inverted or horizontal mounting. (See page 3.)



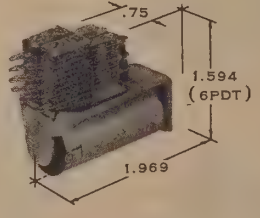
LB SERIES Designed for top performance, long life at an unusually low cost. Each coil is wound with a given coil resistance and factory adjusted to operate on minimum current requirements. Mounting: Two .188″ holes on 2.219″ centers. Contacts: Silver. Weight: Approximately 2 ozs.



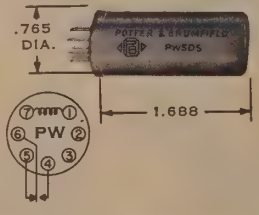
LM SERIES (See KL page 4 for similar voltage actuated relays.) Sensitivity: 100 milliwatts for single pole and 200 milliwatts for double pole. Medium cost, high quality relay with gold-flashed silver contacts. Pick-up adjustable by tail spring adjusting screw. Mounting: Two No. 6-32 tapped holes on 1.813″ centers. Weight: Approximately 5 ozs. DC Coils only.



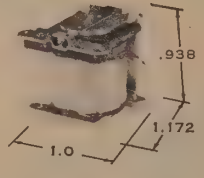
ML SERIES A small telephone type relay having excellent sensitivity and outstanding switching capabilities. Ideal for transistorized computer networks, telephone systems and battery powered communications equipment. Single contact arms have gold-flashed silver contacts rated at 3 amps for 100,000 operations. Pierced solder terminals. Mounting: Four 3-48 holes on .375″ centers. Weight: 2.5 ozs.



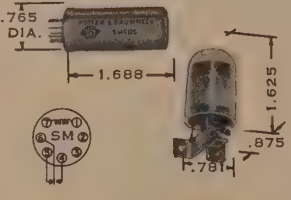
PW SERIES (In both voltage and current actuated models.) Sensitivity: 40 mw for current actuated models, 180 mw for voltage actuated models. Precision, lightweight, hermetically sealed relay for aircraft and missile applications. Will withstand 10g vibration to 500 Hz. Mounting: Standard 7-pin miniature tube base. Weight: Approx. 1 oz.



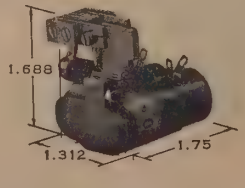
RS SERIES (In both voltage and current actuated models.) 60 mw sensitivity. Low-cost, small, lightweight, sensitive relay for radio-sonde, light dimmer and model applications. Mounting: Two No. 4-40 tapped holes on diagonal .75″ x .625″ centers. Contacts: Bar palladium. Weight: 1½ ozs.



SM SERIES (In both voltage and current actuated models.) Sensitivity 75 mw for current actuated models. Medium cost, lightweight, dust cover (right) or hermetically sealed (left) relay for light contact loads found in computers, model airplanes and similar applications. Extremely long mechanical life because of reed armature. Mounting: Sealed, standard 7-pin miniature tube socket; dust cover, two .094″ dia. holes on .531″ centers. Contacts: Stationary silver; movable rhodium. Weight: 1 oz. max.



SS SERIES Ultra sensitive precision relay. 10 mw sensitivity. Dual series-connected coils with balanced armature on needle-point bearings for all low energy circuits such as instruments and bridge balancing. May also be used as a differential relay by connecting the two coils in separate circuits. Mounting: Two No. 6-32 tapped holes on .719″ centers. Contacts: Silver. Weight: Approx. 3½ ozs.



SENSITIVE RELAYS

TYPE	COILS			CONTACTS		SUGG RE-SALE PRICE
	Input	Res. in Ohms	Nom. Power	Arrang.	Amp Rating	
KCP5§	7.2mA 5.0mA 3.6mA	2,500 5,000 10,000	125mW	SPDT	2	$ 6.8 6.9 7.4
KCP11§	10mA 7.2mA 5.0mA	2,500 5,000 10,000	250mW	DPDT	2	7.3 7.4 7.8
KCP14§	12.3mA 8.7mA 6.1mA	2,500 5,000 10,000	375mW	3PDT	2	9.0 9.1 9.5
LB5	9.0mA 6.3mA 4.5mA	2,500 5,000 10,000	200mW	SPDT	5	3.0 3.2 3.4
LM5	6.3mA 4.5mA 3.2mA	2,500 5,000 10,000	100mW	SPDT	5	4.5 4.8 5.1
LM11	9.0mA 6.3mA 4.5mA	2,500 5,000 10,000	200mW	DPDT	5	6.5 6.7 7.4
ML11D	4.0mA 2.83mA 2.0mA	2,500 5,000 10,000	40mW	DPDT	3	7.3 7.5 7.8
ML17D	5.65mA 4.0mA 2.83mA	2,500 5,000 10,000	80mW	4PDT	3	8.7 8.9 9.2
ML23D	6.93mA 3.4mA	2,500 10,000	120mW	6PDT	3	9.8 10.4
PW5DS†	6V 12V 24V	202 810 3,240	180mW	SPDT	2	12.45 12.45 12.45
PW5LS†	2.8mA 2.0mA	5,000 10,000	40mW	SPDT	2	12.90 13.35
RS5D	6V 12V 5mA 3.5mA 2.5mA	335 1,350 2,500 5,000 10,000	110mW 110mW 60mW 60mW 60mW	SPDT	2	3.05 3.20 3.30 3.60 4.20
SM5DS†	6V 12V 24V	80 360 900	500mW	SPDT	.25	7.65 7.65 7.65
SM5L§	2.7mA	10,000	75mW	SPDT	.25	7.25
SM5LS†	3.9mA 2.7mA	5,000 10,000	75mW	SPDT	.25	7.95 8.50
SS5D	1mA	10,000	10mW	SPDT	2	16.05

SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

† Sealed Relay § Enclosed Relay See ordering information on page 12

Net

© United Technical Publicatio

POTTER & BRUMFIELD RELAYS

3S SERIES Long coil telephone type. Suited for computer and automatic test equipment applications requiring large numbers of poles. Tinned, pierced solder terminals for rear panel wiring. Mounting: Two No. 8-32 NC 2B tapped holes on .75" centers. Contact arms: Bifurcated with twin palladium contacts. Weight: Approximately 3 ozs.

3S DUST COVER Sheet metal enclosures for 3S relays up to 6 Form C (6PDT, BS23); measures: H: 2.188", W: 1.250", L: 3.844" exclusive .625" knob; weight: 6.5 ozs.
5D188 **NET $2.10**

LS SERIES Short springs and lightweight armature provide fast action without sacrificing reliability and long life. Stainless steel hinge bearing designed to give 100 million operations. Tinned, pierced solder terminals. Mounting: Two No. 6-32 tapped holes on .75" centers. Bifurcated contact arms with twin palladium contacts. Weight: Approximately 4 ozs.

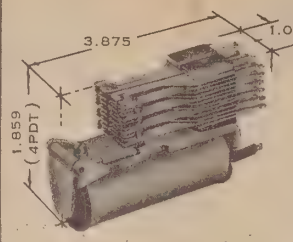
The LSP version has identical specifications as the LS, except that it is enclosed in a clear polycarbonate cover and is provided with a rectangular socket with combination taper tab or solder terminations. Enables plug-in like any other plug-in component. Two sizes of sockets and covers are available: 16-pin for 4 Form C (4PDT) or 28-pin for 6 Form C (6PDT). Dimensions: LSP17D: 1.71" x 1.39" x 2.52" seated; weight 4 ozs. LSP23D 2.11" x 1.39" x 2.52" seated; weight 5½ ozs.

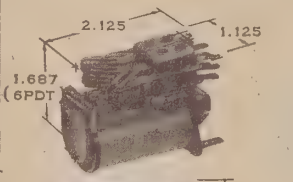
MB SERIES Miniature DC contactor. Designed for very high current applications. Extra rugged construction ensures long life. Contact arms: Stationary, heavy brass, silver contacts pierced solder terminals. Movable, silver bar contact. Mounting: Four No. 3-48 tapped holes on .375" x .375" centers. Weight: 2 ozs.

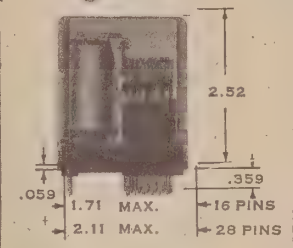
MC SERIES Built with ceramic contact spacer for RF switching to minimize losses at high frequencies. Intercontact capacitance 1.5 mmfd. max. Tinned, pierced solder type terminals. Mounting: Four No. 3-48 tapped holes on .375" x .375" centers. Contacts: palladium. Weight 2 ozs.

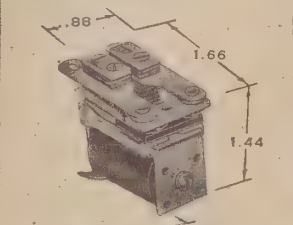
MG SERIES Sub-miniature telephone type relay can be furnished open, sealed or in nylon dust cover. Mounting: Open model has four No. 3-48 tapped holes on .375" x .375" centers. Sealed model has three No. 4-40 threaded studs on 1" x .50" centers. Dust cover model has plug-in header that fits Amphenol receptacle 57-20140 or similar. Contacts: Silver. Weight: Open 1.2 ozs.; Dust cover 2.0 ozs.; Sealed 2.75 ozs.

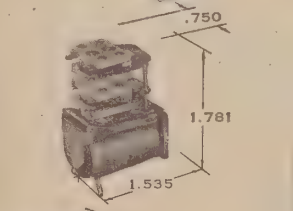
MH SERIES MINIATURE TYPE Ideal for applications where space and weight are factors. Mounting: Open model, MH11L, one No. 6-32 threaded stud .344" long plus locating boss. All other open models have four No. 3-48 holes on .375" x .375" centers. Sealed models, M enclosures, three 6-32 NC 2 threaded studs on 1.250" x .50" centers. D enclosures, three 6-32 threaded studs on 1.188" x .938" centers. All sealed models have hook solder terminals.
All models have gold-flashed silver contacts. Weight: Open models 2½ oz. max. Sealed models 5 ozs. max.

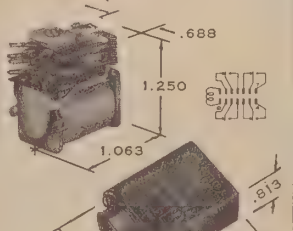


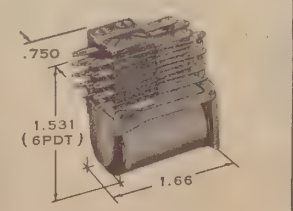












TELEPHONE TYPE RELAYS

TYPE	COILS		CONTACTS			SUGG. RE-SALE PRICE
	Input	Res. in Ohms	Nom. Power	Arrange.	Amp. Rating	
BS17A	120V	103	16.5VA	4PDT	4	$10.65
BS17D	24V 110V	1,000 6,500	576mW 1.8W	4PDT	4	8.75 9.45
BS17L	5.5mA	10,000	300mW	4PDT	4	9.45
BS23A	120V	103	16.5VA	6PDT	4	12.40
BS23D	24V 110V	1,000 6,500	576mW 1.8mW	6PDT	4	10.60 11.30
LS17D	24V 48V 110V	300 1,300 8,000	1.9W 1.8W 1.5W	4PDT	4	6.50 6.70 6.95
LS23D	24V 110V	300 8,000	1.9W 1.5W	6PDT	4	7.85 8.30
LSP17D§	24V 48V 110V	300 1,300 8,000	1.9W 1.8W 1.5W	4PDT	4	8.45 8.55 8.85
LSP23D§	24V 48V 110V	300 1,300 8,000	1.9W 1.8W 1.5W	6PDT	4	10.50 10.60 10.90
MB3D	6V 12V 24V 110V	13.3 62.3 245 5,000	2.7W	SPST-NO-DM	60	6.25 6.40 6.40 6.80
MC5A	6V	2.5	4.6VA	SPDT	1	6.10
MC5D	12V 24V	96 365	1.6W	SPDT	1	5.35 5.35
MC11A	120V	680	4.6VA	DPDT	1	8.40
MC11D	24V	365	1.6W	DPDT	1	7.70
MG11D	12V 24V 110V	90 365 7,560	1.6W	DPDT	2	6.00 6.00 6.45
MG17D	12V 24V	90 365	1.6W	4PDT	2	8.05 8.05
MG17DP§	12V 24V 110V	90 365 7,560	1.6W	4PDT	2	13.40 13.40 14.05
MG17DT†	24V 110V	365 7,560	1.6W	4PDT	2	14.60 15.25
MH11L	4.5mA	10,000	200mW	DPDT	3	6.90
MH11LM†	4.5mA	10,000	200mW	DPDT	3	11.70
MH17D	6V 12V 24V	23 96 365	1.6W	4DPDT	5	6.95 6.95 6.95
MH17DM†	12V 24V	96 365	1.6W	4DPDT	5	13.95 13.95
MH17AMR†	120V	6,200	2VA	4DPDT	5	22.80
MH23D	6V 12V 24V 110V	13.3 62.3 245 5,000	2.5W	6PDT	5	8.70 8.70 8.70 9.25
MH23DD†	12V 24V	62.3 245	2.5W	6PDT	5	18.55 18.55

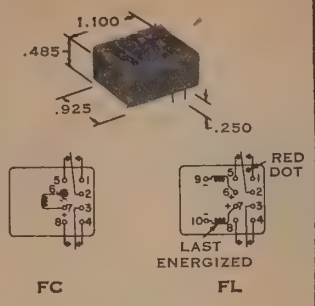
† Sealed Relay § Enclosed Relay

See ordering information on page 2.

POTTER & BRUMFIELD RELAYS

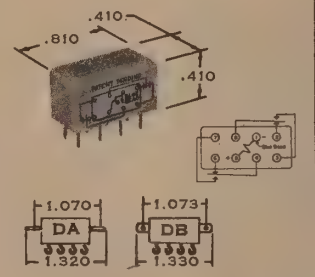
FC SERIES Conventional miniature relay lies flat on printed circuit board. Withstands 150g shock, 400g linear acceleration, 30g vibration to 2000 Hz. Ambient temperature range: −65° to +125°C. Hermetically welded. Bifurcated contacts. Plugs in on .2″ grid. Meets applicable sections of MIL-R-5757E and MSFC-SPEC-339. Weight: .75 oz.

FL SERIES Dual-coil latching relay has same specs as above, except operates by pulsing each coil alternately (observing coil polarity); or connecting the coils in series from a reversing (polarized) source. Remains latched without coil power.



HC SERIES A miniature, non-polarized, non-latching half-size crystal case relay for high reliability performance. Its high-torque motor structure and bifurcated, gold-plated silver DPDT contacts, rated dry circuit to 2 amps @ 28V DC resistive, provide positive performance in low level applications. Temperature range: −65°C to +125°C. Hermetically welded. HC11D has plug-in, plain case; HC11DA has hook-end solder terminals and shoulder brackets; HC11DB has hook-end solder terminals and flat mounting plate with 2 holes. The HC series meets or exceeds all applicable sections of MIL-R-5757E, and complies with MSFC-SPEC-339. Size: Plain case .8″ x .4″ x .4″ (seated). Weight: .5 oz.

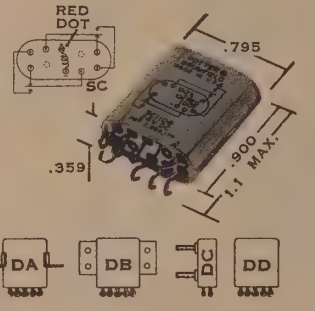
HCM SERIES Military version of miniature HC relay. Same rugged construction features. Hermetically sealed and vibration tested for use in demanding applications such as aircraft and ground support equipment. Meets or exceeds appropriate sections of MIL-R-5757E. Straight pins or hook solder terminals. Shoulder bracket available. HCM has same mountings as HC Series above. Weight: .5 oz.



NEW

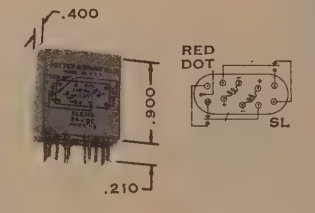
SC SERIES Miniature permanent magnet relay for low power, high shock/vibration applications. 200g shock, 30g vibration to 2000 Hz with no contact opening. Ambient temperature range: −65°C to +125°C. Features single coil action and conforms to standard miniature coil operation except polarized connections because of magnetic circuit. Positive terminal marked with red dot. Mounting: SC11D**, -DA, -DB, DC and DD correspond to similarly designed SL mountings. SCG11D has rectangular header with terminals on .2″ grid. Weight: ¾ oz.

**Armel No. HRK-1, 8-pin receptacles available from distributors for plug-in applications.

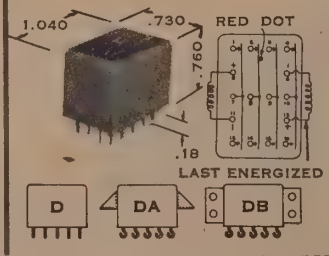


SL SERIES Dual coil miniature magnetic latching relay with same shock/vibration, resistance and ambient temperature range as SC. Coils may be connected in series for polar operation. Mounting: SL11D* for plug-in applications: -DA has shoulder flanges with two .104″ x .136″ holes on a 1.062″ center; -DB has a welded bracket with four .125″ dia. holes on 1.062″ x .281″ centers; -DC has two No. 4-40 NC 2A threaded studs on .488″ x .220″ diagonal centers; -DD has plain case with hook-end solder terminals. SLG11D has plug-in terminals on .2″ grid. Weight: 2 ozs.

*Armel No. HRKB-1, 10-pin receptacles available from distributors for plug-in applications.



TL SERIES High reliability 4PDT miniature magnetic latching relay for severe environments. Hermetically welded relay case. Strong permanent magnetic forces keep the contacts locked in desired position when relay is de-energized. Approx. 0.5 ms transfer time. Temperature range: −65° to +125°C. Meets or exceeds applicable sections MIL-R-5757E and MSFC-SPEC-339. Weight: Approx. 1¼ ozs. Mountings: D-plain case, plug-in header. DA=shoulder bracket. 300″ from base, hook-end solder. DB=flat plate, .593″ wide x 1.60″ long, 4 -.125″ dia. holes on .281″ x 1.30″ centers, hook-end solder.



HIGH RELIABILITY RELAYS

TYPE	COILS			CONTACTS		SUGG RE-SALE PRICI
	Input	Res. in Ohms	Nom. Power	Arrange-ment	Amp Rat-ing	
FC11D	6V 12V 24V	60 210 900	.65W	DPDT	3	$19.40 19.40 19.40
FL11D	6V 12V 24V	67.5 230 1,000	.65W	DPDT	3	21.75 21.75 21.75
HC11D HC11DA HC11DB	24V	814	.72W	DPDT	2	19.30 19.30 19.30
HCM11D HCM11DA HCM11DB	24V	814	.72W	DPDT	2	12.90 12.90 12.90
SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING						
SC11D	6V 12V 24V	35 135 550	1W	DPDT	2	19.60 19.60 19.60
SC11DA	12V 24V	135 550	1W	DPDT	2	19.60 19.60
SC11DB	6V 12V 24V	35 135 550	1W	DPDT	2	19.60 19.60 19.60
SC11DC	24V	550	1W	DPDT	2	19.60
SC11DD	24V	550	1W	DPDT	2	19.60
SCG11D	24V	550	1W	DPDT	2	19.60
SC7141	26.5V	MIL-R-1575E/10C-141 or RY4NA3B3L01				19.75
SL11D	6V 12V 24V	40 160 630	1W	DPDT	2	21.45 21.45 21.45
SL11DA	6V 12V 24V	40 160 630	1W	DPDT	2	21.45 21.45 21.45
SL11DB	6V 12V 24V	40 160 630	1W	DPDT	2	21.45 21.45 21.45
SL11DC	24V	630	1W	DPDT	2	21.45
SL11DD	24V	630	1W	DPDT	2	21.45
SLG11D	24V	630	1W	DPDT	2	21.45
TL17D	24V	600	1W	4PDT	3	31.75
TL17DA	24V	600	1W	4PDT	3	31.75
TL17DB	24V	600	1W	4PDT	3	31.75

See ordering information on page

Net

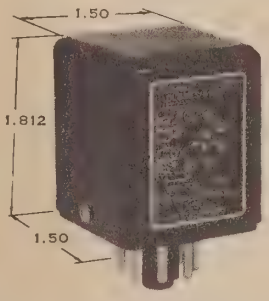
© United Technical Publication

MDP SERIES
SMALL POLARIZED RELAYS

- **Sensitive**
- **High Speed**
- **Bounce-Free**

For Bi-Stable or Center-Stable Operation

Small size, ultra-sensitivity and high speed switching together with efficient, bounce-free contact action characterize MDP polarized relays. Their operation depends on both the magnitude and direction of the coil current. Two types of contact arrangements provide the following action when the coils are de-energized: Bi-Stable—armature remains in its last energized position; Center-stable—armature remains in center-off position with contacts open. Contact materials as listed. Temperatures: −60°C to +85°C. Measuring only 1.500" sq. by 1.812" high (seated), MDP relays are equipped with a plastic dust cover and 8-pin plugs. Weight: 4¼ ozs.



SPECIAL RELAYS

TYPE	COILS			CONTACTS		SUGG. RE-SALE PRICE
	Pick-up Current In mA	Resistance In Ohms Each Coil*	Pick-up Power in Microwatts	Arrangement	Rating In Amps Resistive	
Bi-Stable:						
MDP-300-1	1.5	150 (2)	338	1 Form C ②	.01-1A† 25-150V	$24.65
MDP-1300-1	1.4	150 (2)	294			24.65
Center-Stable:						
MDP-1006	0.32	330 (1)	33.8			28.20
MDP-1007	0.27	480 (1)	35.0			28.20
MDP-1011	0.10	3500 (1)	35.0	1 Form K ①	3A@28VDC	28.20
MDP-1013	0.067	7200 (1)	32.3			28.20
MDP-2009	0.32	1000 (2)	102.0			28.20
MDP-2011	0.17	2300 (2)	66.5			28.20

* Number of coils shown in ( ) parenthesis.
† With suitable arc suppression.
Contact material shown in ○ circle.
① Silver ② Tungsten and Paliney.

TM SERIES
TIME DELAY RELAYS AND AUTOMATIC RESET TIMERS

- **On Delay**
- **Interval**
- **Off Delay**

Built-in Accuracy and Dependability

TM series timers are available in a wide variety of timing and adjustability ranges. Three types of timing sequences: on delay, interval, and off delay are offered by Type TM-01, Type TM-11, and TM-21, respectively. They assure accurate timing control for motors, pumps, heating, air conditioning, vending machines, machine tools and many other types of equipment. They are easy to install as all internal timer components are connected to external terminals.

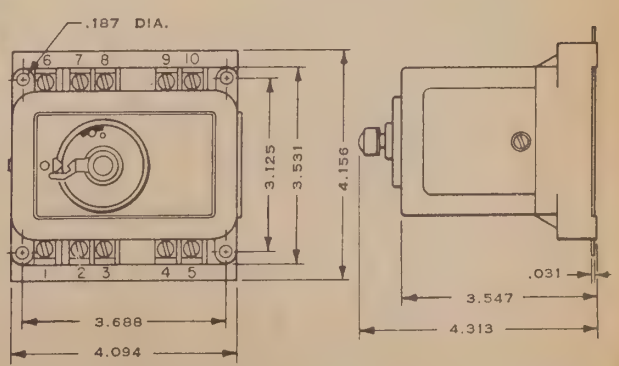
A self-lubricated 3-watt, 120V AC, 50/60Hz synchronous motor runs continuously and requires no shut-off switch. Switches are independent of the motor and can be wired to carry 120 to 600 volts AC—690 voltamperes pilot duty. Accuracy is plus or minus 1% of the total dial range. The minimum setting is two dial graduations, or two seconds of the 60 second range, or a setting of zero. If the application requires by-passing the timer, the timer may be set at zero and locked. To provide protection against dust and moisture, TM series timers have a durable, molded phenolic enclosure and base.



TM SERIES RESET TIMERS

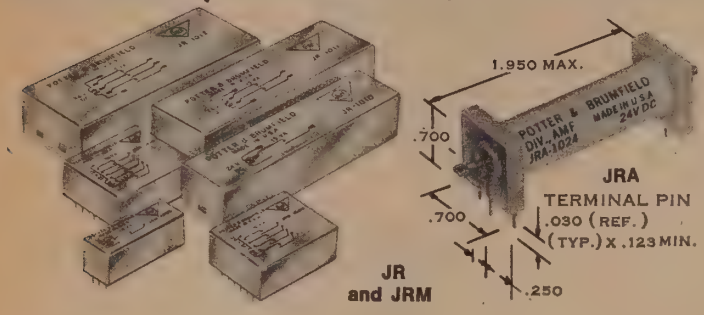
Model	Volts	Series	Time Range	Range of Adjustability	Resale Price
TM-01-020	120	On Delay	1 minute	2-60 seconds	$34.00
TM-01-120	120		3 minutes	6-180 seconds	34.00
TM-01-220	120		5 minutes	10-300 seconds	34.00
TM-01-320	120		1 hour	2 min.-1 hour	34.00
TM-01-420	120		5 hours	10 min.-5 hours	34.00
TM-01-023	240		1 minute	2-60 seconds	35.70
TM-01-123	240		3 minutes	6-180 seconds	35.70
TM-11-320	120	Interval	1 hour	2 min.-1 hour	34.00
TM-11-420	120		5 hours	10 min.-5hours	34.00
TM-21-020	120	Off Delay	1 minute	2-60 seconds	34.00
TM-21-120	120		3 minutes	6-180 seconds	34.00
TM-21-220	120		5 minutes	10-300 seconds	34.00
TM-21-320	120		1 hour	2 min.-1 hour	34.00
TM-21-123	240		3 minutes	6-180 seconds	35.70

OUTLINE DIMENSIONS



DRY REED

JR STANDARD / JRA LOW COST / JRM MINIATURE



Fast response, reliable performance, high sensitivity and long life are characteristic of the JR Series dry reed relays. JR standard and JRM miniature relays are especially suited for data processing applications, computer equipment, logic circuitry and various other sophisticated control circuits. The JRA Series low cost relays are limited to applications where stray magnetic fields and interaction of coils will not interfere with their operation. Adequate spacing (not less than .75" separation) is recommended.

TWO TYPES OF CAPSULES

The JRA Series is available only in a Form A (SPST-NO) contact arrangement. Both JR and JRM relays have reed switches with either Form A (SPST-NO) or Form C (SPDT) contact configuration. Biasing with a permanent magnet changes Form A to a Form B (SPST-NC). This arrangement requires that coil polarity be observed. Combining one Form A with one Form B results in a single Form C (SPDT) break-before-make. A "true" Form C (SPDT) uses a reed switch with two stationary and one movable contact. The movable contact is normally closed until the coil is energized.

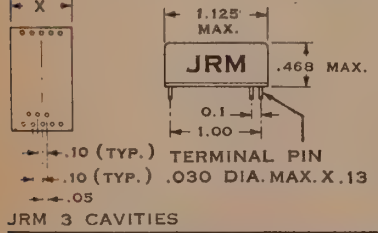
SPECIFICATIONS

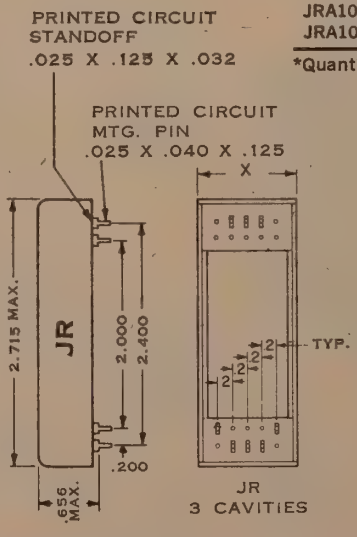
Pick-up: 75% of nominal @ 25°C.
Typical Operate Time: At nominal voltage @ 25°C.: JR: 3 ms. JRA: 1.5 ms. JRM: 1 ms.
Release Time: At 25°C: JR:.5 ms. JRM: .05ms.
Coil Power: Based on nominal voltage and resistance.
JR: 1 capsule—240mw; 2 capsules—360mw; 3 capsules—720mw; 4 capsules—960mw; 5 capsules—1.5w. **JRA:** 1 capsule—550mw. **JRM:** 1 capsule—180mw; 2 capsules—275mw; 3 capsules—420mw; 4 capsules—540mw; 5 capsules—720mw. For additional specifications see columnar listings and drawings.

OUTLINE DIMENSIONS

JR Standard Relays — **Weights**
X = 1 Cavity = .687" max.—1.50 ozs.
X = 2 Cavities = .890" max.—2.00 ozs.
X = 3 Cavities = 1.094" max.—2.50 ozs.
X = 4 Cavities = 1.297" max.—3.00 ozs.
X = 5 Cavities = 1.516" max.—3.50 ozs.

JRM Miniature Relays
X = 1 Cavity = .437" max.—.366 oz.
X = 2 Cavities = .562" max.—.395 oz.
X = 3 Cavities = .703" max.—.530 oz.
X = 4 Cavities = .813" max.—.620 oz.
X = 5 Cavities = .968" max.—.781 oz.





JR STANDARD SERIES

TYPE	COILS: Contact Arrangement	Number of Cavities	Sugg. Nominal Voltage	Resistance in Ohms	Reed Rating Watts	SUGG. RESALE PRICE
JR1000	1A	1	6	150	15	$3.20
JR1001	2A	2	6	100	15	4.30
JR1020	1A	1	6	150	50	4.50
JR1040	1C*	1	6	150	10	8.05
JR1041	2C*	2	6	100	10	8.80
JR1060	1B	2	6	100	15	4.30
JR1005	1A	1	12	600	15	3.20
JR1006	2A	2	12	400	15	4.30
JR1008	4A	4	12	150	15	6.00
JR1025	1A	1	12	600	50	4.50
JR1045	1C*	1	12	600	10	8.05
JR1046	2C*	2	12	400	10	8.80
JR1063	1B	2	12	400	15	4.30
JR1086	1A + 1B	3	12	200	15	5.30
JR1010	1A	1	24	2,400	15	3.75
JR1011	2A	2	24	1,600	15	4.55
JR1013	4A	4	24	600	15	6.30
JR1030	1A	1	24	2,400	50	4.85
JR1031	2A	2	24	1,600	50	7.25
JR1050	1C*	1	24	2,400	10	8.40
JR1051	2C*	2	24	1,600	10	8.90
JR1066	1B	2	24	1,600	15	4.35
JR1088	1A + 1B	3	24	800	15	5.65
JR1089	2A + 2B	5	24	384	15	8.75

*True Form C

JRM MINIATURE SERIES

JRM1000	1A	1	6	200	10	$3.45
JRM1001	2A	2	6	130	10	5.05
JRM1003	4A	4	6	67	10	8.05
JRM1036	1B	2	6	130	10	4.40
JRM1037	2B	3	6	86	10	5.90
JRM1048	1A + 1B	3	6	86	10	5.90
JRM1049	2A + 2B	5	6	50	10	9.05
JRM1006	1A	1	12	800	10	3.45
JRM1007	2A	2	12	520	10	5.05
JRM1009	4A	4	12	268	10	8.05
JRM1040	1B	2	12	520	10	4.40
JRM1041	2B	3	12	344	10	5.90
JRM1050	1A + 1B	3	12	344	10	5.90
JRM1051	2A + 2B	5	12	200	10	9.05
JRM1012	1A	1	24	3,200	10	3.80
JRM1013	2A	2	24	2,080	10	5.20
JRM1015	4A	4	24	1,072	10	8.15
JRM1044	1B	2	24	2,080	10	4.50
JRM1045	2B	3	24	1,376	10	6.05
JRM1052	1A + 1B	3	24	1,376	10	6.05
JRM1053	2A + 2B	5	24	800	10	9.20

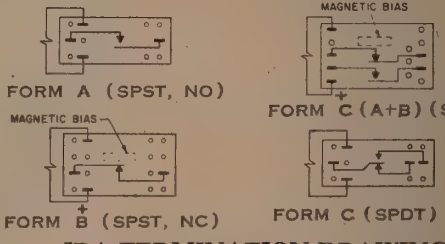
JRA LOW COST SERIES

JRA1006	1A	1	6	74	25VA	$1.50*
JRA1012	1A	1	12	290	25VA	1.50*
JRA1024	1A	1	24	1,200	25VA	1.50*

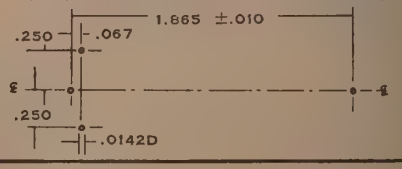
*Quantities over 76 units are $.77 each.

TYPICAL WIRING DIAGRAMS

BOTTOM VIEW



JRA TERMINATION DRAWING



See ordering information on page 17.

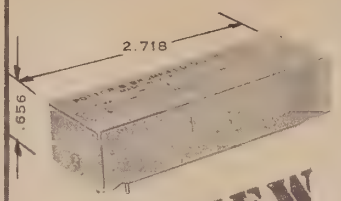
© United Technical Publications

POTTER & BRUMFIELD RELAYS

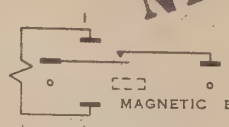
DRY REED

JRL LATCHING

This bi-stable dry reed latching relay requires no coil current to maintain contact in either position. Reversing the polarity of the coil causes the contacts to transfer. Designed for reliable memory work, JRL latching relays mount on p.c. board and are not position sensitive. 1 Form A and 2 Form A contacts are rated 15 watts, resistive. Operate time at 25°C is 1.0 millisecond (including bounce). Weight: 2.0 ozs.



NEW



JRL 1A
SINGLE WOUND LATCH



JRL 2A
SINGLE WOUND LATCH

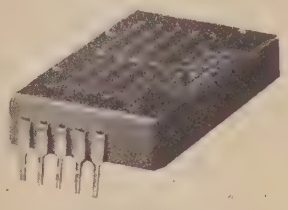
JRL LATCHING SERIES

TYPE	Contact Arrangement	Number of Cavities	COILS: Sugg. Nominal Voltage	COILS: Resist. In Ohms	COILS: Reed Rating Watts	SUGG. RESALE PRICE
JRL1000	1A	2	6V DC	400	15	$4.75
JRL1001	1A	2	12V DC	1,600	15	4.75
JRL1002	1A	2	24V DC	6,400	15	5.25
JRL1012	2A	3	6V DC	300	15	6.75
JRL1013	2A	3	12V DC	1,200	15	6.75
JRL1014	2A	3	24V DC	4 800	15	7.10

ORDERING INFORMATION
Select the desired nominal operating voltage and contact arrangement. Specify the corresponding P&B type number indicated under TYPE in the columnar listing.

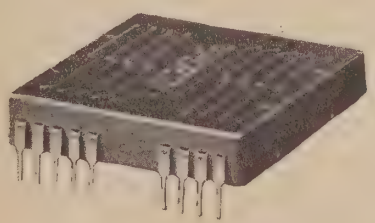
JDT DUAL THIN-LINE

The low profile (only 0.275" max. height) JDT Dual Thin-Line reed relays are ideal for high density packaging applications. Hermetically sealed glass capsules are epoxy encapsulated in 4 pole (4100 Series) or 8 pole (8100 Series) configurations. Dual in-line terminals on .100" centers for p.c. board mounting are featured. Operate time is 3.5 milliseconds including bounce. Release time is 3.5 milliseconds maximum. Weight JDT 4100, ½ oz.; JDT 8100, ¾ oz.



4100 SERIES

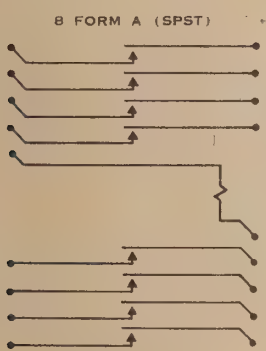
NEW



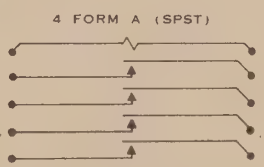
8100 SERIES

JDT DUAL THIN-LINE SERIES

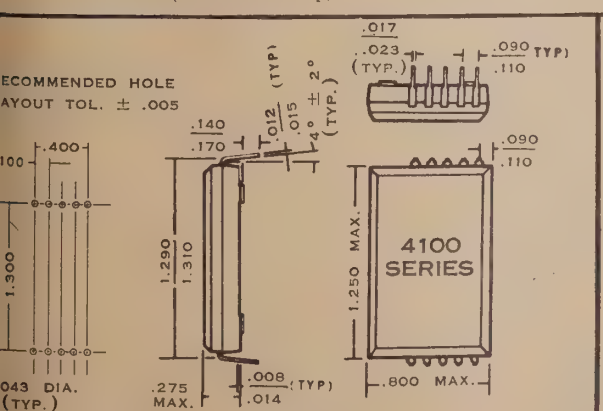
TYPE	Contact Arrangement	Number of Cavities	COILS: Sugg. Nominal Voltage	COILS: Resist. In Ohms	COILS: Reed Rating Watts	SUGG. RESALE PRICE
JDT4100	4A	4	6V DC	115	10	$ 7.65
JDT4105	4A	4	12V DC	480	10	7.65
JDT4110	4A	4	24V DC	1,850	10	8.30
JDT8100	8A	8	6V DC	60	10	12.95
JDT8105	8A	8	12V DC	260	10	12.95
JDT8110	8A	8	24V DC	1,050	10	13.70

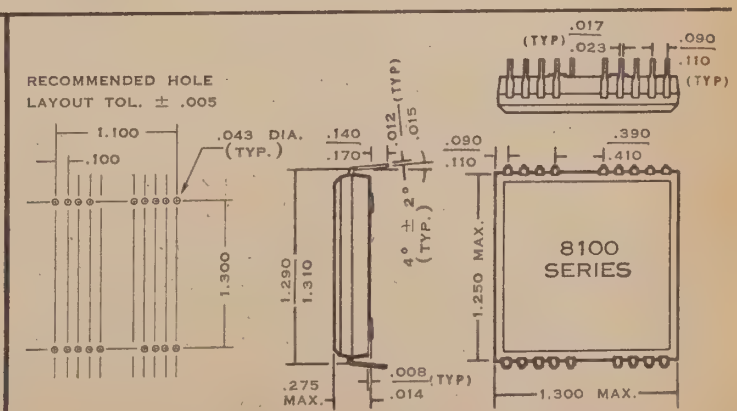


(Viewed from Top)



(Viewed from Top)





© United Technical Publications

JM SERIES
MERCURY-WETTED CONTACT RELAYS

Rare long life, high speed, and unvarying dependability—all are the result of the basic component of these relays: a hermetically sealed glass capsule. It contains the contact arrangement and a small reservoir of mercury sealed in a high pressure hydrogen atmosphere. A film of mercury is renewed for every operation—that's why you can think in terms of billions of operations without contact bounce, pits or welds.

TWO TYPES OF CAPSULES

The capsule used in JMF and JMF2 (with 2 capsules) modules and JML relays has a SPDT, break-before-make (Form C), non-bridging contact arrangement. Each capsule used in JMD, JMP, JMS and JM1 to JM4 relays has a SPDT, make-before-break (Form D), bridging contact arrangement. JMF, JMF2, JML, JMP and JMS Series achieve a high rate of sensitivity by factory-adjusted magnet biasing.

All JM Series mercury-wetted contact relays except the JMF2 relays may be operated up to 5 times the Must Operate current shown in the columnar listings. The JMF2 may be operated up to a maximum voltage of twice the Suggested DC Voltage shown.

Mounting Position: Upright mounting required, but deviation from upright to 30° causes only minor deviation in operating characteristics.

CONTACT RATINGS

JMF, JMF2, JML and JMS: 500V max., and 2 amps max., 100VA max.* JMP, JMD and JM1 to JM4: 500V max., and 5 amps max., 250 VA max.

*With contact protection unless used in a low level circuit. Details of a simple protection circuit consisting of resistor and capacitor in series are packed with each relay.

TERMINATIONS


FIG. 11


FIG. 12


FIG. 21


FIG. 22

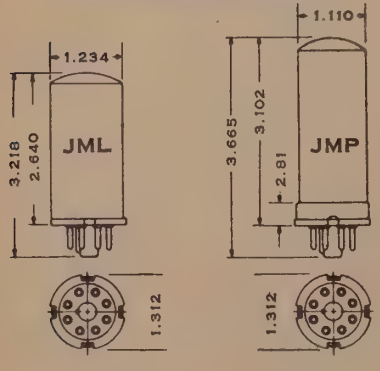

FIG. 31


FIG. 41
14 PIN MINI. PLUG


FIG. 81


FIG. 82

OUTLINE DIMENSIONS





JM MERCURY-WETTED CONTACT RELAY SERIES

	SERIES TYPE	Coil	Term.* Fig. No.	COIL CHARACTERISTICS Res. In Ohms ±10% @25°C	Sugg. Min. Operate mA DC	Soak † mA DC	Must Operate DC	Must Release DC	SUGG RE-SALE PRICE
JMF Printed Circuit Module Sensitive Form C Non-Bridg.	SINGLE-SIDE-STABLE								
	JMF	1070	— 61	450	16.13	—	12.9	2.1	$11.35
	JMF	1080	— 61	675	14.50	—	11.6	1.9	11.35
	JMF	1120	— 61	1425	10.50	—	8.4	1.4	11.35
	JMF	1150	— 61	2400	9.75	—	7.8	1.3	11.35
	JMF	1160	— 61	4000	5.00	—	4.0	0.67	11.90
	BI-STABLE								
	JMF	5080	— 61	675	+6.75	—	±5.4		11.35
JMF2 Dual Capsule Form C Non-Bridg.	SINGLE-SIDE-STABLE								
	JMF2	1000	— 71	130	6V DC	—	3V DC	0.5V DC	21.75
	JMF2	1001	— 71	520	12V DC	—	6V DC	1.0V DC	21.75
	JMF2	1002	— 71	2200	24V DC	—	12V DC	2.0V DC	22.30

* See termination figures on this page.

† Current to be applied to the coil winding for at least 2 seconds just prior to current flow tests.

JM MERCURY-WETTED CONTACT RELAY SERIES

	SERIES TYPE	Coil	Term.* Fig. No.	COIL CHARACTERISTICS Res. In Ohms ±10% @25°C	Must Operate DCmA	Max. Volts DC @25°C	SUGG. RE-SALE PRICE
JMS Sensitive Form D Bridging	20 Milliwatts (per winding), Bi-Stable, Dual-Wound Coil						
	JMS	5040	— 62	325/325	±7.0	24	$11.35
	JMS	5070	— 62	1250/1250	±3.6	47	11.90
	40 Milliwatts, Single-Side-Stable, Single-Wound Coil						
	JMS	1070	— 61	34	32	7.7	11.35
	JMS	1130	— 61	620	7	33	11.35
	JMS	1160	— 61	2430	3.6	65	11.90
	JMS	1190	— 61	8600	2.0	122	11.90

JM MERCURY-WETTED CONTACT RELAY SERIES

	SERIES TYPE	Coil	Term.* Fig. No.	COIL CHARACTERISTICS Res. In Ohms ±10% @25°C	Sugg. Min. Operate mA DC	Soak † mA DC	Must Operate mA DC	Must Release mA DC	SUGG. RE-SALE PRICE
JML Sensitive Form C Non-Bridg.	SINGLE-SIDE-STABLE								
	JML	1061	— 81	40	12.19	36.0	9.75	1.68	$14.00
	JML	1110	— 81	350	4.45	13.1	3.56	0.61	14.00
	JML	1160	— 81	1,000	2.76	8.1	2.21	0.38	14.00
	JML	1190	— 81	2,500	1.79	4.0	1.43	0.17	14.95
	JML	1200	— 81	4,000	1.56	3.4	1.25	0.25	14.95
	JML	1240	— 81	11,000	.90	2.6	0.72	0.12	14.95
	JML	1260	— 81	25,000	.65	1.9	0.52	0.09	14.95
	BI-STABLE								
	JML	5200	— 81	4,000	+ .66	—	±0.53		14.95
	JML	5430	— 82	(1) 1,100 (2) 1,100	+2.20	—	±1.76		16.40
	CHOPPER						Voltage RMS 60 Hz		
	JML	8130	— 81	600		—	6.3V		14.60
JMP Polarized Form D Bridging	SINGLE-SIDE-STABLE								
	JMP	1160	— 11	1,000	7.0	16.2	5.60	0.40	18.40
	JMP	1200	— 11	4,000	3.70	8.55	2.96	0.24	19.70
	BI-STABLE								
	JMP	5200	— 11	4,000	+1.88	—	±1.5		19.70

* See Termination figures on this page.

† Current to be applied to the coil winding for at least 2 seconds just prior to current flow tests.

APPROXIMATE WEIGHTS:

JMF - 1.25 OZS.

JMF2 - 3.25 OZS.

JMS - 1.25 OZS.


FIG. 61
JMF


FIG. 62
JMS


FIG. 71
JMF2

See ordering information on page 19.

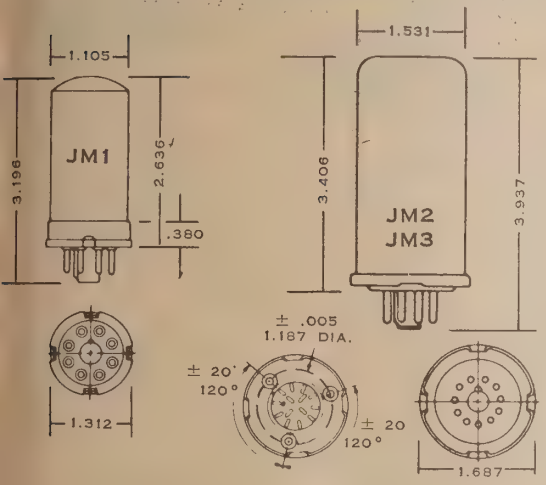
© United Technical Publications

OTTER & BRUMFIELD RELAYS

JM SERIES

MERCURY-WETTED CONTACT RELAYS

OUTLINE DIMENSIONS



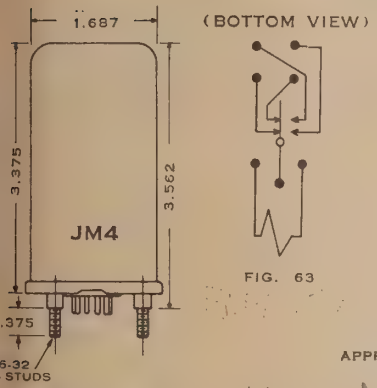
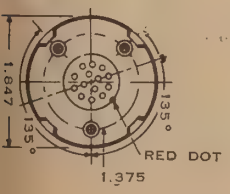
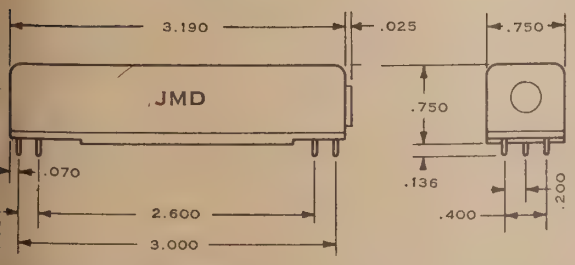


FIG. 63

APPROXIMATE WEIGHTS:
JM1 - 4.0 OZS.
JM4 - 10.0 OZS.
JM2 & 3 - 8.0 OZS.
JMD - 3.0 OZS.





JM MERCURY-WETTED CONTACT RELAY SERIES

TYPE	SERIES Capsule	Coil	Term. Fig. No.*	COIL CHARACTERISTICS Res. in ohms ±10%	Sugg. Min. Operate mADC	MUST OPERATE Current mADC	MUST OPERATE Voltage DC @ 25°C	MAX. Voltage @ 35°C	SUGG. RE-SALE PRICE
JM1 Form D Bridging 1 capsule SPDT	SPDT SINGLE COIL								
	JM1	106	12	40	83.70	67.7	2.98	9.0	$16.95
	JM1	109	12	130	47.50	38.8	5.55	16.1	16.95
	JM1	112	11	500	25.00	20.1	11.10	31.6	16.95
	JM1	114	11	700	25.00	20.0	15.40	37.4	16.95
	JM1	114	12	700	25.00	20.0	15.40	37.4	16.95
	JM1	118	11	2,500	12.50	10.1	27.80	70.7	17.25
	JM1	119	11	4,000	10.00	8.1	35.60	89.5	8.55**
	JM1	120	11	7,000	10.00	6.0	46.20	117.0	17.85
	JM1	121	11	11,000	6.25	5.0	60.50	148.0	17.85
	JM1	123	11	25,000	4.50	3.6	99.00	224.0	17.85
JM2 Form D Bridging 2 capsules DPDT	DPDT SINGLE COIL								
	JM2	104	22	50	137.50	110.0	6.04	12.25	27.50
	JM2	106	21	140	81.25	66.5	10.00	20.5	27.50
	JM2	109	22	315	55.00	44.0	15.30	30.7	27.50
	JM2	110	22	500	42.25	34.8	19.20	38.7	27.50
	JM2	111	22	700	37.30	30.5	23.50	45.8	27.50
	JM2	112	22	1,250	27.50	22.1	30.40	61.2	27.50
	JM2	115	21	5,000	13.75	11.3	62.10	122.0	27.50
	JM2	115	22	5,000	13.75	11.3	62.10	122.0	27.50
JM3 Form D 3 capsules 3PDT	3PDT SINGLE COIL								
	JM3	109	31	315	55.00	44.0	15.30	30.7	35.60
	JM3	110	31	500	42.50	34.8	19.20	38.7	35.60
	JM3	111	31	700	37.30	30.5	23.50	45.8	35.60
	JM3	115	31	5,000	13.75	11.3	62.10	122.0	35.60
JM4 Form D Bridging 4 capsules 4PDT	4PDT SINGLE COIL								
	JM4	106	41	65	125.00	100.0	7.15	15.1	45.90
	JM4	110	41	390	52.50	42.0	18.00	37.0	45.90
	Octal style plugs, except Fig. 41 (14-pin miniature plug).								
JMD Form D Bridging Module 1 capsule SPDT	SPDT SINGLE COIL								
	JMD	1060	63	150	70.00	55.0	9.1	18	11.45
	JMD	1090	63	450	41.90	33.5	16.6	30	11.45
	JMD	1100	63	750	30.0	24.3	20.0	39	11.45

NE

*See Termination Figures on Page 18.

**Single unit price. Regardless of quantity, discount does not apply.

JM SERIES ORDERING INFORMATION

EXAMPLE: ① JM ② P ③ 1600 — ④ 11

A JMP Series polarized, Form D, bridging, mercury wetted contact relay with an assigned 1160 coil and terminations as shown in Fig. 11.

① BASIC RELAY:
JM Series Mercury-wetted contacts

② TYPE:
F = PC module, Form C, Sensitive non-bridging
F2 = Dual capsule, Form C, non-bridging
L = Sensitive, Form C, non-bridging
P = Polarized, Form D, bridging
S = Sensitive, Form D, bridging

1 = Single capsule, Form D, SPDT, bridging
2 = 2 Capsules, Form D, DPDT, bridging
3 = 3 Capsules, Form D, 3PDT, bridging
4 = 4 Capsules, Form D, 4PDT, bridging
D = PC module, Form D, SPDT, bridging

③ COIL CODE NUMBER:
Factory assigned

④ TERMINATION FIGURE NUMBER:
11, 12, 21, 22, 23, 31, etc.

SOLID STATE TIME DELAYS

- ON DELAY
- OFF DELAY
- KNOB ADJUSTABLE
- RESISTOR ADJUSTABLE
- FIXED TIME DELAY



A wide selection of solid state time delay controls are represented by Potter & Brumfield. The differences are in their degree of accuracy, the varietv available in each series, and their cost.

BASIC TIMING CIRCUIT

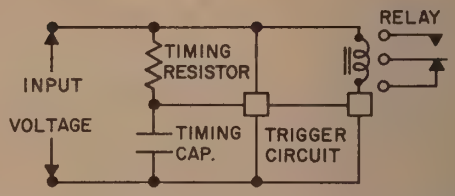
The basic timing circuit consists of a resistor in series with a capacitor. When the input voltage is applied to the resistor-capacitor circuit, the voltage across the capacitor slowly increases. When the firing level is reached a solid state circuit energizes a switching relay or external electrical load.

CD SERIES

Remarkably dependable, accurate and flexible, the CD series offers an unusually wide selection of operational configurations, all with accurate time delay values, fast reset time and excellent repeatability. It is available in two types: Knob-adjustable in two versions, one with the relay in the same enclosure as the solid state unit, the other with an auxiliary relay. A second type is adjustable with an external resistor. The CD series is available for time delay on operate or on release.

CH SERIES

The CH series is intended for a wide range of industrial applications where economy is of greater interest than highly critical performance. It is available in two types: Knob-adjustable with the relay in the same enclosure as the solid state unit. The second type has a fixed time delay period that is set at the factory and cannot be modified; its case has no knob. The CH series is available for time delay on either operate or on release.



CD, CK, CL AND CJ DELAY ON OPERATE CIRCUIT



CH AND CU DELAY ON OPERATE CIRCUIT

If the timing interval is interrupted, the switching contacts may momentarily transfer (pick up and drop out). Reset is accomplished by removal of the input voltage.

SOLID STATE TIME DELAY RELAY ORDERING INFORMATION AND CODE EXPLANATION

	①	②	③	④	⑤	⑥
EXAMPLE:	CD	C	38 —	6	0	003=

CD type, with fixed time value, DC input, 38 style enclosure, 110 volts, standard item, for 10 second delay.

PRODUCT DESIGNATION:

① TYPE (CD, CH, CK, CU, CL or CJ)

OPERATION

② A—Fixed Value .....AC Input
B—Knob Adjustable ..AC Input
C—Fixed Value .....DC Input
D—Knob Adjustable ..DC Input
F—Resistor Adj. .....AC Input
H—Resistor Adj. .....DC Input

ENCLOSURE STYLES:

③ CD—21, 31, 38, 45
CH and CK—38
CJ—01, 02, 03, 06 and 10
CU and CL—41, 42, 43, 44, 45, and 51

INPUT VOLTAGE VALUE

④ 0.....Special DC
1.....Special AC
2.....12 VAC or DC
3.....24 or 28 VAC or DC
4.....48 VDC
5.....90 VDC
6.....110 VDC
7.....120 VAC
8.....240 VAC
9.....Blank

DESIGNATION

⑤ 0 .....Standard
1 .....Special

TIMES: (CJ, CK, CL and CU)

⑥ 001— 1 Sec.
010— 10 Sec.
030— 30 Sec.
060— 60 Sec.
120—120 Sec.

EXAMPLE: PARELCO-P&B

R12	—	30	—	12	—	X2	—	E1
TIME DELAY RANGE		LINE VOLTAGE		5 AMP CONTACTS		SOLDER TERMINALS		
1—30 Seconds		12 VDC		2 Form C		STUD OR SOCKET MOUNTING		

© United Technical Publication

POTTER & BRUMFIELD RELAYS

MORE SOLID STATE TIME DELAYS

CK SERIES

The CK Series is similar to the CH with the exception that they don't false operate† and will time as low as 0.1 second. These time delays include an internally mounted DPDT KU relay rated 10 amperes to form a compact and convenient assembly. Enclosed in white nylon dust covers, CK relays are available in three types: fixed, resistor adjustable and knob adjustable for AC or DC operation. Mounting convenience is provided by plug-in octal type terminals.

CU SERIES

An outstanding value in a solid state time delay relays, the low cost CU Series is designed for delay on operate applications in machine tool controls, copiers, office equipment, coin-operated machines, process controls and many others. Relays are available in three types: Fixed time delay that is set at the factory and cannot be modified, Adjustable with an external resistor, and Knob-Adjustable with a reference scale. For minimum time on external resistor types, two terminals, 2 and 5, must be shorted; for maximum time, the listed external resistor must be added between terminals 2 and 5. For intermediate times select a lesser value resistor or use a potentiometer. Either fixed or resistor adjustable models can be furnished in two types of enclosures with the relay mounted in the same case as the solid state circuit. The CUB series knob-adjustable time delay is offered in a slightly taller enclosure. All CU series time delays have an internal DPDT 10 amp relay of the KUP series featured on page 8. The cases for the CU and KUP are dimensionally the same.

CL SERIES

Designed for delay on operate the CL Series is similar to the CU with the exception that they don't false operate† and will time to 0.1 second. These solid state time delays are ideal for AC or DC applications. A DPDT KU relay rated 10 amperes is mounted in the same enclosure, forming a compact assembly. CL relays are enclosed in yellow polycarbonate dust covers and are available in three types: fixed, resistor adjustable and knob adjustable. Plug-in/quick-connect terminals facilitate handling and hook-up.

CJ SERIES

CJ Series time delay dry reed relays combine the basic timing characteristics of time delay relays with the long life and performance of miniature dry reed relays. Two series are available, the CJC fixed time delay on operate and the CJH external resistor adjustable time delay on operate.

R12 SERIES

The R12 Series time delay relays combine the field proven R10 Series basic relay with a high quality delay circuit. The time delay circuit uses silicon transistors throughout and the critical timing capacitor meets the specifications for military use. These small DC variable time delay relays do not false operate and will time as low as 0.1 second. Timing range of 0.1 to 120 seconds is spanned by three models: 0.1 to 2, 1.0 to 30 and 5.0 to 120 seconds. Each time range is varied with a high resolution 15-turn potentiometer. The internally mounted R10 Series relay is equipped with DPDT contacts rated 5 amperes. Solder terminals are provided and mounting may be accomplished by # 3-48 stud or sockets offering solder or printed circuit board terminals.

COMPARISON OF SPECIFICATIONS OF TIME DELAY RELAYS

TYPE	DIAL SETTING	TEMP. RANGE	ACCURACY OR TOLERANCE	TRANSIENT PROTECTION	† INHERENT FALSE OPERATION	RESET TIME	REPEAT-ABILITY	POLARITY PROTECTION	APPROX. WEIGHT IN OZS.
CD	Time, calibrated ±5% of full scale	−40° to +55°C	Accuracy: ±5% of actual	Tested to 1000V, ½ cycle surges (on all 120V AC models)*	None	60 Milliseconds	CD-38 ±1% ±2%	Yes	CD-21 4.25 CD-31 2.00 CD-38 8.25 CD-45 6.00
CH	Reference scale	−10° to +55°C	Accuracy: ±10% of actual	Twice rated input voltage for 8 milliseconds	Contacts may transfer momentarily if timing interval is interrupted	100 Milliseconds	±2%	Yes	CH-38 4.00
CK	Reference scale	−10° to +55°C	Accuracy: ±10% of actual	Twice rated input voltage for 8 milliseconds	None	60 Milliseconds	±2%	Yes	CK-38 4.00
CU	Reference scale	Norm. room Temp.	Tolerance: Fixed ±5% of nominal; adjustable ±10% of nominal	Twice rated input voltage for 8 milliseconds	Contacts may transfer momentarily if timing interval is interrupted	150 Milliseconds	±3%	Yes	All CU Series 3.50
CL	Reference scale	Norm. room Temp.	Tolerance: Fixed ±5% of nominal; adjustable ±10% of nominal	Twice rated input voltage for 8 milliseconds	None	150 Milliseconds	±3%	Yes	All CL Series 3.50
R12	Not Available	+25° to +72°C	Accuracy: .25% change per 1% change of coil input voltage	200V neg. for 100μ sec. 2 x line pos. for 1 millisecond	None	100 Milliseconds	±2%	Yes	1.5
CJ	Not applicable	−10° to +55°C	Tolerance: Fixed ±5% of nominal; adjustable ±10% of nominal	Twice rated input voltage for 8 milliseconds	None	60 Milliseconds	±2%	No	CJC & CJH 01 1.25 02 1.38 03 1.63

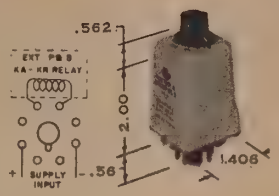
*Except 31 style.

See ordering information on page 20.

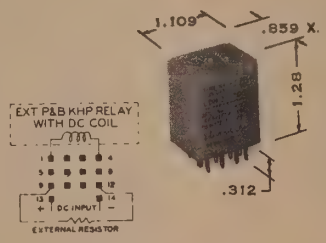
© United Technical Publications

CHOOSE FROM A WIDE SELECTION OF TIME DELAYS

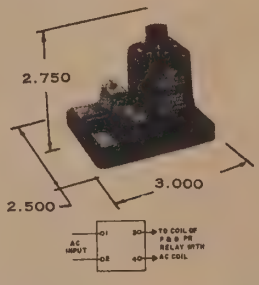
CD-21. Knob-adjustable. Use with P&B KRP relays (see page 5) as listed under Note 2.



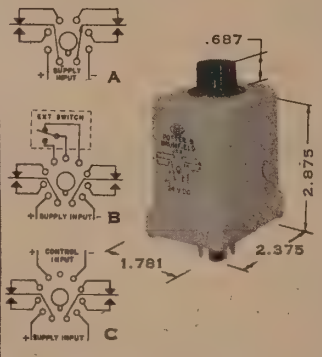
CD-31. Adjustable with external resistor (not furnished). Use with KHP relay (see page 4), Note 4.



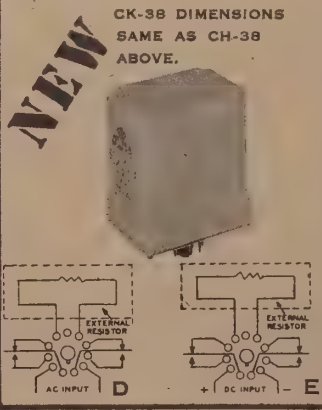
CD-45. Knob-adjustable. For heavy duty when used with PR power relay (see page 9) as listed under Note 6.



CH-38 and CD-38. Knob-adjustable delay on operate with internally mounted DPDT relay. Contacts rated to 10 amps. Diagram A. Delay on release CH requires auxiliary SPDT switch or relay contacts: CHB-38, CHD-38-30011, CHD-38-30013: Diagram B. CD release occurs when "Control" circuit is de-energized; supply circuit must be on continuously: CDB-38-70012, CDD-38-30012: Diagram C.



CK-38 SERIES. Similar to CH.
Three types available: fixed, resistor adjustable, (external resistor not furnished) and knob adjustable. CKA-38-70010 and CKB-38-30010, -70010 and -70120: Diagram A. CKC-38-30010: Diagram A. CKF-38-70010: Diagram D. CKH-38-30010: Diagram E.



TYPE	Time Delay in Seconds	Input Voltage	Notes	SUGG. RESALE PRICE
CDB21-70003	0.1 - 10	120V AC	2	$39.15
CDB21-70001	1.8 - 180	120V AC	2	39.15
CDD21-30003	0.1 - 10	24V DC	3	38.80
CDD21-30001	1.8 - 180	24V DC	3	38.80
CDH31-30005	180 Max.	24V DC	4 & 5	39.35
CDB45-70002	0.6 - 60	120V AC	6	37.50
CHA38-70001	10	120V AC	1	18.90
CHB38-30001	1.0 - 10	24V AC	1	19.95
CHB38-30003	1.0 - 180	24V AC	1	19.95
CHB38-70001	1.0 - 10	120V AC	1	19.95
CHB38-70003	1.0 - 180	120V AC	1	19.95
CHB38-80001	1.0 - 10	240V AC	1	20.95
CHD38-30001	1.0 - 10	24V DC	1	18.95
CHD38-30003	1.0 - 180	24V DC	1	18.95
CHB38-70011	1.0 - 10	120V AC	1 & 7	23.95
CHB38-70013	1.0 - 180	120V AC	1 & 7	23.95
CHD38-30011	1.0 - 10	24V DC	1 & 7	21.95
CHD38-30013	1.0 - 180	24V DC	1 & 7	21.95
CDB38-70003	0.1 - 10	120V AC	1	44.25
CDB38-70004	0.6 - 60	120V AC	1	44.25
CDB38-70005	1.8 - 180	120V AC	1	44.25
CDD38-30003	0.1 - 10	24V DC	1	42.00
CDD38-30004	0.6 - 60	24V DC	1	42.00
CDD38-30005	1.8 - 180	24V DC	1	42.00
CDB38-70012	0.6 - 60	120V AC	1 & 7	52.90
CDD38-30012	0.6 - 60	24V DC	1 & 7	49.95
CKA38-70010	10	120V AC	1 & 9	21.90
CKC38-30010	10	24V DC	1 & 9	20.90
CKF38-70010	0.1 - 10	120V AC	1 & 9	22.05
CKH38-30010	0.1 - 10	24V AC	1 & 9	21.05
CKB38-30010	0.1 - 10	24V AC	1 & 9	22.95
CKB38-70010	0.1 - 10	120V AC	1 & 9	22.95
CKB38-70120	1.2 - 120	120V AC	1 & 9	22.95

NOTES
1. Has internal relay with DPDT contacts rated at 10 amperes, 120V AC. **2.** Use with Potter & Brumfield relay KRP5AG- 120V AC, KRP11AG- 120V or KRP14AG- 120V AC. **3.** Use with Potter & Brumfield KRP5DG- 24V DC, KRP11DG- 24V DC or KRP14DG- 24V DC relay. **4.** Use with Potter & Brumfield KHP17D11- 24V DC relay. **5.** Supplied with 180 seconds delay; adjustable to 1.8 seconds with external resistor (not furnished). **6.** Use with Potter & Brumfield PR11AY- 120V AC relay. **7.** Provides delay on release; all others have delay on operate. **8.** Internal relay contacts rated at 10 VA, other ratings available upon request. **9.** Does not false operate. **10.** Internal relay has 5 ampere rated contacts.

See ordering information on page 20.

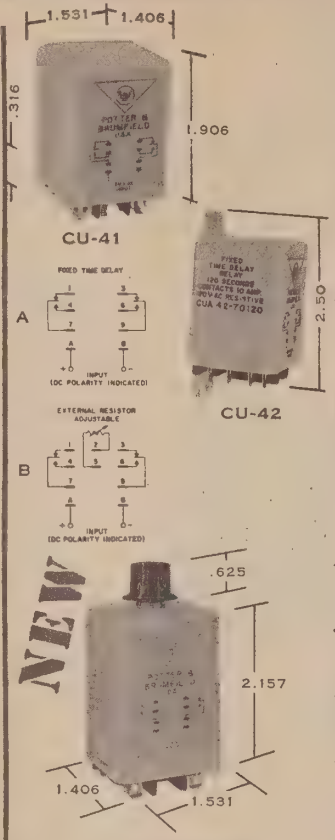
Net
© United Technical Publications

POTTER & BRUMFIELD RELAYS

SOLID STATE TIME DELAYS
AS LOW AS $14.20

CUA and CUC are fixed time delays. CUF and CUH are resistor adjustable delays. All with internal DPDT 10 amp contact relay.

CU-41 is a plain case relay, **CU-42** has a slotted flange case. Diagram A is for fixed delays, diagram B for resistor adjustable delays.



SOCKETS FOR CU-41 PLAIN CASE RELAYS

The plain cases fit the same sockets (except CU resistor-adjustable type will not fit 9KU4) and the same hold down spring (9KU3) can be used. Please use KUP type designators (9KU1, 9KU2 and 9KU4) and prices on page 8 when ordering accessories.

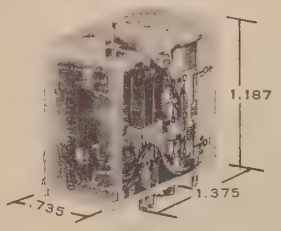
CL-41 is a plain case relay similar to the CU-41 with the exception that it doesn't false operate. See page 8 for mounting accessories (9KU).

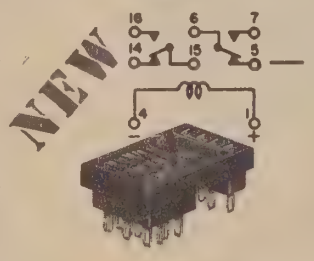
CUB/CLB-51. Knob-adjustable versions of CU enclosed in slightly taller 51 style case. Same mounting accessories as CU-41. CLB does not false operate.

R12. Variable time delay with high resolution 15-turn potentiometer. Calibrated timing capacitor meets specifications for military use. Fits sockets below. See notes 9 and 10.

9XR12-1 DPDT Solder terminal sockets and retainers.
Box of 10 **NET $9.00**

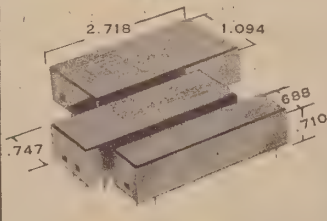
9XR12-2 DPDT Printed circuit terminal sockets and retainers.
Box of 10 **NET $9.00**





CJC SERIES. Fixed time delay that is factory set and cannot be modified.

CJH SERIES. Resistor adjustable type with terminal provisions for external resistor or potentiometer for adjusting time delay period to within ±10% at nominal voltage at 25°C ambient temperature. Pin terminations are for printed circuit board mounting.



CODE: 01 - 1 FORM A
02 - 1 FORM B
03 - 1 FORM C

TYPE	Time Delay In Seconds	Input Voltage	Notes	SUGG. RESALE PRICE
CUA41-70010	10	120V AC	1	$14.20
CUA41-70120	120	120V AC	1	15.75
CUC41-30010	10	24V DC	1	14.20
CUC41-30120	120	24V DC	1	15.75
CUA41-30010	10	24V AC	1	14.20
CUA42-70010	10	120V AC	1	14.20
CUA42-70120	120	120V AC	1	15.75
CUC42-30010	10	24V DC	1	14.20
CUC42-30120	120	24V DC	1	15.75
CUA42-30010	10	24V AC	1	14.20
CUF41-70010	1.0 - 10	120V AC	200K.*	15.00
CUF41-70120	1.0 - 120	120V AC	2.4 Meg.*	16.30
CUH41-30010	1.0 - 10	24V DC	160K.*	15.00
CUH41-30120	1.0 - 120	24V DC	2 Meg.*	16.30
CUF41-30010	1.0 - 10	24V AC	200K.*	15.00
CUF42-70010	1.0 - 10	120V AC	200K.*	15.00
CUF42-70120	1.0 - 120	120V AC	2.4 Meg.*	16.30
CUH42-30010	1.0 - 10	24V DC	160K.*	15.00
CUH42-30120	1.0 - 120	24V DC	2 Meg.*	16.30
CUF42-30010	1.0 - 10	24V AC	200K.*	15.00
CUB51-70010	1.0 - 10	120V AC	1	16.30
CUB51-70120	1.0 - 120	120V AC	1	17.85
CLA41-70010	10	120V AC	1 & 9	17.35
CLC41-30010	10	24V DC	1 & 9	17.35
CLF41-70010	0.1 - 10	120V AC	200K.*	18.85
CLH41-30010	0.1 - 10	24V DC	160K.*	18.85
CLB51-30010	0.1 - 10	24V AC	1 & 9	19.85
CLB51-70010	0.1 - 10	120V AC	1 & 9	19.85
CLB51-70120	1.2 - 120	120V AC	1 & 9	21.15
R12-2-12-X2-E1	0.1 - 2	12V DC	9 & 10	18.10
R12-2-24-X2-E1	0.1 - 2	24V DC	9 & 10	18.10
R12-30-12-X2-E1	1.0 - 30	12V DC	9 & 10	18.60
R12-30-24-X2-E1	1.0 - 30	24V DC	9 & 10	18.60
R12-120-12-X2-E1	5.0 - 120	12V DC	9 & 10	20.10
R12-120-24-X2-E1	5.0 - 120	24V DC	9 & 10	20.10
CJC01-20003	3	12V DC	8	19.30
CJC01-30003	3	24V DC	8	19.30
CJC02-20003	3	12V DC	8	19.95
CJC02-30003	3	24V DC	8	19.95
CJC03-20003	3	12V DC	8	21.20
CJC03-30003	3	24V DC	8	21.20
CJH01-20010	0.1 - 10	12V DC	750K.*	19.80
CJH01-20120	1 - 120	12V DC	1.8 Meg.*	22.55
CJH01-30010	0.1 - 10	24V DC	750K.*	19.80
CJH01-30120	1 - 120	24V DC	1.8 Meg.*	22.55
CJH02-20010	0.1 - 10	12V DC	750K.*	20.45
CJH02-20120	1 - 120	12V DC	1.8 Meg.*	23.20
CJH02-30010	0.1 - 10	24V DC	750K.*	20.45
CJH02-30120	1 - 120	24V DC	1.8 Meg.*	23.20
CJH03-20010	0.1 - 10	12V DC	750K.*	21.70
CJH03-20120	1 - 120	12V DC	1.8 Meg.*	24.45
CJH03-30010	0.1 - 10	24V DC	750K.*	21.70
CJH03-30120	1 - 120	24V DC	1.8 Meg.*	24.45

*External resistor (not furnished) for maximum time.

NOTES
1. Has internal relay with DPDT contacts rated at 10 amperes, 120V AC. **2.** Use with Potter & Brumfield relay KRP5AG- 120V AC, KRP11AG- 120V or KRP14AG- 120V AC. **3.** Use with Potter & Brumfield KRP5DG- 24V DC, KRP11DG- 24V DC or KRP14DG- 24V DC relay. **4.** Use with Potter & Brumfield KHP17D11- 24V DC relay. **5.** Supplied with 180 seconds delay; adjustable to 1.8 seconds with external resistor (not furnished). **6.** Use with Potter & Brumfield PR11AY- 120V AC relay. **7.** Provides delay on release; all others have delay on operate. **8.** Internal relay contacts rated at 10 VA, other ratings available upon request. **9.** Does not false operate. **10.** Internal relay has 5 ampere rated contacts.

See ordering information on page 20.

© United Technical Publications

CS SERIES SOLID-STATE VOLTAGE SENSORS

• CLOSE-DIFFERENTIAL • UNDER-VOLTAGE

A voltage sensor is designed to energize and de-energize a relay at predetermined voltages. These solid state voltage sensors actuate an internally-mounted relay when a specific voltage level is reached. This pick-up level is either fixed or knob adjustable. Fixed sensors are factory set and cannot be changed. Knob-adjustable versions allow the pick-up levels to be varied over a predetermined range.

If the sensing voltage decreases to a pre-set level after pick-up occurs, the internal relay de-energizes. This is the drop-out level and may be fixed or knob-adjustable. The pick-up voltage point must be set higher than the drop-out voltage point.

Voltage sensors consist of a sensing circuit that acts to turn on a solid state switch, energizing the accompanying relay. Both the solid state switch and a DPDT relay rated at 3 amperes are enclosed in the same molded nylon dust cover.

Type 1. A series with factory fixed pick-up and single knob-adjustable drop-out voltage levels.

Type 2. A series with both knob-adjustable pick-up and drop-out for selecting desired voltage levels.

These reliable solid state voltage sensors can be used as protective devices in alarm circuits, motor controls and to activate or cut off a system automatically. It is possible to combine certain of the above sensors into a custom unit designed for specific individual control functions.

CONTACTS:
Load Switching Relay: Arrangement: 2 Form C (DPDT)
Rated: 3 amps @ 28V DC resistive: 120V AC resistive.
Expected Life: Electrical: 100,000 operations at rated load.
Mechanical: 10,000,000 operations.

COILS:
Operate Power: DC: 1.5 watts approximate.
AC: 1.0 volt-ampere approximate.
Duty: Continuous.

GENERAL:
Operate Time @ 25°C: 25 milliseconds approximately at nominal voltage.
Temperature Range: −10°C to +55°C
Reverse Polarity Protection: Yes, on DC types
Size: 2.375″ x 1.750″ x 3.593″ seated height.
Approximate Weight: 8 ozs.
Mounting: Octal plug.
Enclosures: Nylon dust cover.



Fixed pick-up and adjustable drop-out. One knob for setting drop-out value.



Adjustable pick-up and drop-out. Two knobs for setting desired values.

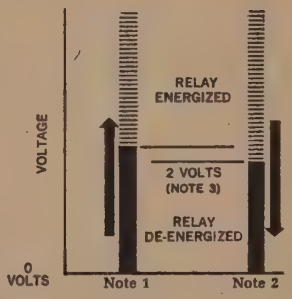
FIXED PICK-UP AND ADJUSTABLE DROP-OUT

Type	Pick-up (Volts)	Drop-out Range (Volts)	Type of Voltage	Sugg. Resale Price
CSJ38-71010	105	90-103	AC(50/60 Hz)	$29.20
CSL38-31010	22	16-20	DC	23.15

ADJUSTABLE PICK-UP AND DROP-OUT

Type	Pick-up Range (Volts)	Drop-out Range (Volts)	Type of Voltage	Sugg. Resale Price
CSJ38-30010	20-30	18-28	AC(50/60 Hz)	$30.20
CSJ38-70010	92-140	90-138	AC(50/60 Hz)	32.95
CSL38-30010	20-30	18-28	DC	26.20

ADJUSTABLE VOLTAGE SENSOR OPERATIONS

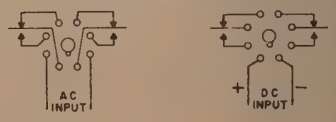


NOTE 1
As voltage increases, the relay will pick up at a predetermined point and remain energized while voltage is maintained at that level or higher.

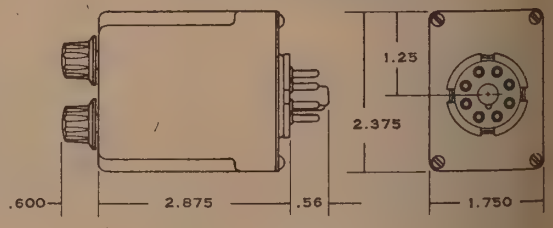
NOTE 2
As voltage decreases, after pick up, the relay will drop out at a predetermined point.

NOTE 3
Minimum difference between pick-up and drop-out points is 2 volts.

SCHEMATICS



OUTLINE DIMENSIONS



See ordering information on page 20.

© United Technical Publications

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



SCHRACK RELAYS

RELAY	GENERAL PURPOSE	GENERAL PURPOSE	GENERAL PURPOSE	SENSITIVE
TYPE	CA*	CAF	CAD*	CMD/CSD
ILLUSTRATION	 * U.L. File E38891 CSA File 14385		 * CSA file 14385	
DESIGN	Open Type	Enclosed with clear Dust Cover or Open Frame	Enclosed with Clear Dust Cover	Enclosed with Clear Dust Cover or Open Frame (CA)
TERMINALS	Pierced terminals soldering or .110 faston or printed circuit	Same as CA terminals also for plug-in socket No. RD78700	8 or 11 Pin Base to mate with standard tube sockets	Same as CA or CAD
CONTACTS Number & Form	1, 2, or 3 form "C" (change over)	1, 2, or 3 form "C" (change over)	1, 2, or 3 form "C" (change over)	1, 2, or 3 form "C" (change over)
Contact Rating	5 or 10 amp.	5 or 10 amp.	5 or 10 amp.	2 amp.
Contact Material	AgCdO, Hard Silver	AgCdO, Hard Silver	AgCdO, Hard Silver	Gold-flashed Silver
COIL Coil Voltage	6-230 VAC 6-110 VDC	6-230 VAC 6-110 VDC	6-230 VAC 6-110 VDC	5-200 VAC 4.9-100 VDC
For more technical data see catalog No.	A69	A69	A69	A69
RELAY	MIDGET RELAY	SINGLE COIL MINI-MAGNETIC LATCHING	MINI-SIX	SINGLE COIL MAGNETIC LATCHING
TYPE	RA	RR	RE	CRD/CRF
ILLUSTRATION	 U.L. File #38891			
DESIGN	Enclosed with dust cover	Plastic dust cover plug in	Enclosed with clear dust cover	Enclosed with clear dust cover
TERMINALS	Plug-in relay Solder lugs Printed circuit	Same as RA	Plug in relay Solder lugs	Plug-in relay CRD for Octal or 11 pin CRF pierced for Solder or .110 Faston or pc board
CONTACTS Number & Form	4 form "C" contacts (change over)	4 form "C"	6 form "C" contacts (change over)	2 or 3 form "C"
Contact Material	Fine silver Gold flashed	Same as RA	Fine silver Gold flashed	—
Max. Rated Cont. Voltage	110 VDC (220 VAC)	Same as RA	60 VAC	250 VAC
Max. Rated Cont. Current	3A	3A	2A	5 amps 10 amps*
Max. Rated Contact Load	350 V. 90 W	Same as RA	120 VA (60 VAC) 90 W (30 VDC)	1250A 2500 VA
Special Contact Materials	AgCdO, AuNi/3 PdAg 60/40 PdAg 30/70	Same as RA	—	—
COIL Coil Voltage	6-110 VDC 6-220 VAC	24-220 VAC 12-110 VDC	6-60 VDC 6-60 VAC	24-220 VAC 12-110 VDC
For more technical data see catalog No.	S404	S404	S408E	S405A

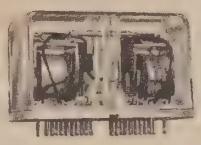
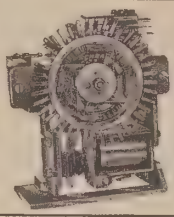
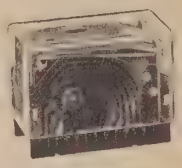
SEND FOR DISCOUNT SCHEDULES

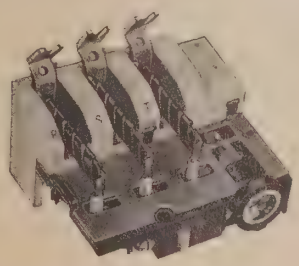
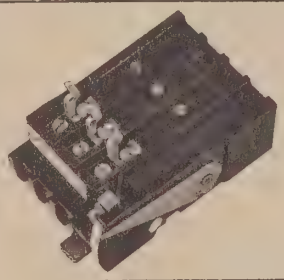
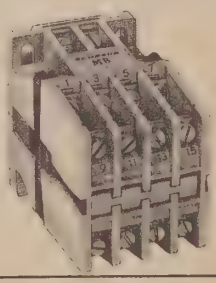
FOR FURTHER INFORMATION ASK FOR CATALOG

SCHRACK ELECTRICAL SALES CORPORATION

© United Technical Publications

SCHRACK RELAYS

RELAY	MECHANICAL LATCHING	PLUG-IN MECHANICAL LATCHING	ROTARY STEPPING	MINIATURE STEPPING
TYPE	CBT	CBF	RT	RTM
ILLUSTRATION				
DESIGN	Enclosed with clear dust cover	Enclosed with clear dust cover	Plastic dust cover die cast metal frame	Plastic dust cover
TERMINALS	Screw type terminals	Plug in type (in 2 sockets) solder lugs	Pierced terminals suitable for soldering or .110 faston	Complete relay plugs into pc board or socket
CONTACTS Number & Form	2 x 2 or 2 x 3 form "C" change over	Same as CBT	1 pole – 40 or 48 positions 2 pole – 20 or 24 positions 4 pole – 10 or 12 positions	• 2 pole – 10 position 2 pole – 12 position
Contact Material	AgCdO, hard silver	Same as CBT	—	Gold plated
Max. Rated Cont. Voltage	250 VAC	250 VAC	110 VDC-115 VAC	60 VDC 60 VAC
Max. Rated Cont. Current	10A	10A	.5A	100 MA 200 MA
COIL Coil Voltage	6-110 VDC 6-220 VAC	6-110 VDC 6-220 VAC	6-110 VDC	12-110 VDC
For more technical data see catalog No.	A69	A69	S401A	S413E

TYPE	FA	FK	M
ILLUSTRATION			
DESIGN	Open frame	Open frame	Open frame 2 screw mounting
CONTACTS	3 pole	3 pole	up to 8 pole
Contact Material	—	—	—
Max. Rated Cont. Voltage	500 VAC/220 VDC	230 VAC	500 VAC
Max. Rated Cont. Current	.35 amps-100 amps	.12 amps-9.0 amps	10-15 amps
Max. Rated Contact Load	—	—	1.5-5.0
COIL Coil Voltage	—	—	—
Voltage Range	—	—	48, 110, 220, 440 VDC 110, 220, 380, 500 VAC
For more technical data see catalog No.	HD 70	HD 70	HD 70

SEND FOR DISCOUNT SCHEDULES

FOR FURTHER INFORMATION ASK FOR CATALOG

SCHRACK ELECTRICAL SALES CORPORATION

© United Technical Publications

SCHRACK RELAYS



SCREW DOWN SOCKET WITH MOLDED TERMINAL STRIPS

No. RN 73301 — 8 Pin

No. RN 73302 — 11 Pin

For surface type installations and proto type work where screw terminals are convenient. Adequate barriers for hi-voltage installations.



STANDARD SOLDER LUG SOCKET

No. RN 78710 — 8 Pin

No. RN 78711 — 11 Pin

Conventional type molded socket with numbered pins — screw mounting.

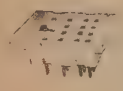


PRINTED CIRCUIT LUG SOCKET

No. RN 78712 — 8 Pin

No. RN 78713 — 11 Pin

Standard type for conventional circuit board assemblies — black molded with numbered pins.

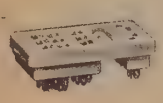


MINIATURE SOCKETS FOR RA RELAYS

No. RA 78700 — for screw mounting, made specially for mounting Schrack RA type relays but may be used for miniature modular circuitry with plug base and dust cover available on request. Precision type with spring-hold grounding terminal.

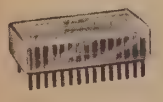
No. RA 78701 — for spring mounting.

No. RA 78702 — for printed circuit mounting.



SOCKETS AND ACCESSORIES FOR RE RELAYS

No. RE 78700 Standard Socket
RE 78702 Printed Circuit Socket
RE 28800 Hold-down Spring



SOCKET FOR TYPE RTM

No. RT 78700 for printed circuits
RT 28406 — Screw type term*
RT 28487 — Solderless term*
RT 28408 — w/solder lugs*

*Available at a later date.



SPECIAL SOCKET FOR CAF SERIES

No. RD 78700 — 8 or 11 Pin

Exclusive with Schrack. This socket accommodates either 8 or 11 pin base. Its small size and design provides for strip mounting with no loss of space.



BASE FOR SCHRACK CAF SERIES

No. RD 78600 — 11 Pins

May be used with above socket and dust cover for building modular component requiring U. L. specs for spacing.
for 8 or 11 wiring

No. RD 78601 — same as above but with printed circuit pins.

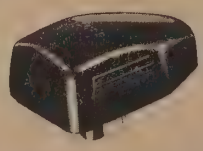


STANDARD MOLDED PLUG

No. RN 78600 — 8 Pin

No. RN 78704 — 11 Pin

Accommodates RN 16035 or RN 16019 Dust Covers for building plug is modular circuitry.



SCHRACK TYPE HOODED PLUG

No. RN 78714 — 8 Pin

No. RN 78715

Permits any relay or component to be mounted remotely and to be plugged into standard socket in circuitry.



DUST COVER FOR CAD SERIES

No. RN 16035 POLYSTRENE
with holes in base for screw mounting.

No. RN 16019 — Same as above but molded of Macralone*.

METAL DUST COVER FOR CAF SERIES ONLY

No. RD 10701



PLUG MOUNTED ON METAL PLATE

No. RN 74221 — 8 Pin
No. RN 74104 — 11 Pin

Metal plate provides base for oversize dust cover in order to install components for modular circuitry.

LARGE DUST COVER FOR METAL PLATE

No. RN 16022 Polystyrene

Internal grooves provide means for mounting circuit boards with components.

No. RN 16034

Same as No. RN 16022 but made of Macralone*.





HIGH POLYSTYRENE DUST COVER

No. RN 16020

May be used with CAD Series.
Two holes in top for ventilation.



HOLD DOWN SPRING

No. RN 28623

Provides quick removal of dust cover — fastens to mounting screws of standard type socket.

HOLD DOWN CLIP

No. RN 28611

*Macralone is a polycarbonate resistant to high temperatures.

Self tapping screws for dust covers available on order.

SEND FOR DISCOUNT SCHEDULES

FOR FURTHER INFORMATION ASK FOR CATALOG

SCHRACK ELECTRICAL SALES CORPORATION

© United Technical Publications

We make resistors for guys who can't stand failures.

New glass tin oxide film resistors—with tighter, ½ to 5% purchase and load-life tolerances, precision temperature coefficients—make CORNING®Resistors more than ever your best buy for stability and reliability. Add these new and improved characteristics to the established physical and electrical integrity of glass tin oxide film resistors and you will see how CORNING Precision, General-purpose, and Power Resistors can add real value to your equipment.

	TYPE AND MIL SPEC	CGW/MIL	RESISTANCE (ohms)		WATTAGE	TOLERANCE
NC	New low ±50 ppm TC with ½ and 1% tolerances for predictable performance. Meets MIL-R 10509F, Char. C.		±1%	±½%	125°C	
		NC4/RN55C	49.9 to 301K	49.9 to 150K	1/10	±½, 1%
		NC5/RN60C	49.9 to 1 meg.	49.9 to 499K	1/8	±½, 1%
		NC6/RN65C	49.9 to 2 meg.	49.9 to 1 meg.	1/4	±½, 1%
NA	Stable ½% and 1% performance at 70°C and 125°C ratings. Meets MIL-R-10509F, Char. D. 100 ppm TC.		±1%	±½%	70°C 125°C	
		NA55/RN55D	10 to 301K	49.9 to 150K	1/8 1/10	±½, 1%
		NA60/RN60D	10 to 1 meg.	49.9 to 499K	1/4 1/8	±½, 1%
		NA65/RN65D	10 to 2 meg.	49.9 to 1 meg.	1/2 1/4	±½, 1%
		NA70/RN70D	51.1 to 1 meg.	51.1 to 1 meg.	3/4 —	±½, 1%
C	Precision stability in a unique multi-use part for both MIL-R-22684B and MIL-R-10509F, Char. D. New C3 style provides ⅛ watt performance in RN50/RC05 size.		100 ppm	200 ppm	70°C 70°C 125°C	
		C3	100Ω-150K	10Ω-150K	1/8	±1, 2, 5, 10%
		C4/RL07S	10Ω-301K		1/4 1/8 1/10	±1, 2, 5%
		C5/RL20S	10Ω-1MEG		1/2 1/4 1/8	±1, 2, 5%
C	General-purpose, low-cost film type. Film resistor performance characteristics at prices comparable to carbon composition types.	C32/RL32S	10 to 1 meg.		1 @ 70°C	±2%, 5%
		C42S/RL42S	10 to 1.5 meg.		2 @ 70°C	±2%, 5%
FP	Low-power resistors that won't burn, even under 100 times-rated overload. FP Style Resistors open up, fuse, but will not flame. Highly stable and non-inductive performance.				40° 70°C	
		FP-½	10 to 470K		— ½	±2, 5%
		FP-2	9 to 90K		3 2	±2, 5, 10%
		FP-3	9 to 40K		4 3	±2, 5, 10%
		FP-4	16 to 90K		5 4	±2, 5, 10%
		FP-5	19 to 90K		7 5	±2, 5, 10%
		FP-7	24 to 90K		— 7	±2, 5, 10%
		FP-10	24 to 90K		10 —	±2, 5, 10%

TANDARD DECADES* **Precision (Mil-R-10509)** **Semi-precision (Mil-R-22684)**

Purchase tolerance in %*																Purchase tolerance in %	
D (0.5)	F (1.0)	D (0.5)	F (1.0)	D (0.5)	F (1.0)	D (0.5)	F (1.0)	D (0.5)	F (1.0)	D (0.5)	F (1.0)	D (0.5)	F (1.0)	D (0.5)	F (1.0)	G & J 2.0 & 5.0	
10.0	10.0	13.3	13.3	17.8	17.8	23.7	23.7	31.6	31.6	42.2	42.2	56.2	56.2	75.0	75.0	10	33
10.1	....	13.5	....	18.0	....	24.0	....	32.0	....	42.7	....	56.9	....	75.9	....	11	36
10.2	10.2	13.7	13.7	18.2	18.2	24.3	24.3	32.4	32.4	43.2	43.2	57.6	57.6	76.8	76.8	12	39
10.4	....	13.8	....	18.4	....	24.6	....	32.8	....	43.7	....	58.3	....	77.7	....	13	43
10.5	10.5	14.0	14.0	18.7	18.7	24.9	24.9	33.2	33.2	44.2	44.2	59.0	59.0	78.7	78.7	15	47
10.6	....	14.2	....	18.9	....	25.2	....	33.6	....	44.8	....	59.7	....	79.6	....	16	51
10.7	10.7	14.3	14.3	19.1	19.1	25.5	25.5	34.0	34.0	45.3	45.3	60.4	60.4	80.6	80.6	18	56
10.9	....	14.5	....	19.3	....	25.8	....	34.4	....	45.9	....	61.2	....	81.6	....	20	62
11.0	11.0	14.7	14.7	19.6	19.6	26.1	26.1	34.8	34.8	46.4	46.4	61.9	61.9	82.5	82.5	22	68
11.1	....	14.9	....	19.8	....	26.4	....	35.2	....	47.0	....	62.6	....	83.5	....	24	75
11.3	11.3	15.0	15.0	20.0	20.0	26.7	26.7	35.7	35.7	47.5	47.5	63.4	63.4	84.5	84.5	27	82
11.4	....	15.2	....	20.3	....	27.1	....	36.1	....	48.1	....	64.2	....	85.6	....	30	91
11.5	11.5	15.4	15.4	20.5	20.5	27.4	27.4	36.5	36.5	48.7	48.7	64.9	64.9	86.6	86.6		
11.7	....	15.6	....	20.8	....	27.7	....	37.0	....	49.3	....	65.7	....	87.6	....		
11.8	11.8	15.8	15.8	21.0	21.0	28.0	28.0	37.4	37.4	49.9	49.9	66.5	66.5	88.7	88.7		
12.0	....	16.0	....	21.3	....	28.4	....	37.9	....	50.5	....	67.3	....	89.8	....		
12.1	12.1	16.2	16.2	21.5	21.5	28.7	28.7	38.3	38.3	51.1	51.1	68.1	68.1	90.9	90.9		
12.3	....	16.4	....	21.8	....	29.1	....	38.8	....	51.7	....	69.0	....	92.0	....		
12.4	12.4	16.5	16.5	22.1	22.1	29.4	29.4	39.2	39.2	52.3	52.3	69.8	69.8	93.1	93.1		
12.6	....	16.7	....	22.3	....	29.8	....	39.7	....	53.0	....	70.6	....	94.2	....		
12.7	12.7	16.9	16.9	22.6	22.6	30.1	30.1	40.2	40.2	53.6	53.6	71.5	71.5	95.3	95.3		
12.9	....	17.2	....	22.9	....	30.5	....	40.7	....	54.2	....	72.3	....	96.5	....		
13.0	13.0	17.4	17.4	23.2	23.2	30.9	30.9	41.2	41.2	54.9	54.9	73.2	73.2	97.6	97.6		
13.2	....	17.6	....	23.4	....	31.2	....	41.7	....	55.6	....	74.1	....	98.8	....		

Standard resistance values are obtained from the decade table by multiplying by multiples of 10. As an example, 1.33 can represent 13.3 ohms, 133 ohms, 1.33k, 13.3k, 133k, 1.33 megohms. and 5% decade values for Mil-R-11804 are standard on CORNING® R, S and H Styles.

CORNING
ELECTRONICS

CORNING GLASS WORKS
ELECTRONIC PRODUCTS DIVISION

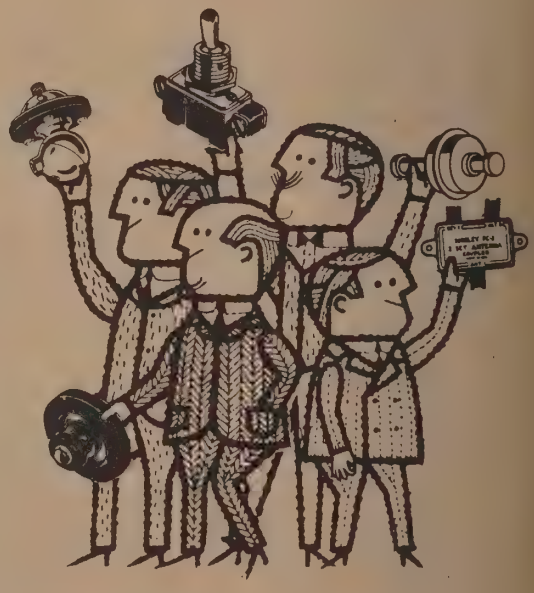
© United Technical Publications

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*



- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

DALE® for Optimum Value in Wirewound Resistors

NDUSTRIAL WIREWOUND POWER RESISTORS, ILICONE OR VITREOUS ENAMEL COATED

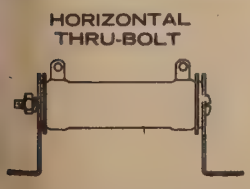
ale's expanded industrial wirewound ne provides both silicone and vitre- is coated models. Silicone models e recommended where maintenance tolerance and T.C. is of primary con- ern. Vitreous models are recom- ended where maximum resistance to nemical action is required.

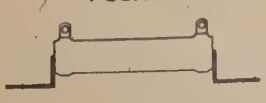


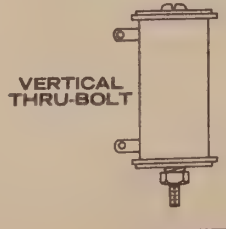
CONTACT DISTRIBUTOR FOR PRICES.

TYPE	APPLICATION	APPLICABLE MIL SPEC AND TYPES	WATTAGE RATING	RESISTANCE RANGE	CORE SIZES	TERMINALS	MOUNTINGS	TOLERANCE
CW Axial Lead	Axial leads. For applications requiring high performance at low cost	MIL-R-26 RW-67, 68, 69	2.5-13 watts	.1 ohm to 100K ohms	Body Dia. .188 to .375" Body Length .500 to 1.781" Leads 1.5 to 2"	Leads	Terminals	±5% (10% below 1 ohm)
HL, VL Tubular	General purpose wirewound resistors with a broad power range.	MIL-R-26 RW-29, 30, 31, 32, 33, 35, 36, 37, 38, 47	5-225 watts	.1 ohm to 1.3 Megohms	O.D. 1/4 to 1-1/8" Length 1-10½"	Lugs	Push-in bracket or thru-bolt	±5% (10% below 1 ohm)
NHL Non-nductive	High frequency circuits and applications requiring low inductive effect and minimum distributed capacity	None	5-225 watts	1 ohm to 90K ohms	O.D. 1/4 to 1-1/8" Length 1-10½"	Lugs or Leads	Push-in bracket or thru-bolt	±5%
HL, VL Flat	For limited space requiring high power-to-size ratio. Vertical or horizontal stacking.	MIL-R-26 RW-20 thru RW-24	30-95 watts	.1 ohm to 150K ohms	Length 1¼ to 6"	Lugs	Spring push-in	±5% (10% below 1 ohm)
HLM, VLM Miniature Flat	For limited space, high power-to-size requirements particularly in high vibration areas.	None	10-20 watts	.1 ohm to 51K ohms	Length 3/4 to 2-1/16"	Lugs	Thru mount with spacers	±5% (10% below 1 ohm)
HLA, VLA Adjustable	For resistance or voltage adjustment	MIL-R-19365C RX-29, 32, 33, 35, 36 37, 38, 47	12-225 watts	1 ohm to 100K ohms	O.D. 5/16 to 1-1/8" Length 1½ to 10½"	Lugs	Push-in bracket or thru-bolt	±5%
HLT, VLT Tapped	For voltage divider networks	MIL-R-26 RW-22, 23, 24, 33, 35, 36, 37, 38, 47	11-225 watts	.1 ohm to 1.1 Megohms	O.D. 5/16 to 1-1/8" Length 1½ to 10½"	Lugs	Push-in bracket or thru-bolt	±10% each section (±10% total)
HLW, VLW Tubular	General application where terminal wires are required for direct electrical connection	None	3-20 watts	.1 ohm to 80K ohms	O.D. 13/64 to 7/16" Length 7/16" to 2"	Lugs with terminal wires	Terminals, thru-bolt or push-in bracket	±5% (10% below 1ohm)
HLZ Edge-wound	For heavy duty requirements where space is at a premium. High thermal capacity.	None	35-375 watts	.05 ohm to 32 ohms	O.D. 9/16 to 1-1/8" Length 2 to 10-1/2"	Lugs	Push-in bracket or thru-bolt	±10%

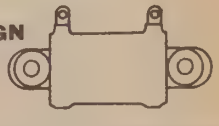
IOUNTING BRACKETS for TUBULAR STYLES







EXCLUSIVE BRACKET DESIGN FOR MINIATURE FLAT STYLE



Mounting strap fits snugly through core and is bound tightly against unit by two eccentric spacers. Eliminates expensive cements and improves heat transfer and power handling capabilities.

© United Technical Publications

DALE® for Optimum Value in Wirewound Resistors

WIREWOUND PRECISION RESISTORS, SILICONE COATED & MOLDED

TYPE RS

Coated and molded models meet applicable requirements of MIL-R-26E, MIL-R-26C and MIL-R-23379. Non-inductive styles available.



(Available with Weldable Leads)

DALE TYPE	MIL-R-26E TYPE*	DALE RATING U .05% thru 5%	DALE RATING V 3% & 5%	RESISTANCE RANGES (OHMS) .05% .1%, .25%	RESISTANCE RANGES (OHMS) .5%, 1% 3%, 5%	MAX.** WORKING VOLTAGE U	MAX.** WORKING VOLTAGE V	MAX. WT. GRAMS	STANDARD TEMPERATURE COEFFICIENT VALUE RANGES (OHMS)† ± 90 PPM	± 50 PPM	± 30 PPM	± 20 PPM
RS-¼	—	.4 W	—	10 to 950	1 to 3.4K	20	—	.21	Below 1 Ω	1 to 6.9	—	7 to 3.4K
RS-½	—	.75 W	—	10 to 1.3K	1 to 4.9K	29	—	.23	Below 1 Ω	1 to 9.9	—	10 to 4.9K
RS-1A	RW-70	1.0 W	—	.1 to 2.7K	.1 to 10.4K	52	—	.34	Below 1 Ω	1 to 9.9	10 to 19	20 to 10.4K
RS-1B	—	1.1 W	—	1 to 4.0K	.1 to 15K	62	—	.40	Below 1 Ω	1 to 9.9	10 to 29	30 to 15K
RS-2	—	4.0 W	5.5 W	1 to 12.7K	.1 to 47.1K	210	250	2.1	Below 1 Ω	1 to 9.9	10 to 79	80 to 47.1K
RS-2A	—	3.25 W	4.75 W	1 to 11.4K	.1 to 42.1K	185	220	.90	Below 1 Ω	1 to 9.9	10 to 79	80 to 42.1K
RS-2B	RW-79	3.0 W	3.75 W	.1 to 6.5K	.1 to 24.5K	140	157	.70	Below 1 Ω	1 to 9.9	10 to 49	50 to 24.5K
RS-2C	—	2.5 W	3.25 W	1 to 8.6K	.1 to 32.3K	138	157	1.6	Below 1 Ω	1 to 9.9	10 to 59	60 to 32.3K
RS-2C-23	RW-69	2.5 W	3.25 W	.1 to 8.6K	.1 to 32.3K	138	157	1.6	Below 1 Ω	1 to 9.9	10 to 59	60 to 32.3K
RS-5	—	5.0 W	6.5 W	.5 to 25.7K	.1 to 95.2K	360	410	4.2	Below 1 Ω	1 to 9.9	10 to 169	170 to 95.2K
RS-5-69	RW-74	5.0 W	6.5 W	.1 to 24.5K	.1 to 91.0K	350	400	4.2	Below 1 Ω	1 to 9.9	10 to 169	170 to 91.0K
RS-5-70	RW-67	5.0 W	6.5 W	.1 to 25.7K	.1 to 95.2K	360	410	4.2	Below 1 Ω	1 to 9.9	10 to 169	170 to 95.2K
RS-7	—	7.0 W	9.0 W	.5 to 41.4K	.1 to 154K	504	576	4.7	Below 1 Ω	1 to 9.9	10 to 269	270 to 154K
RS-10	—	10 W	13 W	.5 to 73.4K	.1 to 273K	858	978	9.0	Below 1 Ω	1 to 9.9	10 to 469	470 to 273K
RS-10-38	RW-78	10 W	13 W	.1 to 71.5K	.1 to 265K	846	966	9.0	Below 1 Ω	1 to 9.9	10 to 469	470 to 265K
RS-10-39	RW-68	10 W	13 W	.1 to 73.4K	.1 to 273K	858	978	9.0	Below 1 Ω	1 to 9.9	10 to 469	470 to 273K

**Max. working voltage determined at .0008 dia. wire resistance values.

†Consult factory for special T.C. requirements.

***NOTE:** The following Dale RS series resistors meet requirements of MIL-R-26C (Char. G & V) and MIL-R-23379:

MIL-R-26C

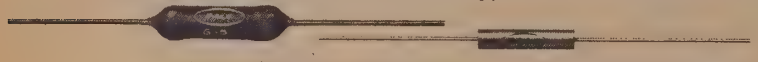
DALE TYPE	RS-2C	RS-5	RS-10
MIL. TYPE	RW-69	RW-67	RW-68

MIL-R-23379

DALE TYPE	RS-1A	RS-2C-23	RS-5	RS-10
MIL. TYPE	RWP-18	RWP-20	RWP-21	RWP-23

WIREWOUND PRECISION RESISTORS, SILICONE COATED & MOLDED

Meets applicable requirements of MIL-R-26E, MIL-R-26C (Char. G & V) and MIL-R-23379. Non-inductive styles are available. Both RS and G types have established outstanding reliability records (write for test reports).



TYPE G

Beryllium oxide core for decreased size, increased stability. Meets applicable specifications of MIL-R-26 and MIL-R-23379.

(Available with Weldable Leads)

DALE TYPE	MIL-R-26E TYPE*	DALE RATING U .05% thru 5%	DALE RATING V 3% & 5%	RESISTANCE RANGES (OHMS) .05% .1%, 25%	RESISTANCE RANGES (OHMS) .5%, 1% 3%, 5%	MAX.** WORKING VOLTAGE U	MAX.** WORKING VOLTAGE V	MAX. WT. GRAMS	STANDARD TEMPERATURE COEFFICIENT VALUE RANGES (OHMS)† ± 90 PPM	± 50 PPM	± 30 PPM	± 20 PPM
G-1	RW-81	1.0 W	—	.1 to 950	1 to 3.4K	33	—	.20	Below 1 Ω	1 to 6.9	—	7 to 3.4K
G-2	—	1.5 W	—	10 to 1.3K	1 to 4.9K	42	—	.21	Below 1 Ω	1 to 9.9	—	10 to 4.9K
G-3	RW-80	2.25 W	—	.1 to 2.7K	.1 to 10.4K	80	—	.34	Below 1 Ω	1 to 9.9	10 to 19	20 to 10.4K
G-5	—	4.0 W	5 W	1 to 6.5K	.1 to 24.5K	162	184	.80	Below 1 Ω	1 to 9.9	10 to 49	50 to 24.5K
G-5A	—	4.5 W	6.5 W	1 to 11.4K	.1 to 42.1K	214	257	.95	Below 1 Ω	1 to 9.9	10 to 79	80 to 42.1K
G-5C	—	5 W	7 W	1 to 8.6K	.1 to 32.3K	194	230	1.2	Below 1 Ω	1 to 9.9	10 to 59	60 to 32.3K
G-6	—	6 W	8 W	1 to 12.7K	.1 to 47.1K	258	298	2.0	Below 1 Ω	1 to 9.9	10 to 79	80 to 47.1K
G-10	—	7 W	10 W	.5 to 25.7K	.1 to 95.2K	425	508	3.6	Below 1 Ω	1 to 9.9	10 to 169	170 to 95.2K
G-12	—	10 W	12 W	.5 to 41.4K	.1 to 154K	607	665	4.2	Below 1 Ω	1 to 9.9	10 to 269	270 to 154K
G-15	—	15 W	18 W	.5 to 73.4K	.1 to 273K	1050	1150	7.6	Below 1 Ω	1 to 9.9	10 to 469	470 to 273K

**Maximum Working Voltage determined at .0008 dia. wire resistance values.

†Consult factory for special T.C. requirements.

***NOTE:** The following Dale G series resistors meet requirements of MIL-R-26C (Char. G & V) and MIL-R-23379:

MIL-R-26C

DALE TYPE	G-5C	G-10	G-15
MIL. TYPE	RW-69	RW-67	RW-68

MIL-R-23379

DALE TYPE	G-1	G-3	G-5C-2	G-10	G-15
MIL. TYPE	RWP-17	RWP-19	RWP-20	RWP-21	RWP-23

© United Technical Publications

NIREWOUND POWER RESISTORS, HEAT SINK ENCASED



'YPE RH

atented design. hassis mounted. ll models exceed IIL-R-18546.

DALE TYPE	MIL-R-18546 TYPE	POWER RATING* (WATTS)		RESISTANCE RANGES (OHMS)		MAX. WORKING VOLTAGE	MAX.† WT. GRAMS	STANDARD TEMPERATURE COEFFICIENT VALUE RANGES (OHMS) ††		
		DALE**	MIL	.05%, .1%, .25%	.5%, 1%, 3%			±50 PPM	±30 PPM	±20 PPM
RH-5	RE-60	7.5 (5)	5	1 to 6.5K	.1 to 24.5K	160	3	1 to 9.9	10 to 49	50 to 24.5K
RH-10	RE-65	12.5 (10)	10	1 to 12.7K	.01 to 47.1K	265	6	1 to 9.9	10 to 79	80 to 47.1K
RH-25	RE-70	25	20	.5 to 25.7K	.01 to 95.2K	550	13	1 to 9.9	10 to 169	170 to 95.2K
RH-50	RE-75	50	30	.5 to 73.4K	.01 to 273K	1250	28	1 to 9.9	10 to 469	470 to 273K

*Rating is based on chassis mounting area and stability.

**NOTE: Figures in parentheses on RH-5 and RH-10 indicate wattage printed on these resistors. New construction allows them to be rated at 7.5 and 12.5 watts – but they will be printed with these higher ratings only upon customer request.

†A weight increase of 10% should be allowed for non-inductive types. ††Consult factory for special values and T.C.'s.

DALE® for Optimum Value in Metal Film Resistors

PRECISION METAL FILM RESISTORS

(Available with Weldable Leads)



TYPE MF

Epoxy molded. Meets MIL-R-10509 and MIL-R-22684.



TYPE MFF

Epoxy conformal coated. Meets electrical and environmental characteristics of MIL-R-10509F, but is dimensionally smaller.

*Characteristic F **Characteristic B

Tolerance MIL-R-10509 ±1%, ±.5%, ±0.25%, ±0.10% standard, MIL-R-22684 ±2%, ±5%. Special tolerances and matching on request.

DALE TYPE	MIL. TYPE	125° C RATING (Char. C&E)	70° C RATING (Char. D)	MIL-R-22684		MAX. WT. (Grams)	MAX. WORKING VOLTAGE
				TYPE	RATING		
MF50	RN-50	1/20 w	–	–	–	.11	200
MF-1/10	RN-55	1/10 w	1/8 w	RL-07	1/4 w	.35	200
MF-1/8	RN-60	1/8 w	1/4 w	RL-20	1/2 w	.45	300
MF-1/4	RN-65	1/4 w	1/2 w	–	–	.84	350
MFS-1/2	RN-70	1/2 w	3/4 w	–	–	1.6	500
MF-3/4	RN-70F	3/4 w*	–	–	–	1.9	500
MF-1	RN-75	–	1 w**	–	–	4.4	500
MF-2	RN-80	–	2 w**	–	–	7.9	750
MFF-1/8	–	1/8 w	–	–	–	.40	300
MFF-1/4	–	1/4 w	–	–	–	.65	350
MFF-1/2	–	1/2 w	–	–	–	.95	500
MFF-1	–	–	1 w	–	–	2.7	500
MFF-2	–	–	2 w	–	–	4.7	750

RESISTANCE RANGE (OHMS) 1%, .5%, .25%, .1% **Lower and higher resistance values available.**

	T-0* (Char. D)	T-1* (Char. D)	T-2 (Char. C)	T-9 (Char. E)
MF50	24.9Ω-100KΩ	49.9Ω-100KΩ	100Ω-100KΩ	100Ω-100KΩ
MF-1/10	10Ω-301KΩ	30.1Ω-301KΩ	30.1Ω-301KΩ	30.1Ω-301KΩ
MF-1/8, MFF-1/8	10Ω-1 Meg.	24.9Ω-1 Meg.	30.1Ω-499KΩ	30.1Ω-499KΩ
MF-1/4, MFF-1/4	10Ω-2 Meg.	24.9Ω-2 Meg.	30.1Ω-1 Meg.	30.1Ω-1 Meg.
MFS-1/2, MFF-1/2	10Ω-2.49 Meg.	24.9Ω-2.49 Meg.	24.9Ω-1 Meg.	24.9Ω-1 Meg.
MF-3/4	10Ω-2.49 Meg.	24.9Ω-2.49 Meg.	100Ω-1 Meg.	100Ω-1 Meg.
MF-1, MFF-1	10Ω-5.11 Meg.	24.9Ω-4.02 Meg.	49.9Ω-2.61 Meg.	49.9Ω-2.61 Meg.
MF-2, MFF-2	30.1Ω-10 Meg.	100Ω-8 Meg.	100Ω-6 Meg.	200Ω-5.11 Meg.

*T-0 and T-1 are available in tolerance of ±.5% and greater only.

DEPOSITED CARBON RESISTORS

Contact Distributor for Prices *(Available with Weldable Leads)*

Meet functional requirements of MIL-R-10509F.



TYPE MC

Molded housing. Completely insulated and protected against environmental or mechanical damage. Specially formulated molding compound gives best humidity protection available.



TYPE DC

Specially coated for complete insulation against moisture, salt spray and other severe environmental factors. Miniature size.

DALE TYPE	MIL. TYPE		POWER RATING (WATTS)		MINIMUM RESISTANCE (OHMS)	MAXIMUM 1% RESISTANCE (OHMS)	MAXIMUM 2% RESISTANCE (OHMS)	MAX. WT. (GRAMS)		MAXIMUM WORKING VOLTAGE
	MC	DC	B	D*				MC	DC	
MC-1/10, DC-1/10	RN-55	–	1/10	1/8	2	400K	400K	.35	.20	200
MC-1/8, DC-1/8	RN-60	–	1/8	1/4	1	3 Megohms	5 Megohms	.45	.30	300
MC-1/4, DC-1/4	RN-65	RN-10	1/4	1/2	2	5 Megohms	6 Megohms	.85	.35	350
MCS-1/2, DCS-1/2	RN-70	RN-20	1/2	3/4	1	10 Megohms	15 Megohms	1.50	.80	500

Tolerance: .5%, 1%, 2%

Operating Temp. Range: –55° C to +165° C

Temperature Coefficient: –200 PPM to –500 PPM, depending on value within normal resistance range.

*Applies to MC only.

© United Technical Publications

GC ELECTRONICS

RESISTIVE DEVICES

GLO-BAR THERMISTORS

Complete Selection individually skin carded on master display cards





Engineered to the original manufacturer's rigid specifications, GC Chemical Fuses are exact replacements for RCA, Emerson, Zenith, etc. All GC Chemical Fuses are visual packed for quick identification. U.L. approved.

RESISTORS

1/4, 1/2, 1 & 2 watt resistors (10% Tol.) in MOISTURE-PROOF packages EIA approved MIL-R-IIE.

BULK RESISTOR PRICES

WATTAGE	EA. 1-9	10-49	50-99	100-UP
1/4 WATT	.13	.09	.06	$4.32/C
1/2 WATT	.12	.085	.05	$4.15/C
1 WATT	.17	.10	.07	$6.47/C
2 WATT	.22	.19	.14	$12.28/C

BEL® CHEMICAL FUSES

GC PART NO.	COLOR	ORIG. MFRS. PART NO.	MFRS. STOCK NO.	BEL FUSE NO.	SP	NET
25-929	Yellow	Emerson 808238		1700-1	10	.50
25-935	Pink	RCA 945392-4		450-1	10	.50
25-937	Green	Emerson 808238		1200-1	10	.50
25-954	Black	RCA 945392-1	RCA 109079	500-1	10	.50
25-956	Blue	RCA 945392-2	RCA 109588	400-1	10	.50
25-958	Red	RCA 945392-3	RCA 109860	3-1	10	.50
25-995	Maroon	Zenith 136-66		2000-1	10	.50
25-997	Gray	Emerson 808241		1400-1	10	.50
25-976	White	Zenith 136-71		1000-1	10	.50
25-1123	Kelly Green	Admiral 84B28-8			10	.50
25-897	Turquoise	Motorola 65C67985-A04			10	.50
25-887	Tan	Zenith 136-85			10	.50
25-899	Brown	Admiral 84B28-9 Zenith 136-76			10	.50
25-893	Ivory	RCA 945-392-5 Warwick 43-53-D			10	.50

AUTO SUPPRESSORS

ILLUSTRATION	PART NO.	DESCRIPTION	STD. PKG.	NET
	26-812	SPARK PLUG CARBON SUPPRESSOR Fits screw-on type terminals	1	.51
	26-814	SLIP-ON TYPE SUPPRESSOR Super wire wound	1	.93
	26-816	DISTRIBUTOR MODEL SUPPRESSOR Super wire wound	1	.93
	26-800	DISTRIBUTOR TYPE SUPPRESSOR Cable type for splicing cables	24	.42
	26-808	SLIP ON CARBON TYPE SUPPRESSOR Fits all cars	1	.66
	26-810	DISTRIBUTOR MODEL SUPPRESSOR Carbon type	1	.33

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

© United Technical Publications

Charles T. Gamble Industries

PRECISION WIRE WOUND RESISTORS & NETWORKS

Charles T. Gamble Industries has engineered and designed non-inductive precision wire wound resistors to meet the requirements of Mil-R-93D. These resistors are completely sealed against the effects of high humidity and salt water immersion cycling. The material used in the manufacture of our resistors has a very high dielectric strength. The bobbin material used in winding the resistors is one and the same as the encapsulating material. All resistors use resistance wire with very low thermal E.M.F. to the copper leads. Where thermal effects can be disregarded, welded construction with nickel alloy leads may be specified.

Standard temperature coeficient is ±10 PPM/°C. Lower T.C.'s, and T.C.'s as high as 6000 PPM/°C can be supplied.

Tolerance available (non power styles): 1%, 0.5%, 0.1%, 0.05%, 0.025%, 0.02% and 0.01%. Resistors with tolerances of 0.1% and below are stabilized by artificial aging and temperature cycling.

NETWORKS: RC NETWORKS, LADDER NETWORKS, VOLTAGE DIVIDERS, BINARY NETWORKS

Sub-miniature Axial lead Precision resistors have been designed for applications where space is a prime factor.

Encapsulated printed circuit resistors are designed for printed circuit board application, where space is a factor.

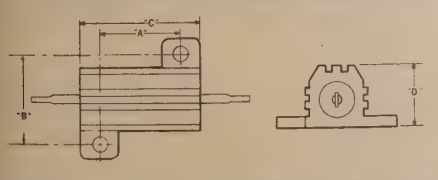
Radial lug type resistors have been designed to meet the requirements of Mil-R-93D.

All resistors are hermetically sealed with epoxy resin to protect the windings against the effects of high humidity and salt water immersion cycling. Resistors can either be inductive or non-inductive wound.

The materials used in the construction of radial lug type resistors are identical to those used in the construction of axial lead types.

These resistors are supplied with a thru hole for mounting to the chassis by means of a #6 thru bolt.

HEAT SINK MOUNTED PRECISION WIREWOUND POWER RESISTORS



POWER RATING	DIMENSIONS A	B	C	D	MAXIMUM OHMS
10 WATT	.562	.625	.750	.390	20,000
25 WATT	.718	.781	1.062	.542	60,000
50 WATT	1.563	.844	1.968	.610	70,000

Ratings shown are based upon use of appropriate chassis mounting.

STANDARD AXIAL LEAD PRECISION RESISTORS

Type	Military Specs. New	Old	Commercial Wattage Rating	Max. Resist. Based on .0007 E Alloy	Military Wattage Rating	Max. Volts	Size Length	Dia.
0808AL			.125W	300K		200V	¼″	¼″
1108AL	RB56		.125W	350K	.125W	250V	11/32″	¼″
1608AL	RB55	AFRT 10	.250W	400K	.15 W	184V	½″	¼″
1208AL			.200W	350K	.250W	225V	⅜″	¼″
2408AL	RB54	AFRT 11	.333W	1 meg.	.250W	300V	¾″	¼″
2412AL	RB53	AFRT 12	.500W	1.2 meg.	.333W	300V	¾″	⅜″
3212AL	RB52	AFRT 13	1.000W	2 meg.	.400W	600V	1″	⅜″
1616AL			.500W	1.3 meg.		300V	½″	½″
3216AL	RF57	AFRT 14	1.000W	3 meg.	.750W	600W	1″	½″
4816AL	RB58	AFRT 15	2.000W	6 meg.	1.000W	900V	1½″	½″
6416AL	RB59	AFRT 16	2.500W	10 meg.	1.250W	1200V	2″	½″
2008AL			.500W	.425 meg.		300V	⅝″	¼″
1612AL			.400W	.500 meg.		300V	½″	⅜″
2012AL			.750W	.600 meg.		600V	⅝″	⅜″
3208AL			.500W	1.1 meg.		300V	1″	¼″
2016AL			.750W	2 meg.		600V	⅝″	½″
1212AL			.250W	1 meg.		225V	⅜″	⅜″

SUB-MINIATURE AXIAL LEAD PRECISION RESISTORS

Type	Commercial Wattage Rating	Maximum Resistance based on .0007 E Alloy	Maximum Voltage	Size Length	Dia.
500156AL	.1W	70K	85 Volts	½″	5/32″
625156AL	.15W	100K	125 Volts	⅝″	5/32″
375125AL	.125	50K	72 Volts	⅜″	1/8″
109250AL	.120	25K	50 Volts	¼″	7/64″
375187AL	.1W	40K	65 Volts	⅜″	3/16″
375109AL	.120	30K	55 Volts	⅜″	7/64″
375093AL	.1	20K	55 Volts	⅜″	3/32″

ENCAPSULATED PRINTED CIRCUIT RESISTORS

Type	Military Specs.	Commercial Wattage	Military Wattage	Max. Volts	Max. Resist. Based on .0007	Sizes Length	Dia.	Lead Spacing	Lead Length
0808PC		.125W		90V	70K	¼″	¼″	.100	1″
1208PC		.200W		200V	200K	⅜″	¼″	.100	1″
1608PC		.250W		184V	400K	½″	¼″	.100	1″
2408PC		.333W		300V	1 meg.	¾″	¼″	.100	1″
3208PC		.500W		750V	1.1 meg.	1″	¼″	.100	1″
1008PC	RB71	.250W	.125W	240V	250K	5/16″	¼″	.200	1″
1612PC	RB70	.500W	.250W	150V	.301 meg.	½″	⅜″	.200	1″
3212PC		1.000W		1350V	1.75 meg.	1″	⅜″	.250	1″
3232PC		1.250W		1700V	2.50 meg.	1″	½″	.250	1″

STANDARD RADIAL LUG PRECISION RESISTORS

Type	Military Specs. New	Old	Commercial Wattage	Military Wattage Rating	Maximum Voltage	Max. Resist. Based on .0007	Size Length	Dia.
1616RLU	RB08	AFRT 17	.500	¼W	300V	885K	½″	½″
2020RLU	RB16	AFRT 18	.666	⅓W	300V	1 meg.	⅝″	⅝″
3220RLU	RB17	AFRT 19	1.000	½W	600V	2.5 meg.	1″	⅝″
4024RLU	RB18		1.500	¾W	600V	6.5 meg.	1¼″	¾″
6828RLU	RB19		2.000	1W	900V	12 meg.	2⅛″	⅞″

CHARLES T. GAMBLE INDUSTRIES
Precision Wire Wound Resistors

© United Technical Publications

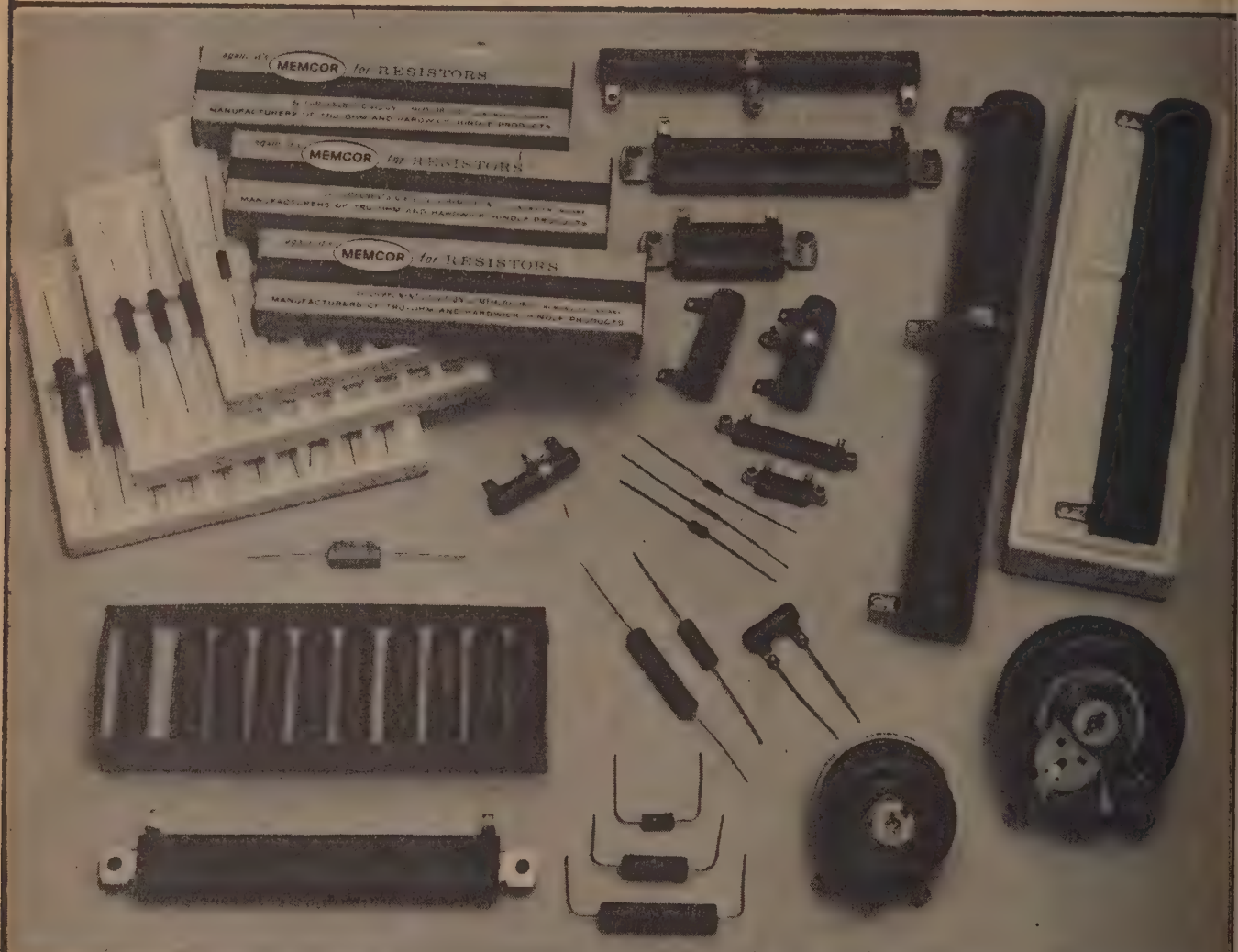
MEMCOR COMPONENTS

POWER WIREWOUND VITREOUS ENAMELED RESISTORS . . . RHEOSTATS

. . . another product of

LTV ELECTROSYSTEMS, INC.

COMPONENTS OPERATION — MEMCOR DIVISION



SEE FOLLOWING PAGES
FOR COMPLETE CATALOG
OF ALL TYPES OF
RESISTORS AND RHEOSTATS
AVAILABLE

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

...VL 3...VL 5

Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS

POWER
WIRE WOUND
VITREOUS ENAMELED

MEMCOR Components . . . resistors and rheostats . . . are manufactured by the MEMCOR Components facility of the MEMCOR Division of LTV Electrosystems, Inc.

MEMOR Components represent the cumulative design skill and production knowledge of two great lines of resistance products — Tru-Ohm and Hardwick, Hindle. This "second generation" product maintains all of the proven features of both original lines plus the manufacturing refinements that can only result from industry experience.

The values of resistance listed in this section are in stock for immediate delivery—special resistance values or terminal diversions are readily available. **When ordering** — identify type and value of resistor by stock number.

VITREOUS AXIAL LEADS VL 3 (3 WATTS)

CORE: 1/32" x 3/16"
WEIGHT: .002 LBS.



The VL type lends itself to applications where size is a factor.

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2701	9.1	2707B	62	2733A	450	2738B	2500	2755
1.1	2701A	10	2708	68	2733B	470	2739	2700	2756
1.2	2701B	11	2708A	75	2724	500	2740	3000	2757
1.3	2701C	12	2709	82	2725	510	2740A	3300	2758
1.5	2702	13	2709A	91	2725A	560	2741	3500	2758A
1.6	2702A	15	2710	100	2726	600	2742	3600	2758B
1.8	2702B	16	2710A	110	2726A	620	2742A	3900	2759
2	2703	18	2711	120	2727	680	2743	4000	2760
2.2	2703A	20	2712	130	2727A	700	2744	4300	2760A
2.4	2703B	22	2713	150	2728	750	2745	4500	2760B
2.7	2703C	24	2713A	160	2728A	800	2746	4700	2761
3	2704	25	2714	180	2729	820	2747	5000	2762
3.3	2704A	27	2715	200	2730	900	2748	5100	2762A
3.6	2704B	30	2716	220	2731	910	2748A	5600	2763
3.9	2704C	33	2717	225	2732	1000	2749	6000	2764
4	2705	35	2717A	240	2732A	1100	2749A	6200	2764A
4.3	2705A	36	2717B	250	2733	1200	2750	6800	2765
4.7	2705B	39	2718	270	2734	1300	2750A	7000	2766
5	2706	40	2719	300	2735	1400	2750B	7500	2767
5.1	2706A	43	2719A	330	2736	1500	2751	8000	2768
5.6	2706B	47	2720	350	2736A	1600	2751A	8200	2769
6.2	2706C	50	2721	360	2736B	1800	2752	9000	2770
6.8	2706D	51	2721A	390	2737	2000	2753	9100	2770A
7.5	2707	56	2722	400	2738	2200	2754	10K	2771
8.2	2707A	60	2723	430	2738A	2400	2754A		

VITREOUS AXIAL LEADS VL 5 (5 WATTS)

CORE: 1/4" x 1/8"
WEIGHT: .006 LBS.

The VL type can also be supplied taped or reeled for automatic insertion.

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2801A	2.4	2803B	22	2813	160	2828A	820	2846	5000	2860A
1.1	2801B	2.7	2803C	24	2813B	180	2829	900	2847	5100	2861
1.2	2801C	3	2804	25	2814	200	2830	910	2847A	5600	2862
1.3	2801D	3.3	2804A	27	2815	220	2831	1000	2848	6000	2863
1.5	2802	3.6	2804B	30	2816	240	2831A	1100	2848A	6200	2863A
1.6	2802A	3.9	2804C	33	2817	250	2832	1200	2849	6800	2864
1.8	2802B	4	2805	35	2817A	270	2833	1300	2849A	7000	2865
2	2803	4.3	2805A	36	2817B	300	2834	1400	2849B	7500	2866
2.2	2803A	4.7	2805B	39	2818	330	2835	1500	2850	8000	2867
		5	2806	40	2819	350	2835A	1600	2850A	8200	2868
		5.1	2806A	43	2819A	360	2835B	1800	2851	9000	2869
		5.6	2806B	47	2820	390	2836	2000	2852	9100	2869A
		6.2	2806C	50	2821	400	2837	2200	2853	10K	2870
		6.8	2806D	51	2821A	430	2837A	2400	2853A	11K	2869B
		7.5	2807	56	2822	450	2837B	2500	2854	12K	2871
		8.2	2807A	62	2822A	470	2838	2700	2855	13K	2871A
		9.1	2807B	68	2823	500	2839	3000	2856	14K	2871B
		10	2808	75	2824	510	2839A	3300	2857	15K	2872
		11	2808A	82	2825	560	2840	3500	2857A	16K	2872A
		12	2809	91	2825A	600	2841	3600	2857B	17K	2872B
		13	2809A	100	2826	620	2841A	3900	2858	18K	2873
		15	2810	110	2826A	680	2842	4000	2859	20K	2874
		16	2810A	120	2827	700	2843	4300	2859A	22K	2875
		18	2811	130	2827A	750	2844	4500	2859B	24K	2875A
		20	2812	150	2828	800	2845	4700	2860	25K	2876

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

...VL 10
...FL 5 w/LEADS...FL 10 w/LEADS

Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS

POWER
WIRE WOUND
VITREOUS ENAMELED

VITREOUS AXIAL LEADS VL 10 (10 WATTS)

CORE: 3/16" x 1 1/16"
WEIGHT: .014 LBS.

Ohms	Stock No.
1	2901A
1.1	2901B
1.2	2901C
1.3	2901D
1.5	2902
1.6	2902A
1.8	2902B
2	2903
2.2	2903A
2.4	2903B
2.7	2903C
3	2904
3.3	2904A
3.6	2904B
3.9	2904C
4	2905
4.3	2905A

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
4.7	2905B	40	2919	360	2935B	1800	2951	9100	2969A
5	2906	43	2919A	390	2936	2000	2952	10K	2970
5.1	2906A	47	2920	400	2937	2200	2953	11K	2970A
5.6	2906B	50	2921	430	2937A	2400	2953A	12K	2971
6.2	2906C	51	2921A	450	2937B	2500	2954	13K	2971A
6.8	2906D	56	2922	470	2938	2700	2955	14K	2971B
7.5	2907	62	2922A	500	2939	3000	2956	15K	2972
8.2	2907A	68	2923	510	2939A	3300	2957	16K	2972A
9.1	2907B	75	2924	560	2940	3500	2957A	17K	2972B
10	2908	82	2925	600	2941	3600	2957B	18K	2973
11	2908A	91	2925A	620	2941A	3900	2958	20K	2974
12	2909	100	2926	670	2942	4000	2959	22K	2975
13	2909A	110	2926A	680	2942A	4300	2959A	24K	2975A
15	2910	120	2927	700	2943	4500	2959B	25K	2976
16	2910A	130	2927A	750	2944	4700	2960	27K	2977
18	2911	150	2928	800	2945	5000	2961	30K	2978
20	2912	160	2928A	820	2946	5100	2961A	33K	2979
22	2912A	180	2929	900	2947	5600	2962	35K	2979A
24	2912B	200	2930	910	2947A	6000	2963	36K	2979B
25	2914	220	2931	1000	2948	6200	2963A	39K	2980
27	2915	240	2931A	1100	2948A	6800	2964	40K	2981
30	2916	250	2932	1200	2949	7000	2965	43K	2981A
33	2917	270	2933	1300	2949A	7500	2966	45K	2981B
35	2917A	300	2934	1400	2949B	8000	2967	47K	2982
36	2917B	330	2935	1500	2950	8200	2968	50K	2983
39	2918	350	2935A	1600	2950A	9000	2969	51K	2983B

These widely-used fixed wire wound vitreous enameled resistors have solidly anchored welded tabs (lugs) and shock-absorbing mounting brackets to withstand vibration. Multi-layer vitreous enamel coating locks the uniformly-wound resistance wire in position and also seals out moisture. MEMCOR resistors have a high-temperature stability and a compatible coefficient of expansion which prevents crazing and cracking.

MEMCOR resistors have a standard tolerance of ±5% on all values above one OHM and a ±10% tolerance on resistance values lower than one OHM (available in closer tolerances).

All MEMCOR resistors listed in this section manufactured to the rigid requirements of MIL-R-26 Specifications . . . MEMCOR resistors meet and exceed all requirements of this specification.

FR TYPES

MEMCOR fixed wire wound vitreous enameled types in 5, 10 and 20 watt sizes FL w/Leads are light enough to be mounted by attached leads and are also available without (FR) tuned leads.



VITREOUS FIXED LEADS FR 5 w/LEADS (5 WATTS)

CORE: 3/16" x 3/16" x 1"
WEIGHT: .012 LBS.
MOUNTING BY LEADS

Ohms	Stock No.
.5	1001
1	1002
1.5	1003
2	1004

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
3	1005	100	1019	800	1033	4500	1047
4	1006	125	1020	900	1034	5000	1048
5	1007	150	1021	1000	1035	6000	1049
7.5	1008	200	1022	1100	1036	7000	1050
10	1009	225	1023	1200	1037	7500	1051
12	1010	250	1024	1250	1038	8000	1052
15	1011	300	1025	1500	1039	9000	1053
20	1012	350	1026	1750	1040	10K	1054
25	1013	400	1027	2000	1041	12.5K	1055
30	1014	450	1028	2250	1042	15K	1056
35	1015	500	1029	2500	1043	17.5K	1057
40	1016	600	1030	3000	1044	20K	1058
50	1017	700	1031	3500	1045	22.5K	1059
75	1018	750	1032	4000	1046	25K	1060

VITREOUS FIXED LEADS FR 10 w/LEADS (10 WATTS)

CORE: 3/16" x 3/16" x 1 3/4"
WEIGHT: .019 LBS.
MOUNTING BY LEADS

Ohms	Stock No.
.5	1101
1	1102
1.5	1103
2	1104

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
3	1105	100	1119	800	1133	4500	1147	16K	1162
4	1106	125	1120	900	1134	5000	1148	17.5K	1163
5	1107	150	1121	1000	1135	6000	1149	18K	1164
7.5	1108	200	1122	1100	1136	7000	1150	20K	1165
10	1109	225	1123	1200	1137	7500	1151	22.5K	1166
12	1110	250	1124	1250	1138	8000	1152	25K	1167
15	1111	300	1125	1500	1139	8500	1153	30K	1168
20	1112	350	1126	1750	1140	9000	1154	35K	1169
25	1113	400	1127	2000	1141	10K	1155	40K	1170
30	1114	450	1128	2250	1142	11K	1156	45K	1171
35	1115	500	1129	2500	1143	12K	1157	50K	1172
40	1116	600	1130	3000	1144	12.5K	1158		
50	1117	700	1131	3500	1145	13.5K	1159		
75	1118	750	1132	4000	1146	15K	1161		

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

...FL 20 w/LEADS

...FR 5 ... FR 10 ... FR 20

Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS

POWER
WIRE WOUND
VITREOUS ENAMELED

VITREOUS FIXED LEADS

FR 20 w/LEADS

(20 WATTS)

CORE: 1/16" x 1/4" x 2"
WEIGHT: .033 LBS.
MOUNTING BY LEADS

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
.5	1201	250	1214	1500	1227	7000	1241	45K	1252
1	1202	300	1215	1750	1228	7500	1242	50K	1253
3	1203	350	1216	2000	1230	8000	1243	55K	1254
4	1204A	400	1217	2250	1231	9K	1243A	60K	1255
5	1204	500	1218	2500	1233	10K	1244	65K	1256
10	1205	650	1219	2750	1234	12.5K	1245	70K	1257
15	1206	700	1220	3000	1235	15K	1246	75K	1258
25	1207	750	1221	3500	1236	20K	1247	80K	1259
50	1208	800	1222	4000	1237	25K	1248	85K	1260
75	1209	910	1223A	4500	1238	30K	1249	90K	1261
100	1210	1000	1224	5000	1239	35K	1250	95K	1262
150	1211	1200	1225	6000	1240	40K	1251	100K	1263
200	1213	1250	1226						

The FR type resistors can be mounted by brackets, vertical through bolts or by their tabs.

The sturdy terminals are hot-tinned for soldering ease, and the holes in the terminals are of suitable size to accommodate screws.

Mounting brackets are furnished **only** on request at **no** additional cost. If required, please specify bracket stock number.

Standard packaging — 5, 10 and 20 watt sizes are packed 10 units per carton and larger sizes are packed individually.





VITREOUS FIXED

FR 5

(5 WATTS)

CORE: 3/16" x 3/16" x 1"
WEIGHT: .012 LBS.

Ohms	Stock No.
.5	4401
1	4402
1.5	4403
2	4404
3	4405

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
4	4406	125	4420	900	4434	5000	4448
5	4407	150	4421	1000	4435	6000	4449
7.5	4408	200	4422	1100	4436	7000	4450
10	4409	225	4423	1200	4437	7500	4451
12	4410	250	4424	1250	4438	8000	4452
15	4411	300	4425	1500	4439	9000	4453
20	4412	350	4426	1750	4440	10K	4454
25	4413	400	4427	2000	4441	12.5K	4455
30	4414	450	4428	2250	4442	15K	4456
35	4415	500	4429	2500	4443	17.5K	4457
40	4416	600	4430	3000	4444	20K	4458
50	4417	700	4431	3500	4445	22.5K	4459
75	4418	750	4432	4000	4446	25K	4460
100	4419	800	4433	4500	4447		

VITREOUS FIXED

FR 10

(10 WATTS)

CORE: 3/16" x 3/16" x 1 3/4"
WEIGHT: .019 LBS.
MTG. BRKT.: P4989

Ohms	Stock No.
.5	4501
1	4502
1.5	4503
2	4504

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
3	4505	100	4519	800	4533	4500	4547	16K	4562
4	4506	125	4520	900	4534	5000	4548	17.5K	4563
5	4507	150	4521	1000	4535	6000	4549	18K	4564
7.5	4508	200	4522	1100	4536	7000	4550	20K	4565
10	4509	225	4523	1200	4537	7500	4551	22.5K	4566
12	4510	250	4524	1250	4538	8000	4552	25K	4567
15	4511	300	4525	1500	4539	8500	4553	30K	4568
20	4512	350	4526	1750	4540	9000	4554	35K	4569
25	4513	400	4527	2000	4541	10K	4555	40K	4570
30	4514	450	4528	2250	4542	11K	4556	45K	4571
35	4515	500	4529	2500	4543	12K	4557	50K	4572
40	4516	600	4530	3000	4544	12.5K	4558		
50	4517	700	4531	3500	4545	13.5K	4559		
75	4518	750	4532	4000	4546	15K	4561		

VITREOUS FIXED

FR 20

(20 WATTS)

CORE: 1/16" x 1/4" x 2"
WEIGHT: .033 LBS.
MTG. BRKT.: P3749

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
.5	4601	300	4615	2000	4630	10K	4644	75K	4658
1	4602	350	4616	2250	4631	12.5K	4645	80K	4659
3	4603	400	4617	2500	4633	15K	4646	85K	4660
4	4603A	500	4618	2750	4634	20K	4647	90K	4661
5	4604	650	4619	3000	4635	25K	4648	95K	4662
10	4605	700	4620	3500	4636	30K	4649	100K	4663
15	4606	750	4621	4000	4637	35K	4650		
25	4607	800	4622	4500	4638	40K	4651		
50	4608	910	4623A	5000	4639	45K	4652		
75	4609	1000	4624	6000	4640	50K	4653		
100	4610	1200	4625	7000	4641	55K	4654		
150	4611	1250	4626	7500	4642	60K	4655		
200	4613	1500	4627	8000	4643	65K	4656		
250	4614	1750	4628	9000	4663A	70K	4657		

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

...FR 25...FR 50

...FR 100...FR 160...FR 200

Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS

POWER
WIRE WOUND
VITREOUS ENAMELED

VITREOUS FIXED FR 25 (25 WATTS)

CORE: 3/16" x 3/16" x 2"
WEIGHT: .051 LBS.
MTG. BRKT.: P3747

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	1301	75	1310	1000	1321	6000	1330	35K	1338
2	1302	100	1311	1500	1323	7500	1331	40K	1339
3	1303	150	1312	2000	1324	10K	1332	50K	1340
4	1304	200	1313	2500	1325	12K	1333	60K	1341
5	1305	250	1314	3000	1326	15K	1334	70K	1342
10	1306	500	1317	3500	1327	20K	1335	75K	1343
25	1308	750	1318	4000	1328	25K	1336	80K	1344
50	1309	800	1319	5000	1329	30K	1337	100K	1345

VITREOUS FIXED FR 50 (50 WATTS)

CORE: 3/16" x 3/16" x 4"
WEIGHT: .082 LBS.
MTG. BRKT.: P3747

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	1401	100	1410	2000	1421	12K	1430	75K	1439
2	1402	150	1411	2500	1422	12.5K	1431	100K	1440
3	1403	200	1412	3000	1423	15K	1432	125K	1441
4	1404	250	1413	4000	1424	20K	1433	150K	1442
5	1405	500	1416	5000	1425	25K	1434	175K	1443
10	1406	750	1417	6000	1426	30K	1435	200K	1444
25	1407	800	1418	7500	1427	35K	1436	225K	1445
50	1408	1000	1419	8000	1428	40K	1437	250K	1446
75	1409	1500	1420	10K	1429	50K	1438		

VITREOUS FIXED FR 100 (100 WATTS)

CORE: 3/4" x 1/2" x 6 1/2"
WEIGHT: .200 LBS.
MTG. BRKT.: P3689

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	1501	75	1509	1500	1518	20K	1529	75K	1537
2	1502	100	1510	2000	1519	25K	1530	100K	1538
3	1503	125	1511	2500	1520	30K	1531		
4	1504	150	1512	3000	1521	35K	1532		
5	1505	250	1513	5000	1525	40K	1533		
10	1506	500	1514	7500	1526	50K	1534		
25	1507	750	1515	10K	1527	60K	1535		
50	1508	1000	1516	15K	1528	70K	1536		

VITREOUS FIXED FR 160 (160 WATTS)

CORE: 1 1/8" x 3/4" x 8 1/2"
WEIGHT: .445 LBS.
MTG. BRKT.: P4898

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	1601	75	1610	1500	1618	20K	1629	80K	1637
2	1602	100	1611	2000	1619	25K	1630	100K	1638
3	1603	125	1611A	2500	1620	30K	1631		
4	1604	150	1612	3000	1621	35K	1632		
5	1605	250	1614	5000	1625	40K	1633		
10	1606	500	1615	7500	1626	50K	1634		
25	1608	750	1616	10K	1627	60K	1635		
50	1609	1000	1617	15K	1628	75K	1636		

VITREOUS FIXED FR 200 (200 WATTS)

CORE: 1 1/8" x 3/4" x 10 1/2"
WEIGHT: .740 LBS.
MTG. BRKT.: P4898

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	1701	75	1709	2000	1717	25K	1728
2	1702	100	1710	2500	1718	30K	1729
3	1703	150	1711	3000	1719	35K	1730
4	1704	250	1712	5000	1723	40K	1731
5	1705	500	1713	7500	1724	50K	1732
10	1706	750	1714	10K	1725	60K	1733
25	1707	1000	1715	15K	1726	75K	1734
50	1708	1500	1716	20K	1727	100K	1735

ADJUSTABLE VALUE RESISTORS

MEMCOR adjustable resistors are used in applications where it is necessary to make adjustment in resistance periodically . . . where intermediate values of resistance are needed . . . or when multi-tabs are required. The AR types are especially useful in laboratories for experimental work, circuit design, etc.

A section of the winding is exposed on one side to enable the adjustment band to make contact at any desired point. This adjustable band **should not** be moved unless the screw holding it in position is completely loosened to prevent abrading or possible damage to the resistance wire.

Adjustable lugs are formed to the exact contour of the body of the resistor to assure positive contact with the exposed section of winding. Standard adjustable bands are screw-driven style and have an embossed area on the lug.

Special adjustable lugs are available with a silver contact . . . also, bakelite thumb screw type bands are available.

The AR wattage ratings (and the ±10% tolerance) given in this section are for **the entire** resistor. Never exceed the maximum rating through any portion of the resistor.

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

AR 10 . . . AR 25 . . . AR 50 . . . AR 75 . . . AR 100 . . . AR 160 . . . AR 200

Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS

POWER
WIRE WOUND
VITREOUS ENAMELED



VITREOUS ADJUSTABLE AR 10 (10 WATTS)

CORE: 3/16" x 3/16" x 1 3/4"
WEIGHT: .019 LBS.
MTG. BRKT.: P4989

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2001	75	2011	750	2021	4000	2031
2	2002	100	2012	800	2022	4500	2032
3	2003	150	2013	1000	2023	5000	2033
5	2004	200	2014	1250	2024	6000	2034
7.5	2005	250	2015	1500	2025	7000	2035
10	2006	300	2016	2000	2026	7500	2036
15	2007	350	2017	2250	2027	8000	2037
20	2008	400	2018	2500	2028	8500	2038
25	2009	500	2019	3000	2029	9000	2039
50	2010	600	2020	3500	2030	10K	2040

VITREOUS ADJUSTABLE AR 25 (25 WATTS)

CORE: 3/16" x 3/16" x 2"
WEIGHT: .052 LBS.
MTG. BRKT.: P3747

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2101	50	2110	750	2119	3500	2129	10K	2139
2	2102	75	2111	800	2120	4000	2130	12K	2140
3	2103	100	2112	1000	2122	4500	2131	15K	2141
5	2104	150	2113	1250	2133	5000	2132	20K	2142
7.5	2105	200	2114	1500	2124	6000	2133	25K	2143
10	2106	250	2115	2000	2125	7000	2134		
15	2107	300	2116	2250	2126	7500	2136		
20	2108	400	2117	2500	2127	8000	2137		
25	2109	500	2118	3000	2128	9000	2138		

VITREOUS ADJUSTABLE AR 50 (50 WATTS)

CORE: 3/16" x 3/16" x 4"
WEIGHT: .096 LBS.
MTG. BRKT.: P3747

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2201	100	2210	1000	2219	4500	2228	15K	2238
2	2202	150	2211	1250	2220	5000	2229	20K	2239
3	2203	200	2212	1500	2221	6000	2230	25K	2240
4	2204	250	2213	2000	2222	7000	2231	30K	2241
5	2205	300	2214	2250	2223	7500	2233	40K	2242
10	2206	400	2215	2500	2224	8000	2234	50K	2243
25	2207	500	2216	3000	2225	9000	2235	60K	2244
50	2208	750	2217	3500	2226	10K	2236	80K	2246
75	2209	800	2218	4000	2227	12K	2237	100K	2247

VITREOUS ADJUSTABLE AR 75 (75 WATTS)

CORE: 3/16" x 3/16" x 6"
WEIGHT: .150 LBS.
MTG. BRKT.: P3747

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2301	200	2312	2000	2322	7500	2333	40K	2343
2	2302	250	2313	2250	2323	8000	2334	45K	2344
3	2303	300	2314	2500	2324	9000	2335	50K	2345
4	2304	400	2315	3000	2325	10K	2336	60K	2346
5	2305	500	2316	3500	2326	12K	2337	80K	2348
10	2306	750	2317	4000	2327	15K	2338	100K	2349
15	2307	800	2318	4500	2328	20K	2339		
25	2308	1000	2319	5000	2329	25K	2340		
50	2309	1250	2320	6000	2330	30K	2341		
100	2311	1500	2321	7000	2331	35K	2342		

VITREOUS ADJUSTABLE AR 100 (100 WATTS)

CORE: 3/4" x 1/2" x 6 1/2"
WEIGHT: .200 LBS.
MTG. BRKT.: P3689

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2401	100	2409	10K	2424	100K	2433
2	2402	250	2411	15K	2425		
3	2403	500	2413	20K	2626		
4	2404	1000	2415	25K	2427		
5	2405	1500	2416	30K	2428		
10	2406	2500	2418	40K	2429		
25	2407	5000	2421	50K	2430		
50	2408	6000	2422	60K	2432		

VITREOUS ADJUSTABLE AR 160 (160 WATTS)

CORE: 1 1/8" x 3/4" x 8 1/2"
WEIGHT: .460 LBS.
MTG. BRKT.: P4898

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2501	100	2510	10K	2524	80K	2532
2	2502	250	2512	15K	2525	100K	2534
3	2503	500	2513	20K	2526		
4	2504	1000	2514	25K	2527		
5	2505	1500	2515	30K	2528		
10	2506	2500	2517	40K	2529		
25	2508	3500	2519	50K	2530		
50	2509	5000	2522	60K	2531		

Caution — the voltage should be off when making adjustments to prevent any possible injury to the operator from high voltage.

VITREOUS ADJUSTABLE AR 200 (200 WATTS)

CORE: 1 1/8" x 3/4" x 10 1/2"
WEIGHT: .670 LBS.
MTG. BRKT.: P4898

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	2601	25	2607	1500	2613	25K	2625
2	2602	50	2608	2500	2615	30K	2626
3	2603	100	2609	5000	2620	40K	2627
4	2604	250	2610	10K	2622	50K	2628
5	2605	500	2611	15K	2623	60K	2630
10	2606	1000	2612	20K	2624	100K	2631

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.
...MZ 10...MZ 20
...ZR 30...ZR 40...ZR 55
Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS
POWER
WIRE WOUND
VITREOUS ENAMELED



VITREOUS MIDGET OVAL MZ 10 (10 WATTS)
CORE: 3/8" x 3/4"
LENGTH: 1 13/16"
MTG. CENTERS: 1"

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	3001	30	3009	250	3017	1500	3025
2	3002	40	3010	300	3018	1750	3026
5	3003	50	3011	400	3019	2000	3027
7.5	3004	75	3012	500	3020	2500	3028
10	3005	100	3013	600	3021	3000	3029
15	3006	125	3014	750	3022	4000	3030
20	3007	150	3015	1000	3023	5000	3031
25	3008	200	3016	1250	3024		

VITREOUS MIDGET OVAL MZ 20 (20 WATTS)
CORE: 3/8" x 2"
LENGTH: 2 5/8"
MTG. CENTERS: 2 15/16"

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	3201	75	3209	800	3217	4000	3225	25K	3233
2	3202	100	3210	1000	3218	5000	3226	30K	3234
5	3203	150	3211	1250	3219	6000	3227	35K	3235
10	3204	200	3212	1500	3220	7500	3228	40K	3236
15	3205	250	3213	2000	3221	10K	3229	50K	3237
25	3206	300	3214	2500	3222	12.5K	3230		
40	3207	400	3215	3000	3223	15K	3231		
50	3208	500	3216	3500	3224	20K	3232		

OVAL (FLAT CORE) RESISTORS

MEMCOR wire wound flat core resistors are applicable for individual and/or stack mounting. Their high watt rating per unit of space and the bracket construction which facilitates stacking (integral mounting brackets are supplied as standard)... make the MZ and ZR types space savers par excellence.

The line of ovals (ZR) was designed particularly for applications where available space is limited... and the supplementary line of midget ovals (MZ) are very desirable for applications where the size of the components must be kept to an absolute minimum. The through bracket helps dissipate heat and reduces hot spots. This permits higher wattage dissipation without requiring additional space.

When stack mounted, the ZR and MZ resistors should be derated. For an ambient temperature not higher than 40°C. the maximum rise of these resistors will not exceed 300°C. when mounted on a steel panel.

Tapped or adjustable ovals are available.



VITREOUS OVAL ZR 30 (30 WATTS)
CORE: 5/16" x 1" x 1 1/4"
WEIGHT: .055 LBS.

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	3301	40	3306A	500	3313	5000	3323
1.5	3301A	50	3307	750	3314	7500	3324
2	3302B	75	3307A	1000	3315	10K	3325
3	3302	100	3308	1500	3317		
5	3303	150	3309	2000	3318		
10	3304	200	3310	2500	3319		
15	3305	250	3311	3000	3320		
25	3306	400	3312	4000	3322		

VITREOUS OVAL ZR 40 (40 WATTS)
CORE: 5/16" x 1" x 2"
WEIGHT: .075 LBS.

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	3401	25	3406	400	3412	3500	3421
1.5	3401A	40	3406A	500	3413	5000	3423
2	3402A	50	3407	750	3414	7500	3424
3	3402	75	3407A	1000	3415	10K	3425
4	3403A	100	3408	1500	3417	15K	3426
5	3403	150	3409	2000	3418	20K	3427
7.5	3404A	200	3410	2500	3419	25K	3428
10	3404	250	3411	3000	3420		

VITREOUS OVAL ZR 55 (55 WATTS)
CORE: 5/16" x 1" x 3 1/2"
WEIGHT: .130 LBS.

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1	3501	25	3506	400	3512	4000	3522
1.5	3501A	40	3506A	500	3513	5000	3523
2	3502A	50	3507	750	3514	7500	3524
3	3502	75	3507A	1000	3515	10K	3525
4	3503A	100	3508	1500	3517	15K	3526
5	3503	150	3509	2000	3518	20K	3527
7.5	3504A	200	3510	2500	3519	25K	3528
10	3504	250	3511	3000	3520	30K	3529

MOULDED SILICONE RESISTORS

These resistors will operate at 350°C. (660°F.) and will withstand thermal shocks to minus 55°C. Because of the moulded construction the resistors are effectively hermetically sealed and will withstand severe moisture conditions without deterioration.

The construction of the resistors are uniform in all dimensions within a few thousandths of an inch, which facilitates their use in automatic-insertion machinery... for which use they may be obtained specially packaged. They will improve the appearance of any assembly in which they are used.

Temperature co-efficients of plus or minus 20 parts per million per C. degree are standard.

The moulding compound used in these resistors was developed through research and development extending over several years, and represents a marked advance in the "state-of-the-art" for such compounds.

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

...ML 3

Originators of TRU-OHM & HARDWICK, HINDLE Products

RESISTORS

SILICONE MOULDED

MOULDED AXIAL LEADS

ML 3

(3 WATTS)

CLOSE TOLERANCE ±1% IN STOCK



Ohms	Stock No.
.100	3M10
.121	3M11
.150	3M12
.182	3M13
.200	3M14
.221	3M15
.249	3M16
.274	3M17
.332	3M18
.392	3M19
.475	3M20
.499	3M21
.562	3M22
.681	3M23
.750	3M24
.825	3M25
1.00	3M26
1.02	3M27
1.05	3M28
1.07	3M29
1.10	3M30
1.13	3M31
1.15	3M32
1.18	3M33
1.21	3M34
1.24	3M35
1.27	3M36
1.30	3M37
1.33	3M38
1.37	3M39
1.40	3M40
1.43	3M41
1.47	3M42
1.50	3M43
1.54	3M44
1.58	3M45
1.62	3M46
1.65	3M47
1.69	3M48
1.74	3M49
1.78	3M50
1.82	3M51
1.87	3M52
1.91	3M53
1.96	3M54
2.00	3M55
2.05	3M57
2.10	3M58
2.15	3M59
2.21	3M60
2.26	3M61
2.32	3M62
2.37	3M63
2.43	3M64
2.49	3M65
2.55	3M66
2.61	3M67
2.67	3M68
2.74	3M69
2.80	3M70
2.87	3M71
2.94	3M72
3.01	3M73
3.09	3M74
3.16	3M75
3.24	3M76
3.32	3M77
3.40	3M78
3.48	3M79
3.57	3M80
3.65	3M81
3.74	3M82
3.83	3M83
3.92	3M84
4.02	3M85
4.12	3M86
4.22	3M87
4.32	3M88
4.42	3M89
4.53	3M90
4.64	3M91
4.75	3M92
4.87	3M93
4.99	3M94
5.11	3M95
5.23	3M96
5.36	3M97
5.49	3M98
5.62	3M99
5.76	3M100
5.90	3M101
6.04	3M102
6.19	3M103
6.34	3M104
6.49	3M105
6.65	3M106
6.81	3M107
6.98	3M108
7.15	3M109
7.32	3M110
7.50	3M111
7.68	3M112
7.87	3M113
8.06	3M114
8.25	3M115
8.45	3M116
8.66	3M117
8.87	3M118
9.90	3M119
9.31	3M120
9.53	3M121
9.76	3M122
10.0	3M123
10.2	3M124
10.5	3M125
10.7	3M126
11.0	3M127
11.3	3M128
11.5	3M129
11.8	3M130
12.1	3M131
12.4	3M132
12.7	3M133
13.0	3M134
13.3	3M135
13.7	3M136
14.0	3M137
14.3	3M138
14.7	3M139
15.0	3M140
15.4	3M141
15.8	3M142
16.2	3M143
16.5	3M144
16.9	3M145
17.4	3M146
17.8	3M147
18.2	3M148
18.7	3M149
19.1	3M150
19.6	3M151
20.0	3M152
20.5	3M153
21.0	3M154
21.5	3M155
22.1	3M156
22.6	3M157
23.2	3M158
23.7	3M159
24.3	3M160
24.9	3M161
25.5	3M162
26.1	3M163
26.7	3M164
27.4	3M165
28.0	3M166
28.7	3M167
29.4	3M168
30.1	3M169
30.9	3M170
31.6	3M171
32.4	3M172
33.2	3M173
34.0	3M174
34.8	3M175
35.7	3M176
36.5	3M177
37.4	3M178
38.3	3M179
39.2	3M180
40.2	3M181
41.2	3M182
42.2	3M183
43.2	3M184
44.2	3M185
45.3	3M186
46.4	3M187
47.5	3M188
48.7	3M189
49.9	3M190
51.1	3M191
52.3	3M192
53.6	3M193
54.9	3M194
56.2	3M195
57.6	3M196
59.0	3M197
60.4	3M198
61.9	3M199
63.4	3M200
64.9	3M201
66.5	3M202
68.1	3M203
69.8	3M204
71.5	3M205
73.2	3M206
75.0	3M207
76.8	3M208
78.7	3M209
80.6	3M210
82.5	3M211
84.5	3M212
86.6	3M213
88.7	3M214
90.9	3M215
93.1	3M216
95.3	3M217
97.6	3M218
100	3M219
102	3M220
105	3M221
107	3M222
110	3M223
113	3M224
115	3M225
118	3M226
121	3M227
124	3M228
127	3M229
130	3M230
133	3M231
137	3M232
140	3M233
143	3M234
147	3M235
150	3M236
154	3M237
158	3M238
162	3M239
165	3M240
169	3M241
174	3M242
178	3M243
182	3M244
187	3M245
191	3M246
196	3M247
200	3M248
205	3M249
210	3M250
215	3M251
221	3M252
226	3M253
232	3M254
237	3M255
243	3M256
249	3M257
255	3M258
261	3M259
267	3M260
274	3M261
280	3M262
287	3M263
294	3M264
301	3M265
309	3M266
316	3M267
324	3M268
332	3M269
340	3M270
348	3M271
357	3M272
365	3M273
374	3M274
383	3M275
392	3M276
402	3M277
412	3M278
422	3M279
432	3M280
442	3M281
453	3M282
464	3M283
475	3M284
487	3M285
499	3M286
511	3M287
523	3M288
536	3M289
549	3M290
562	3M291
576	3M292
590	3M293
604	3M294
619	3M295
634	3M296
649	3M297
665	3M298
681	3M299
698	3M300
715	3M301
732	3M302
750	3M303
768	3M304
787	3M305
806	3M306
825	3M307
845	3M308
866	3M309
887	3M310
909	3M311
931	3M312
953	3M313
976	3M314
1000	3M315
1020	3M316
1050	3M317
1070	3M318
1100	3M319
1130	3M320
1150	3M321
1180	3M322
1210	3M323
1240	3M324
1270	3M325
1300	3M326
1330	3M327
1370	3M328
1400	3M329
1430	3M330
1470	3M331
1500	3M332
1540	3M333
1580	3M334
1620	3M335
1650	3M336
1690	3M337
1740	3M338
1780	3M339
1820	3M340
1870	3M341
1910	3M342
1960	3M343
2000	3M344
2050	3M345
2100	3M346
2150	3M347
2210	3M348
2260	3M349
2320	3M350
2370	3M351
2430	3M352
2490	3M353
2550	3M354
2610	3M355
2670	3M356
2740	3M357
2800	3M358
2870	3M359
2940	3M360
3010	3M361
3090	3M362
3160	3M363
3240	3M364
3320	3M365
3400	3M366
3480	3M367
3500	3M368
3650	9M369
3740	3M370
3830	3M371
3920	3M372
4020	3M373
4120	3M374
4220	3M375
4320	3M376
4420	3M377
4530	3M378
4640	3M379
4750	3M380
4870	3M381
4990	3M382
5110	3M383
5230	3M384
5360	3M385
5490	3M386
5620	3M387
5760	3M388
5900	3M389
6040	3M390
6100	3M391
6340	3M392
6400	3M393
6650	3M394
6810	3M395
6980	3M396
7150	3M397
7320	3M398
7500	3M399
7680	3M400
7870	3M401
8060	3M402
8250	3M403
8450	3M404
8660	3M405
8870	3M406
9090	3M407
9310	3M408
9530	3M409
9760	3M410
10K	3M411
10.2K	3M412
10.5K	3M413
10.7K	3M414
11K	3M415
11.3K	3M416
11.5K	3M417
11.8K	3M418
12.1K	3M419
12.4K	3M420
12.7K	3M421
13K	3M422
13.3K	3M423
13.7K	3M424
14K	3M425
14.3K	3M426
14.7K	3M427
15K	3M428
15.4K	3M429
15.8K	3M430
16.2K	3M431
16.5K	3M432
16.9K	3M433
17.4K	3M434
17.8K	3M435
18.2K	3M436
18.7K	3M437
19.1K	3M438
19.6K	3M439
20K	3M440
20.5K	3M441
21K	3M442
21.5K	3M443
22.1K	3M444

© United Technical Publications

PRICES

Prices in this MASTER should not be considered as final. INQUIRE ABOUT LATEST PRICES AND DELIVERY.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

ORDERING

Since previous editions of the MASTER are frequently referred to, it is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

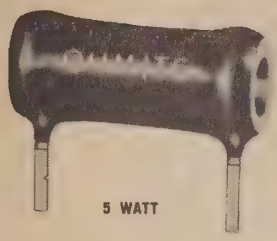
INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

OHMITE radial lead resistors for P.C. boards

CLASS PC-58





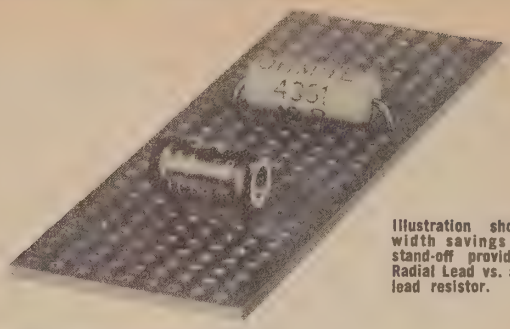


Illustration showing overall width savings and built-in stand-off provided by PC-58 Radial Lead vs. a typical axial lead resistor.

Increases productivity 28.1% — Saves circuit board space

If you are manually inserting axial lead resistors in printed circuit boards, it will pay you to examine the new Ohmite PC-58 resistor.

ADVANTAGES:

LABOR SAVING: Radial Leads eliminate cutting, bending, and forming of leads. Productivity is increased 28.1%. You achieve a 21.9% savings in labor cost. (Time Study Publication No. 163 available on request.)

SPACE SAVING: Radial leads reduce total length dimension required compared to axial lead types, increases packaging density possibilities.

POSITIVE POSITIONING: Built in stand-off automatically provides correct spacing between resistor and P.C. board.

COST SAVING: PC-58 resistors are priced lower than comparable axial lead types: This is in addition to savings in labor as explained above.

STANDARD SIZE: PC-58 Radial Leads fit standard .1 inch matrix boards with standard .046 inch diameter holes.

MARKINGS ALWAYS VISIBLE: Value and Ohmite code markings are always visible from the top of the PC-58. Eliminates time consuming orientation normally required of axial lead types.

CHOICE OF COATINGS: PC-58 resistors are available in ±5% tolerance with Vitreous Enamel (Type 270) for resistance values to 3300 ohms for 3-watt and to 6800 ohms for 5¼-watt or Ohmicone® silicone-ceramic (Type 470) for values over 3300 ohms and 6800 ohms for 3 and 5¼-watt sizes, respectively. For tolerances of ±3% and closer or for low T.C., specify Ohmicone® Type 474.

AVAILABILITY: Now standard PC-58 resistors are in stock at your local Ohmite authorized stocking distributor.

SPECIFICATIONS:

MECHANICAL

Coating: Vitreous Enamel or Ohmicone® (silicone-ceramic), depending on Type.

Terminals: Radial, solder-dipped.

Markings: Ohmite Code and Resistance (Ohms) Value.

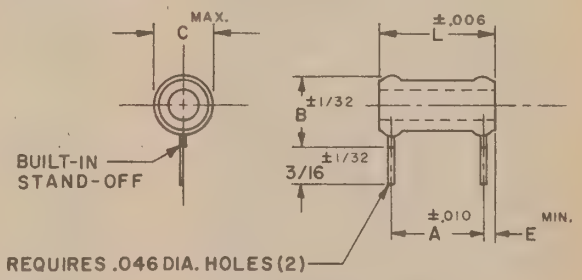
Weight: 3-Watt: .002 lbs.; 5¼ Watt: .003 lbs.

ELECTRICAL

Tolerance: ±5% for 1 ohm and above; ±10% below 1 ohm.

Wattage: 3-Watt, derated to 0 at 350°C—5¼-Watt, derated to 0 at 350°C

Temperature Coefficient: Less than 260 ppm/°C.



Rated Watts @ 25°C	DIMENSIONS (Inches)				
	A ±.010	B ±1/32	C Max.	E Min.	L ±.006
3	.300	.335	9/32	3/64	7/16
5¼	.500	.375	5/16	1/32	5/8

3-WATT

Free air rating thru 10K ohms.

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
1.0	5800	1.73	120	5817	.158	1200	5834	.0500
1.5	5801	1.41	150	5818	.141	1500	5835	.0447
2.0	5802	1.22	200	5819	.122	1800	5836	.0408
2.4	5803	1.12	250	5820	.110	2000	5837	.0387
3.0	5804	1.00	270	5821	.105	2500	5838	.0346
4.0	5805	.866	300	5822	.100	2700	5839	.0333
5.0	5806	.774	330	5823	.0953	3000	5840	.0316
7.5	5807	.632	400	5824	.0866	4000	5841*	.0274
10.0	5808	.548	450	5825	.0816	4700	5842*	.0253
15	5809	.447	500	5826	.0775	5000	5843*	.0245
20	5810	.387	560	5827	.0732	5600	5844*	.0231
30	5811	.316	600	5828	.0707	6200	5845*	.0220
50	5812	.245	620	5829	.0696	7000	5846*	.0209
56	5813	.231	750	5830	.0632	7500	5847*	.0200
68	5814	.210	800	5831	.0612	9000	5848*	.0182
82	5815	.191	900	5832	.0577	10000	5849*	.0173
100	5816	.173	1000	5833	.0548			

NOTE: These resistors are Ohmicone® Coated, Type 470.

5¼-WATT

Free air rating thru 15K ohms.

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
1.0	5850	2.29	100	5864	.229	1800	5882	.0540
1.5	5850A	1.87	120	5865	.209	2000	5883	.0512
2.0	5851	1.62	150	5866	.187	2200	5883A	.0488
3.0	5851A	1.32	160	5867	.181	2500	5884	.0458
4.0	5851B	1.15	200	5868	.162	3000	5885	.0418
5.0	5852	1.02	220	5869	.154	3300	5885A	.0399
5.6	5852A	.968	250	5870	.145	3900	5885B	.0367
10.0	5853	.725	270	5870A	.139	4000	5886	.0362
15	5854	.592	300	5871	.132	4500	5887	.0341
18	5855	.540	330	5872	.126	5000	5888	.0324
20	5856	.512	350	5873	.122	5600	5889	.0306
22	5856A	.489	400	5874	.115	6000	5890	.0296
25	5857	.458	500	5875	.102	7500	5891*	.0265
30	5858	.418	510	5875A	.101	8200	5892*	.0253
40	5859	.362	560	5875B	.0968	9000	5893*	.0241
50	5860	.324	600	5876	.0935	9100	5893A*	.0240
51	5860A	.321	750	5877	.0837	10000	5894*	.0229
56	5860B	.306	800	5878	.0810	12000	5895*	.0209
68	5861	.278	1000	5879	.0725	15000	5896*	.0187
75	5862	.265	1200	5880	.0661	20000	5897*	.0152
82	5863	.253	1300	5881	.0635			

*NOTE: These resistors are Ohmicone® Coated, Type 470.

All standard values shown above are popular values and are stocked by authorized OHMITE stocking distributors.

OHMITE type 995 MOLDED axial lead vitreous enameled resistors

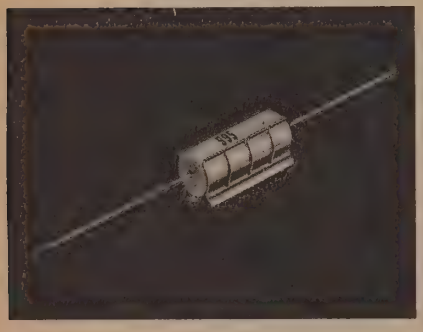


- FIRST MOLDED WIREWOUND, VITREOUS ENAMEL RESISTOR
- INSULATED! Meets 1000 VAC Test
- WITHSTANDS 1500°F Temperatures without Distortion
- RESISTS Chipping, Breaking
- VITRIFIED MARKINGS, Resist Abrasion and Active Solvents
- UNIFORM SIZE Permits Clip-Mounting with Significant Heat Sink Benefits
- HIGH OVERLOAD CAPABILITY

An exclusive technique (U. S. Patent No.'s 3,229,237 and 3,489,828) permits application of the vitreous enamel coating by molding instead of the conventional "dip" process. The dimensionally consistent and thicke coating that results, guarantees a 100(VAC insulation rating plus unparallelec capability for withstanding very high tem peratures, high humidity and immersior in salt solution.

These resistors are normally mountec by their axial leads. However, their con sistent form also permits mounting ir clips with heat sink benefits up to 100% (see "Clips" lower left). Resistor markings are also vitreous and will not burn off even under extreme overloads. Resistance tolerance is ±5%. Series 99 resistors meet the requirements of MIL-R-26 for "insulated" resistors. See Catalog 101 for specific MIL types.

MOUNTING CLIPS



Uniform shape and consistent dimensions of Series 99 and 88 (pages 6-7) resistors, permits them to be conveniently mounted in clips. If the clip is on a metal surface, the wattage capability of the resistor can increase by as much as 100%. Holes in clip base permit fastening to chassis by means of machine screws, eyelets or rivets.

CLIPS for TYPE 995 and 884* RESISTORS

Resistor Watts	Resistor Series	Clip Stock No.
1½	99	5900
2¼	99	5902
3	88	5904
3¼	99	5904
5	88	5905
5	99	5906
10	88	5909
11	99	5908

* See pages 6 and 7 for Type 884 resistors

1½ WATT

.422"x.125" Dia. Style 995-1A Avg. Wt., .0009 lb.

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
1.0	**4030**	1.24	75	4087	.141
1.1	(4031)	1.17	82	4089	.135
1.2	4032	1.12	91	**4091**	.128
1.3	4033	1.08	100	**4092**	.123
1.5	**4034**	1.00	110	**4093**	.117
1.6	4035	.97	120	4094	.112
1.8	4036	.91	130	4095	.108
2.0	**4037**	.87	150	(4096)	.100
2.2	**4038**	.83	160	(4097)	.097
2.4	4039	.79	180	4098	.091
2.7	4041	.75	200	**4099**	.087
3.0	**4042**	.71	220	**4100**	.083
3.3	4043	.67	240	(4101)	.079
3.6	4044	.65	250	(4102)	.077
3.9	4045	.62	270	(4103)	.075
4.0	4046	.61	300	**4104**	.071
4.3	(4047)	.59	330	**4105**	.067
4.7	(4048)	.56	350	(4105A)	.065
5.0	**4049**	.55	360	4106	.064
5.1	(4050)	.54	390	(4107)	.062
5.6	4051	.52	400	(4108)	.061
6.2	4053	.49	430	4109	.059
6.8	4054	.47	450	4109A	.058
7.5	4056	.45	470	**4110**	.056
8.2	4058	.43	500	**4111**	.055
9.1	(4060)	.41	510	**4112**	.054
10	**4061**	.39	560	4113	.052
11	4062	.37	600	**4114**	.050
12	4063	.35	620	4115	.049
13	4064	.34	680	4116	.047
15	(4065)	.32	700	4117	.046
16	4066	.31	750	4118	.045
18	(4067)	.29	800	4119	.043
20	4068	.27	820	(4120)	.043
22	4069	.26	900	(4121)	.041
24	4070	.25	910	(4122)	.041
25	(4071)	.25	1000	**4123**	.039
27	4072	.24	1100	(4124)	.037
30	4073	.22	1200	4125	.035
33	4074	.21	1300	4126	.034
35	(4074A)	.207	1400	(4126A)	.033
36	(4075)	.200	1500	**4127**	.032
39	4076	.196	1600	4128	.031
40	4077	.193	1800	4129	.029
43	(4078)	.187	2000	**4130**	.027
47	(4079)	.179	2200	4131	.026
50	**4080**	.173	2400	(4132)	.025
51	(4081)	.171	2500	4133	.025
56	4082	.164	2700	(4134)	.024
62	4084	.156	3000	**4135**	.022
68	4085	.149			

2¼ WATT

.375"x.188" Dia. Style 995-2A Avg. Wt., .0018 lb

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
1.0	3860	1.50	68	(3916)	.18
1.1	(3861)	1.43	75	(3918)	.17
1.2	(3862)	1.37	82	(3920)	.16
1.3	(3863)	1.31	91	(3922)	.16
1.5	(3864)	1.22	100	3923	.15
1.6	3865	1.18	110	(3924)	.14
1.8	(3866)	1.11	120	(3925)	.14
2.0	(3867)	1.05	130	3926	.13
2.2	3868	1.01	150	**3927**	.12
2.4	(3869)	.97	160	3928	.12
2.7	(3871)	.91	180	**3929**	.11
3.0	3872	.86	200	(3930)	.10
3.3	3873	.82	220	3931	.10
3.6	(3874)	.79	240	(3932)	.097
3.9	(3875)	.76	250	3933	.094
4.0	3876	.73	270	3934	.091
4.3	(3877)	.72	300	3935	.086
4.7	3878	.69	330	(3936)	.082
5.0	3879	.67	350	3937	.080
5.1	3880	.66	360	(3938)	.079
5.6	3881	.63	390	(3939)	.076
6.2	3883	.60	400	(3940)	.075
6.8	3884	.57	430	(3941)	.072
7.5	(3886)	.55	450	(3942)	.071
8.2	3888	.52	470	3943	.069
9.1	(3890)	.50	500	3944	.067
10	3891	.47	510	(3945)	.066
11	3892	.45	560	(3946)	.063
12	3893	.43	600	(3947)	.061
13	(3894)	.41	620	(3948)	.060
15	3895	.39	680	(3949)	.057
16	(3896)	.37	700	**3950**	.056
18	(3897)	.35	750	(3951)	.055
20	3898	.33	800	(3952)	.053
22	3899	.32	820	3953	.052
24	(3900)	.31	900	(3954)	.050
25	3901	.30	910	(3955)	.050
27	3902	.29	1000	**3956**	.047
30	(3903)	.27	1100	3957	.045
33	(3904)	.26	1200	**3958**	.043
35	(3905)	.25	1300	3959	.041
36	(3906)	.25	1400	(3960)	.040
39	**3907**	.24	1500	(3961)	.039
40	(3908)	.24	1600	(3962)	.037
43	3909	.23	1800	(3963)	.035
47	3910	.22	2000	3964	.033
50	(3911)	.21	2200	3965	.032
51	(3912)	.21	2400	(3966)	.031
56	(3913)	.20	2500	3967	.030
62	3915	.19	2700	(3968)	.028
			3000	(3969)	.027

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stockin distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

© United Technical Publications

OHMITE type 995 MOLDED axial lead vitreous enameled resistors

3¼ WATT

.203" Dia. Style 995-3A Avg. Wt., .003 lb.

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
ns					
0	**4330**	1.80	200	**4399**	.13
1	(4331)	1.71	220	**4400**	.12
2	(4332)	1.65	240	4401	.11
3	(4333)	1.58	250	**4402**	.11
5	**4334**	1.47	270	**4403**	.109
6	(4335)	1.42	300	**4404**	.100
.8	4336	1.34	330	**4405**	.099
0	**4337**	1.27	350	(4405A)	.096
2	4338	1.22	360	4406	.095
.4	4339	1.16	390	**4407**	.091
.7	**4341**	1.09	400	**4408**	.090
.0	**4342**	1.04	430	4409	.087
.3	4343	.99	450	**4409A**	.084
.6	4344	.95	470	**4410**	.083
.9	(4345)	.91	500	**4411**	.081
.0	**4346**	.90	510	4412	.080
.3	4347	.87	560	**4413**	.076
.7	4348	.83	600	**4414**	.073
.0	**4349**	.81	620	**4415**	.072
.1	4350	.80	680	**4416**	.069
.6	4351	.76	700	**4417**	.068
.2	4353	.72	750	**4418**	.065
.8	**4354**	.69	800	**4419**	.064
.5	**4356**	.65	820	4420	.063
.2	4358	.63	900	**4421**	.060
.1	4360	.60	910	4422	.060
	4361	.56	1000	**4423**	.056
	4362	.54	1100	**4424**	.054
	4363	.52	1200	**4425**	.052
	4364	.50	1300	**4426**	.050
	4365	.47	1400	(4426A)	.048
	(4366)	.45	1500	**4427**	.047
	4367	.42	1600	4428	.045
	4368	.40	1800	**4429**	.042
	4369	.39	2000	**4430**	.040
	(4370)	.36	2200	**4431**	.039
	4371	.36	2400	4432	.036
	4372	.35	2500	**4433**	.036
	4373	.30	2700	**4434**	.035
	4374	.31	3000	**4435**	.033
	4374A	.30	3300	**4436**	.031
	(4375)	.30	3500	4436A	.030
	4376	.29	3600	(4437)	.030
	4377	.28	3900	4438	.029
	(4378)	.27	4000	**4439**	.028
	4379	.26	4300	(4440)	.027
	4380	.25	4500	(4440A)	.027
	4381	.25	4700	**4441**	.026
	4382	.24	5000	**4442**	.025
	4384	.23	5100	(4443)	.025
	4385	.22	5600	4444	.024
	4387	.21	6000	4445	.023
	4389	.20	6200	4446	.023
	4391	.19	6800	4447	.022
	4392	.18	7000	**4448**	.021
	(4393)	.17	7500	**4449**	.021
	4394	.16	8000	4450	.020
	4395	.16	8200	**4451**	.020
	4396	.15	9000	4452	.019
	4397	.14	9100	(4453)	.019
	4398	.13	10000	**4454**	.018

5 WATT

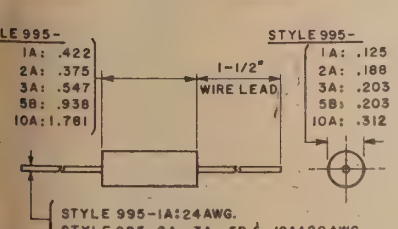
.938"x.203" Dia. Style 995-5B Avg. Wt., .004 lb.

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
1.0	**4530**	2.24	330	**4605**	.12
1.1	4531	2.13	350	**4605A**	.12
1.2	**4532**	2.04	360	(4606)	.12
1.3	(4533)	1.96	390	**4607**	.11
1.5	**4534**	1.83	400	**4608**	.11
1.6	4535	1.77	430	(4609)	.11
1.8	4536	1.67	450	4609A	.11
2.0	**4537**	1.58	470	**4610**	.10
2.2	4538	1.51	500	**4611**	.10
2.4	4539	1.44	510	**4612**	.10
2.7	4541	1.36	560	**4613**	.094
3.0	**4542**	1.29	600	**4614**	.091
3.3	(4543)	1.23	620	4615	.090
3.6	4544	1.18	680	4616	.086
3.9	(4545)	1.13	700	4617	.084
4.0	**4546**	1.11	750	**4618**	.082
4.3	(4547)	1.07	800	**4619**	.079
4.7	4548	1.03	820	**4620**	.078
5.0	**4549**	1.00	900	4621	.074
5.1	4550	.99	910	(4622)	.074
5.6	**4551**	.94	1000	**4623**	.071
6.2	4553	.90	1100	4624	.067
6.8	(4554)	.86	1200	**4625**	.065
7.5	4556	.82	1300	**4626**	.062
8.2	4558	.78	1400	(4626A)	.059
9.1	(4560)	.74	1500	**4627**	.058
10	**4561**	.71	1600	4628	.056
11	(4562)	.67	1800	**4629**	.053
12	**4563**	.65	2000	**4630**	.050
13	4564	.62	2200	**4631**	.048
15	**4565**	.58	2400	4632	.046
16	4566	.56	2500	**4633**	.045
18	**4567**	.53	2700	**4634**	.043
20	**4568**	.50	3000	**4635**	.041
22	**4569**	.48	3300	**4636**	.039
24	4570	.46	3500	4636A	.038
25	**4571**	.45	3600	(4637)	.037
27	4572	.43	3900	**4638**	.036
30	**4573**	.41	4000	**4639**	.035
33	4574	.39	4300	**4640**	.034
35	4574A	.38	4500	**4640A**	.033
36	(4575)	.37	4700	**4641**	.033
39	**4576**	.36	5000	**4642**	.032
40	**4577**	.35	5100	(4643)	.031
43	4578	.34	5600	**4644**	.030
47	**4579**	.33	6000	**4645**	.029
50	**4580**	.32	6200	(4646)	.028
51	**4581**	.31	6800	**4647**	.027
56	**4582**	.30	7000	4648	.027
62	4584	.28	7500	**4649**	.026
68	**4585**	.27	8000	**4650**	.025
75	**4587**	.26	8200	**4651**	.025
82	**4589**	.25	9000	**4652**	.024
91	(4591)	.23	9100	**4653**	.023
100	**4592**	.22	10000	**4654**	.022
110	4593	.21	11000	(4655)	.021
120	**4594**	.20	12000	**4656**	.020
130	4595	.20	13000	(4657)	.020
150	**4596**	.18	14000	(4657A)	.018
160	**4597**	.18	15000	**4658**	.018
180	4598	.17	16000	4659	.018
200	**4599**	.16	17000	4659B	.017
220	**4600**	.15	18000	4660	.017
240	4601	.14	20000	**4661**	.016
250	**4602**	.14	22000	**4662**	.015
270	**4603**	.14	24000	(4663)	.014
300	**4604**	.13	25000	**4664**	.014

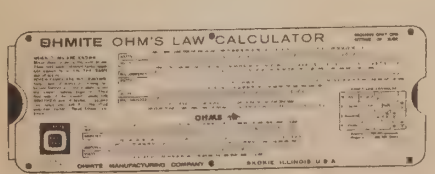
11 WATT

1.781"x.312" Dia. Style 995-10A Avg. Wt., .015 lb.

Ohms	Catalog No.[1]	Max. Amps	Ohms	Catalog No.[1]	Max. Amps
1.0	**4730**	3.32	450	(4809A)	.16
1.1	4731	3.16	470	**4810**	.15
1.2	(4732)	3.03	500	**4811**	.15
1.3	(4733)	2.91	510	4812	.15
1.5	4734	2.71	560	(4813)	.14
1.6	(4735)	2.62	600	4814	.14
1.8	4736	2.42	620	(4815)	.13
2.0	**4737**	2.34	680	4816	.13
2.2	(4738)	2.24	700	4817	.12
2.4	(4739)	2.14	750	**4818**	.12
2.7	4741	2.02	800	(4819)	.12
3.0	**4742**	1.92	820	4820	.12
3.3	(4743)	1.83	900	4821	.11
3.6	4744	1.75	910	4822	.11
3.9	(4745)	1.67	1000	**4823**	.11
4.0	**4746**	1.66	1100	4824	.10
4.3	4747	1.60	1200	4825	.096
4.7	4748	1.53	1300	(4826)	.092
5.0	**4749**	1.48	1400	4826A	.089
5.1	(4750)	1.47	1500	**4827**	.086
5.6	(4751)	1.40	1600	4828	.083
6.2	4753	1.33	1800	4829	.078
6.8	4754	1.27	2000	**4830**	.074
7.5	**4756**	1.21	2200	4831	.071
8.2	4758	1.16	2400	(4832)	.068
9.1	(4760)	1.10	2500	**4833**	.066
10	**4761**	1.05	2700	**4834**	.064
11	4762	1.00	3000	**4835**	.061
12	(4763)	.96	3300	4836	.058
13	4764	.92	3500	4836A	.056
15	**4765**	.86	3600	4837	.055
16	4766	.83	3900	(4838)	.053
18	4767	.78	4000	**4839**	.052
20	**4768**	.74	4300	4840	.050
22	**4769**	.71	4500	4840A	.049
24	(4770)	.68	4700	4841	.048
25	**4771**	.66	5000	**4842**	.047
27	4772	.64	5100	(4843)	.046
30	**4773**	.61	5600	4844	.044
33	**4774**	.58	6000	**4845**	.043
35	4774A	.56	6200	(4846)	.042
36	(4775)	.55	6800	**4847**	.040
39	**4776**	.53	7000	4848	.040
40	**4777**	.52	7500	4849	.038
43	4778	.50	8000	(4850)	.037
47	4779	.48	8200	4851	.037
50	**4780**	.47	9000	(4852)	.035
51	(4781)	.46	9100	(4853)	.035
56	4782	.44	10000	**4854**	.033
62	(4784)	.42	11000	4855	.031
68	**4785**	.40	12000	4856	.030
75	**4787**	.38	13000	(4857)	.029
82	**4789**	.37	14000	(4857B)	.028
91	(4791)	.35	15000	**4858**	.027
100	**4792**	.33	16000	(4859A)	.026
110	(4793)	.31	17000	(4859C)	.025
120	4794	.30	18000	(4860)	.024
130	4795	.29	20000	4861	.023
150	**4796**	.27	22000	4862	.022
160	4797	.26	24000	4863	.021
180	4798	.24	25000	**4864**	.021
200	**4799**	.23	27000	4865	.020
220	**4800**	.22	30000	4866	.019
240	4801	.21	33000	(4867)	.018
250	**4802**	.21	35000	(4867A)	.018
270	(4803)	.20	36000	4868	.017
300	**4804**	.19	39000	(4869)	.017
330	4805	.18	40000	**4870**	.016
350	**4805A**	.18	43000	4871	.016
360	(4806)	.17	45000	4871A	.016
390	(4807)	.17	47000	4872	.015
400	4808	.16	50000	**4873**	.015
430	4809	.16	51000	**4874**	.015



M'S LAW CALCULATOR . . .

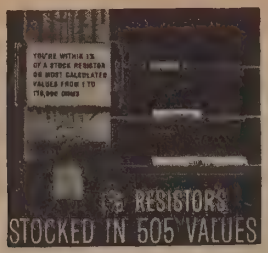


Solve Ohm's Law/Parallel Resistance problems with Ohmite's pocket-sized calculator. Also convenient A, B, C, and D slide rule scales for supplementary calculations. Resistance scales from 0.01 ohm to 100 megohms. Varnished cardboard or deluxe plastic model.

Type	Stock No.	Price
Cardboard	5180	$0.25
Plastic	5182	1.50

opular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking stributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

OHMITE type 884 Riteohm® Resistors—1% tolerance



molded for uniform shape and size

miniature precision resistors—1% tolerance

OHMICONE® molded • wirewound • aged for stability • insulated for 1000 volts • low T.C.

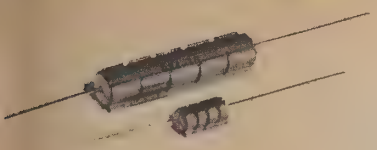
Type 884 Riteohm® Resistors are stocked in power ratings of 3, 5 and 10 watts depending upon resistance. Single layer wound on ceramic cores, Riteohm resistors feature a pressure-molded coating of tough, resilient Ohmicone® silicone-ceramic material which meets the MIL-R-26, 1000 VAC insulation test. Riteohms are aged for long term stability and exhibit negligible inductance at audio frequencies. Temperature coefficient of resistance is 0±10ppm/°C[1] for most values. Values shown are based on the MIL-Bell system of standard values. For non-standard values, closer tolerances, etc. contact your local Ohmite office.

3 WATTS Rating in Free Air for Resistance Values to 13.3K Ohms			3 WATTS Rating in Free Air for Resistance Values to 13.3K Ohms			3 WATTS Rating in Free Air for Resistance Values to 13.3K Ohms			3 WATTS Rating in Free Air for Resistance Values to 13.3K Ohms		
Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts
0.100	80013	.547	3.83	(80733)	3.39	21.5	(81453)	8.03	121	82173	19.1
0.121	80023	.602	3.92	(80743)	3.43	22.1	81463	8.14	124	(82183)	19.3
0.150	80033	.670	4.02	80753	3.47	22.6	(81473)	8.23	127	(82193)	19.5
0.182	(80043)	.739	4.12	(80763)	3.51	23.2	(81483)	8.34	130	82203	19.7
0.200	80053	.774	4.22	(80773)	3.56	23.7	(81493)	8.43	133	(82213)	20.0
0.221	80063	.814	4.32	(80783)	3.60	24.3	81503	8.54	137	(82223)	20.3
0.249	80073	.864	4.42	80793	3.64	24.9	81513	8.64	140	(82233)	20.5
0.274	80083	.906	4.53	80803	3.69	25.5	(81523)	8.74	143	(82243)	20.7
0.332	(80093)	.998	4.64	(80813)	3.73	26.1	(81533)	8.84	147	(82253)	21.0
0.392	80103	1.08	4.75	(80823)	3.77	26.7	(81543)	8.95	150	82263	21.2
0.475	80113	1.19	4.87	(80833)	3.82	27.4	81553	9.06	154	(82273)	21.5
0.499	80123	1.22	4.99	(80843)	3.87	28.0	(81563)	9.16	158	(82283)	21.8
0.562	(80133)	1.30	5.11	80853	3.91	28.7	(81573)	9.28	162	82293	22.0
0.681	80143	1.43	5.23	(80863)	3.96	29.4	(81583)	9.39	165	(82303)	22.2
0.750	80153	1.50	5.36	(80873)	4.01	30.1	81593	9.50	169	82313	22.5
0.825	80163	1.57	5.49	(80883)	4.06	30.9	(81603)	9.62	174	82323	22.8
1.00	**80173**	1.73	5.62	(80893)	4.10	31.6	(81613)	9.74	178	82333	23.1
1.02	(80183)	1.75	5.76	(80903)	4.16	32.4	(81623)	9.86	182	82343	23.4
1.05	(80193)	1.77	5.90	(80913)	4.20	33.2	81633	9.98	187	(82353)	23.7
1.07	(80203)	1.79	6.04	(80923)	4.25	34.0	(81643)	10.1	191	(82363)	23.9
1.10	80213	1.82	6.19	(80933)	4.31	34.8	81653	10.2	196	(82373)	24.2
1.13	(80223)	1.84	6.34	(80943)	4.36	35.7	(81663)	10.3	200	82383	24.5
1.15	(80233)	1.86	6.49	(80953)	4.41	36.5	(81673)	10.5	205	82393	24.8
1.18	(80243)	1.88	6.65	(80963)	4.46	37.4	(81683)	10.6	210	(82403)	25.1
1.21	(80253)	1.91	6.81	80973	4.52	38.3	81693	10.7	215	82413	25.4
1.24	(80263)	1.93	6.98	(80983)	4.57	39.2	81703	10.8	221	82423	25.7
1.27	(80273)	1.95	7.15	(80993)	4.63	40.2	**81713**	11.0	226	(82433)	26.0
1.30	(80283)	1.97	7.32	(81003)	4.68	41.2	(81723)	11.1	232	(82443)	26.4
1.33	(80293)	2.00	7.50	81013	4.74	42.2	(81733)	11.2	237	(82453)	26.7
1.37	(80303)	2.03	7.68	(81023)	4.80	43.2	81743	11.4	243	(82463)	27.0
1.40	(80313)	2.05	7.87	(81033)	4.86	44.2	(81753)	11.5	249	82473	27.3
1.43	80323	2.07	8.06	81043	4.92	45.3	(81763)	11.7	255	82483	27.7
1.47	(80333)	2.10	8.25	(81053)	4.97	46.4	(81773)	11.8	261	(82493)	28.0
1.50	80343	2.12	8.45	(81063)	5.04	47.5	81783	11.9	267	(82503)	28.3
1.54	(80353)	2.15	8.66	(81073)	5.10	48.7	(81793)	12.1	274	82513	28.7
1.58	(80363)	2.18	8.87	(81083)	5.16	49.9	81803	12.2	280	(82523)	29.0
1.62	(80373)	2.20	9.09	81093	5.22	51.1	81813	12.4	287	(82533)	29.3
1.65	(80383)	2.22	9.31	(81103)	5.28	52.3	(81823)	12.5	294	(82543)	29.7
1.69	(80393)	2.25	9.53	(81113)	5.34	53.6	(81833)	12.7	301	82553	30.0
1.74	(80403)	2.28	9.76	(81123)	5.41	54.9	(81843)	12.8	309	(82563)	30.4
1.78	(80413)	2.31	10.0	**81133**	5.47	56.2	81853	13.0	316	(82573)	30.8
1.82	(80423)	2.34	10.2	(81143)	5.53	57.6	(81863)	13.1	324	(82583)	31.2
1.87	(80433)	2.37	10.5	(81153)	5.61	59.0	81873	13.3	332	82593	31.6
1.91	(80443)	2.39	10.7	(81163)	5.66	60.4	81883	13.4	340	82603	31.9
1.96	(80453)	2.42	11.0	81173	5.74	61.9	81893	13.6	348	(82613)	32.3
2.00	80463	2.45	11.3	(81183)	5.82	63.4	(81903)	13.8	357	(82623)	32.7
2.05	(80473)	2.48	11.5	(81193)	5.87	64.9	(81913)	13.9	365	82633)	33.1
2.10	(80483)	2.51	11.8	(81203)	5.95	66.5	(81923)	14.1	374	82643	33.5
2.15	(80493)	2.54	12.1	81213	6.02	68.1	81933	14.3	383	82653	33.9
2.21	(80503)	2.57	12.4	(81223)	6.10	69.8	(81943)	14.5	392	82663	34.3
2.26	(80513)	2.60	12.7	(81233)	6.17	71.5	(81953)	14.6	402	82673	34.7
2.32	(80523)	2.64	13.0	81243	6.24	73.2	(81963)	14.8	412	(82683)	35.1
2.37	(80533)	2.67	13.3	(81253)	6.32	75.0	81973	15.0	422	(82693)	35.6
2.43	(80543)	2.70	13.7	(81263)	6.41	76.8	(81983)	15.2	432	82703	36.1
2.49	80553	2.73	14.0	81273	6.48	78.7	(81993)	15.4	442	(82713)	36.4
2.55	(80563)	2.77	14.3	(81283)	6.55	80.6	(82003)	15.5	453	82723	36.9
2.61	(80573)	2.80	14.7	(81293)	6.64	82.5	82013	15.7	464	(82733)	37.3
2.67	(80583)	2.83	15.0	81303	6.70	84.5	(82023)	15.9	475	82743	37.7
2.74	(80593)	2.87	15.4	(81313)	6.80	86.6	(82033)	16.1	487	(82753)	38.2
2.80	(80603)	2.90	15.8	(81323)	6.88	88.7	82043	16.3	499	82763	38.7
2.87	(80613)	2.93	16.2	(81333)	6.97	90.9	82053	16.5	511	82773	39.1
2.94	(80623)	2.97	16.5	(81343)	7.03	93.1	(82063)	16.7	523	(82783)	39.6
3.01	80633	3.00	16.9	(81353)	7.12	95.3	(82073)	16.9	536	(82793)	40.1
3.09	(80643)	3.04	17.4	(81363)	7.22	97.6	(82083)	17.1	549	(82803)	40.6
3.16	(80653)	3.08	17.8	(81373)	7.30	100	**82093**	17.3	562	82813	41.0
3.24	(80663)	3.12	18.2	81383	7.39	102	(82103)	17.5	576	(82823)	41.6
3.32	80673	3.16	18.7	(81393)	7.49	105	(82113)	17.7	590	(82833)	42.0
3.40	(80683)	3.19	19.1	(81403)	7.57	107	(82123)	17.9	604	82843	42.5
3.48	(80693)	3.23	19.6	(81413)	7.66	110	(82133)	18.2	619	82853	43.1
3.57	(80703)	3.27	20.0	81423	7.74	113	(82143)	18.4	634	(82863)	43.6
3.65	(80713)	3.31	20.5	(81433)	7.84	115	82153	18.6	649	(82873)	44.1
3.74	(80723)	3.35	21.0	(81443)	7.94	118	(82163)	18.8	665	(82883)	44.6

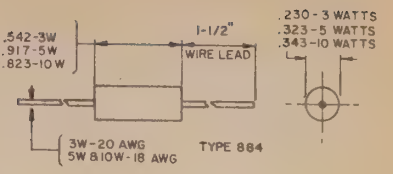
[2] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

© United Technical Publications

OHMITE



Uniform shape of Riteohms permits clip mounting for extra heat dissipation. The wattage capability can be increased by as much as 100% when clip is mounted to a metal surface. See Series 99 listings for clip ordering information.



Type 884 Riteohm® Resistors — 1% tolerance

3 WATTS	Rating in Free Air for Resistance Values to 13.3K Ohms		3 WATTS	Rating in Free Air for Resistance Values to 13.3K Ohms		3 WATTS	Rating in Free Air for Resistance Values to 13.3K Ohms		3 WATTS	Rating in Free Air for Resistance Values to 13.3K Ohms	
Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts
681	82893	45.2	1,650	(83263)	70.3	4,020	83633	110	9,760	(84003)	171
698	(82903)	45.7	1,690	(83273)	71.2	4,120	(83643)	111	10,000	**84013**	173
715	82913	46.3	1,740	(83283)	72.2	4,220	(83653)	112	10,200	(84023)	175
732	(82923)	46.8	1,780	83293	73.0	4,320	(83663)	114	10,500	(84033)	178
750	82933	47.4	1,820	83303	73.9	4,420	(83673)	115	10,700	(84043)	179
768	(82943)	48.0	1,870	(83313)	74.9	4,530	(83683)	117	11,000	(84053)	182
787	(82953)	48.6	1,910	(83323)	75.7	4,640	(83693)	118	11,300	(84063)	184
806	82963	49.2	1,960	(83333)	76.6	4,750	83703	119	11,500	(84073)	186
825	82973	49.7	2,000	83343	77.4	4,870	83713	121	11,800	(84083)	188
845	(82983)	50.4	2,050	(83353)	78.4	4,990	83723	122	12,100	(84093)	190
866	(82993)	51.0	2,100	(83363)	79.4	5,110	83733	124	12,400	(84103)	193
887	(83003)	51.6	2,150	83373	80.3	5,230	(83743)	125	12,700	(84113)	195
909	83013	52.2	2,210	83383	81.4	5,360	(83753)	127	13,000	(84123)	197
931	(83023)	52.8	2,260	83393	82.3	5,490	83763	128	13,300	(84133)	200
953	83033	53.4	2,320	(83403)	83.4	5,620	83773	130	13,700	(84143)	200
976	(83043)	54.1	2,370	(83413)	84.3	5,760	(83783)	131	14,000	(84153)	200
1,000	**83053**	54.7	2,430	83423	85.4	5,900	(83793)	133	14,300	(84163)	200
1,020	(83063)	55.3	2,490	83433	86.4	6,040	83803	134	14,700	(84173)	200
1,050	(83073)	56.1	2,550	(83443)	87.4	6,190	83813	136	15,000	84183	200
1,070	(83083)	56.6	2,610	(83453)	88.4	6,340	(83823)	138	15,400	(84193)	200
1,100	83093	57.4	2,670	(83463)	89.5	6,490	(83833)	140	15,800	(84203)	200
1,130	(83103)	58.2	2,740	83473	90.6	6,650	(83843)	141	16,200	(84213)	200
1,150	(83113)	58.7	2,800	(83483)	91.6	6,810	83853	143	16,500	(84223)	200
1,180	**83123**	59.5	2,870	(83493)	92.8	6,980	83863	145	16,900	(84233)	200
1,210	(83133)	60.2	2,940	83503	93.9	7,150	(83873)	146	17,400	(84243)	200
1,240	(83143)	61.0	3,010	83513	95.0	7,320	(83883)	148	17,800	(84253)	200
1,270	(83153)	61.7	3,090	83523	96.2	7,500	83893	150	18,200	(84263)	200
1,300	83163	62.4	3,160	**83533**	97.4	7,680	(83903)	152	18,700	(84273)	200
1,330	(83173)	63.2	3,240	83543	98.6	7,870	(83913)	154	19,100	(84283)	200
1,370	(83183)	64.1	3,320	83553	99.8	8,060	83923	155	19,600	(84293)	200
1,400	(83193)	64.8	3,400	(83563)	101	8,250	83933	157	20,000	84303	200
1,430	(83203)	65.5	3,480	83573	102	8,450	(83943)	159	20,500	84313	200
1,470	83213	66.4	3,570	(83583)	103	8,660	(83953)	161	21,000	(84323)	200
1,500	83223	67.0	3,650	(83593)	105	8,870	83963	163	21,500	(84333)	200
1,540	(83233)	68.0	3,740	(83603)	106	9,090	(83973)	165	22,100	84343	200
1,580	(83243)	68.8	3,830	(83613)	107	9,310	(83983)	167			
1,620	83253	69.7	3,920	83623	108	9,530	(83993)	169			

5 WATTS	Rating in Free Air for Resistance Values to 42.2K Ohms		5 WATTS	Rating in Free Air for Resistance Values to 42.2K Ohms		5 WATTS	Rating in Free Air for Resistance Values to 42.2K Ohms		5 WATTS	Rating in Free Air for Resistance Values to 42.2K Ohms	
Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts
22,600	(84355)	337	31,600	(84495)	397	44,200	(84635)	460	61,900	(84775)	460
23,200	(84365)	341	32,400	(84505)	402	45,300	84645	460	63,400	(84785)	460
23,700	84375	344	33,200	(84515)	407	46,400	(84655)	460	64,900	(84795)	460
24,300	(84385)	347	34,000	84525	412	47,500	84665	460	66,500	(84805)	460
24,900	84395	353	34,800	(84535)	417	48,700	(84675)	460	68,100	(84815)	460
25,500	84405	357	35,700	(84545)	422	49,900	84685	460	69,800	(84825)	460
26,100	(84415)	361	36,500	84555	427	51,100	84695	460	71,500	(84835)	460
26,700	(84425)	365	37,400	(84565)	432	52,300	(84705)	460	73,200	(84845)	460
27,400	84435	370	38,300	(84575)	437	53,600	(84715)	460	75,000	(84855)	460
28,000	(84445)	374	39,200	(84585)	442	54,900	(84725)	460	76,800	(84865)	460
28,700	(84455)	379	40,200	84595	448	56,200	(84735)	460	78,700	(84875)	460
29,400	(84465)	383	41,200	(84605)	454	57,600	(84745)	460	80,600	84885	460
30,100	84475	388	42,200	(84615)	460	59,000	(84755)	460			
30,900	(84485)	393	43,200	84625	460	60,400	(84765)	460			

10 WATTS	Rating in Free Air for Resistance Values to 121K Ohms		10 WATTS	Rating in Free Air for Resistance Values to 121K Ohms		10 WATTS	Rating in Free Air for Resistance Values to 121K Ohms		10 WATTS	Rating in Free Air for Resistance Values to 121K Ohms	
Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts	Ohms	Catalog No.[2]	Max. Volts
82,500	84890	908	105,000	(84990)	1,020	133,000	(85090)	1,100	169,000	(85190)	1,100
84,500	(84900)	919	107,000	(85000)	1,030	137,000	(85100)	1,100	174,000	85200	1,100
86,600	(84910)	930	110,000	(85010)	1,050	140,000	(85110)	1,100	178,000	(85210)	1,100
88,700	(84920)	942	113,000	(85020)	1,060	143,000	(85120)	1,100	182,000	(85220)	1,100
90,900	84930	952	115,000	(85030)	1,070	147,000	(85130)	1,100	187,000	(85230)	1,100
93,100	(84940)	965	118,000	(85040)	1,090	150,000	**85140**	1,100	191,000	(85240)	1,100
95,300	(84950)	976	121,000	(85050)	1,100	154,000	(85150)	1,100	196,000	(85250)	1,100
97,600	(84960)	988	124,000	(85060)	1,100	158,000	(85160)	1,100	200,000	**85260**	1,100
100,000	84970	1,000	127,000	(85070)	1,100	162,000	(85170)	1,100			
102,000	(84980)	1,010	130,000	(85080)	1,100	165,000	(85180)	1,100			

T.C. of values in 3 Watt size under 97.6 ohms is as follows: From 97.6 thru 10 ohms, 0±20ppm/°C; from 9.76 thru 1.0 ohms, 0±50ppm/°C; below 1 ohm, 0±90ppm/°C.

Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

OHMITE type 270 vitreous enameled fixed resistors

These lug type resistors are wire-wound on high quality ceramic cores, protected and insulated by Ohmite vitreous enamel — the time-proved standard covering that is the best conductor of heat for a material which must also be a good electrical insulator.

Resistance tolerance is ±5% for values 1 ohm or higher; ±10% below 1 ohm.

Wattage ratings are for use in free air. When resistors are mounted in closed spaces or where the circulation of air is restricted, they should not be used at more than one-half rating. Currents and voltages for reduced ratings can be obtained by multiplying full rating by the following factors: 75% load = .86, 66% = .81, 50% = .71, 33% = .57, 25% = .50.

Mounting brackets are automatically supplied in individual unit packs; supplied only when specified in bulk pack orders. See page 18, "Mounting Brackets for Tubular Resistors" to specify other brackets.







12 WATT Free air rating to 5600 Ohms Core: 1¾"x⅜" Mtg. Ctr: 2¾"—Av. Wt. .02 lb. Std. Mtg. Brkt.: Cat. No. 5		25 WATT Free air rating to 12,000 Ohms. Core: 2"x¾" Mtg. Ctr: 2¾" — Av. Wt. .05 lb. Std. Mtg. Brkt.: No. 9		50 WATT Free air rating to 25,000 Ohms. Core: 4"x⅜" Mtg. Ctr:4¾" — Av. Wt. .09 lb. Std. Mtg. Brkt.: No. 9		100 WATT Free air rating to 60,000 Ohms. Core: 6½"x¾" Mtg. Ctr: 7⅜" — Av. Wt. .20 lb. Std. Mtg. Brkt.: No. 12		175 WATT Free air rating for All Values Core: 8½"x1⅛" Mtg. Ctr: 9⅜" — Av. Wt. .50 lb. Std. Mtg. Brkt.: No. 18		225 WATT Free air rating for All Values Core: 10½"x1⅛" Mtg. Ctr: 11⅜" — Av. Wt. .62 lb. Std. Mtg. Brkt.: No. 18	
Resist. Ohms.	Cat. No.[1] Max. Amps.	Ohms Res.	Catalog No.[1] Max. Amps.		Catalog No.[1] Max. Amps.		Catalog No.[1] Max. Amps.		Catalog No.[1] Max. Amps.		Catalog No.[1] Max. Amps.
.51	**3723** 4.86	1	**0200J** 5.00		**0400J** 7.07		**0600C** 10.00		**0700C** 13.2		**0900C** 15.00
1.0	**3730** 3.46	2	**0200K** 3.54		**0400K** 5.00		**0600D** 7.07		0700D 9.35		**0900D** 10.60
1.5	3734 2.83	3	**0200L** 2.88		**0400L** 4.07		**0600E** 5.77		0700E 7.63		**0900E** 8.67
2.2	(3738) 2.34	4	**0200N** 2.50		**0400N** 3.53		**0600F** 5.00		(0700F) 6.6		**0900F** 7.50
3.3	3742 1.91	5	**0200A** 2.24		**0400A** 3.16		**0600A** 4.47		**0700A** 5.92		**0900A** 6.72
4.7	3746 1.60	10	**0200B** 1.58		**0400B** 2.23		**0600B** 3.16		**0700B** 4.18		**0900B** 4.74
6.8	3750 1.33	15	**0200R** 1.29								
10	**3754** 1.10	25	**0200C** 1.00		**0400C** 1.41		**0601** 2.00		**0701** 2.64		**0901** 3.00
12	3756 1.00	50	**0200D** .71		**0400D** 1.00		**0602** 1.41		**0702** 1.87		**0902** 2.12
15	3758 .89	75	**0200E** .58		**0400E** .82		**0603** 1.15		0703 1.52		**0903** 1.73
18	3760 .82	100	**0200F** .50		**0400F** .71		**0604** 1.00		**0704** 1.32		**0904** 1.50
22	3762 .74	125					0604B .90		0704B 1.18		
27	3764 .67	150	**0200G** .41		**0400G** .58		**0605** .82		**0705** 1.08		**0905** 1.25
33	3766 .60	200	**0200H** .35		**0400H** .50						
39	3768 .55	250	**0201** .32		**0401** .45		**0606** .63		**0706** .84		**0906** .95
47	3770 .53	500	**0202** .22		**0402** .32		**0607** .45		0707 .59		**0907** .67
56	3772 .46	750	**0203** .18		**0403** .26		**0608** .37		0708 .48		**0908** .55
68	3774 .42	800	**0204** .17		**0404** .25						
82	**3776** .38	1,000	**0205** .16		**0405** .22		**0609** .32		0709 .42		**0909** .47
100	**3778** .35	1,500	**0206** .13		**0406** .18		0610 .26		0710 .34		**0910** .39
120	3780 .32	2,000	**0207** .12		**0407** .16		**0611** .22		0711 .30		**0911** .34
150	3782 .28	2,500	**0208** .10		**0408** .14		**0612** .20		(0712) .26		**0912** .30
180	3784 .26	3,000	**0209** .091		0409 .13		**0613** .18		0713 .24		**0913** .27
220	3786 .23	3,500	0210 .084								
270	3788 .21	4,000	0211 .079		0410 .11						
330	3790 .19	5,000	**0212** .070		**0411** .10		**0614** .14		0714 .19		**0914** .21
390	3792 .18	6,000	**0213** .064								
470	3794 .16	7,500	**0214** .057		0412 .081		0615 .12		(0715) .15		0915 .17
560	3796 .15	8,000			0413 .079						
680	(3798) .13	10,000	**0215** .050		**0414** .071		0616 .10		0716 .13		**0916** .15
820	3800 .12	12,000	**0216** .045		(0415) .064						
1,000	**3802** .11	15,000	**0217** .036		**0416** .057		0617 .081		0717 .11		**0917** .13
1,200	3804 .10	20,000	**0218** .031		(0417) .050		0618 .071		0718 .094		**0918** .11
1,500	**3806** .089	25,000	**0219** .028		0418 .045		0619 .063		0719 .083		0919 .095
1,800	(3808) .082	30,000	0220 .026				0620 .058		(0720) .076		0920 .087
2,200	3810 .074	35,000	(0221) .024		0419 .032						
2,700	3812 .067	40,000	0222 .022				0621 .050		(0721) .066		**0921** .075
3,300	3814 .060	50,000	**0224** .019		**0420** .026		**0622** .045		(0722) .059		**0922** .067
3,900	3816 .055	60,000	**0225** .016				0623 .041		(0723) .054		(0923) .061
4,700	**3818** .051	70,000	0226 .013								
5,600	3820 .046	75,000			0421 .021		0624 .032		(0724) .048		(0924) .055
6,800	(3822) .038	80,000	0227 .012								
8,200	(3824) .035	100,000	**0229** .0094		**0422** .018		**0625** .028		0725 .042		**0925** .047
10,000	**3826** .032	125,000			0423 .017						
12,000	3828 .029	150,000			0424 .015						
15,000	3830 .026	175,000			(0425) .014						
18,000	(3832) .024	200,000			0426 .012						
22,000	3834 .021	250,000			**0428** .010						
27,000	3836 .019										
33,000	(3838) .017										
39,000	(3840) .016										
47,000	(3842) .015										
51,000	**3843** .014										

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

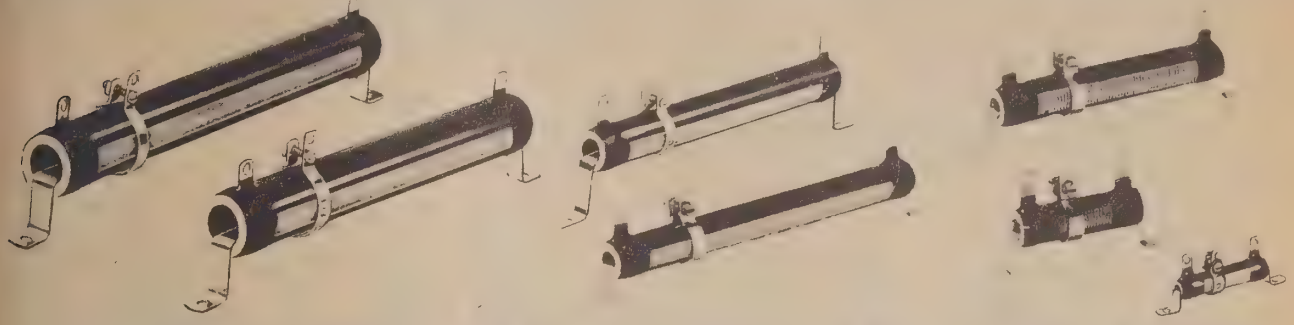
© United Technical Publication

OHMITE dividohm® type 210 adjustable vitreous enameled resistors

"Dividohm" resistors make ideal voltage dividers for original equipment and replacement in transmitters, rectifiers and other apparatus. Such tapped "bleeders" are made by using one or more adjustable lugs, as required. "Dividohms" are also handy for obtaining odd resistance values, for adjusting circuits, and for use on equipment which must be set to meet various line voltages.

"Dividohm" resistors are vitreous enameled resistors on which a narrow strip has been left uncovered to expose a portion of each turn. Contact to any wire in this strip is made by an embossed contact on the adjustable lug (supplied).

WATT RATING: **The stated wattage rating applies only when the entire resistance is in the circuit.** When the adjustable lug is set at an intermediate point, the wattage rating is reduced in approximately the same portion, i.e., if the lug is set at half the resistance, the wattage is reduced by one-half. A safe rule to follow is to make sure that the maximum rated current is not exceeded. This should be carefully checked particularly if the resistor will be used as a voltage divider with several adjustable lugs. Resistance tolerance is ±10% for the total resistance value.



Resist. Ohms	12 WATT Core: 1¾"x⅝"D. Mtg. Ctr: 2¾"— Av. Wt. .02 lb. Std. Mtg. Brkt.* No. 5		25 WATT Core: 2"x⅝"D. Mtg. Ctr: 2¾"— Av. Wt. .05 lb. Std. Mtg. Brkt.* No. 9		50 WATT Core: 4"x⅝"D. Mtg. Ctr: 4¾"— Av. Wt. .09 lb. Std. Mtg. Brkt.* No. 9		75 WATT Core: 6"x⅝"D. Mtg. Ctr: 6¾"— Av. Wt. .15 lb. Std. Mtg. Brkt.* No. 9		100 WATT Core: 6½"x¾"D. Mtg. Ctr: 7⅜"— Av. Wt. .20 lb. Std. Mtg. Brkt.* No. 12		175 WATT Core: 8½"x1⅛"D. Mtg. Ctr: 9¾"— Av. Wt. .50 lb. Std. Mtg. Brkt.* No. 18		225 WATT Core: 10½"x1⅛"D. Mtg. Ctr: 11⅜"— Av. Wt. .62 lb. Std Mtg. Brkt.* No. 18	
	Catalog No.[1]	Max. Amps.	Catalog No.[1]	Max. Amps.	Catalog No.[1]	Max. Amps.	Catalog No.[1]	Max. Amps.	Catalog No.[1]	Max. Amps.	Catalog No.[1]	Max. Amps.	Catalog No.[1]	Max. Amps.
1	**1001**	3.46	**0360**	5.00	**0560A**	7.07	0769A	8.66	**0956A**	10.0	**1156A**	13.2	**1356A**	15.00
2	**1002**	2.45	**0360B**	3.54	**0560B**	5.00	0769B	6.12	**0956B**	7.07	1156B	9.35	**1356B**	10.60
3	**1003**	2.00	**0361**	2.88	**0560C**	4.07	0769C	5.00	**0956C**	5.77	1156C	7.63	**1356C**	8.67
4					0560D	3.53	0769D	4.33	**0956D**	5.00	1156D	6.60	**1356D**	7.50
5	**1004**	1.54	0362	2.24	**0560**	3.16	**0769**	3.87	**0956**	4.47	**1156**	5.92	**1356**	6.72
7.5	1005	1.26	**0362B**	1.82										
10	**1006**	1.09	**0363**	1.58	**0561**	2.23	**0770**	2.74	**0957**	3.16	**1157**	4.18	**1357**	4.74
15	**1007**	.89	**0364**	1.29			**0771**	2.24						
20	**1008**	.77	**0364B**	1.12										
25	**1009**	.69	**0365**	1.00	**0562**	1.41	**0772**	1.73	**0958**	2.00	**1158**	2.64	**1358**	3.00
50	**1010**	.49	**0366**	.71	**0563**	1.00	**0773**	1.22	**0959**	1.41	**1159**	1.87	**1359**	2.12
75	**1011**	.40	**0367**	.58	**0564**	.82								
100	**1012**	.34	**0368**	.50	**0565**	.71	**0774**	.86	**0960**	1.00	**1160**	1.32	**1360**	1,50
150	**1013**	.28	**0369**	.41	**0566**	.58								
200	**1014**	.24	**0370**	.35	0567	.50	0774B	.61						
250	**1015**	.22	**0371**	.32	**0568**	.45	0775	.55	**0960B**	.63	**1160B**	.84	**1360B**	.95
300	**1016**	.20	**0371B**	.29	**0568B**	.41	**0775B**	.50						
350	1017	.18												
400	**1018**	.17	**0371C**	.25	**0568C**	.35	0775C	.43						
500	**1019**	.15	**0372**	.22	**0569**	.32	**0776**	.39	**0961**	.45	**1161**	.59	**1361**	.67
600	1020	.14												
750	**1021**	.13	**0373**	.18	**0570**	.26	0777	.32						
800	1022	.12	0374	.17	(0571)	.25	(0777B)	.30						
1000	**1023**	.11	**0375**	.16	**0572**	.22	0778	.27	**0962**	.32	**1162**	.42	**1362**	.47
1250	1024	.098	0375B	.14	0572B	.20	0778B	.24						
1500	**1025**	.089	**0376**	.13	**0573**	.18	0779	.22	**0962B**	.26	1162B	.34	**1362B**	.39
2000	**1026**	.077	**0377**	.12	0574	.16	0780	.19						
2250	1027	.073	0377B	.11	(0574B)	.15	(0780B)	.18						
2500	**1028**	.069	**0378**	.10	**0575**	.14	(0781)	.17	**0963**	.20	1163	.26	**1363**	.30
3000	**1029**	.063	**0379**	.091	**0576**	.13	(0781B)	.16						
3500	1030	.058	0380	.084	0576B	.12	(0782)	.15						
4000	1031	.055	**0381**	.079	0577	.11	0782B	.14						
4500	1032	.052	0381B	.074	0577B	.10	(0782C)	.13						
5000	**1033**	.049	**0382**	.070	**0578**	.10	0783	.12	**0964**	.14	1164	.19	**1364**	.21
6000	1034	.045	0383	.064	0578B	.091	(0783B)	.11						
7000	**1035**	.042	(0383B)	.060	(0578C)	.084	(0783C)	.10						
7500	1036	.040	**0384**	.057	(0579)	.081	(0784)	.10						
8000	**1037**	.039	0384B	.055	**0580**	.079	(0784B)	.096						
8500	(1038)	.037												
9000	(1039)	.036	0384C	.052	(0580B)	.074	(0784C)	.091						
10000	**1040**	.035	**0385**	.050	**0581**	.071	0785	.086	**0965**	.10	1165	.13	**1365**	.15
12000			0386	.042	0582	.064	(0785B)	.079						
15000			**0387**	.036	**0583**	.057	(0786)	.070	(0966)	.081	(1166)	.11	1366	.13
20000			**0388**	.031	0584	.050	0787	.061	0967	.071	(1167)	.094	1367	.11
25000			**0389**	.028	**0585**	.045	0788	.054	0968	.063	(1168)	.083	1368	.095
30000					0586	.036	(0789)	.050	(0969)	.058	(1169)	.076	1369	.087
35000							(0790)	.046						
40000					0587	.029	(0791)	.043	0970	.050	(1170)	.066	(1370)	.075
45000							(0792)	.035						
50000					**0588**	.026	(0793)	.033	**0971**	.045	(1171)	.059	1371	.067
60000					(0589)	.024	(0794)	.030						
75000									(0972)	.032	(1172)	.048	(1372)	.055
80000					(0590)	.021	(0795)	.026						
100000					0591	.018	(0796)	.023	**0973**	.028	1173	.042	1373	.047

[1] **Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.**

* **Mounting brackets are automatically supplied in individual unit packs; supplied only when specified in bulk packs.**

adjustable lugs

One "Screw Driver Type Adjustable Lug" is supplied with each unit. Lugs with a silver contact button can be ordered from the table shown below.

MOVING THE LUGS: Lugs always should be loosened completely before moving and not moved except while the current is off, in order to protect the exposed wire from mechanical or electrical injury and to protect the operator from dangerous voltages.



STANDARD

Core Diam. Inches	Screw Driver Type — New Cat. No.	Screw Driver Type — Old Cat. No.	Bakelite Knob Type — New Cat. No.	Bakelite Knob Type — Old Cat. No.
⅜	2115	1058	—	—
9/16	2121	0358	2122	0359
¾	2125	1958	2126	1959
1⅛	2133	2158	2134	2159

With SILVER CONTACT BUTTONS

Core Diam. Inches	Screw Driver Type — New Cat. No.	Screw Driver Type — Old Cat. No.	Bakelite Knob Type — New Cat. No.	Bakelite Knob Type — Old Cat. No.
⅜	2116	2161	—	—
9/16	2123	2164	2124	2165
¾	2127	2166	2128	2167
1⅛	2135	2170	2136	2171

DOUBLE THUMB SCREW ADJUSTABLE LUG

This adjustable lug, which is illustrated above, features two advantages — ease of adjustment and less chance of damaging the resistance wire while moving lugs. Available for 1⅛" cores. Catalog No. **2160**

© United Technical Publications

OHMITE type 200 *brown devil*® fixed resistors



BROWN DEVIL® (Type 200) resistors, are vitreous enameled, wirewound units long famous for ruggedness and durability in small power resistors. With the emphasis towards miniaturization and the current industry trend towards higher operating temperatures, Ohmite has been able to increase the ratings on two Brown Devil sizes. The 5 watt size is now rated **8 watts** and the 10 watt size is now rated **12 watts**. The 20 watt unit retains the same rating. The higher ratings may be confidently applied to any 5 or 10 watt unit now in the possession of users or distributors. At this time also, to meet the demand for lower wattage units, Ohmite introduces two, new, small stock sizes — 3 and 5¼ watts.

Standard resistance tolerance is ±5% for values 1 ohm or higher; ±10% for values below 1 ohm. Tinned leads 1½" long: 3 and 5¼ watt, 20 AWG; 8, 12 and 20 watt, 18 AWG.

DIMENSIONS, WEIGHTS, CODES

Rating	3W	5¼W	8W	12W	20W
Core Dimen.	7/16x.21D	5/8x1¼D	1x3/4D	1¾x3/4D	2x7/8D
Weight (lbs.)	.003	.005	.01	.015	.03

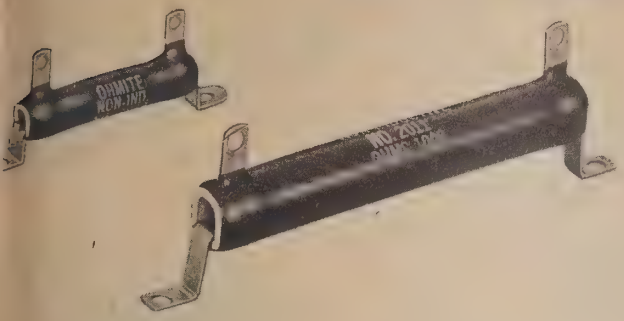
Ohms	3 WATT Cat. No.[1]	Amps.	5¼ WATT Cat. No.[1]	Amps.	8 WATT Cat. No.[1]	Amps.	12 WATT Cat. No.[1]	Amps.	20 WATT Cat. No.[1]	Amps.
0.5							**1700A**	4.90	**1800A**	6.32
1.0	**2712**	1.73	**2822**	2.29	**1500**	2.83	**1701**	3.46	**1802A**	4.47
1.1	(2713)	1.65	(2823)	2.19						
1.2	(2714)	1.58	(2824)	2.09						
1.3	(2715)	1.52	(2825)	2.01						
1.5	(2716)	1.41	2826	1.87	1500B	2.30	**1704**	2.82		
1.6	(2717)	1.37	(2827)	1.81						
1.8	(2718)	1.29	(2828)	1.71						
2.0	2719	1.22	**2829**	1.62	**1501**	2.00	**1705**	2.45	**1802B**	3.16
2.2	(2720)	1.17	2830	1.54						
2.4	(2721)	1.12	(2831)	1.48						
2.7	2722	1.05	(2832)	1.39						
3.0	2723	1.00	2833	1.32	1502	1.63	**1706**	2.00	**1802C**	2.58
3.3	2724	.95	2834	1.24						
3.6	2725	.91	2835	1.21						
3.9	(2726)	.88	2836	1.16						
4.0					**1503**	1.41	**1707**	1.73	1802D	2.24
4.3	(2727)	.83	2837	1.10						
4.7	2728	.80	2838	1.06						
5.0					**1504**	1.26	**1708**	1.54	**1803**	2.00
5.1	2729	.77	**2839**	1.01						
5.6	2730	.73	2840	.97						
6.2	2731	.69	(2841)	.92						
6.8	(2732)	.66	(2842)	.88						
7.5	2733	.63	2843	.84	**1505**	1.00	**1709**	1.26		
8.2	(2734)	.60	2844	.80						
9.1	2735	.57	(2845)	.76						
10	2736	.55	**2846**	.72	**1506**	.89	**1710**	1.09	**1804**	1.41
11	(2737)	.52	2847	.69						
12	(2738)	.50	2848	.66	1507	.81	**1711**	1.00		
13	(2739)	.48	(2849)	.64						
15	2740	.45	**2850**	.59	**1508**	.73	**1712**	.89		
16	(2741)	.43	2851	.57						
18	2742	.42	(2852)	.54						
20	2743	.39	**2853**	.51	**1509**	.63	**1713**	.77		
22	2744	.37	2854	.49						
24	(2745)	.35	2855	.47						
25					**1510**	.56	**1714**	.69	**1805**	.89
27	(2746)	.33	2856	.44						
30	2747	.32	2857	.42	**1511**	.51	**1715**	.63		
33	2748	.30	(2858)	.40						
35					1512	.47	1716	.58		
36	(2749)	.29	(2859)	.38						
39	2750	.28	2860	.37						
40					**1513**	.44	**1717**	.54		
43	(2751)	.26	(2861)	.35						
47	(2752)	.25	2862	.33						
50					**1514**	.40	**1718**	.49	**1806**	.63
51	2753	.24	2863	.32						
56	2754	.23	2864	.31						
62	2755	.22	2865	.29						
68	2756	.21	2866	.28						
75	2757	.20	2867	.27	**1515**	.32	**1719**	.40	**1807**	.52
82	(2758)	.19	2868	.25						
91	2759	.18	2869	.24						
100	**2760**	.17	**2870**	.23	1516	.28	**1720**	.34	**1808**	.45
110	(2761)	.16	2871	.22						
120	2762	.16	2872	.21						
125					**1517**	.25	**1721**	.31		
130	(2763)	.15	(2873)	.20						
150	2764	.14	**2874**	.19	**1518**	.23	**1722**	.28	**1809**	.36
160	(2765)	.14	2875	.18						
180	2766	.13	**2876**	.17						
200	**2767**	.12	**2877**	.16	**1519**	.20	**1723**	.24	**1810**	.32
220	2768	.12	2878	.16						
225					1520	.18	1724	.23		
240	2769	.11	2879	.15						
250					**1521**	.17	**1725**	.22	**1811**	.28
270	2770	.11	2880	.14						
300	2771	.10	**2881**	.13	1522	.16	**1726**	.20	**1812**	.26
330	2772	.095	**2882**	.12						
350					1523	.15	1727	.18	1813	.24
360	2773	.091	(2883)	.12						
390	(2774)	.088	2884	.12						
400					**1524**	.14	**1728**	.17	1814	.22
430	2775	.083	2885	.11						
450					1525	.13	1729	.16		
470	2776	.080	**2886**	.11						

Ohms	3 WATT Cat. No.[1]	Amps.	5¼ WATT Cat. No.[1]	Amps.	8 WATT Cat. No.[1]	Amps.	12 WATT Cat. No.[1]	Amps.	20 WAT Cat. No.[1]	Amp
500					**1526**	.12	**1730**	.15	**1815**	.2
510	2777	.077	2887	.10						
560	2778	.073	2888	.097						
600					**1527**	.11	**1731**	.14		
620	(2779)	.070	2889	.092						
650									**1816**	.1
680	2780	.067	2890	.088						
700					1528	.11	**1732**	.13	1817	.1
750	2781	.063	2891	.084	1529	.10	**1733**	.12	**1818**	.1
800					1530	.10	1734	.12	1819	.1
820	(2782)	.060	**2892**	.080						
900					1531	.094	**1735**	.11	1820A	.1
910	**2783**	.057	2893	.076						
1000	2784	.055	**2894**	.072	**1532**	.089	**1736**	.11	**1821**	.1
1100	(2785)	.052	2895	.069	1533	.085	(1737)	.10		
1200	2786	.050	2896	.066	**1534**	.081	**1738**	.10	**1822**	.1
1250					1535	.080	1739	.097	1823	.1
1300	(2787)	.048	2897	.063						
1500	2788	.045	**2898**	.059	**1536**	.073	**1740**	.089	**1824**	.1
1600	2789	.043	(2899)	.057						
1750					1537	.067	**1741**	.082	1825	.1
1800	(2790)	.042	2900	.050						
2000	(2791)	.039	**2901**	.047	**1538**	.063	**1742**	.077	**1827**	.1
2200	2792	.037	2902	.045						
2250					1539	.059	**1743**	.073	(1828)	.0
2400	(2793)	.035	2903	.043						
2500					**1540**	.056	**1744**	.069	**1830**	.0
2700	(2794)	.033	2904	.041						
2750									1831	.0
3000	2795	.032	**2905**	.039	**1541**	.046	**1745**	.063	**1832**	.0
3300	2796	.030	2906	.037						
3500					1542	.043	**1746**	.058	**1833**	.0
3600	(2797)	.029	2907	.035						
3900	2798	.028	2908	.034						
4000					**1543**	.040	**1747**	.054	**1834**	.0
4300	(2799)	.026	(2909)	.032						
4500					**1544**	.038	**1748**	.051	1835	.0
4700	2800	.025	2910	.031						
5000					**1545**	.036	**1749**	.049	**1836**	.0
5100	(2801)	.024	2911	.030						
5600	(2802)	.023	2912	.028						
6000					**1546**	.033	**1750**	.044	**1837**	.0
6200	2803	.022	2913	.027						
6800	(2804)	.021	2914	.026						
7000					**1547**	.030	1751	.041	(1838)	.0
7500	(2805)	.020	2915	.025	**1548**	.029	**1752**	.036	1839	.0
8000					1549	.029	**1753**	.035	(1840)	.0
8200	2806	.019	2916	.023						
8500							(1754)	.034		
9000					**1550**	.027	1754A	.033	(1840A)	.0
9100	(2807)	.018	(2917)	.022						
10K	2808	.016	**2918**	.021	**1551**	.026	**1755**	.032	**1841**	.0
11K			(2919)	.020			(1756)	.030		
12K			2920	.019			1757	.029		
12.5K					1552	.023	1758	.028	1842	.0
13K			(2921)	.019						
13.5K							(1759)	.027		
15K			2922	.017	**1553**	.021	**1761**	.026	1843	.0
16K			2923	.017			(1762)	.025		
17.5K					1554	.019	1763	.024		
18K			2924	.016			1764	.024		
20K			**2925**	.014	1555	.018	**1765**	.022	**1844**	.0
22.5K					1556	.017	1766	.021		
25K					1557	.015	**1767**	.020	**1845**	.0
30K							**1768**	.018	1846	.0
35K							**1769**	.017	1847	.0
40K							1770	.016	1848	.0
45K							1771	.015	(1849)	.0
50K							1772	.014	**1850**	.0
55K									(1851)	.0
60K									1852	.0
65K									1853	.0
70K									1854	.0
75K									(1855)	.0
80K									(1856)	.0
85K									(1857)	.0
90K									(1858)	.0
95K									1859	.0
100K									**1860**	.0

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stock distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

© United Technical Publicatio

OHMITE non-inductive
type 270N vitreous enameled fixed resistors



These non-inductively wound power resistors are widely used at radio frequencies for such purposes as dummy antennas, terminating resistors for antennas, and in diathermy apparatus. Their properly proportioned Ayrton-Perry type windings, reduce the inductance to low proportions (less than 1% of regular solenoid type resistors) while the distributed capacity is small. R.F. resistance is the same as the D.C. resistance over the useful range of frequencies.

Change of impedance with frequency is so slight that the resistors can be used throughout the broadcast band and at even higher frequencies, depending on the particular resistance to be used. All the resistors are lug-type tubular units which mount by means of non-magnetic mounting brackets (furnished). Ohmite's high grade ceramic construction and exclusive vitreous enamel coating assure long, reliable performance under full rated load. Resistance tolerance is ±5%.

12 WATT
Core: 1¾"x¾"
Mtg. Ctr: 2¾"—Av. Wt. .02 lb.
Std. Mtg. Brkt.* No. 5B

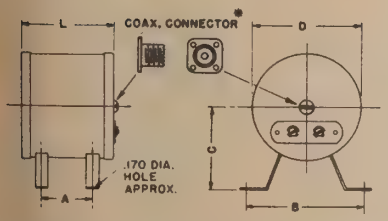
Ohms	Cat. No.[1]	Max. Milli-Amps	Ohms	Cat. No.[1]	Max. Milli-Amps
5	2050	1,540	600	(2066)	140
10	2051	1,090	700	(2067)	130
15	(2052)	890	800	(2068)	120
20	2053	770	900	(2069)	110
25	2054	690	1,000	(2070)	110
30	(2055)	630	1,500	(2071)	89
40	2056	550	2,000	(2072)	77
50	2057	490	2,500	(2073)	69
75	2058	400	3,000	(2074)	63
100	2059	340	4,000	(2075)	54
150	(2060)	280	5,000	(2076)	49
200	(2061)	240	6,000	(2077)	44
250	2062	220	7,500	(2078)	40
300	(2063)	200	8,000	(2079)	38
400	(2064)	170	9,000	(2080)	36
500	(2065)	150	10,000	(2081)	35

Resist. Ohms	50 WATT Core: 4"x¾" Mtg. Ctr: 4¾" Av. Wt. .09 lb. Std. Mtg. Brkt.* No. 9B		100 WATT Core: 6½"x¾" Mtg. Ctr: 7⅜" — Av. Wt. .20 lb. Std. Mtg. Brkt.* No. 12B		175 WATT Core: 8½"x1⅛" Mtg. Ctr: 9⅜" — Av. Wt. .50 lb. Std. Mtg. Brkt.* No. 18B	
	Cat. No.[1]	Max. Milliamps	Cat. No.[1]	Max. Milliamps	Cat. No.[1]	Max. Milliamps
5	(2001)	3,160	2201	4,470	2401	5,920
10	2002	2,230	2202	3,160	2402	4,180
25	2003	1,410	2203	2,000	2403	2,640
50	2004	1,000	2204	1,410	2404	1,870
100	(2005)	710	2205	1,000	2405	1,320
150	2006	580	(2206)	816	2406	1,090
200	(2007)	500	(2207)	707	(2407)	935
250	(2008)	450	(2208)	630	2408	840
500	2009	320	(2209)	450	2409	590
750	2010	260	2210	365	2410	480
1000	2011	220	(2211)	320	2411	420
1500	2012	180	2212	260	(2412)	340
2000	(2013)	160	(2213)	224	(2413)	290
2500	(2014)	140	(2214)	200	2414	260
3000	(2015)	130	2215	180	2415	240
3500	(2016)	119	(2216)	169	(2416)	222
4000	(2017)	110	(2217)	158	(2417)	208
5000	2018	100	(2218)	140	(2418)	190

Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge. Mounting brackets are automatically supplied in individual unit packs; supplied only when specified in bulk packs.

lummy-antenna resistors NON-INDUCTIVE





Ohmite Models D-101 and D-251 Dummy Antenna Resistors provide a simple, accurate, and direct means of measuring R.F. power for the radio amateur, experimenter and manufacturer and for operators of aviation, police and broadcast stations. These units consist of a number of special, vitreous enameled resistors connected in parallel in a concentric arrangement and mounted inside a perforated metal cage. The dummy antenna resistors feature constant R.F. resistance (within their recommended frequency range), low reactance, high wattage dissipation, and compactness. Actual D.C. resistance tolerance is ±5%.

The residual inductance and distributed capacitance have been kept to a minimum, thereby making the natural resonant frequency as high as possible. These factors and the D.C. resistance have been proportioned in such a manner as to give the best possible response characteristics. This resistor may be considered practically a "Non-Reactive Resistor."

Catalog Number	Dimensions (Inches) A	B	C	D	L
(D-101-52*), (D-101-73*)	1½	3½	2⅜	3 5/32	2 23/32
(D-101-300), (D-101-600)	2¾	3½	2⅜	3 5/32	4 7/32
D-251-52*, (D-251-73*)	3⅛	3⅞	2½	3 23/32	4 19/32
D-251-300, (D-251-600)	5⅛	3⅞	2½	3 23/32	6 13/16

*Employs coax connector.

EQUENCY CHARACTERISTICS OF OHMITE DUMMY ANTENNAS

Type	D-101				D-251			
Resistance	52 Ohms	73 Ohms	300 Ohms	600 Ohms	52 Ohms	73 Ohms	300 Ohms	600 Ohms
ximum frequency which = Rdc ± 10%	22 mc	38 mc	22 mc	31 mc	19 mc	21 mc	15 mc	19 mc
at this frequency	1.10 R dc	1.10 R dc	1.10 R dc	.90 R dc	1.10 R dc	1.10 R dc	1.10 R dc	.90 R dc
t this frequency	1.18 R dc	1.14 R dc	1.10 R dc	.99 R dc	1.25 R dc	1.13 R dc	1.15 R dc	1.00 R dc
ximum frequency which = Rdc ± 10%	18 mc	32 mc	22 mc	60 mc	13 mc	19 mc	13 mc	30 mc
at this frequency	1.06 R dc	1.07 R dc	1.10 R dc	.60 R dc	1.03 R dc	1.07 R dc	1.08 R dc	.64 R dc
t this frequency	1.10 R dc	1.10 R dc	1.10 R dc	.90 R dc	1.10 R dc	1.10 R dc	1.10 R dc	.90 R dc

Cat. No.[1]	Watts	*±5% Ohms*	Net Lbs.
(D-101-52)	100	52	.60
(D-101-73)	100	73	.60
(D-101-300)	100	300	.65
(D-101-600)	100	600	.65
D-251-52	250	52	1.25
(D-251-73)	250	73	1.25
(D-251-300)	250	300	1.50
D-251-600	250	600	1.50

Rdc . D.C. Resistance of Dummy Antenna
Rs .. Effective Series Resistance of Dummy Antenna
Z ... Scalar Value of Impedance of Dummy Antenna

Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

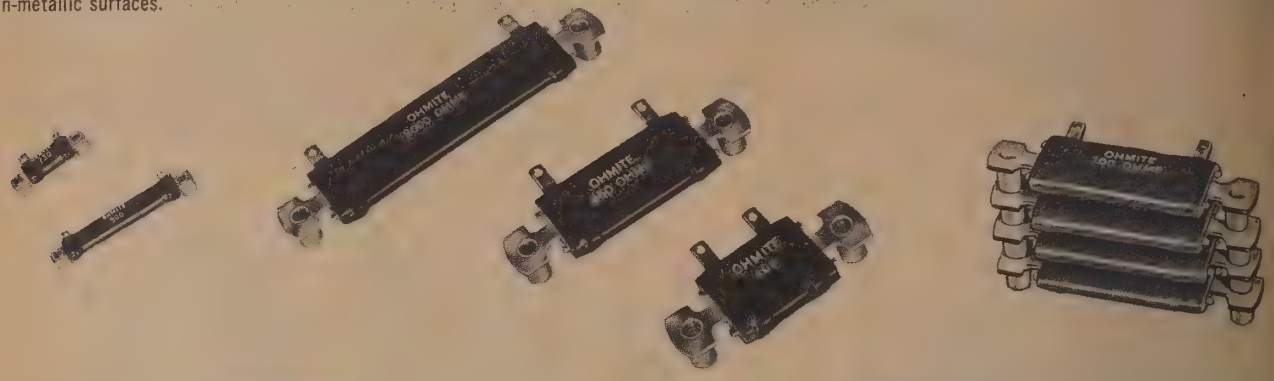
OHMITE type 250 "THIN" vitreous enameled resistors

Ohmite "Thin" Resistors are intended for use in equipment where space is at a premium. They are wound on flat, oval shaped ceramic cores, and covered with Ohmite's exclusive vitreous enamel coating. Resistance tolerance, ±5%.

Integral mounting brackets extend through the resistor core to equalize heat distribution and to conduct heat directly to the mounting surface — provides equivalent wattage with less bulk and in less space. Wattage ratings assume the use of a metal mounting surface. Reduce ratings 15% for non-metallic surfaces.

"Thin" resistors are mounted or compactly stacked by means of bracke studs which are hollow to receive assembly bolts. The load should be re duced for each unit when resistors are stacked or used in confined, poorl ventilated spaces. Total height from bottom of mounting stud to top o resistor is approximately 9/16" for the Standard units and 1 1/32" for th Miniature units.

For other sizes, closer tolerances, non-stacking brackets, Dividohr adjustable or other features, consult factory.



	MINIATURE SIZES						STANDARD SIZES								
	10 WATT* Core: ¾"x⅜"x⅛"— Mtg. Ctr. 1" Stud Hole .125"— Av. Wt. .007 lb.			20 WATT* Core: 2"x⅜"x⅛"— Mtg. Ctr. 2⅝" Stud Hole .125"— Av. Wt. .015 lb.			30 WATT* Core: 1¼"x1"x¼"— Mtg. Ctr. 2" Stud Hole .196"— Av. Wt. .037 lb.			40 WATT* Core: 2"x1"x¼"— Mtg. Ctr. 2¾" Stud Hole .196"— Av. Wt. .052 lb.			55 WATT* Core: 3½"x1"x¼"— Mtg. Ctr. 4¼" Stud Hole .196"— Av. Wt. .095 lb.		
Resist. Ohms	Cat. No.[1]	Max. Volts	Max. Amps	Cat. No.[1]	Max. Volts	Max. Amps	Cat. No.[1]	Max. Volts	Max. Amps	Cat. No.[1]	Max. Volts	Max. Amps	Cat. No.[1]	Max. Volts	Max. Amps
1	**F101**	3.16	3.16	F201	4.47	4.47	F301	5.47	5.47	**F401**	6.32	6.32	**F501**	7.42	7.42
1.5							(F302)	6.70	4.47	F402	7.74	5.16	F502	8.25	6.05
2	F102	4.47	2.24	**F202**	6.32	3.16	(F303)	7.74	3.88	**F403**	8.94	4.47	**F503**	10.4	5.24
3							F304	9.45	3.17	F404	10.9	3.65	F504	12.8	4.28
4										(F405)	12.6	3.16	F505	14.8	3.70
5	**F103**	7.07	1.41	**F203**	10.0	2.00	**F305**	12.2	2.46	F406	14.1	2.83	F506	16.6	3.32
7.5	F104	8.66	1.15							F407	17.3	2.31	(F507)	20.6	2.72
10	F105	10.0	1.00	**F204**	14.1	1.41	F306	17.3	1.73	**F408**	20.0	2.00	F508	23.4	2.34
15	(F106)	12.2	0.82	**F205**	17.3	1.16	**F307**	21.2	1.42						
20	**F107**	14.1	0.71												
25	F108	15.8	0.63	F206	22.3	0.89	F308	27.4	1.10	**F409**	31.6	1.26	**F509**	37.1	1.48
30	F109	17.3	0.58												
40	F110	20.0	0.50	F207	28.3	0.71	F309	34.6	0.87	**F410**	40.0	1.00	**F510**	46.9	1.17
50	**F111**	22.3	0.45	**F208**	31.6	0.63	F310	38.7	0.77	F411	44.7	0.89	**F511**	52.4	1.05
75	**F112**	27.4	0.36	F209	38.7	0.52	F311	47.4	0.63	(F412)	54.8	0.73	(F512)	64.2	0.86
100	**F113**	31.6	0.32	**F210**	44.7	0.45	F312	54.8	0.55	F413	63.2	0.63	F513	74.1	0.74
125	F114	35.3	0.28												
150	**F115**	38.7	0.26	**F211**	54.8	0.36	(F313)	67.0	0.45	(F414)	77.4	0.52	F514	82.5	0.61
200	F116	44.7	0.22	**F212**	63.2	0.32	(F314)	77.4	0.39	(F415)	89.4	0.45	F515	104.0	0.52
250	**F117**	50.0	0.20	F213	70.7	0.28	F315	86.6	0.35	(F416)	100.0	0.40	F516	117.0	0.47
300	F118	54.8	0.18	F214	77.4	0.26									
400	**F119**	63.2	0.16	**F215**	89.4	0.22	(F316)	108.0	0.28	(F417)	126.0	0.32	F517	148.0	0.37
500	**F120**	70.7	0.14	**F216**	100.0	0.20	F317	122.0	0.25	F418	141.0	0.28	F518	166.0	0.33
600	(F121)	77.4	0.13												
750	F122	86.6	0.12				(F318)	150.0	0.20	F419	173.0	0.23	(F519)	206.0	0.27
800				F217	126.0	0.16									
1000	F123	100.0	0.10	F218	141.0	0.14	F319	173.0	0.17	(F420)	200.0	0.20	(F520)	234.0	0.23
1250	(F124)	111.0	0.089	**F219**	158.0	0.12									
1500	F125	122.0	0.081	**F220**	173.0	0.12	F320	212.0	0.14	(F421)	245.0	0.16 1.54	(F521)	287.0	0.19
1750	F126	132.0	0.075												
2000	F127	141.0	0.071	(F221)	200.0	0.10	(F321)	245.0	0.12	F422	283.0	0.14	(F522)	332.0	0.17
2500	**F128**	158.0	0.063	(F222)	223.0	0.089	F322	274.0	0.11	(F423)	316.0	0.13	(F523)	371.0	0.15
3000	**F129**	173.0	0.057	(F223)	245.0	0.081	(F323)	300.0	0.10	(F424)	345.0	0.12	(F524)	406.0	0.14
3500				(F224)	264.0	0.075									
4000	F130	200.0	0.050	(F225)	283.0	0.070	F324	346.0	0.087	(F425)	400.0	0.10	(F525)	469.0	0.12
5000	(F131)	223.0	0.045	F226	316.0	0.063	(F325)	387.0	0.076	(F426)	447.0	0.089	(F526)	524.0	0.10
6000				(F227)	346.0	0.058									
7500				(F228)	387.0	0.052	(F326)	424.0	0.057	(F427)	548.0	0.073	(F527)	642.0	0.086
10000				**F229**	445.0	0.045	(F327)	490.0	0.049	F428	632.0	0.063	F528	741.0	0.074
12500				(F230)	500.0	0.040									
15000				**F231**	555.0	0.036				(F429)	670.0	0.045	(F529)	825.0	0.061
20000				(F232)	625.0	0.032				(F430)	774.0	0.039	(F530)	1040.0	0.052
25000				(F233)	715.0	0.028				(F431)	866.0	0.035	(F531)	1170.0	0.047
30000				(F234)	770.0	0.026							(F532)	1210.0	0.040
35000				(F235)	835.0	0.024									
40000				(F236)	910.0	0.022									
50000				F237	990.0	0.020									

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocki distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

*Ratings are based on use of steel panel mounting and should be reduced on non-metallic mounting surface because of reduced thermal conductivity.

© United Technical Publicatio

OHMITE corrib® HIGH CURRENT LOW OHMS resistors



Fixed



Dividohm® Adjustable

High current, low resistance, heavy duty units used in motor starting, dynamic braking, etc. "Corrib" type units employ a corrugated ribbon of resistance alloy. This is space-wound edge-wise around a ceramic tube. Vitreous enamel is fused around the alloy ribbon to lock the turns securely in place. Heavy lug terminals. Resistance tolerance is ±10%.

Available in fixed or Dividohm® adjustable types. Dividohm® type is similar to fixed and includes one adjustable lug. Rating of Fixed or Dividohm® stock units—300 watts—reduce unit load for stack-mounted resistors; core size (bare) 8½" long x1⅛" diameter. Other sizes made to order.

STOCK CORRIBS — 300 WATT SIZE
Type 280 Fixed; 230 Dividohm®

ire: 8½x1⅛" Fixed or Adjustable (DIVIDOHM)
g. Weight (Fixed) .61 lb.; (Dividohm) .64 lb.

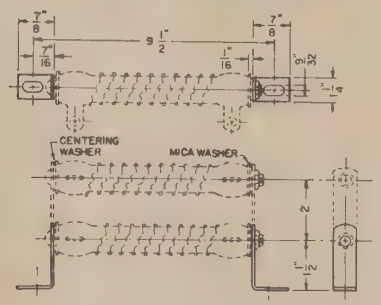
Ohms	Amps.	Fixed[1] Catalog No.	Dividohm*[1] Catalog No.
.10	54.7	**2501**	2601
.12	50.0	**2502**	(2602)
.16	43.3	2503	2603
.20	38.7	**2504**	(2604)
.25	34.6	**2505**	**2605**
.31	31.1	**2506**	2606
.40	27.4	(2507)	2607
.50	24.5	**2508**	**2608**
.63	21.8	2509	2609
.80	19.3	2510	2610
1.0	17.3	**2511**	2611
1.2	15.8	**2512**	(2612)
1.6	13.7	2513	2613
2.0	12.2	**2514**	2614
2.5	10.9	2515	2615
3.1	9.8	**2516**	2616
4.0	8.6	2517	2617
5.0	7.7	**2518**	2618
6.3	6.9	2519	2619
8.0	6.1	2520	2620
10.0	5.5	**2521**	2621
12.0	5.0	2522	**2622**
16.0	4.3	2523	2623
20.0	3.8	**2524**	**2624**

*Adjustable Lug Stk. No. 1974 supplied with Dividohm.

THRU-BOLT MOUNTING BRACKETS FOR CORRIBS

Includes 2 brackets; bolt; centering, mica, and lock washers; nuts. Diagram below.

No. of Resistors	Catalog No.
1	6126P8½
2	6127P8½
3	6128P8½
4	6129P8½



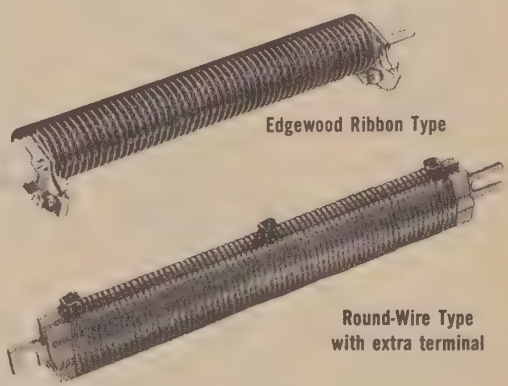
EXTRA ADJUSTABLE LUGS FOR CORRIBS

For Dividohm	Lug Catalog No.
2601 to 2618	1974-B
2619 to 2624	1974-A

)owr-rib® HIGH CURRENT LOW OHMS resistors

ven higher power handling capability—approximately 700 to 1000 vatts—is available in stock, "Powr-Rib" resistors. These are NCOATED types and are wound either edgewise with ribbon 'Edgewound" type) or with round wire (Round-Wire type).

The core of these units consists of ceramic segments on a netal bar which is slotted on both ends for rapid installation. tandard resistance tolerance is ±10%. Terminals clamp onto he resistor wire and may be moved in from the ends for inter-nediate resistance values. Extra terminals available for use as aps. See diagrams for terminals. Terminal Stk. No. 2172G (not hown) has screw connections.

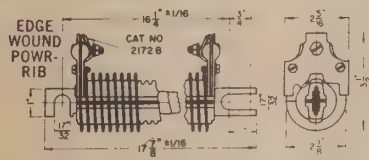


Edgewood Ribbon Type

Round-Wire Type with extra terminal

STYLE 080-5 EDGEWOUND POWR-RIBS

Ohms*	H ±⅛	D +⅛ —0
10-.22	3¾	2⅛
25-1.00	3⅛	1⅞
30-1.60	2¾	1⅞
2, 2.8, 4.5, 5.4	2½	1¾
5, 6.8, 8.5	2¼	1⅝

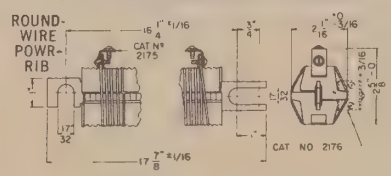


*.10 to 1.00 Ω with terminal No. 2172B
1.3 to 8.5 Ω with terminal No. 2172G

Avg. Weight .18Ω or less, 4 lbs.; .22Ω and up, 2 lbs.

Catalog No.[1]	Ohms	Max. Amps.	Catalog No.[1]	Ohms	Max. Amps.
301	.10	100	2318	.67	41
302	.12	91	2311	.75	39
303A	.14	89	2312	1.00	33
304A	.16	78	2319	1.30	29
305A	.18	75	2313	1.60	26
306A	.22	68	2331A	2.20	18.4
306	.25	63	2332A	2.80	16.3
308A	.30	57	2333A	3.50	14.6
308	.33	54	2334A	4.50	12.7
309A	.37	50	2335A	5.40	11.8
310	.50	47	2336A	6.80	10.3
317	.60	43	2337A	8.50	9.4

STYLE 082-5 ROUND-WIRE POWR-RIBS



Avg. Weight 3¼ lbs.

Catalog No.[1]	Ohms	Max. Amps.
2338	11.0	8.3
2339	13.0	7.6
2340	17.0	6.6
2341	20.0	5.9
2342	25.0	5.1

EXTRA TERMINALS

For Round Wire Powr-Rib		For Edgewound Powr-Rib	
Descrip	Catalog No.	Descrip	Catalog No.
In-Line Mtg.	2175	30 Amps & more	2172B
90° Mtg.	(2176)	29 Amps & less	2172G

opular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking stributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

OHMITE *Little Devil*® molded composition resistors on "Tally Tape"



"Tally Tape," Ohmite's wonderfully convenient packaging presently provides for ¼, ½, 1 and 2-watt resistors. Each perforated segment holds 5 resistors — prevents spilling or tangling — simplifies counting — is printed for quick identification — guarantees original, factory-fresh stock.

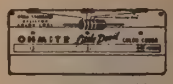


Now Includes MIL-R-II Types

Little Devils, Ohmite's famous molded composition resistors, find broad use in commercial and military applications. The ⅛, ¼, ½, 1 and 2-watt sizes, which conform respectively to Styles RC05, RC07, RC20, RC32 and RC42 of MIL-R-11, meet all the stringent requirements of this military specification. The five sizes available satisfy a wide range of design and service needs.

Little Devils have molded insulation for high dielectric strength. Noted advantages of these units are great stability, low noise level, low voltage coefficient, high insulation breakdown voltage and rapid heat dissipation. They may be used at full rated wattage at 70°C (158°F) ambient temperature.

Little Devils are available from stock in standard EIA resistance values in the tolerances and resistance ranges shown in the price table. Ratings for maximum continuous RMS voltage drop are high: 150 volts for ⅛ watt units, 250 volts for ¼ watt, 350 volts for ½ watt, 500 volts for 1 watt, and 750 volts for 2 watt units. See "Little Devil" Resistor Assortments page 16.



Color Coder 10¢

CATALOG NO. 5190

⅛ WATT MIL Type: RC 05* Size: .145"L.x .062"D. Leads: .015" D. x 1" L.

Resistance	Catalog Number ±5%	±10%
2.7 ohms	OB27G5	OB27G1
3.0 ohms	OB30G5	
3.3 ohms	OB33G5	OB33G1
3.6 ohms	OB36G5	
3.9 ohms	OB39G5	OB39G1
4.3 ohms	OB43G5	
4.7 ohms	OB47G5	OB47G1
5.1 ohms	OB51G5	
5.6 ohms	OB56G5	OB56G1
6.2 ohms	OB62G5	
6.8 ohms	OB68G5	OB68G1
7.5 ohms	OB75G5	
8.2 ohms	OB82G5	OB82G1
9.1 ohms	OB91G5	
10. ohms	OB1005	OB1001
11. ohms	OB1105	
12. ohms	OB1205	OB1201
13. ohms	OB1305	
15. ohms	OB1505	OB1501
16. ohms	OB1605	
18. ohms	OB1805	OB1801
20. ohms	OB2005	
22. ohms	OB2205	OB2201
24. ohms	OB2405	
27. ohms	OB2705	OB2701
30. ohms	OB3005	
33. ohms	OB3305	OB3301
36. ohms	OB3605	
39. ohms	OB3905	OB3901
43. ohms	OB4305	
47. ohms	OB4705	OB4701
51. ohms	OB5105	
56. ohms	OB5605	OB5601
62. ohms	OB6205	
68. ohms	OB6805	OB6801
75. ohms	OB7505	
82. ohms	OB8205	OB8201
91. ohms	OB9105	
100. ohms	OB1015	OB1011
110. ohms	OB1115	
120. ohms	OB1215	OB1211
130. ohms	OB1315	
150. ohms	OB1515	OB1511
160. ohms	OB1615	
180. ohms	OB1815	OB1811
200. ohms	OB2015	
220. ohms	OB2215	OB2211
240. ohms	OB2415	
270. ohms	OB2715	OB2711
300. ohms	OB3015	
330. ohms	OB3315	OB3311
360. ohms	OB3615	
390. ohms	OB3915	OB3911
430. ohms	OB4315	
470. ohms	OB4715	OB4711
510. ohms	OB5115	
560. ohms	OB5615	OB5611
620. ohms	OB6215	
680. ohms	OB6815	OB6811
750. ohms	OB7515	
820. ohms	OB8215	OB8211
910. ohms	OB9115	
1,000. ohms	OB1025	OB1021
1,100. ohms	OB1125	
1,200. ohms	OB1225	OB1221
1,300. ohms	OB1325	
1,500. ohms	OB1525	OB1521
1,600. ohms	OB1625	
1,800. ohms	OB1825	OB1821
2,000. ohms	OB2025	
2,200. ohms	OB2225	OB2221
2,400. ohms	OB2425	
2,700. ohms	OB2725	OB2721
3,000. ohms	OB3025	
3,300. ohms	OB3325	OB3321
3,600. ohms	OB3625	
3,900. ohms	OB3925	OB3921
4,300. ohms	OB4325	
4,700. ohms	OB4725	OB4721
5,100. ohms	OB5125	
5,600. ohms	OB5625	OB5621
6,200. ohms	OB6225	
6,800. ohms	OB6825	OB6821
7,500. ohms	OB7525	
8,200. ohms	OB8225	OB8221
9,100. ohms	OB9125	
10,000. ohms	OB1035	OB1031
11,000. ohms	OB1135	
12,000. ohms	OB1235	OB1231
13,000. ohms	OB1335	
15,000. ohms	OB1535	OB1531
16,000. ohms	OB1635	
18,000. ohms	OB1835	OB1831
20,000. ohms	OB2035	
22,000. ohms	OB2235	OB2231
24,000. ohms	OB2435	
27,000. ohms	OB2735	OB2731
30,000. ohms	OB3035	
33,000. ohms	OB3335	OB3331
36,000. ohms	OB3635	
39,000. ohms	OB3935	OB3931
43,000. ohms	OB4335	
47,000. ohms	OB4735	OB4731
51,000. ohms	OB5135	
56,000. ohms	OB5635	OB5631
62,000. ohms	OB6235	
68,000. ohms	OB6835	OB6831
75,000. ohms	OB7535	
82,000. ohms	OB8235	OB8231
91,000. ohms	OB9135	
0.1 megs	OB1045	OB1041
0.11 megs	OB1145	
0.12 megs	OB1245	OB1241
0.13 megs	OB1345	
0.15 megs	OB1545	OB1541
0.16 megs	OB1645	
0.18 megs	OB1845	OB1841
0.20 megs	OB2045	
0.22 megs	OB2245	OB2241
0.24 megs	OB2445	
0.27 megs	OB2745	OB2741
0.30 megs	OB3045	
0.33 megs	OB3345	OB3341
0.36 megs	OB3645	
0.39 megs	OB3945	OB3941
0.43 megs	OB4345	
0.47 megs	OB4745	OB4741
0.51 megs	OB5145	
0.56 megs	OB5645	OB5641
0.62 megs	OB6245	
0.68 megs	OB6845	OB6841
0.75 megs	OB7545	
0.82 megs	OB8245	OB8241
0.91 megs	OB9145	
1. megs	OB1055	OB1051
1.1 megs	OB1155	
1.2 megs	OB1255	OB1251
1.3 megs	OB1355	
1.5 megs	OB1555	OB1551
1.6 megs	OB1655	
1.8 megs	OB1855	OB1851
2.0 megs	OB2055	
2.2 megs	OB2255	OB2251
2.4 megs	OB2455	
2.7 megs	OB2755	OB2751
3.0 megs	OB3055	
3.3 megs	OB3355	OB3351
3.6 megs	OB3655	
3.9 megs	OB3955	OB3951
4.3 megs	OB4355	
4.7 megs	OB4755	OB4751
5.1 megs	OB5155	
5.6 megs	OB5655	OB5651
6.2 megs	OB6255	
6.8 megs	OB6855	OB6851
7.5 megs	OB7555	
8.2 megs	OB8255	OB8251
9.1 megs	OB9155	
10. megs	OB1065	OB1061
11. megs	OB1165	
12. megs	OB1265	OB1261
13. megs	OB1365	
15. megs	OB1565	OB1561
16. megs	OB1665	
18. megs	OB1865	OB1861
20. megs	OB2065	
22. megs	OB2265	OB2261

¼ WATT MIL Type: RC 07 Size: ¼"L. x .090"D. Leads: .025"D. x 1½"L.

Resistance	Catalog Number ±5%	±10%
2.7 ohms	OC27G5	OC27G1
3.0 ohms	OC30G5	
3.3 ohms	OC33G5	OC33G1
3.6 ohms	OC36G5	
3.9 ohms	OC39G5	OC39G1
4.3 ohms	OC43G5	
4.7 ohms	OC47G5	OC47G1
5.1 ohms	OC51G5	
5.6 ohms	OC56G5	OC56G1
6.2 ohms	OC62G5	
6.8 ohms	OC68G5	OC68G1
7.5 ohms	OC75G5	
8.2 ohms	OC82G5	OC82G1
9.1 ohms	OC91G5	
10. ohms	OC1005	OC1001
11. ohms	OC1105	
12. ohms	OC1205	OC1201
13. ohms	OC1305	
15. ohms	OC1505	OC1501
16. ohms	OC1605	
18. ohms	OC1805	OC1801
20. ohms	OC2005	
22. ohms	OC2205	OC2201
24. ohms	OC2405	
27. ohms	OC2705	OC2701
30. ohms	OC3005	
33. ohms	OC3305	OC3301
36. ohms	OC3605	
39. ohms	OC3905	OC3901
43. ohms	OC4305	
47. ohms	OC4705	OC4701
51. ohms	OC5105	
56. ohms	OC5605	OC5601
62. ohms	OC6205	
68. ohms	OC6805	OC6801
75. ohms	OC7505	
82. ohms	OC8205	OC8201
91. ohms	OC9105	
100. ohms	OC1015	OC1011
110. ohms	OC1115	
120. ohms	OC1215	OC1211
130. ohms	OC1315	
150. ohms	OC1515	OC1511
160. ohms	OC1615	
180. ohms	OC1815	OC1811
200. ohms	OC2015	
220. ohms	OC2215	OC2211
240. ohms	OC2415	
270. ohms	OC2715	OC2711
300. ohms	OC3015	
330. ohms	OC3315	OC3311
360. ohms	OC3615	
390. ohms	OC3915	OC3911
430. ohms	OC4315	
470. ohms	OC4715	OC4711
510. ohms	OC5115	
560. ohms	OC5615	OC5611
620. ohms	OC6215	
680. ohms	OC6815	OC6811
750. ohms	OC7515	
820. ohms	OC8215	OC8211
910. ohms	OC9115	
1,000. ohms	OC1025	OC1021
1,100. ohms	OC1125	
1,200. ohms	OC1225	OC1221
1,300. ohms	OC1325	
1,500. ohms	OC1525	OC1521
1,600. ohms	OC1625	
1,800. ohms	OC1825	OC1821
2,000. ohms	OC2025	
2,200. ohms	OC2225	OC2221
2,400. ohms	OC2425	
2,700. ohms	OC2725	OC2721
3,000. ohms	OC3025	
3,300. ohms	OC3325	OC3321
3,600. ohms	OC3625	
3,900. ohms	OC3925	OC3921
4,300. ohms	OC4325	
4,700. ohms	OC4725	OC4721
5,100. ohms	OC5125	
5,600. ohms	OC5625	OC5621
6,200. ohms	OC6225	
6,800. ohms	OC6825	OC6821
7,500. ohms	OC7525	
8,200. ohms	OC8225	OC8221
9,100. ohms	OC9125	
10,000. ohms	OC1035	OC1031
11,000. ohms	OC1135	
12,000. ohms	OC1235	OC1231
13,000. ohms	OC1335	
15,000. ohms	OC1535	OC1531
16,000. ohms	OC1635	
18,000. ohms	OC1835	OC1831
20,000. ohms	OC2035	
22,000. ohms	OC2235	OC2231
24,000. ohms	OC2435	
27,000. ohms	OC2735	OC2731
30,000. ohms	OC3035	
33,000. ohms	OC3335	OC3331
36,000. ohms	OC3635	
39,000. ohms	OC3935	OC3931
43,000. ohms	OC4335	
47,000. ohms	OC4735	OC4731
51,000. ohms	OC5135	
56,000. ohms	OC5635	OC5631
62,000. ohms	OC6235	
68,000. ohms	OC6835	OC6831
75,000. ohms	OC7535	
82,000. ohms	OC8235	OC8231
91,000. ohms	OC9135	
0.1 megs	OC1045	OC1041
0.11 megs	OC1145	
0.12 megs	OC1245	OC1241
0.13 megs	OC1345	
0.15 megs	OC1545	OC1541
0.16 megs	OC1645	
0.18 megs	OC1845	OC1841
0.20 megs	OC2045	
0.22 megs	OC2245	OC2241
0.24 megs	OC2445	
0.27 megs	OC2745	OC2741
0.30 megs	OC3045	
0.33 megs	OC3345	OC3341
0.36 megs	OC3645	
0.39 megs	OC3945	OC3941
0.43 megs	OC4345	
0.47 megs	OC4745	OC4741
0.51 megs	OC5145	
0.56 megs	OC5645	OC5641
0.62 megs	OC6245	
0.68 megs	OC6845	OC6841
0.75 megs	OC7545	
0.82 megs	OC8245	OC8241
0.91 megs	OC9145	
1. megs	OC1055	OC1051
1.1 megs	OC1155	
1.2 megs	OC1255	OC1251
1.3 megs	OC1355	
1.5 megs	OC1555	OC1551
1.6 megs	OC1655	
1.8 megs	OC1855	OC1851
2.0 megs	OC2055	
2.2 megs	OC2255	OC2251
2.4 megs	OC2455	
2.7 megs	OC2755	OC2751
3.0 megs	OC3055	
3.3 megs	OC3355	OC3351
3.6 megs	OC3655	
3.9 megs	OC3955	OC3951
4.3 megs	OC4355	
4.7 megs	OC4755	OC4751
5.1 megs	OC5155	
5.6 megs	OC5655	OC5651
6.2 megs	OC6255	
6.8 megs	OC6855	OC6851
7.5 megs	OC7555	
8.2 megs	OC8255	OC8251
9.1 megs	OC9155	
10. megs	OC1065	OC1061
11. megs	OC1165	
12. megs	OC1265	OC1261
13. megs	OC1365	
15. megs	OC1565	OC1561
16. megs	OC1665	
18. megs	OC1865	OC1861
20. megs	OC2065	
22. megs	OC2265	OC2261

¹ Items appearing in BOLD print are popular values and are usually stocked by authorized OHMITE distributors. Items appearing in LIGHT FACE print are available from stocking distributors but normally are not stocked in depth.

© United Technical Publication

½ WATT — MIL Type: RC 20‡ — Size: ⅜"L. x ¾"D. — Leads: .033"D. x 1½"L.

Resistance	Catalog Number ±5%	±10%
1. ohms	OE10G5	OE10G1
1.1 ohms	OE11G5	
1.2 ohms	OE12G5	OE12G1
1.3 ohms	OE13G5	
1.5 ohms	OE15G5	OE15G1
1.6 ohms	OE16G5	
1.8 ohms	OE18G5	OE18G1
2. ohms	OE20G5	
2.2 ohms	OE22G5	OE22G1
2.4 ohms	OE24G5	
2.7 ohms	OE27G5	OE27G1
3.0 ohms	OE30G5	
3.3 ohms	OE33G5	OE33G1
3.6 ohms	OE36G5	
3.9 ohms	OE39G5	OE39G1
4.3 ohms	OE43G5	
4.7 ohms	OE47G5	OE47G1
5.1 ohms	OE51G5	
5.6 ohms	OE56G5	OE56G1
6.2 ohms	OE62G5	
6.8 ohms	OE68G5	OS68G1
7.5 ohms	OE75G5	
8.2 ohms	OE82G5	OE82G1
9.1 ohms	OE91G5	
10. ohms	OE1005	OE1001
11. ohms	OE1105	
12. ohms	OE1205	OE1201
13. ohms	OE1305	
15. ohms	OE1505	OE1501
16. ohms	OE1605	
18. ohms	OE1805	OE1801
20. ohms	OE2005	
22. ohms	OE2205	OE2201
24. ohms	OE2405	
27. ohms	OE2705	OE2701
30. ohms	OE3005	
33. ohms	OE3305	OE3301
36. ohms	OE3605	
39. ohms	OE3905	OE3901
43. ohms	OE4305	
47. ohms	OE4705	OE4701
51. ohms	OE5105	
56. ohms	OE5605	OE5601
62. ohms	OE6205	
68. ohms	OE6805	OE6801
75. ohms	OE7505	
82. ohms	OE8205	OE8201
91. ohms	OE9105	
100. ohms	OE1015	OE1011
110. ohms	OE1115	
120. ohms	OE1215	OE1211
130. ohms	OE1315	
150. ohms	OE1515	OE1511
160. ohms	OE1615	
180. ohms	OE1815	OE1811
200. ohms	OE2015	
220. ohms	OE2215	OE2211
240. ohms	OE2415	
270. ohms	OE2715	OE2711
300. ohms	OE3015	
330. ohms	OE3315	OE3311
360. ohms	OE3615	
390. ohms	OE3915	OE3911
430. ohms	OE4315	
470. ohms	OE4715	OE4711
510. ohms	OE5115	
560. ohms	OE5615	OE5611
620. ohms	OE6215	
680. ohms	OE6815	OE6811
750. ohms	OE7515	
820. ohms	OE8215	OE8211
910. ohms	OE9115	
1,000. ohms	OE1025	OE1021
1,100. ohms	OE1125	
1,200. ohms	OE1225	OE1221
1,300. ohms	OE1325	
1,500. ohms	OE1525	OE1521
1,600. ohms	OE1625	
1,800. ohms	OE1825	OE1821
2,000. ohms	OE2025	
2,200. ohms	OE2225	OE2221
2,400. ohms	OE2425	
2,700. ohms	OE2725	OE2721
3,000. ohms	OE3025	
3,300. ohms	OE3325	OE3321
3,600. ohms	OE3625	
3,900. ohms	OE3925	OE3921
4,300. ohms	OE4325	
4,700. ohms	OE4725	OE4721
5,100. ohms	OE5125	
5,600. ohms	OE5625	OE5621
6,200. ohms	OE6225	
6,800. ohms	OE6825	OE6821
7,500. ohms	OE7525	
8,200. ohms	OE8225	OE8221
9,100. ohms	OE9125	
10,000. ohms	OE1035	OE1031
11,000. ohms	OE1135	
12,000. ohms	OE1235	OE1231
13,000. ohms	OE1335	
15,000. ohms	OE1535	OE1531
16,000. ohms	OE1635	
18,000. ohms	OE1835	OE1831
20,000. ohms	OE2035	
22,000. ohms	OE2235	OE2231
24,000. ohms	OE2435	
27,000. ohms	OE2735	OE2731
30,000. ohms	OE3035	
33,000. ohms	OE3335	OE3331
36,000. ohms	OE3635	
39,000. ohms	OE3935	OE3931
43,000. ohms	OE4335	
47,000. ohms	OE4735	OE4731
51,000. ohms	OE5135	
56,000. ohms	OE5635	OE5631
62,000. ohms	OE6235	
68,000. ohms	OE6835	OE6831
75,000. ohms	OE7535	
82,000. ohms	OE8235	OE8231
91,000. ohms	OE9135	
0.1 megs	OE1045	OE1041
0.11 megs	OE1145	
0.12 megs	OE1245	OE1241
0.13 megs	OE1345	
0.15 megs	OE1545	OE1541
0.16 megs	OE1645	
0.18 megs	OE1845	OE1841
0.20 megs	OE2045	
0.22 megs	OE2245	OE2241
0.24 megs	OE2445	
0.27 megs	OE2745	OE2741
0.30 megs	OE3045	
0.33 megs	OE3345	OE3341
0.36 megs	OE3645	
0.39 megs	OE3945	OE3941
0.43 megs	OE4345	
0.47 megs	OE4745	OE4741
0.51 megs	OE5145	
0.56 megs	OE5645	OE5641
0.62 megs	OE6245	
0.68 megs	OE6845	OE6841
0.75 megs	OE7545	
0.82 megs	OE8245	OE8241
0.91 megs	OE9145	
1. megs	OE1055	OE1051
1.1 megs	OE1155	
1.2 megs	OE1255	OE1251
1.3 megs	OE1355	
1.5 megs	OE1555	OE1551
1.6 megs	OE1655	
1.8 megs	OE1855	OE1851
2.0 megs	OE2055	
2.2 megs	OE2255	OE2251
2.4 megs	OE2455	
2.7 megs	OE2755	OE2751
3.0 megs	OE3055	
3.3 megs	OE3355	OE3351
3.6 megs	OE3655	
3.9 megs	OE3955	OE3951
4.3 megs	OE4355	
4.7 megs	OE4755	OE4751
5.1 megs	OE5155	
5.6 megs	OE5655	OE5651
6.2 megs	OE6255	
6.8 megs	OE6855	OE6851
7.5 megs	OE7555	
8.2 megs	OE8255	OE8251
9.1 megs	OE9155	
10. megs	OE1065	OE1061
11. megs	OE1165	
12. megs	OE1265	OE1261
13. megs	OE1365	
15. megs	OE1565	OE1561
16. megs	OE1665	
18. megs	OE1865	OE1861
20. megs	OE2065	
22. megs	OE2265	OE2261

1 WATT — MIL Type: RC 32 — Size: ⅜"L. x ⅞2"D. — Leads: .041"D. x 1½"L.

Resistance	Catalog Number ±5%	±10%
2.7 ohms	OG27G5	OG27G1
3.0 ohms	OG30G5	
3.3 ohms	OG33G5	OG33G1
3.6 ohms	OG36G5	
3.9 ohms	OG39G5	OG39G1
4.3 ohms	OG43G5	
4.7 ohms	OG47G5	OG47G1
5.1 ohms	OG51G5	
5.6 ohms	OG56G5	OG56G1
6.2 ohms	OG62G5	
6.8 ohms	OG68G5	OG68G1
7.5 ohms	OG75G5	
8.2 ohms	OG82G5	OG82G1
9.1 ohms	OG91G5	
10. ohms	OG1005	OG1001
11. ohms	OG1105	
12. ohms	OG1205	OG1201
13. ohms	OG1305	
15. ohms	OG1505	OG1501
16. ohms	OG1605	
18. ohms	OG1805	OG1801
20. ohms	OG2005	
22. ohms	OG2205	OG2201
24. ohms	OG2405	
27. ohms	OG2705	OG2701
30. ohms	OG3005	
33. ohms	OG3305	OG3301
36. ohms	OG3605	
39. ohms	OG3905	OG3901
43. ohms	OG4305	
47. ohms	OG4705	OG4701
51. ohms	OG5105	
56. ohms	OG5605	OG5601
62. ohms	OG6205	
68. ohms	OG6805	OG6801
75. ohms	OG7505	
82. ohms	OG8205	OG8201
91. ohms	OG9105	
100. ohms	OG1015	OG1011
110. ohms	OG1115	
120. ohms	OG1215	OG1211
130. ohms	OG1315	
150. ohms	OG1515	OG1511
160. ohms	OG1615	
180. ohms	OG1815	OG1811
200. ohms	OG2015	
220. ohms	OG2215	OG2211
240. ohms	OG2415	
270. ohms	OG2715	OG2711
300. ohms	OG3015	
330. ohms	OG3315	OG3311
360. ohms	OG3615	
390. ohms	OG3915	OG3911
430. ohms	OG4315	
470. ohms	OG4715	OG4711
510. ohms	OG5115	
560. ohms	OG5615	OG5611
620. ohms	OG6215	
680. ohms	OG6815	OG6811
750. ohms	OG7515	
820. ohms	OG8215	OG8211
910. ohms	OG9115	
1,000. ohms	OG1025	OG1021
1,100. ohms	OG1125	
1,200. ohms	OG1225	OG1221
1,300. ohms	OG1325	
1,500. ohms	OG1525	OG1521
1,600. ohms	OG1625	
1,800. ohms	OG1825	OG1821
2,000. ohms	OG2025	
2,200. ohms	OG2225	OG2221
2,400. ohms	OG2425	
2,700. ohms	OG2725	OG2721
3,000. ohms	OG3025	
3,300. ohms	OG3325	OG3321
3,600. ohms	OG3625	
3,900. ohms	OG3925	OG3921
4,300. ohms	OG4325	
4,700. ohms	OG4725	OG4721
5,100. ohms	OG5125	
5,600. ohms	OG5625	OG5621
6,200. ohms	OG6225	
6,800. ohms	OG6825	OG6821
7,500. ohms	OG7525	
8,200. ohms	OG8225	OG8221
9,100. ohms	OG9125	
10,000. ohms	OG1035	OG1031
11,000. ohms	OG1135	
12,000. ohms	OG1235	OG1231
13,000. ohms	OG1335	
15,000. ohms	OG1535	OG1531
16,000. ohms	OG1635	
18,000. ohms	OG1835	OG1831
20,000. ohms	OG2035	
22,000. ohms	OG2235	OG2231
24,000. ohms	OG2435	
27,000. ohms	OG2735	OG2731
30,000. ohms	OG3035	
33,000. ohms	OG3335	OG3331
36,000. ohms	OG3635	
39,000. ohms	OG3935	OG3931
43,000. ohms	OG4335	
47,000. ohms	OG4735	OG4731
51,000. ohms	OG5135	
56,000. ohms	OG5635	OG5631
62,000. ohms	OG6235	
68,000. ohms	OG6835	OG6831
75,000. ohms	OG7535	
82,000. ohms	OG8235	OG8231
91,000. ohms	OG9135	
0.1 megs	OG1045	OG1041
0.11 megs	OG1145	
0.12 megs	OG1245	OG1241
0.13 megs	OG1345	
0.15 megs	OG1545	OG1541
0.16 megs	OG1645	
0.18 megs	OG1845	OG1841
0.20 megs	OG2045	
0.22 megs	OG2245	OG2241
0.24 megs	OG2445	
0.27 megs	OG2745	OG2741
0.30 megs	OG3045	
0.33 megs	OG3345	OG3341
0.36 megs	OG3645	
0.39 megs	OG3945	OG3941
0.43 megs	OG4345	
0.47 megs	OG4745	OG4741
0.51 megs	OG5145	
0.56 megs	OG5645	OG5641
0.62 megs	OG6245	
0.68 megs	OG6845	OG6841
0.75 megs	OG7545	
0.82 megs	OG8245	OG8241
0.91 megs	OG9145	
1. megs	OG1055	OG1051
1.1 megs	OG1155	
1.2 megs	OG1255	OG1251
1.3 megs	OG1355	
1.5 megs	OG1555	OG1551
1.6 megs	OG1655	
1.8 megs	OG1855	OG1851
2.0 megs	OG2055	
2.2 megs	OG2255	OG2251
2.4 megs	OG2455	
2.7 megs	OG2755	OG2751
3.0 megs	OG3055	
3.3 megs	OG3355	OG3351
3.6 megs	OG3655	
3.9 megs	OG3955	OG3951
4.3 megs	OG4355	
4.7 megs	OG4755	OG4751
5.1 megs	OG5155	
5.6 megs	OG5655	OG5651
6.2 megs	OG6255	
6.8 megs	OG6855	OG6851
7.5 megs	OG7555	
8.2 megs	OG8255	OG8251
9.1 megs	OG9155	
10. megs	OG1065	OG1061
11. megs	OG1165	
12. megs	OG1265	OG1261
13. megs	OG1365	
15. megs	OG1565	OG1561
16. megs	OG1665	
18. megs	OG1865	OG1861
20. megs	OG2065	
22. megs	OG2265	OG2261

2 WATT — MIL Type: RC 42 — Size: 1³⁄₁₆"L. x ⅝"D. — Leads: .046"D. x 1½"L.

Resistance	Catalog Number ±5%	±10%
10. ohms	OH1005	OH1001
11. ohms	OH1105	
12. ohms	OH1205	OH1201
13. ohms	OH1305	
15. ohms	OH1505	OH1501
16. ohms	OH1605	
18. ohms	OH1805	OH1801
20. ohms	OH2005	
22. ohms	OH2205	OH2201
24. ohms	OH2405	
27. ohms	OH2705	OH2701
30. ohms	OH3005	
33. ohms	OH3305	OH3301
36. ohms	OH3605	
39. ohms	OH3905	OH3901
43. ohms	OH4305	
47. ohms	OH4705	OH4701
51. ohms	OH5105	
56. ohms	OH5605	OH5601
62. ohms	OH6205	
68. ohms	OH6805	OH6801
75. ohms	OH7505	
82. ohms	OH8205	OH8201
91. ohms	OH9105	
100. ohms	OH1015	OH1011
110. ohms	OH1115	
120. ohms	OH1215	OH1211
130. ohms	OH1315	
150. ohms	OH1515	OH1511
160. ohms	OH1615	
180. ohms	OH1815	OH1811
200. ohms	OH2015	
220. ohms	OH2215	OH2211
240. ohms	OH2415	
270. ohms	OH2715	OH2711
300. ohms	OH3015	
330. ohms	OH3315	OH3311
360. ohms	OH3615	
390. ohms	OH3915	OH3911
430. ohms	OH4315	
470. ohms	OH4715	OH4711
510. ohms	OH5115	
560. ohms	OH5615	OH5611
620. ohms	OH6215	
680. ohms	OH6815	OH6811
750. ohms	OH7515	
820. ohms	OH8215	OH8211
910. ohms	OH9115	
1,000. ohms	OH1025	OH1021
1,100. ohms	OH1125	
1,200. ohms	OH1225	OH1221
1,300. ohms	OH1325	
1,500. ohms	OH1525	OH1521
1,600. ohms	OH1625	
1,800. ohms	OH1825	OH1821
2,000. ohms	OH2025	
2,200. ohms	OH2225	OH2221
2,400. ohms	OH2425	
2,700. ohms	OH2725	OH2721
3,000. ohms	OH3025	
3,300. ohms	OH3325	OH3321
3,600. ohms	OH3625	
3,900. ohms	OH3925	OH3921
4,300. ohms	OH4325	
4,700. ohms	OH4725	OH4721
5,100. ohms	OH5125	
5,600. ohms	OH5625	OH5621
6,200. ohms	OH6225	
6,800. ohms	OH6825	OH6821
7,500. ohms	OH7525	
8,200. ohms	OH8225	OH8221
9,100. ohms	OH9125	
10,000. ohms	OH1035	OH1031
11,000. ohms	OH1135	
12,000. ohms	OH1235	OH1231
13,000. ohms	OH1335	
15,000. ohms	OH1535	OH1531
16,000. ohms	OH1635	
18,000. ohms	OH1835	OH1831
20,000. ohms	OH2035	
22,000. ohms	OH2235	OH2231
24,000. ohms	OH2435	
27,000. ohms	OH2735	OH2731
30,000. ohms	OH3035	
33,000. ohms	OH3335	OH3331
36,000. ohms	OH3635	
39,000. ohms	OH3935	OH3931
43,000. ohms	OH4335	
47,000. ohms	OH4735	OH4731
51,000. ohms	OH5135	
56,000. ohms	OH5635	OH5631
62,000. ohms	OH6235	
68,000. ohms	OH6835	OH6831
75,000. ohms	OH7535	
82,000. ohms	OH8235	OH8231
91,000. ohms	OH9135	
0.1 megs	OH1045	OH1041
0.11 megs	OH1145	
0.12 megs	OH1245	OH1241
0.13 megs	OH1345	
0.15 megs	OH1545	OH1541
0.16 megs	OH1645	
0.18 megs	OH1845	AH1841
0.20 megs	OH2045	
0.22 megs	OH2245	OH2241
0.24 megs	OH2445	
0.27 megs	OH2745	OH2741
0.30 megs	OH3045	
0.33 megs	OH3345	OH3341
0.36 megs	OH3645	
0.39 megs	OH3945	OH3941
0.43 megs	OH4345	
0.47 megs	OH4745	OH4741
0.51 megs	OH5145	
0.56 megs	OH5645	OH5641
0.62 megs	OH6245	
0.68 megs	OH6845	OH6841
0.75 megs	OH7545	
0.82 megs	OH8245	AH8241
0.91 megs	OH9145	
1. megs	OH1055	OH1051
1.1 megs	OH1155	
1.2 megs	OH1255	OH1251
1.3 megs	OH1355	
1.5 megs	OH1555	OH1551
1.6 megs	OH1655	
1.8 megs	OH1855	OH1851
2.0 megs	OH2055	
2.2 megs	OH2255	OH2251
2.4 megs	OH2455	
2.7 megs	OH2755	OH2751
3.0 ohms	OH3055	
3.3 megs	OH3355	OH3351
3.6 megs	OH3655	
3.9 megs	OH3955	OH3951
4.3 megs	OH4355	
4.7 megs	OH4755	OH4751
5.1 megs	OH5155	
5.6 megs	OH5655	OH5651
6.2 megs	OH6255	
6.8 megs	OH6855	OH6851
7.5 megs	OH7555	
8.2 megs	OH8255	OH8251
9.1 megs	OH9155	
10. megs	OH1065	OH1061
11. megs	OH1165	
12. megs	OH1265	OH1261
13. megs	OH1365	
15. megs	OH1565	OH1561
16. megs	OH1665	
18. megs		OH1861
22. megs		OH2261

*Min. Resistance under MIL-R-11 is 10 ohms.
‡Min. Resistance under MIL-R-11 is 2.7 ohms.
Items appearing in BOLD print are popular values and are usually stocked by authorized OHMITE distributors. Items appearing in LIGHT FACE print are available from stocking distributors but normally are not stocked in depth.

© United Technical Publications

OHMITE *Little Devil*® industrial and service resistor assortments



RESISTORS AND HANDY CABINET FOR THE PRICE OF THE RESISTORS ALONE

Select the composition resistor you need, right on the job from time-saving Little Devil® Assortments. Ohmite now offers **seven industrial** assortments in addition to the four service assortments that have been so popular for many years. In this complete line, there is an assortment to fill every industrial and service need. An attractive plastic cabinet or cabinet assembly is furnished at no extra cost with each assortment. Each drawer of a single 5-drawer cabinet has eight compartments all individually labeled. Dimensions of the single cabinet are 9" long, 4¾" high 5¼" deep. Dovetail tops and bottoms facilitate stacking. Cabinet assemblies for industrial assortments are riveted to metal strips which afford rigidity and permit hanging of the unit on the wall.

Of the seven industrial assortments, there are three ±10% tolerance assortments of ¼, ½ or 1 watt sizes each containing 80 values. A two-cabinet assembly is furnished for these assortments. Four 5% tolerance assortments provide 160 values each of resistors in the ⅛, ¼, ½, or 1 watt sizes. A four-cabinet assembly is furnished for each of these assortments.

The four popular **service** assortments provide ±10% tolerance resistors in a single cabinet in ¼, ½, 1 or 2 watt sizes.

Cabinets are factory packed in accordance with the tables shown below.

11 ASSORTMENTS

Assortment	Catalog No.	Quantity of Resistors	Wattage Size	Net Price
INDUSTRIAL ±10% Tolerance 80 Resistance Values 2 Cabinets	**CAB-25**	1000	¼	$ 70.0
	CAB-26	1000	½	60.0
	CAB-27	600	1	54.0
INDUSTRIAL ±5% Tolerance 160 Resistance Values 4 Cabinets	**CAB-45**	1000	⅛	225.0
	CAB-46	1500	¼	210.0
	CAB-47	1500	½	180.0
	CAB-48	900	1	160.0
RADIO & TV SERVICE KITS ±10% Tolerance 37 Values—CAB-4 40 Values—Others 1 Cabinet	**CAB-4**	150	¼	19.5
	CAB-10	150	½	18.0
	CAB-2	125	1	22.5
	CAB-3	125	2	30.0

Prices Subject to Change Without Notice

10% TOLERANCE ASSORTMENTS

10% Resistance Values	Quantities In Each Assortment — Service Assortments CAB-4, ¼ W	CAB-10, ½ W	CAB-2, 1 W	CAB-3, 2 W	Industrial Assortments CAB-25, ¼ W	CAB-26, ½ W	CAB-27, 1 W
2.7					5	5	10
3.3					5	5	5
3.9					5	5	5
4.7					5	5	10
5.6					5	5	5
6.8					5	5	10
10		1	1	1	20	20	10
12					5	5	5
15		1	1	1	5	5	10
18					5	5	5
22					5	5	10
27		1	1	1	5	5	10
33					5	5	10
39					5	5	5
47	5	1	1	1	20	20	10
56					5	5	5
68					5	5	5
82					5	5	5
100	5	5	1	1	30	30	10
120					5	5	5
150	1	1	1	1	20	15	10
180					5	5	5
220					20	20	10
270	3	3	1	1	30	15	10
330	1	1	1	1	20	15	10
390					5	5	10
470	3	3	1	1	20	30	10
560					5	15	10
680	1	1	1	1	20	15	10
820					5	5	5
1,000	10	5	3	3	5	30	10
1,200					5	5	10
1,500	5	1	1	1	20	20	10
1,800					5	15	5
2,200	10	1	1	1	30	30	10
2,700	5	3	3	3	20	15	10
3,300					30	20	10
3,900					20	5	10
4,700	10	10	5	5	30	30	10
5,600					5	20	5
6,800					30	15	10
8,200					20	5	5
10,000					30	30	10
12,000					20	15	5
15,000					30	5	10
18,000					20	5	5
22,000					30	30	10
27,000					20	20	10
33,000					20	20	10
39,000					5	15	10
47,000					30	30	10
56,000					20	15	5
68,000					20	20	5
82,000					5	15	5
0.10 meg.					30	30	10
0.12 meg.					5	5	5
0.15 meg.					5	15	10
0.18 meg.					5	5	5
0.22 meg.					20	20	10
0.27 meg.					5	20	10
0.33 meg.					20	15	5
0.39 meg.					20	5	5
0.47 meg.					30	30	10
0.56 meg.					5	5	5
0.68 meg.					5	5	5
0.82 meg.					5	5	10
1.0 meg.					30	30	10
1.2 meg.					5	5	5
1.5 meg.					5	5	5
1.8 meg.					5	5	5
2.2 meg.					5	15	5
2.7 meg.					5	5	5
3.3 meg.					5	5	5
3.9 meg.					5	5	5
4.7 meg.					5	5	5
5.6 meg.					5	5	5
6.8 meg.					5	5	5
10 meg.					5	5	5
12 meg.					5	5	5
15 meg.					5	5	5
18 meg.					5	5	5
22 meg.					5	5	5

5% TOLERANCE ASSORTMENTS

5% Resistance Values	Quantities In Each Assortment — Industrial Assortments CAB-45, ⅛ W	CAB-46, ¼ W	CAB-47, ½ W	CAB-48, 1 W
2.7	5	5	5	5
3.0	5	5	5	5
3.3	5	5	5	5
3.6	5	5	5	5
3.9	5	5	5	5
4.7	5	5	5	5
5.1	5	5	5	5
5.6	5	5	5	5
6.8	5	5	5	5
7.5	5	5	5	5
8.2	5	5	5	5
9.1	5	5	5	5
10	20	25	30	10
11	5	5	5	5
12	5	5	5	5
15	5	5	5	5
18	5	5	5	5
20	5	5	5	5
22	5	5	5	5
24	5	5	5	5
27	5	5	15	5
30	5	5	5	5
33	5	5	5	5
36	5	5	5	5
39	5	5	5	5
43	5	5	5	5
47	10	10	5	5
51	10	10	15	10
56	5	5	5	5
62	5	5	5	5
68	5	5	5	5
75	5	5	20	5
82	5	5	5	5
91	5	5	5	5
100	20	30	30	10
110	5	5	5	5
120	5	5	5	5
130	5	5	5	5
150	5	10	15	10
160	5	5	5	5
180	20	5	5	5
200	5	5	15	10
220	10	25	15	10
240	5	5	5	5
270	5	10	15	10
300	5	5	5	5
330	5	25	15	10
360	5	5	5	5
390	5	10	15	5
430	5	5	5	5
470	10	25	20	10
510	5	10	15	10
560	5	10	15	5
620	5	5	15	5
680	5	10	5	10
750	5	5	5	5
820	5	10	5	5
910	5	5	5	5
1,000	20	30	30	10
1,100	5	5	5	5
1,200	10	25	15	10
1,300	5	5	5	5
1,500	20	10	20	5
1,600	5	5	5	5
1,800	5	25	15	5
2,000	20	25	30	10
2,200	20	30	30	10
2,400	5	10	5	5
2,700	10	25	15	5
3,000	5	10	15	5
3,300	5	25	30	5
3,600	5	5	5	5
3,900	10	25	15	5
4,300	5	5	5	5
4,700	20	30	30	10
5,100	10	25	15	5
5,600	5	25	15	5
6,200	5	10	5	5
6,800	5	30	20	5
7,500	5	5	5	5
8,200	5	25	15	5
9,100	5	5	5	5
10,000	20	30	30	10
11,000	5	5	5	5
12,000	10	25	20	5
13,000	5	5	5	5
15,000	5	30	30	5
16,000	5	5	5	5
18,000	5	10	15	5
20,000	5	25	15	5
22,000	5	25	30	10
24,000	5	5	15	5
27,000	5	10	15	5
30,000	5	10	5	5
33,000	5	25	20	5
36,000	5	5	5	5
39,000	5	10	15	5
43,000	5	5	5	5
47,000	10	25	20	10
51,000	5	10	15	5
56,000	5	5	15	5
62,000	5	5	5	5
68,000	5	10	15	5
75,000	5	5	5	5
82,000	5	10	5	5
91,000	5	5	5	5
0.10 meg.	20	30	30	10
0.11 meg.	5	5	5	5
0.12 meg.	5	5	5	5
0.13 meg.	5	5	5	5
0.15 meg.	5	10	15	5
0.16 meg.	5	5	5	5
0.18 meg.	5	5	5	5
0.20 meg.	5	10	5	5
0.22 meg.	5	5	15	5
0.24 meg.	5	5	5	5
0.27 meg.	5	5	5	5
0.30 meg.	5	5	5	5
0.33 meg.	5	5	5	5
0.36 meg.	5	5	5	5
0.39 meg.	5	5	5	5
0.43 meg.	5	5	5	5
0.47 meg.	5	10	20	5
0.51 meg.	5	5	5	5
0.56 meg.	5	5	5	5
0.62 meg.	5	5	5	5
0.68 meg.	5	5	5	5
0.75 meg.	5	5	5	5
0.82 meg.	5	5	5	5
0.91 meg.	5	5	5	5
1.0 meg.	5	25	20	5
1.1 meg.	5	5	5	5
1.2 meg.	5	5	5	5
1.3 meg.	5	5	5	5
1.5 meg.	5	10	5	5
1.6 meg.	5	5	5	5
1.8 meg.	5	10	15	5
2.0 meg.	5	5	5	5
2.2 meg.	5	5	5	5
2.4 meg.	5	5	5	5
2.7 meg.	5	5	5	5
3.0 meg.	5	5	5	5
3.3 meg.	5	5	5	5
3.6 meg.	5	5	5	5
3.9 meg.	5	5	5	5
4.3 meg.	5	5	5	5
4.7 meg.	5	5	5	5
5.1 meg.	5	5	5	5
5.6 meg.	5	5	5	5
6.2 meg.	5	5	5	5
6.8 meg.	5	5	5	5
7.5 meg.	5	5	5	5
8.2 meg.	5	5	5	5
10.0 meg.	5	5	5	5
12.0 meg.	5	5	5	5
15.0 meg.	5	5	5	5
18.0 meg.	5	5	5	5
20.0 meg.	5	5	5	5
22.0 meg.	5	5	5	5

ITEMS APPEARING IN BOLD PRINT ARE POPULAR VALUES AND ARE USUALLY STOCKED BY AUTHORIZED OHMITE DISTRIBUTORS.

© United Technical Publication

OHMITE 0.1% precision Determ-Ohm® resistance box



The new Ohmite Precision Determ-ohm® is a resistance decade box with an accuracy of ±0.1%. Four models cover the resistance range from 1 ohm to 1 megohm in a choice of three-4 decade and one-6 decade models.

Simplified selection of resistance values is accomplished by operation of rocker-type thumbwheel switches. Resistance setting is indicated by a direct in-line numeric readout. Unique switch feature (pat. pend.) allows advancing or decreasing of values directly from 9 thru 0 to 1 or vice versa, without retracing all the other values.

The housing is a functional sloping panel metal case equipped with universal binding posts and a grounded metallic binding post for effective shielding.

SPECIFICATIONS

Accuracy: 0.1% (plus .01Ω max. contact and circuit resistance per decade).

Selection: Rocker-type thumbwheel switches, continuous rotation in either direction.

Switch Life: In excess of 50,000 operations.

Power: ¼ Watt per resistor.

Operating Temperature: +15 to +35°C.

T.C. of Resistors: ±10 ppm/°C, max. 20 ppm/°C.

MAXIMUM CURRENT RATINGS

(Do not exceed 500 Volts.)

Resistance Range (Ohms)	Maximum Current (Milliamps)
1-9	710
10-99	220
100-999	71
1000-9999	22
10,000-99,999	7.1
100,000-999,999	1.1

SELECTION AND PRICING

Resistance Range (Ohms)	Ohms Per Step	Number of Decades	Catalog Number	Net Price
0 to 9.999K	1	4	3405	$85.00
0 to 99.99K	10	4	3406	85.00
0 to 999.9K	100	4	3407	90.00
0 to 999.999K	1	6	3410	125.00

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

wire-wound

resistor assortments

of type 995 axial lead MOLDED vitreous enamel

- Perfect for R & D and Prototype Labs
- All popular values included.
- Resistors and handy cabinet for the price of the resistors alone.
- 4 Wattage sizes to choose from.
- Contents clearly marked on front of each drawer segment.

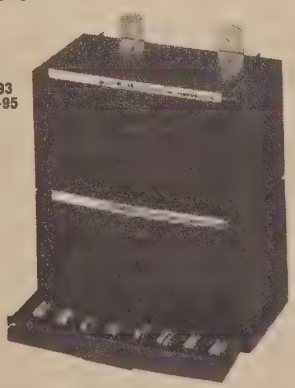
Select the wire-wound resistor you need, right on the job. All the popular resistance values, as determined by national usage, are contained in these handy, compact assortments.

The attractive plastic cabinet is furnished at no extra cost with each assortment. Cabinets are factory packed in accordance with the table (shown at right) which states the quantities of each resistance value per assortment. Each drawer segment is individually labeled. Dovetail tops and bottoms of cabinets facilitate stacking. Dimensions for single cabinets are 9" long x 4¾" high x 5¼" deep; double cabinets are 10" high, including wall hanging brackets.

Single Cabinets for CAB-91 and CAB-99



Double Cabinets for CAB-93 and CAB-95



SPECIFICATIONS AND PRICING

Nominal Wattage Size	Catalog Number	Number of Res. Values	Quantity of Resistors	Net Price
1½ W.	CAB-91	40	167	$110.00
3½ W.	CAB-93	71	325	205.00
5 W.	CAB-95	75	355	240.00
11 W.	CAB-99	40	185	140.00

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

±5% Resistance Values	QUANTITIES AND RESISTANCE FOR EACH ASSORTMENT				±5% Resistance Values	QUANTITIES AND RESISTANCE FOR EACH ASSORTMENT			
	1½ Watt CAB-91	3¼ Watt CAB-93	5 Watt CAB-95	11 Watt CAB-99		1½ Watt CAB-91	3¼ Watt CAB-93	5 Watt CAB-95	11 Watt CAB-99
1.0	10	7	7	5	470	5	7	4	4
1.2	—	—	4	—	500	5	7	7	5
1.5	5	4	4	—	510	5	—	4	—
2.0	5	4	4	5	560	—	4	4	—
2.2	5	—	—	—	600	5	7	4	—
2.7	—	4	—	—	620	—	4	—	—
3.0	5	4	4	5	680	2	7	—	—
4.0	3	4	4	5	700	—	4	—	—
5.0	5	7	7	5	750	2	7	7	5
5.6	—	1	4	—	800	2	4	4	—
6.8	—	4	—	—	820	—	—	4	—
7.5	3	4	1	5	900	—	4	—	—
10.0	10	4	7	5	1000	5	7	7	5
12	—	1	4	—	1200	2	4	4	—
15	5	7	7	5	1300	—	7	7	—
18	—	1	4	—	1500	5	7	4	4
20	3	4	7	5	1800	2	4	4	—
22	2	7	4	5	2000	5	7	7	4
25	—	4	7	5	2200	2	4	4	—
30	3	4	4	5	2500	2	4	4	4
33	—	4	—	—	2700	—	4	1	—
39	—	4	4	5	3000	5	4	7	4
40	3	4	4	5	3300	—	4	4	—
47	—	4	4	—	3900	—	1	1	—
50	5	7	7	5	4000	—	4	4	4
51	—	—	7	—	4300	—	—	4	—
56	2	4	4	—	4500	—	—	—	—
68	2	4	4	5	4700	—	4	4	—
75	2	7	4	4	5000	—	4	7	4
82	—	4	4	5	5600	—	1	4	—
91	5	—	—	—	6000	—	—	4	—
100	5	7	7	5	6800	—	1	5	4
110	5	—	—	—	7000	—	4	—	—
120	—	7	4	—	7500	—	3	—	—
150	—	4	4	5	8000	—	—	4	—
160	—	1	4	—	8200	—	4	4	—
200	5	7	7	5	9000	—	—	4	—
220	5	7	7	—	9100	—	—	—	—
250	—	4	7	5	10,000	—	7	7	4
270	—	4	4	—	12,000	—	—	4	—
300	5	7	7	5	15,000	—	—	4	4
330	5	4	4	—	20,000	—	—	4	—
350	—	—	4	4	22,000	—	—	4	—
390	—	4	4	—	25,000	—	—	4	4
400	—	4	4	—	40,000	—	—	—	4
450	—	4	—	—	50,000	—	—	—	4

© United Technical Publications

SPRAGUE RESISTORS

KOOLOHM® AXIAL-LEAD WIREWOUND RESISTORS
FOR INDUSTRIAL APPLICATIONS



- Types 450E, 452E, 454E, 456E and 458E are Standard Resistors. Types 451E, 453E, 455E, 457E and 459E are Non-Inductive Resistors

- Insulated-Shell Design for Easy Mounting
- Feature Improved Internal Construction in Which Windings and Leads are Welded to End-Cap for Superior Mechanical Strength
- Ceramic-Insulated Wire is Space Wound and Cemented, to Prevent Turn-to-Turn Shorting. Permits Higher Resistance Values in a Given Size Than in Conventional Resistors
- Non-Porous Tubular Ceramic Shells Sealed With High Temperature Silicone Cement
- Unexcelled Insulation and Mechanical Protection. Can be Mounted in Direct Contact With Chassis
- Call Your Sprague Industrial Distributor for Quantity Prices.
- For Complete Technical Details, Refer to Latest Issue of Sprague Engineering Bulletin 7300

Ohms	Type 450E 3 WATTS ¼" x 9/16" Cat. No.	Type 452E 5 WATTS ¼" x 1" Cat. No.	Type 454E 7 WATTS 15/32" x 1 3/16" Cat. No.	Type 456E 10 WATTS 13/32" x 1 29/32" Cat. No.	Type 458E 14 WATTS 15/32" x 1 29/32" Cat. No.
1	450E1R05	452E1R05	454E1R05	456E1R05	458E1R05
1.5	450E1R55	452E1R55	454E1R55	456E1R55	458E1R55
2	450E2R05	452E2R05	454E2R05	456E2R05	458E2R05
3	450E3R05	452E3R05	454E3R05	456E3R05	458E3R05
4	450E4R05	452E4R05	454E4R05	456E4R05	458E4R05
5	450E5R05	452E5R05	454E5R05	456E5R05	458E5R05
7.5	450E7R55	452E7R55	454E7R55	456E7R55	458E7R55
10	450E1005	452E1005	454E1005	456E1005	458E1005
12	450E1205	452E1205	454E1205	456E1205	458E1205
15	450E1505	452E1505	454E1505	456E1505	458E1505
18	450E1805	———	———	———	———
20	450E2005	452E2005	454E2005	456E2005	458E2005
22	450E2205	———	———	———	———
25	450E2505	452E2505	454E2505	456E2505	458E2505
27	450E2705	———	———	———	———
30	450E3005	452E3005	454E3005	456E3005	458E3005
33	450E3305	———	———	———	———
35	———	452E3505	454E3505	456E3505	458E3505
39	450E3905	———	———	———	———
40	450E4005	452E4005	454E4005	456E4005	458E4005
47	450E4705	———	———	———	———
50	450E5005	452E5005	454E5005	456E5005	458E5005
56	450E5605	———	———	———	———
68	450E6805	———	———	———	———
75	450E7505	452E7505	454E7505	456E7505	458E7505
82	450E8205	———	———	———	———
100	450E1015	452E1015	454E1015	456E1015	458E1015
120	450E1215	452E1215	454E1215	456E1215	458E1215
150	450E1515	452E1515	454E1515	456E1515	458E1515
180	450E1815	———	———	———	———

Call Your Sprague Industrial Distributor for Current Quantity Prices

Copyright 1970 Sprague Products Company

IND-REM-56-7002

Sizes subject to change without notic

© United Technical Publicatio

SPRAGUE RESISTORS

KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS, continued

Ohms	Type 450E 3 WATTS ¼" x 5/16" Cat. No.	Type 452E 5 WATTS ¼" x 1" Cat. No.	Type 454E 7 WATTS 15/32" x 13/16" Cat. No.	Type 456E 10 WATTS 15/32" x 1 29/32" Cat. No.	Type 458E 14 WATTS 15/32" x 1 29/32" Cat. No.
200	450E2015	452E2015	454E2015	456E2015	458E2015
220	450E2215	452E2215	454E2215	456E2215	458E2215
250	450E2515	452E2515	454E2515	456E2515	458E2515
270	450E2715	———	———	———	———
300	450E3015	452E3015	454E3015	456E3015	458E3015
330	450E3315	———	———	———	———
350	———	452E3515	454E3515	456E3515	458E3515
390	450E3915	———	———	———	———
400	450E4015	452E4015	454E4015	456E4015	458E4015
450	———	452E4515	———	———	———
470	450E4715	———	———	———	———
500	450E5015	452E5015	454E5015	456E5015	458E5015
560	450E5615	———	———	———	———
600	450E6015	452E6015	454E6015	456E6015	458E6015
680	450E6815	———	———	———	———
700	450E7015	452E7015	454E7015	456E7515	458E7015
750	———	452E7515	454E7515	———	458E7515
800	450E8015	452E8015	454E8015	456E8015	458E8015
820	450E8215	———	———	———	———
900	450E9015	452E9015	454E9015	456E9015	458E9015
1000	450E1025	452E1025	454E1025	456E1025	458E1025
1100	———	452E1125	454E1125	456E1125	458E1125
1200	450E1225	452E1225	454E1225	456E1225	458E1225
1400	450E1425	452E1425	454E1425	456E1425	458E1425
1500	450E1525	452E1525	454E1525	456E1525	458E1525
1800	450E1825	452E1825	454E1825	456E1825	458E1825
2000	450E2025	452E2025	454E2025	456E2025	458E2025
2200	450E2225	452E2225	454E2225	465E2225	458E2225
2500	450E2525	452E2525	454E2525	456E2525	458E2525
2700	450E2725	———	———	———	———
3000	450E3025	452E3025	454E3025	456E3025	458E3025
3300	450E3325	———	454E3325	456E3325	458E3325
3500	———	452E3525	454E3525	456E3525	458E3525
3900	450E3925	———	454E3925	456E3925	458E3925
4000	450E4025	452E4025	454E4025	456E4025	458E4025
4500	———	452E4525	454E4525	456E4525	458E4525
4700	450E4725	———	———	———	———
5000	450E5025	452E5025	454E5025	456E5025	458E5025
5600	450E5625	———	———	———	———
6000	450E6025	452E6025	454E6025	456E6025	458E6025
6800	450E6825	———	———	———	———
7000	———	452E7025	454E7025	456E7025	458E7025
7500	450E7525	452E7525	454E7525	456E7525	458E7525
8000	450E8025	452E8025	454E8025	456E8025	458E8025
8200	450E8225	———	———	———	———
9000	450E9025	452E9025	454E9025	456E9025	458E9025
10000	450E1035	452E1035	454E1035	456E1035	458E1035
11000	———	———	454E1135	456E1135	458E1135
12000	———	452E1235	454E1235	456E1235	458E1235
14000	———	452E1435	454E1435	456E1435	458E1435
15000	———	452E1535	454E1535	456E1535	458E1535
16000	———	———	454E1635	456E1635	458E1635
18000	———	452E1835	454E1835	456E1835	458E1835
20000	———	452E2035	454E2035	456E2035	458E2035
22000	———	———	454E2235	456E2235	———
25000	———	———	454E2535	456E2535	———
30000	———	———	454E3035	456E3035	———
35000	———	———	454E3535	456E3535	———
40000	———	———	454E4035	456E4035	———
45000	———	———	———	456E4535	———
50000	———	———	———	456E5035	———
60000	———	———	———	456E6035	———
70000	———	———	———	456E7035	———

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

IND-REM-57-7002

Sizes subject to change without notice.

Copyright 1970 Sprague Products Company

United Technical Publications

SPRAGUE RESISTORS

NON-INDUCTIVE KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS

Ohms	Type 451E 3 WATTS ¼" x 9/16" Cat. No.	Type 453E 5 WATTS ¼" x 1" Cat. No.	Type 455E 7 WATTS 15/32" x 1 3/16" Cat. No.	Type 457E 10 WATTS 15/32" x 1 29/32" Cat. No.	Type 459E 14 WATTS 15/32" x 1 29/32" Cat. No.
1	451E1R05	453E1R05	455E1R05	457E1R05	459E1R05
1.5	451E1R55	453E1R55	455E1R55	457E1R55	459E1R55
2	451E2R05	453E2R05	455E2R05	457E2R05	459E2R05
3	451E3R05	453E3R05	455E3R05	457E3R05	459E3R05
4	451E4R05	453E4R05	455E4R05	457E4R05	459E4R05
5	451E5R05	453E5R05	455E5R05	457E5R05	459E5R05
7.5	451E7R55	453E7R55	455E7R55	457E7R55	459E7R55
10	451E1005	453E1005	455E1005	457E1005	459E1005
12	451E1205	453E1205	455E1205	457E1205	459E1205
15	451E1505	453E1505	455E1505	457E1505	459E1505
18	451E1805	———	———	———	———
20	451E2005	453E2005	455E2005	457E2005	459E2005
22	451E2205	———	———	———	———
25	451E2505	453E2505	455E2505	457E2505	459E2505
27	451E2705	———	———	———	———
30	451E3005	453E3005	455E3005	457E3005	459E3005
33	451E3305	———	———	———	———
35	451E3505	453E3505	455E3505	457E3505	459E3505
39	451E3905	———	———	———	———
40	451E4005	453E4005	455E4005	457E4005	459E4005
47	451E4705	———	———	———	———
50	451E5005	453E5005	455E5005	457E5005	459E5005
56	451E5605	———	———	———	———
68	451E6805	———	———	———	———
75	451E7505	453E7505	455E7505	457E7505	459E7505
82	451E8205	———	———	———	———
100	451E1015	453E1015	455E1015	457E1015	459E1015
120	451E1215	453E1215	455E1215	457E1215	459E1215
150	451E1515	453E1515	455E1515	457E1515	459E1515
180	451E1815	———	———	———	———
200	451E2015	453E2015	455E2015	457E2015	459E2015
220	451E2215	453E2215	455E2215	457E2215	459E2215
250	451E2515	453E2515	455E2515	457E2515	459E2515
270	451E2715	———	———	———	———
300	451E3015	453E3015	455E3015	457E3015	459E3015
330	451E3315	———	———	———	———
350	451E3515	453E3515	455E3515	457E3515	459E3515
390	451E3915	———	———	———	———
400	451E4015	453E4015	455E4015	457E4015	459E4015
450	451E4515	453E4515	———	———	———
470	451E4715	———	———	———	———
500	451E5015	453E5015	455E5015	457E5015	459E5015
560	———	———	———	———	———
600	———	453E6015	455E6015	457E6015	459E6015
680	———	———	———	———	———
700	———	453E7015	455E7015	457E7015	459E7015
750	———	453E7515	455E7515	457E7515	459E7515
800	———	453E8015	455E8015	457E8015	459E8015

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Copyright 1970 Sprague Products Company

IND-REM-58-7002

Sizes subject to change without notice

© United Technical Publications

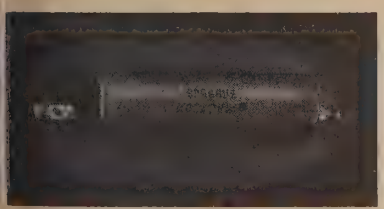
SPRAGUE RESISTORS

NON-INDUCTIVE KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS (Cont.)

Ohms	Type 451E 3 WATTS 1/4" x 9/16" Cat. No.	Type 453E 5 WATTS 1/4" x 1" Cat. No.	Type 455E 7 WATTS 15/32" x 1 1/16" Cat. No.	Type 457E 10 WATTS 15/32" x 1 29/32" Cat. No.	Type 459E 14 WATTS 15/32" x 1 29/32" Cat. No.
820	———	———	———	———	———
900	———	453E9015	455E9015	457E9015	459E9015
1000	———	453E1025	455E1025	457E1025	459E1025
1100	———	453E1125	455E1125	457E1125	459E1125
1200	———	453E1225	455E1225	457E1225	459E1225
1400	———	———	455E1425	457E1425	459E1425
1500	———	———	455E1525	457E1525	459E1525
1800	———	———	455E1825	457E1825	459E1825
2000	———	———	455E2025	457E2025	459E2025
2200	———	———	455E2225	457E2225	459E2225
2500	———	———	455E2525	457E2525	459E2525
3000	———	———	———	457E3025	459E3025
3300	———	———	———	457E3325	459E3325
3500	———	———	———	457E3525	459E3525
3900	———	———	———	457E3925	459E3925
4000	———	———	———	457E4025	459E4025
4500	———	———	———	457E4525	459E4525
5000	———	———	———	457E5025	459E5025

Call Your Sprague Industrial Distributor for Quantity Prices

Commercial Tab-Terminal KOOLOHM® Wirewound Resistors



- Ceramic Outer Jacket. May be Mounted Anywhere—Even Flat Against Grounded Parts.
- Each resistor is Tropicallized by a Glazed Ceramic Outer Coating and Improved End Seals Which Offer Complete Protection Seals Which Offer Complete Protection Against Moisture or Any Other Climatic Conditions
- Extremely High Insulation Resistance—10,000 Volts From Surface of Ceramic Jacket to Inner Resistance Elements
- Standard Resistance Tolerance: ±5%
- Insulated Wire Permits Winding Higher Values in Layers Which Means Much Smaller Physical Sizes for Each Wattage Rating
- Insulated Wire Permits True Non-Inductive Wound Designs
- These Resistors Are Also Available in 5 and 10 Watt Ratings, Axial-Lead Style. See Latest Issue of Sprague Catalog C-619
- For Technical Data, See Latest Issue of Sprague Engineering Bulletin 7310

TYPE KT STANDARD RESISTORS

Ohms	Type 25KT 25 Watts Cat. No.	Type 50KT 50 Watts Cat. No.	Type 120KT 120 Watts Cat. No.
5	25KT5R05	50KT5R05	120KT5R05
10	25KT1005	50KT1005	120KT1005
25	25KT2505	50KT2505	120KT2505
50	25KT5005	50KT5005	120KT5005
75	25KT7505	50KT7505	120KT7505
100	25KT1015	50KT1015	120KT1015
150	25KT1515	50KT1515	120KT1515
200	25KT2015	50KT2015	120KT2015
250	25KT2515	50KT2515	120KT2515
390	———	———	120KT3915
500	25KT5015	50KT5015	120KT5015
600	25KT6015	50KT6015	120KT6015
750	25KT7515	50KT7515	120KT7515
1000	25KT1025	50KT1025	120KT1025
1500	25KT1525	50KT1525	120KT1525
2000	25KT2025	50KT2025	120KT2025
2500	25KT2525	50KT2525	120KT2525
3000	25KT3025	50KT3025	120KT3025
4000	25KT4025	50KT4025	———
5000	25KT5025	50KT5025	120KT5025
7500	25KT7525	50KT7525	120KT7525
10000	25KT1035	50KT1035	120KT1035
12000	25KT1235	50KT1235	120KT1235
15000	25KT1535	50KT1535	120KT1535
20000	25KT2035	50KT2035	120KT2035
25000	25KT2535	50KT2535	120KT2535
40000	25KT4035	———	———
50000	25KT5035	50KT5035	120KT5035
75000	25KT7535	50KT7535	120KT7535
00000	25KT1045	50KT1045	120KT1045

Call Your Sprague Industrial Distributor for Current Quantity Prices

TYPE NIT NON-INDUCTIVE RESISTORS

Ohms	Type 25NIT 25 Watts Cat. No.	Type 50NIT 50 Watts Cat. No.	Type 120NIT 120 Watts Cat. No.
5	25NIT5R05	50NIT5R05	120NIT5R05
10	25NIT1005	50NIT1005	120NIT1005
25	25NIT2505	50NIT2505	120NIT2505
50	25NIT5005	50NIT5005	120NIT5005
75	25NIT7505	50NIT7505	120NIT7505
100	25NIT1015	50NIT1015	120NIT1015
150	25NIT1515	50NIT1515	120NIT1515
200	25NIT2015	50NIT2015	120NIT2015
250	25NIT2515	50NIT2515	120NIT2515
390	———	———	120NIT3915
500	25NIT5015	50NIT5015	120NIT5015
600	25NIT6015	50NIT6015	120NIT6015
750	25NIT7515	50NIT7515	120NIT7515
1000	25NIT1025	50NIT1025	120NIT1025
1500	25NIT1525	50NIT1525	120NIT1525
2000	25NIT2025	50NIT2025	120NIT2025
2500	25NIT2525	50NIT2525	120NIT2525
3000	25NIT3025	50NIT3025	120NIT3025
4000	25NIT4025	50NIT4025	———
5000	25NIT5025	50NIT5025	120NIT5025
7500	25NIT7525	50NIT7525	120NIT7525
10000	25NIT1035	50NIT1035	120NIT1035
12000	———	50NIT1235	———
15000	———	50NIT1535	120NIT1535
20000	———	50NIT2035	120NIT2035
25000	———	50NIT2535	120NIT2535
50000	———	———	120NIT5035

Call Your Sprague Industrial Distributor for Current Quantity Prices

Copyright 1970 Sprague Products Company

Sizes subject to change without notice.

SPRAGUE RESISTORS

BLUE JACKET® INDUSTRIAL WIREWOUND RESISTORS

- Improved Minified Resistors Designed for Thorough Reliability and Stability Under Extreme Operating Conditions
- Matched Coefficient of Expansion Allows Uniform Expansion of Vitreous Enamel Coating, Ceramic Base, and End Caps, Eliminating Crazing, Cracks, and Protects From Fumes and Humidity
- Windings and Leads Welded to End-Caps for Superior Mechanical Strength
- For 2BJ, 3BJ, 5BJ and 10BJ Commercial or Service Equivalents to These Resistors, Refer to the Latest issue of Sprague Catalog C-619
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 7410



	Type 239E, 1 WATT 1/8" x 3/8"		Type 240E, 2 WATTS 3/16" x 3/8"		Type 242E, 3 WATTS 13/64" x 17/32"		Type 243E, 5 WATTS 13/64" x 15/16"		Type 244E, 7 WATTS 5/16" x 1"		Type 247E, 10 WAT 5/16" x 1 3/4"	
Ohms	Cat. No.		Cat. No		Cat. No.		Cat. No.		Cat. No.		Cat. No.	
1	239E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	240E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	242E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	243E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	244E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	247E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
1.2	239E1R25											
1.5	239E1R55		240E1R55		242E1R55		243E1R55		244E1R55		247E1R55	
1.8	239E1R85											
2	239E2R05		240E2R05		242E2R05		243E2R05		244E2R05		247E2R05	
2.2	239E2R25											
2.7	239E2R27											
3	239E3R05		240E3R05		242E3R05		243E3R05		244E3R05		247E3R05	
3.3	239E3R35											
3.9	239E3R95											
4	239E4R05		240E4R05		242E4R05		243E4R05		244E4R05		247E4R05	
4.7	239E4R75											
5	239E5R05		240E5R05		242E5R05		243E5R05		244E5R05		247E5R05	
5.6	239E5R65											
6.8	239E6R85											
7.5	239E7R55		240E7R55		242E7R55		243E7R55		244E7R55		247E7R55	
8.2	239E8R25											
10	239E1005		240E1005		242E1005		243E1005		244E1005		247E1005	
12	239E1205		240E1205		242E1205		243E1205		244E1205		247E1205	
15	239E1505		240E1505		242E1505		243E1505		244E1505		247E1505	
18	239E1805		240E1805		242E1805							
20	239E2005		240E2005		242E2005		243E2005		244E2005		247E2005	
22	239E2205		240E2205		242E2205							
25	239E2505		240E2505		242E2505		243E2505		244E2505		247E2505	
27	239E2705		240E2705		242E2705							
30	239E3005		240E3005		242E3005		243E3005		244E3005		247E3005	
33	239E3305		240E3305		242E3305							
35							243E3505		244E3505		247E3505	
39	239E3905		240E3905		242E3905							
40	239E4005		240E4005		242E4005		243E4005		244E4005		247E4005	
47	239E4705		240E4705		242E4705							
50	239E5005		240E5005		242E5005		243E5005		244E5005		247E5005	
56	239E5605		240E5605		242E5605							
68	239E6805		240E6805		242E6805							
75	239E7505		240E7505		242E7505		243E7505		244E7505		247E7505	
82	239E8205		240E8205		242E8205							
100	239E1015		240E1015		242E1015		243E1015		244E1015		247E1015	
120	239E1215		240E1215		242E1215		243E1215		244E1215		247E1215	
150	239E1515		240E1515		242E1515		243E1515		244E1515		247E1515	
180	239E1815		240E1815		242E1815							
200	239E2015		240E2015		242E2015		243E2015		244E2015		247E2015	
220	239E2215		240E2215		242E2215		243E2215		244E2215		247E2215	
250	239E2515		240E2515		242E2515		243E2515		244E2515		247E2515	
270	239E2715		240E2715		242E2715							
300	239E3015		240E3015		242E3015		243E3015		244E3015		247E3015	
330	239E3315		240E3315		242E3315							
350							243E3515		244E3515		247E3515	
390	239E3915		240E3915		242E3915							
400	239E4015		240E4015		242E4015		243E4015		244E4015		247E4015	
450							243E4515					
470	239E4715		240E4715		242E4715							
500	239E5015		240E5015		242E5015		243E5015		244E5015		247E5015	
560	239E5615		240E5615		242E5615							
600	239E6015		240E6015		242E6015		243E6015		244E6015		247E6015	
680	239E6815		240E6815		242E6815							
700	239E7015		240E7015		242E7015		243E7015		244E7015		247E7015	
750							243E7515		244E7515		247E7515	
800	239E8015		240E8015		242E8015		243E8015		244E8015		247E8015	
820	239E8215		240E8215		242E8215							
900	239E9015		240E9015		242E9015		243E9015		244E9015		247E9015	
1000	239E1025		240E1025		242E1025		243E1025		244E1025		247E1025	
1100							243E1125		244E1125		247E1125	
1200	239E1225		240E1225		242E1225		243E1225		244E1225		247E1225	
1400	239E1425		240E1425		242E1425		243E1425		244E1425		247E1425	
1500	239E1525		240E1525		242E1525		243E1525		244E1525		247E1525	
1800	239E1825		240E1825		242E1825		243E1825		244E1825		247E1825	
2000	239E2025		240E2025		242E2025		243E2025		244E2025		247E2025	
2200	239E2225		240E2225		242E2225		243E2225		244E2225		247E2225	
2500	239E2525		240E2525		242E2525		243E2525		244E2525		247E2525	
2700			240E2725		242E2725							
3000			240E3025		242E3025		243E3025		244E3025		247E3025	
3300			240E3325		242E3325				244E3325		247E3325	
3500			240E3525				243E3525		244E3525		247E3525	
3900					242E3925				244E3925		247E3925	
4000					242E4025		243E4025		244E4025		247E4025	
4500							243E4525		244E4525		247E4525	
4700					242E4725							
5000					242E5025		243E5025		244E5025		247E5025	
5600					242E5625							
6000					242E6025		243E6025		244E6025		247E6025	
6800					242E6825							
7000							243E7025		244E7025		247E7025	
7500					242E7525		243E7525		244E7525		247E7525	
8000					242E8025		243E8025		244E8025		247E8025	
8200					242E8225							

Copyright 1970 Sprague Products Company

Sizes subject to change without noti

© United Technical Publicatio

SPRAGUE RESISTORS

LUE JACKET INDUSTRIAL WIREWOUND RESISTORS, continued

Ohms	Type 239E, 1 WATT 1/8" x 3/8" Cat. No.	Type 240E, 2 WATTS 3/16" x 3/8" Cat. No.	Type 242E, 3 WATTS 13/64" x 17/32" Cat. No.	Type 243E, 5 WATTS 13/64" x 15/16" Cat. No.	Type 244E, 7 WATTS 5/16" x 1" Cat. No.	Type 247E, 10 WATTS 5/16" x 1 3/4" Cat. No.
9000			242E9025	243E9025	244E9025	247E9025
10000			242E1035	243E1035	244E1035	247E1035
11000					244E1135	247E1135
12000				243E1235	244E1235	247E1235
14000				243E1435	244E1435	247E1435
15000				243E1535	244E1535	247E1535
16000					244E1635	247E1635
17000					244E1735	
18000				243E1835	244E1835	247E1835
20000				243E2035	244E2035	247E2035
22000				243E2235	244E2235	247E2235
25000				243E2535	244E2535	247E2535
30000				243E3035	244E3035	247E3035
35000						247E3535
40000						247E4035
45000						247E4535
50000						247E5035

Call Your Sprague Industrial Distributor for Quantity Prices

TYPE RW67, RW68, RW69 BLUE JACKET® WIREWOUND RESISTORS

This Series of Blue Jacket Wirewound Resistors Meet All Performance Characteristics of Military Specification MIL R-26E, Characteristics V & G

Ohms	Type RW69 3 WATTS 3/16" x 1/2" Cat. No.	Type RW67 6.5 WATTS 5/16" x 1" Cat. No.	Type RW68 11 WATTS 11/32" x 17/8" Cat. No.
1.0	RW69V1R0	RW67V1R0	RW68V1R0
1.1	RW69V1R1	RW67V1R1	RW68V1R1
1.2	RW69V1R2	RW67V1R2	RW68V1R2
1.3	RW69V1R3	RW67V1R3	RW68V1R3
1.5	RW69V1R5	RW67V1R5	RW68V1R5
1.6	RW69V1R6	RW67V1R6	RW68V1R6
1.8	RW69V1R8	RW67V1R8	RW68V1R8
2.0	RW69V2R0	RW67V2R0	RW68V2R0
2.2	RW69V2R2	RW67V2R2	RW68V2R2
2.4	RW69V2R4	RW67V2R4	RW68V2R4
2.7	RW69V2R7	RW67V2R7	RW68V2R7
3.0	RW69V3R0	RW67V3R0	RW68V3R0
3.3	RW69V3R3	RW67V3R3	RW68V3R3
3.6	RW69V3R6	RW67V3R6	RW68V3R6
3.9	RW69V3R9	RW67V3R9	RW68V3R9
4.3	RW69V4R3	RW67V4R3	RW68V4R3
4.7	RW69V4R7	RW67V4R7	RW68V4R7
5.1	RW69V5R1	RW67V5R1	RW68V5R1
5.6	RW69V5R6	RW67V5R6	RW68V5R6
6.2	RW69V6R2	RW67V6R2	RW68V6R2
6.8	RW69V6R8	RW67V6R8	RW68V6R8
7.5	RW69V7R5	RW67V7R5	RW68V7R5
8.2	RW69V8R2	RW67V8R2	RW68V8R2
9.1	RW69V9R1	RW67V9R1	RW68V9R1
10	RW69V100	RW67V100	RW68V100
11	RW69V110	RW67V110	RW68V110
12	RW69V120	RW67V120	RW68V120
13	RW69V130	RW67V130	RW68V130
15	RW69V150	RW67V150	RW68V150
16	RW69V160	RW67V160	RW68V160
18	RW69V180	RW67V180	RW68V180
20	RW69V200	RW67V200	RW68V200
22	RW69V220	RW67V220	RW68V220
24	RW69V240	RW67V240	RW68V240
27	RW69V270	RW67V270	RW68V270
30	RW69V300	RW67V300	RW68V300
33	RW69V330	RW67V330	RW68V330
36	RW69V360	RW67V360	RW68V360
39	RW69V390	RW67V390	RW68V390
43	RW69V430	RW67V430	RW68V430
47	RW69V470	RW67V470	RW68V470
51	RW69V510	RW67V510	RW68V510
56	RW69V560	RW67V560	RW68V560
62	RW69V620	RW67V620	RW68V620
68	RW69V680	RW67V680	RW68V680
75	RW69V750	RW67V750	RW68V750
82	RW69V820	RW67V820	RW68V820
91	RW69V910	RW67V910	RW68V910
100	RW69V101	RW67V101	RW68V101
110	RW69V111	RW67V111	RW68V111
120	RW69V121	RW67V121	RW68V121
130	RW69V131	RW67V131	RW68V131
150	RW69V151	RW67V151	RW68V151
160	RW69V161	RW67V161	RW68V161
180	RW69V181	RW67V181	RW68V181
200	RW69V201	RW67V201	RW68V201
220	RW69V221	RW67V221	RW68V221
240	RW69V241	RW67V241	RW68V241
270	RW69V271	RW67V271	RW68V271
300	RW69V301	RW67V301	RW68V301
330	RW69V331	RW67V331	RW68V331
360	RW69V361	RW67V361	RW68V361
390	RW69V391	RW67V391	RW68V391
430	RW69V431	RW67V431	RW68V431
470	RW69V471	RW67V471	RW68V471
510	RW69V511	RW67V511	RW68V511
560	RW69V561	RW67V561	RW68V561
620	RW69V621	RW67V621	RW68V621
680	RW69V681	RW67V681	RW68V681
750	RW69V751	RW67V751	RW68V751
820	RW69V821	RW67V821	RW68V821
910	RW69V911	RW67V911	RW68V911
1000	RW69V102	RW67V102	RW68V102
1100	RW69V112	RW67V112	RW68V112
1200	RW69V122	RW67V122	RW68V122
1300	RW69V132	RW67V132	RW68V132
1500	RW69V152	RW67V152	RW68V152
1600	RW69V162	RW67V162	RW68V162
1800	RW69V182	RW67V182	RW68V182
2000	RW69V202	RW67V202	RW68V202
2200		RW67V222	RW68V222
2400		RW67V242	RW68V242
2700		RW67V272	RW68V272
3000		RW67V302	RW68V302
3300		RW67V332	RW68V332
3600		RW67V362	RW68V362
3900		RW67V392	RW68V392
4300		RW67V432	RW68V432
4700		RW67V472	RW68V472
5100		RW67V512	RW68V512
5600		RW67V562	RW68V562
6200		RW67V622	RW68V622
6800		RW67V682	RW68V682
7500		RW67V752	RW68V752
8200		RW67V822	RW68V822
9100			RW68V912
10,000			RW68V103
11,000			RW68V113
12,000			RW68V123
13,000			RW68V133
15,000			RW68V153
16,000			RW68V163
18,000			RW68V183
20,000			RW68V203

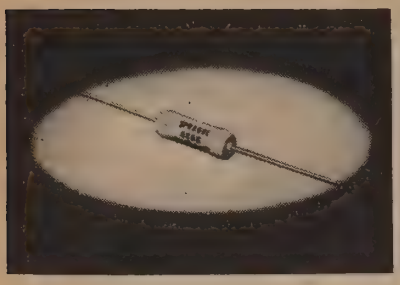
Call Your Sprague Industrial Distributor For Current Quality Prices

Sizes subject to change without notice.

opyright 1970 Sprague Products Company

SPRAGUE RESISTORS

ACRASIL® PRECISION/POWER WIREWOUND RESISTORS



- Exclusive Silicone Coating Has Such Excellent Protective Qualities That Extremely Fine Diameter Wire is Used in Winding Resistor Body —Result is Higher Values of Resistance Than Were Previously Available.
- Extended Range of Resistance Values In No Way Impairs the Stability or Reliability of These Resistors, Even Under Extreme Operating Conditions.
- Small Size—Ideal for High-Density Circuitry.
- Both Standard and Non-Inductive Winding Are Available.
- Designed to Meet the Stringent Requirement of MIL-R-26E.
- Standard Resistance Tolerance, ±1%.
- For Complete Technical Data, Refer to Latest Issue of Engineering Bulletin 7450.

Call Your Sprague Industrial Distributor For Current Quantity Prices

STANDARD RESISTANCE VALUES (Ohms)

.100	.287	.825	2.37	6.81	19.6	56.2	162	464	1.33 K	3.83 K	11.0 K	31.6 K	90.9 K
.102	.294	.845	2.43	6.98	20.0	57.6	165	475	1.37 K	3.92 K	11.3 K	32.4 K	93.1 K
.105	.301	.866	2.49	7.15	20.5	59.0	169	487	1.40 K	4.02 K	11.5 K	33.2 K	95.3 K
.107	.309	.887	2.55	7.32	21.0	60.4	174	499	1.43 K	4.12 K	11.8 K	34.0 K	97.6 K
.110	.316	.909	2.61	7.50	21.5	61.9	178	511	1.47 K	4.22 K	12.1 K	34.8 K	100 K
.113	.324	.931	2.67	7.68	22.1	63.4	182	523	1.50 K	4.32 K	12.4 K	35.7 K	102 K
.115	.332	.953	2.74	7.87	22.6	64.9	187	536	1.54 K	4.42 K	12.7 K	36.5 K	105 K
.118	.340	.976	2.80	8.06	23.2	66.5	191	549	1.58 K	4.53 K	13.0 K	37.4 K	107 K
.121	.348	1.0	2.87	8.25	23.7	68.1	196	562	1.62 K	4.64 K	13.3 K	38.3 K	110 K
.124	.357	1.02	2.94	8.45	24.3	69.8	200	576	1.65 K	4.75 K	13.7 K	39.2 K	113 K
.127	.365	1.05	3.01	8.66	24.9	71.5	205	590	1.69 K	4.87 K	14.0 K	40.2 K	115 K
.130	.374	1.07	3.09	8.87	25.5	73.2	210	604	1.74 K	4.99 K	14.3 K	41.2 K	118 K
.133	.383	1.10	3.16	9.09	26.1	75.0	215	619	1.78 K	5.11 K	14.7 K	42.2 K	121 K
.137	.392	1.13	3.24	9.31	26.7	76.8	221	634	1.82 K	5.23 K	15.0 K	43.2 K	124 K
.140	.402	1.15	3.32	9.53	27.4	78.7	226	649	1.87 K	5.36 K	15.4 K	44.2 K	127 K
.143	.412	1.18	3.40	9.76	28.0	80.6	232	665	1.91 K	5.49 K	15.8 K	45.3 K	130 K
.147	.422	1.21	3.48	10.00	28.7	82.5	237	681	1.96 K	5.62 K	16.2 K	46.4 K	133 K
.150	.432	1.24	3.57	10.2	29.4	84.5	243	698	2.00 K	5.76 K	16.5 K	47.5 K	137 K
.154	.442	1.27	3.65	10.5	30.1	86.6	249	715	2.05 K	5.90 K	16.9 K	48.7 K	140 K
.158	.453	1.30	3.74	10.7	30.9	88.7	255	732	2.10 K	6.04 K	17.4 K	49.9 K	143 K
.162	.464	1.33	3.83	11.0	31.6	90.9	261	750	2.15 K	6.19 K	17.8 K	51.1 K	147 K
.165	.475	1.37	3.92	11.3	32.4	93.1	267	768	2.21 K	6.34 K	18.2 K	52.3 K	150 K
.169	.487	1.40	4.02	11.5	33.2	95.3	274	787	2.26 K	6.49 K	18.7 K	53.6 K	154 K
.174	.499	1.43	4.12	11.8	34.0	97.6	280	806	2.32 K	6.65 K	19.1 K	54.9 K	158 K
.178	.511	1.47	4.22	12.1	34.8	100	287	825	2.37 K	6.81 K	19.6 K	56.2 K	162 K
.182	.523	1.50	4.32	12.4	35.7	102	294	845	2.43 K	6.98 K	20.0 K	57.6 K	165 K
.187	.536	1.54	4.42	12.7	36.5	105	301	866	2.49 K	7.15 K	20.5 K	59.0 K	169 K
.191	.549	1.58	4.53	13.0	37.4	107	309	887	2.55 K	7.32 K	21.0 K	60.4 K	174 K
.196	.562	1.62	4.64	13.3	38.3	110	316	909	2.61 K	7.50 K	21.5 K	61.9 K	178 K
.200	.576	1.65	4.75	13.7	39.2	113	324	931	2.67 K	7.68 K	22.1 K	63.4 K	182 K
.205	.590	1.69	4.87	14.0	40.2	115	332	953	2.74 K	7.87 K	22.6 K	64.9 K	187 K
.210	.604	1.74	4.99	14.3	41.2	118	340	976	2.80 K	8.06 K	23.2 K	66.5 K	191 K
.215	.619	1.78	5.11	14.7	42.2	121	348	1.0 K	2.87 K	8.25 K	23.7 K	68.1 K	196 K
.221	.634	1.82	5.23	15.0	43.2	124	357	1.02 K	2.94 K	8.45 K	24.3 K	69.8 K	200 K
.226	.649	1.87	5.36	15.4	44.2	127	365	1.05 K	3.01 K	8.66 K	24.9 K	71.5 K	205 K
.232	.665	1.91	5.49	15.8	45.3	130	374	1.07 K	3.09 K	8.87 K	25.5 K	73.2 K	210 K
.237	.681	1.96	5.62	16.2	46.4	133	383	1.10 K	3.16 K	9.09 K	26.1 K	75.0 K	215 K
.243	.698	2.00	5.76	16.5	47.5	137	392	1.13 K	3.24 K	9.31 K	26.7 K	76.8 K	221 K
.249	.715	2.05	5.90	16.9	48.7	140	402	1.15 K	3.32 K	9.53 K	27.4 K	78.7 K	226 K
.255	.732	2.10	6.04	17.4	49.9	143	412	1.18 K	3.40 K	9.76 K	28.0 K	80.6 K	232 K
.261	.750	2.15	6.19	17.8	51.1	147	422	1.21 K	3.48 K	10.00 K	28.7 K	82.5 K	237 K
.267	.768	2.21	6.34	18.2	52.3	150	432	1.24 K	3.57 K	10.2 K	29.4 K	84.5 K	243 K
.274	.787	2.26	6.49	18.7	53.6	154	442	1.27 K	3.65 K	10.5 K	30.1 K	86.6 K	249 K
.280	.806	2.32	6.65	19.1	54.9	158	453	1.30 K	3.74 K	10.7 K	30.9 K	88.7 K	

INDUSTRIAL TYPES

1 WATT
TYPE 219E
.093"D. x 250"L.
.1 ohm thru 3K

1.25 WATT
TYPE 221E
.093"D x .406"L.
.1 ohm thru 10K

3 WATTS
TYPE 223E
.187"D x .562"L.
.1 ohm thru 25K

5 WATTS
TYPE 225E
.312"D x .875"L.
.1 ohm thru 75K

10 WATTS
TYPE 227E
.375"D. x 1.781"L.
.1 ohm thru 249K

MILITARY TYPES

1 WATT
TYPE RW70U
.093"D. x .406"L.
.1 ohm thru 3.16K

3 WATTS
TYPE RW79U
.187"D. x .562"L.
.1 ohm thru 10.5K

5 WATTS
TYPE RW74U
.312"D. x .875"L.
.1 ohm thru 38.3K

10 WATTS
TYPE RW78U
.375"D x 1.781"L.
.1 ohm thru 99.9K

Copyright 1970 Sprague Products Company

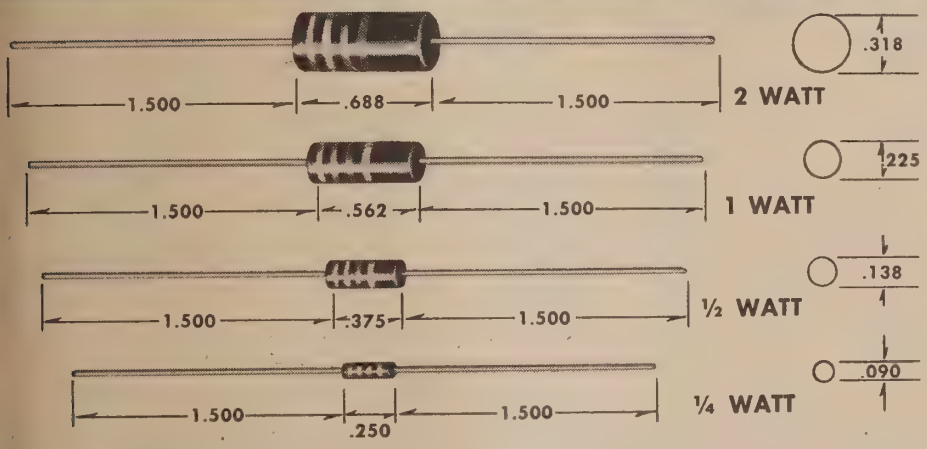
IND-REM-63-7002

Sizes subject to change without notice

© United Technical Publication

STACKPOLE

FIXED COMPOSITION RESISTORS



Stackpole Resistors offer superior performance in terms of load life, moisture resistance, shelf life, and other important characteristics. Available in ¼, ½, 1, and 2 watt insulated types in resistance values with 5%, 10% and 20% tolerances as shown below.

EASIEST SOLDERING

is asured thanks to an exclusive extra solder coating applied after the usual tin dipping. Leads of Stackpole Resistors solder readily by any method—dip or iron—stay tarnish free even after months in storage. And, their baked-on color codes resist solvent scrubbing operations . . . maintain uniform, attractive appearance.

269 STANDARD VALUES FOR MODERN CIRCUITRY

±20%	±10%	±5%	±20%	±10%	±5%	±20%	±10%	±5%	±20%	±10%	±5%
										560000	560000
		10		390	390			15000			620000
10	10	11			430			16000			
	12	12	470	470	470		18000	18000	680000	680000	680000
		13			510			20000			750000
				560	560	22000	22000	22000		820000	820000
15	15	15			620			24000			910000
		16					27000	27000	1.0 Meg	1.0 Meg	1.0 Meg
	18	18	680	680	680			30000			1.1 Meg
		20			750					1.2 Meg	1.2 Meg
22	22	22		820	820	33000	33000	33000			1.3 Meg
		24			910			36000			
	27	27	1000	1000	1000		39000	39000	1.5 Meg	1.5 Meg	1.5 Meg
		30			1100			43000			1.6 Meg
				1200	1200	47000	47000	47000		1.8 Meg	1.8 Meg
33	33	33			1300			51000			2.0 Meg
		36					56000	56000	2.2 Meg	2.2 Meg	2.2 Meg
	39	39	1500	1500	1500			62000			2.4 Meg
		43			1600					2.7 Meg	2.7 Meg
47	47	47		1800	1800	68000	68000	68000			3.0 Meg
		51			2000			75000			
	56	56	2200	2200	2200		82000	82000	3.3 Meg	3.3 Meg	3.3 Meg
		62			2400			91000			3.6 Meg
				2700	2700	100000	100000	100000		3.9 Meg	3.9 Meg
68	68	68			3000			110000			4.3 Meg
		75					120000	120000	4.7 Meg	4.7 Meg	4.7 Meg
	82	82	3300	3300	3300			130000			5.1 Meg
		91			3600					5.6 Meg	5.6 Meg
				3900	3900	150000	150000	150000			6.2 Meg
100	100	100			4300			160000			
		110					180000	180000	6.8 Meg	6.8 Meg	6.8 Meg
	120	120	4700	4700	4700			200000			7.5 Meg
		130			5100					8.2 Meg	8.2 Meg
				5600	5600	220000	220000	220000			9.1 Meg
150	150	150			6200			240000			
		160					270000	270000	10.0 Meg	10.0 Meg	10.0 Meg
	180	180	6800	6800	6800			300000			11.0 Meg
		200			7500					12.0 Meg	12.0 Meg
220	220	220		8200	8200	330000	330000	330000			13.0 Meg
		240			9100			360000			
	270	270	10000	10000	10000		390000	390000	15.0 Meg	15.0 Meg	15.0 Meg
		300			11000			430000			16.0 Meg
				12000	12000	470000	470000	470000		18.0 Meg	18.0 Meg
330	330	330			13000			510000			20.0 Meg
		360							22.0 Meg	22.0 Meg	22.0 Meg

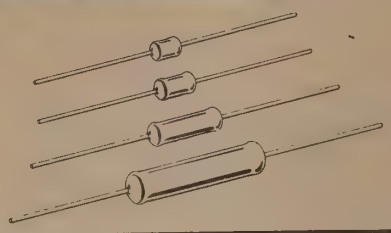
AVAILABLE THROUGH LEADING INDUSTRIAL ELECTRONIC PARTS DISTRIBUTORS

Electronic Components Div., STACKPOLE CARBON COMPANY

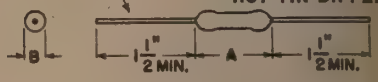
WARD LEONARD

Axiohm® RESISTORS
Vitreous Enamel Wire-Wound Power Type

AXIOHM, the miniaturized, space-saving power resistor line, is designed for automation, printed circuits and advanced miniaturization use. Recommended for electronic and industrial use where high O.L. capacity and high stability are a "must." Ratings based on 325°C rise. Order by Type No. and Ohms.



1 WATT #24 B & S GAGE WIRE
2, 3, 4 AND 5 WATT #20 B & S GAGE WIRE
7, 10 AND 12.5 WATT #18 B & S GAGE WIRE
HOT TIN DIPPED



WATTS	Standard Resistance Values in Ohms ±5%	Price 1-24 Ohms	Price 1-24 Net $
1 **Type 1X** Dimensions A = 13/32 B = 3/32	1, 1.5, 2, 3, 4, 5, 7.5, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91, 100, 110, 120, 130, 150, 160, 180, 200, 220, 240, 250, 270, 300, 330, 360, 390, 430, 470, 510, 560, 620, 680, 750, 820, 910, 1K, 1.1K, 1.2K, 1.3K, 1.5K, 1.6K, 1.8K, 2K, 2.2K, 2.4K, 2.5K, 2.7K, 3K, 3.3K, 3.9K, 4.3K, 4.7K, 5.1K, 5.6K, 6.2K, 6.8K, 7.5K	1-1K 1.1K-2K 2.2K-3K 3.3K-4.3K 4.7K-6.8K 7.5K	.69 .73 .86 1.04 1.23 1.50
2 **Type 2X** Dimensions A = 3/8 B — 3/16	1, 1.5, 2, 3, 4, 5, 7.5, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91, 100, 110, 120, 130, 150, 160, 180, 200, 220, 240, 250, 270, 300, 330, 360, 390, 430, 470, 510, 560, 620, 680, 750, 820, 910, 1K, 1.1K, 1.2K, 1.3K, 1.5K, 1.6K, 1.8K, 2K, 2.2K, 2.4K, 2.5K, 2.7K, 3K, 3.3K, 3.9K, 4.3K, 4.7K, 5.1K	1-1K 1.1K-3K 3.3K-3.9K 4.3K-5.1K	.53 .55 .66 .79
3 **Type 3X** Dimensions A = 1/2 B = 3/16	1, 1.5, 2, 3, 4, 5, 7.5, 10, 12, 15, 18, 20, 22, 25, 27, 30, 33, 35, 40, 47, 50, 56, 68, 75, 82, 100, 120, 125, 150, 180, 200, 225, 250, 270, 300, 350, 390, 400, 450, 470, 500, 560, 600, 680, 700, 750, 800, 820, 900, 1K, 1.1K, 1.2K, 1.25K, 1.5K, 1.75K, 1.8K, 2K, 2.2K, 2.25K, 2.5K, 2.7K, 3K, 3.3K, 3.5K, 3.9K, 4K, 4.5K, 5K, 5.6K, 6K, 6.5K, 6.8K, 7K, 7.5K, 8K, 8.2K, 9K, 10K	1-1K 1.1K-6.5K 6.8K-9K 10K	.48 .52 .66 .79
4 **Type 4X** Dimensions A = 11/16 B = 3/16	1, 1.5, 2, 3, 4, 5, 7.5, 10, 12, 15, 18, 20, 22, 25, 27, 30, 33, 35, 40, 47, 50, 56, 68, 75, 82, 100, 120, 125, 150, 180, 200, 225, 250, 270, 300, 350, 390, 400, 450, 470, 500, 560, 600, 680, 700, 750, 800, 820, 900, 1K, 1.1K, 1.2K, 1.25K, 1.5K, 1.75K, 1.8K, 2K, 2.2K, 2.25K, 2.5K, 2.7K, 3K, 3.3K, 3.5K, 3.9K, 4K, 4.5K, 5K, 5.6K, 6K, 6.5K, 6.8K, 7K, 7.5K, 8K, 8.2K, 9K, 10K	1-1K 1001-5K 5001-10K	.50 .54 .60

WATTS	Standard Resistance Values in Ohms ±5%	Price 1-24 Ohms	Price 1-24 Net $
5 **Type 5X** Dimensions A = 15/16 B = 3/16	1, 1.5, 2, 3, 4, 5, 7.5, 10, 12, 15, 18, 20, 22, 25, 27, 30, 33, 35, 39, 40, 47, 50, 56, 68, 75, 82, 100, 120, 125, 150, 180, 200, 220, 225, 250, 270, 300, 330, 350, 390, 400, 450, 470, 500, 560, 600, 680, 700, 750, 800, 820, 900, 1K, 1.1K, 1.2K, 1.25K, 1.5K, 1.75K, 1.8K, 2K, 2.2K, 2.25K, 2.5K, 2.7K, 3K, 3.3K, 3.5K, 3.9K, 4K, 4.5K, 5K, 5.6K, 6K, 6.8K, 7K, 7.5K, 8K, 8.2K, 9K, 10K, 11K, 12K, 12.5K, 13.5K, 15K, 16K, 17.5K, 18K, 20K, 22K, 25K, 27K	1-1K 1.1K-5K 5.6K-10K 11K-15K 16K-20K 22K-27K	.52 .57 .61 .67 .87 1.04
7 **Type 7X** Dimensions A = 1 B = 15/16	1, 1.5, 2, 3, 4, 5, 7.5, 10, 12, 15, 20, 25, 30, 33, 35, 40, 50, 68, 75, 100, 125, 150, 180, 200, 225, 250, 300, 330, 350, 390, 400, 450, 500, 600, 700, 750, 800, 900, 1K, 1.1K, 1.2K, 1.25K, 1.5K, 1.75K, 2K, 2.25K, 2.5K, 3K, 3.5K, 4K, 4.5K, 5K, 6K, 7K, 8K, 8.2K, 9K, 10K, 11K, 12K, 12.5K, 15K, 17.5K, 20K, 25K, 27K	1-1K 1.1K-5K 5001-10K 10,001-24.5K 25K	.55 .61 .64 .71 .95
10 **Type 10X** Dimensions A = 1 3/4 B = 5/16	1, 1.5, 2, 3, 4, 5, 7.5, 10, 12, 15, 20, 25, 30, 35, 40, 50, 75, 100, 125, 150, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700, 750, 800, 900, 1K, 1.1K, 1.2K, 1.25K, 1.5K, 1.75K, 2K, 2.25K, 2.5K, 3K, 3.5K, 4K, 4.5K, 5K, 6K, 7K, 7.5K, 8K, 8.5K, 9K, 10K, 11K, 12K, 12.5K, 13.5K, 15K, 16K, 17.5K, 18K, 20K, 22.5K, 25K, 30K, 35K, 40K, 45K, 50K	1-1K 1.1K-5K 6K-10K 11K-20K 22.5K-45K 50K	.66 .76 .79 .87 .94 1.12
12.5 **Type 12.5X** Dimensions A = 1 3/4 B = 3/8	1, 1.5, 2, 3, 4, 5, 7.5, 10, 12, 15, 20, 25, 30, 35, 40, 50, 75, 100, 125, 150, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700, 750, 800, 900, 1K, 1.1K, 1.2K, 1.25K, 1.5K, 1.75K, 2K, 2.25K, 2.5K, 3K, 3.5K, 4K, 4.5K, 5K, 6K, 7K, 7.5K, 8K, 8.5K, 9K, 10K, 11K, 12K, 12.5K, 13.5K, 15K, 16K, 17.5K, 18K, 20K, 22.5K, 25K, 30K, 35K, 40K, 45K, 50K	1-1K 1.1K-5K 6K-10K 11K-20K 22.5-45K 50K	.73 .84 .87 .96 1.04 1.23

Net

© United Technical Publications

WARD LEONARD

Vitrohm® RESISTORS
Vitreous Enamel Wire-Wound Power Type

ITROHM LUG TERMINAL RESISTORS are the most advanced wire-wound power resistors you can specify. The itreous enamel coating, a high heat conducting medium eveloped and manufactured only by Ward Leonard is ough, hard, moisture and acid resistant. Ceramic cores, oo, are Ward Leonard made. Alloys for resistance wire nd terminals are manufactured to exacting specs. And itrohm lug resistors include a unique two piece terminal alloy band with matched coefficient of expansion and a inned copper tab for best solderability). Result... built-in eliability and uniformity proven through the years.

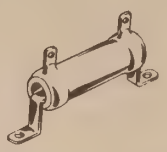
Vitrohm lug terminal resistors utilize Ward Leonard's new Dual-Power Rating System, i.e. 50/35 watts, 50/35F.

Temperature rise, ambient, resistance, applied voltage and ther factors influence the power that can be safely applied to a resistor. The dual-power rating takes these factors into account. For example, the 50/35 watt unit indicates 50 watts for units in the low resistance range; 35 watts for the higher resistances. 35 watts represents the power rating under the worst normal conditions. See Catalog ww/wl/270 for technical data.

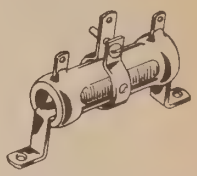
Standard resistance tolerance: ±5% fixed; ±10%-5% adjustable.



Types 5F, 10F, and 20F. Furnished with wire terminal leads. Brackets supplied on request.



Types 25F, 50F, 100F, 160F, 200F. Furnished with lug terminals and mounting brackets.



Types 10A, 25A, 50A, 80A, 100A, 160A, 200A. Furnished with mounting brackets and one adjustable band.

VITROHM FIXED RESISTORS

8/5-WATT TYPE 8/5F

Resistance Range, Ohms	Net Each
1-1000	$0.57
1100-5000	.59
6000-10K	.63

10/8-WATT TYPE 10/8F

1-1000	$0.59
1100-5000	.62
6000-10K	.69
11K-20K	.75
20K-30K	.83

12/10-WATT TYPE 12/10F

1-1000	$0.61
1100-5000	.65
6000-10K	.76
11K-20K	.84
22.5K-40K	.87
45K-50K	1.00

15/12-WATT TYPE 15/12F

1-1000	$0.66
1100-5000	.70
6000-10K	.82
11K-20K	.87
22.5K-40K	.96
45K-50K	1.12

20/15-WATT TYPE 20/15F

1-1000	$0.72
1200-5000	.75
6000-10K	.88
12.5K-20K	.90
25K-40K	1.06
45K-60K	1.23
65K-70K	1.46

25/20-WATT TYPE 25/20F

1-1000	$0.77
1250-5000	.80
6000-10K	.90
12K-20K	.97
25K-40K	1.11
50K-60K	1.30
65K-80K	1.51
85K-100K	1.75

30/25-WATT TYPE 30/25F

1-1000	$0.89
1250-5000	.92
6000-10K	1.07
12K-20K	1.15
25K-40K	1.25
50K-60K	1.40
70K-80K	1.99
100K	2.36

35/30-WATT TYPE 35/30F

1-1000	$1.10
1250-5000	1.12
6000-10K	1.21
12K-20K	1.36
25K-40K	1.60
50K-60K	1.81
70K-80K	2.19
100K	2.36

***50/35-WATT TYPE 50/35F**

1-2	$1.67
3-1000	1.19
1500-5000	1.23
6000-10K	1.33
12K-20K	1.46
25K-40K	1.66
45K-50K	1.85

***50/35-WATT TYPE 50/35F**

Resistance Range, Ohms	Net Each
75K	$2.12
100K-125K	2.70
150K	2.88
175K-200K	3.00
225K-250K	3.50

70/50-WATT TYPE 70/50F

1-4	$1.67
5-1000	1.19
1500-5000	1.23
6000-10K	1.33
12K-20K	1.46
25K-40K	1.66
45K-60K	1.85
75K	2.12
100K-125K	2.70
150K	2.88
175K-200K	3.00
225K-250K	3.50

100/70-W TYPE 100/70F

1-5	$2.25
10-1000	1.60
1250-5000	1.65
7500-10K	1.80
15K-20K	1.94
25K-40K	2.20
50K-60K	2.30
70K-75K	2.52
100K	2.85

130/100-W TYPE 130/100F

1-5	$2.55
10-1000	1.82
1250-5000	1.90
7500-10K	2.01
15K-20K	2.21
25K-40K	2.40
50K-60K	2.76
70K-75K	2.90
100K	3.07

160/130-W TYPE 160/130F

1-10	$2.73
15-1000	1.93
1500-5000	2.01
7500-10K	2.16
15K-20K	2.26
25K-40K	2.47
50K-60K	2.81
75K-80K	3.07
100K	3.37

180/160-W TYPE 180/160F

1-10	$2.87
15-1000	2.05
1500-5000	2.12
7500-10K	2.31
15K-20K	2.33
25K-40K	2.53
50K-60K	2.85
75K-80K	3.25
100K	3.67

225/200-W TYPE 225/200F

1-10	$3.00
25-1000	2.15
1500-5000	2.20
7500-10K	2.27
15K-20K	2.50
25K-40K	2.84
50K-60K	2.86
75K	3.18
100K	3.53

ADJUSTABLE RESISTORS

12/10-WATT TYPE 12/10A

Resistance Range, Ohms	Net Each
1	$1.89
2-1000	1.56
1100-5000	1.59
6000-10K	1.71

30/25-WATT TYPE 30/25A

1-2	$2.22
3-1000	1.78
1250-5000	1.81
6000-10K	2.00
12K-20K	2.10
25K	2.22

50/35-WATT TYPE 50/35A

1-5	$2.60
10-1000	2.10
1250-5000	2.15
6000-10K	2.21
12K-20K	2.35
25K-40K	2.68
50K-60K	2.88
75K-80K	2.97
100K	3.09

70/50-WATT TYPE 70/50A

1-5	$2.78
10-1000	2.25
1250-5000	2.29
6000-10K	2.40
12K-20K	2.55
25K-40K	2.77
50K-60K	2.98
75K-80K	3.27
100K	3.91

130/100-W TYPE 130/100A

1-10	$4.05
25-1000	3.24
1500-5000	3.33
6000-10K	3.45
15K-20K	3.67
25K-40K	3.88
50K-60K	4.28
75K	4.43
100K	4.62

180/160-W TYPE 180/160A

1-25	$4.66
50-1000	3.76
1500-5000	3.83
6000-10K	4.04
15K-20K	4.06
25K-40K	4.28
50K-60K	4.64
75K-80K	5.08
100K	5.54

225/200-W TYPE 225/200A

1-25	$5.19
50-1000	4.26
1500-5000	4.31
7500-10K	4.39
15K-20K	4.64
25K-40K	5.01
50K-60K	5.04
75K	5.39
100K	5.77
125K	6.24
150K	6.36

STRIPOHM RESISTORS

itrohm construction but flat design for applications where space for mounting component is extremely limited. Strip shape, low silhouette mounting and terminal arrangement provides extra space saving. Multiple stacking permissible by using 3/32" washers. Push-in mounting brackets furnished. 10, 15, 20 watt sizes based on 300°C rise. Larger sizes 300°C rise with resistor mounted horizontally on a vertical 12" sq. x .040" steel plate. Adjustable types to order. Tolerance: ±5% fixed.

10-WATT TYPE 10S

Size: 1¼" long x 21/32" wide over lugs. Mounting centers, 1".

Resistance Range, Ohms	Net Each
1-1,000	$1.17
1,250-5,000	1.22
7,500-10,000	1.24

15-WATT TYPE 15S

Size: 1½" long x 21/32" wide over lugs. Mounting centers, 1¼".

1-1,000	$1.19
1,250-5,000	1.24
7,500-10,000	1.28
15,000	1.33

20-WATT TYPE 20S

Size: 2 3/32" long x 7/8" wide over lugs. Mounting centers, 2 5/16".

1-1,000	$1.21
1,250-5,000	1.25
7,500-10,000	1.30
15,000-20,000	1.32
30,000-40,000	1.40
50,000	1.46

30-WATT TYPE 30S

Size: 2½" long x 1 1/16" wide over lugs. Mounting centers, 2".

1-1,000	$1.33
1,250-5,000	1.42

40-WATT TYPE 40S

Size: 3¼" long x 1 1/16" wide over lugs. Mounting centers, 2¾".

1-2	$1.90
3-1,000	1.36
1,250-5,000	1.41
7,500-10,000	1.53
15,000	1.62



55-WATT TYPE 55S

Size: 4¾" long x 1 1/16" wide over lugs. Mounting centers, 4¼".

Resistance Range, Ohms	Net Each
1-3	$2.09
5-1,000	1.49
1,250-5,000	1.64
7,500-10,000	1.74
15,000-20,000	1.94
25,000-30,000	2.22

65-WATT TYPE 65S

Size: 6" long x 1 1/16" wide over lugs. Mounting centers, 6".

1-3	$2.40
5-1,000	1.72
1,250-5,000	1.77
7,500-10,000	1.95
15,000-20,000	2.09
25,000-40,000	2.53
50,000	2.76

75-WATT TYPE 75S

Size: 7¼" long x 1 1/16" wide over lugs. Mounting centers, 6¾".

1-5	$2.53
10-1,000	1.81
1,250-5,000	1.87
7,500-10,000	2.05
15,000-20,000	2.25
25,000-40,000	2.47
50,000-60,000	2.64
65,000	2.80

STOCK VALUES

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	25	250	1250	3500	15,000	40,000
3	50	400	1500	4000	20,000	50,000
5	100	500	2000	5000	25,000	60,000
10	150	750	2500	7500	30,000	65,000
15	200	1000	3000	10,000	35,000	

RESISTOR DIMENSIONS

Type	Size, In.	Mtg.
8/5F*	1 x 3/16	.....
10/8F*	1 1/2 x 3/16	.....
12/10A†	1 3/4 x 3/16	.....
15/12F*	1 1/2 x 7/16	.....
20/15F*	2 x 7/16	.....
25/20F‡	2 x 3/16	2 5/8"
30/25F‡ and 30/25A†	2 x 5/8	2 5/8"
35/30F‡	3 x 3/16	3 5/8"
50/35F‡ and 50/35A†	4 x 7/16	4 5/8"

Type	Size, In.	Mtg.
70/50F‡ and 70/50A†	4 1/2 x 3/4	5 1/4"
100/70F‡	6 1/2 x 3/4	7 1/4"
130/100F‡ and A†	6 1/2 x 1 1/8	7 1/4"
160/130F‡	7 1/2 x 1 1/8	8 1/4"
180/160F‡ and A†	8 1/2 x 1 1/8	9 1/4"
225/200F‡ and A†	10 1/2 x 1 1/8	11 1/4"

*Lugs and wire leads. †Lugs and sliding band. ‡Lug terminals. 30/25A, 2x5/8".

WORKMAN Electronic PRODUCTS, INC.

REPLACEMENT COMPONENTS

GLOBAR RESISTORS

MODEL	DESCRIPTION	LIST	DLR.
FR.49	.49Ω at 3 amps.	1.94	1.17
FR-1M	600kΩ Hot 1 Meg Ω Cold	1.97	1.18
FR2	Replaces Fil Resistors	3.28	1.97
FR3.5	3.5Ω Cold	1.33	.80
FR3.8	3.8Ω Cold	1.33	.80
FR4.5	4.5Ω Cold	1.33	.80
FR5K	500KΩ at 25°C	1.57	.94
FR5-8	5-8Ω at 450 ma.	1.83	1.10
FR6	6Ω Hot-600 ma.	2.00	1.20
FR9	9Ω Hot-600 ma.	2.00	1.20
FR10	10Ω Cold	1.33	.80
FR11	11Ω Hot-600 ma.	2.82	1.62
FR11P	11Ω-450 ma. 9.2Ω-600 ma.	1.88	1.15
FR12.9	12.9Ω Cold	1.30	.78
FR13	13Ω Cold	1.30	.78
FR19	19Ω Hot-600 ma.	1.82	1.09
FR26.5	26.5Ω Cold Thermistor	2.66	1.60
FR50	50Ω Hot-150 ma.	1.57	.94
FRO41	75Ω Hot-300 ma.	2.10	1.26
FRO51	200Ω Hot-600 ma.	1.82	1.09
FR066	For Color TV	1.83	1.10
FRO88	14KΩ at 140 Volts	2.62	1.57
FR100	500Ω Hot-150 ma.	1.57	.94
FR191	120Ω Cold	2.04	1.22
FR291	79Ω Cold 47Ω Hot	1.57	.94
FR922	For Color TV	1.57	.94
FRT1	100Ω Hot to 200Ω Hot	2.24	1.34
FRT2	Hvy. Duty Univ. Globar Res.	2.42	1.45
FRTV	Resistor Kit for color TV	3.50	2.28
FRTV1 Thru FRTV7	Resistor Kit for color TV	3.50	2.28
FS103	.05 to 1.0 ma. @100V to 175V	1.10	.70
FS106	1.0 ma. @ 500V to 600V	1.10	.70
FS107	4.5Ω to 5Ω @ 230°C to 25°C	1.10	.70
FS108	15Ω @ 25°C	1.10	.70
FS109	150KΩ @ 5 Volts	1.10	.70
FS110	1.0 ma. @ 7.5 Volts	1.10	.70
FS111	2 ma. @ 950 Volts	1.10	.70
FS305	120KΩ to 150KΩ @ 25°C	1.10	.70
FS308	1.0 ma. @ 110V to 120V	1.10	.70
FS309	1.0 ma. @ 220 Volts	1.10	.70
FS314	1.0 ma. @ 870 Volts to 1K V.	1.10	.70
FS320	20Ω @ 37.8°C	1.10	.67
FS402	10 ma. @ 560 volts	1.10	.67
FS808	1.0 ma. @ 290 volts to 340 V.	1.10	.67
FS811	10 ma. @ 680 Volts to 700 V.	1.10	.67
FS819	10Ω @ 25°C	1.10	.67
FS923	2.0 ma. @ 870 volts	1.10	.67
FS931	1.5 meg @ 25°C	1.10	.67
FS1007	30 ma. @ 72 volts	1.10	.67
FS1130	1.0 ma. @ 34 Volts	1.10	.67
FS1203	.05 ma. @ 34 volts to 40 volts	1.10	.67
FS1204	.05 ma. @ 100 volts to 137 volts	1.10	.67
FS1205	.05 ma. @ 80 volts	1.10	.67
FS1220	.2 ma. @ 400 volts	1.10	.67
FS1222	1.4KΩ @ 25°C	1.10	.67

SANS-A-FUSE®

FA3-1	Color Coded - Red	2.00	1.20
FA225-1	Color Coded - Ivory	2.00	1.20
FA350-1	Color Coded - Kelly Green	2.00	1.20
FA400-1	Color Coded - Blue	2.00	1.20
FA450-1	Color Coded - Pink	2.00	1.20
FA500-1	Color Coded - Black	2.00	1.20
FA700-1	Color Coded - Turquoise	2.00	1.20
FA1000-1	Color Coded - White	2.00	1.20
FA1200-1	Color Coded - Green	2.00	1.20
FA1400-1	Color Coded - Grey	2.00	1.20
FA1700-1	Color Coded - Yellow	2.00	1.20
FA2000-1	Color Coded - Maroon	2.00	1.20
FA2700-1	Color Coded - Brown	2.00	1.20

DIAL LAMPS

L12		.95	.57
L14		1.23	.74
L16	Dial Lamps	1.13	.68
L18	all in 5 Colors	.84	.50
L20		.90	.54
L22	Green, Red,	1.25	.75
L24	Yellow, Blue,	.79	.47
L29	Clear.	.79	.47
L31		.66	.40
L33	Order	1.10	.66
L34	Model No. plus color.	1.25	.75
L35		.98	.59
L36		.98	.59
L37		.84	.50
L38		1.05	.63
L39		.86	.52
L40		.86	.52

SQUARE OHMS

5W-SQ	5W 81 Values 1-10KΩ	.53	32
10W-SQ	10W 87 values 1Ω-25KΩ	.58	.35
20W-SQ	20W 87 values 1Ω-35KΩ	.96	.58
25W-SQ	25W 121 values 1-50KΩ	1.10	.66

FUSED RESISTORS

F4.7	4.7Ω-5 Watt	.61	.36
F5	5Ω-5 Watt	.61	.36
F5.6	5.6Ω-5 Watt	.61	.36
F6	6Ω-5 Watt	.61	.36
F7	7.5Ω-3 Amp.	.79	.47
F7-3.6	3.6Ω Watt	.61	.36
F7-5	5Ω-7 Watt	.79	.47
F9	9Ω-5 Watt	.61	.36
F10	10Ω-5 Watt	.61	.36
F10-4.5	4.5Ω-10 Watt	.83	.50
F12A	150Ω-0.12 Amp	.61	.36
F15-7.5	7.5Ω-15 Watt	1.06	.64
F18	18Ω-5 Watt	.61	.36
F22	22Ω-5 Watt	.61	.36
F26	AWG 26 Wire Fused (5 pcs.)	.28	.17
F28	AWG 28 Wire Fuse (5 pcs.)	.28	.17
F47	47Ω-5 Watt	.61	.36
F80	7.5Ω-3 Amp.	.61	.36
F100	100Ω-5 Watt	.61	.36
F145	1.45Ω Philco	.79	.47
F150	150Ω-5 Watt	.61	.36
FB1	Universal Fuse Replmt.	2.36	1.42
FJ4.7	4.7Ω-3.5 Amp.	.83	.50
FJ5.6	5.6Ω3.5 Amp.	.83	.50
FJ7.5	7.5Ω3.5 Amp.	.83	.50
FJR4.7	4.7Ω-3.5 Amp.	.83	.50
FJR5.6	5.6Ω-3.5 Amp.	.83	.50
FJR7.5	7.5Ω-3.5 Amp.	.83	.50

WIREWOUND RESISTORS

6W-B	6W Bendohms, 34 values	.52	.31
25W	25W, 42 values 3.4Ω to 1KΩ	1.00	.61
30W	30W, 18 values 19Ω to 196Ω	1.18	.71
50W-5	50 Watt-5Ω for color	1.81	1.09
50WJ-5	50 Watt-5Ω heavy duty	2.80	1.68
148	41Ω - 25 watt	1.00	.60
151	51Ω - 30 Watt	1.05	.63
389	1400Ω - 20 watt	.97	.58
792	910Ω - 20 watt	1.05	.63
MO1	59Ω - 25 watt	.94	.56
WR	5-15W 50 values each univ.	.75	.45
W-	2W 21 values .22 to 10.Ω	52	31

AMP FUSES

W3-1	RCA #945392-3	.75	.45
W200-10	RCA #945309-1	.75	.45
W350-1	Admiral 84B28-8, Zenith 136-75	.75	.45
W400-1	Mot.65C67985-AC1,RCA 945392-2	.75	.45
W450-1	RCA #945392-4	.75	.45
W500-1	Emerson, Olympic, RCA	.75	.45
W700-1	Motorola #65C67985-AO4	.75	.45
W1000-1	Mot. #65C67985-AO3, Zen. 136-71	.75	.45
W1200-1	Em. #808236, Zenith 136-63	.75	.45
W1400-1	Em.#808241, Mot.#65C67985-AO2	.75	.45
W1700-1	Em.#808238, Zenith 136-62	.75	.45
W2000-1	Zenith 136-66	.75	.45

CIRCUIT BREAKERS

FA1	Break 1 amp. carry .65 amp.	1.31	.79
FA1.5	Break 1.5 amp. carry 1 amp.	1.31	.79
FA2	Break 2 amp. carry 1.25 amp.	1.27	.76
FA2.5	Break 2.5 amp. carry 1.6 amp.	1.27	.76
FA2.75	Break 2.75 amp. Color TV	1.27	.76
FA3	Break 3 amp. carry 1.9 amp.	1.27	.76
FA3.5	Break 3.5 amp. carry 3.2 amp.	1.27	.76
FA3.25	Break 3.25 amp. Color TV	1.27	.76
FA4	Break 4 amp. carry 2.5 amp.	1.27	.76
FA4.5	Break 4.5 amp. carry 3 amp.	1.27	.76
FA5	Break 5 amp. carry 3.25 amp.	1.27	.76
FA5.5	Break 5.5 amp. carry 3.6 amp.	1.27	.76
FA6	Break 6 amp. carry 3.9 amp.	1.27	.76
FA7	Break 7 amp. carry 4 amp.	1.31	.79
FAD	For Color TV	1.57	.94

COLOR RESISTORS

3G	100Ω thru 39KΩ-3 Watt	.94	.56
4G	73Ω thru 39KΩ-4 Watt	99	.59
5G	1KΩ thru 39KΩ-5 Watt	1.15	.69
6G	3.3KΩ and 5KΩ-6 Watt	.94	.56
7G	50Ω thru 16KΩ-7 Watt	1.07	.64
8G	5.1KΩ - 8 Watt	1.18	.71
10G	800Ω thru 12KΩ - 10 Watt	1.34	.80

CHEMICALS

H6	"Wissh" cleaner 6 oz.	1.83	1.09
HF6	"Freez-It" cooler 6 oz.	1.83	1.09
HF15	Extra Dry Super Freez-It 15 oz.	4.58	2.75
HL6	Lubrite cleaner 6 oz.	2.75	1.65
HG24	"Miracle Mist" cleaner 24 oz.	5.40	3.24
HT6	Magnetic Tape Head Cleaner 6 oz.	2.01	1.21
R50	"Reco Kleen" record cleaner 1/2 oz	1.20	.72
S6	Super Wissh" 6 oz.	1.41	.85
S24	Super "Wissh" 24 oz. tank	4.17	2.50
SC8	Color Tuner Toner 8 oz.	2.19	1.31
SG6	Silicone-Lube	1.44	.86

SUPER BRIGHTENERS

W2	9V, parallel, standard base	2.92	1.7
W3	9V, series, standard base	3.19	1.9
W4	8.5V Std. Isolation	4.07	2.4
W5	9V RCA Parallel	4.29	2.5
W6	9V RCA Series	4.29	2.5
W7	9V Sylvania Parallel	4.29	2.5
W8	9V Sylvania Series	4.29	2.5
W9	9V Std. Series-Parallel	4.57	2.7
W10	3.5V RCA Series	3.85	2.3
W11	3.5V Sylvnaia Series	3.85	2.3
W12	9V RCA Series-Parallel	4.95	2.9
W14	9V Sylvania Series-Parallel	4.95	2.9
W15	9V 23EP4 Parallel	4.29	2.5
W16	8.5V RCA Isolation	4.29	2.5
W17	8.5V, Isolation, Sylvania	4.29	2.5
W20	8.5V 70° Color Parallel	10.73	6.4
W21	8.5V 90° Color Parallel	10.73	6.4
W22	6.2V 70° Color Par. Iso.	11.00	6.6
W23	6.2V 90° Color Par. Iso.	11.00	6.6
W24	11SP22 G.E. Porta. Color	10.73	6.4
W25	4.5 and 6.3V Series	3.30	1.9

TRANSISTORS

AA1	PNP Osc. Mixer Converter	1.65	.9
AA2	NPN Osc. Mixer Converter	1.82	1.0
AA3	PNP Hi Freq. Osc. Mixer	2.86	1.7
AA4	PNP Output TO3 Base	2.34	1.4
AA5	PNP Output TO36 Base	4.68	2.8

SERVICE AIDS

BZ1	Buzit	15.97	9.5
C200	Line Matching transformer	4.00	2.
D1	RCA 110° CRT to Std.	3.49	2.
D2	Sylva. 110° CRT to Std.	3.49	2.
D3	RCA 110° CRT to Sylv.	3.49	2.
D4	Sylv. 110° CRT to RCA	3.49	2.
D5	23EP4 to Sylv. 8YP4	3.49	2.
D6	110° to Standard	3.49	2.
D7	90° Color CRT to 70°	6.66	3.9
D8	70° to 90° Color CRT	6.66	3.9
D9	Duo Decal Stand. to 7GR	3.49	2.
D10	G.E. 11SP22 to 70° color TV	6.66	3.9
RS1	110° RCA CRT Socket	1.41	.8
RS2	110° Sylvania CRT Socket	1.41	.8
RS3	Standard Socket	1.41	.8
RS4	70° Color CRT Rpl. Socket	2.64	1.5
RS5	23EP4 CRT Repl. Socket	1.41	.8
RS6	90° Color CRT Repl. Socket	3.30	1.9
RS7	7 GR-CRT Repl. Socket	1.41	.8
TM3	Coil. Insulator TO36 Base	.92	.5
TM5	Coil. Insulator TO3 Base	.92	.5
TMA	Alum. Insulator TO3 Base	1.31	.7
TMK	Power Trans. Mtg. Kit	1.26	.7
TMM	Mica Insulator	.92	.5
TMN	TO3 Nylon Screw Insul.	.92	.5
TMS	Trans. Socket diam'd base	.79	.4
WG1	One Gun Booster	8.50	5.1
WJL	Gozinta with 3 oz. Lubrite	4.45	2.6
WJ2	Gozinta with adapter	3.30	1.9
X1	RCA 110° CRT Xtend-it	2.88	1.7
X2	Sylv. 110° CRT Xtend-it	2.88	1.7
X3	Std. CRT Xtend-it	2.88	1.7
X4	70° Color CRT Xtend-it	4.19	2.5
X5	23EP4 CRT Xtend-it	2.88	1.7
X6	70° Color CRT Xtend-it	4.51	2.7
X7	90° Color CRT Xtend-it	4.51	2.7
X8	11 SP22 Color CRT Xtend-it	4.51	2.7

AUDIO CABLES

BATTERY HOLDERS

REPLACEMENT ANTENNAS

REPLACEMENT BULBS

TEST ACCESSORIES

Prices subject to change without notice.

COILS

Over 5000 Numbers IN STOCK

Exact Replacements

FOR OVER 200 MANUFACTURERS SPECIALIZING IN SHORT RUNS

Workman part numbers for Coils, Fusing Devices, Amp Fuses, Circuit Breakers, Wirewound and Special Purpose Resistors are listed in Howard W. Sams' Photofacts and Counterfacts.

Trade Discount Applies To List Prices Only

© United Technical Publicatio

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

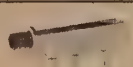
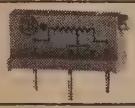
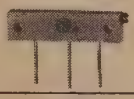
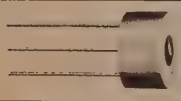
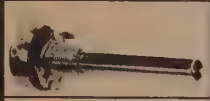
This will avoid confusion and expedite delivery.

Thank you!

The
RADIO-ELECTRONIC
MASTER
A United Technical Publication

TRIMMERS/POTENTIOMETERS

CERMET

	CTS Series	Description	Element Type	Resistance Range & Tol.	Power Rating (Watts)	Max. Op. Temp.	No. of Turns	Prices 1-9	Prices 10-24	Prices 25-49
	185PC (STYLE RJ11)	1¼" Rectilinear	Cermet	100Ω-1 Meg ±10%	1 @ 85°C	175°C	25	$5.00	$4.70	$4.40
	185WL (STYLE RJ11)	1¼" Rectilinear	Cermet	100Ω-1 Meg ±10%	1 @ 85°C	175°C	25	5.00	4.70	4.40
	185 Bushing Mount Hardware	For Panel Mount Installation						.80	.75	.65
	190	¾" Rectilinear	Cermet	50Ω-500KΩ ±10%	½ @ 85°C	150°C	20	1.94	1.84	1.75
	191	¾" Rectilinear	Cermet	50Ω-500KΩ ±10%	½ @ 85°C	150°C	20	1.94	1.84	1.75
	192	¾" Rectilinear (RJ11 Terminal Spacing)	Cermet	50Ω-500KΩ ±10%	½ @ 85°C	150°C	20	1.94	1.84	1.75
	RJ12CL (195L)	1¼" Rectilinear	Cermet	50Ω-500KΩ ±10%	¾ @ 85°C	150°C	23	4.66	4.46	4.22
	RJ12CP (195P)	1¼" Rectilinear	Cermet	50Ω-500KΩ ±10%	¾ @ 85°C	150°C	23	4.66	4.46	4.22
	RJ12CY (195Y)	1¼" Rectilinear (RJ11 Terminal Spacing)	Cermet	50Ω-500KΩ ±10%	¾ @ 85°C	150°C	23	4.57	4.37	4.14
	340	¼" Square	Cermet	10Ω-500KΩ ±20%	½ @ 85°C	150°C	1	2.10	1.90	1.75
	360S	25/64" x 7/16" x 9/32"	Cermet	50Ω-1 Meg ±20%	1 @ 25°C ½ @ 70°C	125°C	1	1.52	1.42	1.35
	360T	9/32" x 7/16" x 25/64"	Cermet	50Ω-1 Meg ±20%	1 @ 25°C ½ @ 70°C	125°C	1	1.52	1.42	1.35
	385	11/32" Round	Cermet	100Ω-500KΩ ±10%	⅛ @ 125°C	175°C	1	6.25	5.68	4.90
	550R	¾" Panel Mount Shaft: ¼" dia. x ⅞" FMS. Slotted	Cermet	50Ω-1 Meg ±10%	2 @ 70°C	150°C	1	2.99	2.49	2.04
	550S	¾" Panel Mount Shaft: ¼" dia. x 2" FMS. Round	Cermet	50Ω-1 Meg ±10%	2 @ 70°C	150°C	1	2.99	2.49	2.04
	550LT	¾" Panel Mount Locking Bushing Shaft: ¼" dia. x ⅝" FMS. Slotted	Cermet	50Ω-1 Meg ±10%	2 @ 70°C	150°C	1	3.06	2.56	2.11
	RJ22CP* (M174)	½" Square	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	35	5.60	5.30	5.15

Net

© United Technical Publications

CERMET

	CTS Series	Description	Element Type	Resistance Range & Tol.	Power Rating (Watts)	Max. Op. Temp.	No. of Turns	Prices 1-9	Prices 10-24	Prices 25-49
	RJ22CW* (M175)	½" Square, Top Adjust	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	35	$5.55	$5.25	$5.10
	RJ22CX* (M175)	½" Square, Side Adjust	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	35	5.55	5.25	5.10
	RJ22CL* (M176)	½" Square	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	35	5.50	5.20	5.05
	RJ24CP* (M164P)	⅜" Square Side Adjust	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	25	6.10	5.60	5.35
	RJ24CW* (M165W)	⅜" Square Top Adjust	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	25	6.05	5.55	5.30
	RJ24CX* (M165X)	⅜" Square Side Adjust	Cermet	50Ω-1 Meg ±10%	½ @ 85°C	150°C	25	6.05	5.55	5.30
	RVC6NYD** (600)	½" Panel Mount Shaft: ⅛" dia. x ⅞" FMS. Slotted	Cermet	100Ω-1 Meg ±10%	½ @ 125°C	175°C	1	5.44	4.69	4.04
	RVC6LYA* (600LT)	½" Panel Mount Locking Bushing Shaft: ⅛" dia. x ⅝" FMS. Slotted	Cermet	100Ω-1 Meg ±10%	½ @ 125°C	175°C	1	5.47	4.72	4.07

*Approved to MIL-R-22097D, Char. C.
**Approved to MIL-R-23285B.

APPLICATION INFORMATION

CTS CERMET Potentiometers are designed for applications requiring higher power, temperature and stability than have been previously available with carbon elements and higher resistance and better resolution than have been available with wirewound potentiometers. They are ideal for applications now using carbon element potentiometers where an ultra-conservative rating is desired for high reliability.

CTS CERMET Trimmers are used in applications where wirewound distributed capacitance and inductance are intolerable due to high frequencies and in applications where a trimmer with high stability and better reliability than obtainable from a carbon trimmer is needed.

TRIMMERS/POTENTIOMETERS

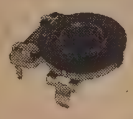
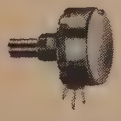
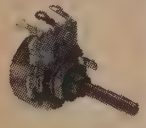
CARBON

	CTS Series	Description	Element Type	Resistance Range & Tol.	Power Rating (Watts)	Max. Op. Temp.	No. of Turns	Prices 1-9	Prices 10-24	Prices 25-49
	45	15/16" Panel Mount Shaft: ¼" Dia. x ½" to 3" FMS. 20 shaft styles. Linear and audio tapers. Single and and multi sections	Carbon	500Ω-10 Meg ±20%	½ @ 55°C	85°C	1	Price dependent upon combination of components ordered.		

The CTS 45 series snap-together system was designed to provide a wide variety of combinations of ½ watt controls for industrial applications. This system includes the most commonly used resistance values plus five basic components combining to quickly assemble any of 8,000,000 specifications. Included are 25 resistance values and tapers for single controls (panel section of multi-section controls), 20 popular values and tapers of multi-section or rear control sections, 20 most used shafts, two rotary power switches and a control dust cover.

© United Technical Publications

CARBON

	CTS Series	Description	Element Type	Resistance Range & Tol.	Power Rating (Watts)	Max. Op. Temp.	No. of Turns	Prices 1-9	Prices 10-24	Prices 25-49
	U201	19/32" Knob Dia. Snap-in self-supporting mounting, parallel to PC board	Carbon	100Ω-1 Meg ±20%	¼ to 5K @ 40°C ¼ 5K & Up @ 55°C	85°C 100°C	1	$ .39	$ .39	$ .35
	X201	19/32" Knob Dia. Snap-in self-supporting mounting, perpendicular to PC board	Carbon	100Ω-1 Meg ±20%	¼ to 5K @ 40°C ¼ 5K & Up @ 55°C	85°C 100°C	1	.39	.39	.35
	220	½" x 7/16" x 5/16"	Carbon	250Ω-2.5 Meg ±20%	⅛ @ 55°C	85°C	1	2.50	2.35	2.20
	330P	½" Round	Carbon	100Ω-2.5 Meg ±10%	⅜ @ 70°C	150°C	1	4.00	3.30	2.50
	RV2NAYSD* (90)	15/16" Panel Mount Shaft: ¼" dia. x ⅞" FMS. Slotted	Carbon	100Ω-2.5 Meg ±10% to 1 Meg ±20% 1 Meg & Above	1 @ 70°C	125°C	1	3.25	3.00	3.00
	RV2LAYSA* (90LT)	15/16" Panel Mount Locking Bushing Shaft: ¼" Dia. x ⅝" FMS. Slotted	Carbon	100Ω-2.5 Meg ±10% to 1 Meg ±20% 1 Meg & Above	1 @ 70°C	125°C	1	3.25	3.00	3.00
	RV4NAYSD* & K* (320)	1 1/16" Panel Mount Shaft: ¼" Dia. x ⅞" or 2½" FMS. Slotted	Carbon	100Ω-1 Meg ±10%	3 @ 70°C 2 @ 85°C	150°C	1	1.95	1.60	1.60
	RV4LAYSA* & D* (320LT)	1 1/16" Panel Mount Locking Bushing Shaft: ¼" dia. x ⅝" or ⅞" FMS. Slotted	Carbon	100Ω-1 Meg ±10%	3 @ 70°C 2 @ 85°C	150°C	1	2.25	1.90	1.90
	RV5NAYSD* (65)	¾" Panel Mount Shaft: ⅛" dia. x ⅞" FMS. Slotted	Carbon	250Ω-2.5 Meg ±10% to 1 Meg ±20% 1 Meg & Above	½ @ 70°C	125°C	1	3.25	3.00	2.82
	RV5LAYSB* (65LT)	¾" Panel Mount Locking Bushing Shaft: ⅛" dia. x ½" FMS. Slotted	Carbon	250Ω-2.5 Meg ±10% to 1 Meg ±20% 1 Meg & Above	½ @ 70°C	125°C	1	3.25	3.00	2.90
	RV6NAYSD* (300)	½" Panel Mount Shaft: ⅛" dia. x ⅞" FMS. Slotted	Carbon	100Ω-2.5 Meg ±10% to 1 Meg ±20% 1 Meg & Above	¾ @ 70°C	150°C	1	4.10	3.65	3.65
	RV6LAYSA* (300LT)	½" Panel Mount Locking Bushing Shaft: ⅛" dia. x ⅝" FMS. Slotted	Carbon	100Ω-2.5 Meg ±10% to 1 Meg ±20% 1 Meg & Above	¾ @ 70°C	150°C	1	4.10	3.70	3.70

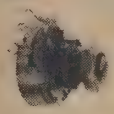
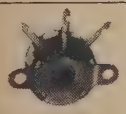
*Approved to MIL-R-94C.

Net

© United Technical Publications

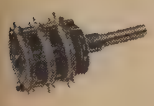
TRIMMERS/POTENTIOMETERS

WIREWOUND

	CTS Series	Description	Element Type	Resistance Range & Tol.	Power Rating (Watts)	Max. Op. Temp.	No. of Turns	Prices 1-9	Prices 10-24	Prices 25-49
	AW	15/16" Panel Mount Shaft: 1/4" dia. x 3" FMS. Round	Wire-wound	10Ω-10KΩ ±10%	5 @ 25°C 4 @ 55°C	105°C 105°C	1	$1.29	$1.20	$1.10
	AWRL	15/16" Panel Mount Locking Bushing Shaft: 1/4" dia. x 1/2" FMS. Slotted	Wire-wound	10Ω-10KΩ ±10%	5 @ 25°C 4 @ 55°C	105°C 105°C	1	1.59	1.47	1.30
	P115	3/4" Round Twist Tab Mounting	Wire-wound	5Ω-10KΩ ±10%	2 @ 55°C	105°C	1	1.25	1.25	1.00
	117	3/4" Round Rivet Ear Mounting	Wire-wound	5Ω-10KΩ ±10%	2 @ 55°C	105°C	1	1.25	1.25	1.00
	RA20NASD* (252)	1 17/64" Panel Mount Shaft: 1/4" dia. x 7/8" FMS. Slotted	Wire-wound	3Ω-15KΩ ±10%	2 @ 40°C	105°C	1	2.55	2.01	2.01
	RA20LASB* & D* (252LT)	1 17/64" Panel Mount Locking Bushing Shaft: 1/4" dia. x 5/8" or 7/8" FMS. Slotted	Wire-wound	3Ω-15KΩ ±10%	2 @ 40°C	105°C	1	2.55	2.09	2.09
	RA30NASD* (25)	1 17/32" Panel Mount Shaft: 1/4" dia. x 7/8" FMS. Slotted	Wire-wound	3Ω-25KΩ ±10%	4 @ 55°C	105°C	1	2.70	2.19	2.19
	RA30LASB* (25LT)	1 17/32" Panel Mount Locking Bushing Shaft: 1/4" dia. x 5/8" FMS. Slotted	Wire-wound	3Ω-25KΩ ±10%	4 @ 55°C	105°C	1	2.70	2.27	2.27

*Approved to MIL-R-19B.

ROTARY SELECTOR SWITCHES

	CTS Series	Description	Electrical Rating	Contact Life	Detent & Detent Rotational Life	Indexing
	212	1 1/16" one-piece molded glass alkyd wafer. Panel mount. Bushing: 3/8"-32 UNEF-2A thd., 3/8" long. Shaft: 1/4" dia. x 2" FMS, Round.	1 amp @ 28V DC 3/4 amp @ 115V AC. Shorting or Non-shorting type.	25,000 cycles through 12 positions and return.	STANDARD balanced double bump formed spring in a hill and valley type detent providing a minimum of 25,000 cycles through 12 positions and return. SPECIAL CTS balanced lever arm and star wheel detent assembly has a rated life of 100,000 cycles through 12 positions and return. (CTS Series 211).	Both hill and valley and star wheel detents provide 30° indexing from 2 to 12 positions; both have one fixed and one adjustable stop.

The CTS series 212 selector switch is available in a number of completed switch configurations and also as individual component parts for customer fabrication. The unique one-piece wafer features rivet-free construction for closer stacking. The molded glass alkyd material will not break if jarred or dropped.

Switch accessories include a selection of attachable CTS AC power switches, open or enclosed detent dust sealing kits, shields and mounting brackets.

DATA SHEETS

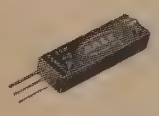
Complete electrical and mechanical data on each of the products covered in this catalog are available, upon request, from the local CTS industrial distributor

DALE® for Optimum Value in Potentiometers

TRIMMER QUICK REFERENCE GUIDE

- New rectilinear wirewound and film models
- New square wirewound models
- Expanded low-priced Econo-Trim series with sealability for pennies more
- Mil-style construction methods used throughout
- Panel mount models available in most series

MILITARY GRADE TRIMMER POTENTIOMETERS (High Temperature, Precision)

SERIES	ILLUSTRATION	MODEL	CONFIGURATION	STANDARD RESISTANCE & TOLERANCE	HUMIDITY PROOF (Mil. Spec.)	POWER RATING	OPERATING TEMP. RANGE	ADJUSTMENT TURNS	HEIGHT	WIDTH	LENGTH
600	 Mil. Equiv. RT-10	691 680 690* 697* 692*	• Alternate position Printed Circuit Pins 22 AWG • Printed Circuit Pins 22 AWG • Hook Type Wire Solder Terminal • 28 AWG Stranded Teflon Leads • 26 AWG Solid Leads	10 ohms to 100K ohms ±5%	Yes	1 watt at 70° C, derated to 0 at 175° C	−65° C to 175° C	15 ± 2	.18	.32	1.00
1200	 Mil. Equiv. RT-11	1287 1288* 1299*	• Printed Circuit Pins 21 AWG • Stranded Teflon Leads 28 AWG • Spade Type Solder Lug	10 ohms to 100K ohms ±5%	Yes	1 watt at 70° C, derated to 0 at 175° C	−65° C to 175° C	25 ± 2	.28	.31	1.25
1600	 Mil. Equiv. RT-12	1680 1697* 1692* 1690*	• Printed Circuit Pins 21 AWG • Stranded Teflon Leads 28 AWG • 22 AWG Solid Wire • Solder Lug	10 ohms to 100K ohms ±5%	Yes	1 watt at 70° C, derated to 0 at 175° C	−65° C to 175° C	22 ± 3	.19	.32	1.25
5000	 Mil. Equiv. RT-22	5050 5080 5091	• Stranded Teflon Leads 30 AWG • Printed Circuit Pins 21 AWG, Edge Mount • Printed Circuit Pins 21 AWG	10 ohms to 50K ohms ±5%	Yes	1 watt at 70° C, derated to 0 at 175° C	−65° C to 175° C	25 ± 2	.19 .22 .22	.50 .50 .50	.50 .50 .50
5800	 Mil. Equiv. RT-24	5850 5891 5880 5887	• Stranded Teflon Leads 30 AWG • Printed Circuit Pins 22 AWG, Base Mount • Printed Circuit Pins 22 AWG, Edge Mount • Printed Circuit Pins 22 AWG Side Adjust	10 ohms to 50K ohms ±5%	Yes	1 watt at 70° C, derated to 0 at 175° C	−65° C to 175° C	25 ± 3	.145 .150 .145 .145	.375 .375 .375 .375	.375 .375 .375 .375

*Indicates model is also available in Panel Mount version.

COMMERCIAL GRADE ECONO-TRIM POTENTIOMETERS

WIREWOUND ELEMENT

SERIES	ILLUSTRATION	MODEL	CONFIGURATION	STANDARD RESISTANCE & TOLERANCE	HUMIDITY PROOF (Mil. Spec.)	POWER RATING	OPERATING TEMP. RANGE	ADJUSTMENT TURNS	HEIGHT	WIDTH	LENGTH
2300		2387 2317 2389 2319	• Unsealed } Printed Circuit Terminals, Gold Plated • Sealed • Unsealed } Hook-type Solder Lugs, Gold Plated • Sealed	10 ohms to 50K ohms ±10%	Optional	0.5 watt at 25° C, derated to 0 at 105° C	−55° C to 105° C	15 turns nominal	.36	.28	1.00
2400		2487 2417	• Unsealed } Printed Circuit Terminals, Gold Plated • Sealed	10 ohms to 50K ohms ±10%	Optional	1 watt at 40° C, derated to 0 at 125° C	−55° C to 125° C	20 turns nominal	.31	.16	.75

FILM ELEMENT

8300		8387 8317 8389 8319	• Unsealed } Printed Circuit Terminals Gold Plated • Sealed • Unsealed } Hook-type Solder Lugs, Gold Plated • Sealed	10 ohms to 2 Megohms ±10% 100Ω thru 500K ±20% all other values	Optional	.75 watt at 25° C, derated to 0 at 105° C	−55° C to 105° C	15 turns nominal	.36	.28	1.00
8400		8487 8417	• Unsealed } Printed Circuit Terminals Gold Plated • Sealed	10 ohms to 2 Megohms ±10% 100Ω thru 500K ±20% all other values	Optional	.75 watt at 25° C, derated to 0 at 125° C	−55° C to 125° C	20 turns nominal	.31	.16	.75

© United Technical Publications

DALE® for Optimum Value in Potentiometers

INDUSTRIAL GRADE TRIMMER POTENTIOMETERS

WIREWOUND ELEMENT

SERIES	ILLUSTRATION	MODEL	CONFIGURATION	STANDARD RESISTANCE & TOLERANCE	HUMIDITY PROOF (Mil. Spec.)	POWER RATING	OPERATING TEMP. RANGE	ADJUSTMENT TURNS	HEIGHT	WIDTH	LENGTH
2100		2187 2188* 2199*	• Printed Circuit Pins 21 AWG • Stranded Vinyl Leads 28 AWG • Spade Type Solder Lug	10 ohms to 100K ohms ±10%	Optional	1 watt at 70° C, derated to 0 at 125° C	−65° C to 125° C	25 ± 2	.28	.31	1.25
2200		2280 2292 2297	• Printed Circuit Pins 22 AWG • 26 AWG Solid Leads • 28 AWG Stranded Vinyl Leads	10 ohms to 100K ohms ±10%	Optional	1 watt at 70° C, derated to 0 at 125° C	−65° C to 125° C	15 ± 2	.18	.32	1.00

FILM ELEMENT

8100		8187 8188* 8189*	• Printed Circuit Pins 21 AWG • Stranded Vinyl Leads 28 AWG • Gold-plated Solder Lug	10 ohms to 2 Megohms ±10% 100Ω to 500K ±20% other values	Optional	.75 watt at 70° C, derated to 0 at 125° C	−65° C to 125° C	25 ± 2	.28	.31	1.25

*Indicates model is also available in Panel Mount version.

PRICE LIST DALE® TRIMMER POTENTIOMETERS

MILITARY GRADE

SERIES	RESISTANCE VALUES	1-9	10-24	25-49	STANDARD VALUES
600 (680, 690, 691, 692, 697)	10Ω–10K	$5.56	$5.13	$4.71	10Ω 500Ω 15K 20Ω 1K 20K 50Ω 2K 25K 100Ω 5K 30K 200Ω 10K 100K
	Over 10K–30K	6.11	5.64	5.17	
	Over 30K–50K	6.43	5.94	5.47	
1200 (1287, 1288, 1299)	10Ω–10K	$5.56	$5.13	$4.71	10Ω 500Ω 15K 20Ω 1K 20K 50Ω 2K 25K 100Ω 5K 50K 200Ω 10K 100K
	Over 10K–30K	6.11	5.64	5.17	
	Over 30K–50K	6.43	5.94	5.47	
	Over 50K–100K	7.83	7.23	6.63	
1600 (1680, 1690, 1692, 1697)	10Ω–10K	$5.56	$5.13	$4.71	10Ω 500Ω 15K 20Ω 1K 20K 50Ω 2K 25K 100Ω 5K 50K 200Ω 10K 100K
	Over 10K–30K	6.11	5.64	5.17	
	Over 30K–50K	6.43	5.94	5.47	
	Over 50K–100K	7.83	7.23	6.63	
5000 (5050, 5080, 5087, 5091)	10Ω–10K	$5.47	$5.14	$4.84	10Ω 500Ω 20K 20Ω 1K 50K 50Ω 2K 100Ω 5K 200Ω 10K
	Over 10K–30K	6.02	5.69	5.36	
	Over 30K–50K	7.07	6.68	6.29	
5800 (5850, 5880, 5887, 5891)	10Ω–10K	$6.17	$5.76	$5.28	10Ω 500Ω 15K 20Ω 1K 20K 50Ω 2K 25K 100Ω 5K 30K 200Ω 10K 50K
	Over 10K–30K	6.58	6.17	5.69	
	Over 30K–50K	7.21	6.80	6.32	

COMMERCIAL GRADE

SERIES	RESISTANCE VALUES	1-9	10-24	25-49	STANDARD VALUES
2300 (2387, 2389)	10Ω–20K	$1.94	$1.78	$1.60	10Ω 500Ω 20K 20Ω 1K 50K 50Ω 2K 100Ω 5K 200Ω 10K
	Over 20K–50K	2.34	2.10	2.00	
2300 (2317, 2319)	10Ω–20K	$2.04	$1.88	$1.70	
	Over 20K–50K	2.44	2.20	2.10	

COMMERCIAL GRADE (continued)

SERIES	RESISTANCE VALUES	1-9	10-24	25-49	STANDARD VALUES
2400 (2417)	10Ω–20K	$1.82	$1.69	$1.55	10Ω 200Ω 5K 20Ω 500Ω 10K 50Ω 1K 20K 100Ω 2K 50K
	50K	2.20	2.09	1.95	
2400 (2487)	10Ω–20K	1.61	1.48	1.36	
	50K	2.01	1.88	1.76	
8300 (8387, 8389)	10Ω–2 Meg.	$1.99	$1.83	$1.65	10Ω 10K 20Ω 20K 50Ω 25K 100Ω 50K 200Ω 100K 500Ω 200K 1K 250K 2K 500K 5K 1 Meg. 2 Meg.
8300 (8317, 8319)	10Ω-2 Meg.	$2.09	$1.93	$1.75	
8400 (8417)	10Ω–2 Meg.	$1.82	$1.69	$1.55	10Ω 1K 50K 20Ω 2K 100K 50Ω 5K 200K 100Ω 10K 250K 200Ω 20K 500K 500Ω 25K 1 Meg. 2 Meg.
(8487)	10Ω–2 Meg.	1.61	1.48	1.36	

INDUSTRIAL GRADE

SERIES	RESISTANCE VALUES	1-9	10-24	25-49	STANDARD VALUES
2100* (2187, 2188, 2199)	10Ω–10K	$3.10	$2.85	$2.62	10Ω 500Ω 15K 20Ω 1K 20K 50Ω 2K 25K 100Ω 5K 50K 200Ω 10K 100K
	Over 10K–30K	3.61	3.31	3.05	
	Over 30K–50K	4.11	3.77	3.47	
	Over 50K–100K	5.20	4.77	4.40	
2200* (2280, 2292, 2297)	10Ω–10K	$3.44	$3.15	$2.91	10Ω 500Ω 15K 20Ω 1K 20K 50Ω 2K 25K 100Ω 5K 30K 200Ω 10K 50K 100K
	Over 10K–30K	3.94	3.62	3.33	
	Over 30K–50K	4.78	4.41	4.05	
8100 (8187, 8188, 8189)	10Ω–2 Meg.	$3.10	$2.85	$2.62	10Ω 1K 100K 20Ω 2K 200K 50Ω 5K 250K 100Ω 10K 500K 200Ω 20K 1 Meg. 500Ω 25K 2 Meg.

*Add $.13/unit to all 2100 and 2200 price breaks for sealed units. To specify, add "–17" to part number. Example: "2187-17."

Net

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

Originators of TRU-OHM & HARDWICK, HINDLE Products

12½ thru 225 WATT

RHEOSTATS

POWER

VITREOUS ENAMELED

MEMCOR power vitreous enameled rheostats are exceptionally rugged and are "made better than they need be." They exhibit characteristics that meet the most exacting specifications. Special design features assure long life and protection under extremes of humidity and abnormal atmospheric conditions.

In the 225, 500, 750 and 1000 watt sizes the "buss bar" contact arm automatically adjusts for complete, continuous contact, and smooth, flexible control. MEMCOR high temperature enamel gives increased service life with an extreme factor of safety.

MEMCOR rheostats are stocked in eleven sizes; 12½ through 1000 watts resistance from 0.5 to 10,000 ohms with diameters from ⅞" through 12". All standard stock units are identified by stock number.

TYPE R-12½ (12½ WATTS)

DIAM.: ⅞"
WEIGHT: .035 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	3.53	27	600	25	.71	65	607	250	.22	124	614
2.	2.5	38	601	35	.6	78	608	350	.19	150	615
2.5	2.23	40	601A	50	.5	81	609	500	.16	164	616
3.	2.04	36	602	75	.41	98	610	750	.13	188	617
5.	1.58	55	602A	100	.35	102	611	1000	.11	196	618
6.	1.44	45	603	125	.32	102	612	1500	.091	235	619
8.	1.25	49	604	150	.29	96	612A	2500	.071	260	620
10	1.18	42	605	175	.27	112	613	3500	.06	285	621
15	.91	49	606	200	.25	128	613A	5000	.05	315	622

TYPE R-25 (25 WATTS)

DIAM.: 1⅜"
WEIGHT: .23 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	5.0	26	100	35	.845	100	108	500	.222	215	116
2.	3.54	28	101	50	.707	105	109	750	.182	230	117
3.	2.88	44	102	75	.575	120	110	1000	.155	270	118
6.	2.04	50	103	100	.5	140	111	1500	.129	325	119
8.	1.77	54	104	125	.445	145	112	2500	.1	410	120
10	1.58	60	105	175	.375	153	113	3500	.084	440	121
15	1.29	78	106	250	.316	170	114	5000	.07	480	122
25	1.0	80	107	350	.267	180	115				

TYPE R-50 (50 WATTS)

DIAM.: 2⅜"
WEIGHT: .45 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
.5	10.0	22	200	35	1.19	120	209	1000	.223	375	218
1.	7.07	36	201	50	1.0	120	210	1600	.176	465	219
2.	5.0	38	202	80	.79	135	211	2500	.141	560	220
4.	3.54	38	203	125	.63	185	212	3500	.119	585	221
6.	2.88	75	204	150	.574	175	213	5000	.1	600	222
8.	2.5	70	205	225	.47	215	214	8000	.079	710	223
12	2.04	80	206	300	.408	225	215	10K	.07	720	224
16	1.76	90	207	500	.316	295	216				
22	1.5	95	208	800	.25	360	217				

TYPE R-75 (75 WATTS)

DIAM.: 2¾"
WEIGHT: .60 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
.5	12.3	27	300	25	1.73	92	308	750	.316	260	316
1.	8.66	18	301	50	1.23	118	309	1000	.274	290	317
2.	6.12	30	302	75	1.0	135	310	1500	.224	350	318
3.	5.0	30	303	100	.866	147	311	2000	.194	380	319
5.	3.8	45	304	200	.612	180	312	2500	.173	425	320
7.5	3.16	47	305	300	.5	227	313	5000	.123	630	321
10	2.74	50	306	400	.433	232	314	7500	.1	715	322
16	2.17	87	307	500	.388	250	315	10K	.087	820	323

TYPE R-100 (100 WATTS)

DIAM.: 3⅛"
WEIGHT: .72 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
.5	14.1	30	400	25	2.0	105	408	750	.365	280	416
1.	10.0	20	401	50	1.41	140	409	1000	.316	316	417
2.	7.07	32	402	75	1.15	155	410	1500	.258	370	418
3.	5.75	32	403	100	1.0	168	411	2000	.224	420	419
5.	4.47	50	404	200	.707	190	412	500	.2	460	420
7.5	3.65	52	405	300	.575	260	413	5000	.141	650	421
10	3.16	58	406	400	.500	262	414	7500	.115	740	422
16	2.5	97	407	500	.447	270	415	10K	.1	850	423

TYPE R-150 (150 WATTS)

DIAM.: 4"
WEIGHT: 1.50 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
.5	17.3	28	500	35	2.07	133	509	750	.447	370	518
1.	12.3	37	501	50	1.735	160	510	1250	.346	460	519
2.	8.65	38	502	75	1.415	185	511	1800	.288	550	520
3.	7.07	67	503	100	1.225	190	512	2250	.259	570	521
5.	5.48	68	504	150	1.0	230	513	3000	.224	600	522
7.5	4.47	71	505	200	.865	242	514	4500	.182	680	523
10	3.88	70	506	250	.775	250	515	7500	.141	980	524
15	3.163	138	507	350	.655	280	516	10K	.122	990	525
25	2.45	140	508	500	.548	330	517				

TYPE R-225 (225 WATTS)

DIAM.: 5"
WEIGHT: 2.18 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	15.0	55	4001	25	3.0	117	4009	700	.567	495	4017
2.	10.61	54	4002	50	2.12	250	4010	900	.5	498	4018
3.	8.66	56	4003	75	1.73	306	4011	1200	.43	523	4019
4.	7.5	52	4004	100	1.5	322	4012	1500	.39	630	4020
5.	6.71	52	4005	150	1.22	385	4013	1750	.358	605	4021
7.5	5.48	113	4006	200	1.06	355	4014	2000	.33	710	4022
10	4.74	107	4007	300	.866	336	4015	2500	.3	700	4023
15	3.87	111	4008	400	.75	352	4016				

© United Technical Publications

MEMCOR COMPONENTS

A DIVISION OF LTV ELECTROSYSTEMS, INC.

300 thru 1000 WATT

Originators of TRU-OHM & HARDWICK, HINDLE Products

RHEOSTATS

POWER

VITREOUS ENAMELED

MEMCOR rheostats are made in a wide assortment of variations, among which are included tapers, off - positions, ventilated enclosures, dust - proof enclosures, tandems, toggle switches, micro switches, switching lugs and many variations of shaft and panel mountings. Extra length flattened, round or screw driver shaft assemblies and special length bushings or other special requirements per customer drawing are available.

TYPE R-300 (300 WATTS)

DIAM.: 6"
WEIGHT: 3 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	17.32	49	700	25	3.46	117	708	700	.66	492	716
2.	12.25	48	701	50	2.45	259	709	900	.58	510	717
3.	10.0	72	702	75	2.0	308	710	1200	.5	532	718
4.	8.66	76	703	100	1.73	317	711	1500	.45	527	719
5.	7.75	67	704	150	1.41	268	712	1750	.41	497	720
7.5	6.32	70	705	200	1.22	284	713	2000	.38	567	720A
10	5.48	75	706	300	1.0	336	714	2500	.35	560	721
15	4.47	129	707	400	.87	357	715				

TYPE R-500 (500 WATTS)

DIAM.: 8"
WEIGHT: 3.75 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	27.3	61	4101	12.5	6.3	104	4109	250	1.41	570	4117
1.5	18.2	63	4102	16	5.6	192	4110	325	1.24	513	4118
2.	15.81	68	4103	25	4.47	185	4111	500	1.0	620	4119
2.5	14.14	65	4104	40	3.54	208	4112	750	.82	745	4120
3.	12.91	63	4105	50	3.16	208	4113	1000	.71	780	4121
4.	11.18	96	4106	80	2.52	462	4114	1500	.58	940	4122
5.	10.0	95	4107	125	2.0	452	4115	2000	.5	980	4123
8.	7.9	93	4108	175	1.69	500	4116	2500	.45	975	4124

TYPE R-750 (750 WATTS)

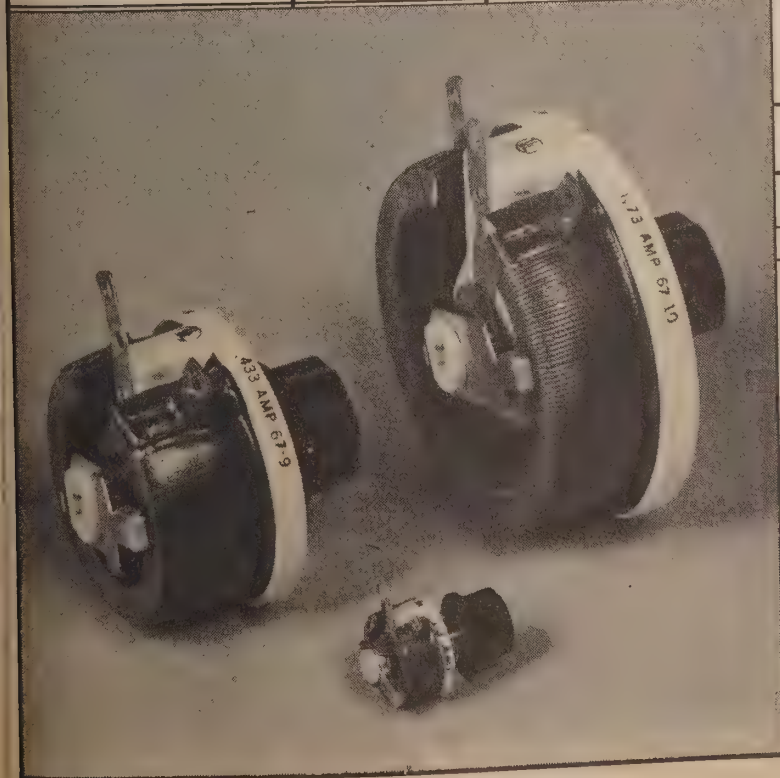
DIAM.: 10"
WEIGHT: 7.31 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	27.4	85	4201	12.5	7.75	115	4210	400	1.37	573	4219
1.5	22.3	85	4202	16	6.82	120	4211	600	1.12	680	4220
2.	19.36	80	4203	25	5.48	216	4212	750	1.0	670	4221
2.5	17.32	87	4204	50	3.87	238	4213	1200	.79	657	4222
3.	15.81	80	4205	80	3.06	240	4214	1800	.646	792	4223
4.	13.69	87	4206	100	2.74	283	4215	2000	.61	906	4224
5.	12.25	122	4207	160	2.17	496	4216	2500	.55	1085	4225
8.	9.65	122	4208	200	1.94	520	4217				
10	8.66	104	4209	300	1.58	440	4218				

TYPE R-1000 (1000 WATTS)

DIAM.: 12"
WEIGHT: 10 LBS.

Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.	Ohms	Max. Amps.	Approx. Steps	Stock No.
1.	31.6	87	4301	10	10.0	103	4309	225	2.11	585	4317
1.5	25.8	84	4302	12.5	8.95	160	4310	300	1.83	750	4318
2.	22.36	109	4303	16	7.9	164	4311	400	1.58	631	4319
2.5	20.0	96	4304	25	6.32	160	4312	500	1.41	635	4320
3.	18.26	100	4305	50	4.47	290	4313	750	1.15	800	4321
4.	15.81	94	4306	75	3.65	303	4314	1000	1.0	1090	4322
5.	14.14	152	4307	100	3.16	321	4315	1500	.82	1000	4323
8.	11.2	113	4308	160	2.5	328	4316	2000	.63	1080	4324



Specify on order if knob and/or dial is required.

HARDWARE

RHEOSTAT - KNOBS

Type	Stock No.
R12½	2400
R25 to R150	2500
R25 to R150	2502
R25 to R150	2503
R25 to R150	2504
R25 to R150	2505
R25 to R150	2506
R25 to R150	2507
R25 to R150	2508
R25 to R150	2510-1
R25 to R150	2510-2
R25 to R150	2511
R25 to R150	2512
R225 to R1000	2520
R225 to R1000	2521
R25 to R225	2514
R225 to R1000	2518
R225 to R1000	2519

RHEOSTAT - DIALS

Type	Stock No.
R12½	3501
R25	3500
R50	3500
R75	3500
R100	3500
R150	3500
R225	3502
R300	3502
R500	3502
R750	3502
R1000	3502

© United Technical Publications

Contact your local ELECTRONIC DISTRIBUTOR

for all your requirements!

You can depend on him for...

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*



- *Availability of the latest products*
- *Speedy purchasing — one order does the job*

OHMITE hot molded single-turn trimmers

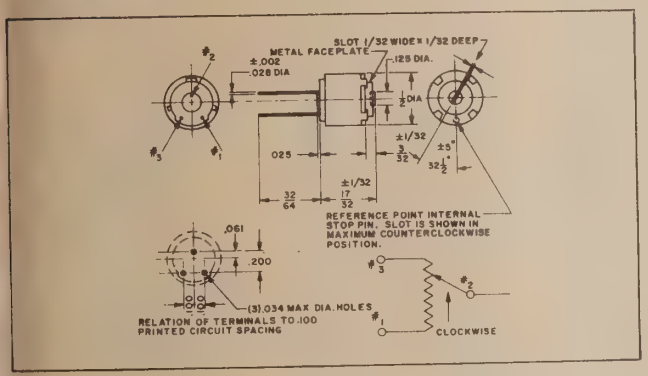
TYPE AFR — SINGLE TURN



OHMITE type AFR Trimmers are single-turn controls built to withstand severe environmental conditions. Their unique design includes a hot-molded resistor track bridged by a single moving molded contact brush. Resistance material, collector track material, insulation material and metal terminals are all molded together at one time into a single, solid, integral structure. There are no cracks or crevices to admit moisture.

Enclosure of the Ohmite type AFR is non-magnetic, corrosion resistant, and splash-proof. Type AFR Trimmers are designed for screwdriver adjustment. Fixed stops withstand a maximum shaft torque of 2 inch-pounds.

In excess of 50,000 operational cycles with low "noise" level initially — decreasing with use — can be expected in conventional applications.



CHARACTERISTICS:

Power Rating: ¼ watt @ +70° C ambient temperature. Derate power linearly to zero at +120° C ambient for resistance values to 0.5 megohms. Additional derating required for resistance values over 0.1 megohms at ambients higher than 70° C.

Resistance Range: 100 ohms to 5.0 megohms. Resistance change is nominally linear with shaft rotation.

Tolerance: ±20% standard.

Temperature Range: —55° C to +120° C.

Working Voltage: 350 volts, RMS, maximum.

Dielectric Strength: 750 VAC, RMS, at sea level.

Adjustment: Single turn, 295 ±5 degrees.

Torque: 0.25 to 3.0 inch-ounces.

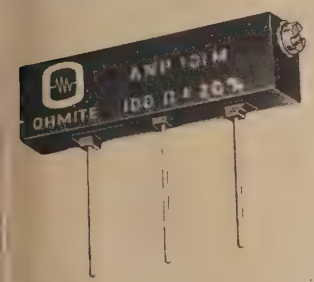
Leads: Designed for mounting directly on printed wiring boards using the terminal leads which are spaced to fit the 0.1" printed wiring board standard spacing.

STOCK OHMITE TYPE AFR TRIMMERS

Ohms ±20%	Catalog Number	Ohms ±20%	Catalog Number
100	AFR 101M	25,000	AFR 253M
250	AFR 251M	50,000	AFR 503M
500	AFR 501M	.1 meg	AFR 104M
1,000	AFR 102M	.25 meg	AFR 254M
2,500	AFR 252M	.5 meg	AFR 504M
5,000	AFR 502M	1.0 meg	AFR 105M
10,000	AFR 103M	2.5 meg	AFR 255M
		5.0 meg	AFR 505M

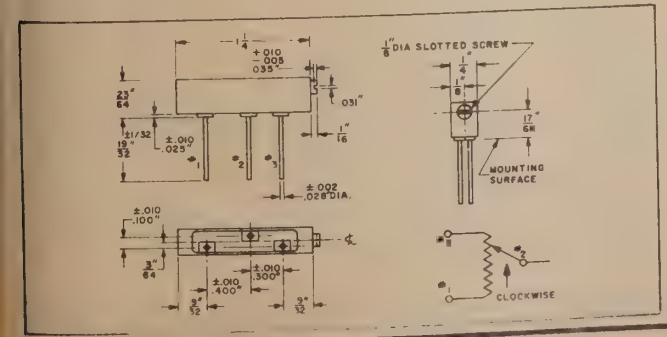
hot molded 25-turn trimmers

TYPE ANP — 25-TURN



Ohmite type ANP Hot-Molded Trimmers are continuously adjustable 25-turn variable resistors intended primarily for trimmer applications. Designed for use on printed circuit boards, these dependable three-terminal devices can be applied as either rheostats or potentiometers with equally satisfactory results. Stepless and relatively non-inductive regardless of resistance value. Unexcelled stability of setting in normal environmental conditions.

The type ANP Trimmer is produced by a hot-molding process using a high insulation material together with a hot molded resistance track, low resistance collector track and terminal pins — all combined into a single, solid, integral structure. The type ANP is splash-proof, dust-tight and can be mounted by its own rugged terminals.



CHARACTERISTICS:

Power Rating: ⅓ watt @ 50° C ambient temperature. Derate power linearly to zero at 100° C.

Resistance Range: 100 ohms to 0.1 megohms. Resistance change is nominally linear with shaft rotation.

Tolerance: Standard resistance tolerance is ±20%.

Temperature Range: —55° C to +100° C.

Working Voltage: 350 volts RMS, maximum at sea level.

Dielectric Strength: 700 volts RMS maximum, at sea level.

Insulation Resistance: 1000 megohms minimum.

Adjustment: 25 ± 3 turns for continuous resistance change. Mechanical release at end positions. Turning torque is 0.10 to 8 inches-ounce. Slotted for screwdriver adjustment.

Leads: Pin type terminals, spaced in accordance with 0.1" printed wiring board grid system.

STOCK OHMITE TYPE ANP TRIMMERS

Ohms ±20%	Catalog Number	Ohms ±20%	Catalog Number
100	ANP-101M	5,000	ANP-502M
250	ANP-251M	10,000	ANP-103M
500	ANP-501M	25,000	ANP-253M
1,000	ANP-102M	50,000	ANP-503M
2,500	ANP-252M	.1 meg	ANP-104M

United Technical Publications

OHMITE vitreous enameled rheostats (potentiometers)

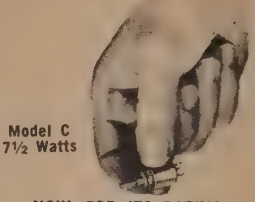
Now, Ohmite offers TWELVE sizes in its line of famous rheostats ranging from 7.5 to 1000 watts. Nothing to shrink or burn, all models are metal and ceramic construction and coated with Ohmite's exclusive vitreous enamel or Ohmicone® silicone ceramic. The revolutionary Model C, 7½ watt miniature unit, **the smallest rheostat of its rating available,** employs this same construction! All Model C stock units and the enclosed Model E unit, are normally supplied in a corrosion-resistant dust-proof case. Model C units are stocked in both standard and locking type bushings.

In all Ohmite rheostats, the resistance wire is wound on a solid ceramic core. The turns are locked in place with tough, protective vitreous enamel or Ohmicone® silicone ceramic. Pivoted, universal action mounting of the brush, assures perfect contact. Metal-graphite contact brushes, varied to fit current and resistance, insure good contact with negligible wear of the wire. Terminals at each end of the winding permit connection of the unit as a potentiometer.

Models H, J, G, K, L, P, and N, marked "Series A," are listed under the Underwriter's Laboratories Reexamination Service. RHEOSTAT KNOBS are listed on page 20. Rheostats can be supplied to meet military specification MIL-R-22.

RATINGS: Current ratings shown, assume use in free air. If units are enclosed, currents should be reduced to as much as 50% depending upon ventilation. The rated current causes the rheostat to dissipate its rated wattage when its full resistance is in the circuit.

SPECIAL RHEOSTAT FEATURES: Hundreds of features to meet your special rheostat requirements can be furnished. Submit your specifications.



Model C
7½ Watts

NOW, FOR ITS RATING INDUSTRY'S SMALLEST RHEOSTAT!



Model U
1000 Watts



Unenclosed
Model E
12½ Watts



Enclosed
Model E
12½ Watts

MODEL "C" — 7½ WATT* — STANDARD & LOCKING BUSHINGS

Diameter .515" max. — Depth behind panel ⅞" — Shaft ⅛" diameter, slotted for both types; Std. shaft accommodates knob — Rotation 300° — Mounting for panels up to ⅛" by means of ¼"-32 bushing and hex. nut — Non-turn lug requires ⅛" hole ¼" below center of shaft — No. 5151 knob recommended — Solder terminals also fit EIA type TS-E3R100 transistor socket — Wt. 0.27 oz.

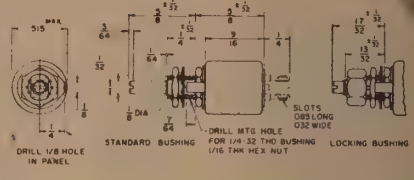
Ohms	Amps.	Standard Shaft Catalog No.[1]	Locking Shaft Catalog No.[1]
10	.86	**4908**	**4948**
15	.71	**4909**	(4949)
25	.55	4910	(4950)
35	.46	(4911)	(4951)
50	.39	4912	(4952)
75	.32	(4913)	(4953)
100	.27	**4914**	4954
150	.22	(4915)	(4955)
200	.19	(4916)	(4956)
250	.17	4917	(4957)
350	.15	4918	**4958**
500	.12	4919	(4959)
750	.10	(4920)	(4960)
1000	.086	4921	4961
1500	.071	(4922)	(4962)
2500	.055	(4923)	4963
3500	.046	(4924)	(4964)
5000	.039	4925	4965

*Rating on metal panel — unit is silicone-ceramic coated.

Locking-type Model C mounted in socket on panel. Solder terminals fit transistor socket.



MODEL C



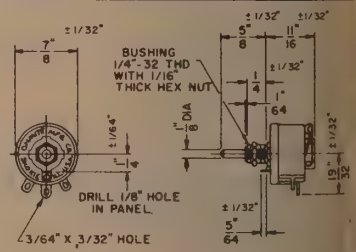
MODEL "E" — 12½ WATT* — UNENCLOSED & ENCLOSED

Diameter ⅞"; Diameter with dust-tight aluminum enclosure 1¾₄" — Depth behind panel 1¹⁄₁₆"; for enclosed, 1²⁄₃₂" — Rotation 300° — Mounts on panels up to ⅛", by means of ¼"-32 bushing and hex nut — Non-turn lug requires ⅛" hole ¼" below center of shaft. No. 5151 knob recommended—Wt. 0.6 oz.; enclosed 0.85 oz.

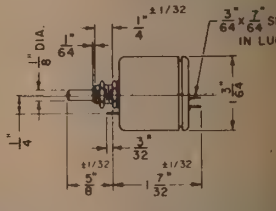
Total Ohms	Max. Amps	Steps Appr.	Unenclosed Catalog No.[1]	Enclosed Catalog No[1]
1	3.53	28	**0101**	(W0101)
2	2.50	29	**0102**	(W0102)
2.5	2.24	29	(0102A)	(W0102A)
3	2.04	38	**0103**	(W0103)
5	1.58	51	0103A	(W0103A)
6	1.44	35	**0104**	(W0104)
8	1.25	53	**0105**	(W0105)
10	1.12	50	**0106**	W0106
15	.91	70	**0107**	(W0107)
25	.71	72	**0108**	W0108
35	.60	82	**0109**	(W0109)
50	.50	92	**0110**	(W0110)
75	.41	105	**0111**	(W0111)
100	.35	102	**0112**	W0112
125	.32	110	**0113**	(W0113)
150	.29	130	(0113A)	(W0113A)
175	.27	155	**0114**	(W0114)
200	.25	135	0114A	(W0114A)
250	.22	170	**0115**	W0115
350	.19	190	**0116**	(W0116)
500	.16	210	**0117**	(W0117)
750	.13	200	**0118**	(W0118)
1,000	.11	260	**0119**	W0119
1,500	.091	209	**0120**	(W0120)
2,500	.071	323	**0121**	W0121
3,500	.060	400	**0122†**	(W0122†)
5,000	.050	340	**0123†**	W0123†
7,500	.041*	420	**4190†**	W4190†
10,000	.035*	560	**4191†**	(W4191†)
12,500	.031*	480	(4192†)	W4192†)
15,000	.029*	490	**4193†**	(W4193†)

*Rating on metal panel. †Silicone-ceramic coating — 350V maximum; 7500 ohms = 305V

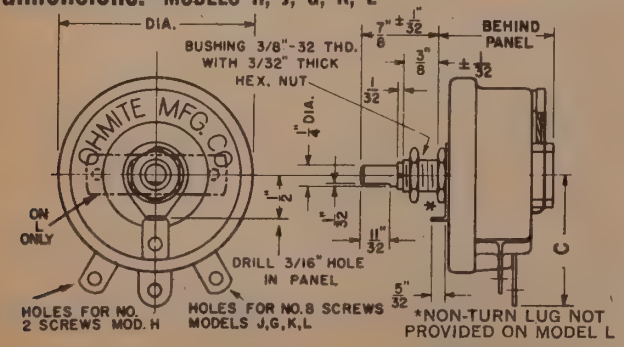
MODEL E



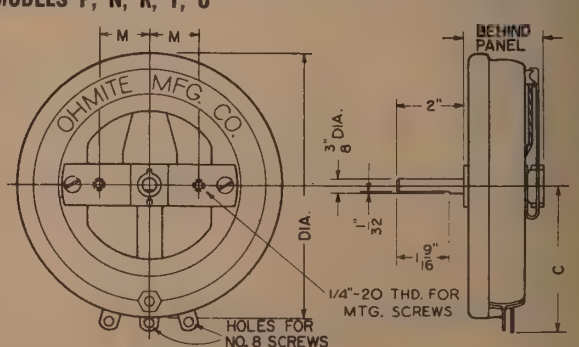
MODEL E ENCLOSED



dimensions: MODELS H, J, G, K, L*



MODELS P, N, R, T, U



[1] **Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.**

© United Technical Publications

OHMITE vitreous enameled rheostats (potentiometers)

5 WATT
ODEL "H," SERIES A

a. 1¾" — Depth behind panel
⅛" — Shaft ¼" dia. Rotation
0° — Mounts on panels up to
" by means of ⅜"-32 Bushing
d Hex. Nut — Non-turn lug
quires 3/16" hole ½" below ctr.
shaft — No. 5150 knob recom.
-C dimension is 1 5/16" — Weight
19 lb.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
0140	1	5.000	30
0141	2	3.540	29
0142	3	2.880	51
0143	6	2.040	50
0144	8	1.770	52
0145	10	1.580	52
0146	15	1.290	74
0147	25	1.000	95
0148	35	.845	107
0149	50	.707	97
0150	75	.575	117
0151	100	.500	123
0152	125	.445	155
0153	175	.375	171
0154	250	.316	195
0155	350	.267	210
0156	500	.222	245
0157	750	.182	286
0158	1,000	.155	305
0159	1,500	.129	380
0160	2,500	.100	300
0161	3,500	.084	335
0162	5,000	.070	380
4200†	7,500	.058	590
4201†	10,000	.050	525
4202†	15,000	.041	750
4203†	20,000	.035	750
4204†	25,000	.032	700

† Silicone-ceramic coating, 500V max. Not listed UL Ser. A.

50 WATT
MODEL "J," SERIES A

Dia. 2 5/16" — Depth behind panel 1⅜" — Shaft ¼" dia. Rotation 300° — Mounts on panels up to ¼" by means of ⅜"-32 Bushing and Hex. Nut — Non-turn lug requires 3/16" hole ½" below ctr. of shaft — No. 5150 knob recom. — C dimension is 1 3/16" — Weight 0.32 lb.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
0308	0.5	10.000	25
0309	1	7.070	44
0310	2	5.000	44
0311	4	3.530	44
0312	6	2.880	74
0313	8	2.500	82
0314	12	2.040	85
0315	16	1.760	89
0316	22	1.500	98
0317	35	1.190	126
0318	50	1.000	111
0319	80	.790	143
0320	125	.630	177
0321	150	.575	175
0322	225	.470	203
0323	300	.408	215
0324	500	.316	286
0325	800	.250	286
0326	1,000	.224	360
0327	1,600	.176	368
0328	2,500	.141	463
0329	3,500	.119	510
0330	5,000	.100	442
0331	8,000	.079	560
0332	10,000	.070	567
4210†	15,000	.058	700
4211†	20,000	.050	850
4212†	25,000	.045	950
4213†	30,000	.041	900
(4214†)	40,000	.035	950
4215†	50,000	.032	1130

† Silicone-ceramic coating, 750V max. Not listed UL Ser. A.

75 WATT
MODEL "G," SERIES A

Dia. 2¾" — Depth behind panel 1¾" — Shaft ¼" dia. Rotation 300° — Mounts on panels up to ¼" by means of ⅜"-32 Bushing and Hex. Nut — Non-turn lug requires 3/16" hole ½" below ctr. of shaft — No. 5150 knob recom. — C dimension is 1 23/32" — Weight 0.52 lb.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
1100	0.5	12.300	28
(1101)	1	8.660	27
1102	2	6.120	28
1103	3	5.000	53
1104	5	3.880	54
1105	7.5	3.160	51
1106	10	2.740	55
1107	16	2.170	131
1108	25	1.730	113
1109	50	1.230	143
1110	75	1.000	134
1111	100	.866	180
1112	200	.612	186
1113	300	.500	217
1114	400	.433	230
1115	500	.388	291
(1116)	750	.316	345
1117	1,000	.274	351
(1118)	1,500	.224	434
1119	2,000	.194	450
(1120)	2,500	.173	448
(1121)	5,000	.123	590
(1122)	7,500	.100	544
1123	10,000	.087	568

100 WATT
MODEL "K," SERIES A

Dia. 3 1/16" — Depth behind panel 1¾" — Shaft ¼" dia. Rotation 300° — Mounts on panels up to ¼" by means of ⅜"-32 Bushing and Hex. Nut — Non-turn lug requires 3/16" hole ½" below ctr. of shaft — No. 5150 knob recom. — C dimension is 1 23/32" — Weight 0.64 lb.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
0440	0.5	14.100	33
0441	1	10.000	33
0442	2	7.070	33
0443	3	5.750	30
0444	5	4.470	57
0445	7.5	3.650	60
0446	10	3.160	57
0447	16	2.500	124
0448	25	2.000	107
0449	50	1.410	135
0450	75	1.150	158
0451	100	1.000	168
0452	200	.707	213
0453	300	.575	259
0454	400	.500	270
0455	500	.447	269
0456	750	.365	319
0457	1,000	.316	330
0458	1,500	.258	402
0459	2,000	.224	417
0460	2,500	.200	515
0461	5,000	.141	560
0462	7,500	.115	495
0463	10,000	.100	673

150 WATT
MODEL "L," SERIES A

Dia. 4" — Depth behind panel 2" — Shaft ¼" diameter. Rotation 300° — Mounting for panels up to ¼", ⅜"-32 Bushing and Hex. Nut or two 10-32 flat head screws, mounting centers 7/8" each side of center of shaft on line perpendicular to center terminal. — Stock No. 5150 knob recom. — C dimension is 2 5/32" — Weight 1.1 lbs.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
0524	0.5	17.300	28
0525	1	12.300	44
0526	2	8.650	43
0527	3	7.070	74
0528	5	5.480	78
0529	7.5	4.470	81
0530	10	3.880	77
0531	15	3.163	130
0532	25	2.450	114
0533	35	2.070	125
0534	50	1.735	142
0535	75	1.415	170
0536	100	1.225	177
0537	150	1.000	215
0538	200	.865	229
0539	250	.775	285
0540	350	.655	315
0541	500	.548	366
0542	750	.447	335
0543	1,250	.346	453
0544	1,800	.288	497
0545	2,250	.259	511
0546	3,000	.224	526
0547	4,500	.182	630
0548	7,500	.141	894
0549	10,000	.122	929

225 WATT
MODEL "P," SERIES A

Dia. 5" — Depth behind panel 2⅛" — Shaft ⅜" dia. Rotation 310° — Mounting for panels up to 1¼" by two ¼"-20 screws, mounting centers (M) 7/8" each side of center of shaft on center line of cross-bar. — Stock No. 5105 Knob Recommended — C dimension is 2 21/32" — Weight 2 lbs.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
(1250)	1.0	15.000	42
1251	2.0	10.600	42
1252	3.0	8.660	43
(1253)	4.0	7.500	57
1254	5.0	6.710	57
(1255)	7.5	5.490	61
1256	10.0	4.740	103
1257	15.0	3.870	109
1258	25.0	3.000	115
1259	50.0	2.120	183
1260	75.0	1.730	192
1261	100	1.500	268
1262	150	1.220	256
1263	200	1.060	337
1264	300	.866	323
1265	400	.750	343
1266	700	.567	484
1267	900	.500	493
1268	1,200	.433	520
1269	1,500	.387	647
1270	1,750	.358	603
1270A	2,000	.336	650
1271	2,500	.300	652

300 WATT
MODEL "N," SERIES A

Dia. 6" — Depth behind panel 2⅜" — Shaft ⅜" dia. Rotation 320° — Mounting for panels up to 1¼" by two ¼"-20 screws, mounting centers (M) 1 3/16" each side of center of shaft on center line of cross-bar. — Stock No. 5105 Knob Recommended — C dimension is 3 7/16" — Weight 2.6 lbs.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
0650	1.0	17.320	50
0651	2.0	12.240	52
0652	3.0	10.000	52
0653	4.0	8.660	78
0654	5.0	7.750	78
0655	7.5	6.320	72
0656	10.0	5.480	78
0657	15.0	4.470	144
0658	25.0	3.460	135
0659	50.0	2.450	218
0660	75.0	2.000	225
0661	100	1.730	285
0662	150	1.410	342
0663	200	1.220	363
0664	300	1.000	424
0665	400	.866	454
0666	700	.655	504
0667	900	.578	528
0668	1,200	.500	546
0669	1,500	.447	678
(0670)	1,750	.414	626
(0670A)	2,000	.387	700
0671	2,500	.346	708

500 WATT
MODEL "R"

Dia. 8" — Depth behind panel 2⅛" — Shaft ⅜" dia. Rotation 325° — Mounting for panels up to 1¼" by two ¼"-20 screws, mounting centers (M) 1½" each side of center of shaft on center line of cross-bar. — Stock No. 5105 Knob Recommended — C dimension is 4 5/16" — Weight 4 lbs.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
0849	1.0	22.300	69
0850	1.5	18.200	79
(0851)	2.0	15.800	75
(0852)	2.5	14.100	76
0853	3.0	12.900	78
0854	4.0	11.200	73
0855	5.0	10.000	103
0856	8.0	7.900	103
0857	12.5	6.300	103
0858	16.0	5.600	188
0859	25.0	4.470	204
0860	40.0	3.540	206
0872	50.0	3.160	206
0861	80.0	2.520	327
0862	125	2.000	327
0863	175	1.690	423
0864	250	1.410	488
0865	325	1.240	500
0866	500	1.000	609
0867	750	.817	727
0868	1,000	.707	771
0869	1,500	.577	925
0870	2,000	.500	980
0871	2,500	.447	968

750 WATT
MODEL "T"

Dia. 10" — Depth behind panel 3" — Shaft ⅜" dia. Rotation 330° — Mounting for panels up to 1¼" by two ¼"-20 screws, mounting centers (M) 1 7/8" each side of center of shaft on center line of cross-bar. — Stock No. 5105 Knob Recommended — is 5 5/16" — Weight 7.6 lbs.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
1300	1.0	27.400	71
(1301)	1.5	22.300	91
1302	2.0	19.400	103
(1303)	2.5	17.300	99
(1304)	3.0	15.800	94
(1305)	4.0	13.600	91
1306	5.0	12.200	102
1307	8.0	9.650	98
1308	10.0	8.650	138
(1309)	12.5	7.750	138
1310	16.0	6.820	140
1311	25.0	5.470	138
1312	50.0	3.870	248
1313	80.0	3.060	250
1314	100	2.740	248
1315	160	2.170	446
1316	200	1.940	442
1317	300	1.580	540
1318	400	1.370	583
(1319)	600	1.117	684
(1320)	750	1.000	686
1321	1,200	.791	870
(1322)	1,800	.646	1,042
(1322A)	2,000	.610	900
(1323)	2,500	.547	1,170

1000 WATT
MODEL "U"

Dia. 12" — Depth behind panel 3" — Shaft ⅜" dia. Rotation 335° — Mounting for panels up to 1¼" by two ¼"-20 screws, mounting centers (M) 3" each side of center of shaft on center line of cross-bar. — Stock No. 5105 Knob Recommended — C dimension is 6⅜" — Weight 10 lbs.

Catalog No.[1]	Total Ohms	Max. Amps	Steps Approx.
1450	1.0	31.600	86
1451	1.5	25.800	89
1452	2.0	22.400	115
1453	2.5	20.000	122
1454	3.0	18.300	125
1455	4.0	15.800	118
1456	5.0	14.100	122
1457	8.0	11.200	116
1458	10.0	10.000	114
(1459)	12.5	8.950	181
1460	16.0	7.900	164
1461	25.0	6.330	181
1462	50.0	4.470	321
1463	75.0	3.650	301
1464	100	3.160	321
1465	175	2.390	520
1466	225	2.110	608
1467	300	1.830	640
1468	400	1.580	685
1469	500	1.410	687
1470	750	1.150	806
1471	1,000	1.000	855
1472	1,500	.816	1,026
1473	2,500	.633	1,097

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

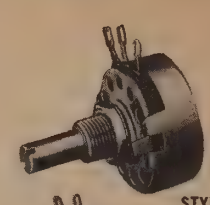
© United Technical Publications

OHMITE molded composition potentiometers

Ohmite molded composition potentiometers are used in commercial and military electronic applications where high quality and dependable performance are important. Type AB is rated 2 watts at 70°C ambient and is available with 7/8" slotted shaft (CMU), 2" unslotted shaft (CU, CA, CB, CCU) and locking type bushing with slotted shaft (CLU). Type AS is a miniature unit rated ½ watt. It is available with locking type bushing and slotted shaft (Style AS) and standard bushing with longer (slotted) shaft for knob control (Style ASM).

Because the resistance element is a thick, solid-molded ring — not a sprayed film or paint-type resistor — longer life and smoother operation are obtained. This is due also to the molded composition contact. Units are dust and splash proof, fungus and corrosion resistant and meet the requirements of military specification MIL-R-94. Styles CMU, CLU, AS and ASM conform respectively to MIL-R-94, Styles RV4N, RV4L, RV6L and RV6N.

Styles and tapers are listed in table. Dimensions of all stock units are shown below. A SPST switch for single AB controls can be supplied (see below table).


STYLE CMU
MIL STYLE RV4N


STYLE ASM
MIL STYLE RV6N


STYLE AS
MIL STYLE RV6L


STYLE CLU
MIL STYLE RV4L


STYLES CU, CA, CB


SWITCH CS-1

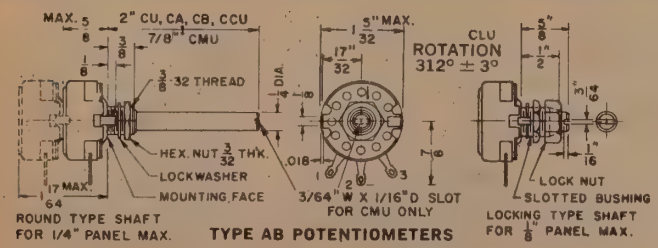

STYLE CCU

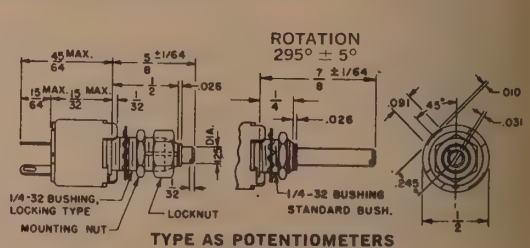
STOCK "POTS" — MIL Units are Stamped with MIL and Commercial Designations

Resistance Ohms Except As Noted Tol. ±10% except * ±20%	TYPE AB (1 3/32" Dia.) Rated 2 Watts[1] Single Unit 7/8" Shaft Style CMU Linear	MIL Designation	Single Unit 2" Shaft Style CU Linear	Style CA CW log	Style CB CCW log	Locking Style CLU Linear	MIL Designation	Dual Style CCU Linear	TYPE AS (½" Dia.) Rated ½ Watt[1] Miniature Locking Style AS Linear	MIL Designation	Miniature 7/8" Shaft Style ASM Linear	MIL Designation
50	**CMU5001**	500A	**CU5001**			**CLU5001**	500A					
100	**CMU1011**	101A	**CU1011**			**CLU1011**	101A		**AS3601**	101A	ASM6661	101A
150	CMU1511	151A	CU1511			CLU1511	151A					
250	**CMU2511**	251A	**CU2511**			**CLU2511**	251A		AS3602	251A	ASM6662	251A
350	CMU3511	351A	CU3511			CLU3511	351A					
500	**CMU5011**	501A	**CU5011**			**CLU5011**	501A		**AS3603**	501A	**ASM6663**	501A
750	CMU7511	751A	CU7511			CLU7511	751A					
1,000	**CMU1021**	102A	**CU1021**			**CLU1021**	102A		**AS3604**	102A	**ASM6664**	102A
1,500	CMU1521	152A	**CU1521**			**CLU1521**	152A					
2,500	**CMU2521**	252A	**CU2521**			**CLU2521**	252A		**AS3605**	252A	**ASM6665**	252A
3,500	CMU3521	352A	CU3521			CLU3521	352A					
5,000	**CMU5021**	502A	**CU5021**			**CLU5021**	502A		**AS3606**	502A	**ASM6666**	502A
7,500	CMU7521	752A	CU7521			CLU7521	752A					
10,000	**CMU1031**	103A	**CU1031**		CB1031	**CLU1031**	103A	**CCU1031**	**AS3607**	103A	**ASM6667**	103A
15,000	**CMU1531**	153A	CU1531			CLU1531	153A					
25,000	**CMU2531**	253A	**CU2531**		CB2531	**CLU2531**	253A	**CCU2531**	**AS3608**	253A	ASM6668	253A
35,000	CMU3531	353A	CU3531			CLU3531	353A					
50,000	**CMU5031**	503A	**CU5031**		**CB5031**	**CLU5031**	503A	**CCU5031**	**AS3609**	503A	**ASM6669**	503A
75,000	CMU7531	753A	CU7531			CLU7531	753A					
.1 meg.	**CMU1041**	104A	**CU1041**	**CA1041**		**CLU1041**	104A	**CCU1041**	**AS3610**	104A	**ASM6670**	104A
.15 meg.	CMU1541	154A	CU1541			CLU1541	154A					
.25 meg.	**CMU2541**	254A	**CU2541**	CA2541		**CLU2541**	254A	CCU2541	**AS3611**	254A	ASM6671	254A
.35 meg.	CMU3541	354A	CU3541			CLU3541	354A					
.5 meg.	**CMU5041**	504A	**CU5041**	CA5041		**CLU5041**	504A	CCU5041	AS3612	504A	ASM6672	504A
.75 meg.*	CMU7542	754B	CU7542			CLU7542	754B					
1.0 meg.*	**CMU1052**	105B	**CU1052**	CA1052		**CLU1052**	105B	CCU1052	**AS3613**	105B	ASM6673	105B
1.5 meg.*	CMU1552	155B	CU1552			CLU1552	155B					
2.0 meg.*	CMU2052	205B	CU2052			CLU2052	205B		AS3684	205B	ASM6674	205B
2.5 meg.*	CMU2552	255B	**CU2552**	CA2552		CLU2552	255B		AS3614	255B	ASM6675	255B
3.5 meg.*	CMU3552	355B	CU3552			CLU3552	355B					
5.0 meg.*	CMU5052	505B	CU5052			CLU5052	505B		AS3615	505B	ASM6676	505B
Weight	.064 lb.		.084 lb.			.070 lb.		.123 lb.	.017 lb.		.017 lb.	

Cat. No. Prefix RV4N-AYSD- (Single Unit 7/8" Shaft)
Cat. No. Prefix RV4L-AYSA- (Locking)
Cat. No. Prefix RV6L-AYSA- (Miniature Locking)
Cat. No. Prefix RV6N-AYSD- (Miniature 7/8" Shaft)
Resistance Shown is for Each Unit

SWITCH CS-1 (UNMOUNTED) For CMU, CU, CA, CB, CLU (order CS-1X for potentiometers with Ω stamped on case)





[1] Items appearing in BOLD print are popular values and are usually stocked by authorized OHMITE distributors. Items appearing in LIGHT FACE print are available from stocking distributors but normally are not stocked in depth.

© United Technical Publications

WARD LEONARD

POWER RHEOSTATS

THE STANDARD OF QUALITY FOR ELECTRONIC AND INDUSTRIAL PURPOSES



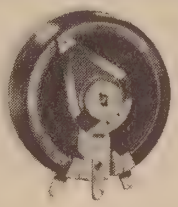
12.5 Watt — Type MP06



25 Watt — Type MP10



50 Watt — Type MP15



100 Watt — Type 100R



150 Watt — Type 150R

APPLICATIONS

Ward Leonard Power Rheostats are especially suited for use in electronic and electrical circuits where gradual and positive resistance changes are essential.

Balanced contact arms, self-lubricating metal graphite contact shoes, and no backlash in the drive shaft combine to ensure uniform contact pressure and smooth operation.

The 12.5, 25, and 50 watt Type MP rheostats, designed and acceptance-tested to the requirements of MIL-R-22, are completely interchangeable with other suppliers' rheostats. The tiny yet exceptionally rugged 12.5 watt rheostat, recently added to Ward Leonard's line, will handle those special low-power requirements with ease.

Immediate shipment from Ward Leonard's vast and varied stock of power rheostats assures you of fast, on-time delivery.

FEATURES

- Compact design
- Standardized for interchangeability
- Suitable for both MIL and industrial uses
- 12.5, 25, 50, 100, 150, and 300 watt sizes
- All ceramic construction—vitreous enamel bonded

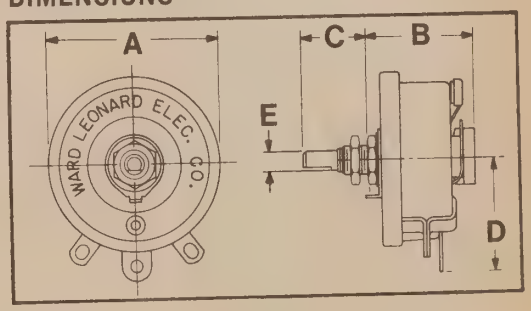


300 Watt — Type 300R

POWER RHEOSTATS — STOCK PRICES

WATTS	Price 1-9 Ohms	Price 1-9 Net $	WATTS	Price 1-9 Ohms	Price 1-9 Net $
12.5	1-10 15-750 1K-2.5K 3.5K-5K	5.00 4.50 5.00 5.35	100	1-15 25-750 1K-2.5K 5K 7.5K 10K	8.49 7.93 8.49 9.06 9.64 10.19
25	1-10 15-750 1K-2.5K 3.5K-5K	5.24 4.66 5.24 5.55	150	1-15 25-500 750-1K 2K-2.5K 5K-7.5K 10K	10.76 10.19 10.76 11.34 12.46 13.59
50	0.5-6 8-500 800-2.5K 3.5K-10K	5.85 5.24 5.55 5.85	300	1-2.5K	16.82

DIMENSIONS



STOCK RESISTANCE VALUES

12.5 WATT—TYPE MP06 DIM: A=⅞″ B=1/16″ C=⅝″ D=13/32″ E=⅛″			25 WATT—TYPE MP10 DIM: A=1¾″ B=1⅜″ C=27/32″ D=3/32″ E=¼″			50 WATT—TYPE MP15 DIM: A=2 3/32″ B=1⅜″ C=27/32″ D=1 17/32″ E=¼″			100 WATT—TYPE 100R DIM: A=3 3/32″ B=1½″ C=⅞″ D=2 1/64″ E=¼″			150 WATT—TYPE 150R DIM: A=4″ B=1¾″ C=⅞″ D=2 1/16″ E=¼″			300 WATT—TYPE 300R DIM: A=6″ B=2 1/16″ C=2″ D=3 1/16″ E=⅜″		
OHMS*	AMPS. (MAX.)	STEPS (APPROX.)	OHMS*	AMPS. (MAX.)	STEPS (APPROX.)	OHMS*	AMPS. (MAX.)	STEPS (APPROX.)	OHMS*	AMPS. (MAX.)	STEPS (APPROX.)	OHMS*	AMPS. (MAX.)	STEPS (APPROX.)	OHMS*	AMPS. (MAX.)	STEPS (APPROX.)
1.0	3.53	29	1.0	5.00	28	0.5	10.00	24	1	10.000	30	1	12.247	39	1	17.320	40
2.0	2.50	42	2.0	3.54	31	1.0	7.07	46	2	7.071	56	2	8.660	39	1.5	14.142	58
2.5	2.24	38	3.0	2.89	48	2.0	5.00	50	3	5.774	66	3	7.071	70	2	12.247	78
3.0	2.04	44	6.0	2.04	51	4.0	3.54	44	5	4.472	56	5	5.477	73	2.5	10.954	78
5.0	1.58	40	8.0	1.77	54	6.0	2.89	74	7.5	3.652	66	7.5	4.472	70	3	10.000	73
6.0	1.44	48	10	1.58	54	8.0	2.50	85	10	3.162	104	10	3.873	70	4	8.660	78
8.0	1.25	51	15	1.29	64	12	2.04	108							5	7.745	78
10	1.12	51	25	1.00	86	16	1.76	108	15	2.582	113	15	3.162	120	7.5	6.324	148
15	0.91	51	35	0.85	105	22	1.50	123	25	2.000	144	25	2.449	152	10	5.477	154
25	0.71	73	50	0.71	115	35	1.19	148	50	1.414	180	50	1.732	190			
35	0.60	75	75	0.58	135	50	1.00	113	75	1.155	180	75	1.414	228	15	4.472	147
50	0.50	86				80	0.79	147	100	1.000	216	100	1.225	228	25	3.464	155
75	0.41	103	100	0.50	152										35	2.927	231
100	0.35	108	125	0.45	143	125	0.63	178	200	0.707	252	200	0.866	265	50	2.449	267
125	0.32	128	175	0.38	160	150	0.58	173	300	0.577	252	300	0.707	303	75	2.000	308
150	0.29	128	250	0.32	185	225	0.47	203	400	0.500	252	400	0.612	342	100	1.732	326
175	0.27	148	350	0.27	205	300	0.41	214	500	0.447	324	500	0.548	342			
200	0.25	130	500	0.22	230	500	0.32	290	750	0.365	396	750	0.447	418	150	1.414	270
250	0.22	166	750	0.18	270	800	0.25	365							200	1.224	308
350	0.19	185							1000	0.316	410	1000	0.387	432	300	1.000	340
500	0.16	215	1000	0.16	292	1000	0.22	358	2000	0.224	410	2000	0.274	575	400	0.866	370
750	0.13	255	1500	0.13	353	1600	0.18	367	2500	0.200	410	2500	0.244	456	500	0.774	455
1000	0.11	260	2500	0.10	358	2500	0.14	460	5000	0.141	685	5000	0.173	865	750	0.632	514
1500	0.091	310	3500	0.08	392	3500	0.12	505	7500	0.115	820	7500	0.141	1000			
2500	0.071	321	5000	0.07	440	5000	0.10	565	10000	0.100	820				1000	0.547	578
3500	0.060	378				8000	0.08	695				10000	0.122	1000	1500	0.447	675
5000	0.050	430				10000	0.07	693							2500	0.346	720

*All other intermediate resistance values are available and can be manufactured on normal delivery cycle.

© United Technical Publications

Amperex®

TRANSISTORS, GERMANIUM

AF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS			TYPICAL CHARACTERISTICS					OUTLINE	
						TEST CONDITIONS						
			V_{CBO} (V)	I_C (mA)	P_T (mW)	V_{CE} (V)	I_C (mA)	h_{FE}	f_T (MHz)	NF (dB)	DWG. NO.	JEDEC NO.
2N2428	PNP	HIGH GAIN, LOW LEVEL AUDIO AMPLIFIER	32	100	500	5	2	100	1.7	4	3	TO-1
2N2429	PNP		32	100	500	5	2	140	2.3	4	3	TO-1
2N2430	NPN	LOW POWER AUDIO AMPLIFIER	32	500	280	0	20	100	—	—	3	TO-1
						2	10	—	2.5	—		
						5	0.5	—	—	4		
2N2706	PNP		32	200	500	0	20	135	—	—	3	TO-1
						2	10	—	2	—		
						5	0.5	—	—	4		

MF-HF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS			TYPICAL CHARACTERISTICS						OUTLINE	
						TEST CONDITIONS				POWER GAIN			
			V_{CBO} (V)	I_C (mA)	P_T (mW)	V_{CB} (V)	I_C (mA)	h_{FE}	f_T (MHz)	@ f (MHz)	(dB)	DWG. NO.	JEDEC NO.
2N993	PNP	RF-IF AMPLIFIER	40	10	100	6	1.0	150	75	10.7	25	10	TO-72
2N1224*	PNP	RF-IF AMPLIFIER MEDIUM FREQUENCIES	40	10	120	12	1.5	60	30	12.5	22	14	TO-33
2N1225*	PNP	RF-IF AMPLIFIER HIGH FREQUENCIES	40	10	120	12	1.5	60	100	12.5	28	14	TO-33
2N1226	PNP	RF-IF AMPLIFIER MEDIUM FREQUENCIES	60	10	120	12	1.5	60	30	12.5	22	14	TO-33
2N1395	PNP	AF AMPLIFIER	40	10	120	12	1.5	90	30	12.5	22	14	TO-33
2N1396	PNP	RF AMPLIFIER	40	10	120	12	1.5	90	100	12.5	28	14	TO-33
2N2083	PNP	RF-IF AMPLIFIER MIXER-OSCILLATOR	32	10	100	6	1.0	150	75	100	14	7	TO-7
2N2092	PNP	RF-IF AMPLIFIER	25	10	83	6	1.0	150	70	0.45	40	7	TO-7
2N2672	PNP	RF AMPLIFIER, MEDIUM FREQUENCY	32	10	100	6	1.0	150	75	100	8	15	TO-39

* Available to Military Specifications

HF-VHF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS			TYPICAL CHARACTERISTICS							OUTLINE	
						TEST CONDITIONS					POWER GAIN			
			V_{CBO} (V)	I_C (mA)	P_T (mW)	V_{CB} (V)	I_C (mA)	f (MHz)	C_{re} pF	f_T (MHz)	@ f (MHz)	(dB)	DWG. NO.	JEDEC NO.
2N987*	PNP	RF-IF AMPLIFIER	40	10	86	6	1.0	0.45	1.6	100	100	14	10	TO-72
2N990	PNP	RF-IF AMPLIFIER, OSCILLATOR MIXER	40	10	100	6	1.0	1.0	1.5	75	100	14	10	TO-72
2N2084*	PNP	RF-IF AMPLIFIER	40	10	125	6	1.0	1.0	1.5	100	100	14	14	TO-33
2N2495	PNP	RF AMPLIFIER, LOW NOISE, HIGH GAIN	35	10	100	6	1.0	1.0	—	180	200	15.5	8	TO-12
2N2496	PNP	RF AMPLIFIER, LOW NOISE, HIGH GAIN	40	10	100	6	1.0	1.0	1.2	180	200	15	10	TO-72
2N2654	PNP	FM-IF AMPLIFIER	32	10	100	6	1.0	1.0	0.5	250	100	18.8	8	TO-12
2N2671	PNP	RM-IF AMPLIFIER	32	10	100	6	1.0	1.0	1.5	100	100	14	8	TO-12
2N3588	PNP	FM, TV—RF-IF AMPLIFIER	25	10	100	6	1.0	1.0	0.45	250	100	18.8	2	TALL TO-72

* Available to Military Specifications

UHF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS			TYPICAL CHARACTERISTICS					OUTLINE	
						TEST CONDITIONS						
			V_{CBO} (V)	I_C (mA)	P_T (mW)	V_{CE} (V)	I_C (mA)	h_{FE} (min)	f_T (MHz)	NF (dB)	DWG. NO.	JEDEC NO.
2N3399	PNP	AF AMPLIFIER, MIXER	20	7	80	12	1.5	10	600	7	11	TO-72

RF SMALL SIGNAL

2N2207	PNP	RF AND VIDEO AMPLIFIER	70	50	260	6	10	200	175	—	7	TO-7

AF POWER

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS			TYPICAL CHARACTERISTICS					OUTLINE	
						TEST CONDITIONS						
			V_{CBO} (V)	I_C (A)	P_T (W)	V_{CB} (V)	I_C (mA)	h_{FE} (min)	f_T (MHz)	NF (dB)	DWG. NO.	JEDEC NO.
2N2431	PNP	MEDIUM POWER	32	1.0	1.6	1.0	50	90	—	—	1	—
						2.0	10	—	1.5	—		
2N4078	PNP	MEDIUM POWER	32	3.0	14	1.0	500	150	—	—	3	TO-1
						2.0	10	—	1.0	—		
2N4106	PNP	MEDIUM POWER	25	1.0	1.6	1.0	300	200	—	—	3	TO-1
						2.0	10	—	1.5	—		
2N4241	PNP	HIGH POWER	32	5.0	30	1.0	1000	150	—	—	4	TO-3
						2.0	500	—	0.75	—		

© United Technical Publications

Amperex®

TRANSISTORS, GERMANIUM (Continued)

AF POWER, MATCHED PAIRS

PAIR TYPE	TYPE 1	POLARITY	TYPE 2	POLARITY	DESCRIPTION	V_{CB} (V)	POWER OUTPUT (W)	OUTLINE DWG. NO.	OUTLINE JEDEC NO.
2N2431	2N2431	PNP	2N2431	PNP	PNP PAIR	32	3.0	3	2 TO-1
2N2707	2N2430	NPN	2N2706	PNP	COMPLEMENTARY SYMMETRY PAIR	32	1.0	3	2 TO-1
2N4079	2N4077	NPN	2N4078	PNP	COMPLEMENTARY SYMMETRY PAIR	32	8.0	1	—
2N4107	2N4105	NPN	2N4106	PNP	COMPLEMENTARY SYMMETRY PAIR	32	3.0	3	2 TO-1
2N4136	2N2430	NPN	2N2431	PNP	COMPLEMENTARY SYMMETRY PAIR	32	2.0	3	2 TO-1
2N4241	2N4241	PNP	2N4241	PNP	PNP PAIR	32	18.0	4	2 TO-3

TRANSISTORS, SILICON

AF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS V_{CEO} (V)	V_{EBO} (V)	I_C (mA)	P_T (mW)	TYPICAL CHARACTERISTICS TEST CONDITIONS V_{CE} (V)	I_C (mA)	h_{FE}	f_T (MHz)	I_{CBO} (150°C) (μA)	OUTLINE DWG. NO.	OUTLINE JEDEC NO.
A141	NPN	SUBMINIATURE PRE-STAGE AMPLIFIERS	20	—	50	30	0.5	0.2	130	150	—	29	—
A142	NPN		20	—	50	30	0.5	0.2	220	150	—	29	—
A143	NPN		20	—	50	30	0.5	0.2	380	150	—	29	—
A157	NPN	MEDIUM VOLTAGE DRIVER	45	6	100	300	5	2	180 (A157a) 290 (A157b)	300	15	9	TO-18
A158	NPN	LOW VOLTAGE PRE-AMPLIFIER AND DRIVER	20	5	100	300	5	2	290 (A158a) 520 (A158c)	—	15	9	TO-18
							5	10	—	300			
A159	NPN	LOW NOISE, LOW CURRENT PRE-AMPLIFIER	20	5	100	300	5	.01	150 (A159b) 270 (A159c)	—	15	9	TO-18
							5	10	—	300			
A747	NPN	MEDIUM VOLTAGE DRIVER	45	6	100	300	5	2	180 (A747a) 290 (A747b)	—	—	20	—
							5	10	—	300			
A748	NPN	HIGH GAIN AT LOW CURRENT	20	5	100	300	5	2	290 (A748a) 520 (A747c)	—	—	20	—
							5	10	—	300			
A749	NPN	HIGH GAIN AT LOW CURRENT, LOW NOISE	20	5	100	300	5	.01	150 (A749b) 270 (A749c)	—	—	20	—
							5	10	—	300			
A177	PNP	MEDIUM VOLTAGE DRIVER	50	5	100	300	5	2	140	—	15	9	TO-18
							5	50	—	150			
A178	PNP	LOW VOLTAGE PRE-AMPLIFIER AND DRIVER	25	5	100	300	5	2	180 (A178b) 290 A178c)	—	15	9	TO-18
							5	10	—	150			
A179	PNP	LOW NOISE, LOW CURRENT, PRE-AMP	25	5	100	300	5	2	180 (A179b) 290 (A179c)	—	15	9	TO-18
							5	10	—	150			

HF-VHF-UHF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS V_{CEO} (V)	V_{EBO} (V)	I_C (mA)	P_T (mW)	TYPICAL CHARACTERISTICS TEST CONDITIONS V_{CE} (V)	I_C (mA)	C_{re} (pF)	f_T (MHz)	POWER GAIN @ f (MHz)	(dB)	OUTLINE DWG. NO.	OUTLINE JEDEC NO.
A415	NPN	RF-IF AMPLIFIER	50	5	30	165	10	1.0	0.55	200	100	19	10	TO-72
A467	NPN	AGC, IF AMPLIFIER	40	4	30	150	12	4.0	0.15	235	45	38	10	TO-72
A473	NPN	VIDEO, IF AMPLIFIER	40	4	35	230	10	5.0	0.23	550	45	40	10	TO-72

VHF-UHF SMALL SIGNAL

A417	NPN	FM RF AMPLIFIER	30	5	30	145	10	1.0	0.65	250	100	27	10	TO-72
A418	NPN	FM MIXER	30	5	30	145	10	1.0	0.65	200	100	27	10	TO-72
A419	NPN	AM/FM IF AMPLIFIER	30	5	30	145	10	1.0	0.65	200	10.7	39	10	TO-72
A420	NPN	AM RF AMPLIFIER	30	5	30	145	10	1.0	0.65	200	0.45	41	10	TO-72
A430	NPN	WIDE-BAND AMPLIFIER	20	2.5	50	250	5	2.0	0.80	—	200	21	11	TO-72
							5	50	—	1600	800	7.5		
A482	NPN	MIXER, AGC AMPLIFIER	25	3	15	130	10	4	16	675	—	—	10	TO-72
A483	NPN	OSCILLATOR	25	3	15	130	10	4	16	600	—	—	10	TO-72
A484	NPN	RF AMPLIFIER	30	3	20	130	10	2	44	550	—	—	10	TO-72
A496	NPN	AM/FM IF OUTPUT AMPLIFIER	30	4	25	250	10	1	0.2	—	—	—	19	—
							10	4	—	400				
A497	NPN		25	4	25	250	10	1	0.3	—	—	—	19	—
							10	5	—	550				

© United Technical Publications

Amperex®

TRANSISTORS, SILICON (Continued)

UHF SMALL SIGNAL

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS				TYPICAL CHARACTERISTICS								OUTLINE	
							TEST CONDITIONS				NF		POWER GAIN			
			V_{CBO} (V)	V_{EBO} (V)	I_C (mA)	P_T (mW)	V_{CE} (V)	I_C (mA)	h_{FE}	f_T (MHz)	@ f (Mhz)	(dB)	@ f (Mhz)	(dB)	DWG. NO.	JEDEC NO.
A485	NPN	RF-IF WIDE BAND AMPLIFIER, LOW NOISE	30	2.5	25	200	1.0	2	75	1500	200	2.5	500	22	11	TO-72
A490	NPN		15	2.5	25	200	1.0	15	75	1200	200	4.5	200	36	11	TO-72
A492	NPN	RF-IF WIDE BAND AMPLIFIER	30	2.5	25	200	1.0	2	25 (min)	1000	200	4.0	—	—	11	TO-72
2N2857	NPN		30	2.5	20	200	1.0	2	50	1000	450	4.0	450	15	11	TO-72
2N5053	NPN	RF AMPLIFIER, LOW NOISE	30	3	25	200	1.0	2	—	1200	450	5.0	—	—	11	TO-72
							1.0	25	—	1400						
2N5054	NPN		30	3	25	200	1.0	2	—	1300	450	4.0	—	—	11	TO-72
							1.0	25	—	1500						

RF LARGE SIGNAL, POWER

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS			TYPICAL CHARACTERISTICS						OUTLINE	
						TEST CONDITIONS				POWER GAIN	POWER OUT		
			V_{CBO} (V)	I_C (A)	P_T (W)	V_{CE} (V)	I_C (mA)	h_{FE}	f_T (MHz)	(dB)	@ f (Mhz)	(W)	DWG. NO.	JEDEC NO.
A209	NPN	RF POWER AMPLIFIER	40	0.15	5.0	5	50	25 (min)	1000	—	—	—	26	—
A210	NPN	WIDE BAND, MEDIUM POWER AMPLIFIER	40	0.2	0.7	5	50	25 (min)	1200 (min)	15 (min)	200	0.1 (min)	15	TO-39
A211	NPN		40	0.2	0.7	5	50	25 (min)	800 (min)	11 (min)	200	0.1 (min)	15	TO-39
A214	NPN	RF POWER AMPLIFIER	40	0.15	5.0	5	50	25 (min)	1200	—	—	—	25	TO-46
A238	NPN		36	0.8	5	5	250	70	1000	—	470	1.8	27	—
A253	NPN	RF POWER AMPLIFIER	36	1.5	10	5	500	50	800	—	470	6	27	—
A270	NPN	EMITTER-GRID RF POWER AMPLIFIERS	65	1.5	8	5	500	5 (min)	500	11 (min)	175	4	15	—
A271	NPN		65	0.75	16	5	500	5 (min)	500	12 (min)	175	8	28	—
A272	NPN	EMITTER-GRID RF POWER AMPLIFIERS	65	1.5	29	5	500	5 (min)	500	10 (min)	175	15	28	—
A273	NPN		65	2.0	44	5	500	5 (min)	500	9 (min)	175	25	28	—
A274	NPN	EMITTER-GRID RF POWER AMPLIFIERS	36	0.75	8	5	500	5 (min)	700	8 (min)	175	3	15	—
A275	NPN		36	1.25	16	5	500	5 (min)	700	9 (min)	175	8	28	—
A276	NPN	EMITTER-GRID RF POWER AMPLIFIERS	36	2.5	29	5	500	5 (min)	700	7.5 (min)	175	15	28	—
A277	NPN		36	3.5	44	5	500	5 (min)	700	6 (min)	175	23	28	—
2N3866	NPN	RF POWER AMPLIFIERS	55	0.4	5	5	50	200 (max)	700	—	100	1.8	15	TO-39
2N4427	NPN		40	0.4	3.5	5	40	—	800	10	175	1	15	TO-39

CHOPPERS

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS				TYPICAL CHARACTERISTICS								OUTLINE	
							TEST CONDITIONS				I_{CES}		V_{offset}			
			V_{CBO} (V)	V_{EBO} (V)	I_C (mA)	P_T (mW)	V_{CE} (V)	I_C (mA)	h_{FE}	f_T (MHz)	@ V_{CE} (V)	(nA)	@ I_B (μB)	(μV)	DWG. NO.	JEDEC NO.
ME209	NPN	LOW OFFSET VOLTAGE CHOPPERS	10	5	—	300	—	—	—	—	5	2	150	250	9	TO-18
ME214	NPN		10	5	100	300	—	—	—	—	5	2	150	500	9	TO-18
2N2569	NPN		20	5	100	300	10	0.1	50	—	5	2	150	250	9	TO-18
								10	—	100						
2N2570	NPN		20	5	100	300	10	0.1	50	—	5	2	150	500	9	TO-18
								10	—	100						

TELEVISION

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS				TYPICAL CHARACTERISTICS				OUTLINE	
							TEST CONDITIONS					
			V_{CBO} (V)	V_{EBO} (V)	I_C (mA)	P_T (W)	V_{CE} (V)	I_C (mA)	h_{FE}	f_T (MHz)	DWG. NO.	JEDEC NO.
A705	NPN	HORIZONTAL DEFLECTION	750	—	2500	10	5	100	—	7.5	4	TO-3
A777	NPN	VIDEO OUTPUT (SMALL SCREEN)	85	5	50	0.6	10	15	20 (min)	—	5	TO-5
							10	10	—	120		
A778	NPN	VIDEO OUTPUT (LARGE SCREEN)	145	5	50	1.7	10	15	20 (min)	—	5	TO-5
							10	10	—	120		
A779	NPN	VIDEO OUTPUT AND COLOR CKTS.	200	5	50	1.7	10	15	20 (min)	—	5	TO-5
							10	10	—	120		

© United Technical Publications

Amperex®

TRANSISTORS, SILICON (Continued)

DIFFERENTIAL AMPLIFIERS

TYPE	POLARITY	DESCRIPTION	MAXIMUM RATINGS				TYPICAL CHARACTERISTICS						OUTLINE	
			V_{CBO} (V)	V_{EBO} (V)	I_C (mA)	P_T (mW)	f_T (min) (MHz)	h_{FE} (min)	h_{FE1}/h_{FE2}	$\lvert V_{BE1}-V_{BE2}\rvert$ 5V 10μA (mV)	I_{CBO} @ V_{CB} (V)	I_{CBO} (nA)	DWG. NO.	JEDEC NO.
A600	NPN	CLOSE BALANCE, HIGH FREQUENCY	50	5	50	600	50	60	0.9	10 (100 μA)	20	10	6	TO-77
A601	NPN	CLOSE BALANCE, HIGH GAIN, HIGH FREQUENCY	30	5	50	600	50	175	0.9	10 (100 μA)	20	10	6	TO-77
A602	NPN	MEDIUM GAIN, HIGH FREQUENCY	35	5	30	600	30	50	0.8	20 (100 μA)	30	10	6	TO-77
A603	NPN	HIGH GAIN, HIGH FREQUENCY	35	5	30	600	30	100	0.8	5 (100 μA)	30	10	6	TO-77
A604	NPN	HIGH GAIN, HIGH FREQUENCY	35	5	30	600	30	100	0.8	10 (100 μA)	30	10	6	TO-77
A605	NPN	HIGH GAIN, HIGH FREQUENCY	35	5	30	600	30	100	0.9	5 (100 μA)	30	10	6	TO-77
A606	NPN	HIGH GAIN, HIGH FREQUENCY	35	5	30	600	30	100	0.9	10 (100 μA)	30	10	6	TO-77
A640/S/L	NPN	MEDIUM GAIN, CLOSE MATCH	30	5	30	200	30	40	0.9	3	5	5	18	2 TO-18
A641/S/L	NPN	MEDIUM GAIN, CLOSE MATCH	30	5	30	200	30	80	0.9	3	5	5	18	2 TO-18
A642/S/L	NPN	HIGH GAIN, CLOSE MATCH	30	5	30	200	30	160	0.9	3	5	5	18	2 TO-18
A643/S/L	NPN	MEDIUM GAIN	30	5	30	200	50	30	0.8	30	5	5	18	2 TO-18
A644/S/L	NPN	HIGH GAIN	30	5	30	200	50	60	0.8	30	5	5	18	2 TO-18
A645/S/L	NPN	VERY HIGH GAIN	30	5	30	200	50	120	0.8	30	5	5	18	2 TO-18
A646	NPN	HIGH GAIN, HIGH FREQUENCY	35	5	30	600	30	100	0.6	20 (100 μA)	30	10	6	TO-77
A647/S/L	PNP	LOW LEVEL ECONOMY UNITS FOR INDUSTRIAL EQUIPMENT	40	5	30	300	100	40	0.8	15 (2 mA)	5	5	18	2 TO-18
A648/S/L	PNP		30	5	30	300	130	100	0.8	15 (2 mA)	30	100	18	2 TO-18
A649/S/L	NPN	HIGH GAIN, CLOSE MATCH	30	5	30	200	30	200	0.9	1	—	0.5	18	2 TO-18

S = Short Cooling Clip
L = Long Cooling Clip
} See Outline drawing

DIODES AND RECTIFIERS, GERMANIUM

GENERAL PURPOSE

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS				OUTLINE	
				I_F		I_R			
		I_F (mA)	V_R (V)	@ V_F (V)	(mA)	@ V_R (V)	(μA)	DWG. NO.	JEDEC NO.
A20	BIAS CONTROL	50	—	0.25	10	20	5	31	DO-1
1N67A	HIGH BACK RESISTANCE	30	80	1.0	4	5	5	39	DO-7
						50	50		
1N68A	HIGH PEAK VOLTAGE	40	100	1.0	3	100	625	39	DO-7
1N90	GENERAL PURPOSE	30	60	1.0	5	50	500	39	DO-7
1N116	HIGH BACK RESISTANCE	30	60	1.0	5	50	100	39	DO-7
1N117	HIGH BACK RESISTANCE	30	60	1.0	10	50	100	39	DO-7
1N126	GENERAL PURPOSE	30	60	1.0	5	10	50	39	DO-7
						50	850		
1N128	GENERAL PURPOSE	30	40	1.0	3	10	10	39	DO-7
1N617	HIGH PEAK VOLTAGE	50	115	1.0	7	10	11	39	DO-7
						100	275		
1N618	HIGH PEAK VOLTAGE	50	115	1.0	10	5	5	39	DO-7
						100	250		

HIGH FORWARD CONDUCTANCE

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS				OUTLINE	
				I_F		I_R			
		I_F (mA)	V_R (V)	@ V_F (V)	(mA)	@ V_R (V)	(μA)	DWG. NO.	JEDEC NO.
1N270	GOLD BONDED DIODE	90	80	1.0	200	50	100	39	DO-7

DETECTORS

AA119*	HIGH EFFICIENCY AM DETECTOR	35	30	1.5	10	10	4.5	39	DO-7
				2.8	30	30	35		
1N87A	HIGH EFFICIENCY VIDEO DETECTOR	30	30	1.0	10	10	20	39	DO-7
				2.0	30	20	90		
1N541**	HIGH EFFICIENCY AM DETECTOR	35	30	1.5	10	10	4.5	39	DO-7
				2.8	30	30	35		

* Available as matched pair (AA119MP)
** Available as matched pair (1N542)

© United Technical Publications

Amperex®

DIODES AND RECTIFIERS, GERMANIUM (Continued)

COMPUTER, SWITCHING

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS			OUTLINE	
				I_F				
		I_F (mA)	V_R (V)	@ V_F (V)	(mA)	t_{rr} (μs)	DWG. NO.	JEDEC NO.
A82	TUNER BAND SWITCHING DIODE	100	35	1.2	100	—	36	—
1N191	HIGH SPEED LOGIC DIODE	30	90	1.0	5	3.5	39	DO-7
1N698		110	25	0.5	30	3.5	39	DO-7

COMPUTER, SWITCHING

DIODES AND RECTIFIERS, SILICON

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS			OUTLINE	
				I_F				
		I_F (mA)	V_R (V)	@ V_F (V)	(mA)	t_{rr} (μs)	DWG. NO.	JEDEC NO.
A13	MEDIUM SPEED SWITCHING DIODE	170	150	1.5	100	120 (max.)	32	—
A23	FAST LOGIC DIODE	150	40	1.0	20	4 (max.)	32	—

TELEVISION and SPECIAL PURPOSE

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS			OUTLINE	
				I_F				
		I_F (mA)	V_R (V)	@ V_F (V)	(mA)	Q_s (nc)	DWG. NO.	JEDEC NO.
A45	CLAMPING, LINE PHASE DETECTOR	10	300	1.0	100	0.5	33	—
A48	SCAN RECTIFIER, LINE PHASE DETECTOR	300	300	1.0	100	1.0	33	—
BA114	CONTROLLED FORWARD CONDUCTANCE	20	—	0.5	0.2	—	39	DO-7

DRIVER, PULSE SHAPER

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS				OUTLINE	
		I_F (mA)	PRV (V)	I_{GF} (mA)	V_{GF} (V)	T_{ON} (μs)	T_{OFF} (μs)	DWG. NO.	JEDEC NO.
A983	INDICATOR TUBE DRIVER AND PULSE SHAPER	50	70	0.15	0.8	3	10	12	TO-72

VOLTAGE VARIABLE CAPACITANCE

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS				OUTLINE	
				C_D		ΔC			
		V_{RM} (V)	V_R (V)	@ V_R (V)	(pF)	@ V_R (V)		DWG. NO.	JEDEC NO.
1N3182	VOLTAGE VARIABLE CAPACITANCE DIODES	—	20	4	33	4 to 10	0.7	39	DO-7

VARACTOR

TYPE	DESCRIPTION	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS				OUTLINE	
		V_R (V)	P_T (W)	P_{IN} (W)	P_{OUT} (W)	C_D (pF)	Cutoff Frequency (GHz)	DWG. NO.	JEDEC NO.
1N4885	VHF-UHF HIGH FREQUENCY MULTIPLIER	150	20	40	24	28	80	34	DO-4
1N4886		120	20	25	16	28	55	34	DO-4

POWER RECTIFIER

TYPE	DESCRIPTION	MAXIMUM RATINGS				TYPICAL CHARACTERISTICS				OUTLINE	
						I_F		I_R			
		I_{FM} (A)	I_F (A)	V_{RM} (V)	V_R (V)	@ V_F (V)	(mA)	@ V_R (V)	(μA)	DWG. NO.	JEDEC NO.
BY127	HIGH-VOLTAGE MEDIUM CURRENT	50	1.0	1250	800	1.5	5	1250	10	35	—

PHOTOTRANSISTORS, GERMANIUM

SPECIAL PRODUCT

TYPE	MAXIMUM RATINGS		TYPICAL CHARACTERISTICS					OUTLINE	
	V_{CE} (VOLTS)	I_C (mA)	LIGHT CURRENT (75f_c) (μA)	DARK CURRENT (μA)	@ @ V_{CE} (VOLTS)	PEAK SPECTRAL RESPONSE (μm)	FREQUENCY CUT-OFF (kHz)	DWG. NO.	JEDEC NO.
OCP71	25	−20	1500 to 4000	−300	−4.5	1.43	3	17	—

© United Technical Publications

DELCO RADIO

DEVICE TYPES — RATINGS
SEPTEMBER, 1970

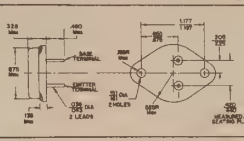
POWER SEMICONDUCTORS

SILICON NPN HIGH ENERGY POWER TRANSISTORS

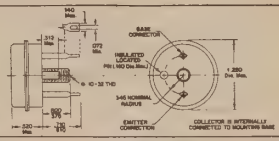
High voltage ratings — V_{CEX} up to 1400V — permit circuit simplification. Highly reliable for video deflection, converters, regulators, power amplifiers.



TO-3



TO-37



Type	I_C Max. Amps	$V_{CEO}(sus)$ @ I_C Volts @ mA		V_{CEO} @ I_{CEO} Volts @ mA		V_{CEX} @ I_C Volts @ mA @ 125°C		h_{FE} @ I_C Amps		V_{EBO} @ I_{EBO} Volts @ mA		$V_{CE}(sat)$ @ I_C Volts @ Amps		V_{BE} Volts	f_T MHz Min.	Thermal Resistance deg. C/W
0.5 TO 15 AMPERE TO-3 HIGH VOLTAGE																
DTS103	15	60	100	60	0.25	80[1]	0.5	20/55	5.0	5.0	5.0	1.8	10	1.6	4	0.75
DTS104	15	60	100	60	0.25	80[1]	0.5	50/120	5.0	5.0	5.0	1.5	10	1.4	4	0.75
DTS105	15	75	100	80	0.25	100[1]	0.5	20/55	5.0	5.0	5.0	1.8	10	1.6	4	0.75
DTS106	15	80	100	90	0.25	110[1]	0.5	20/55	5.0	5.0	5.0	1.8	10	1.6	4	0.75
DTS107	15	85	100	100	0.25	120[1]	0.5	20/55	5.0	5.0	5.0	1.8	10	1.6	4	0.75
DTS108	15	85	250	100	0.25	180[1]	0.5	20/55	5.0	5.0	5.0	1.8	10	1.6	4	0.75
DTS401	2.0	300	100	400	0.5	400	0.5	20/100	0.5	5.0	5.0	0.8	0.5	1.5	—	1.0
DTS402	3.5	325	100	400	0.5	700[1]	0.5	—	—	5.0	5.0	2.0	3.0	1.5	1.9[2]	0.75
DTS410	3.5	200	100	200	0.25	200	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
DTS411	3.5	300	100	300	0.25	300	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
DTS413	2.0	325	100	400	0.25	400	0.5	20/80	0.5	5.0	5.0	0.8	0.5	1.5	4.0[3]	1.0
DTS423	3.5	325	100	400	0.25	400	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
DTS423M	3.5	325	100	400	0.25	400	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	3.0[4]	0.75
DTS424	3.5	350	100	500	0.25	700[1]	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
DTS425	3.5	400	100	500	0.25	700[1]	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
DTS430	5	300	100	400	2.5	400	5.0	15/45	2.5	5.0	2.0	0.9	2.5	1.5	4.0[3]	0.7
DTS431	5	325	100	400	2.5	400	5.0	15/35	2.5	5.0	2.0	0.7	2.5	1.5	4.0[3]	0.7
DTS431M	5	325	100	400	2.5	400	5.0	15/35	2.5	5.0	2.0	0.7	2.5	1.5	4.0[3]	0.7
DTS701	0.5	600	250	800	0.5	—	—	20/	0.15	5.0	5.0	—	—	—	1.5	1.5
DTS702	3	750	1000	1000	0.5	1200[1]	0.5	2.5/	2.0	5.0	5.0	—	—	—	1.5	1.5
DTS704	3	800	1000	1000	0.5	1400[1]	0.5	2.5/	2.0	5.0	5.0	—	—	—	1.5	1.5
DTS721	3	800	1000	1000	0.25	1000[1]	0.25	20/60	.15	5.0	5.0	—	—	—	1.5	1.5
DTS723	3	750	1000	1000	0.25	1200[1]	0.5	10/	0.5	5.0	5.0	0.8	1.0		1.5	1.5
DTS801	2	700	250	800	0.5	—	—	20/	0.2	5.0	5.0	—	—	—	1.5	1.0
DTS802	5	750	1000	1000	0.5	1200[1]	0.5	2.2/	3.5	5.0	5.0	—	—	—	1.5	1.0
DTS804	5	800	1000	1000	0.5	1400[1]	0.5	2.2/	3.5	5.0	5.0	—	—	—	1.5	1.0
2N3902	3.5	325	100	400	0.25	700[1]	2.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
JAN2N3902	3.5	325	100	400	0.25	700[1]	2.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	2.8	0.75
2N5157	3.5	400	100	500	0.25	700[1]	0.5	30/90	1.0	5.0	5.0	0.8	1.0	1.5	4.0[3]	0.75
2N5241	5.0	325	100	400	2.5	400	5.0	15/35	2.5	5.0	2.0	0.7	2.5	1.5	4.0[3]	0.75
2N5970	15	60	100	60	0.25	80	0.5	20/60	5.0	5.0	5.0	2.0	10	1.4	4	1.17
2N5971	15	60	100	60	0.25	80	0.5	50/150	5.0	6.0	5.0	1.5	10	1.2	4	1.17
2N5972	15	70	100	80	0.25	100	0.5	25/75	5.0	6.0	5.0	1.8	10	1.4	4	1.17
2N5973	15	80	100	100	0.25	120	0.5	25/75	5.0	6.0	5.0	1.8	10	1.4	4	1.17

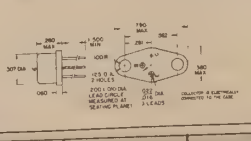
Type	I_C Max. Amps	$V_{CEO}(sus)$ @ I_C Volts @ mA		V_{CEO} @ I_{CEO} Volts @ mA		h_{FE} @ I_C Amps Min./Max.			V_{EBO} @ I_{EBO} Volts @ mA		$V_{CE}(sat)$ @ I_C Volts @ Amps		V_{BE} (sat) Volts	f_T MHz Min.	Thermal Resistance deg. C/W (max.)
10 AMPERE TO-36 HIGH VOLTAGE															
2N2580	10	325	100	400	5	10/40 4 min.	5 10		5.0	50	0.7	5.0	1.5	2	0.7
2N2580M	10	325	100	400	5	10/40 4 min.	5 10		5.0	50	0.7	5.0	1.5	2	0.7
2N2581	10	325	100	400	5	25/65 10 min.	5 10		5.0	50	0.7	5.0	1.7	2	0.7
2N2582	10	325	100	400	5	10/40 4 min.	5 10		5.0	50	0.7	5.0	1.5	2	0.7
2N2583	10	325	100	500	5	25/65 10 min.	5 10		5.0	50	1.0	10.0	1.7	2	0.7
2N3079	10	200	100	200	5	10/50	5		5.0	50	0.7	5.0	1.5	2	0.7
2N3080	10	300	100	300	5	10/50	5		5.0	50	0.7	5.0	1.5	2	0.7

GERMANIUM PNP NU-BASE POWER TRANSISTORS

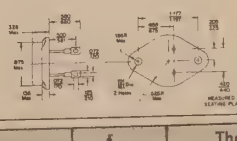
Diffused base devices with excellent energy and frequency capabilities. Stabilized and SPAC protected. Safety assured by sustaining voltage tests.



TO-37



TO-41



Type	I_C Max. Amps	$V_{CEO}(sus)$ @ I_C Volts @ A		V_{CBO} @ I_{CBO} Volts @ mA		h_{FE} @ I_C Amps		V_{EBO} @ I_{EBO} Volts @ mA		$V_{CE}(sat)$ @ I_C Volts @ Amps		V_{BE} Volts	f_T kHz Typical	Thermal Resistance deg. C/W (max.)
5 AMPERE TO-37 MEDIUM POWER NU-BASE														
2N3212	5	80[10]	.02	100[1]	1.0	30/90	3.0	2	7	0.5	5.0	1.0	600	7.0
2N3213	5	60[10]	.02	80[1]	1.0	30/90	3.0	2	7	0.5	5.0	1.0	600	7.0
2N3214	5	40[10]	.02	60[1]	1.0	30/90	3.0	2	7	0.5	5.0	1.0	600	7.0
2N3215	5	30[10]	.02	40[1]	1.0	25/100	3.0	2	7	0.5	5.0	1.0	600	7.0

(continued on next page)

[1] V_{CEX} @ 25°C [2] t_F in μ seconds [3] f_T typical in MHz [4] AC gain @ 1 MHz [8] V_{CER} [10] V_{CEO}

© United Technical Publications

DELCO RADIO GM MARK OF EXCELLENCE POWER SEMICONDUCTORS

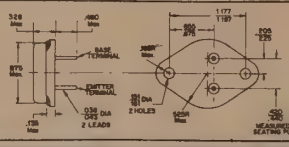
GERMANIUM PNP NU-BASE POWER TRANSISTORS (continued)

Type	I_C Max. Amps	V_{CEO}(sus) @ I_C Volts @ A	V_{CEX} @ I_C Volts @ mA	h_{FE} @ I_C Amps	V_{EBO} @ I_{EBO} Volts @ mA	V_{CE}(sat) @ I_C Volts @ Amps	V_{BE} Volts	f_T kHz Typical	Thermal Resistance deg. C/W (max.)
15 • 25 AMPERE TO-3 HIGH POWER H.K. NU-BASE									
DTG110A	25	70[10] 5	110[1] 20	50/300 1.0	2.8 100	0.5 5.0	.43	850	1.0
DTG110B	25	40 5	90[1] 20	65/300 1.0	2.0 100	0.5 5.0	.33	850	0.8
DTG600	25	50 5	75 20	50/ 5.0	1.0 100	0.75 25.0	1.4	850	1.0
DTG601	25	60 5	75 20	50/ 5.0	1.0 100	0.75 25.0	1.4	850	1.0
DTG602	25	70 5	90 20	50/ 5.0	1.0 100	0.75 25.0	1.4	850	1.0
DTG603	25	80 5	90 20	50/ 5.0	1.0 100	0.75 25.0	1.4	850	1.0
DTG603M	15	80 5	90 20	50/250 5.0	1.4 100	0.75 25.0	1.4	850	1.0
DTG1010	15	110 5	325 10	— —	1.0 200	0.5 12	1.0	250	0.8
DTG1110	15	80 8	200 15	— —	1.0 100	0.5 10	1.0	450	0.8
DTG1200	15	120 8	10	22.5/ 8.0	1.0 200	0.5 12.0	1.0	350	0.8
DTG2000	25	30 8	60 10	25/ 8.0	1.0 200	0.9 25.0	1.0	350	0.8
DTG2100	25	60 8	80 10	25/ 8.0	1.0 200	0.9 25.0	1.0	350	0.8
DTG2200	25	80 8	100 10	25/ 8.0	1.0 200	0.9 25.0	1.0	350	0.8
DTG2300	25	100 8	120 10	25/ 8.0	1.0 200	0.9 25.0	1.0	350	0.8
DTG2400	25	120 8	140 10	25/ 8.0	1.0 200	0.9 25.0	1.0	350	0.8
DTG2400M	25	120 10	140 10	25/125 10.0	1.5 500	0.9 25.0	1.0	350	1.0
2N5155	25	120 8	140 10	25/100 8.0	1.5 500	0.9 25.0	1.0	350	0.8
10 AMPERE TO-41 HIGH POWER H.K. NU-BASE									
2N1073	10	40[8] .05	40 10	20/60 5.0	.75 50	0.6 5.0	1.0	350	0.8
2N1073A	10	80[8] .05	80 10	20/60 5.0	.75 50	0.6 5.0	1.0	350	0.8
2N1073B	10	120[8] .05	120 10	20/60 5.0	.75 50	0.6 5.0	1.0	350	0.8

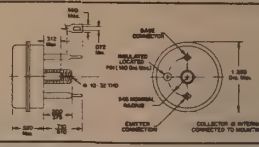
GERMANIUM PNP ALLOY BASE TRANSISTORS

Used by the millions because of their low cost, high thermal capacity and high peak power capacity. Conservatively rated for high reliability.





TO-3



TO-36

Type	I_C Max. Amps	V_{CEO} @ I_C Volts @ Amps	V_{CBO} @ I_{CBO} Volts @ mA	h_{FE} @ I_C Amps	V_{EBO} @ I_{EBO} Volts @ mA	V_{CE}(sat) @ I_C Volts @ Amps	V_{BE} Volts	f_{hfe} kHz	Thermal Resistance deg. C/W (max.)
3 • 10 AMPERE TO-3 MEDIUM POWER AND HIGH POWER									
DTG110	7	40[2] .600	40 2	74/250 1.0	20 8	0.5 2.0	0.5	320[9]	0.8
2N255A	5	15[2] .220	15 5	25[3] .450	15 5	— —	—	—	0.8
2N301	3	32 .300	40 5	62.5 .700	10 2	— —	—	5[4]	0.8
2N301A	3	32 .300	60 5	62.5 .700	10 2	1.0 —	—	5[4]	0.8
2N379	7	40 .100[6]	80[8] 8	20/90 2.0	20 8	1.0 2.0	1.3	3	0.8
2N380	7	30 .100[6]	60[8] 8	20/90 2.0	20 8	1.0 2.0	1.3	3	0.8
2N392	5	45 .300	60 8	60/150 3.0	40 8	0.5 3.0	.7[4]	6	0.8
2N456A	7	20 .200	40 2	30/90 5.0	20 2	0.5 5.0	1.5	10[4]	0.8
2N456B	7	30 .500	40 2	30/90 5.0	30 2	0.5 5.0	1.5	200[9]	0.8
2N457A	7	30 .200	60 2	30/90 5.0	20 2	0.5 5.0	1.5	10[4]	0.8
2N457B	7	40 .500	60 2	30/90 5.0	30 2	0.5 5.0	1.5	200[9]	0.8
2N458A	7	40 .200	80 2	30/90 5.0	20 2	0.5 5.0	1.5	10[4]	0.8
2N458B	7	45 .500	80 2	30/90 5.0	30 2	0.5 5.0	1.5	200[9]	0.8
2N554	5	30 .300	15 10	30 1.0	20 8	— —	—	—	0.8
2N669	3	30[1] .300	30[7] 20[7]	250‡ .500	10 2	0.4[4] 3.0	—	3	0.8
2N1011	5	40 .300	80 15	30/75 3.0	40 3	1.5 3.0	1.0	5	0.8
2N1021	7	50 .200	100 2	30/90 5.0	20 2	0.5 5.0	1.5	10[4]	0.8
2N1021A	7	50 .500	100 2	30/90 5.0	30 2	0.5 5.0	1.5	200[9]	0.8
2N1022	7	50 .200	120 2	30/90 5.0	20 2	0.5 5.0	1.5	10[4]	0.8
2N1022A	7	55 .500	120 2	30/90 5.0	30 2	0.5 5.0	1.5	200[9]	0.8
2N1159	5	60 1.0	80 8	30/75 3.0	20 8	1.0 3.0	1.5	10[4]	0.8
2N1160	7	60 1.0	80 8	20/50 5.0	20 8	1.0 5.0	1.5	10[4]	0.8
2N1168	5	30 .300	50 8	60[4] 3.0	20 8	.25[4] 3.0	0.7[4]	10[4]	0.8
2N1534	5	20 .500	40 20	35/70 3.0	12 0.5	1.2 3.0	1.5	8.5[4]	0.8
2N1535	5	30 .500	60 20	35/70 3.0	12 0.5	1.2 3.0	1.5	8.5[4]	0.8
2N1536	5	40 .500	80 20	35/75 3.0	12 0.5	1.2 3.0	1.5	8.5[4]	0.8
2N1539	5	20 .500	25 2	50/100 3.0	12 .500	0.3 .300	1.0	2	0.8
2N1540	5	30 .500	40 2	50/100 3.0	12 .500	0.3 .300	1.0	2	0.8
2N1542	5	50 .500	65 2	50/100 3.0	12 .500	0.3 .300	1.0	2	0.8
2N1544	5	20 .500	25 2	75/150 3.0	12 .500	0.2 .300	0.6	2	0.8
2N1546	5	40 .500	55 2	75/150 3.0	12 .500	0.2 .300	0.6	2	0.8
2N5156	10	60[10] 10	100 4	25/60 5.0	60 4	1.0 10.0	0.8	320[9]	0.8
15 AMPERE TO-36 HIGH POWER (SPAC)									
2N173	15	45 1.0	60 4	35/70 5.0	40 4	1.0 12.0	0.9	10[4]	0.5
2N174	15	55 1.0	80 4	25/50 5.0	60 4	0.9 12.0	0.9	10[4]	0.5
2N174A	15	40 0.3	80 8	40/80 1.2	60 8	0.7 12.0	0.9	100[5]	0.5
JAN2N174A	15	40 0.3	80 8	40/80 1.2	60 8	0.7 12.0	0.9	100[5]	0.5

[1] V_{CES} [2] V_{CER} [3] Power Gain db [4] Typical [6] I_{CEO} [7] 90°C – R_{EB} = 100 ohm [8] V_{CBX} [9] f_T Typical [10] V_{CEO} ‡ Max. Value

© United Technical Publications

DELCO RADIO GM MARK OF EXCELLENCE POWER SEMICONDUCTORS

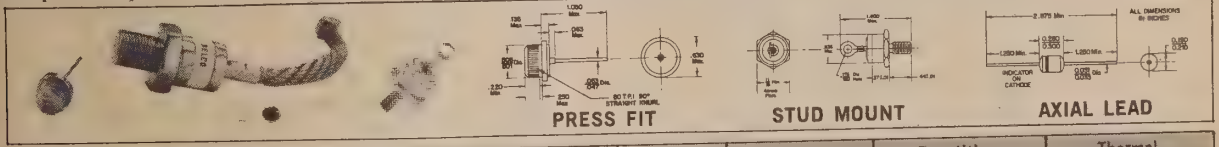
GERMANIUM PNP ALLOY BASE TRANSISTORS (continued)

Type	I_C Max. Amps	V_{CEO} @ I_C Volts @ Amps	V_{CBO} @ I_{CBO} Volts @ mA	h_{FE} @ I_C Amps	V_{EBO} @ I_{EBO} Volts @ mA	V_{CE}(sat) @ I_C Volts @ Amps	V_{BE} Volts	f_{hfe} kHz	Thermal Resistance deg. C/W (max.)
15 AMPERE TO-36 HIGH POWER (SPAC) (continued)									
2N277	15	25 1.0	40 8	35/70 5.0	20 8	0.3[4] 12.0	.65[4]	10[4]	0.5
2N278	15	30 1.0	50 4	35/70 5.0	30 4	1.0 12.0	.65[4]	10[4]	0.5
2N441	15	25 1.0	40 8	20/40 5.0	20 8	0.3[4] 12.0	.65[4]	10[4]	0.5
2N442	15	30 1.0	50 4	20/40 5.0	30 4	0.3[4] 12.0	.65[4]	10[4]	0.5
2N443	15	45 1.0	60 4	20/40 5.0	40 4	1.0 12.0	0.9	10[4]	0.5
2N1099	15	55 1.0	80 4	35/70 5.0	40 4	0.7 12.0	0.9	10[4]	0.5
2N1100	15	65 1.0	100 4	25/50 5.0	80 4	0.7 12.0	0.9	10[4]	0.5
2N1358	15	40 0.3	80 4	40/80 1.2	60 4	0.7 12.0	0.9	100[5]	0.5
2N1358A	15	60 1.0	100 4	25/50 5.0	60 4	0.7 12.0	0.9	5	0.5
JAN2N1358	15	40 0.3	80 4	25/50 5.0	40 4	0.7 12.0	0.9	5	0.5
2N1412	15	65 1.0	100 4	25/50 5.0	60 4	0.7 12.0	0.8	10[4]	0.5
JAN2N1412	15	60 1.0	100 4	25/50 5.0	60 4	0.7 12.0	0.9	5	0.5
JAN2N1412A	15	70 1.0	100 4	25/50 5.0	60 4	— 12.0	0.8	5	0.5
2N1970	15	50 1.0	100 4	17/40 5.0	40 4	1.0 12.0	0.9	10[4]	0.5
2N2075	15	65 1.0	80 4	20/40 5.0	40 4	0.7 12.0	0.9	5	0.5
2N2076	15	55 1.0	70 4	20/40 5.0	35 4	0.7 12.0	0.9	5	0.5
2N2077	15	45 1.0	50 4	20/40 5.0	25 4	0.9 12.0	0.9	5	0.5
2N2078	15	25 1.0	40 4	20/40 5.0	20 4	0.9 12.0	0.9	5	0.5
2N2079	15	65 1.0	80 4	35/70 5.0	40 4	0.7 12.0	0.9	5	0.5
2N2080	15	55 1.0	70 4	35/70 5.0	35 4	0.7 12.0	0.9	5	0.5
2N2081	15	45 1.0	50 4	35/70 5.0	25 4	0.9 12.0	0.9	5	0.5
2N2082	15	25 1.0	40 4	35/70 5.0	20 4	0.9 12.0	0.9	5	0.5
JAN2N2210	USE JAN2N1412A								
2N2490	15	50 1.0	70 3	20/40 5.0	40 3	0.7 12.0	1.5	5	0.5
2N2491	15	40 1.0	60 3	35/70 5.0	30 3	0.7 12.0	1.5	5	0.5
2N2492	15	65 1.0	80 2	25/50 5.0	60 3	0.5 12.0	1.5	5	0.5
2N2493	15	75 1.0	100 3	25/50 5.0	80 3	0.5 12.0	1.5	5	0.5
25 • 35 • 50 AMPERE TO-36 HIGH POWER (SPAC)									
2N1518	25	40 1.0	50 4	15/60 15	30 8	0.7 25	1.5	4[4]	0.5
2N1519	25	60 1.0	80 4	15/60 15	30 8	0.7 25	1.5	4[4]	0.5
2N1520	35	40 1.0	50 4	17/68 15	30 8	0.6 35	1.5	4[4]	0.5
2N1521	35	60 1.0	80 4	17/68 15	30 8	0.6 35	1.5	4[4]	0.5
2N1522	50	40 1.0	50 4	25/100 15	30 8	0.5 50	1.5	4[4]	0.5
2N1523	50	60 1.0	80 4	25/100 15	30 8	0.5 50	1.5	4[4]	0.5

[4] Typical [5] f_{hfb}

SILICON RECTIFIERS AND ZENER DIODES

Rugged axial lead units for general purpose and TV. Stud mounts and press fits proved in vigorous automotive and locomotive applications. New zeners.



Type	Maximum Forward Current I_F(AV)	Peak Reverse Voltage	Peak Reverse Time t_{rr}	Forward Recovery Voltage V_{fr}	Reverse Current I_R(AV)	Forward Voltage Drop V_{FM}	Repetitive Peak Forward Current	Thermal Resistance deg. C/W (Max.)
1.5 AMPERE AXIAL LEAD								
DRS102	1.5A[12]	200V	—	—	10μA[13]	0.9V[14]	10A	50
DRS104	1.5A[12]	400V	—	—	10μA[13]	0.9V[14]	10A	50
DRS106	1.5A[12]	600V	—	—	10μA[13]	0.9V[14]	10A	50
DRS108	1.5A[12]	800V	—	—	10μA[13]	0.9V[14]	10A	50
DRS110	1.5A[12]	1000V	—	—	10μA[13]	0.9V[14]	10A	50
DRS112	1.5A[12]	1200V	—	—	10μA[13]	0.9V[14]	10A	50
DRS114	1.5A[12]	1400V	—	—	10μA[13]	0.9V[14]	10A	50
DRS114C	1.5A[12]	1400V	15μs	30V	10μA[13]	0.9V[14]	10A	50
DRS114D	1.5A[12]	1400V	20μs	20V	10μA[13]	0.9V[14]		
15 AMPERE STUD MOUNT[20]								
1N3208	15A[15]	50V	—	—	10mA[16]	1.5V	70A	2.0
1N3209	15A[15]	100V	—	—	10mA[16]	1.5V	70A	2.0
1N3210	15A[15]	200V	—	—	10mA[16]	1.5V	70A	2.0
25 AMPERE PRESS FIT[20]								
1N3491	25A[18]	50V	—	—	10mA[16]	0.7V[17]	110A	1.0
1N3492	25A[18]	100V	—	—	10mA[16]	0.7V[17]	110A	1.0
1N3493	25A[18]	200V	—	—	8mA[16]	0.7V[17]	110A	1.0
160 AMPERE STUD BASE[20]		Peak Transient Reverse Voltage						
DRS163	160A	300V	400V		15mA	1.45V	2500A[19]	0.24
DRS164	160A	400V	525V		15mA	1.45V	2500A[19]	0.24
DRS165	160A	500V	650V		15mA	1.45V	2500A[19]	0.24
DRS166	160A	600V	800V		12mA	1.45V	2500A[19]	0.24
DRS167	160A	700V	925V		12mA	1.45V	2500A[19]	0.24
DRS168	160A	800V	1050V		10mA	1.45V	2500A[19]	0.24
DRS169	160A	900V	1200V		10mA	1.45V	2500A[19]	0.24

[12] @ 50°C Case [13] @ 25°C rated P.R.V. [14] @ 100°C 0.5 amp [15] @ 150°C Case [16] Full load, Full cycle @ 150°C case [17] Maximum drop @ 15A Full cycle average @ 25°C [18] 100°C Case [19] ½ Cycle non-repetitive [20] Add R to type number for reverse polarity

(continued on next page)

© United Technical Publications

DELCO RADIO GM MARK OF EXCELLENCE POWER SEMICONDUCTORS

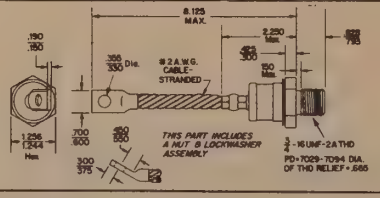
SILICON RECTIFIERS AND ZENER DIODES (continued)

Type	Maximum Forward Current I_F(AV)	Peak Reverse Voltage	Peak Transient Reverse Voltage	Reverse Current I_R(AV)	Forward Voltage Drop V_{FM}	Repetitive Peak Forward Current	Thermal Resistance deg. C/W (Max.)
200 AMPERE STUD BASE[20]							
DRS203	200A	300V	400V	15mA	1.4V	3500A[19]	0.25
DRS204	200A	400V	425V	15mA	1.4V	3500A[19]	0.25
DRS205	200A	500V	650V	15mA	1.4V	3500A[19]	0.25
DRS206	200A	600V	800V	12mA	1.4V	3500A[19]	0.25
DRS207	200A	700V	925V	12mA	1.4V	3500A[19]	0.25
DRS208	200A	800V	1050V	10mA	1.4V	3500A[19]	0.25
DRS209	200A	900V	1200V	10mA	1.4V	3500A[19]	0.25
250 AMPERE STUD BASE[20]							
DRS243	250A	300V	400V	15mA	1.4V	4500A[19]	0.24
DRS244	250A	400V	525V	15mA	1.4V	4500A[19]	0.24
DRS245	250A	500V	560V	15mA	1.4V	4500A[19]	0.24
DRS246	250A	600V	800V	12mA	1.4V	4500A[19]	0.24
DRS247	250A	700V	925V	12mA	1.4V	4500A[19]	0.24
DRS248	250A	800V	1050V	10mA	1.4V	4500A[19]	0.24
DRS249	250A	900V	1200V	10mA	1.4V	4500A[19]	0.24
DRS250	250A	800V	1050V	10mA	1.55V	4500A[19]	0.22
DRS251	250A	1000V	1300V	10mA	1.55V	4500A[19]	0.22
DRS252	250A	1200A	1600V	10mA	1.55V	4500A[19]	0.22
DRS253	250A	1400V	2000V	10mA	1.55V	4500A[19]	0.22
DRS254	250A	1600V	2400V	10mA	1.55V	4500A[19]	0.22

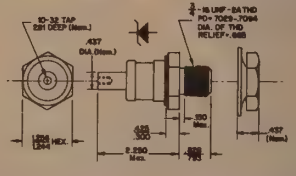
30kw POWER ZENERS — DO-9 CASE

Type	Min. Zener Voltage V_Z @ 0.25 Adc	Max. Zener Voltage Pulse Width = 1ms	Maximum Clamping Factor	Maximum Reverse Current I_R (mA)
DPZ30-30R	30	43Vdc @ 700A	1.4	5.0
DPZ30-33R	33	47Vdc @ 640A	1.4	5.0
DPZ30-36R	36	52Vdc @ 580A	1.4	5.0
DPZ30-39R	39	56Vdc @ 535A	1.4	5.0
DPZ30-43R	43	62Vdc @ 485A	1.4	5.0
DPZ30-45R	45	65Vdc @ 460A	1.4	5.0
DPZ30-47R	47	68Vdc @ 440A	1.4	5.0
DPZ30-50R	50	72Vdc @ 420A	1.4	5.0

[19] ½ Cycle non-repetitive [20] Add R to type number for reverse polarity



STUD BASE



HEAT SINKS AND ACCESSORIES

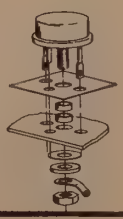
Part No.	Outline Description	†Thermal Resistance	Max. Width	Max. Depth	Max. Length
7270725 A	Single Punch, Univ. Mount	2.3°C/watt	3.125″	1.370″	4.690″
7281352 A	Double Punch, Univ. Mount	2.3°C/watt	3.125″	1.370″	4.690″
7270606 A	Unpunch, Unpainted	2.3°C/watt	3.125″	1.370″	4.690″
7300811 A	Double Punched for 2 Press Fit Rectifiers	2.3°C/watt	3.125″	1.370″	4.690″
7281361 B	Double Punch, Univ. Mount	1.6°C/watt	3.125″	1.080″	6.135″
7281364 B	Unpunch, Unpainted	1.6°C/watt	3.125″	1.080″	6.135″
7281357 C	Double Punch, Univ. Mount	5.0°C/watt	1.625″	1.330″	2.930″
7281360 C	Unpunched, Unpainted	5.0°C/watt	1.625″	1.330″	2.930″

Part No.	Outline Description	†Thermal Resistance	Max. Width	Max. Depth	Max. Length
7281351 D	Double Punch, Univ. Mount	2.2°C/watt	3.125″	.750″	6.775″
7281354 D	Unpunched, Unpainted	2.2°C/watt	3.125″	.750″	6.775″
7281355 E	Double Punch, Univ. Mount	2.2°C/watt	3.125″	1.330″	4.850″
7281353 E	Unpunched, Unpainted	2.2°C/watt	3.125″	1.330″	4.850″
7276040 E	Punched for Round Base Only	3.5°C/watt	1.531″	1.330″	4.850″
7277151 E	Punched for Diamond Base Only	3.5°C/watt	1.531″	1.330″	4.850″
7278482 E	Unpunched, Unpainted	3.5°C/watt	1.531″	1.330″	4.850″
7281366 F	Double Punch, Univ. Mount	1.3°C/watt	3.125″	2.500″	4.850″
7281369 F	Unpunched, Unpainted	1.3°C/watt	3.125″	2.500″	4.850″



MOUNTING KITS

Part No.	Description
7269634	Insulating Spacer (for Heat Sink)
7276396	DO-5 (Rectifier) Mtg. Kit
7274775	TO-3 (Diamond Base) Basic Mtg. Kit
7305210	TO-3 Mtg. Kit for High Voltage Silicon
7274633	TO-36 (Round Base) Mtg. Kit
7276383	TO-37 (Miniature Diamond Base) Mtg. Kit
7305209	TO-41 (Large Lead) Mtg. Kit for 2N1073



© United Technical Publications

SERVICE-DESIGNED ENTERTAINMENT SEMICONDUCTORS

UNIVERSAL REPLACEMENT TRANSISTORS

Highly dependable low-cost germanium and silicon transistors especially designed as general replacements for most types of transistors used in Radio and TV Sets and other home entertainment devices.

Cat. No.	Unit Type	Application(s)	Config-uration	Use	Max. Current	Max. Wattage	Max. Coll/Emit. Volts	Sugg. List Price
GE-1	Germanium	Mixer/Oscillator Converter, RF & IF Amplifiers (AM Radio)	TO-5	PNP	100MA	150MW	12V	$2.00
GE-2	Germanium	AF Amplifier	TO-5	PNP	200MA	200MW	20V	1.70
GE-3	Germanium	AF Power Amplifier	TO-3	PNP	3A	25W	50V	2.95
GE-4	Germanium	AF High Power Amplifier	TO-36	PNP	12A	50W	50V	4.90
GE-5	Germanium	Mixer/Oscillator Converter, RF & IF Amplifiers (AM Radio)	TO-5	NPN	100MA	150MW	12V	2.80
GE-6	Germanium	Mixer/Oscillator Converter, RF Amplifier (AM Radio)	OV-5	NPN	20MA	65MW	15V	3.05
GE-7	Germanium	IF Amplifier (AM Radio)	OV-5	NPN	20MA	65MW	15V	2.95
GE-8	Germanium	AF Amplifier	TO-5	NPN	200MA	150MW	20V	2.15
GE-9	Germanium	Mixer/Oscillator Converter, RF & IF Amplifiers (AM-FM Radio)	TO-72	PNP	10MA	70MW	20V	2.10
GE-10	Silicon	Mixer/Oscillator Converter, RF & IF Amplifiers (AM Radio), AF Amplifier	RO-67	NPN	100MA	200MW	25V	2.00
GE-11	Silicon	Mixer/Oscillator Converter, RF & IF Amplifiers (FM-Radio), VHF Tuner, UHF Oscillator	RO-67	NPN	25MA	200MW	30V	2.55
GE-12	Silicon	AF Power Amplifier (Line Operated Units)	TO-66	NPN	300MA	10W	300V	3.90
GE-13MP	Germanium	AF Power Amplifier. Matched Pairs of GE-3	TO-3	PNP	3A	25W	50V	5.90
GE-14	Silicon	AF Power Amplifier	TO-3	NPN	15A	115W	100V	5.85
GE-15MP	Silicon	AF Power Amplifier. Matched Pairs of GE-14	TO-3	NPN	15A	115W	100V	11.70
GE-16	Germanium	AF High Power Amplifier	TO-3	PNP	10A	90W	60V	5.25
GE-17	Silicon	FM, RF, & Oscillator, TV and Other Low-Noise Circuits 50-100 mHz	RO-97A	NPN	100MA	500MW	30V	2.40
GE-18	Silicon	AF Amplifier, Output, or Oscillator	TO-5	NPN	500MA	800MW	80V	2.40
GE-19	Silicon	AF Amplifier, Output Oscillator — High Current	TO-3	NPN	4A	90W	50V	5.10
GE-20	Silicon	RF & IF Amplifiers, Oscillator, Audio, and Applications to 50 mHz	TO-18	NPN	500MA	500MW	25V	1.85
GE-21	Silicon	RF & IF Amplifiers, Oscillator, Audio, and Applications to 50 mHz	TO-5	PNP	500MA	500MW	25V	1.90
GE-22	Silicon	RF & IF Amplifier, Oscillator (AM-FM) to 100 mHz	RO-110	PNP	500MA	500MW	25V	1.70
GE-23	Silicon	Class A & B AF Power Amplifiers, Communications, Hi-Fi	TO-66	NPN	2A	15W	40V	4.20
GE-24MP	Silicon	Class A & B AF Power Amplifiers, etc. Matched Pairs of GE-23	TO-66	NPN	2A	15W	40V	8.40
GE-25	Germanium	Horizontal & Vertical TV Sweep Circuits and Other High Voltage, High Current Use	TO-3	PNP	10A	50W	325V	12.50
GE-26	Silicon	AF Power Amplifier	TO-66	PNP	2A	20W	50V	5.20
GE-27	Silicon	Color/BW Video Output Amplifier, High Voltage	Plastic Pak	NPN	100MA	6W(25°TC) 1W(25°TA)	300V	3.65
GE-28	Silicon	AF Power Amplifier	Plastic Pak	NPN	3A	12W(25°TC) 2W(25°TA)	60V(CES) 45V(CED)	3.60
GE-29	Silicon	AF Power Amplifier	Plastic Pak	PNP	3A	12W(25°TC) 2W(25°TA)	60V(CES) 45V(CED)	4.00
GE-30	Germanium	Audio Power Output	TO-66	PNP	3A	6W	60V	4.20
GE-31MP	Germanium	Audio Power Output, Matched Pairs of GE-30	TO-66	PNP	3A	6W	60V	8.40
GE-FET-1	Silicon	N Channel Field Effect Transistor for Small Signal Use	TO-92	(10MA Gate Current, 200MW)			25V	3.75

REGISTERED JEDEC TRANSISTORS

These supplement the Universal Line above. Characteristics conform to JEDEC specifications.

Type or JEDEC No.	Use	Appli-cation	Sugg. List Price	Type or JEDEC No.	Use	Appli-cation	Sugg. List Price
2N107	PNP	AF	$1.25	2N324	PNP	AF	$1.20
2N170	NPN	IF	1.70	2N404	PNP	SW	0.90
2N188A	PNP	AF OUT	3.05	2N508	PNP	AF OUT	1.30
2N190	PNP	AF	1.40	2N2160	*	OSC	2.75

* Silicon Unijunction

GE GE-504A AND GE-509 UNIVERSAL RECTIFIERS

A silicon rectifier with a 100-amp surge rating. Recommended as a replacement for all selenium, germanium and silicon rectifiers used in TV receivers. The 100-amp surge rating eliminates the need for the surge limiting resistors normally required when silicon rectifiers are used.

Type	PIV	I_{DC}	Sugg. List Price	Type	PIV	I_{DC}	Sugg. List Price
GE-504A	600V	1A	$1.10	GE-509	1000V	1A	$1.25

GE TYPE IN91 GERMANIUM RECTIFIER

This top hat, hermetically sealed rectifier is designed for general-purpose applications.

PIV is 100 volts; maximum I_{DC} is 150 mA. Suggested List Price $1.55.

GE BR-600 SILICON RECTIFIER

This rectifier utilizes GE-504A type units connected in full-wave bridge configuration; the total bridge is encapsulated in plastic.

PRV is 600 volts; maximum I_{DC} is 1.5 amp. Suggested List Price $5.10.

GE VAC-U-SEL® DOUBLE/DIODES

Miniature double diodes for TV horizontal phase detector, replacement and other applications. 7/16 x 9/16 x 3/16".

Type No.	Ifwd	Imr	Description	Max Case Temp.	Sugg. List Price
6GC1	1.1 @ 2.5V	4 @ 20V	Common cathode	85°C	$0.90
6GD1	1.1 @ 2.5V	4 @ 20V	Series connected	85°C	.90
6GX1	1.1 @ 2.5V	4 @ 20V	Common anode	85°C	.90

GE CRYSTAL DIODES

Type	Description	Average Forward Current (ma)	Peak Reverse Voltage (volts)	Sugg. List price
1N34AS	General Purpose	50	75	$0.55
1N60	Video Detector	50	30	.55
1N82A	Silicon UHF Mixer	—	5	1.45
1N295	50 MC Detector	30	50	.55

RECTIFIERS AND CRYSTALS FOR COLOR TV

GE Selenium Rectifiers

Cat. No.	Type	Sugg. List Price
GECR-1	Focus Rect.	$3.75
GECR-2	Boosted Boost	1.65
GECR-3	Convergence	1.43

GE Quartz Crystals‡

Cat. No.	Type	Sugg. List Price
GE-41	Color burst filter	$5.60
GE-42	Color subcarrier oscillators	3.80

‡ Resonant frequency 3579.545 kc

SILICON ZENER DIODES — CASE SIZE 59

GE Type	Power Dissipation @ 25°C (Watts)	Breakdown Voltage V_Z @ I_{ZT} (Volts)	Test Current I_{ZT} (MA)	Zener Impedance Z_Z @ I_{ZT} (OHMS)	DC Zener Current I_{ZM} (MA)	Sugg. User Price
GE ZD-10-4	400 MW	10	20	17	20	$ .90
GE ZD-3.6	1 Watt	3.6	69	10	253	1.20
GE ZD-5.1	1 Watt	5.1	49	7	178	1.20
GE ZD-5.6	1 Watt	5.6	45	5	162	1.20
GE ZD-6.2	1 Watt	6.2	41	2	146	1.20
GE ZD-9.1	1 Watt	9.1	28	5	100	1.20
GE ZD-12	1 Watt	12	21	9	76	1.20
GE ZD-15	1 Watt	15	17	14	61	1.20
GE ZD-18	1 Watt	18	14	20	50	1.20
GE ZD-20	1 Watt	20	12.5	22	46	1.20
GE ZD-27	1 Watt	27	9.5	35	34	1.20

All Zeners ±10% tolerance in Voltage.
Junction operating and storage temperature −65° to 200°C.

MAINTENANCE INDUSTRIAL REPLACEMENT SEMICONDUCTORS

Cat. No.	Repet-itive PRV	Max. I_{DC} @ Tran-sient PRV	Stud single Phase	Peak 1 Cycle Surge	Max. Rev. Cur. (Full Cycle Av @ Full Load)	Max. Full Load Voltage Drop	Max. Oper. °C	Sugg. User Price
Silicon Rectifiers								
GEMR-1	200	350	12 A	240 A	2.0 mA	0.55 V	200°	$4.80
GEMR-2	400	—	35*A	500 A	10*mAdc	0.65*V	200°	6.90

Cat. No.	PRV and $V_{(BO)}$	Max. I_{DC} @ Temp. °C	Max. Temp. °C Oper.	Max. Temp. °C Stor.	Max. Req'd. Gate Signal @ 25°C T_J	Sugg. User Price
Silicon Controlled Rectifiers						
GEMR-3	400	35 A @ 19°C case	125°	150°	3 V, 40 mA	$8.60
GEMR-4	400	7.4 A @ 80°C case	100°	100°	3 V, 25 mA	3.80

Silicon Controlled Rectifier, Economy Flat Pack Design						
GEMR-5	200	4 A @ 75°C anode tab	110°	150°	0.8 V, 200 uAdc	1.40

Cat. No.	h_{FE} V_{CE} = 1 V I_C = 1A	V_{CEO} I_C = 1 mA	V_{CE}(sat) I_C = 1 A I_B° = 50 mA	P_T 70° Tab	Sugg. User Price
Silicon Power Tab Transistor					
GEMR-6	20 min.	40 V	1.0 V (Max.)	8 W	$1.42

* @ 140°C

GENERAL ELECTRIC

Trade Discount Applies To List Prices Only

© United Technical Publications

DIRECTRON



Industrial Selenium Rectifiers, Transformers, Chokes and Power Supplies

FULL WAVE BRIDGE RECTIFIERS, SINGLE PHASE, RESISTIVE-INDUCTIVE LOADS

ALL PRICES SHOWN ARE USER PRICES



E130

Max. Amps.	18v. in — 14v. out No.	Price	36v. In — 28v. out No.	Price	54v. in — 42v. out No.	Price	130v. in — 100v. out No.	Price	260v. in — 200v. out No.	Price
½	A 18	$ 1.05	A 36	$ 1.50	A 54	$ 2.50	A 130	$ 5.00	A 260	$10.00
1	B 18	1.20	B 36	2.20	B 54	3.20	B 130	8.00	B 260	16.00
2	C 18	2.10	C 36	3.00	C 54	4.50	C 130	10.00	C 260	20.00
3	D 18	2.70	D 36	4.00	D 54	6.00	D 130	14.00	D 260	28.00
4	E 18	3.60	E 36	7.50	E 54	10.00	E 130	24.00	E 260	48.00
6	F 18	4.50	F 36	9.00	F 54	12.00	F 130	32.00	F 260	64.00
10	G 18	6.60	G 36	12.00	G 54	18.00	G 130	39.00	G 260	78.00
12	H 18	8.20	H 36	16.00	H 54	22.00	H 130	44.00	H 260	88.00
15	J 18	10.50	J 36	20.00	J 54	27.00	J 130	54.00	J 260	108.00
20	K 18	12.50	K 36	25.00	K 54	36.00	K 130	77.00	K 260	154.00
24	L 18	15.00	L 36	30.00	L 54	42.00	L 130	82.00	L 260	164.00
30	M 18	19.10	M 36	37.00	M 54	55.00				
36	P 18	24.00	P 36	48.00						
50	R 18	30.00	R 36	60.00						

220 v. Single Phase available . . . up to 1000 amps.

HALF-WAVE, CENTER-TAP, DOUBLER, TRIPLER or 3-PHASE

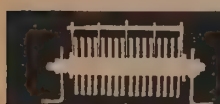
Quotations on request

ELEVATOR CONTROL RECTIFIERS

PART No.	PHASE	AC INPUT VOLTS UP TO	AMPS	UNITS REQUIRED	LIST PRICE UNIT	SET
CD260	1φ	260	1.5	2	$ 8.00	$16.00
CD260	3φ	260	2.2	3	8.00	24.00
DD260	1φ	260	2.2	2	10.00	20.00
DD260	3φ	260	3.3	3	10.00	30.00
ED260	1φ	260	3.4	2	12.00	24.00
ED260	3φ	260	5.1	3	12.00	36.00
FD260	1φ	260	6.6	2	15.00	30.00
FD260	3φ	260	10.	3	15.00	45.00
COMPACT UNIT (Double Decker)						
3D260	3φ	260	3.	1	34.00	

24 HOUR SERVICE on Custom Built Stacks

See OUR AD UNDER "TRANSFORMERS" IN SECTION 5600 FOR RECTIFIER TRANSFORMERS AND HIGH CURRENT CHOKES



Mfd. by SANFORD MILLER CORP.

Trade Discount Applies To List Prices Only

© United Technical Publications

SILICON POWER RECTIFIERS

HY-A-SIL
High - Ampere - Silicon



FEATURES

- High operating temperature, 190°C (Up to 120°C ambient)
- High operating voltage (Up to 600 p.i.v.)
- High efficiency (99% compared to about 75% for selenium)
- Excellent regulation (4% compared to about 15% for selenium)

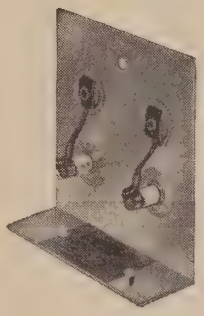
Stock No.	Type	AC Input Volts up to	DC Output Volts up to	Max. Amps Self Cooled	Max. Amps Fan Cooled	Size And Weight	User Net Price
SI-CT-A	Center-Tap	18-0-18	16	40	80	B	$ 15.00
SI-CT-B	Center-Tap	36-0-36	32	40	80	B	20.00
SL-CT-A	Center-Tap	18-0-18	16	50	100	B	17.50
SL-CT-B	Center-Tap	36-0-36	32	50	100	B	22.50
SL-CT-D	Center-Tap	72-0-72	64	50	100	B	36.00
SL-CT-F	Center-Tap	140-0-140	125	50	100	B	44.00
SK-CT-A	Center-Tap	18-0-18	16	100	200	C	30.00
SK-CT-B	Center-Tap	36-0-36	32	100	200	C	34.00
SK-CT-D	Center-Tap	72-0-72	64	100	200	C	37.00
SK-CT-F	Center-Tap	140-0-140	125	100	200	C	48.00
SM-CT-A	Center-Tap	18-0-18	16	200	400	D	45.00
SM-CT-B	Center-Tap	36-0-36	32	200	400	D	60.00
SM-CT-D	Center-Tap	72-0-72	64	200	400	D	62.00
SM-CT-F	Center-Tap	140-0-140	125	200	400	D	76.00
SO-CT-B	Center-Tap	36-0-36	32	400	800	E	100.00
SA-BR-D	1ϕ Bridge	140	125	1	•	—	9.00
SA-BR-F	1ϕ Bridge	280	250	1	•	—	10.50
SC-BR-D	1ϕ Bridge	140	125	2	•	—	10.50
SC-BR-F	1ϕ Bridge	280	250	2	•	—	12.00
SD-BR-A	1ϕ Bridge	36	32	6	12	F	18.00
SD-BR-D	1ϕ Bridge	140	125	6	12	F	30.00
SD-BR-F	1ϕ Bridge	280	250	6	12	F	39.00
SE-BR-A	1ϕ Bridge	36	32	10	20	G	21.00
SE-BR-D	1ϕ Bridge	140	125	10	20	G	36.00
SE-BR-F	1ϕ Bridge	280	250	10	20	G	44.00
SF-BR-A	1ϕ Bridge	36	32	20	40	H	24.00
SF-BR-D	1ϕ Bridge	140	125	20	40	H	40.00
SF-BR-F	1ϕ Bridge	280	250	20	40	H	48.00
SI-BR-A	1ϕ Bridge	36	32	40	80	J	30.00
SI-BR-B	1ϕ Bridge	72	64	40	80	J	36.00
SI-BR-D	1ϕ Bridge	140	125	40	80	J	63.00
SI-BR-F	1ϕ Bridge	280	250	40	80	J	95.00
SL-BR-A	1ϕ Bridge	36	32	50	100	J	33.00
SL-BR-B	1ϕ Bridge	72	64	50	100	J	39.00
SL-BR-D	1ϕ Bridge	140	125	50	100	J	70.00
SL-BR-F	1ϕ Bridge	280	250	50	100	J	110.00
SG-BR-A	1ϕ Bridge	36	32	70	140	J	40.00
SG-BR-B	1ϕ Bridge	72	64	70	140	J	50.00
SG-BR-D	1ϕ Bridge	140	125	70	140	J	80.00
SG-BR-F	1ϕ Bridge	280	250	70	140	J	130.00
SK-BR-A	1ϕ Bridge	36	32	100	200	K	60.00
SK-BR-B	1ϕ Bridge	72	64	100	200	K	68.00
SK-BR-D	1ϕ Bridge	140	125	100	200	K	90.00
SK-BR-F	1ϕ Bridge	280	250	100	200	K	150.00
SM-BR-A	1ϕ Bridge	36	32	200	400	L	100.00
SM-BR-B	1ϕ Bridge	72	64	200	400	L	120.00
SM-BR-D	1ϕ Bridge	140	125	200	400	L	180.00
SM-BR-F	1ϕ Bridge	280	250	200	400	L	260.00
SO-BR-B	1ϕ Bridge	72	64	400	800	M	270.00
SO-BR-F	1ϕ Bridge	280	250	400	800	M	480.00
SL-PH-A	3ϕ Bridge	36	48	75	150	N	60.00
SL-PH-B	3ϕ Bridge	72	96	75	150	N	85.00
SL-PH-C	3ϕ Bridge	105	144	75	150	N	120.00
SL-PH-D	3ϕ Bridge	140	188	75	150	N	180.00
SL-PH-E	3ϕ Bridge	220	290	75	150	M	220.00
SK-PH-E	3ϕ Bridge	220	290	100	200	M	240.00
SM-PH-E	3ϕ Bridge	220	290	200	400	M	300.00
SO-PH-E	3ϕ Bridge	220	290	400	800	M	375.00

All above ratings based on 30°C ambient. Fan-cooled ratings based on air velocity of 1000 linear ft/minute. For resistive or inductive loads, as rated. For capacitive or battery loads, derate amperage 20%. Doublers, triplers, 3 phase half wave and 3 phase center-tap also available. Custom-built stacks, 24 hour service.

DIMENSIONS WITH BRACKETS

Size	Length	Height	Width	Weight
B	3″	6″	5″	12 oz.
C	3″	6″	6″	1 lb.
D	4″	8″	7″	2 lbs.
E	4″	9″	8″	6 lbs.
F	6″	5″	5″	1¼ lbs.
G	6″	6″	5″	1½ lbs.
H	6″	6″	6″	2 lbs.
J	6″	6″	5″	1½ lbs.
K	7″	8″	7″	4 lbs.
L	8″	9″	8″	6 lbs.
M	8″	11″	10″	6 lbs.
N	8″	6″	5″	4 lbs.

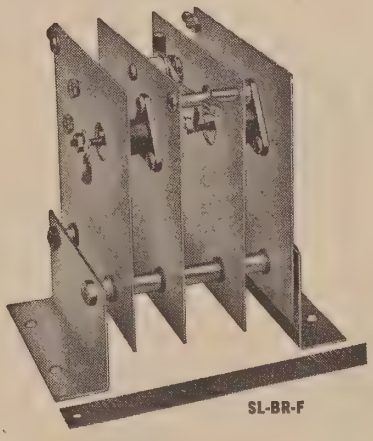
*Not suitable for fan-cooling



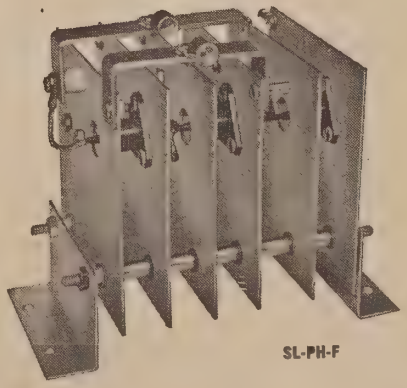
SC-BR-F



SA-BR-D



SL-BR-F



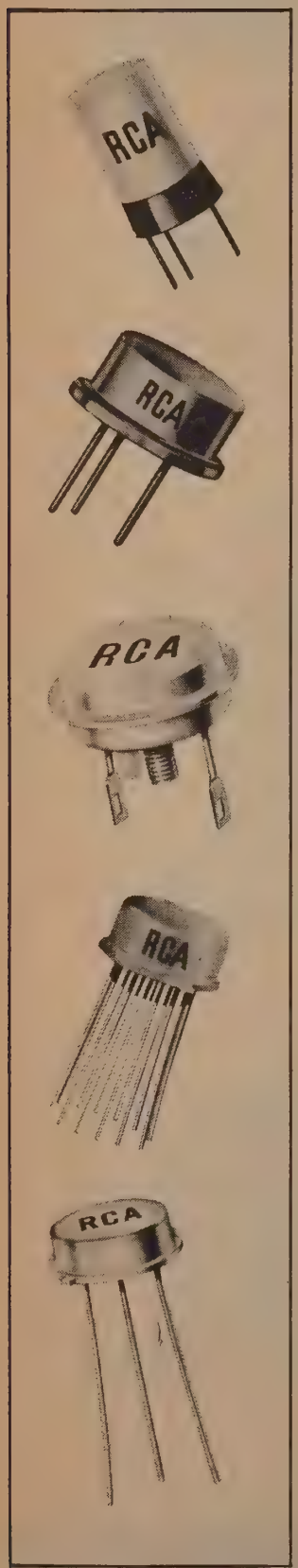
SL-PH-F

Mfd. by SANFORD MILLER CORP.

RCA

SEMICONDUCTOR PRODUCTS

JULY 1, 1970



TRANSISTORS & DIODES

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
1N2326	$ .55	$ .40	$ .33
1N4785	1.08	.78	.65
2N176	1.31	.95	.79
2N217	.60	.44	.365
2N274	1.24	.90	.75
2N384	1.65	1.20	1.00
JAN2N384	3.30	2.40	2.00
2N388	.50	.36	.30
JAN2N388	.53	.38	.32
2N388A	.94	.68	.57
2N398	.89	.65	.54
JAN2N398	.99	.72	.60
2N398A	.97	.71	.59
JAN2N398A	1.07	.78	.65
2N398B	1.24	.90	.75
2N404	.45	.32	.27
JAN2N404	.48	.35	.29
2N404A	.58	.42	.35
JAN2N404A	.66	.48	.40
2N406	.45	.32	.27
2N408	.50	.37	.305
2N414	.46	.34	.28
2N591	.62	.45	.375
2N647	1.16	.84	.70
2N649	.92	.67	.56
2N697	.63	.46	.38
2N699	1.16	.84	.70
2N706	.59	.43	.36
2N706A	1.07	.78	.65
2N709	1.32	.96	.80
2N718A	1.08	.78	.65
2N720A	1.32	.96	.80
2N834	1.98	1.44	1.20
2N918	2.97	2.16	1.80
JAN2N918	5.45	3.96	3.30
2N1023	2.72	1.98	1.65
2N1066	1.98	1.44	1.20
2N1183	1.82	1.32	1.10
JAN2N1183	2.64	1.92	1.60
2N1183A	2.31	1.68	1.40
JAN2N1183A	3.30	2.40	2.00
2N1183B	2.89	2.10	1.75
JAN2N1183B	3.88	2.82	2.35
2N1184	2.48	1.80	1.50
JAN2N1184	3.71	2.70	2.25
2N1184A	2.81	2.04	1.70
JAN2N1184A	4.04	2.94	2.45
2N1184B	4.13	3.00	2.50
JAN2N1184B	5.36	3.90	3.25
2N1224	1.24	.90	.75
JAN2N1224	1.41	1.02	.85
2N1225	1.41	1.02	.85
JAN2N1225	1.57	1.14	.95
2N1226	1.49	1.08	.90
2N1285	1.72	1.25	1.04
2N1302	.45	.32	.27
JAN2N1302	.48	.35	.29
2N1303	.45	.32	.27
JAN2N1303	.48	.35	.29
2N1304	.53	.38	.32
JAN2N1304	.58	.42	.35
2N1305	.53	.38	.32
JAN2N1305	.58	.42	.35
2N1306	.66	.48	.40
JAN2N1306	.71	.52	.43
2N1307	.64	.47	.39
JAN2N1307	.69	.50	.42
2N1308	.97	.71	.59
JAN2N1308	1.04	.76	.63
2N1309	.97	.71	.59
JAN2N1309	1.04	.76	.63
2N1395	1.82	1.32	1.10
2N1396	1.93	1.40	1.17
2N1397	2.15	1.56	1.30
2N1479	1.65	1.20	1.00
JAN2N1479	2.56	1.86	1.55

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
2N1480	1.82	1.32	1.10
JAN2N1480	2.72	1.98	1.65
2N1481	1.98	1.44	1.20
JAN2N1481	2.89	2.10	1.75
2N1482	2.81	2.04	1.70
JAN2N1482	3.71	2.70	2.25
2N1483	2.89	2.10	1.75
JAN2N1483	3.71	2.70	2.25
JANTX2N1483	7.85	5.70	4.75
2N1484	3.63	2.64	2.20
JAN2N1484	4.46	3.24	2.70
JANTX2N1484	8.60	6.25	5.20
2N1485	4.46	3.24	2.70
JAN2N1485	5.28	3.84	3.20
JANTX2N1485	9.40	6.85	5.70
2N1486	6.77	4.92	4.10
JAN2N1486	7.59	5.52	4.60
JANTX2N1486	10.30	8.55	7.10
2N1487	4.54	3.30	2.75
JAN2N1487	5.36	3.90	3.25
2N1488	4.95	3.60	3.00
JAN2N1488	5.78	4.20	3.50
2N1489	7.43	5.40	4.50
JAN2N1489	8.25	6.00	5.00
2N1490	8.25	6.00	5.00
JAN2N1490	9.10	6.60	5.50
2N1491	1.82	1.32	1.10
2N1492	4.29	3.12	2.60
2N1493	7.01	5.10	4.25
JAN2N1493	7.43	5.40	4.50
2N1524	.51	.37	.31
2N1526	.53	.38	.32
2N1605	.66	.48	.40
2N1605A	1.14	.83	.69
2N1613	.75	.54	.45
2N1632	.63	.46	.38
2N1637	.61	.44	.37
2N1638	.54	.40	.33
2N1639	.58	.42	.35
2N1700	1.90	1.38	1.15
2N1701	2.31	1.68	1.40
2N1702	4.54	3.30	2.75
2N1711	.94	.69	.57
2N1893	1.08	.78	.65
2N1905	4.13	3.00	2.50
2N1906	6.60	4.80	4.00
2N2015	9.08	6.60	5.50
JAN2N2015	9.90	7.20	6.00
2N2016	9.90	7.20	6.00
JAN2N2016	10.75	7.80	6.50
2N2102	1.13	.82	.68
*S2N2102	14.50	12.00	10.00
2N2147	1.57	1.14	.95
2N2148	1.08	.78	.65
2N2208	1.54	1.12	.93
2N2270	.91	.66	.55
2N2304	4.29	3.12	2.60
2N2305	6.44	4.68	3.90
2N2338	6.60	4.80	4.00
2N2369	1.40	1.02	.85
2N2369A	1.65	1.20	1.00
2N2405	1.57	1.14	.95
2N2475	1.62	1.18	.98
2N2476	1.16	.84	.70
2N2477	1.32	.96	.80
2N2594	1.62	1.18	.98
2N2613	.59	.43	.355
2N2614	.54	.39	.325
2N2631	3.80	2.76	2.30
2N2857	4.46	3.24	2.70
JAN2N2857	4.95	3.60	3.00
JANTX2N2857	10.20	8.45	7.05
2N2869/ 2N301	1.52	1.11	.92
2N2870/ 2N301A	3.15	2.29	1.91
2N2876	17.40	14.40	12.00
2N2895	1.41	1.02	.85

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
2N2896	2.06	1.50	1.25
2N2897	1.16	.84	.70
2N2953	.54	.40	.33
2N3053/ 40053	.75	.54	.45
2N3054	1.16	.84	.70
2N3055	1.82	1.32	1.10
JAN2N3055	2.64	1.92	1.60
JANTX2N3055	8.25	6.00	5.00
2N3118	4.95	3.60	3.00
2N3119	5.36	3.90	3.25
2N3229	22.21	18.38	15.32
2N3241A	.73	.53	.44
2N3242A	.83	.60	.50
2N3261	1.32	.96	.80
2N3262	7.43	5.40	4.50
2N3263	58.00	48.00	40.00
2N3264	40.60	33.00	28.00
2N3265	60.90	50.40	42.00
2N3266	43.50	36.00	30.00
2N3375	10.80	8.95	7.45
JAN2N3375	17.00	14.15	10.75
JANTX2N3375	21.60	17.85	14.90
2N3435	7.43	5.40	4.50
2N3439	3.71	2.70	2.25
JAN2N3439	4.70	3.42	2.85
2N3440	1.82	1.32	1.10
JAN2N3440	2.31	1.68	1.40
2N3441	2.48	1.80	1.50
JAN2N3441	3.05	2.22	1.85
2N3442	4.54	3.30	2.75
JAN2N3442	5.69	4.14	3.45
2N3478	1.90	1.38	1.15
2N3512	1.08	.78	.65
2N3553	4.37	3.18	2.65
JAN2N3553	5.78	4.20	3.50
JANTX2N3553	8.74	6.36	5.30
2N3583	2.48	1.80	1.50
2N3584	4.13	3.00	2.50
JAN2N3584	4.95	3.60	3.00
2N3585	6.60	4.80	4.00
JAN2N3585	7.43	5.40	4.50
2N3600	3.80	2.76	2.30
2N3632	12.75	10.55	8.80
2N3730	1.24	.90	.75
2N3731	1.62	1.18	.98
2N3732	1.07	.78	.65
2N3733	15.80	13.10	10.90
2N3771	4.13	3.00	2.50
JAN2N3771	5.35	3.90	3.25
JANTX2N3771	15.50	11.50	9.50
2N3772	4.13	3.00	2.50
JAN2N3772	5.35	3.90	3.25
JANTX2N3772	15.50	11.50	9.50
2N3773	7.43	5.40	4.50
2N3839	13.80	11.40	9.50
2N3866	1.65	1.25	1.00
JAN2N3866	4.44	3.24	2.70
JANTX2N3866	5.94	4.32	3.60
2N3878	3.13	2.28	1.90
2N3879	4.78	3.48	2.90
2N3932	1.40	1.02	.85
2N3933	1.62	1.18	.98
2N4012	14.20	11.75	9.80
2N4036	1.32	.96	.80
2N4037	1.16	.84	.70
2N4063	3.80	2.76	2.30
2N4064	1.90	1.38	1.15
2N4068	1.34	.97	.81
2N4069	1.40	1.02	.85
2N4074	.73	.53	.44
2N4240	2.89	2.10	1.75
2N4259	1.90	1.38	1.15
2N4314	1.24	.90	.75
2N4346	2.31	1.68	1.40
2N4347	2.97	2.16	1.80
2N4348	4.13	3.00	2.50
2N4390	.75	.54	.45

Prices shown do not include any state or local taxes. All prices are subject to change or withdrawal without notice.

Net

© United Technical Publications

RCA

SEMICONDUCTOR PRODUCTS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
2N4427	2.15	1.56	1.30
2N4440	11.90	9.85	8.20
JAN2N4440	18.00	15.00	13.00
JANTX2N4440	24.00	20.00	16.50
2N4932	29.00	24.00	20.00
2N4933	29.00	24.00	20.00
2N5016	36.25	30.00	25.00
2N5034	1.34	.98	.81
2N5035	1.32	.96	.80
2N5036	1.42	1.04	.86
2N5037	1.41	1.02	.85
2N5038	14.50	12.00	10.00
2N5039	11.60	9.60	8.00
2N5070	29.00	24.00	20.00
2N5071	29.00	24.00	20.00
2N5090	11.40	8.30	6.90
2N5102	21.75	18.00	15.00
2N5108	12.90	10.70	8.90
2N5109	3.47	2.52	2.10
2N5179	.81	.59	.49
2N5180	.54	.40	.33
2N5183	.40	.29	.24
2N5184	.48	.35	.29
2N5185	.56	.41	.34
2N5186	.40	.29	.24
2N5187	.56	.41	.34
2N5188	.66	.48	.40
2N5189	.73	.53	.44
2N5202	4.53	3.30	2.75
2N5239	5.77	4.20	3.50
2N5240	7.42	5.40	4.50
2N5262	1.62	1.18	.98
2N5293	.91	.66	.55
2N5294	.91	.66	.55
2N5295	.91	.66	.55
2N5296	.91	.66	.55
2N5297	1.04	.76	.63
2N5298	1.04	.76	.63
2N5320	1.65	1.20	1.00
2N5321	1.16	.84	.70
2N5322	1.90	1.38	1.15
2N5323	1.41	1.02	.85
2N5415	3.30	2.40	2.00
2N5416	4.95	3.60	3.00
2N5470	62.25	54.00	45.00
2N5490	1.07	.78	.65
2N5491	1.07	.78	.65
2N5492	1.19	.86	.72
2N5493	1.19	.86	.72
2N5494	1.19	.86	.72
2N5495	1.19	.86	.72
2N5496	1.29	.94	.78
2N5497	1.29	.94	.78
2N5575	36.25	30.00	25.00
2N5576	36.25	30.00	25.00
2N5577	40.60	33.60	28.00
2N5578	43.50	36.00	30.00
2N5579	43.50	36.00	30.00
2N5580	47.85	39.60	33.00
2N5671	2320	19.20	16.00
2N5672	36.25	30.00	25.00
2N5781	1.41	1.02	.85
2N5782	1.24	.90	.75
2N5783	1.16	.84	.70
2N5784	1.24	.90	.75
2N5785	1.08	.78	.65
2N5786	.99	.72	.60
2N5804	14.50	12.00	10.00
2N5805	18.85	15.60	13.00
2N5838	6.27	4.56	3.80
2N5839	5.28	3.84	3.20
2N5840	8.91	6.48	5.40
2N5913	3.63	2.64	2.20
2N5914	9.90	7.20	6.00
2N5915	10.88	9.00	7.50
2N5916	12.33	10.20	8.50
2N5917	11.60	9.60	8.00
2N5918	21.75	18.00	15.00
2N5919	43.50	36.00	30.00
2N5920	130.00	108.00	90.00
2N5921	181.25	150.00	125.00
3N128	1.45	1.06	.88
3N138	3.30	2.40	2.00
3N139	2.89	2.10	1.75
3N140	1.62	1.18	.98
3N141	1.55	1.13	.94
3N142	1.08	.78	.65
3N143	1.39	1.01	.84
3N152	1.78	1.30	1.08
3N153	1.58	1.15	.96
3N154	1.62	1.18	.98
3N159	2.18	1.58	1.32
40004	1.65	1.20	1.00
40005	1.82	1.32	1.10
40006	3.30	2.40	2.00
40022	.83	.60	.50
40050	.99	.72	.60
40051	1.21	.88	.73
40080	1.08	.78	.65
40081	1.41	1.02	.85
40082	4.04	2.94	2.45
40084	.99	.72	.60
40231	.51	.37	.31
40232	.58	.42	.35
40233	.64	.47	.39
40234	.45	.32	.27
40235	.61	.44	.37
40236	.51	.37	.31
40237	.41	.30	.25
40238	.46	.34	.28
40239	.43	.31	.26
40240	.41	.30	.25
40242	.61	.44	.37
40243	.50	.36	.30
40244	.41	.30	.25
40245	.43	.31	.26
40246	.41	.30	.25
40250	1.16	.84	.70
40250V1	1.24	.90	.75
40251	1.90	1.38	1.15
40254	.78	.57	.47
*40259	12.40	10.25	8.55
40263	.56	.41	.34
40269	.61	.44	.37
*40279	109.85	90.90	75.75
40280	4.62	3.36	2.80
40281	10.60	8.75	7.30
40282	11.90	9.85	8.20
*40285	37.70	31.20	26.00
40287	21.75	18.00	15.00
40290	2.48	1.80	1.50
40291	10.40	7.55	6.30
40292	11.30	9.35	7.80
*40294	22.05	18.25	15.20
*40295	11.15	8.10	6.75
*40305	15.10	12.50	10.40
*40306	26.85	22.20	18.50
*40307	28.85	23.90	19.90
40309	.70	.51	.42
40309V1;V2	.78	.57	.47
40310	.99	.72	.60
40310V1	1.08	.78	.65
40311	.73	.53	.44
40311V1;V2	.81	.59	.49
40312	1.03	.75	.62
40312V1	1.13	.85	.72
40313	2.23	1.62	1.35
40314	.78	.57	.47
40314V1;V2	.86	.63	.52
40315	.75	.54	.45
40315V1;V2	.83	.60	.50
40316	.99	.72	.60
40317	.78	.57	.47
40317V1;V2	.86	.63	.52
40318	2.10	1.52	1.27
40319	1.16	.84	.70
40319V1;V2	1.24	.90	.75
40320	.78	.57	.47
40320V1;V2	.86	.63	.52
40321	1.24	.90	.75
40321V1;V2	1.32	.96	.80
40322	2.15	1.56	1.30
40323	.70	.51	.42
40323V1;V2	.78	.57	.47
40324	.99	.72	.60
40325	1.90	1.38	1.15
40326	.78	.57	.47
40326V1;V2	.86	.63	.52
40327	1.24	.90	.75
40327V1;V2	1.32	.96	.80
40328	2.19	1.60	1.33
40329	.50	.37	.305
40340	29.00	24.00	20.00
40341	29.00	24.00	20.00
40346	1.14	.83	.69
40346V1;V2	1.23	.89	.74
40347	.75	.54	.45
40347V1;V2	.91	.66	.55
40348	1.06	.77	.64
40348V1;V2	1.14	.83	.69
40349	1.56	1.13	.94
40349V1;V2	1.64	1.19	.99
40354	1.18	.86	.71
40355	1.24	.90	.75
40359	.40	.29	.24
40360	.91	.66	.55
40360V1;V2	.99	.72	.60
40361	1.03	.75	.62
40361V1;V2	1.11	.81	.67
40362	1.24	.90	.75
40362V1;V2	1.32	.96	.80
40363	1.82	1.32	1.10
40364	4.79	3.48	2.90
*40366	7.84	5.70	4.75
*40366V1;V2	7.92	5.75	4.80
*40367	7.84	5.70	4.75
*40367V1;V2	7.92	5.75	4.80
*40368	11.60	9.60	8.00
*40369	13.05	10.80	9.00
40370	.63	.46	.38
40372	1.24	.90	.75
40373	2.56	1.86	1.55
40374	2.56	1.86	1.55
40375	5.03	3.66	3.05
*40385	9.50	6.90	5.75
*40385V1;V2	9.55	6.95	5.80
*40388	8.83	6.42	5.35
40389	.91	.66	.55
40390	2.15	1.56	1.30
40391	1.24	.90	.75
40392	.91	.66	.55
40394	1.24	.90	.75
40395	.46	.34	.28
40396	.91	.66	.55
40397	.71	.52	.43
40398	.64	.47	.39
40399	.59	.43	.36
40400	.54	.40	.33
40405	1.82	1.32	1.10
40406	1.19	.87	.72
40407	.81	.59	.49
40408	1.08	.78	.65
40409	1.14	.83	.69
40410	1.32	.96	.80
40411	4.29	3.12	2.60
40412	1.06	.77	.64
40412V1;V2	1.14	.83	.69
*40414	5.61	4.08	3.40
40421	1.28	.93	.77
40428	.31	.23	.185
40433	2.97	2.16	1.80
40437	.99	.72	.60
40439	1.98	1.44	1.20
40440	1.32	.96	.80
40442	.83	.60	.50
40446	4.29	3.12	2.60
40458	.78	.57	.47
40462	1.16	.84	.70
40467;A	1.24	.90	.75
40468;A	.75	.54	.45
40490	.46	.34	.28
40513	1.24	.90	.75
40514	1.26	.92	.76
40519	1.52	1.10	.92
40537	1.24	.90	.75
40538	1.36	.99	.82
40539	.66	.48	.40
40542	1.31	.95	.79
40543	1.37	1.00	.83
40544	.75	.54	.45
40559A	.70	.51	.42
40561	4.54	3.30	2.75
40562	4.54	3.30	2.75
40563	4.54	3.30	2.75
40564	4.54	3.30	2.75
40565	4.54	3.30	2.75
40566	7.43	5.40	4.50
40567	6.52	4.74	3.95
40568	7.01	5.10	4.25
40569	7.43	5.40	4.50
40570	10.75	7.80	6.50
40571	8.60	6.24	5.20
40572	7.01	5.10	4.25
40573	8.15	5.94	4.95
40574	10.75	7.80	6.50
*40577	58.00	48.00	40.00
*40578	58.00	48.00	40.00
40581	4.87	3.54	2.95
40582	5.12	3.72	3.10
40594	2.23	1.62	1.35
40595	2.23	1.62	1.35
40600	1.24	.90	.75
40601	1.16	.84	.70
40602	.83	.60	.50
40603	1.04	.76	.63
40604	.98	.71	.59
*40605	45.00	37.25	31.05
*40606	38.30	31.70	26.40
40608	2.48	1.80	1.50
40611	.71	.52	.43
40612	.71	.52	.43
40613	.73	.53	.44
40616	.73	.53	.44
40618	.74	.54	.45
40621	.86	.62	.52
40622	.88	.64	.53
40623	.86	.62	.52
40624	1.14	.83	.69
40625	.89	.65	.54
40626	.89	.65	.54
40627	1.20	.83	.73
40628	.94	.68	.57
40629	.74	.54	.45
40630	.86	.62	.52
40631	.97	.71	.59
40632	1.24	.90	.75
40633	1.27	.92	.77
40634	1.29	.94	.78
40635	.74	.54	.45
40636	2.31	1.68	1.40
40637	.91	.66	.55
40653	2.61	1.90	1.58
40665	14.00	11.65	9.70
40666	12.00	9.85	8.20
40673	2.06	1.50	1.25
40675	132.00	110.00	91.00
40736R	7.45	5.40	4.50

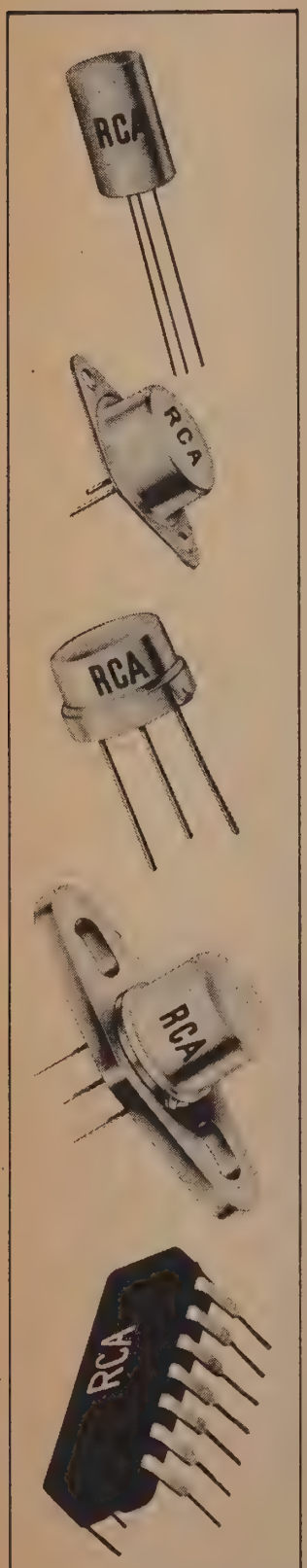
*NOTED — Group 1 products can only be shipped direct to the end user due to technical specifications of the unit.

© United Technical Publications

Net

RCA

SEMICONDUCTOR PRODUCTS



SILICON RECTIFIER ASSEMBLIES

Type	RCA Equipment Manufacturers Price (Bulk) 1 - 29	30 & up
CR101	$ 5.75	$ 5.47
CR102	7.20	6.85
CR103	8.15	7.75
CR104	9.60	9.10
CR105	10.55	10.05
CR106	12.00	11.40
CR107	12.95	12.30
CR108	13.90	13.20
CR109	15.35	14.60
CR110	16.30	15.50
CR201	3.10	2.96
CR203	4.80	4.56
CR204	5.75	5.47
CR206	6.95	6.60
CR208	8.40	8.00
CR210	10.10	9.60
CR212	12.00	11.40
CR301	28.00	26.55
CR302	40.00	37.95
CR303	51.00	48.45
CR304	57.60	54.72
CR305	73.00	69.35
CR306	83.00	78.85
CR307	93.00	88.35
CR311	30.00	28.50
CR312	42.00	39.90
CR313	53.00	50.35
CR314	64.00	60.75
CR315	75.00	71.25
CR316	85.00	80.75
CR317	95.00	90.25
CR321	35.00	33.25
CR322	49.00	46.55
CR323	62.00	58.90
CR324	76.00	72.20
CR325	90.00	85.50
CR331	37.00	35.15
CR332	52.00	49.40
CR333	65.00	61.75
CR334	79.00	75.05
CR335	93.00	88.35
CR341	44.00	41.80
CR342	61.00	57.95
CR343	78.00	74.10
CR344	94.00	89.30
CR351	46.00	43.70
CR352	64.00	60.80
CR353	82.00	72.90
CR354	98.00	93.10
CR401	28.00	26.60
CR402	32.00	30.40
CR403	44.00	41.80
CR404	30.00	28.50
CR405	36.00	34.20
CR406	54.00	51.30
CR407	40.00	38.00
CR408	48.00	45.60
CR409	64.00	60.80
CR501	40.00	38.00
CR502	48.00	45.60
CR503	50.00	47.50
CR504	62.00	58.90
CR505	64.00	60.80
CR506	84.00	79.80

PHOTOCELLS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
SQ2502	1.90	1.38	1.15
SQ2503	1.21	.88	.73
SQ2508	1.24	.90	.75
SQ2519	1.16	.84	.70
SQ2520	1.32	.96	.80
SQ2521	1.40	1.02	.85
SQ2526	1.32	.96	.80
SQ2527	1.32	.96	.80
SQ2529	1.24	.90	.75
SQ2534	1.24	.90	.75
SQ2535	1.57	1.14	.95
SQ2536	1.24	.90	.75
SQ2543	2.06	1.50	1.25
SQ2544	1.90	1.38	1.15
SQ2544V1	1.90	1.38	1.15
SQ2545	1.90	1.38	1.15
SQ2545V1	1.90	1.38	1.15
SQ2546	1.90	1.38	1.15
SQ2554	1.13	.82	.68
SQ2555	1.24	.90	.75
SQ2556	1.44	1.05	.87
SQ2557	1.40	1.02	.85
SQ2558	1.57	1.14	.95
4403	1.21	.88	.73
4404	1.32	.96	.80
4448	1.32	.96	.80
4453	1.28	.93	.77
7163	1.21	.88	.73

SILICON RECTIFIERS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
1N248C;RC	1.65	1.20	1.00
1N249C;RC	2.06	1.50	1.25
1N250C;RC	2.72	1.98	1.65
1N440B	.53	.38	.32
1N441B	.60	.43	.36
1N442B	.66	.51	.43
1N443B	.79	.58	.48
1N444B	.92	.67	.56
1N445B	1.12	.82	.68
1N536	.36	.27	.22
1N537	.40	.29	.24
1N538	.45	.32	.27
1N539	.50	.36	.30
1N540	.56	.41	.34
1N547	.79	.57	.48
1N1095	.61	.48	.40
1N1183A;RA	2.15	1.56	1.30
1N1184A;RA	2.48	1.80	1.50
1N1186A;RA	3.55	2.58	2.15
1N1187A;RA	4.95	3.60	3.00
1N1188A;RA	6.19	4.50	3.75
1N1189A;RA	7.43	5.40	4.50
1N1190A;RA	8.65	6.30	5.25
1N1195A;RA	3.88	2.82	2.35
1N1196A;RA	4.95	3.60	3.00
1N1197A;RA	5.94	4.32	3.60
1N1198A;RA	7.01	5.10	4.25
1N1199A; RA	1.24	.90	.75
1N1200A;RA	1.41	1.02	.85
1N1202A;RA	2.48	1.80	1.50
1N1203A;RA	3.47	2.52	2.10
1N1204A;RA	4.46	3.24	2.70
1N1205A;RA	5.36	3.90	3.25
1N1206A;RA	6.19	4.50	3.75
1N1341B;RB	1.16	.84	.70
1N1342B;RB	1.32	.96	.80
1N1344B;RB	2.15	1.56	1.30
1N1345B;RB	3.05	2.22	1.85
1N1346B;RB	3.96	2.88	2.40
1N1347B;RB	4.79	3.48	2.90
1N1348B;RB	5.78	4.20	3.50
1N1612;R	1.08	.78	.65
1N1613;R	1.24	.90	.75
1N1614;R	1.90	1.38	1.15
1N1615;R	3.71	2.70	2.25
1N1616;R	5.36	3.90	3.25
1N1763A	.42	.30	.25
1N1764A	.52	.38	.31
1N2858A	.33	.24	.20
1N2859A	.37	.27	.22
1N2860A	.40	.29	.24
1N2861A	.42	.30	.25
1N2862A	.48	.35	.29
1N2863A	.58	.42	.35
1N2864A	.70	.51	.42
1N3193	.35	.26	.21
1N3194	.38	.28	.23
1N3195	.53	.39	.32
1N3196	.74	.54	.45
1N3253	.38	.28	.23
1N3254	.42	.30	.25
1N3255	.56	.41	.34
1N3256	.78	.57	.47
1N3563	.94	.69	.57
1N3754	.32	.23	.19
1N3755	.33	.24	.20
1N3756	.35	.26	.21
1N5211	.38	.28	.23
1N5212	.42	.30	.25
1N5213	.56	.41	.34
1N5214	.81	.59	.49
1N5215	.42	.30	.25
1N5216	.45	.33	.27
1N5217	.60	.44	.36
1N5218	.85	.62	.51
40108;R	.99	.72	.60
40109;R	1.16	.84	.70
40110;R	1.57	1.14	.95
40111;R	2.15	1.56	1.30
40112;R	2.48	1.80	1.50
40113;R	3.14	2.28	1.90
40114;R	3.71	2.70	2.25
40115;R	6.60	4.80	4.00
40208	.99	.72	.60
40208R	1.19	.87	.72
40209;R	1.32	.96	.80
40210;R	1.78	1.30	1.08
40211;R	2.39	1.74	1.45
40212;R	2.89	2.10	1.75
40213;R	3.63	2.64	2.20
40214;R	4.21	3.06	2.55
40265	.35	.25	.21
40266	.29	.21	.175
40267	.33	.24	.20
40495	.30	.22	.18
40642	.99	.72	.60
40643	.91	.66	.55
40644	.83	.60	.50

INTEGRATED CIRCUITS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
CA3000	3.80	2.76	2.30
CA3001	5.55	4.00	3.35
CA3002	3.71	2.70	2.25
CA3004	3.71	2.70	2.25
CA3005	2.48	1.80	1.50
CA3006	5.80	4.20	3.50
CA3007	5.35	3.90	3.25
CA3008	6.44	4.68	3.90
CA3008A	9.74	7.08	5.90
CA3010	2.61	1.90	1.58
CA3010A	4.79	3.48	2.90
CA3011	1.47	1.07	.89
CA3012	1.82	1.32	1.10
CA3013	2.15	1.56	1.30
CA3014	2.48	1.80	1.50
CA3015	3.96	2.88	2.44
CA3015A	6.44	4.68	3.90
CA3016	8.91	6.48	5.40
CA3016A	11.38	8.28	6.90
CA3018	1.62	1.18	.98
CA3018A	2.22	1.62	1.35
CA3019	1.62	1.18	.98
CA3020	2.56	1.86	1.55
CA3020A	3.26	2.37	1.98
CA3021	3.14	2.28	1.90

Net

© United Technical Publications

RCA

SEMICONDUCTOR PRODUCTS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
CA3022	2.64	1.92	1.60
CA3023	2.56	1.86	1.55
CA3026	2.06	1.50	1.25
CA3028A	1.47	1.07	.89
CA3028B	2.06	1.50	1.25
CA3029	1.62	1.18	.98
CA3029A	3.14	2.28	1.90
CA3030	2.61	1.90	1.58
CA3030A	4.79	3.48	2.90
CA3033	4.79	3.48	2.90
CA3033A	8.09	5.88	4.90
CA3035	2.48	1.80	1.50
CA3035V1	2.48	1.80	1.50
CA3036	1.47	1.07	.89
CA3037	3.14	2.28	1.90
CA3037A	4.79	3.48	2.90
CA3038	4.79	3.48	2.90
CA3038A	6.44	4.68	3.90
CA3039	1.61	1.17	.98
CA3040	4.87	3.54	2.95
CA3041	2.06	1.50	1.25
CA3042	2.06	1.50	1.25
CA3043	2.81	2.04	1.70
CA3044	2.31	1.68	1.40
CA3044V1	2.31	1.68	1.40
CA3045	2.47	1.80	1.50
CA3046	1.61	1.17	.98
CA3047	2.61	1.90	1.58
CA3047A	4.79	3.48	2.90
CA3048	4.04	2.94	2.45
CA3049	3.22	2.34	1.95
CA3050	3.71	2.70	2.25
CA3051	2.72	1.98	1.65
CA3052	3.14	2.28	1.90
CA3053	.81	.59	.49
CA3054	2.06	1.50	1.25
CA3055	4.86	3.54	2.95
CA3059	3.20	2.35	1.95
CA3060	9.82	7.14	5.95
CA3062	4.86	3.54	2.95
CA3064	2.31	1.68	1.40
CA3065	2.31	1.68	1.40
CA3075	2.31	1.68	1.40
CA3076	2.64	1.92	1.60
CD2100	6.20	4.50	3.75
CD2101	6.50	4.75	3.95
CD2150	3.96	2.88	2.40
CD2151	3.96	2.88	2.40
CD2152	3.96	2.88	2.40
CD2153	5.20	3.80	3.15
CD2200	10.72	7.80	6.50
CD2200D	10.72	7.80	6.50
CD2201	10.72	7.80	6.50
CD2201D	10.72	7.80	6.50
CD2202	10.72	7.80	6.50
CD2202D	10.72	7.80	6.50
CD2203	12.33	10.20	8.50
CD2203D	12.33	10.20	8.50
CD2204	6.60	4.80	4.00
CD2204D	6.60	4.80	4.00
CD2205	10.72	7.80	6.50
CD2205D	10.72	7.80	6.50
CD4000	8.25	6.20	5.00
CD4000D	6.60	4.80	4.00
CD4001	9.50	6.90	5.75
CD4001D	7.85	5.70	4.75
CD4002	9.10	6.60	5.50
CD4002D	7.45	5.40	4.50
CD4004	15.95	13.20	11.00
CD4004T	14.50	12.00	10.00
CD4005	15.95	13.20	11.00
CD4005D	14.50	12.00	10.00
CD4006	26.50	21.90	18.25
CD4006D	25.00	20.70	17.25
CD4007	6.60	4.80	4.00
CD4007D	4.95	3.60	3.00
CD4008	24.65	20.40	17.00
CD4008D	23.20	19.20	16.00
CD4009D	11.55	8.40	7.00
CD4010D	11.55	8.40	7.00
CD4011	9.50	6.90	5.75
CD4011D	7.85	5.70	4.75
CD4012	9.10	6.60	5.50
CD4012D	7.45	5.40	4.50
CD4013	13.05	10.80	9.00
CD4013D	11.60	9.60	8.00
CD4014D	19.72	16.32	13.60
CD4015	21.20	17.50	14.60
CD4015D	19.72	16.32	13.60
CD4016	13.56	11.22	9.35
CD4016D	12.11	10.02	8.35
CD4017D	20.00	16.56	13.80
CD4018D	21.75	18.00	15.00
CD4019D	11.55	8.40	7.00

SILICON CONTROLLED RECTIFIERS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
2N681	2.34	1.70	1.42
2N682	2.82	2.05	1.71
2N683	3.57	2.60	2.16
2N684	4.19	3.05	2.54
2N685	4.81	3.50	2.92
2N686	5.36	3.90	3.25
2N687	5.77	4.20	3.50
2N688	6.74	4.90	4.08
2N689	8.05	5.85	4.87
2N690	8.67	6.30	5.25
2N1842A	2.20	1.60	1.33
2N1843A	2.61	1.90	1.58
2N1844A	3.30	2.40	2.00
2N1845A	3.84	2.80	2.33
2N1846A	4.46	3.75	2.71
2N1847A	5.10	3.70	3.09
2N1848A	5.51	4.00	3.34
2N1849A	6.54	4.75	3.96
2N1850A	7.56	5.50	4.58
2N3228	1.62	1.18	.98
2N3525	2.31	1.68	1.40
2N3528	1.58	1.14	.95
2N3529	1.96	1.43	1.19
2N3650	9.90	7.20	6.00
2N3651	12.40	10.26	8.55
2N3652	18.71	15.48	12.90
2N3653	22.77	18.84	15.70
2N3668	2.39	1.74	1.45
2N3669	2.81	2.04	1.70
2N3670	3.80	2.76	2.30
2N3870	3.88	2.82	2.35
2N3871	4.54	3.30	2.75
2N3872	6.11	4.44	3.70
2N3873	8.22	5.98	4.98
2N3896	4.37	3.18	2.65
2N3897	5.03	3.66	3.05
2N3898	6.60	4.80	4.00
2N3899	8.75	6.36	5.30
2N4101	3.05	2.22	1.85
2N4102	2.64	1.92	1.60
2N4103	5.12	3.72	3.10
40216	42.20	34.90	29.10
40378	1.47	1.07	.89
40379	1.85	1.34	1.12
40504	1.78	1.30	1.08
40505	2.48	1.80	1.50
40506	3.22	2.34	1.95
40507	1.63	1.19	.99
40508	2.01	1.46	1.22
40553	2.75	2.00	1.67
40554	4.44	3.22	2.68
40555	4.76	3.47	2.89
40640	2.72	1.98	1.65
40641	2.85	2.08	1.73
40654	1.62	1.18	.98
40655	2.03	1.48	1.23
40656	1.70	1.24	1.23
40657	2.11	1.54	1.28
40658	1.86	1.36	1.13
40659	2.19	1.60	1.33
40680	5.45	3.96	3.30
40681	6.19	4.50	3.75
40682	7.76	5.64	4.70
40683	9.90	7.20	6.00
40735	31.40	26.00	21.65
40737	2.18	1.58	1.32
40738	2.56	1.86	1.55
40739	3.33	2.42	2.02
40740	4.50	3.28	2.73
40741	2.67	1.94	1.63
40742	3.05	2.22	1.85
40743	3.83	2.78	2.32
40744	5.00	3.64	3.03
40745	3.83	2.78	2.32
40746	4.21	3.06	2.55
40747	4.98	3.62	3.02
40748	6.15	4.48	3.73
40749	3.43	2.50	2.08
40750	4.04	2.94	2.45
40751	5.45	3.96	3.30
40752	7.39	5.38	4.48
40753	3.93	2.86	2.38
40754	4.54	3.30	2.75
40755	5.94	4.32	3.60
40756	7.89	5.73	4.78
40757	5.08	3.70	3.08
40758	5.69	4.14	3.45
40759	7.10	5.16	4.30
40760	9.04	6.58	5.48
40768	9.65	7.00	5.85
40769	1.95	1.42	1.18

TRIACS & DIACS

Type	RCA Equipment Manufacturers Price (Bulk) 1-99 SCH. D	100-999 SCH. B	1,000 & up SCH. C
†1N5411	.61	.44	.37
2N5441	8.17	5.94	4.95
2N5442	11.47	8.34	6.95
2N5443	13.63	11.28	9.40
2N5444	8.66	6.30	5.25
2N5445	10.51	8.70	7.25
2N5446	14.21	11.76	9.80
2N5567	3.38	2.46	2.05
2N5568	4.41	3.20	2.67
2N5569	3.88	2.82	2.35
2N5570	4.90	3.56	2.97
2N5571	3.47	2.52	2.10
2N5572	4.65	3.38	2.82
2N5573	3.96	2.88	2.40
2N5574	5.15	3.74	3.12
2N5754	1.40	1.02	.85
2N5755	1.47	1.07	.89
2N5756	1.85	1.34	1.12
2N5757	2.48	1.80	1.50
40429	2.06	1.50	1.25
40430	2.39	1.74	1.45
40431	2.56	1.86	1.55
40432	2.97	2.16	1.80
40485	1.57	1.14	.95
40486	2.06	1.50	1.25
40502	2.23	1.62	1.35
40503	2.56	1.86	1.55
40509	1.73	1.26	1.05
40510	2.23	1.62	1.35
40511	2.72	1.98	1.65
40512	3.14	2.28	1.90
40525	1.57	1.14	.95
40526	1.78	1.30	1.08
40527	2.48	1.80	1.50
40528	1.57	1.14	.95
40529	1.62	1.18	.98
40530	2.31	1.68	1.40
40531	1.73	1.26	1.05
40532	1.94	1.41	1.18
40533	2.65	1.92	1.60
40534	1.73	1.26	1.05
40535	1.78	1.30	1.08
40536	2.48	1.80	1.50
40575	2.48	1.80	1.50
40576	3.29	2.38	1.98
†40583	.48	.35	.29
40638	1.65	1.20	1.00
40639	2.15	1.56	1.30
40660	5.78	4.20	3.50
40661	8.22	5.98	4.98
40662	6.27	4.56	3.80
40663	8.71	6.34	5.28
40664	2.22	1.61	1.34
40667	2.05	1.49	1.24
40668	1.62	1.18	.98
40669	2.18	1.58	1.32
40671	11.14	8.10	6.75
40672	10.37	8.58	7.15
40684	1.57	1.14	.95
40685	1.63	1.19	.99
40686	2.01	1.46	1.22
40687	2.64	1.92	1.60
40691	1.70	1.24	1.03
40692	2.40	1.74	1.45
40693	1.57	1.14	.95
40694	1.64	1.19	.99
40695	2.01	1.46	1.22
40696	1.41	1.02	.85
40697	1.47.	1.07	.89
40698	1.85	1.34	1.12
40699	8.17	5.94	4.95
40700	11.47	8.34	6.95
40701	13.63	11.28	9.40
40702	8.66	6.30	5.25
40703	10.51	8.70	7.25
40704	14.21	11.76	9.80
40705	5.78	4.20	3.50
40706	8.22	5.98	4.98
40707	6.27	4.56	3.80
40708	8.71	6.34	5.28
40709	11.14	8.10	6.75
40710	10.37	8.58	7.15
40711	3.47	2.52	2.10
40712	4.65	3.38	2.82
40713	3.96	2.88	2.40
40714	5.15	3.74	3.12
40715	2.48	1.80	1.50
40716	3.27	2.38	1.98
40717	3.38	2.46	2.05
40718	4.41	3.20	2.67
40719	3.80	2.82	2.35
40720	4.90	3.56	2.97
40721	1.62	1.18	.98
40722	2.18	1.58	1.32
40723	1.95	1.42	1.18
40724	2.05	1.49	1.24
40725	1.57	1.14	.95
40726	2.06	1.50	1.25
40727	2.06	1.50	1.25
40728	2.39	1.74	1.45
40729	2.23	1.62	1.35
40730	2.56	1.86	1.55
40731	1.73	1.26	1.05
40732	2.23	1.62	1.35
40733	1.65	1.20	1.00
40734	2.15	1.56	1.30
40761	1.86	1.36	1.13
40762	2.56	1.86	1.55
40766	1.57	1.14	.95
40767	1.73	1.26	1.05
40770	2.77	2.02	1.68
40771	1.77	1.28	1.07
40772	2.21	1.61	1.34
40773	1.88	1.37	1.14
40774	2.48	1.80	1.50
40775	3.07	2.23	1.86
40776	4.36	3.17	2.64
40777	3.55	2.58	2.15
40778	4.83	3.52	2.93
40779	4.74	3.44	2.87
40780	6.15	4.48	3.73
40781	5.45	3.95	3.29
40782	6.70	4.88	4.07
40783	5.20	3.78	3.15
40784	7.00	5.10	4.25
40785	5.95	4.32	3.60
40786	7.70	5.60	4.68

†Diac.

Net

© United Technical Publications

SARKES TARZIAN

Silicon Avalanche Rectifiers

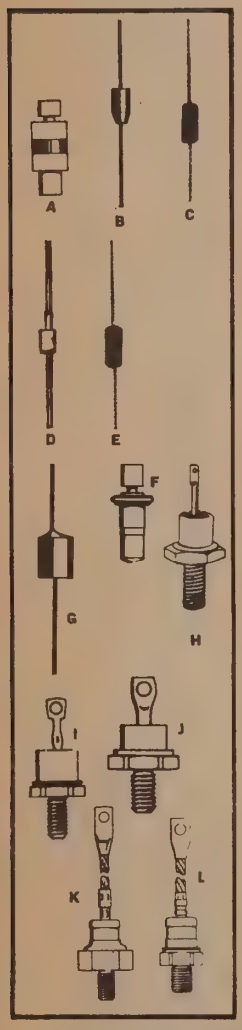
All of the silicon rectifiers listed below are supplied with avalanche characteristics as standard. They are direct replacements, electrically and physically, for ordinary silicon rectifiers, yet they provide important benefits to you and your products, **at no** extra cost.

Overvoltage protection is built into the rectifier. Transient voltage induced failures are virtually eliminated because these units avalanche at voltages well below the destruction point. The overvoltage spike is dissipated through the junction at a point below the critical voltage stress across the edge of the junction.

Lower circuit costs are readily achieved. When avalanche rectifiers are used suppressor and balancing devices, such as resistors, capacitors, R-C networks, etc., are no longer needed. In addition, their elimination improves circuit reliability, due to a reduction in number of components and interconnections.

Dependable performance is assured. Over 20,000,000 of these devices already have been delivered and are in actual use in the field. They are now routinely available from high volume production lines.

1 TO 6 AMP RECTIFIERS



CURRENT	1 AMP					2 AMP	3 AMP	6 AMP	OUTPUT VOLTAGES, SINGLE PHASE			
P.I.V.	PLUG-IN PART NO	INSULATED CASE PART NO		METAL CASE PART NO	GLASS CASE PART NO	PLUG-IN PART NO	INSULATED CASE PART NO	STUD MTG. PART NO[2][3]	MAX RMS VOLTS	HALFWAVE 1 X AMP DC[1]	CENTER TAP 2 X AMP DC[2]	BRIDGE 2 X AMP DC
Figure	A	B	C	D	E	F	G	H		Output VDC	Output VDC	Output VDC
100	10M			10C	G1	10LA	3AF1	10H3P	70	30	30	60
200	20M	F2	E2	20C	G2	20LA	3AF2	20H3P	140	60	60	120
300	30M			30C	G3	30LA	3AF3	30H3P	210	90	90	180
400	M 500	F4	E4	40C	G4	40LA	3AF4	40H3P	280	120	120	240
500	50M			50C	G5	50LA	3AF5	50H3P	350	150	150	300
600	60M	F6	E6	60C	G6	60LA	3AF6	60H3P	420	180	180	360
800		F8	E8	80C	G8		3AF8	80H3P	560	240	240	480
1000		F10	E10	100C	G10		3AF10	100H3P	700	300	300	600

12 TO 100 AMP RECTIFIERS / STUD MOUNTED[2][3]

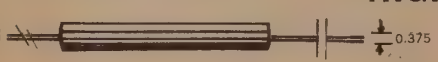
CURRENT	12 AMP	25 AMP	35 AMP	50 AMP	100 AMP	OUTPUT VOLTAGES, SINGLE PHASE			
P.I.V.						MAX RMS VOLTS	HALFWAVE 1 X AMP DC[1]	CENTER TAP 2 X AMP DC[2]	BRIDGE 2 X AMP DC
Figure	H	I	J	K	L		Output VDC	Output VDC	Output VDC
100	ST210P	ST3A10P	ST410P	ST5A10P	ST610P	70	30	30	60
200	ST220P	ST3A20P	ST420P	ST5A20P	ST620P	140	60	60	120
300	ST230P	ST3A30P	ST430P	ST5A30P	ST630P	210	90	90	180
400	ST240P	ST3A40P	ST440P	ST5A40P	ST640P	280	120	120	240
500	ST250P	ST3A50P	ST450P	ST5A50P	ST650P	350	150	150	300
600	ST260P	ST3A60P	ST460P	ST5A60P	ST660P	420	180	180	360
800	ST280P	ST3A80P	ST480P	ST5A80P	ST680P	560	240	240	480
1000	ST2100P	ST3A100P	ST4100P	ST5A100P	ST6100P	700	300	300	600
1200	ST2120P	ST3A120P	ST4120P	ST5A120P	ST6120P	840	360	360	720
1400	ST2140P	ST3A140P	ST4140P	ST5A140P	ST6140P	980	420	420	840

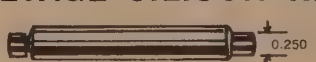
160 TO 350 AMP RECTIFIERS / STUD MOUNTED[2][3]

CURRENT	160 AMP		250 AMP		350 AMP	OUTPUT VOLTAGES, SINGLE PHASE			
P.I.V.						MAX RMS VOLTS	HALFWAVE 1 X AMP DC	CENTER TAP 2 X AMP DC	BRIDGE 2 X AMP DC
Figure	L	K	K	L	L		Output VDC	Output VDC	Output VDC
100	ST710P	ST1010P	ST810P	ST910P	ST2010P	70	30	30	60
200	ST720P	ST1020P	ST820P	ST920P	ST2020P	140	60	60	120
300	ST730P	ST1030P	ST830P	ST930P	ST2030P	210	90	90	180
400	ST740P	ST1040P	ST840P	ST940P	ST2040P	280	120	120	240
500	ST750P	ST1050P	ST850P	ST950P	ST2050P	350	150	150	300
600	ST760P	ST1060P	ST860P	ST960P	ST2060P	420	180	180	360
800	ST780P	ST1080P	ST880P	ST980P	ST2080P	560	240	240	480
1000	ST7100P	ST10100P	ST8100P	ST9100P	ST20100P	700	300	300	600
1200	ST7120P	ST10120P	ST8120P	ST9120P	ST20120P	840	360	360	720
1400	ST7140P	ST10140P	ST8140P	ST9140P	ST20140P	980	420	420	840

[1] Derate 50% for single phase halfwave with capacitor load.
[2] Derate current 20% for single phase operation on battery motor or capacitive load
[3] Add suffix "N" for anode connected to stud.

HIGH VOLTAGE SILICON RECTIFIERS

M 

N 

O 

AXIAL LEAD		RATINGS 55°C AMBIENT			
Max. Peak Inverse Volts	Type	Max. DCMA	Max. Volt'ge Drop Volts	Max. Length "A" In.	Fig.
600	1N2373	250	2	½	M
1000	1N1730	200	3	½	M
1000	1N2374	250	3	½	M
1500	1N1731	200	4	½	M
1500	1N2375	200	4	½	M
1800	HVC180	250	4	⅝	M
2000	1N1732	200	5	10	M
2000	1N2376	200	5	15/16	M
2400	1N2377	150	6	15/16	M
2400	HVC240	250	5	1 1/16	M
3000	1N1733	150	8	1	M
3000	1N2378	150	8	1	M
3000	HVC300	200	6	1 3/4	M
4000	1N2379	100	10	1¼	M
4000	1N2382	150	10	1	M
4000	HVC400	200	8	⅞	M
5000	1N1734	100	15	10	M
5000	HVC500	200	10	1	M
6000	1N2380	100	15	2½	M
6000	1N2383	100	15	1½	M

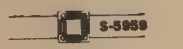
AXIAL LEAD		RATINGS 55°C AMBIENT			
Max. Peak Inverse Volts	Type	Max. DCMA	Max. Volt'ge Drop Volts	Max. Length "A" In.	Fig.
6000	HVC600	150	12	1 1/16	M
6500	HVC650	150	13	1 3/16	M
7500	HVC750	150	15	1 5/16	M
8000	1N2384	70	20	1½	M
8400	HVC840	100	16	1⅜	M
9600	HVC960	100	18	1½	M
10000	1N2381	75	25	2½	M
10000	1N2385	70	25	2	M
10000	HVC1000	100	20	1¾	M
12000	HVC1200	75	22	1 15/16	M
15000	HVC1500	75	25	2 5/16	M
18000	HVC1800	75	30	2 5/8	M
21000	HVC2100	50	35	3	M
25000	HVC2500	50	40	3½	M
30000	HVC3000	50	50	4 1/16	M

FERRULE MOUNTING		RATINGS 55°C AMBIENT			
800	1N1108	450	2	1 13/32	N
1200	1N1109	425	3	1 15/16	N
1500	1N1133	75	4	2½	O

FERRULE MOUNTING		RATINGS 55°C AMBIENT			
Max. Peak Inverse Volts	Type	Max. DCMA	Max. Volt'ge Drop Volts	Max. Length "A" In.	Fig.
1500	1N1134	100	4	1 3/4	O
1600	1N1110	400	4	2 13/32	N
1800	1N1135	65	5	2½	O
1800	1N1136	85	5	1 13/16	O
2000	1N1111	375	5	2⅞	N
2400	1N1112	350	6	3 13/32	N
2400	1N1137	50	6	2½	O
2400	1N1138	60	6	1 13/16	O
2800	1N1113	325	7	3 13/16	N
3600	1N1139	65	9	4 5/16	O
3600	1N1140	65	9	2½	O
4800	1N1141	60	12	4 5/16	O
4800	1N1142	50	12	2½	O
6000	1N1143	50	15	4 5/16	O
6000	1N1143A	65	15	4 5/16	O
7200	1N1144	50	18	6 1/16	O
7200	1N1145	60	18	4 5/16	O
8000	1N1146	45	20	6 1/16	O
12000	1N1147	45	30	6 1/16	O
14000	1N1148	50	35	6 1/16	O
16000	1N1149	45	40	6 1/16	O

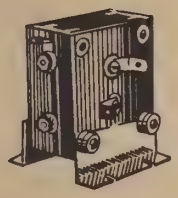
© United Technical Publications

AVALANCHE SILICON BRIDGE RECTIFIER ASSEMBLIES

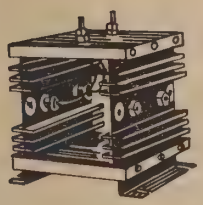


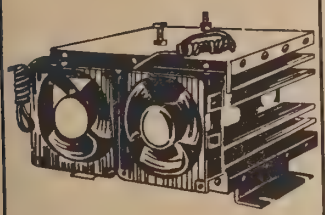














2 TO 12 AMP SINGLE PHASE ASSEMBLIES*

CURRENT			2 AMP	2.5 AMP	6 AMP	12 AMP
Figure			1	2	3	4
APPROX. DC OUTPUT VOLTS	MAX. PIV	MAX. RMS VOLTS	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER
60	100	70	—	—	S-6121	S-5745
120	200	140	S-6211	S-5959	S-6121-1	S-5745-1
180	300	210	—	—	S-6121-2	S-5745-2
240	400	280	S-6211-1	S-5959-1	S-6121-3	S-5745-3
300	500	350	—	—	S-6121-4	S-5745-4
360	600	420	S-6211-2	S-5959-2	S-6121-5	S-5745-5
480	800	560	S-6211-3	S-5959-3	—	—
600	1000	700	S-6211-4	S-5959-4	—	—

Specifications at 50°C, resistive inductive loads.

24 TO 70 AMP SINGLE PHASE ASSEMBLIES

CURRENT			24 AMP*	50 AMP*	70 AMP**
Dimensions overall		Fig. 5	A—5½" B—4¼" C—2⅞"	A—5" B—1¹⁄₁₆" C—5¹³⁄₁₆"	A—7¾" B—5¹⁄₁₆" C—5¹³⁄₁₆"
APPROX. DC OUTPUT VOLTS	MAX. PIV	MAX. RMS VOLTS	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER
30	50	35	ST25-1B1-BBX	ST35-1B1-BBX	ST45F-1B1-BBX
60	100	70	ST210-1B1-BBX	ST310-1B1-BBX	ST410F-1B1-BBX
120	200	140	ST220-1B1-BBX	ST320-1B1-BBX	ST420F-1B1-BBX
180	300	210	ST230-1B1-BBX	ST330-1B1-BBX	ST430F-1B1-BBX
240	400	280	ST240-1B1-BBX	ST340-1B1-BBX	ST440F-1B1-BBX
300	500	350	ST250-1B1-BBX	ST350-1B1-BBX	ST450F-1B1-BBX
360	600	420	ST260-1B1-BBX	ST360-1B1-BBX	ST460F-1B1-BBX
420	700	490	ST270-1B1-BBX	ST370-1B1-BBX	ST470F-1B1-BBX
480	800	560	ST280-1B1-BBX	ST380-1B1-BBX	ST480F-1B1-BBX
600	1000	700	ST2100-1B1-BBX	ST3100-1B1-BBX	ST4100F-1B1-BBX
720	1200	840	ST2120-1B1-BBX	ST3120-1B1-BBX	ST4120F-1B1-BBX

* Convection cooling. ** Forced air cooling; fan included.

100 TO 400 AMP SINGLE PHASE ASSEMBLIES

CURRENT			100 AMP*	200 AMP**	320 AMP**	400 AMP**
Dimensions overall		Fig. 6	A—8¾" B—5¹¹⁄₁₆" C—6½"	A—8¾" B—5¹¹⁄₁₆" C—6½"	A—8¼" B—10½" C—7⅝"	A—9¾" B—10½" C—7⅝"
APPROX. DC OUTPUT VOLTS	MAX. PIV	MAX. RMS VOLTS	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER
30	50	35	ST55F-1B1-BBX	ST65F-1B1-BBX	ST75F-1B1-BBX	ST95F-1B1-BBX
60	100	70	ST510F-1B1-BBX	ST610F-1B1-BBX	ST710F-1B1-BBX	ST910F-1B1-BBX
120	200	140	ST520F-1B1-BBX	ST620F-1B1-BBX	ST720F-1B1-BBX	ST920F-1B1-BBX
180	300	210	ST530F-1B1-BBX	ST630F-1B1-BBX	ST730F-1B1-BBX	ST930F-1B1-BBX
240	400	280	ST540F-1B1-BBX	ST640F-1B1-BBX	ST740F-1B1-BBX	ST940F-1B1-BBX
300	500	350	ST550F-1B1-BBX	ST650F-1B1-BBX	ST750F-1B1-BBX	ST950F-1B1-BBX
360	600	420	ST560F-1B1-BBX	ST660F-1B1-BBX	ST760F-1B1-BBX	ST960F-1B1-BBX
420	700	490	ST570F-1B1-BBX	ST670F-1B1-BBX	ST770F-1B1-BBX	ST970F-1B1-BBX
480	800	560	ST580F-1B1-BBX	ST680F-1B1-BBX	ST780F-1B1-BBX	ST980F-1B1-BBX
600	1000	700	ST5100F-1B1-BBX	ST6100F-1B1-BBX	ST7100F-1B1-BBX	ST9100F-1B1-BBX
720	1200	840	ST5120F-1B1-BBX	ST6120F-1B1-BBX	ST7120F-1B1-BBX	ST9120F-1B1-BBX

* Forced air cooled; 500 LFM fan included. ** Forced air cooled; 1000 LFM fan included.

15 TO 100 AMP THREE PHASE ASSEMBLIES

CURRENT			15 AMP*	32 AMP*	67.5 AMP*	100 AMP**
Dimensions overall		Fig. 7	A—5" B—4⅛" C—2⅞"	A—8" B—4¼" C—2⅞"	A—9¼" B—6¹¹⁄₁₆" C—5"	A—10¾" B—6¹¹⁄₁₆" C—5"
APPROX. DC OUTPUT VOLTS	MAX. PIV	MAX. RMS VOLTS	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER
45	50	35	—	ST25-1BA1-BBX	ST35-1BA1-BBX	ST45F-1BA1-BBX
90	100	70	S-5748	ST210-1BA1-BBX	ST310-1BA1-BBX	ST410F-1BA1-BBX
185	200	140	S-5748-1	ST220-1BA1-BBX	ST320-1BA1-BBX	ST420F-1BA1-BBX
280	300	210	S-5748-2	ST230-1BA1-BBX	ST330-1BA1-BBX	ST430F-1BA1-BBX
370	400	280	S-5748-3	ST240-1BA1-BBX	ST340-1BA1-BBX	ST440F-1BA1-BBX
465	500	350	S-5748-4	ST250-1BA1-BBX	ST350-1BA1-BBX	ST450F-1BA1-BBX
560	600	420	S-5748-5	ST260-1BA1-BBX	ST360-1BA1-BBX	ST460F-1BA1-BBX
650	700	490	S-5748-6	ST270-1BA1-BBX	ST370-1BA1-BBX	ST470-1BA1-BBX
745	800	560	S-5748-7	ST280-1BA1-BBX	ST380-1BA1-BBX	ST480-1BA1-BBX
930	1000	700	S-5748-8	ST2100-1BA1-BBX	ST3100-1BA1-BBX	ST4100-1BA1-BBX
1115	1200	840	S-5748-9	ST2120-1BA1-BBX	ST3120-1BA1-BBX	ST4120-1BA1-BBX

* Convection cooled. ** Forced air cooling; 500 LFM fan included.

135 TO 500 AMP THREE PHASE ASSEMBLIES

CURRENT			135 AMP*	270 AMP**	420 AMP**	500 AMP**
Dimensions overall		Fig. 8	A—12¼" B—5¹¹⁄₁₆" C—6½"	A—12¼" B—5¹¹⁄₁₆" C—6½"	A—11¼" B—10½" C—7⅝"	A—13¾" B—10½" C—7⅝"
APPROX. DC OUTPUT VOLTS	MAX. PIV	MAX. RMS VOLTS	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER	TYPE NUMBER
45	50	35	ST55F-1BA1-BBX	ST65F-1BA1-BBX	ST75F-1BA1-BBX	ST995F-1BA1-BBX
90	100	70	ST510F-1BA1-BBX	ST610F-1BA1-BBX	ST710F-1BA1-BBX	ST910F-1BA1-BBX
185	200	140	ST520F-1BA1-BBX	ST620F-1BA1-BBX	ST720F-1BA1-BBX	ST920F-1BA1-BBX
280	300	210	ST530F-1BA1-BBX	ST630F-1BA1-BBX	ST730F-1BA1-BBX	ST930F-1BA1-BBX
370	400	280	ST540F-1BA1-BBX	ST640F-1BA1-BBX	ST740F-1BA1-BBX	ST940F-1BA1-BBX
465	500	350	ST550F-1BA1-BBX	ST650F-1BA1-BBX	ST750F-1BA1-BBX	ST950F-1BA1-BBX
560	600	420	ST560F-1BA1-BBX	ST660F-1BA1-BBX	ST760F-1BA1-BBX	ST960F-1BA1-BBX
650	700	490	ST570F-1BA1-BBX	ST670F-1BA1-BBX	ST770F-1BA1-BBX	ST970F-1BA1-BBX
745	800	560	ST580F-1BA1-BBX	ST680F-1BA1-BBX	ST780F-1BA1-BBX	ST980F-1BA1-BBX
930	1000	700	ST5100F-1BA1-BBX	ST6100F-1BA1-BBX	ST7100F-1BA1-BBX	ST9100F-1BA1-BBX
1115	1200	840	ST5120F-1BA1-BBX	ST6120F-1BA1-BBX	ST7120F-1BA1-BBX	ST9120F-1BA1-BBX

* Forced air cooling; 500 LFM fan included. ** Forced air cooling; 1000 LFM fan included.

KLIPVOLT SURGE SUPPRESSORS

A voltage transient does its damage in a few microseconds—destroying semiconductors or causing circuit malfunction. But Tarzian Klipvolt selenium suppressors protect semiconductor components and circuits from voltage transients in 1/10 the time required for silicon device reaction.

Tarzian Klipvolt selenium suppressors have turn-on and turn-off characteristics that exceed requirements of even the fastest silicon devices available. Typical Klipvolts can turn on, or off, within 200 nanoseconds.

Tarzian Klipvolt surge suppressors inhibit or reduce peak voltages generated in many different kinds of circuits. They are used to protect silicon rectifiers, transistors and other semiconductor devices and to reduce noise transients.

Polarized types function in DC circuitry and non-polarized types in AC circuits. Extremely small units are available for easy mounting on printed circuit boards.

LOW CURRENT SUPPRESSORS

POLARIZED				SINGLE PHASE NON-POLARIZED				
Max. DC Blocking Volts	Max. Discharge Current (Amps)	Std. Type	Sealed Type	Max. RMS Volts	Discharge Curr. (Amps)	Clamping Volt'g	Std. Type	Sealed Type
22	.250	S-235	S-235-C	26	.200	63	S-235	S-235-C
22	.850	S-236	S-236-C	26	.700	63	S-236	S-236-C
44	.250	S-237	S-237-C	52	.200	125	S-249	S-248-C
44	.850	S-238	S-238-C	52	.700	125	S-250	S-250-C
66	.250	S-239	S-239-C	78	.200	190	S-251	S-251-C
66	.850	S-240	S-240-C	78	.700	190	S-252	S-252-C
88	.250	S-241	S-241-C	104	.200	250	S-253	S-253-C
88	.850	S-242	S-242-C	104	.700	250	S-254	S-254-C
110	.250	S-243	S-243-C	130	.200	310	S-255	S-255-C
110	.850	S-244	S-244-C	130	.700	310	S-871	—
132	.250	S-245	S-245-C	130	.700	310	S-256	S-256-C
132	.850	S-246	S-246-C	—	—	—	—	—
154	.250	S-247	S-247-C	—	—	—	—	—
154	.850	S-248	S-248-C	—	—	—	—	—

SARKES TARZIAN

MEDIUM AND HIGHER CURRENT SUPPRESSORS* (Cont'

THREE PHASE NON-POLARIZED SUPPRESSORS

Max RMS Volts	Peak Discharge Current (Amps)	Max Clamping Voltage	Type No.
35	2.5	85	S-539
35	4.5	85	S-539A
35	8	85	S-539B
35	13.5	85	S-539C
35	20	85	S-539D
35	30	85	S-539E
35	55	85	S-539F
35	85	85	S-539G
35	85	85	S-539H
35	105	85	S-539J
35	165	85	S-539K
35	180	85	S-539L
70	2.5	170	S-540
70	4.5	170	S-540A
70	8	170	S-540B
70	13.5	170	S-540C
70	20	170	S-540D
70	30	170	S-540E
70	55	170	S-540F
70	85	170	S-540G
70	85	170	S-540H
70	105	170	S-540J
70	165	170	S-540K
70	180	170	S-540L
105	2.5	255	S-541
105	4.5	255	S-541A
105	8	255	S-541B
105	13.5	255	S-541C
105	20	255	S-541D
105	30	255	S-541E
105	55	255	S-541F
105	85	255	S-541G
105	85	255	S-541H
105	105	255	S-541J
105	165	255	S-541K
105	180	255	S-541L
140	2.5	340	S-542
140	4.5	340	S-542A
140	8	340	S-542B
140	13.5	340	S-542C
140	20	340	S-542D
140	30	340	S-542E
140	55	340	S-542F
140	85	340	S-542G
140	85	340	S-542H
140	105	340	S-542J
140	165	340	S-542K
140	180	340	S-542L
175	2.5	425	S-543
175	4.5	425	S-543A
175	8	425	S-543B
175	13.5	425	S-543C
175	20	425	S-543D
175	30	425	S-543E
175	55	425	S-543F
175	85	425	S-543G
175	85	425	S-543H
175	105	425	S-543J
175	165	425	S-543K
175	180	425	S-543L
210	2.5	510	S-544
210	4.5	510	S-544A
210	8	510	S-544B
210	13.5	510	S-544C
210	20	510	S-544D
210	30	510	S-544E
210	55	510	S-544F
210	85	510	S-544G
210	85	510	S-544H
210	105	510	S-544J
210	165	510	S-544K
210	180	510	S-544L
245	2.5	600	S-549
245	4.5	600	S-549A
245	8	600	S-549B
245	13.5	600	S-549C
245	20	600	S-549D
245	30	600	S-549E
245	55	600	S-549F
245	85	600	S-549G
245	85	600	S-549H
245	105	600	S-549J
245	165	600	S-549K
245	180	600	S-549L

SINGLE PHASE NON-POLARIZED SUPPRESSORS

Max RMS Volts	Peak Discharge Current (Amps)	Max Clamping Voltage	Type No.
35	2.5	85	S-487
35	4.5	85	S-487A
35	8	85	S-487B
35	13.5	85	S-487C
35	20	85	S-487D
35	30	85	S-487E
35	55	85	S-487F
35	85	85	S-487G
35	85	85	S-487H
35	105	85	S-487J
35	165	85	S-487K
35	180	85	S-487L
70	2.5	170	S-488
70	4.5	170	S-488A
70	8	170	S-488B
70	13.5	170	S-488C
70	20	170	S-488D
70	30	170	S-488E
70	55	170	S-488F
70	85	170	S-488G
70	85	170	S-488H
70	105	170	S-488J
70	165	170	S-488K
70	180	170	S-488L
105	2.5	255	S-489
105	4.5	255	S-489A
105	8	255	S-489B
105	13.5	255	S-489C
105	20	255	S-489D
105	30	255	S-489E
105	55	255	S-489F
105	85	255	S-489G
105	85	255	S-489H
105	105	255	S-489J
105	165	255	S-489K
105	180	255	S-489L
140	2.5	340	S-490
140	4.5	340	S-490A
140	8	340	S-490B
140	13.5	340	S-490C
140	20	340	S-490D
140	30	340	S-490E
140	55	340	S-490F
140	85	340	S-490G
140	85	340	S-490H
140	105	340	S-490J
140	165	340	S-490K
140	180	340	S-490L
175	2.5	425	S-491
175	4.5	425	S-491A
175	8	425	S-491B
175	13.5	425	S-491C
175	20	425	S-491D
175	30	425	S-491E
175	55	425	S-491F
175	85	425	S-491G
175	85	425	S-491H
175	105	425	S-491J
175	165	425	S-491K
175	180	425	S-491L
210	2.5	510	S-492
210	4.5	510	S-492A
210	8	510	S-492B
210	13.5	510	S-492C
210	20	510	S-492D
210	30	510	S-492E
210	55	510	S-492F
210	85	510	S-492G
210	85	510	S-492H
210	105	510	S-492J
210	165	510	S-492K
210	180	510	S-492L
280	2.5	680	S-493
280	4.5	680	S-493A
280	8	680	S-493B
280	13.5	680	S-493C
280	20	680	S-493D
280	30	680	S-493E
280	55	680	S-493F
280	85	680	S-493G
280	85	680	S-493H
280	105	680	S-493J
280	165	680	S-493K
280	185	680	S-493L
350	2.5	850	S-494
350	4.5	850	S-494A
350	8	850	S-494B
350	13.5	850	S-494C
350	20	850	S-494D
350	30	850	S-494E
350	55	850	S-494F
350	85	850	S-494G
350	85	850	S-494H
350	105	850	S-494J
350	165	850	S-494K
350	180	850	S-494L
420	2.5	1020	S-495
420	4.5	1020	S-495A
420	8	1020	S-495B
420	13.5	1020	S-495C
420	20	1020	S-495D
420	30	1020	S-495E
420	55	1020	S-495F
420	85	1020	S-495G
420	85	1020	S-495H
420	105	1020	S-495J
420	165	1020	S-495K
420	180	1020	S-495L

POLARIZED SUPPRESSORS

Maximum DC Blocking Volts	Peak Discharge Current (Amps)	Type No.
27	5.5	S-550
27	11	S-550A
27	20	S-550B
27	33	S-550C
27	50	S-550D
27	65	S-550E
27	120	S-550F
27	200	S-550G
27	200	S-550H
27	225	S-550J
27	360	S-550K
27	430	S-550L
54	5.5	S-551
54	11	S-551A
54	20	S-551B
54	33	S-551C
54	50	S-551D
54	65	S-551E
54	120	S-551F
54	200	S-551G
54	200	S-551H
54	225	S-551J
54	360	S-551K
54	430	S-551L
81	5.5	S-552
81	11	S-552A
81	20	S-552B
81	33	S-552C
81	50	S-552D
81	65	S-552E
81	120	S-552F
81	200	S-552G
81	200	S-552H
81	225	S-552J
81	360	S-552K
81	430	S-552L
108	5.5	S-553
108	11	S-553A
108	20	S-553B
108	33	S-553C
108	50	S-553D
108	65	S-553E
108	120	S-553F
108	200	S-553G
108	200	S-553H
108	225	S-553J
108	360	S-553K
108	430	S-553L
135	5.5	S-554
135	11	S-554A
135	20	S-554B
135	33	S-554C
135	50	S-554D
135	65	S-554E
135	120	S-554F
135	200	S-554G
135	200	S-554H
135	225	S-554J
135	360	S-554K
135	430	S-554L
162	5.5	S-555
162	11	S-555A
162	20	S-555B
162	33	S-555C
162	50	S-555D
162	65	S-555E
162	1200	S-555F
162	200	S-555G
162	200	S-555H
162	225	S-555J
162	360	S-555K
162	430	S-555L
189	5.5	S-556
189	11	S-556A
189	20	S-556B
189	33	S-556C
189	50	S-556D
189	65	S-556E
189	120	S-556F
189	200	S-556G
189	200	S-556H
189	225	S-556J
189	360	S-556K
189	430	S-556L
216	5.5	S-557
216	11	S-557A
216	20	S-557B
216	33	S-557C
216	50	S-557D
216	65	S-557E
216	120	S-557F
216	200	S-557G
216	200	S-557H
216	225	S-557J
216	360	S-557K
216	430	S-557L
244	5.5	S-561
244	11	S-561A
244	20	S-561B
244	33	S-561C
244	50	S-561D
244	65	S-561E
244	120	S-561F
244	200	S-561G
244	200	S-561H
244	225	S-561J
244	360	S-561K
244	430	S-561L
272	5.5	S-577
272	11	S-577A
272	20	S-577B
272	33	S-577C
272	50	S-577D
272	65	S-577E
272	120	S-577F
272	200	S-577G
272	200	S-577H
272	225	S-577J
272	360	S-577K
272	430	S-577L

SEE PRECEDING PAGE FOR LOW CURRENT SUPPRESSORS

© United Technical Publication

SARKES TARZIAN SILICON ZENER VOLTAGE REGULATORS

1 WATT PLASTIC CASE — 1TA SERIES (Style D)



Tarzian Type	Specifications @ 25°C: Zener Volt (V)	Test Current (Ma)	Dyn. Imped. (Ohms)	Jedec Type
1TA5.6	5.6	100	1.2	—
1TA6.2	6.2	100	1.5	—
1TA6.8	6.8	37	3.5	1N3016
1TA7.5	7.5	34	4.0	1N3017
1TA8.2	8.2	31	4.5	1N3018
1TA9.1	9.1	28	5.0	1N3019
1TA10	10	25	7.0	1N3020
1TA11	11	23	8.0	1N3021
1TA12	12	21	9.0	1N3022
1TA13	13	19	10	1N3023
1TA15	15	17	14	1N3024
1TA16	16	15.5	16	1N3025
1TA18	18	14	20	1N3026
1TA20	20	12.5	22	1N3027
1TA22	22	11.5	23	1N3028
1TA24	24	10.5	25	1N3029
1TA27	27	9.5	35	1N3030
1TA30	30	8.5	40	1N3031
1TA33	33	7.5	45	1N3032
1TA36	36	7.0	50	1N3033
1TA39	39	6.5	60	1N3034
1TA43	43	6.0	70	1N3035
1TA47	47	5.5	80	1N3036
1TA51	51	5.0	95	1N3037
1TA56	56	4.5	110	1N3038
1TA62	62	4.0	125	1N3039
1TA68	68	3.7	150	1N3040
1TA75	75	3.3	175	1N3041
1TA82	82	3.0	200	1N3042
1TA91	91	2.8	250	1N4043
1TA100	100	2.5	350	1N3044
1TA110	110	2.3	450	1N3045
1TA120	120	2.0	550	1N3046
1TA130	130	1.9	700	1N3047
1TA150	150	1.7	1000	1N3048
1TA160	160	1.6	1100	1N3049
1TA180	180	1.4	1200	1N3050
1TA200	200	1.2	1500	1N3051

NOTES: Standard tolerance is ±20%.

1 WATT PLASTIC CASE — VR SERIES (Style B)



Tarzian Type	Specifications @ 25°C: Breakdown Voltage (VB)	Test Current (Ma)	Dyn. Imped. (Ohms)
VR6	6	25	4
VR7	7	25	5
VR8.5	8.5	25	6
VR10	10	12	8
VR12	12	12	10
VR14	14	12	11
VR18	18	12	17
VR20	20	12	20
VR24	24	4	28
VR28	28	4	42
VR33	33	4	50
VR39	39	4	70
VR47	47	4	98
VR56	56	4	140
VR67	67	2	200
VR80	80	2	280
VR90	90	1	340
VR105	105	1	400
VR110	110	1	490
VR120	120	1	570
VR130	130	1	650
VR150	150	1	860
VR160	160	1	970
VR180	180	1	1200
VR200	200	1	1400

NOTES: Maximum Dissipation — 1 Watt.

2 WATT PLASTIC CASE — 2VR SERIES (Style B)



Tarzian Type	Specifications @ 25°C: Breakdown Voltage (VB)	Test Current (Ma)	Dyn. Imped. (Ohms)
2VR6	6	25	4
2VR7	7	25	5
2VR8.5	8.5	25	6
2VR10	10	25	8
2VR12	12	12	10
2VR14	14	12	11
2VR18	18	12	17
2VR20	20	12	20
2VR24	24	4	28
2VR28	28	4	42
2VR33	33	4	50
2VR39	39	4	70
2VR47	47	4	98
2VR56	56	4	140
2VR67	67	2	200
2VR80	80	2	280
2VR90	90	1	340
2VR105	105	1	400
2VR110	110	1	490
2VR120	120	1	570
2VR130	130	1	650
2VR150	150	1	860
2VR160	160	1	970
2VR180	180	1	1200
2VR200	200	1	1400

NOTES: Maximum Dissipation — 2 Watts.

3 WATT PLASTIC CASE — 3VR SERIES (Style G)



Tarzian Type	Specifications @ 25°C: Breakdown Voltage (VB)	Test Current (Ma)	Dyn. Imped. (Ohms)
3VR6	6	250	1.0
3VR8.5	8.5	250	1.5
3VR12	12	250	2.0
3VR18	18	75	3.0
3VR24	24	75	5.0
3VR33	33	75	8.0
3VR47	47	30	15.0
3VR67	67	30	30.0
3VR90	90	30	60.0
3VR120	120	15	100.0
3VR150	150	15	200.0
3VR180	180	15	300.0
3VR200	200	15	350.0

NOTES: Maximum Dissipation — 3 Watt.

Add Suffix "A" to type number for 10% tolerance; Suffix "B" for 5% tolerance. For reverse polarity add Suffix "R" to type number and Jedec number.

Example: 1TA6-8RA; 1N30168A

10 WATT STUD MOUNT — 10T SERIES (Style H)



Tarzian Type	Specifications @ 25°C: Zener Volt (V)	Test Current (Ma)	Dyn. Imped. (Ohms)	Jedec Type
10T5.6	5.6	1000	1	1N1803
10T6.2	6.2	1000	1	1N1804
10T6.8	6.8	1000	1	1N1805
10T7.5	7.5	1000	1	1N1806
10T8.2	8.2	1000	1	1N1807
10T9.1	9.1	500	1	1N1808
10T10	10	500	2	1N1351
10T11	11	500	2	1N1352
10T12	12	500	2	1N1353
10T13	13	500	2	1N1354
10T15	15	500	2	1N1355
10T16	16	500	3	1N1356
10T18	18	150	3	1N1357
10T20	20	150	3	1N1358
10T22	22	150	3	1N1359
10T24	24	150	3	1N1360
10T27	27	150	3	1N1361
10T30	30	150	4	1N1362
10T33	33	150	4	1N1363
10T36	36	150	5	1N1364
10T39	39	150	5	1N1365
10T43	43	150	6	1N1366
10T47	47	150	7	1N1367
10T51	51	150	8	1N1368
10T56	56	150	9	1N1369
10T62	62	50	12	1N1370
10T68	68	50	14	1N1371
10T75	75	50	20	1N1372
10T82	82	50	22	1N1373
10T91	91	50	35	1N1374
10T100	100	50	40	1N1375
10T110	110	50	47	1N1809
10T120	120	50	56	1N1810
10T130	130	50	65	1N1811
10T150	150	50	82	1N1812
10T160	160	50	93	1N1813
10T180	180	50	115	1N1814
10T200	200	50	140	1N1815

NOTE: Standard tolerance is 10%.

50 WATT STUD MOUNT — 50T SERIES (Style H)

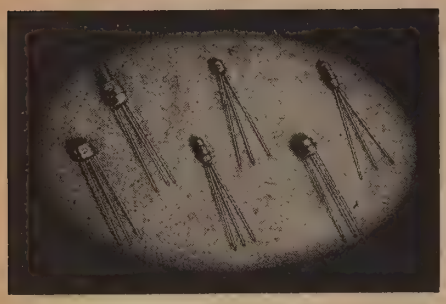


Tarzian Type	Specifications @ 25°C: Zener Volt (V)	Test Current (Ma)	Dyn. Imped. (Ohms)
50T6.8	6.8	1850	0.2
50T7.5	7.5	1700	0.3
50T8.2	8.2	1500	0.4
50T9.1	9.1	1370	0.5
50T10	10	1200	0.6
50T11	11	1100	0.8
50T12	12	1000	1.0
50T13	13	960	1.1
50T15	15	830	1.4
50T16	16	780	1.6
50T18	18	700	2.0
50T20	20	630	2.4
50T22	22	570	2.5
50T24	24	520	2.6
50T27	27	460	2.8
50T30	30	420	3.0
50T33	33	380	3.2
50T36	36	350	3.5
50T39	39	320	4.0
50T43	43	290	4.5
50T47	47	270	5.0
50T51	51	245	5.2
50T62	62	200	7
50T68	68	180	8
50T75	75	170	9
50T82	82	150	11
50T91	91	140	15
50T100	100	120	20
50T110	110	110	30
50T120	120	100	40
50T130	130	95	50
50T150	150	85	75
50T160	160	80	80
50T180	180	68	90
50T200	200	65	100

Standard tolerance is 10%.

© United Technical Publications

SPRAGUE SEMICONDUCTORS



GERMANIUM & SILICON TRANSISTORS

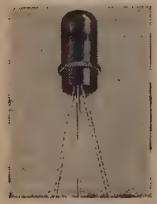
- Sprague Transistors are Produced by Advanced Equipment and the Latest Manufacturing Techniques.
- Excellent Design Flexibility and Electrical Properties Meet the Most Rigid Performance and Reliability Standards.
- Highest Quality and Outstanding Economy.
- For Complete Technical Data, Refer to Latest Issue of the Applicable Engineering Bulletin.

Call your Sprague Industrial Distributor for current quantity prices.

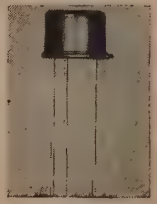
Type Number	Case	Description
2N128	TO-24	PNP Ge Switch SBT®
JAN-2N128	TO-24	to MIL-S-19500/9A
2N231	TO-24	PNP Ge Switch SBT
2N240	TO-24	PNP Ge Switch SBT
JAN-2N240	TO-24	to MIL-S-19500/25A
2N344	TO-24	PNP Ge Amplifier SBT
2N345	TO-24	PNP Ge Amplifier SBT
2N346	TO-24	PNP Ge Amplifier SBT
2N393	TO-24	PNP Ge Switch MAT®
JAN-2N393	TO-24	to MIL-S-19500/77B
2N495	TO-1	PNP Si Switch SPAT®
2N496	TO-1	PNP Si Switch SPAT
2N499	TO-1	PNP Ge Amplifier MADT®
JAN-2N499	TO-1	to MIL-S-19500/72B
2N499A	TO-1	PNP Ge Amplifier MADT
JAN-2N499A	TO-1	to MIL-S-19500/72B
2N501	TO-1	PNP Ge Switch MADT
2N501A	TO-1	PNP Ge Switch MADT
JAN-2N501A	TO-1	to MIL-S-19500/62A
2N502	TO-9	PNP Ge Amplifier MADT
2N502A	TO-9	PNP Ge Amplifier MADT
JAN-2N502A	TO-9	to MIL-S-19500/112A
2N502B	TO-9	PNP Ge Amplifier MADT
JAN-2N502B	TO-9	to MIL-S-19500/112A
2N503	TO-9	PNP Ge Amplifier MADT
2N504	TO-1	PNP Ge Amplifier MADT
2N588	TO-1	PNP Ge Amplifier MADT
2N588A	TO-1	PNP Ge Amplifier MADT
2N779A	TO-18	PNP Ge Switch MADT
2N794	TO-18	PNP Ge Switch ECDC
2N795	TO-18	PNP Ge Switch ECDC
2N796	TO-18	PNP Ge Switch ECDC
2N846A	TO-18	PNP Ge Switch ECDC
2N858	TO-18	PNP Si Switch SPAT
2N859	TO-18	PNP Si Switch SPAT
2N860	TO-18	PNP Si Switch SPAT
2N861	TO-18	PNP Si Switch SPAT
2N862	TO-18	PNP Si Switch SPAT
2N863	TO-18	PNP Si Switch SPAT
2N864	TO-18	PNP Si Switch SPAT
2N865	TO-18	PNP Si Switch SPAT

Type Number	Case	Description
2N1118	TO-5	PNP Si Amplifier SPAT
JAN-2N1118	TO-5	to MIL-S-19500/138B
2N1118A	TO-5	PNP Si Amplifier SPAT
2N1119	TO-5	PNP Si Switch SPAT
JAN-2N1119	TO-5	to MIL-S-19500/139B
2N1122	TO-24	PNP Ge Switch MAT
2N1122A	TO-24	PNP Ge Switch MAT
2N1300	TO-5	PNP Ge Switch ECDC
2N1301	TO-5	PNP Ge Switch ECDC
2N1411	TO-24	PNP Ge Switch MAT
JAN-2N1411	TO-24	to MIL-S-19500/133
2N1427	TO-24	PNP Ge Switch MAT
2N1429	TO-5	PNP Si Switch SPAT
2N1499A	TO-9	PNP GE Switch ECDC
JAN-2N1499A	TO-9	to MIL-S-19500/170
2N1499B	TO-9	PNP GE Switch ECDC
2N1500	TO-9	PNP Ge Switch MADT
JAN-2N1500	TO-9	to MIL-S-19500/125
2N1676	TO-5	PNP Si Chopper SPAT
2N1677	TO-5	PNP Si Chopper SPAT
2N1726	TO-9	Ge Communication MADT
2N1727	TO-9	Ge Communication MADT
2N1728	TO-9	Ge Communication MADT
2N1742	TO-9	Ge Communication MADT
2N1743	TO-9	Ge Communication MADT
2N1744	TO-9	Ge Communication MADT
2N1745	TO-9	PNP Ge Amplifier MADT
2N1868	TO-9	PNP Ge Communication MADT
2N2048	TO-9	PNP Ge Switch ECDC
2N2162	TO-5	PNP Si Chopper SPAT
2N2163	TO-5	PNP Si Chopper SPAT
2N2164	TO-5	PNP Si Chopper SPAT
2N2165	TO-5	PNP Si Chopper SPAT
2N2166	TO-5	PNP Si Chopper SPAT
2N2167	TO-5	PNP Si Chopper SPAT
2N2168	TO-9	PNP Ge Switch MADT
2N2169	TO-9	PNP Ge Switch MADT
2N2170	TO-9	PNP Ge Switch MADT

Type Number	Case	Description
2N2185	TO-18	PNP Si Chopper SPAT
2N2186	TO-18	PNP Si Matched Pair SPAT
2N2187	TO-18	PNP Si Matched Pair SPAT
2N2199	TO-9	PNP Ge Amplifier MADT
2N2200	TO-9	PNP Ge Amplifier MADT
2N2218	TO-5	NPN Si Switch SEPT®
2N2218A	TO-5	NPN Si Switch SEPT
2N2219	TO-5	NPN Si Switch SEPT
2N2219A	TO-5	NPN Si Switch SEPT
2N2221	TO-18	NPN Si Switch SEPT
JAN-2N2221	TO-18	to MIL-S-19500/225D
2N2221A	TO-18	NPN Si Switch SEPT
JAN-2N2221A	TO-18	to MIL-S-19500/255D
2N2222	TO-18	NPN Si Switch SEPT
JAN-2N2222	TO-18	to MIL-S-19500/225D
2N2222A	TO-18	NPN Si Switch SEPT
JAN-2N2222A	TO-18	to MIL-S-19500/255D
2N2274	TO-18	PNP Si Chopper SPAT
2N2275	TO-18	PNP Si Matched Pair SPAT
2N2276	TO-18	PNP Si Chopper SPAT
2N2277	TO-18	PNP Si Matched Pair SPAT
2N2278	TO-18	PNP Si Chopper SPAT
2N2279	TO-18	PNP Si Matched Pair SPAT
2N2280	TO-18	PNP Si Chopper SPAT
2N2281	TO-18	PNP Si Matched Pair SPAT
2N2360	TO-12	PNP Ge Amplifier MADT
2N2361	TO-12	PNP Ge Amplifier MADT
2N2362	TO-12	PNP Ge Amplifier MADT
2N2377	TO-18	PNP Si Amplifier SPAT
JAN-2N2377	TO-18	to MIL-S-19500/288
2N2378	TO-18	PNP Si Amplifier SPAT
JAN-2N2378	TO-18	to MIL-S-19500/289
2N2398	TO-12	PNP Ge Amplifier MADT
2N2399	TO-12	PNP Ge Amplifier MADT
2N2451	TO-24	PNP Ge Switch MAT
2N2487	TO-18	PNP Ge Switch MADT
2N2488	TO-18	PNP Ge Switch MADT
2N2489	TO-18	PNP Ge Switch MADT



TO-1



TO-5



TO-9



TO-12

Copyright 1970, Sprague Products Company

Sizes subject to change without notice.

© United Technical Publications

SPRAGUE SEMICONDUCTORS

RANSISTORS, continued

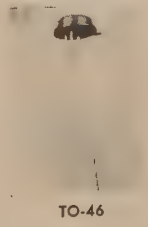
Type Number	Case	Description
2N2904	TO-5	PNP Si Switch SEPT
-2N2904	TO-5	to MIL-S-19500/290
2N2904A	TO-5	PNP Si Switch SEPT
2N2905	TO-5	PNP Si Switch SEPT
-2N2905	TO-5	to MIL-S-19500/290
2N2905A	TO-5	PNP Si Switch SEPT
2N2906	TO-18	PNP Si Switch SEPT
2N2906A	TO-18	PNP Si Switch SEPT
2N2907	TO-18	PNP Si Switch SEPT
2N2907A	TO-18	PNP Si Switch SEPT
2N2944	TO-46	PNP Si Switch, Amplifier, Chopper SEPT
2N2945	TO-46	PNP Si Switch, Amplifier, Chopper SEPT
2N2946	TO-46	PNP Si Switch, Amplifier, Chopper SEPT
2N2951	TO-5	NPN Si Amplifier SEPT
2N2952	TO-18	NPN Si Amplifier SEPT
2N2958	TO-5	NPN Si Switch SEPT
2N2959	TO-5	NPN Si Switch SEPT
2N2968	TO-5	PNP Si Symmetrical SPAT
2N2970	TO-5	PNP Si Symmetrical SPAT
2N2971	TO-18	PNP Si Symmetrical SPAT
2N3058	TO-46	PNP Si Amplifier SEPT
2N3059	TO-46	PNP Si Amplifier SEPT
2N3060	TO-46	PNP Si Amplifier SEPT
2N3061	TO-46	PNP Si Amplifier SEPT
2N3133	TO-5	PNP Si Switch SEPT
2N3134	TO-5	PNP Si Switch SEPT
2N3135	TO-18	PNP Si Switch SEPT
2N3136	TO-18	PNP Si Switch SEPT
2N3217	TO-46	PNP Si Switch, Amplifier, Chopper SEPT
2N3218	TO-46	PNP Si Switch, Amplifier, Chopper SEPT
2N3219	TO-46	PNP Si Switch, Amplifier, Chopper SEPT
2N3317	TO-18	PNP Si Chopper SPAT
2N3318	TO-18	PNP Si Chopper SPAT
2N3319	TO-18	PNP Si Chopper SPAT
2N3320	TO-18	PNP Ge Switch MADT
2N3321	TO-18	PNP Ge Switch MADT
2N3322	TO-18	PNP Ge Switch MADT
2N3677	TO-46	PNP Silicon Planar SEPT
2N3724	TO-5	NPN Si Core Driver SEPT
2N3725	TO-5	NPN Si Core Driver SEPT

Type Number	Case	Description
2N3840	TO-46	PNP Si Switch, Amp., Chopper
2N3977	TO-46	PNP Si Switch, Amp., Chopper
2N3978	TO-46	PNP Si Switch, Amp., Chopper
2N3979	TO-46	PNP Si Switch, Amp., Chopper
2N4007	TO-46	PNP Silicon Planar SEPT
2N4008	TO-46	PNP Silicon Planar SEPT
2N4013	TO-18	NPN Si Core Driver SEPT
2N4014	TO-18	NPN Si Core Driver SEPT
2N4383	TO-5	NPN Si Low-Level Amp. SEPT
2N4384	TO-18	NPN Si Low-Level Amp. SEPT
2N4385	TO-5	NPN Si Low-Level Amp. SEPT
2N4386	TO-18	NPN Si Low-Level Amp. SEPT
2N4412	TO-5	NPN Si Low-Level Amp. SEPT
2N4412A	TO-5	NPN Si Low-Level Amp. SEPT
2N4413	TO-18	NPN Si Low-Level Amp. SEPT
2N4413A	TO-18	NPN Si Low-Level Amp. SEPT
2N4414	TO-5	NPN Si Low-Level Amp. SEPT
2N4414A	TO-5	NPN Si Low-Level Amp. SEPT
2N4415	TO-18	NPN Si Low-Level Amp. SEPT
2N4415A	TO-18	NPN Si Low-Level Amp. SEPT
3N90	TO-18	PNP Si Dual Emitter Chopper DUET
3N91	TO-18	PNP Si Dual Emitter Chopper DUET
3N92	TO-18	PNP Si Dual Emitter Chopper DUET
3N93	TO-18	PNP Si Dual Emitter Chopper DUET
3N94	TO-18	PNP Si Dual Emitter Chopper DUET
3N95	TO-18	PNP Si Dual Emitter Chopper DUET
3N114	TO-72	PNP Si Dual Emitter Chopper DUET
3N115	TO-72	PNP Si Dual Emitter Chopper DUET
3N116	TO-72	PNP Si Dual Emitter Chopper DUET
3N117	TO-72	PNP Si Dual Emitter Chopper DUET
3N118	TO-72	PNP Si Dual Emitter Chopper DUET
3N119	TO-72	PNP Si Dual Emitter Chopper DUET
3N123	TO-72	PNP Si Dual Emitter Chopper DUET
MA-95	TO-24	PNP Ge Switch MAT
MA-96	TO-24	PNP Ge Switch MAT
MA-97	TO-24	PNP Ge Switch MAT
SA-310	TO-5	PNP Si Symmetrical SPAT
SA-311	TO-5	PNP Si Symmetrical SPAT
SA-312	TO-5	PNP Si Symmetrical SPAT
SA-313	TO-5	PNP Si Symmetrical SPAT
SA-314	TO-5	PNP Si Symmetrical SPAT
SA-315	TO-5	PNP Si Symmetrical SPAT
SA-316	TO-5	PNP Si Symmetrical SPAT
SA-410	TO-18	PNP Si Symmetrical SPAT
SA-411	TO-18	PNP Si Symmetrical SPAT
SA-412	TO-18	PNP Si Symmetrical SPAT
SA-413	TO-18	PNP Si Symmetrical SPAT
SA-414	TO-18	PNP Si Symmetrical SPAT
SA-415	TO-18	PNP Si Symmetrical SPAT
SA-416	TO-18	PNP Si Symmetrical SPAT

Type Number	Case	Description
TN-53	TO-5	NPN Si Switch, Amp. SEPT
TN-54	TO-18	NPN Si Switch, Amp. SEPT
TN-55	TO-5	NPN Si Low-Level Amplifier SEPT
TN-56	TO-18	NPN Low-level Amplifier SEPT
TN-57	TO-5	NPN Si Low-level Amplifier SEPT
TN-58	TO-18	NPN Low-level Amplifier SEPT
TN-59	TO-5	NPN Si Switch, Amp. SEPT
TN-60	TO-18	NPN Si Switch, Amp. SEPT
TN-61	TO-5	NPN Si Switch, Amp. SEPT
TN-62	TO-18	NPN Si Switch, Amp. SEPT
TN-63	TO-5	NPN Si Switch, Amp. SEPT
TN-64	TO-18	NPN Si Switch, Amp. SEPT
TN-79	TO-5	NPN Si Chopper SEPT
TN-80	TO-18	NPN Chopper SEPT
TN-81	TO-5	NPN Si Switch SEPT
TN-237	TO-5	NPN Core Driver SEPT
TN-238	TO-18	NPN Si Core Driver SEPT
TQ-53	TO-5	PNP Si Amplifier SEPT
TQ-53A	TO-5	PNP Si Amplifier SEPT
TQ-54	TO-18	PNP Si Amplifier SEPT
TQ-54A	TO-18	PNP Si Amplifier SEPT
TQ-55	TO-5	PNP Si Low-level Amplifier SEPT
TQ-55A	TO-5	PNP Si Low-level Amplifier SEPT
TQ-56	TO-18	PNP Si Low-level Amplifier SEPT
TQ56A	TO-18	PNP Si Low-level Amplifier SEPT
TQ-57	TO-5	PNP Si Low-level Amplifier SEPT
TQ-57A	TO-5	PNP Si Low-level Amplifier SEPT
TQ-58	TO-18	PNP Si Low-level Amplifier SEPT
TQ-58A	TO-18	PNP Si Low-level Amplifier SEPT
TQ-59	TO-5	PNP Si Switch, Amp. SEPT
TQ-59A	TO-5	PNP Si Switch, Amp. SEPT
TQ-60	TO-18	PNP Si Switch, Amp. SEPT
TQ-60A	TO-18	PNP Si Switch, Amp. SEPT.
TQ-61	TO-5	PNP Si Switch, Amp. SEPT
TQ-61A	TO-5	PNP Si Switch, Amp. SEPT
TQ-62	TO-18	PNP Si Switch, Amp. SEPT
TQ-62A	TO-18	PNP Si Switch, Amp. SEPT.
TQ-63	TO-5	PNP Si Switch, Amp. SEPT
TQ63A	TO-5	PNP Si Switch, Amp. SEPT
TQ-64	TO-18	PNP Si Switch, Amp. SEPT
TQ-64A	TO-18	PNP Si Switch, Amp. SEPT.


TO-18


TO-24


TO-46

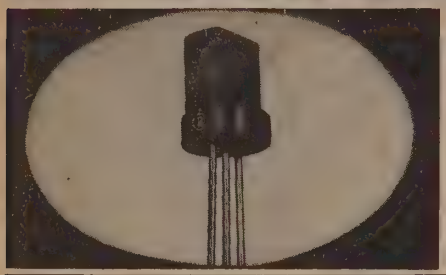

TO-72

Copyriht 1970, Sprague Products Company

Sizes subject to change without notice.

United Technical Publications

SPRAGUE SEMICONDUCTORS



ECONOLINE® PLASTIC-MOLDED TRANSISTORS

- An Improved Low-Cost Line of Transistors Priced for Commercial Applications, Yet Retain the Reliability Required in Industrial Equipment.
- Automated Assembly and Plastic Packaging Bring Prices Substantially Under Those of Comparable Metal-Can Types.
- For More Data, See latest Issue of Short-Form Catalog IND-851.

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

Type No.	Case	Description
2N2711	TO-98	NPN G/P Small-signal Audio Amplifier
2N2712	TO-98	NPN G/P Small-signal Audio Amplifier
2N2713	TO-98	NPN G/P Large-signal Amplifier/Switch
2N2714	TO-98	NPN G/P Large-signal Amplifier/Switch
2N2923	TO-98	NPN G/P Small-signal Audio Amplifier
2N2924	TO-98	NPN G/P Small-signal Audio Amplifier
2N2925	TO-98	NPN G/P Small-signal Audio Amplifier
2N2926	TO-98	NPN G/P Small-signal Audio Amplifier
2N3390	TO-98	NPN Low-noise High-gain Amplifier
2N3391	TO-98	NPN Low-noise High-gain Amplifier
2N3391A	TO-98	NPN Low-noise High-gain Amplifier
2N3392	TO-98	NPN G/P Small-signal Audio Amplifier
2N3393	TO-98	NPN G/P Small-signal Audio Amplifier
2N3394	TO-98	NPN G/P Small-signal Audio Amplifier
243395	TO-98	NPN G/P Small-signal Audio Amplifier
2N3396	TO-98	NPN G/P Small-signal Audio Amplifier
2N3397	TO-98	NPN G/P Small-signal Audio Amplifier
2N3398	TO-98	NPN G/P Small-signal Audio Amplifier
2N3402	TO-98HS*	NPN G/P Large-signal Amplifier/Switch
2N3403	TO-98HS*	NPN G/P Large-signal Amplifier/Switch
2N3404	TO-98HS*	NPN G/P Large-signal Amplifier/Switch
2N3405	TO-98HS*	NPN G/P Large-signal Amplifier/Switch
2N3414	TO-98	NPN G/P Large-signal Amplifier/Switch
2N3415	TO-98	NPN G/P Large-signal Amplifier/Switch
2N3416	TO-98	NPN G/P Large-signal Amplifier/Switch
2N3417	TO-98	NPN G/P Large-signal Amplifier/Switch
2N3721	TO-98	NPN G/P Small-signal Audio Amplifier
2N3843	TO-98	NPN High-frequency Amplifier/Oscillator
2N3843A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3844	TO-98	NPN High-frequency Amplifier/Oscillator
2N3844A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3845	TO-98	NPN High-frequency Amplifier/Oscillator
2N3845A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3854	TO-98	NPN High-frequency Amplifier/Oscillator
2N3854A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3855	TO-98	NPN High-frequency Amplifier/Oscillator
2N3855A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3856	TO-98	NPN High-frequency Amplifier/Oscillator
2N3856A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3858	TO-98	NPN High-frequency Amplifier/Oscillator
2N3858A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3859	TO-98	NPN High-frequency Amplifier/Oscillator
2N3859A	TO-98	NPN High-frequency Amplifier/Oscillator
2N3860	TO-98	NPN High-frequency Amplifier/Oscillator
2N3877	TO-98	NPN High-voltage Indicator Driver
2N3877A	TO-98	NPN High-voltage Indicator Driver
2N3900	TO-98	NPN Low-noise High-gain Amplifier
2N3900A	TO-98	NPN Low-noise High-gain Amplifier
2N3901	TO-98	NPN Low-noise High-gain Amplifier
2N3975	TO-98	NPN G/P Large-signal Amplifier/Switch
2N3976	TO-98	NPN G/P Large-signal Amplifier/Switch
2N4424	TO-98	NPN G/P Large-signal Amplifier/Switch
2N4425	TO-98HS*	NPN G/P Large-signal Amplifier/Switch
2N4951	TO-98	NPN Premium Large-signal Amplifier/Switch
2N4952	TO-98	NPN Premium Large-signal Amplifier/Switch
2N4953	TO-98	NPN Premium Large-signal Amplifier/Switch
2N4954	TO-98	NPN Premium Large-signal Amplifier/Switch
2N5060	TO-92	PNPN Silicon Controlled Rectifier—SCR
2N5061	TO-92	PNPN Silicon Controlled Rectifier—SCR
2N5172	TO-98	NPN G/P Small-signal Audio Amplifier
2N5232	TO-98	NPN Low-noise, High-gain Amplifier
2N5232A	TO-98	NPN Low-noise, High-gain Amplifier
2N5354	TO-98	PNP G/P Small-signal Audio Amplifier
2N5355	TO-98	PNP G/P Small-signal Audio Amplifier
2N5356	TO-98	PNP G/P Small-signal Audio Amplifier
2N5368	BR†	NPN Premium Large-signal Amplifier/Switch
2N5369	BR†	NPN Premium Large-signal Amplifier/Switch
2N5370	BR†	NPN Premium Large-signal Amplifier/Switch
2N5371	BR†	NPN Premium Large-signal Amplifier/Switch
2N5372	BR†	PNP Premium Large-signal Amplifier/Switch
2N5373	BR†	PNP Premium Large-signal Amplifier/Switch
2N5374	BR†	PNP Premium Large-signal Amplifier/Switch
2N5375	BR†	PNP Premium Large-signal Amplifier/Switch
2N5376	BR†	NPN Low-noise High-gain Amplifier
2N5377	BR†	NPN Low-noise High-gain Amplifier
2N5378	BR†	PNP Low-noise High-gain Amplifier
2N5379	BR†	PNP Low-noise High-gain Amplifier
2N5380	BR†	NPN Premium Large-signal Amplifier/Switch
2N5381	BR†	NPN Premium Large-signal Amplifier/Switch
2N5382	BR†	PNP Premium Large-signal Amplifier/Switch
2N5383	BR†	PNP Premium Large-signal Amplifier/Switch
NN7000 through NN7005	BR	NPN High-current Amplifier
NN7500 through NN7505	BR	PNP High-current Amplifier
TD-100	6-lead BP	NPN/NPN Dual Transistor Differential Amplif
TD-101	6-lead BP	NPN/NPN Dual Transistor Differential Amplif
TD-102	6-lead BP	NPN/NPN Dual Transistor
TD-200	6-lead BN	NPN/NPN Dual Transistor Differential Amplif
TD-201	6-lead BN	NPN/NPN Dual Transistor Differential Amplif
TD-202	6-lead BN	NPN/NPN Dual Transistor
TD-250	6-lead BN	NPN/NPN Dual Transistor Differential Amplif
TD-400	6-lead BP	PNP/PNP Dual Transistor Differential Amplifi
TD-401	6-lead BP	PNP/PNP Dual Transistor Differential Amplifi
TD-402	6-lead BP	PNP/PNP Dual Transistor
TD-500	6-lead BN	PNP/PNP Dual Transistor Differential Amplifi
TD-501	6-lead BN	PNP/PNP Dual Transistor Differential Amplifi
TD-502	6-lead BN	PNP/PNP Dual Transistor
TD-550	6-lead BN	PNP/PNP Dual Transistor Differential Amplifi
TD-600	6-lead BP	NPN/PNP Complementary Pair
TD-601	6-lead BP	NPN/PNP Complementary Pair
TD-602	6-lead BP	NPN/PNP Dual Transistor
TD-700	6-lead BN	Complementary Pair
TD-701	6-lead BN	NPN/PNP Complementary Pair
TD-702	6-lead BN	NPN/PNP Dual Transistor
TP-3638	BR†	PNP G/P Large-signal Amplifier/Switch
TP-3638A	BR†	PNP G/P Large-signal Amplifier/Switch
TP-4123	BR†	NPN G/P Audio & Low-frequency Amplifier
TP-4124	BR†	NPN G/P Audio & Low-frequency Amplifier
TP-4125	BR†	PNP G/P Audio & Low frequency Amplifier
TP-4126	BR†	PNP G/P Audio & Low frequency Amplifier
TP-4257	BR	PNP High Speed Switch
TP-4258	BR	PNP High Speed Switch
TP-4274	BR†	NPN High-speed Switch
TP-4275	BR†	NPN High-speed Switch
TPS-6512	BR†	NPN G/P Audio & Low-frequency Amplifier
TPS-6513	BR†	NPN G/P Audio & Low-frequency Amplifier
TPS-6514	BR†	NPN G/P Audio & Low-frequency Amplifier
TPS-6515	BR†	NPN G/P Audio & Low-frequency Amplifier
TPS-6516	BR†	PNP G/P Audio & Low-frequency Amplifier
TPS-6517	BR†	PNP G/P Audio & Low-frequency Amplifier
TPS-6518	BR†	PNP G/P Audio & Low-frequency Amplifier
TPS-6519	BR†	PNP G/P Audio & Low-frequency Amplifier
TPS-6520	BR†	NPN G/P Low-noise Audio Amplifier
TPS-6521	BR†	NPN G/P Low-noise Audio Amplifier
TPS-6522	BR†	PNP G/P Low-noise Audio Amplifier

* With heat sink.

† Leads spaced on TO-18 pin circle.

Copyright 1970, Sprague Products Company

Sizes subject to change without notice

© United Technical Publications

SPRAGUE SEMICONDUCTORS

PIRGO SILICON POWER TRANSISTORS

(Pirgo Electronics, Inc. is an affiliate of the Sprague Electric Co.)



- Complete Line of High Quality Power Transistors Now Available from Your Sprague Industrial Distributor.
- For Complete Information, See Latest Issue of Sprague Pirgo Short-form Catalog IND-875.

Call Your Sprague Industrial Distributor For Current Quantity Prices

Type No.	Case	Description
N1479	TO-5	NPN 1 ½ Amp Single-diffused
N1480	TO-5	NPN 1 ½ Amp Single-diffused
N1481	TO-5	NPN 1 ½ Amp Single-diffused
N1482	TO-5	NPN 1 ½ Amp Single-diffused
N1483	TO-8	NPN 3 Amp Single-diffused
N1484	TO-8	NPN 3 Amp Single-diffused
N1485	TO-8	NPN 3 Amp Single-diffused
N1486	TO-8	NPN 3 Amp Single-diffused
N1487	TO-3	NPN 6 Amp Single-diffused
N1488	TO-3	NPN 6 Amp Single-diffused
N1489	TO-3	NPN 6 Amp Single-diffused
N1490	TO-3	NPN 6 Amp Single-diffused
N2033	TO-5	NPN 3 Amp Single-diffused
N2034	TO-5	NPN 3 Amp Single-diffused
N2035	TO-8	NPN 3 Amp Single-diffused
N2657	TO-5	NPN 5 Amp Silicon Planar
N2658	TO-5	NPN 5 Amp Silicon Planar
N2811	TO-61	NPN 10 Amp Silicon Planar
N2812	TO-61	NPN 10 Amp Silicon Planar
JAN 2N2812	TO-61	NPN 10 Amp Silicon Planar
JAN-TX 2N2812	TO-61	NPN 10 Amp Silicon Planar
N2813	TO-61	NPN 10 Amp Silicon Planar
N2814	TO-61	NPN 10 Amp Silicon Planar
JAN 2N2814	TO-61	NPN 10 Amp Silicon Planar
JAN-TX 2N2814	TO-61	NPN 10 Amp Silicon Planar
N2877	TO-111	NPN 5 Amp Silicon Planar
N2878	TO-111	NPN 5 Amp Silicon Planar
N2879	TO-111	NPN 5 Amp Silicon Planar
N2880	TO-111	NPN 5 Amp Silicon Planar
JAN 2N2880	TO-111	NPN 5 Amp Silicon Planar
JAN-TX 2N2880	TO-111	NPN 5 Amp Silicon Planar
N3149	TO-114	NPN 50 Amp Silicon Planar
N3150	TO-114	NPN 50 Amp Silicon Planar
N3441	TO-66	NPN 3 Amp Single-diffused
N3442	TO-3	NPN 10 Amp Single-diffused
N3597	TO-63	NPN 20 Amp Silicon Planar
N3598	TO-63	NPN 20 Amp Silicon Planar
N3599	TO-63	NPN 20 Amp Silicon Planar
N3744	TO-111	NPN 5 Amp Silicon Planar
N3745	TO-111	NPN 5 Amp Silicon Planar

Type No.	Case	Description
2N3746	TO-111	NPN 5 Amp Silicon Planar
2N3747	TO-111	NPN 5 Amp Silicon Planar
2N3748	TO-111	NPN 5 Amp Silicon Planar
2N3749	TO-111	NPN 5 Amp Silicon Planar
JAN 2N3749	TO-111	NPN 5 Amp Silicon Planar
JAN-TX 2N3749	TO-111	NPN 5 Amp Silicon Planar
2N3750	TO-111	NPN 5 Amp Silicon Planar
2N3751	TO-111	NPN 5 Amp Silicon Planar
2N3752	TO-111	NPN 5 Amp Silicon Planar
2N3771	TO-3	NPN 30 Amp Single-diffused
2N3772	TO-3	NPN 20 Amp Single-diffused
2N3773	TO-3	NPN 16 Amp Single-diffused
2N3996	TO-111 (isolated)	NPN 5 Amp Silicon Planar
JAN 2N3996	TO-111	NPN 5 Amp Silicon Planar
JAN-TX 2N3996	TO-111	NPN 5 Amp Silicon Planar
2N3997	TO-111 (isolated)	NPN 5 Amp Silicon Planar
JAN 2N3997	TO-111	NPN 5 Amp Silicon Planar
JAN-TX 2N3997	TO-111	NPN 5 Amp Silicon Planar
2N3998	TO-111	NPN 5 Amp Silicon Planar
JAN 2N3998	TO-111	NPN 5 Amp Silicon Planar
JAN-TX 2N3998	TO-111	NPN 5 Amp Silicon Planar
2N3999	TO-111	NPN 5 Amp Silicon Planar
JAN 2N3999	TO-111	NPN 5 Amp Silicon Puanar
JAN-TX 2N3999	TO-111	NPN 5 Amp Silicon Planar
2N4070	TO-3	NPN 10 Amp Silicon Planar
2N4150	TO-5	NPN 10 Amp Silicon Planar
2N4862	TO-46	NPN 2 Amp Silicon Planar
2N4863	TO-5	NPN 2 Amp Silicon Planar
2N4864	TO-66	NPN 2 Amp Silicon Planar
2N4865	TO-114	NPN 90 Amp Silicon Planar
2N5250	TO-114	NPN 90 Amp Silicon Planar
2N5313	TO-61	NPN 20 Amp Silicon Planar
2N5315	TO-61	NPN 20 Amp Silicon Planar

Copyright 1970, Sprague Products Company

TECHNICAL APPARATUS BUILDERS

A Division of "Power Alternating Direct Corp."

RECTIFIERS — TRANSFORMERS — CHOKES
FOR ALL YOUR DC POWER REQUIREMENTS

"TECHNICAL APPARATUS BUILDERS" mfgr. Power Rectifiers to your specs. From one amp up to and above 1000 amps. convection or fan cooled, single or 3 phase. "NEMA" & Jan. Specs.

SILTAB

*"SILTAB"® FWB SILICON RECTIFIER FINNED STACKS — 65°C to + 150°C CONVECTION COOLED**

Max DC Amps	36VAC 32VDC	70VAC 62VDC	140VAC 125VDC	280VAC 250VDC	840VAC 750VDC	1120VAC 1000VDC	1400VAC 1250VDC	2800VAC 2500VDC
1.5	JA36 $1.50	JA70 $ 1.60	JA140 $ 1.75	JA280 $ 1.90	JA840 $6.00	JA1120 $9.00	JA1400 $12.00	JA2800 $15.00
6	JJ36 5.90	JJ70 6.90	JJ140 7.90	JJ280 8.90	JJ840 18.00	JJ1120 21.00	JJ1400 24.00	JJ2800 36.00
12	JL36 7.50	JL70 8.80	JL140 11.75	JL280 15.00	JL840 29.45	JL1120 36.00	JL1400 43.00	JL2800 54.00
24	JN36 10.00	JN70 15.00	JN140 20.00	JN280 30.00				
36	JR36 13.60	JR70 20.30	JR140 30.90	JR280 41.60				
50	JS36 20.00	JS70 27.00	JS140 36.15	JS280 45.45				
100	JT35 27.00	JT70 36.75	JT140 45.90	JT280 63.00				
150	JO35 30.15	JO70 42.30	JO140 54.30	JO280 99.00				
*250	JY35 39.90	JY70 51.00	JY140 88.45	JY280 144.00				
*400	JZ35 70.60	JZ70 108.45	JZ140 147.30	JZ280 270.00				

*Force Air Cool—for capacitive, battery & motor loads derate 20%! Fuse input & output use single cycle fuses available from us.

3φ THREE PHASE FULL WAVE BRIDGE 3φ

DC Amps	36VAC 48VDC	105VAC 144VDC	185VAC 248VDC	280VAC 375VDC
2	YE36 $3.90	YE105 $ 7.30	YE185 $10.00	YE280 $13.45
12	YJ36 7.45	YJ105 13.75	YJ185 21.00	YJ280 30.00
18	YW36 10.00	YW105 18.60	YW185 33.45	YW280 45.60
60	YS36 27.75	YS105 37.90	YS185 48.15	YS280 60.00
*100	YT36 36.00	YT105 48.60	YT185 57.90	YT280 69.30
*250	YV36 49.00	YY105 63.60	YY185 81.45	YY280 100.00
*400	YZ36 99.15	YZ105 148.00	YZ185 198.00	YZ280 290.00

DC Amps	C.T. 3 Star 18V to C.T. 24VDC
2	FE36 $1.15
6	FJ36 3.75
18	FW36 4.90
60	FS36 17.00
100	FT36 22.00
250	FY36 31.00
400	FZ36 66.00

SELENIUM-SILICON-GERMANIUM
COP-OX—ALL GOV'T TYPES—LOW PRICES
FAST REPLACEMENT DELIVERIES ON—
VICKERS — KOTRON — FEDERAL —
CHATHAM — G.E. — WESTINGHOUSE —
MALLORY — I.R.C. — S.C.A. — R.R. —
I.T.T. — B.L. — SPECIFY YOUR NEEDS

24-HOUR SERVICE ON REPLACEMENT
We can supply exac equals on all make and types of recti fiers — size, typ current to your spe cifications.

"TEKSEL" SELENIUM RECTIFIER STACKS

Full Wave Bridge — Single Phase — Full Wave Bridge Dated and Guaranteed

DC Amps	18VAC 14VDC		36VAC 28VDC		54VAC 42VDC		72VAC 56VDC		130VAC 100VDC		144VAC 118VDC		266VAC 217VDC		DC Amps
0.5	BV18	$1.00	BV36	$1.45	BV54	$2.45	BV72	$3.85	BV130	$5.00	BV144	$6.75	BV266	$9.75	0.5
1	BA18	1.15	BA36	2.15	BA54	3.15	BA72	4.90	BA130	7.45	BA144	10.65	BA266	16.00	1
2	BE18	2.00	BE36	3.00	BE54	4.30	BE72	6.25	BE130	9.60	BE144	14.00	BE266	19.60	2
3	BF18	2.60	BF36	4.00	BF54	5.75	BF72	8.60	BF130	13.75	BF144	17.25	BF266	27.45	3
4	BG18	3.50	BG36	7.35	BG54	9.60	BG72	16.00	BG130	23.30	BG144	28.50	BG266	47.60	4
6	BJ18	4.40	BJ36	8.60	BJ54	11.90	BJ72	18.75	BJ130	31.00	BJ144	36.00	BJ266	63.45	6
10	BK18	6.35	BK36	11.45	BK54	17.60	BK72	26.30	BK130	38.15	BK144	48.75	BK266	77.00	10
12	BL18	8.00	BL36	15.75	BL54	21.95	BL72	30.95	BL130	43.00	BL144	52.50	BL266	86.60	12
15	BW18	10.30	BW36	19.60	BW54	26.75	BW72	40.00	BW130	52.75	BW144	64.45	BW266	106.75	15
20	BM18	12.00	BM36	24.60	BM54	35.00	BM72	49.90	BM130	75.00	BM144	90.00	BM266	153.00	20
24	BN18	14.90	BN36	29.45	BN54	41.45	BN72	57.50	BN130	80.90	BN144	96.50	BN266	162.90	24

ELEVATOR CONTROL STARTER RECTIFIERS - 1φ & 3φ

"Teksel" Hi-Density - Non Ageing* - Long Life* - Dated & Guaranteed!**

Single Phase - 266 VAC Inpt. Amps	Ckt.	Part No.	Net Each	Req'd.
1.5	1φ	DB266	$7.50 @	2
2.2	1φ	DBC266	9.00 @	2
3.4	1φ	BDD266	11.00 @	2
6.6	1φ	DEA266	14.00 @	2

SEND SAMPLE — 24 HOUR SERVICE

Three Phase - 266 VAC Inpt. Amps	Ckt.	Part No.	Net Each	Req'd.
2.2	3φ	DBB266	$7.50 @	3
3.3	3φ	DBC266	9.00 @	3
5.1	3φ	DDD266	11.00 @	3
10	3φ	DEA266	14.00 @	3

3.3/ 3φ Compact Unit $33.00 #3DBC266

Automotive Service Station 100 Amp Fast Charger Replacement CR100N* Selenium for Neg/Polarity $12.00 or CR100P* fo Pos/Polarity — JT100N Silicon for Neg/Polarity $16.00 o JT100P for Pos/Polarity.
Plating Room Replacements Selenium* or Silicon 24 Hour Delivery
$2.00 Per Cell Using Your Bus-Bars & Terminals
$2.50 Per Cell Using Our Bus-Bar & Terminals!

Send Us Your Burned Out Rectifier Today — We Ship Tomorrow!

"TABTRAN" RECTIFIER TRANSFORMERS & CHOKES

Transformer	Secondaries	AC Amps	Primary	Net Price
TR4000R	Dual (2) Sec'd each 0-16V	1	115V	$4.60
TR4001	Dual (2) Sec'd each 0-9-15-18	1	115V	5.60
TR4002	Volts at rated current per	2	115V	7.75
TR4003	each winding.	5	115V	13.50
TR4005	Secondary series connected	12	115V	22.00
TR4006	Taps give 0-3-6-9-12-15-18-21-24-27-30-33-36 Volts	25	115V	43.50
TR4007	Secondary parallel 0-9-15-18	50	115 & 220V	54.00
TR4008	Volts at twice (2X) the current.	100	115 & 220V	117.90

36 or 18 V C.T.

Choke	Ind	AC/Amp	Ohms	IR Drop	Price
CR6001	0.1	1	1.4	1.4	$4.30
CR6002	0.1	2	0.67	1.34	6.30
CR6007	0.01	4	0.1	0.04	6.45
CR6003	0.07	5	0.6	3.00	11.60
CR6004	0.015	12	0.1	1.20	19.75
CR6005	0.005	25	0.025	0.60	29.30
CR6006	0.001	50	0.001	0.05	40.00
CR6010	0.5	100	.005		47.00
CR6011	0.3	200	.0025		74.15
CR6012	0.055	500	.00027		101.00
CR6013	0.015	1000	.000065		112.20

"TABTRAN" No.	Secondary Volts	Primary Volts 50-500 cps	SEC/AMPS Series	SEC/AMPS Parallel	Net Price
T10-1	**10 or 5 V C.T.** Series 0-2.5-5-7.5-10V Parallel 0 - 2.5 - 5 V @ 2 x Amps	115	1	2	Query
T10-2		115	2	4	Query
T10-4		115	4	8	Query
T10-6		115	6	12	Query
T10-12		115	12	24	Query
T10-25		115	25	50	Query
T10-50		105, 115, 125	50	100	Query
T10-100		105, 115, 125	100	200	Query
T12.8-1	**12.8 or 6.4 V C.T.** Series 0-3.2-6.4-9.6-12.8 V Parallel 0 - 3.2 - 6.4 V @ 2 x Amps	115	1	2	Query
T12.8-2		115	2	4	Query
T12.8-4		115	4	8	Query
T12.8-6		115	6	12	Query
T12.8-12		115	12	24	Query
T12.8-25		115	25	50	Query
T12.8-50		105, 115, 125	50	100	Query
T12.8-100		105, 115, 125	100	200	Query

"TABTRAN" INDUSTRIAL ISOLATION & CONTROL TRANSFORMERS

PRIMARY 240/280 SECONDARY 240 x 120

CT050/50 WATTS	$ 9.45	CT1000/1KVA	$47.30
CT100/100 WATTS	11.30	CT2000/2KVA	69.30
CT250/250 WATTS	16.45	CT3000/3KVA	92.45
CT500/500 WATTS	25.90	CT5000/5KVA	144.00
CT750/750 WATTS	36.30	CT7500/7.5KVA	195.90

"TABTRAN" No.	Secondary Volts	SEC/AMPS 50-500 cps	Primary Volts Series	Primary Volts Parallel	Net Price
T16-2	**16 or 8 V C.T.** Series 0-4-8-12-16 V Parallel 0 - 4 - 8 @ 2 x Amps	115	2	4	Query
T16-6		115	6	12	Query
T16-12		115	12	24	Query
T16-25		115	25	50	Query
T16-50		105, 115, 125	50	100	Query
T16-100		105, 115, 125	100	200	Query
T24-1	**24 or 12 V C.T.** Series 0-6-12-18-24 V Parallel 0 - 6 - 12 V @ 2 x Amps	115	1	2	Query
T24-2		115	2	4	Query
T24-4		115	4	8	Query
T24-6		115	6	12	Query
T24-12		105, 115, 125	12	24	Query
T24-20		105, 115, 125	20	40	Query
T24-25		105, 115, 125	25	50	Query
T24-50		105, 115, 125	50	100	Query
T24-100		115/230	100	200	Query
T56-1	**56 or 28 V C.T.** Series 0-14-28-42-56 V Parallel 0 - 14 - 28 V @ 2 x Amps	115	1	2	Query
T56-2		115	2	4	Query
T56-4		115	4	8	Query
T56-6		115	6	12	Query
T56-12		105, 115, 125	12	24	Query
T56-25		105, 115, 125	25	50	Query
T56-50		115/230	50	100	Query
T120-1	**120 or 60 V C.T.** Series 0-30-60-90-120 V Parallel 0 - 30 - 60 V @ 2 x Amps	115	1	2	Query
T120-2		115	2	4	Query
T120-4		115	4	8	Query
T120-6		105, 115, 125	6	12	Query
T120-12		105, 115, 125	12	24	Query
T120-20		105, 115, 125	20	40	Query
T230-1	**230 or 115 V C.T.** Series 0-57½-115-172½-230 V Parallel 57½-115 V @ 2 x Amps	115	1	2	Query
T230-2		115	2	4	Query
T230-4		105, 115, 125	4	8	Query
T230-6		105, 115, 125	6	12	Query

We reserve the right to change specifications and prices without notice.

Net
© United Technical Publications

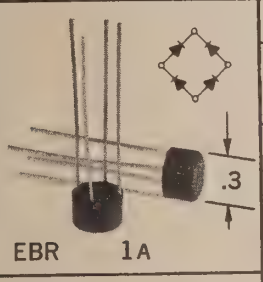
If you don't find it here, give us a call.

SILICON RECTIFIERS

ASK US ABOUT OUR MANY TYPES OF CUSTOM RECTIFIERS AND RECTIFIER ASSEMBLIES.

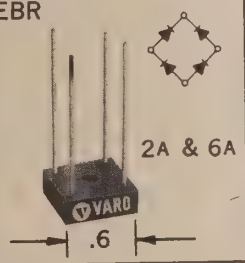
FULL WAVE BRIDGE RECTIFIERS*

50V	I_O	1-99
W 111	1A	.95
100V		
VE 18	1A	1.00
VS 148	2A	1.00
VH 148	6A	1.93
200V		
VE 27	1A	1.20
VE 28	1A	1.10
VS 247	2A	1.20
VS 248	2A	1.10
VH 247	6A	2.25
VH 248	6A	2.15
IN 4436	10A	4.15
VT 200	25A	5.35
400V		
VE 47	1A	1.30
VE 48	1A	1.20
VS 447	2A	1.30
VS 448	2A	1.20
VH 447	6A	2.59
VH 448	6A	2.49
IN 4437	10A	5.45
VT 400	25A	7.00
600V		
VE 67	1A	1.59
VE 68	1A	1.49
VS 647	2A	1.60
VS 648	2A	1.50
VH 647	6A	2.98
VH 648	6A	2.88
IN 4438	10A	7.45
VT 600	25A	9.85



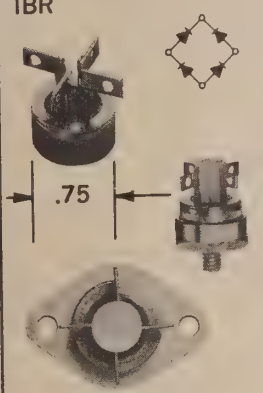
EBR 1A

EBR

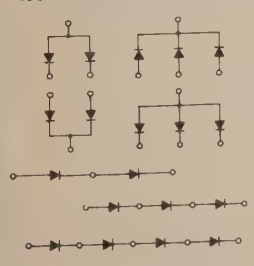


2A & 6A

IBR



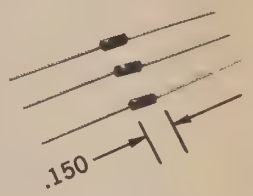
10A & 25A ALSO AVAILABLE IN THESE CIRCUITS



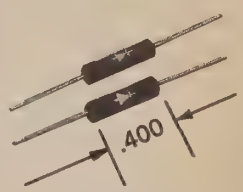
HIGH VOLTAGE RECTIFIERS*

1000V	I_O	1-99
VA 10	50mA	1.36
VB 10	100mA	1.41
1500V		
VA 15	50mA	1.44
VB 15	100mA	1.51
2000V		
VA 20	50mA	1.55
VB 20	100mA	1.59
VC 20	2A	5.20
2500V		
VA 25	50mA	1.66
VB 25	100mA	1.72
3000V		
VA 30	25mA	1.93
VB 30	50mA	1.88
VC 30	2A	5.52
3500V		
VA 35	25mA	2.70
4000V		
VB 40	50mA	2.05
VC 40	2A	5.85
5000V		
VB 50	50mA	2.40
VC 50	1.5A	6.18
VF 5-5	5mA	1.60
VF 10-5	10A	1.77
VF 25-5	25mA	1.95
6000V		
VB 60	50mA	2.62
VC 60	1.5A	6.50

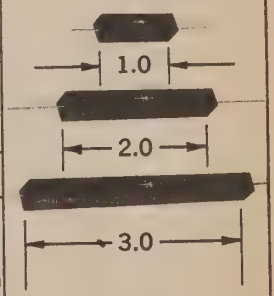
7000V	I_O	1-99
VC 70	1.5A	6.82
VF 5-7	5mA	1.71
VF 10-7	10mA	1.89
VF 25-7	25mA	2.08
8000V		
VC 80	1A	7.15
10,000V		
VF 5-10	5mA	1.96
VF 10-10	10mA	2.16
VF 25-10	25mA	2.38
12,000V		
VF 5-12	5mA	2.22
VF 10-12	10mA	2.44
VF 25-12	25mA	2.68
15,000V		
VF 5-15	5mA	2.30
VF 10-15	10mA	2.54
VF 25-15	25mA	2.80
20,000V		
VF 5-20	5mA	2.97
VF 10-20	10mA	3.27
VF 25-20	25mA	3.60
25,000V		
VF 5-25	5mA	3.72
VF 10-25	10mA	4.09
VF 25-25	25mA	4.51
30,000V		
VF 5-30	5mA	4.46
VF 10-30	10mA	4.91
VF 25-30	25mA	5.39
40,000V		
VF 5-40	5mA	5.95
VF 10-40	10mA	6.54
VF 25-40	25mA	7.20



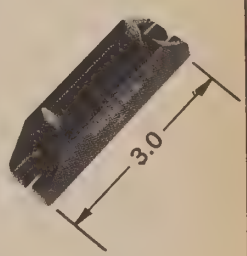
VA SERIES



VB SERIES



VF SERIES



VC SERIES

*Available with fast recovery characteristic

VARO

SEMICONDUCTOR DIVISION

ALCOSWITCH®

DIV. OF ALCO ELECTRONIC PRODUCTS, INC.



BASE MOUNTED KEYBOARD PUSH BUTTON SWITCH

Reed actuated low profile, single pole Normally Open unit provides the low operating force and high reliability required in keyboards. RSM-41 is suitable for an 0.75 inch matrix, and is free from interaction between units. The switch is molded in high quality glass filled nylon and acetal resin, and is an FR Hamlin reed switch actuated by a permanent magnet.

Model	Description	One-24	25-99	100-499
RSM-41*	Keyboard Push Button Switch	2.55	1.90	1.79
RSB-1**	Blank Key	.15	.12	.105
RSB-1N	Two Shot Molded Keys 0 to 9 (specify)	.20	.16	.14

*Includes Blank Keytop (Black). **Specify color: Black, White, Red, Blue, Gray.

Performance Data		Electrical Ratings	
Total Stroke:	0.140"	Voltage:	50 volts
Minimum Pretravel:	0.060"	Current:	500 mA
Minimum Overtravel:	0.030"	Power:	10 watts
Minimum Travel After Release:	0.032"	Initial Contact Res:	150 milliohms
Min. Operating Force:	1.2 ozs.	Life:	10,000,000 operations

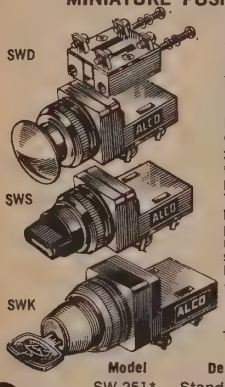
MSS SERIES MINIATURE SLIDE SWITCHES

MSS-22 Miniature Slide Switch with unusual two-circuit N.O.-N.C. (useable as SPDT) anti-tease design. Rated 2 amps @ 120 VAC. Compact ½" case has corrosion-proof metal case and phenolic slide block. Gold on nickel on silver-plated brass contacts. Life cycle, 250,000 operations. Case size, .500" x .305" x .257"; mounts .687" centers.



Model	Description	One-24	25-99	100-499	500-999
MSS-22	SPDT, 2 circuit	1.75	1.17	.88	.73
MSS-44	DPDT	3.15	2.11	1.58	1.31

MINIATURE PUSH BUTTON MOTOR START SWITCHES



Alco Miniature Power Switches combine a compact size, modern appearance and functional flexibility to meet today's control needs and mount in a 1" hole. Rated to carry to carry 6 amps @ 230 VAC. These switches may be used to control circuits independently or with optional relays. All models supplied with a single (N.O.-N.C.) contact block but have provisions for additional (SU) blocks thereby converting to DPDT, 3PDT, 4PDT.

3-Way Selector Power Switch is the same basic model as above but instead has a bar knob with pointer. Electrical and physical specifications are the same. Available in black only.

Key-Lock Push Button type is an accident-proof power switch that has its own key lock to prevent unwanted operations of machines and controls. The switch functions only when the key disengages the lock. Same specs as the series described above.

*Push button models are equipped with spare (snap-on) colored buttons offering a choice of use in red, black, or green.

†Standard snap-on buttons with legend for SW-251 switches.

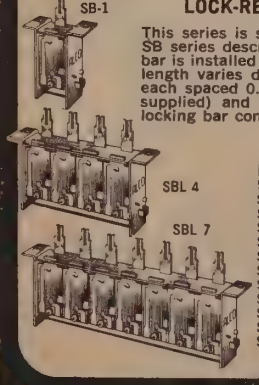
Model	Description	Action	One-24	25-99	100-499	500-999
SW-251*	Standard Button	Mom. ON	2.95	1.97	1.77	—
SW-251D*	Mushroom Button	Mom. ON	3.35	2.23	2.01	—
SW-251L*	Long Button	Mom. ON	3.10	2.07	1.86	—
SW-251S	Selector	ON-OFF-ON	3.35	2.23	2.01	—
SWK-1	Key/Lock Switch	ON-OFF-ON	7.95	5.30	4.77	—
SU-251	N.O.-N.C. Block		1.85	1.23	1.11	—
C-251-00†	ON-OFF Buttons (pr.)		.35	.23	.21	.18
C-251-SS†	STOP-START Buttons (pr.)		.35	.23	.21	.18
C-251-HL	HIGH-LOW Buttons (pr.)		.35	.23	.21	.18
C-251-UD	UP-DOWN Buttons (pr.)		.35	.23	.21	.18



COMPACT FOOT SWITCH FOR RELIABLE OPERATION

SPDT momentary-contact switch has spring return and non-skid base. Size: 3¼"x3¼" x1".

Model	Supplied	One-24	25-99	100-499
SKF	Less Cable	4.65	3.16	2.79
SKF-6	With 6-ft. Cable	5.85	3.98	3.51

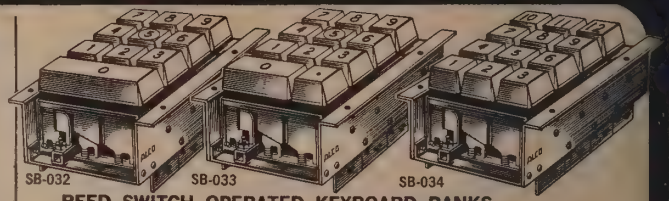


LOCK-RELEASE — MODULAR SECTIONS

This series is similar in appearance and specifications to the SB series described to the right. This group differs because a bar is installed that provides a single locking operation. Overall length varies depending on the number of switches involved, each spaced 0.700" apart. Same SBB type keys are used (not supplied) and may be ordered separately. Note, removal of locking bar converts this switch into a momentary model.

Model	Number Positions	Description	One-24	25-99	100-499
SB-1	1	Momentary	2.70	2.16	—
SBL-1	1	Locking	2.95	2.36	—
SBL-2	2	Locking	4.95	3.96	—
SBL-3	3	Locking	6.90	5.52	—
SBL-4	4	Locking	8.90	7.12	—
SBL-5	5	Locking	10.85	8.68	—
SBL-6	6	Locking	12.85	10.28	—
SBL-7	7	Locking	14.80	11.84	—
SBL-8	8	Locking	16.80	13.44	—
SBL-9	9	Locking	18.75	15.00	—
SBL-10	10	Locking	20.75	16.60	—
SBL-12	12	Locking	24.70	19.76	—

Above switches are supplied less keys; order from listing at right.



REED SWITCH OPERATED KEYBOARD BANKS

Now designers can be assured of highest reliability in data processing equipment. Short strokes provide a smooth operation of the switch plunger resulting in one of the finest keyboard actions obtainable. It is also suitable for test equipment, communication gear, and many other applications. All details of this switch line are designed for light pressure (5 ounces), operator's convenience, and positive input of data with long life under heavy office type of usage. Highly efficient "single-pole open circuit' reed switches are used assuring reliability and extremely long life expectancy. Square light grey keys (⅞") have an industry standard 0-9 marking and format. All switch positions contain a "positive lockout" between sections and rows. This feature prevents more than one position from operating at the same time. This basic keyboard system is designed for flexibility and can be customized to meet the special needs of quantity users. Up to 12 switches may be installed in the basic module in any combination including momentary, or lockout design.

SPECIFICATIONS

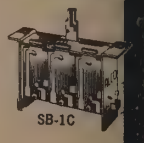
Dimensions:	2.81" W. x 3.62" L. x 2.25" D.		
Depth:	1⅝"	**Full Stroke Travel:**	7/32"
Switch Contact:	Normally Open	**Travel to Contact:**	5/32"
Rating:	100 ma @ 48V	**Symbols (black):**	¾" h.
Operating Force:	5 Ounces	**Key Color:**	Grey
Mechanical Life:	1,000,000 Cycles		
Reed Switch Life:	10,000,000 Cycles		

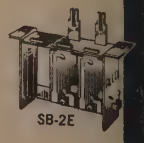
(Colored blank keys available separately; see below.)

Model	Description	One-24
SB-032	Lockout 0-9 ("O" Triple Bar)	28.50
SB-033	Lockout 0-9 and Period	28.50
SB-034	Lockout 1-12 Numerals	29.95
SB-035	Momentary 1-12 Numerals	28.50
*SB-032PC	Lockout 0-9 ("O" Triple Bar)	29.50
*SB-033PC	Lockout 0-9 and Period	29.50
*SB-034PC	Lockout 1-12 Numerals	30.95
*SB-035PC	Momentary 1-12 Numerals	29.50

*With printed circuit connectors







MOMENTARY MODULAR SECTIONS

This modular idea is a simple concept, which allows the design engineer to create his own custom push button layouts. Highly efficient single pole "normally-open" reed switches aer used throughout thus assuring reliability and an extremely long life expectancy. Light pressure (5 ounces) and short strokes result in optimum operators' convenience and positive input of data. The basic module allows use of one to three switches in either momentary or alternate "push-ON-push-OFF" action. Stacking allows any number of these switch sections to be used in a group by themselves or with our matching keyboard assemblies SB-032, SB-033, SB-034, SB-035. Standard size switch Keys are available separately in various colors, either single or extended Keys which span 2 or 3 switches. Note: that by use of wider keys it is also possible to form 2 or 3 pole switch functions.



SPECIFICATIONS

Switch Contact:	Normally Open	**Full Travel:**	7/32"
Rating:	100 ma @ 48V	**Travel to Contact:**	5/32"
Life Expectancy:	1,000,000 cycles	**Depth Requirements:**	1-5/8"

Model	Description	One-24	25-99
SB-1E	Mod-Segment, 1 pole, end, mom.	2.90	2.32
SB-1C	Mod-Segment, 1 pole, center, mom.	2.90	2.32
SB-2E	Mod-Segment, 2 pole, end, mom.	4.80	3.84
SB-3C	Mod-Seg. 3 pole, ctr. & ends, mom.	6.70	5.36
SB-4C	Mod-Segment, 4 pole, momentary	8.60	6.88
SBL-1C	Mod-Segment, 1 pole, locking	3.90	3.12
SBL-2E	Mod-Segment, 2 pole, lock & mom.	5.80	4.64

Above switches are supplied less keys; order below.



INDEPENDENT LOCKING — MODULAR SECTIONS

New series of inline keyboard switch modules are similar to the SB Series described above except these switches have alternate action, independent of each other. When one switch is depressed, it remains that way regardless of the switching action of the rest of the module. Same SBB type keys are used.

Model	Number Positions	Description	One-24	25-99	100-499
SBL-1	1	Independent Locking	2.95	2.36	2.07
SBLR-2	2	Independent Locking	5.35	4.28	3.75
SBLR-3	3	Independent Locking	7.50	6.00	5.25
SBLR-4	4	Independent Locking	9.70	7.76	6.79
SBLR-5	5	Independent Locking	11.85	9.48	8.30
SBLR-6	6	Independent Locking	14.10	11.28	9.87
SBLR-7	7	Independent Locking	16.20	12.96	11.34
SBLR-8	8	Independent Locking	18.40	14.72	12.88
SBLR-9	9	Independent Locking	20.55	16.44	14.39
SBLR-10	10	Independent Locking	22.75	18.20	15.93
SBLR-12	12	Independent Locking	27.10	21.68	18.97

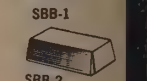
Above switches are supplied less keys; order below.

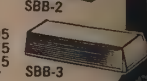
SBB-1*	Key only	Single	.15	.12	.105
SBB-2*	Key only	Double	.25	.20	.175
SBB-3*	Key only	Triple	.35	.28	.245
SB-BKT	Mounting Brackets (pr.)		1.95	1.56	1.37

*Specify Color: Light Grey, Dark Grey, White, Blue, Red, Black.









ALCO ELECTRONIC PRODUCTS, INC.

© United Technical Publications

ALCOSWITCH®

DIV. OF ALCO ELECTRONIC PRODUCTS, INC.

MST SERIES MINIATURE TOGGLE SWITCHES



The original Alcoswitch Series of high quality ultra-miniature toggle switches combines high current capacity and long life in a ½" case. Slim, bat handle or optional plastic caps(*) are provided. Terminals and contacts are solid silver. Case material is black phenolic resin; 1/4-40 threaded bushing. Rated 5 amps at 115 VAC. SPDT and DPDT types have life cycle of over 80,000 on-off operations. High voltage barriers between terminals and contacts. Rated 5 amps @ 115 VAC.



Model	Contacts	Description	One-24	25-99	100-499	500-999
MST-115D*	SPDT	On-None-On	1.70	1.16	1.02	.85
MST-105D	SPDT	On-None-On	1.65	1.12	.99	.83
MST-105E	SPDT	On-Off-On	1.95	1.33	1.17	.975
MST-105F	SPDT	None-On-(On)	1.95	1.33	1.17	.975
MST-105G	SPDT	(On)-Off-(On)	1.95	1.33	1.17	.975
MST-105H	SPDT	On-Off-(On)	1.95	1.33	1.17	.975
MST-215N*	DPDT	On-None-On	2.20	1.47	1.32	1.10
MST-205N	DPDT	On-None-On	2.15	1.43	1.29	1.08
MST-205P	DPDT	On-Off-On	2.55	1.72	1.53	1.28
MST-205R	DPDT	None-On-(On)	2.55	1.72	1.53	1.28
MST-205S	DPDT	(On)-Off-(On)	2.55	1.72	1.53	1.28
MST-205T	DPDT	On-Off-(On)	2.55	1.72	1.53	1.28
MST-205PA	DP3T	On-On-On	2.85	1.90	1.71	1.42
MST-205SA	DP3T	(On)-On-(On)	3.15	2.14	1.89	1.58
MST-205TA	DP3T	On-On-(On)	3.15	2.14	1.89	1.58
MST-315D*	3PDT	On-None-On	3.90	2.61	2.34	1.95
MST-305D	3PDT	On-None-On	3.85	2.57	2.31	1.925
MST-305E	3PDT	On-Off-On	4.15	2.82	2.49	2.075
MST-305F	3PDT	None-On(On)	4.15	2.82	2.49	2.075
MST-305H	3PDT	On-Off-(On)	4.15	2.82	2.49	2.075
MST-415N*	4PDT	On-None-On	4.90	3.33	2.94	2.45
MST-405N	4PDT	On-None-On	4.85	3.29	2.91	2.43
MST-405P	4PDT	On-Off-On	5.35	3.64	3.21	2.68





Hardware supplied mounted. (On) indicates momentary positions.

MSTA SERIES MINIATURE TOGGLE SWITCHES

This new Alcoswitch "MSTA" Series fills a need for those who want the best product possible at an optimum price. Similar in appearance and specs to the Alco "E" Series but without the waterproof feature. Has the important features wanted in a good miniature: turret terminals, extra-wide contacts, heavier current capabilities, low-loss, high heat and high impact case construction. "No Tear" shoulder on bushing. 6A 125V/3A 280 VAC.



Model	Contacts	Description	One-24	25-99	100-499	500-999
MSTA-106D	SPDT	On-None-On	1.80	1.23	1.08	.90
MSTA-106E	SPDT	On-Off-On	2.25	1.53	1.35	1.125
MSTA-106F	SPDT	(On)-On-None	†	†	†	†
MSTA-106G	SPDT	(On)-Off-(On)	†	†	†	†
MSTA-106H	SPDT	(On)-Off-On	†	†	†	†
MSTA-206N	DPDT	On-None-On	2.35	1.60	1.41	1.18
MSTA-206P	DPDT	On-Off-On	2.85	1.90	1.71	1.42
MSTA-206R	DPDT	(On)-On-None	†	†	†	†
MSTA-206S	DPDT	(On)-Off-(On)	†	†	†	†
MSTA-206T	DPDT	(On)-Off-On	†	†	†	†
MSTA-206PA	DP3T	On-On-On	3.15	2.14	1.89	1.58
MSTA-206TA	DP3T	(On)-On-On	†	†	†	†
MSTA-206SA	DP3T	(On)-On-(On)	†	†	†	†
MSTA-306D	3PDT	On-None-On	4.05	2.75	2.43	2.03
MSTA-306E	3PDT	On-Off-On	4.45	3.03	2.67	2.23
MSTA-306F	3PDT	(On)-On-None	†	†	†	†
MSTA-306H	3PDT	(On)-Off-On	†	†	†	†
MSTA-406N	4PDT	On-None-On	5.10	3.47	3.06	2.55
MSTA-406P	4PDT	On-Off-On	5.65	3.84	3.39	2.83
MSTA-406PA	4P3T	On-On-On	6.15	4.18	3.69	3.08
C-10*°	Plastic cap for MST, A, E		.04	.028	.025	.022
C-17*°	Flat top cap for MST, A, E		.04	.028	.025	.022





* Packages of 25; ° Specify red, white, black, blue, gray, green, yellow, pink. (On) Indicates momentary positions. † Prices upon request.

MSTE SERIES MINIATURE TOGGLE SWITCHES



The new "E" Series has the most-wanted features in miniature switches. Waterproof 'O' rings are located inside the toggle and on the shoulder. A mechanical shoulder on the bottom of the bushing prevents "tear-offs" when a single mounting nut is employed. High voltage barriers between terminals inside as well as outside. Case has a new, superior plastic material capable of withstanding a higher impact; guards against accidental damage. Low-loss case has extremely high resistance between terminals and case ground, and its high temperature coefficient is ideally suited for prolonged soldering and printed circuits. Turret type terminals are used for simplified wiring or for P.C. Extra-wide, solid silver contacts are bonded, not riveted, on copper-silver plated terminals. Long-life cycle over 100,000 On-Off operations at operating conditions (SPDT). Rated 6 amps @ 125 VAC.





Model	Contacts	Description	One-24	25-99	100-499	500-999
MSTE-106D	SPDT	On-None-On	1.95	1.33	1.17	.975
MSTE-106E	SPDT	On-Off-On	2.55	1.72	1.53	1.28
MSTE-206N	DPDT	On-None-On	2.55	1.72	1.53	1.28
MSTE-206P	DPDT	On-Off-On	3.15	2.14	1.89	1.58
MSTE-206PA	DP3T	On-On-On	3.45	2.35	2.07	1.73
MSTE-306D	3PDT	On-None-On	4.25	2.89	2.55	2.13
MSTE-306E	3PDT	On-Off-On	4.75	3.23	2.85	2.38
MSTE-406N	4PDT	On-None-On	5.35	3.64	3.21	2.68
MSTE-406P	4PDT	On-Off-On	5.95	4.05	3.57	2.98



Hardware supplied mounted. Color-coded caps: see "A" Series above

MSTG SERIES MINIATURE TOGGLE SWITCHES

Mustang

The Mustang Series is for designers who prefer the feel of a larger toggle switch but have space limitations behind today's compact panel. The familiar ultra-miniature Alcoswitch ½" case is utilized, however the Mustang mounting requirements are the same as the larger switches with 15/32" bushings. This new Alcoswitch concept is a behind-the-panel space-saver in all Mustang models and it is especially true in the 3 Pole and 4 Pole Series where non-miniature switches are bulky in size. The Mustang switches have the most-wanted features as itemized in the "E" Series story (at left) with the exception of the waterproof 'O' rings. The case construction is of low-loss, high impact and high temperature materials with turret terminals and silver contacts. 6 amps @ 125 VAC.









Model	Contacts	Description	One-24	25-99	100-499	500-999
MSTG-106D	SPDT	On-None-On	2.15	1.43	1.29	1.08
MSTG-106E	SPDT	On-Off-On	2.75	1.87	1.65	1.38
MSTG-206N	DPDT	On-None-On	2.75	1.87	1.65	1.38
MSTG-206P	DPDT	On-Off-On	3.35	2.28	2.01	1.68
MSTG-206PA	DP3T	On-On-On	3.65	2.48	2.19	1.83
MSTG-306D	3PDT	On-None-On	4.45	3.03	2.67	2.23
MSTG-306E	3PDT	On-Off-On	4.95	3.37	2.97	2.48
MSTG-406N	4PDT	On-None-On	5.55	3.77	3.33	2.78
MSTG-406P	4PDT	On-Off-On	6.15	4.18	3.69	3.08
C-15*	Plastic cap for Mustang Series		.06	.04	.036	.033
N-1B*	15/32" "Perfect Fit" Nut		.08	.056	.05	.044

*Packaged in multiples of 25; when ordering caps specify, red, white, black, blue or green.

MSTL SERIES LOCKING TOGGLE SWITCHES

Lever-Lock Alcoswitch is the world's first "pull-to-unlock" toggle switch for use in hazardous applications. The toggle locks in position to safeguard against accidents. Optional interchangeable color-coded toggle tips available. Rated 6 amps @ 125 VAC.



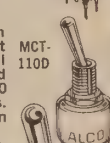


Model	Contacts	Description	One-24	25-99	100 499	500-999
MSTL-106D	SPDT	On-None-On	3.15	2.14	1.89	1.58
MSTL-106E	SPDT	On-Off-On	3.85	2.57	2.31	1.925
MSTL-206N	DPDT	On-None-On	3.85	2.57	2.31	1.925
MSTL-206P	DPDT	On-Off-On	4.45	3.03	2.67	2.23
MSTL-206PA	DP3T	On-On-On	4.75	3.23	2.85	2.38
MSTL-306D	3PDT	On-None-On	5.65	3.84	3.39	2.83
MSTL-306E	3PDT	On-Off-On	6.25	4.24	3.75	3.13
MSTL-406N	4PDT	On-None-On	6.95	4.73	4.17	3.48
MSTL-406P	4PDT	On-Off-On	7.45	5.06	4.47	3.73
MSTL-406PA	4P3T	On-On-On	7.95	5.40	4.77	3.98
C-16*	Color-Coded Caps		.18	.12	.11	.10

* Lever-lock switches are stocked with natural aluminum caps only. Extra caps available in anodized Red, Blue, Green, and Black, (specify color).

MINIATURE CYLINDRICAL TOGGLE SWITCHES

New design cylindrical case for miniature toggle switches when a positive feel and reliability are prerequisite in the smallest size possible. All metal construction and high impact terminal insulator allows use under all environmental conditions. Rated 10 amps @ 125 VAC. Internal contact resistance; under 20 milliohms @ 2-4 VDC, 1 amp. Life 40,000 on-off operations. Contact material, silver on copper. U/L Approval available on special order.





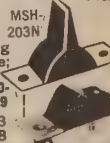
Model	Contacts	Description	One-24	25-99	100-499	500-999
*MCT-110D	SPDT	On-None-On	1.95	1.33	1.17	.975
*MCT-220N	DPDT	On-None-On	2.55	1.72	1.53	1.28
**MCTG-110D	SPDT	On-None-On	1.95	1.33	1.17	.975
**MCTG-220N	DPDT	On-None-On	2.55	1.72	1.53	1.28

*With miniature bushings. **With standard size 15/32" bushings.

C-10*°	Plastic cap for MST, A, E	.04	.028	.025	.022
C-17*°	Flat top cap for MST, A, E	.04	.028	.025	.022

* Packages of 25; ° Specify red, white, black, blue, gray, green, yellow, pink.

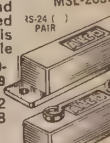
MSH LEVER AND MSL ROCKER SWITCHES



Versatile DPDT action switches have choice of actuators, long lever or rocker. Rated 3 amps @ 125 VAC; 25,000 life cycle; contacts silverplated.

Model	Description	One-24	25-99	100-499	500-999
MSH-203N	Lever-Switch DPDT	1.25	.85	.75	.63
MSL-203N	Rocker Switch DPDT	1.15	.78	.69	.58

DRY REED PROXIMITY MAGNETIC SWITCH ASSEMBLIES



Proximity Switch and Magnet Assembly features the inherent simplicity of a basic dry reed switch to provide long life and reliability. Alnico-5 magnet is the force used to actuate the reed switch within distance of 1" centers. Reed switch provided is replaceable. Rated 0.5 amps break, 1.0 amps carry. Life cycle over 5-million operations.

Model	Description	One-24	25-99	100-499	500-999
RS-24-NO	N.O. (Apart) Pair	2.85	1.90	1.71	1.42
RS-24-NC	N.C. (Apart) Pair	3.15	2.14	1.89	1.58

MINIATURE PROXIMITY MAGNETIC SWITCH ASSEMBLIES



Includes a basic dry reed switch and encased Alnico-5 magnet that actuates the reed switch within distance of .39". Current rating @ 50 VDC: .15 amps break, .5 amps carry. 200 VDC breakdown. Life: 10-million cycles. 8" leads. Size: 1.102" x .335".

Model	Description	One-24	25-99	100-499	500-999
RS-11-NO	N.O. (Apart) Pair	2.75	1.87	1.65	1.38
RS-11-NC	N.C. (Apart) Pair	3.05	2.08	1.83	1.53

ALCO® ELECTRONIC PRODUCTS, INC.

ALCOSWITCH® DIV. OF ALCO ELECTRONIC PRODUCTS, INC.

MINIATURE PUSH BUTTON SWITCHES



MSP Miniature Pushbutton Switches, snap-action, 5 amps @ 115VAC. Solid silver contacts, terminals. Bushing size, ¼-40 with keyway. Black phenolic case. 20,000 life cycle.

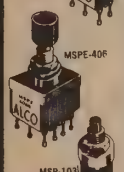
MSPE Waterproof Pushbutton Switches, 6 amps resistive, 2 amps inductive @ 125VAC. Double "O" waterseals, low-loss "E" Series case; turret terminals. Versatile "double-throw".

MSP-103 Economy Pushbutton Switches, 3 amps @ 125VAC. Low-pressure. Silverplated brass contacts, terminals. Plunger travels .098". Depth behind panel, ¾". 1-pc. ¼-40 bushing.

MSPS-103C is similar to MSP-103C except smaller diameter .310 Rated 0.5 amps @ 125 VAC.



Model	Contacts	Application	One-24	25-99	100-499	500-999
MSP-105D*	SPDT	Push on-off	2.15	1.46	1.29	1.08
MSP-105F*	SPDT	Momentary	2.15	1.46	1.29	1.08
MSP-205N*	DPDT	Push on-off	2.95	2.01	1.77	1.48
MSP-205R*	DPDT	Momentary	2.95	2.01	1.77	1.48
MSPE-106D*	SPDT	Push on-off	2.55	1.72	1.53	1.28
MSPE-106F*	SPDT	Momentary	2.55	1.72	1.53	1.28
MSPE-206N*	DPDT	Push on-off	3.45	2.35	2.07	1.73
MSPE-206R*	DPDT	Momentary	3.45	2.35	2.07	1.73
MSPE-406N*	4PDT	Push on-off	5.95	4.05	3.57	2.98
MSPE-406R*	4PDT	Momentary	5.95	4.05	3.57	2.98
C-12		Extra plastic button*	.05	.036	.032	.03
C-13		Large Button**	.09	.06	.054	.05
C-14		Chrome button (thin)	.06	.04	.036	.033
C-14L		Chrome button	.09	.06	.054	.05
G-12- (‡)		Plain guard, use with C-12	.25	.17	.15	.13
G-12-K (‡)		Knurl guard, use with C-12	.30	.20	.18	.15
G-13- (‡)		Plain guard, use with C-13	.25	.17	.15	.13
G-13-K (‡)		Knurl guard, use with C-13	.30	.20	.18	.15
MSP-103B†	SPST	Normally closed	.65	.44	.39	.33
MSP-103C*	SPST	Normally open	.65	.44	.39	.33
MSP-103C-B†	SPST	Normally open	.65	.44	.39	.33
MSPS-103C*	SPST	Normally open	.50	.34	.30	.25



*Supplied with one red, green, or black plastic button; specify color.
**Specify red, green or black. † With black button. °With red button.
‡Specify finish: add suffix **C** for chrome, **A** for nat'l alum., **B** for black.



MSPG Mustang Push Button Switches rated 6 amps @ 125 VAC (Specs same as MSPE series, less waterproof). 13/32" bushings.

Model	Contacts	Application	One-24	25-99	100-499	500-999
MSPG-206N*	DPDT	Push on-off	3.15	2.14	1.89	1.58
MSPG-206R*	DPDT	Momentary	3.15	2.14	1.89	1.58

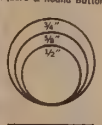
*Supplied with one red or black plastic button; specify color.

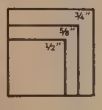
ILLUMINATED PUSH BUTTON SWITCHES



MSPN Illuminated Push Button Switches are snap-action types capable of handling a high current rating for its small size. DPDT action in a miniature case with separate connections to its replaceable T-1¾ grooved base lamps. Side terminals for simplified wiring or P.C. use. Metal construction, phenolic case, solid silver contacts. 6 amps @ 125 VAC. Mounts in 13/32" dia. hole. Wide choice of plastic buttons. **TRANSPARENT** colors: Red, Amber, Blue, Green, Clear. **TRANSLUCENT:** Red, Yellow, Green, White. Uses grooved base lamps.

Sizes available for Square & Round Buttons





Model	Contacts	Application	One-24	25-99	100-499	500-999
MSPN-206N	DPDT	Push on-off	4.80	3.26	2.88	2.40
MSPN-206R	DPDT	Momentary	4.80	3.26	2.88	2.40

Note: supplied less colored button and lamps, see listing below.

RS*	½" Round Button	.10	.068	.06	.05
RM*	⅝" Round Button	.12	.082	.072	.06
RL*	¾" Round Button	.15	.102	.09	.075
SS*	½" Square Button	.10	.068	.06	.05
SM*	⅝" Square Button	.12	.082	.072	.06
SL*	¾" Square Button	.15	.102	.09	.075
CGR-½	½" Round Guard, Chromed Brass	.30	.204	.18	.15
CGR-⅝	⅝" Round Guard, Chromed Brass	.40	.27	.24	.20
CGR-¾	¾" Round Guard, Chromed Brass	.50	.33	.30	.25
CGS-½	½" Square Guard, Chromed Plastic	.30	.204	.18	.15
CGS-⅝	⅝" Square Guard, Chromed Plastic	.40	.27	.24	.20
CGS-¾	¾" Square Guard, Chromed Plastic	.50	.33	.30	.25
379	6.3V @ 0.2A Lamps	.85	.57	.51	.43
386	14.0V @ 0.08A Lamps	.90	.60	.54	.45
388	28.0V @ 0.04A Lamps	.95	.63	.57	.47

* Specify Transparent or Translucent Type and Color.

KEYBOARD MAGNETIC REPULSION PUSH BUTTON SWITCHES



Momentary push button switches designed for data entry in modern electronic equipment. Ceramic magnets eliminate springs and allow for a very unusual touch that is light and snappy with little change in pressure over very long periods of service. Contacts are glass-encapsulated reeds for long-life. Plunger is keyed and non-rotating. Metal case withstands abuse and serves as a shield. Rated 100 mA @ 50 VDC, resistance 100 milliohms. Contact bounce 1 millisecond. Plunger travel 5/64". Operating force, under 2 ozs. Life, 10 million.

Model	Contacts	Description	One-24	25-99	100-499	500-999
MSPM-101B†	SPST	N.C., Solder Lug	4.25	3.40	2.98	2.76
MSPM-101C°	SPST	N.O., Solder Lug	3.90	3.12	2.73	2.54
MSPM-101B-1†	SPST	N.C., 110" Term.	4.25	3.40	2.98	2.76
MSPM-101C-1°	SPST	N.O., 110" Term.	3.90	3.12	2.73	2.54
C-12*		Extra button for MSPM	.05	.036	.032	.03

† Supplied with black button. °Supplied with red button.
* Packages of 25; specify red, black or green.

MINIATURE ROTARY SWITCHES



MRA Adjustable-Stop Rotary Switches are miniature types rated 500 mA @ 125 VAC. Features: adjustable-stop; non-shorting; 36° spacing; up to 4 poles on single deck; solid silver terminals and contacts. Types with suffix **S,** ⅛", dia. shaft less knob. Bushing, ¼-40.

MRA 12-Position Rotary Switches are slightly larger than standard MRA Series has ⅛" shaft and 30° spacing. Other specs similar to MRA Series. Knobs not included. Type MRA-1-12S can be converted to an adjustable-stop switch when used with KCVS-500 knob (see Alco knob listings).



MSRE Waterproof Rotary Switches are non-adjustable. Similar to MRA Series but feature internal and external 'O' rings. One-piece metal case construction, and terminals are epoxy sealed. ⅛" shaft. Ideal for printed circuits. Supplied less knob. Rated 500 mA @ 125 VAC. Can be converted to an adjustable-stop switch when used with KCVS-500 knob (see knob listings).



MODEL	Pole	Positions	Knob Supplied	One-24	25-99	100-499	500 999
MRA-1-10	1	2-10	Yes	4.35	2.96	2.61	2.18
MRA-2-5	2	2-5	Yes	4.35	2.96	2.61	2.18
MRA-3-3	3	2-3	Yes	4.35	2.96	2.61	2.18
MSRA-4-2*	4	2	Yes	4.35	2.96	2.61	2.18
MRA-1-10S	1	2-10	No	4.25	2.89	2.55	2.13
MRA-1-10SC**	1	10	No	4.25	2.89	2.55	2.13
MRA-2-5S	2	2-5	No	4.25	2.89	2.55	2.13
MRA-3-3S	3	2-3	No	4.25	2.89	2.55	2.13
MSRA-4-2S*	4	2	No	4.25	2.89	2.55	2.13
MRA-1-12S	1	12	No	4.75	3.23	2.85	2.38
MRA-1-12SC**	1	12	No	4.75	3.23	2.85	2.38
MRA-4-3	4	3	No	4.75	3.23	2.85	2.38
MSRE-1-10°	1	10	No	5.35	3.64	3.21	2.68
MSRE-2-5°	2	5	No	5.35	3.64	3.21	2.68
MSRE-3-3°	3	3	No	5.35	3.64	3.21	2.68
MSRE-4-2°	4	2	No	5.35	3.64	3.21	2.68

Continuous rotation. * **Switches are non-adjustable.



SP1, SP2 Aluminum Foil, pressure-sensitive "ON-OFF" plates for ALCOSWITCH and other miniature switches which have a ¼" bushing; and for standard switches requiring 13/32" hole. Each card has 12 plates.

SP3, SP4 Stamped Aluminum Plates for use with miniature and standard toggle switches. Black anodized, raised letters. Each card has 5 plates: 3 ON-OFF, 1 ON-ON, 1 PWR-OFF.



SLP4 Stamped Aluminum Plates for ¼" dia. switch bushings and ⅜" pilot lights. Each card has 5 plates: 3 ON-OFF, 1 ON-ON, 1 PWR-OFF. ⅜" hole accepts our BND series pilots.

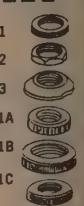


Model	Hole Size	No. Plates	One-24	25-99	100-499
SP-1	¼" Dia.	12	.25	.18	.17
SP-2	13/32" Dia.	12	.25	.18	.17
SP-3	¼" Dia.	5°	.75	.55	.50
SP-4	13/32" Dia.	5°	.75	.55	.50
SLP-4	¼" Dia. and ⅜" pilot	5°	.90	.65	.61

°3 ON-OFF, 1 ON-ON, 1 PWR-OFF.

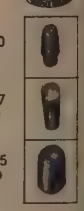


Decorative Mounting Nuts — 4 styles are available for use with ALCOSWITCH and other miniature switches. Packaged in multiples of 25. **STANDARD** double chamfered knurled nuts for ¼-40 threaded bushings only. **"PERFECT FIT"** round bevel top with lip for automatic stop ¼-40, ⅜, and 13/32" bushings. Decorative is conical shape; ¼-40.



Model	Description	One-24	25-99	100-499	500-999
N-1	¼-40 Standard Knurl Nut	.04	.028	.025	.022
N-1A	¼-40 "Perfect Fit" Knurl Nut	.06	.04	.036	.033
N-1B	13/32" "Perfect Fit" Knurl Nut	.08	.056	.05	.044
N-1C	⅜" "Perfect Fit" Knurl Nut	.08	.056	.05	.044
N-2	¼-40 Standard Hex Nut	.03	.022	.02	.018
N-3	¼-40 Decorative Mounting Nut	.06	.04	.036	.033

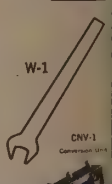
Color-Coded Caps for miniature and standard toggle switches. The MST-115D, 215N, 315N, 415N switches are stocked with white caps only. Colored caps may be purchased separately for use on all ALCO bat handle switches for color identification. When ordering — specify color. Packaged in multiples of 25 (minimum).



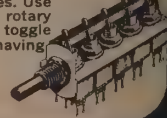
Model	Description	25-99	100-499	500-999
C-10*	Plastic caps for "MST", "A" & "E" Series	.028	.025	.022
C-15°	Plastic caps for Mustang "MSTG" Series	.04	.036	.033
C-17*	Flat top caps for "MST", "A" & "E" Series	.028	.025	.022

*Specify: Red, White, Black, Blue, Gray, Green, Yellow or Pink.
°Specify: Red, White, Black, Blue, or Green

A Spanner Wrench designed expressly to expedite the proper installation of ALCOSWITCH. A long, tapered arm extends at a slight angle allowing the user to tighten the lower mounting nut.
Model No. W-1 ..... **Net 25¢ ea.**



Conversion Unit For Rotary Switch Operation. Gangs miniature toggle switches (with ¼" bushings) for controlling multiple circuits simultaneously. Operating as a 2- or 3-position rotary switch, this unit is capable of ganging from 1 to as many as 5 toggle switch combinations that total up to 10 poles. Allows you to have enclosed contacts, and heavier current capabilities. Use with various types of switches to act as a 3-position rotary switch when used with CENTER-OFF or ON-ON-ON type toggle switches, or becomes a 2-position rotary with switches having no center position.



Model	Description	One-24	25-99	100-499	500-999
CNV-1	Conversion Unit	.95	.63	.57	.48

ALCO ELECTRONIC PRODUCTS, INC.

© United Technical Publication

ARCOLECTRIC SWITCH CO.

10A. 6/24V. D.C., 3A. 250V. A.C. 3A. 125V. A.C. ¼" DIA. MTG. HOLE "600" SERIES



BC 600/C ·25" TAB TERMS
G 600 SCREW TERMS
T 600 SOLDER TERMS



BC 601/C ·25" TAB TERMS
G 601 SCREW TERMS
T 601 SOLDER TERMS



BC 602/C ·25" TAB TERMS
G 602 SCREW TERMS
T 602 SOLDER TERMS



BC 603/C ·25" TAB TERMS
G 603 SCREW TERMS
T 603 SOLDER TERMS



BC 604/C ·25" TAB TERMS
G 604 SCREW TERMS
T 604 SOLDER TERMS



BC 605/C ·25" TAB TERMS
G 605 SCREW TERMS
T 605 SOLDER TERMS



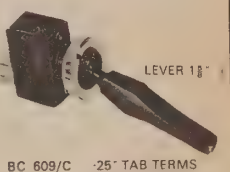
BC 606/C ·25" TAB TERMS
G 606 SCREW TERMS
T 606 SOLDER TERMS



BC 607/C ·25" TAB TERMS
G 607 SCREW TERMS
T 607 SOLDER TERMS



BC 608/C ·25" TAB TERMS
G 608 SCREW TERMS
T 608 SOLDER TERMS

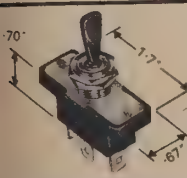


BC 609/C ·25" TAB TERMS
G 609 SCREW TERMS
T 609 SOLDER TERMS

S.P.D.T. SP 2-CIRCUIT, AND D.P.S.T AVAILABLE IN 600 SERIES

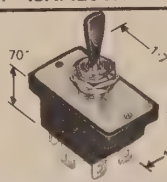
CERTAIN TYPES IN 600 SERIES ARE AVAILABLE WITH 'UND LAB' APPROVALS PENDING.

17A. 6/24V. DC. 13A. 250V. AC. 13A. 125V. A.C. '27' SERIES



·25" TAB TERMINALS
1·06" LEVER
½" DIA. MTG. HOLE

C2700/5	S.P.S.T.			
C2701/5	S.P.D.T.			
C2710/5	S.P.D.T.	CENTER OFF		
C2710/5C	S.P.D.T.	CENTER OFF	SPR. RETURN	ONE SIDE
C2710/5D	S.P.D.T.	CENTER OFF	SPR. RETURN	BOTH SIDES



·25" TAB TERMINALS
1·06" LEVER
½" DIA. MTG. HOLE

C2720/5	D.P.S.T.			
C2721/5	D.P.D.T.			
C2730/5	D.P.D.T.	CENTER OFF		
C2730/5C	D.P.D.T.	CENTER OFF	SPR. RETURN	ONE SIDE
C2730/5D	D.P.D.T.	CENTER OFF	SPR. RETURN	BOTH SIDES

THE '27' SERIES ARE AVAILABLE IN ALL METAL VERSIONS AND OTHER CIRCUIT ARRANGEMENTS. FOR SCREW TERMINALS CHANGE PREFIX 'C' TO 'S'

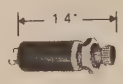
MOMENTARY SWITCHES RED, BLACK, GREEN OR WHITE BUTTONS



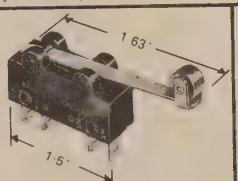
15 AMP 250V A.C. C290/P1 ¼" DIA. MTG. HOLE 2-CONTACTS N/O 2-CONTACTS N/C



1 AMP 250V A.C. ½" DIA. MTG. HOLE T936/D1 N/O T938/D1 N/C



1 AMP 250V A.C. ⅜ DIA. MTG. HOLE T906 N/O T908 N/C

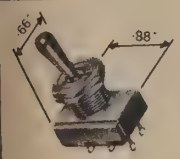


15 AMP 250V A.C. C290/RA 2-CONTACTS N/O 2-CONTACTS N/C



15 AMP 250V A.C. C290/K1 ¼" DIA. MTG. HOLE 2-CONTACTS N/O 2-CONTACTS N/C

SILENT ACTION INSTRUMENT SWITCHES ¼" DIA. MTG. HOLE 1 AMP 250V A.C.



METAL LEVER ⅜"
T9531 S.P.S.T.
T9551 S.P.D.T.
T9561 D.P.S.T.
T9571 D.P.D.T.



NYLON LEVER ⅜"
T9533 S.P.S.T.
T9553 S.P.D.T.
T9563 D.P.S.T.
T9573 D.P.D.T.



NYLON LEVER 1⅛"
T9535 S.P.S.T.
T9555 S.P.D.T.
T9565 D.P.S.T.
T9575 D.P.D.T.

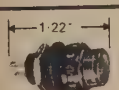


NYLON LEVER ⅛"
T9536 S.P.S.T.
T9556 S.P.D.T.
T9566 D.P.S.T.
T9576 D.P.D.T.

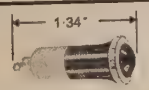
SIGNAL LAMP/HOLDERS

RED/AMBER/GREEN BLUE OR CLEAR

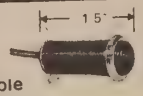
6V/12V/24V CAN BE SUPPLIED COMPLETE WITH BULBS



SL60
MIDGET SCREW BASE ALL INSULATED
¾" DIA. MTG. HOLE



SL61/B
MIDGET SCREW BASE SNAP-IN MOUNTING
¾" DIA. MTG. HOLE



Not available in Clear.
SL67
SNAP-IN MOUNTING IN ¾" DIA. HOLE 4" LEAD & TERMINAL CLIP
BA7 BULB HOLDER

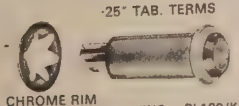


SL91
6V/12V
¾" DIA MTG HOLE
CHROME BEZEL
MINIATURE BAYONET BASE

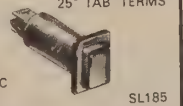
NEON INDICATORS ALL 125V AC/DC RED OR AMBER WITH BUILT IN RESISTOR



SNAP-IN MTG.
ALL PLASTIC LENS
SL59



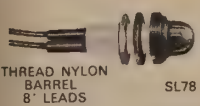
·25" TAB. TERMS
CHROME RIM AROUND PLASTIC LENS SL180/K



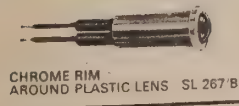
25" TAB TERMS
ALL PLASTIC LENS SL185



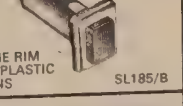
8" LEADS SNAP-IN MTG
CHROME RIM AROUND PLASTIC LENS SL190



THREAD NYLON BARREL 8" LEADS SL78



SNAP-IN MTG.
CHROME RIM AROUND PLASTIC LENS SL 267/B



SNAP-IN MTG
CHROME RIM AROUND PLASTIC LENS SL185/B



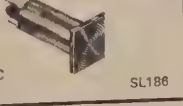
25 TAB. TERMS
CHROME RIM AROUND PLASTIC LENS SL264/C



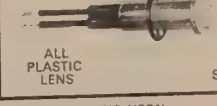
CHROME RIM AROUND PLASTIC LENS SL168/C



8" LEADS
CHROME RIM AROUND PLASTIC LENS SL 268/C



25" TAB. TERMS
ALL PLASTIC LENS SL186



8" LEADS
ALL PLASTIC LENS SL265

PART NO.	OVERALL LENGTH	MTG. HOLE
SL59	·58"	·937" x ·437"
SL78	1·25"	⅜" DIA.
SL168/C	1·56"	⅜" DIA.
SL180/K	1·61"	½" DIA.
SL267/B	1 12"	⅜" DIA
SL268/C	1·12	⅜" DIA
SL185	1 52"	½" DIA
SL185/B	1 52"	½" DIA
SL186	1 66"	½ DIA
SL190	1 09"	½" DIA
SL264C	1 67"	⅜" DIA
SL265	1 03"	⅜ DIA

ARCOLECTRIC SPECIALISE IN THE PRODUCTION OF SWITCHES, LAMPHOLDERS, AND NEON INDICATORS FOR THE ELECTRONIC, ELECTRICAL, AUTOMOTIVE AND OTHER INDUSTRIAL MANUFACTURERS
FOR COMPLETE INFORMATION ON ALL PRODUCTS REQUEST CATALOG 137A

RF SWITCHES

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series 303 High Isolation Microwave Switches

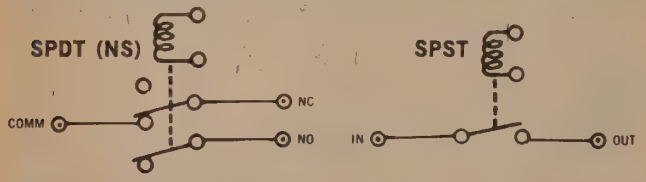
Compact coaxial switches, with superior isolation characteristics over entire operating range, particularly suitable where crosstalk interference must be minimized. Other units are also available, please request additional information and specifications.

CHARACTERISTICS

ELECTRICAL: Frequency Range: standard size and economy 0-12.4 GHz, miniature (303-10179-00) 0-18 GHz. **Characteristic Impedance:** 50 ohms. **Crosstalk (isolation):** 60 db at 12.4 GHz (standard) and at 18 GHz (miniature). **SWR:** 1.5:1 at 12.4 and 18 GHz respectively. **Insertion loss:** 0.5 db maximum. **Contact resistance:** 60.0 milliohms. **RF Power rating:** 100 watts at 1 GHz (power off during switching). **High RF Voltage rating:** 1000 V peak at 60 Hz. **Switching time:** operate 15 ms maximum: release: 10 ms maximum.

MECHANICAL: Minimum life: 1,000,000 cycles.

ENVIRONMENTAL: Temperature range: —55°C to 85°C. **Moisture resistance:** 10 day cycle. **Shock:** operating: 10 g's; non-operating: 100 g's. **Vibration:** operating: Test Cond. B, 10 to 55 cps; non-operating: 20 g's, 10 to 2000 cps. **Altitude and cold:** 0 to 70,000 ft.

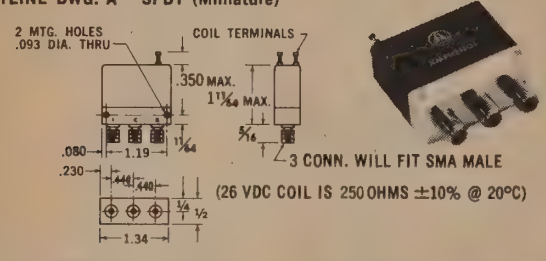


FUNCTIONS AND PART NUMBERS

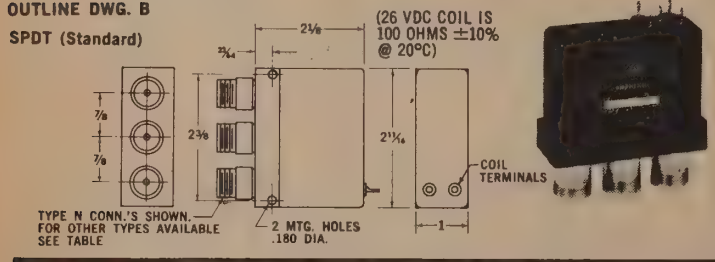
Connector	Coil Volts	SPDT (with cover) Outline Dwg. A Non-Latching	SPDT (with cover) Outline Dwg. A Latching	SPDT (Economy Version) Outline Dwg. C
SMA	6 DC	303-10179-1	303-10179-21	303-10116-1
	12 DC	303-10179-2	303-10179-22	303-10116-2
	26 DC	303-10179-3	303-10179-23	303-10116-3
	48 DC	303-10179-4	303-10179-24	
	120 DC	303-10179-5	303-10179-25	
	115 AC	303-10179-6	303-10179-26	303-10116-6

Connector	Coil Volts	SPDT (with cover) Outline Dwg. B Non-Latching	SPDT (with cover) Outline Dwg. B Latching	SPST (Shutter) Outline Dwg. D
TNC	6 DC	303-10168-1	303-10168-21	
	12 DC	303-10168-2	303-10168-22	
	26 DC	303-10168-3	303-10168-23	303-10969
	48 DC	303-10168-4	303-10168-24	
	120 DC	303-10168-5	303-10168-25	
	115 AC	303-10168-6	303-10168-26	
N	6 DC	303-10167-1	303-10167-21	
	12 DC	303-10167-2	303-10167-22	
	26 DC	303-10167-3	303-10167-23	
	48 DC	303-10167-4	303-10167-24	
	120 DC	303-10167-5	303-10167-25	
	115 AC	303-10167-6	303-10167-26	

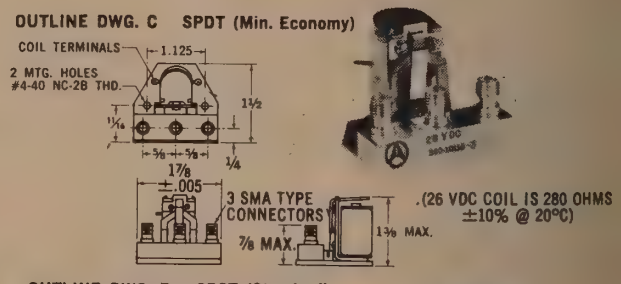
OUTLINE DWG. A SPDT (Miniature)



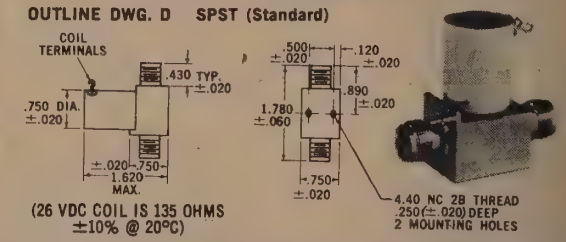
OUTLINE DWG. B
SPDT (Standard)



OUTLINE DWG. C SPDT (Min. Economy)



OUTLINE DWG. D SPST (Standard)



Coaxial Relays

Precision coax units. Maximum time to operate and release is 20 milliseconds. Gold-plated, fine silver contacts assure reliable low-level operation. Minimum life expectancy is 1,000,000 cycles, when switch is operated at speeds of less than 10 Hz. Switches are impedance matched to 50-ohm cable, though loss is negligible with 75-ohm cable. Operation is break-before-make. All materials are corrosion resistant.

Units meet applicable portions of military connector specs as follows: BNC — Mil-C-3608 and N — Mil-C-71.



Part No.	Termination	Function	Connectors	Frequency (MHz)	RF Power (W)	Coil Volts	Coil Ohms
315-10002-3	Open	SPDT	BNC	1000	100	26 DC	280
316-10082-3	Short	SPDT	BNC	2000	100	26 DC	280
316-10082-6	Short	SPDT	BNC	2000	100	120 DC	6000
316-10102-8	Short	SPDT	BNC	2000	100	115 AC	550
317-10202-3	Short	SPDT	BNC	2000	100	26 DC	280
317-10215-8	Short	SPDT	BNC	2000	100	115 AC	550
317-10242-3	Short	SPDT	N	2000	100	26 DC	280
317-10255-8	Short	SPDT	N	2000	100	115 AC	550
318-10407-3	Open	SPDT	BNC	2000	100	26 DC	280
318-10381	Short	SPDT	BNC	2000	100	lever manual	—
318-10382-3	Short	SPDT	BNC	2000	100	26 DC	280
318-11165-3	Res.	SPDT	BNC	2000	100	26 DC	280
318-11576-8	Res.	SPDT	BNC	2000	100	115 AC	550
319-11141	Open	SPDT	BNC	2000	100	rotary manual	—
320-10931-3	Open	SPDT	N	3000	1000	26 DC	200
321-11062	Open	DPDT	BNC	1000	100	lever manual	—
321-11064-3	Open	DPDT	BNC	1000	100	26 DC	200
322-11431	Open	1P4T	BNC	3000	100	rotary manual	—
323-11651-3	Open	1P4T	BNC	1000	100	26 DC	280
322-11442	Open	1P6T	BNC	3000	100	rotary manual	—
325-11635-3	Short	1P6T	BNC	400	100	26 DC	280
325-11641-3	Open	1P6T	BNC	400	100	26 DC	280

© United Technical Publications

RF SWITCHES

AMPHENOL
THE BUNKER-RAMO CORPORATION

Series 360 DYNAFORM FUNCTIONS AND PART NUMBERS

Conn.	Term.	Schematic	Coil Volts	SPDT Outline Dwg. A	SPDT Outline Dwg. B	DPDT Outline Dwg. C	DPDT Outline Dwg. D	Transfer Outline Dwg. E
BNC	SH	1	26 DC 110 DC 115 AC	360-11891-12 360-11891-34 360-11891-45	360-11891-13 360-11891-35 360-11891-46	360-11896-12 360-11896-34 360-11896-45	360-11896-13 360-11896-35 360-11896-46	
	NS	2	26 DC 110 DC 115 AC	360-11891-14 360-11891-36 360-11891-47	360-11891-15 360-11891-37 360-11891-48	360-11896-14 360-11896-36 360-11896-47	360-11896-15 360-11896-37 360-11896-48	
	50 Ω RT	3	26 DC 110 DC 115 AC	360-11891-16 360-11891-38 360-11891-49	360-11891-17 360-11891-39 360-11891-50	360-11896-16 360-11896-38 360-11896-49	360-11896-17 360-11896-39 360-11896-50	
	75 Ω RT	3	26 DC 110 DC 115 AC	360-11891-18 360-11891-40 360-11891-51	360-11891-19 360-11891-41 360-11891-52	360-11896-18 360-11896-40 360-11896-51	360-11896-19 360-11896-41 360-11896-52	
	95 Ω RT	3	26 DC 110 DC 115 AC	360-11891-20 360-11891-42 360-11891-53	360-11891-21 360-11891-43 360-11891-54	360-11896-20 360-11896-42 360-11896-53	360-11896-21 360-11896-43 360-11896-54	
	TRANS	4	26 DC 110 DC 115 AC					360-11891-22 360-11891-44 360-11891-55
TNC	SH	1	26 DC 110 DC 115 AC	360-11892-12 360-11892-34 360-11892-45	360-11892-13 360-11892-35 360-11892-46	360-11897-12 360-11897-34 360-11897-45	360-11897-13 360-11897-35 360-11897-46	
	NS	2	26 DC 110 DC 115 AC	360-11892-14 360-11892-36 360-11892-47	360-11892-15 360-11892-37 360-11892-48	360-11897-14 360-11897-36 360-11897-47	360-11897-15 360-11897-37 360-11897-48	
	50 Ω RT	3	26 DC 110 DC 115 AC	360-11892-16 360-11892-38 360-11892-49	360-11892-17 360-11892-39 360-11892-50	360-11897-16 360-11897-38 360-11897-49	360-11897-17 360-11897-39 360-11897-50	
	75 Ω RT	3	26 DC 110 DC 115 AC	360-11892-18 360-11892-40 360-11892-51	360-11892-19 360-11892-41 360-11892-52	360-11897-18 360-11897-40 360-11897-51	360-11897-19 360-11897-41 360-11897-52	
	95 Ω RT	3	26 DC 110 DC 115 AC	360-11892-20 360-11892-42 360-11892-53	360-11892-21 360-11892-43 360-11892-54	360-11897-20 360-11897-42 360-11897-53	360-11897-21 360-11897-43 360-11897-54	
	TRANS	4	26 DC 110 DC 115 AC					360-11892-22 360-11892-44 360-11892-55
N	SH	1	26 DC 110 DC 115 AC	360-11890-12 360-11890-34 360-11890-45	360-11890-13 360-11890-35 360-11890-46	360-11895-12 360-11895-34 360-11895-45	360-11895-13 360-11895-35 360-11895-46	
	NS	2	26 DC 110 DC 115 AC	360-11890-14 360-11890-36 360-11890-47	360-11890-15 360-11890-37 360-11890-48	360-11895-14 360-11895-36 360-11895-47	360-11895-15 360-11895-37 360-11895-48	
	50 Ω RT	3	26 DC 110 DC 115 AC	360-11890-16 360-11890-38 360-11890-49	360-11890-17 360-11890-39 360-11890-50	360-11895-16 360-11895-38 360-11895-49	360-11895-17 360-11895-39 360-11895-50	
	75 Ω RT	3	26 DC 110 DC 115 AC	360-11890-18 360-11890-40 360-11890-51	360-11890-19 360-11890-41 360-11890-52	360-11895-18 360-11895-40 360-11895-51	360-11895-19 360-11895-41 360-11895-52	
	95 Ω RT	3	26 DC 110 DC 115 AC	360-11890-20 360-11890-42 360-11890-53	360-11890-21 360-11890-43 360-11890-54	360-11895-20 360-11895-42 360-11895-53	360-11895-21 360-11895-43 360-11895-54	
	TRANS	4	26 DC 110 DC 115 AC					360-11890-22 360-11890-44 360-11890-55

COIL CHARACTERISTICS

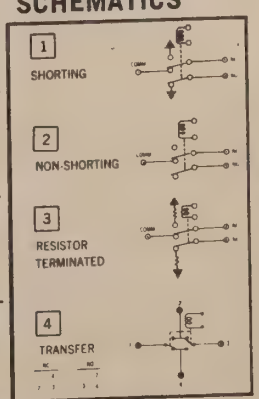
@ 20°C

Nominal Voltage	Operating Range	Resistance, ohms ±10%
26 DC	20 - 32	260 ohms
110 DC	85 - 130	5100 ohms
115 AC (50 - 400 Hz)	90- 130	1500 ohms thru diodes

ELECTRICAL CHARACTERISTICS

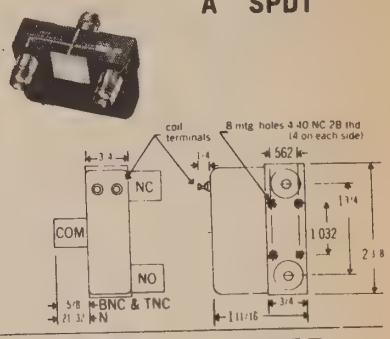
Conn.	Term.	Typical VSWR (Frequency GHz) .03	.2	.4	1.0	2.0	4.0	6.0	Typical Crosstalk - db (Frequency GHz) .03	.2	.4	1.0	2.0	4.0	6.0
BNC	SH	1.03	1.06	1.08	1.10	1.20	1.25	1.35	70	66	60	53	42	30	20
	NS	1.03	1.06	1.08	1.10	1.21	1.27	1.40	50	45	41	30	27	24	18
	50 Ω RT	1.03	1.06	1.08	1.14	1.25	1.50	—	40	35	31	24	17	14	—
	75 Ω RT	1.03	1.06	1.08	1.14	1.25	1.50	—	40	35	31	24	17	14	—
	95 Ω RT	1.03	1.06	1.08	1.14	1.25	1.50	—	40	35	31	24	17	14	—
	TRANS	1.05	1.10	1.15	1.20	1.50	—	—	45	38	32	24	17	—	—
TNC	SH	1.03	1.06	1.08	1.10	1.20	1.25	1.35	70	66	60	53	42	35	25
	NS	1.03	1.06	1.08	1.10	1.21	1.27	1.40	51	43	41	30	27	26	21
	50 Ω RT	1.03	1.06	1.08	1.14	1.25	1.50	—	40	35	31	24	17	14	—
	75 Ω RT	1.03	1.06	1.08	1.14	1.25	1.50	—	40	35	31	24	17	14	—
	95 Ω RT	1.03	1.06	1.08	1.14	1.25	1.50	—	40	35	31	24	17	14	—
	TRANS	1.05	1.10	1.15	1.20	1.50	—	—	45	38	32	24	17	—	—
N	SH	1.03	1.04	1.07	1.10	1.15	1.18	1.30	70	66	60	53	42	35	25
	NS	1.03	1.04	1.07	1.10	1.17	1.20	1.35	51	43	41	30	27	26	21
	50 Ω RT	1.03	1.05	1.08	1.12	1.18	1.50	—	41	35	31	24	17	14	—
	75 Ω RT	1.03	1.05	1.08	1.12	1.18	1.50	—	39	32	30	23	16	14	—
	95 Ω RT	1.03	1.05	1.08	1.12	1.18	1.50	—	37	31	29	22	15	14	—
	TRANS	1.05	1.10	1.15	1.20	1.50	—	—	45	38	32	24	17	—	—

SCHEMATICS

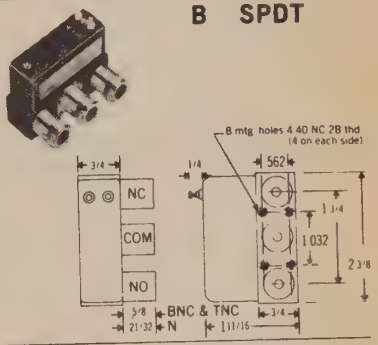


NOTE: High frequency electrical characteristics are typical values (not maximum) as measured in a 50 ohm circuit and may be used for most design analyses. For more exacting applications, maximum values in the frequency range may be obtained upon request. SWR measured to common with a matched 50 ohm termination. **For additional specifications request Amphenol RF Switches Catalog SS-1.**

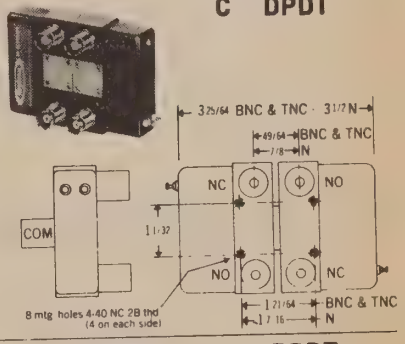
A SPDT



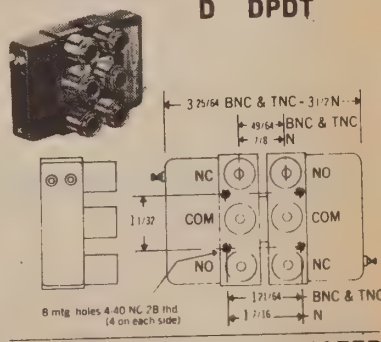
B SPDT



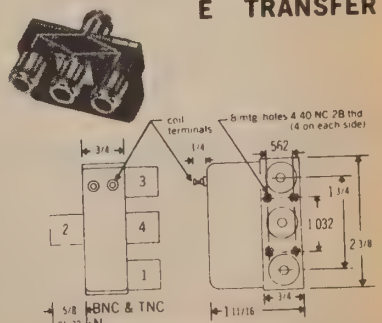
C DPDT



D DPDT

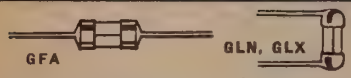


E TRANSFER



bussmann manufacturing div.
fuses and holders

TRON® SUBMINIATURE PIG-TAIL FUSES



Glass-tube construction with 1-1/2" leads of #24 tinned copper for 1/100-5 amp ratings, #18 tinned copper for 7-15 amp ratings. Hermetically sealed. Color coded to indicate amp ratings. For circuits with fault current of 50 amps or less (1/100-5 amps for 125 V or less, 7-15 amps for 32 V or less). GLN, GLX body size, .140" x .3"; GFA body size, .145" x .3".

Buss No.	Amperes	Net Price For Ten	Net Price For 100
GLN	1/100	$13.10	$110.00
GLN	1/32, 1/20, 1/16, 1/10, 1/8, 3/10, 4/10, 7, 8, 15	11.00	92.00
GLX	15/100, 2/10, 1/4, 1/2, 6/10, 3/4, 1, 1-1/2, 2, 3, 4, 5	14.30	119.00
GFA	1/100, 1/32, 1/20, 1/16, 1/10, 1/8, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10	4.70	39.00
GFA	3/4, 1, 1-1/2, 2, 3, 4, 5, 7, 8, 15	4.10	35.00

SUBMINIATURE PRONG TYPE UNIT



HWA Holder — GMW Fuse — AF Knob

Rated 125 V or less, fault current not over 300 amps; open at 200% within 10 sec or less. Use AF knob for waterproof. Size, .270" dia., .250" lg. (body).

Buss No.	Amperes	Net Price For Ten	Net Price For 100
GMW	1/200, 1/100, 1/64, 1/32, 1/16	$7.90	$66.00
GMW	1/10, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10, 3/4, 1, 1-1/2, 2, 3, 4, 5	6.00	50.00
HWA*	Holder, fits all GMW	7.80	64.00
HWA†	Holder, fits all GMW	6.80	56.00
AF	Knob only, fits HWA	1.00	8.00

*With AF knob. †Without AF knob.

13/64 x 45/64 inch FUSES

(5mm x 20mm)



Protection of miniaturized circuits — commonly used in foreign equipment. Carry 100%, open at 200% in 10 sec.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
GMA	1/8	125	$1.75	$30.00
GMA	1/4, 1/2, 7/10	125	1.40	24.00
GMA	1, 1-2/10, 1-1/2, 2, 3, 4, 5, 6, 10	125	1.15	19.00

1/4 x 5/8 inch FUSES

FAST ACTING FUSE



Glass tube, 1/4" x 5/8". Carry 110%, open at 135% in 1 hour.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
AGA	1, 1-1/2, 2, 2-1/2	32	$0.42	$7.50
AGA	8	32	.42	7.50
AGA	5, 6, 7-1/2, 10, 15, 20	32	.33	5.50
AGA	25, 30	32	.33	5.50

1/4 x 7/8 inch FUSES

FAST ACTING FUSE



Glass tube, carry 110%, open at 135% in 1 hour.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
AGW	1, 2-1/2, 3, 4	32	$0.42	$7.50
AGW	5, 6, 7-1/2, 15, 20, 30	32	.33	5.50

1/4 x 1 inch FUSES

FAST ACTING FUSES



Glass tube, 1/4" x 1". Carry 100%, open at 200% in 5 seconds. 1/500 to 1/32 amp sizes have bridge construction; all others straight-through element. U/L Approved.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
AGX	1/500	250	$6.40	$106.00
AGX	1/200	250	2.75	46.00
AGX	1/100	250	2.35	40.00
AGX	1/32	250	2.05	35.00
AGX	1/16	250	1.30	22.00
AGX	1/10, 1/8, 3/16, 2/10	250	.95	16.00
AGX	1/4, 3/8, 4/10, 1/2, 3/4	250	.60	10.00
AGX	1, 1-1/2, 2, 3, 4, 5	125*	.42	7.50
AGX	8, 10, 15, 20	32†	.33	5.50
AGX	25, 30	32	.33	5.50

*1 A, 250. †5 A, 125.

1/4 x 1-1/4 inch FUSES

FAST ACTING FUSES

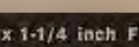
Glass tube, 1/4" x 1-1/4". Carry 110%, open at 135% in 1 hour or less. 1/500 to 2 amp sizes will open at 200% in 5 seconds or less. 1/500 to 1/32 amp have bridge construction; all others straight-through element. U/L Approved.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
AGC	1/500	250	$6.40	$106.00
AGC	1/200	250	2.75	46.00
AGC	1/100	250	2.35	40.00
AGC	1/32	250	2.05	35.00
AGC	1/16, 1/8, 15/100, 175/1000, 3/16, 1/10, 2/10	250.	.95	16.00
AGC	1/4, 3/10, 3/8, 45/100, 1/2, 6/10, 3/4	250	.60	10.00
AGC	1, 1-1/4, 1-1/2, 1-6/10, 2	250	.42	7.50
AGC	2-1/2, 3	250	.42	7.50
AGC	4	32‡	.42	7.50
MTH	4, 5, 6	250	.50	8.50
AGC	5, 6, 7-1/2, 8, 10, 15	32‡	.33	5.50
AGC	20	32‡	.33	5.50
AGC	25, 30	32‡	.33	5.50

‡Not U/L listed.

1/4 x 1-1/4 inch FUSES

CERAMIC TUBE FUSES

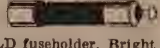


High interrupting capacity for use on circuit delivering as high as 25,000 amps at 125 V, or 10,000 amps at 250 V. 1/4" x 1-1/4". Carry 110%, open at 135% in 1 hour. Up to 15 amp size U/L Approved.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
ABC	1/4	250	$0.80	$14.00
ABC	1, 2, 3	250	.80	14.00
ABC	5, 6, 8, 10	250	.70	12.00
ABC	12, 15, 20	250	.80	14.00
ABC	25, 30	125	1.00	17.00

1/4 x 1-1/4 inch FUSES

VISUAL INDICATING FUSES



For use with HLD fuseholder. Bright red dot on indicating pin extends from end of fuse when fuse is open even after power is off. Rated 125 V or less, carries 110%, opens at 135% in 1 hour or less. Only 1/4" x 1-1/4".

Buss No.	Amperes	Net Price For Five	Net Price For 100
GBA	3/4	$2.75	$46.00
GBA	1, 1-1/2, 2, 3, 4, 5	2.05	35.00

Fiber tube with silver plated indicating pin which extends when fuse is blown. May be used to actuate a signal when used in HKA fuseholder or Signal Fuse Block. Dual tube construction in sizes larger than 5 amps (cannot be used in HKA fuseholder). Voltage, 125 volts, except 8 amp and over which are 32 volts. Size, 1/4" x 1-1/4".

Buss No.	Amperes	Net Price For Five	Net Price For 100
GLD	3/4	$2.50	$42.00
GLD	1, 1-1/2, 2, 3, 4, 5	2.00	33.00
GLD	6, 8, 10, 12, 15, 20	2.75	46.00

1/4 x 1-1/4 inch FUSES

FUSETRON PIG-TAIL FUSES



Body 1/4" x 1-1/4", #20 tinned leads, 1-1/4". 1/100 to 2-8/10 same as MDL type; 3 to 7 amps same as MDX type. U/L Approved.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
MDV	1/100, 1/32	250	$2.15	$36.00
MDV	1/16, 1/10, 1/8, 15/100, 175/1000, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 3/4, 8/10, 1	250	1.60	27.00
MDV	1-1/4, 1-1/2, 1-6/10, 2	125	1.50	25.00
MDV	2-1/2, 2-8/10, 3, 3-2/10, 4, 5, 6-1/4, 7	125	1.30	22.00

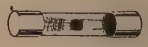
FAST ACTING FUSE
PIG-TAIL FUSES

Glass tube 1/4" x 1-1/4" with 1-1/4" leads of #20 tinned wire. Carry 110%, open 135% in 1 hour. 250 V. U/L Approved.

Buss No.	Amperes	Net Price For Five	Net Price For 100
GJV	1/16	$1.60	$27.00
GJV	1/8	1.25	21.00
GJV	1/4, 3/10, 3/8, 1/2, 3/4	.95	16.00
GJV	1, 1-1/2, 2, 3	.75	13.00
GJV	4, 5, 6	.80	13.00

1/4 x 1-1/4 inch FUSES

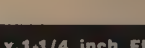
FUSETRON GLASS TUBE FUSES



Dual-element slow-blowing type, 1/4" x 1-1/4". Fuse link operates only on very high overloads or short-circuits; thermal cutout functions on low overloads (cannot operate quickly on any load, thus providing long time-lag). Carry 110%, open at 135% in 1 hour. MDL 1/100 to 2-8/10 amp and MDX 3 to 7 amp sizes. U/L Approved. MDL type has longer time-lag than MDX type.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
MDL	1/100, 1/32	250	$1.75	$30.00
MDL	1/16, 1/10, 1/8, 15/100, 175/1000, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 7/10, 3/4, 8/10, 1		1.30	22.00
MDX	1-1/4, 1-1/2, 1-6/10, 2	250	1.40	24.00
MDL	1-2/10, 1-1/4, 1-1/2, 1-6/10, 2	125	1.25	21.00
MDL	2-1/2, 2-8/10	125	.95	16.00
MDX	3, 3-2/10, 4, 5	125	.95	16.00
MDX	6-1/4, 7	125	1.15	19.00
MDL	3, 3-2/10, 4, 5, 6-1/4, 8, 10, 15, 20, 25, 30	32	.95	16.00

1/4 x 1-1/4 inch FUSES



Fusetron dual-element fuse, slow-blowing type, ceramic tube. Carry 110%, open at 135% in 1 hour.

Buss No.	Amperes	Volts	Net Price For Five	Net Price For 100
MDA	1/100, 1/32	250	$2.25	$38.00
MDA	1/16, 1/10, 1/8, 15/100, 175/1000, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 3/4, 8/10, 1, 1-1/4, 1-1/2, 1-6/10, 2	250	1.90	31.00
MDA	2-1/2, 2-8/10, 3, 3-2/10, 4, 5, 6-1/4, 7, 8, 10, 15, 20	250	1.30	22.00
MDA	25, 30	125	1.30	22.00

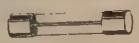
Net

© United Technical Publications

bussmann manufacturing div.
fuses and holders

9/32 x 1-1/4 inch FUSES

AGS GLASS TUBE FUSES



t specification; carry, 110%, open at 135% within 1 r except 35 and 40 amp units which open at 300% in 2 seconds when tested in standard 30-amp test circuit. e: These units in sizes larger than 30 amps are not mmended for use in fuse clips or fuseholders as s will not carry the high currents.

ss o.	Amperes	Volts	Net Price For Five	100
S	1/16	250	$1.90	$31.00
S	1/8	250	1.40	24.00
S	1/4, 1/2	250	.70	12.00
S	1, 2, 2-1/2, 3	250	.65	11.00
S	5, 10, 15, 20 ,25, 30	32	.55	9.00
S	35, 40, 50	32	.65	11.00

9/32 x 1-1/4 inch FUSES

CERAMIC TUBE FUSES



rrry 110%, at 135% in 1 hour. 35 and 40 amp. open 300% in 2 to 4 seconds when tested in a standard 30 p. test circuit.

uss lo.	Amperes	Volts	Net Price For Five	100
8S	1, 2, 3	250	$1.30	$22.00
8S	5, 8, 10, 15, 20	250	1.20	20.00
8S	25, 30	125	1.20	20.00
8S	35, 40	32	1.30	22.00

9/32 x 1-1/4 inch FUSES

FUSETRON DUAL-ELEMENT FUSES

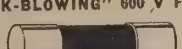


lass tube, slow-blowing. Avoid needless blows from arting currents or surges, yet provides protection against ort-circuits or continuous overloads. Carry 110%, open 135% in 1 hour. Approximate blowing time: at 200% ad, 25 seconds; at 300% load, 8 seconds; at 500% ad, 3 seconds.

Buss No.	Amperes	Volts	Net Price For Five	100
DM	1/10, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10, 8/10, 1	250	$1.70	$28.00
DM	1-1/4, 1-6/10, 2	125	1.70	28.00
DM	2-1/2, 2-8/10, 3	125	1.30	22.00
DM	3-2/10, 4, 5, 6-1/4, 8, 10, 10, 15, 20, 25, 30, 35, 40	32	1.30	22.00

13/32 x 1-3/8 inch FUSES

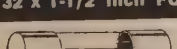
"QUICK-BLOWING" 600 V FUSES



Designed to protect control circuits, fluorescent lighting circuits or similar uses where quick-blowing characteristics are desired. Use HPC-L fuseholder or 3845 fuse block. U/L Approved. Fiber tube 13/32" x 1-3/8".

Buss No.	Amperes	Net Price For Ten	100
BS	4/10, 3/4, 8/10	$2.40	$20.00
BS	1, 2, 3, 4, 5	2.20	19.00

13/32 x 1-1/2 inch FUSES



Glass tube, carry 110%, open at 135% in 1 hour. 3 amp. and smaller sizes U/L listed.

Buss No.	Amperes	Volts	Net Price For Ten	100
AGU	1, 2, 3, 4	250	$1.60	$13.00
AGU	5, 10, 15, 20, 25, 30	32	1.60	13.00

13/32 x 1-1/2 inch FUSES



MIDGET TYPE FUSES

Up to 15 amp size U/L Approved.

Buss No.	Amperes	Volts	Net Price For Ten	100
BAF	1, 3, 5, 6, 10	250	$1.20	$11.00
BAF	15, 20, 25, 30	125	1.20	11.00

13/32 x 1-1/2 inch FUSES

INDICATING, LAMINATED TUBE FUSES



Red button on indicating pin extends from end of fuse when fuse is blown. Units are built in accordance with Navy Specifications. These units may be used in Buss HPC-C fuseholders. Voltage, (1-15 amps), 250, others, 125 V.

Buss No.	Amperes	Net Price For Ten	100
MIN	1, 2, 3, 5, 10, 15, 20, 25, 30	$4.10	$35.00

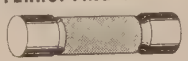
SIGNAL OR VISUAL INDICATING FUSES

MIC fuses have silver-plated indicating pin. Pin may be used as visual indicator or may be used to actuate a signal. **MIJ** fuses are similar to MIC types except they have been specially designed for complex circuitry as in computers. Voltage, 250 except 20 amps and over which are 32 V.

Buss No.	Amperes	Net Price For Ten	100
MIC	1, 2, 3, 5, 10, 15, 20, 25, 30	$4.70	$39.00
MIJ	1, 2, 3, 5, 10, 15, 20, 25, 30	5.50	46.00

13/32 x 1-1/2 inch FUSES

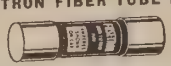
HIGH INTERRUPTING CAPACITY FUSES



Type **KTK** — For use on circuits as high as 100,000 amps and sand filler surrounding a silver fuse at 600 volts or less, AC only. Glass fiber melamine tubes element. **Amperes:** 1/10, 1/8, 2/10, 1/4, 3/10, 1/2, 3/4, 1, 1-1/2, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30. Lot of 10, Net $11.20. Lot 100, Net $94.00.

13/32 x 1-1/2 inch FUSES

FUSETRON FIBER TUBE FUSES



Dual-element slow-blowing type, 13/32" x 1-1/2" overall. Fuse link operates only on very high overloads or short circuits; thermal cutout functions on low overloads (cannot operate quickly on any overload, thus providing longer time lag). Carry 110%, open at 135% in 1 hour. 125 and 250 volt sizes U/L Approved.

Buss No.	Amperes	Volts	Net Price For Ten	100
FNM	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1-1/8, 1-1/4, 1-4/10, 1-6/10, 1-8/10, 2, 2-1/4, 2-1/2, 2-8/10, 3-2/10, 3-1/2, 4, 4-1/2, 5, 5-6/10, 6-1/4, 7, 8, 9, 10	250	$3.70	$32.00
		125	3.70	32.00
FNM	12, 15	32	3.70	32.00
FNM	20, 25, 30			

Same as series FNM above, except glass tube instead of fibre tube.

Buss No.	Amperes	Volts	Net Price For Ten	100
MDR	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10	250	$4.10	$35.00
		125	4.10	35.00
MDR	1, 1/2, 1-6/10			
MDR	2-1/2, 3, 3-2/10, 4, 5,	32	3.40	28.00
	6-1/4, 8, 10, 15, 20	32	3.80	31.00
MDR	25, 30, 35, 40			

13/32 x 1-1/2 inch FUSES

INDICATING FUSETRON FUSES



Similar to FNM types. Indicating pin extends from fuse when fuse blows. Use in signal fuse block or HPC-C fuseholder (larger than 10 amps units cannot be used in HPC-C). U/L Approved in 0-15 amp sizes.

Buss No.	Amperes	Net Price For Ten	100
FNA	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1-1/8, 1-1/4,1-4/10, 1-6/10, 1-8/10, 2, 2-1/4, 2-1/2, 2-8/10, 3, 3-2/10, 3-1/2, 4, 4-1/2, 5, 5-6/10, 6, 6-1/4, 7, 8, 10	$6.70	$56.00
FNA	12, 15, 20, 25, 30	7.50	62.00

TYPE C AND N FUSES, HOLDERS



C, N HC, HN

Matched glass fuses and fuseholders for specific size ranges. **Type N** fuses are dual-element time-delay or slow-blowing type. 0 to 1-1/4 amp sizes, 1/4" x 1-1/4"; 1-3/10 to 7 amp sizes, 1/4" x 1-7/16". **Type C** fuses are single-element quick-blowing type. 0 to 3-1/2 amp sizes, 1/4" x 1-1/16"; 3-6/10 to 10 amp sizes, 1/4" x 1-1/4". Holders rated at 250 volts.

TYPE N FUSES

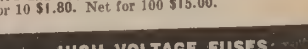
Amperes	Holder No. HN-	Volts	Net Price For Five	100
1/100, 1/32	0 to 3/10	250	$1.75	$30.00
1/16, 1/10, 15/100, 2/10, 1/4, 3/10	0 to 3/10	250	1.30	22.00
4/10	3/10 to 1/2	250	1.30	22.00
1/2	3/10 to 1/2	250	1.30	22.00
6/10	1/2 to 3/4	250	1.30	22.00
7/10, 3/4	1/2 to 3/4	250	1.30	22.00
8/10, 1	3/4 to 1-1/4	250	1.30	22.00
1-1/4	3/4 to 1-1/4	250	1.25	21.00
1-6/10	1-3/10 to 1-3/4	125	1.25	21.00
1-3/4		125	1.25	21.00
2	1-3/4 to 2-1/2	125	1.25	21.00
2-1/2	1-3/4 to 2-1/2	125	1.25	21.00
2-8/10	2-1/2 to 3-1/2	125	1.25	21.00
3-2/10	2-1/2 to 3-1/2	125	1.25	21.00
3-1/2	2-1/2 to 3-1/2	125	1.25	21.00
4	3-1/2 to 5	125	1.25	21.00
5	3-1/2 to 5	125	1.25	21.00
6-1/4	5 to 7	125	1.25	21.00
7	5 to 7	125	1.25	21.00

TYPE C FUSES

Amperes	Holder No. HC-	Volts	Net Price For Five	100
1/32	0 to 3/10	250	$2.00	$33.00
1/16	0 to 3/10	250	1.30	22.00
1/8, 3/16	0 to 3/10	250	.95	16.00
1/4	0 to 3/10	250	.80	13.00
3/10	0 to 3/10	250	.80	13.00
3/8	3/10 to 1/2	250	.80	13.00
1/2	3/10 to 1/2	250	.80	13.00
3/4	1/2 to 3/4	250	.48	8.00
1	3/4 to 1-1/4	250	.48	8.00
1-1/4	3/4 to 1-1/4	250	.48	8.00
1-1/2	1-1/4 to 1-3/4	250	.48	8.00
1-3/4	1-1/4 to 1-3/4	250	.48	8.00
2	1-3/4 to 2-1/2	250	.48	8.00
2-1/2	1-3/4 to 2-1/2	250	.48	8.00
3	2-1/2 to 3-1/2	250	.55	9.00
3-1/2	2-1/2 to 3-1/2	250	.55	9.00
4	3-6/10 to 5	250	.55	9.00
5	3-6/10 to 5	250	.55	9.00
6	5 to 7	250	.55	9.00
7	5 to 7	250	.55	9.00
8	7 to 10	250	.85	14.00
10	7 to 10	250	.85	14.00

Type HC and Type HN Fuseholders — All sizes (specify). Net for 10 $1.80. Net for 100 $15.00.

HIGH VOLTAGE FUSES



Designed for protection of circuits up to 20 kW on DC and 30 kVA on AC.

Buss No.	Amperes	Volts	Net Price For Ten	100
HVA	3/8, 1/2, 3/4, 1, 1-1/2, 2	1000	$2.90	$24.00
HVB	1/2, 3/4, 1, 1-1/2, 2	2500	4.00	34.00
HVJ	1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1-1/2, 2	5000	7.20	60.00
HVL	1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1-1/2, 2	10K	14.10	118.00

Net

© United Technical Publications

bussmann manufacturing div.
fuses and holders

SFE STANDARD FUSES

Different amperages are different lengths, making it impossible to over-fuse. Glass tube, 1/4" dia. Carry 110%, open at 135% in 1 hour. Made to SAE specifications and U/L Approved. 32 volts or less.

Buss No.	Amperes	Length In.	Net Price For Five	Net Price For 100
SFE	4	5/8	$0.33	$5.50
SFE	6	3/4	.33	5.50
SFE	7-1/2, 9	7/8	.33	5.50
SFE	14	1-1/16	.33	5.50
SFE	20	1-1/4	.33	5.50
SFE	30	1-7/16	.33	5.50

SIGNAL-INDICATING ALARM ACTIVATING TYPE UNIT



Takes only 1/4" x 1-15/32" space. Color indicator. Rated 300 V or less; 100% for 10 min.; open at 150% within 5 min.

Buss No.	Amperes and Color of Indicator	Net Price For Ten	Net Price For 100
GMT	18/100*, 1/4†, 1/2‡, 65/100§, 3/4#, 1●, 1-1/3△, 2□, 3◀, 5∞, 7-1/2♣, 10**	$4.50	$38.00
HLT	Holder, fits all GMT	4.70	39.00

Color of Indicator: *Yellow; †violet; ‡red; §black; #brown; ●gray; △white; □orange; ◀blue; ∞green; ♣black-white; **red-white.

FUSETRON DUAL-ELEMENT FUSES



Long time-lag prevents useless shut-downs caused by ordinary fuses opening on starting currents or other harmless overloads, yet protects against short-circuits. On normal installations will guard motors against burn-out from overloads or single phasing. U/L Listed for motor running and circuit protection up to 250 volts.

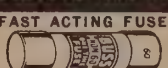
Buss No.	Amperes	Net Price For Ten	Net Price For 100
FRN	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1-1/8, 1-1/4, 1-4/10, 1-6/10, 1-8/10, 2, 2-1/4, 2-1/2, 2-8/10, 3-2/10, 3-1/2, 4, 4-1/2, 5, 5-6/10, 6-1/4, 7, 8, 9	$4.80	$40.00
	10, 12, 15, 17-1/2, 20, 25, 30	4.50	38.00
FRN	35, 40, 45, 50, 60	8.50	71.00



FRN	70, 80, 90, 100	19.40	161.00

BUSS ONE-TIME FUSES

FAST ACTING FUSE



Get same care in engineering and manufacture as other BUSS products. Each can be depended upon to operate as intended under all service conditions. Carry U/L label. For voltage up to 250.

Buss No.	Amperes	Net Price For Ten	Net Price For 100
NON	1, 3, 6, 10, 15, 20, 25, 30	$1.30	$11.00
NON	35, 40, 45, 50, 60	2.40	21.00



NON	70, 80, 90, 100	10.40	87.00

GRASSHOPPER FUSES



Alarm activating and signal indicating. Length: 1-43/64", except 35D (1-5/8"), 35E (1-63/64").

Buss No.	Amperes	Blowing Time Amp	Blowing Time Sec.	Net Price For Ten	Net Price For 100
35A*	1-1/3#	2	90	$3.00	$25.00
35B*	1-1/3**	2	90	3.00	25.00
35B*	2**	3	180	3.00	25.00
35C*	2#	3	180	3.00	25.00
35D*	1-1/3**	2	90	5.80	49.00
35E	3**	4	300	3.20	27.00
35F*	1/2#	3/4	9	3.00	25.00
35G*	3**	4-1/2	300	3.00	25.00
35H*	5**	6-1/2	300	3.00	25.00
35J†	1/2#	3/4	90	4.10	35.00
35K†	1-1/3#	2	180	5.80	49.00
35L†	2#	3	180	5.80	49.00
35M†	3**	4-1/2	300	5.30	44.00
35N†	5**	6-1/2	300	5.30	44.00
35P†	3/4#	1-1/8	90	3.80	31.00
35R*	18/100#	.270	90	3.80	31.00
35S†	1/4#	.375	90	4.10	35.00
35T*	65/100#	1.1	180	4.10	35.00

Volts: *90 or less. †160 or less. Mounting Screw: #No. 10. **No. 6.

TRON RECTIFIER FUSES

For Protection of Semiconductor Rectifiers and Similar Applications





Especially designed for protection of semiconductor rectifiers, thyristors and other solid state devices. High interrupting capacity and very fast clearing to restrict let-through current and energy to very low values. Give safe short-circuit protection for systems with fault current to 200 kA at 600 volts or less. Carry 100%, open at 1000 secs between 150% and 180% of rating; open within 1 sec at 250% of rating.

GBB SERIES

Size, 1-1/4" length x 1/4" diameter.

Buss No.	Amperes	Max. Volts	Net Each
GBB	1, 1-1/4, 2, 3, 4, 5, 6, 7, 8, 9, 10	130	$0.71
GBB	12, 15, 20, 25, 30	65	.71

KAA SERIES

Size, 1-1/2" length x 13/32" diameter. Also available up to 1000 amps; prices on request.

KAA	1/2, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 20, 25, 30	130	.87

KAW SERIES

Size, 1-1/2" length x 13/32" diameter.

KAW	1, 2, 3, 4, 5, 7, 8, 10, 12, 15, 20, 25, 30	130	.87

KAB SERIES

Size, 9/16" diameter x 2" length, values to 30 amps; 1-7/32" diameter x 3-1/8" length, 70 amps to 200 amps. Also available up to 800 amps; prices on request.

KAB	1/2, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 17-1/2, 20, 25, 30	250	.99
KAB	70, 80, 90, 100, 150, 200	250	5.50

KAC SERIES

Size, 2-7/8" length x 9/16" diameter. Also available up to 800 amps; prices on request.

KAC	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 17-1/2, 20, 25, 30	600	1.33

BLOCKS FOR TRON RECTIFIER FUSES

Buss No.	No. Poles	For Fuse* Symbol Amp.	Base Size In.	Ne Eac
4515	1	KAA	3/4 x 2-9/16	$0.6
4525	2	or 1 to 30	1-5/16 x 2-9/16	1.1
4535	3	KAW	2-1/16 x 2-9/16	1.7
4386	1		3/4 x 3-1/4	.8
4287	2	KAB 1 to 30	2 x 3-1/2	1.7
3959	3		3 x 3-1/2	2.6
3556	1	KAB 70 to 100	1-1/2 x 3-1/8	2.1
3521	3		5-23/32 x 3-1/8	6.5
3595	1		1-1/4 x 3-1/2	1.5
3528	2	KAC 1 to 30	2-1/2 x 3-1/2	3.1
2795	3		3-1/2 x 3-1/2	4.7

*GBB series — use any BUSS block for 1/4" x 1-1/4" fuse.

BLOCKS FOR 1/4 x 5/8 inch FUSES

Buss No.	No. Poles	Type Term	Ne Eac
4511	1	Screw	$0.4
4521	2	Screw	.7
4531	3	Screw	1.1

BLOCKS FOR 1/4 x 7/8 inch FUSES

Buss No.	No. Poles	Type Term	Ne Eac
4393	1	None	$0.2
4398	1	Solder	.2
4399	1	Screw	.3
4401	2	Solder	.3
4402	2	Screw	.5
4403	3	Solder	.5
4404	3	Screw	.5
4485	2	Solder	.3
4517	1	Screw	.4
4520	1	Solder	.2
4537	3	Screw	1.1

BLOCKS FOR 1/4 x 1 inch FUSES

Buss No.	No. Poles	Type Term	Ne Eac
3828-1	1	Solder	$0.2
3828-2	2	Solder	.4
3828-3	3	Solder	.7
3828-4	4	Solder	.8
3828-5	5	Solder	1.0
3828-6	6	Solder	1.2
3828-7	7	Solder	1.4
3828-8	8	Solder	1.6
3828-9	9	Solder	1.8
3828-10	10	Solder	2.0
3828-11	11	Solder	2.2
3828-12	12	Solder	2.4
4393	1	None	.2
4398	1	Solder	.2
4399	1	Screw	.3
4401	2	Solder	.3
4402	2	Screw	.5
4403	3	Solder	.5
4404	3	Screw	.5
4485	2	Solder	.3
4514	1	Screw	.4
4520	1	Solder	.2
4524	2	Screw	.7
4534	3	Screw	1.1

Net

© United Technical Publication

bussmann manufacturing div.
fuses and holders

BLOCKS FOR 1/4 x 1-1/4 inch FUSES

ded black phenolic base; Albaloy plated spring clips strong grip, high corrosion resistance.

SOLDER TERMINAL TYPE ON SMALL BASE

ss o.	No. Poles	Base Size* In.	Net Each
-1	1	1/2	$0.24
-2	2	1-1/8	.45
-3	3	1-3/4	.70
-4	4	2-3/8	.88
-5	5	3	1.08
-6	6	3-5/8	1.26
-7	7	4-1/4	1.44
-8	8	4-7/8	1.62
-9	9	5-1/2	1.84
-10	10	6-1/8	2.04
-11	11	6-3/4	2.25
-12	12	7-3/8	2.45

SCREW TERMINAL TYPE ON FULL BASE

3-1	1	25/32	.48
3-2	2	1-11/16	.94
3-3	3	2-19/32	1.44
3-4	4	3-1/3	1.92
3-5	5	4-13/16	2.38
3-6	6	5-11/16	2.86
3-7	7	6-7/32	3.33
3-8	8	7-1/8	3.82
3-9	9	8-1/32	4.30
3-10	10	8-15/16	4.77
3-11	11	9-27/32	5.24
3-12	12	10-3/4	5.72

1-5/8", 3823 Series; x 2-3/8", 3833 Series.

BLOCKS FOR 9/32 x 1-1/4 inch FUSES

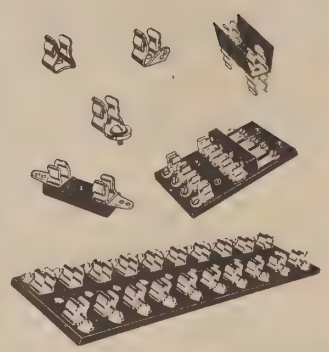
ss o.	No. Poles	Type Term	Net Each
13	1	Solder	$0.32
14	1	Solder	.32
15	1	Screw	.55
16	2	Solder	.62
17	2	Solder	.62
18	2	Screw	1.00
19	3	Solder	.92
20	3	Screw	1.46
81	1	Screw	.55
82	2	Screw	1.00
83	3	Screw	1.46

BLOCKS FOR 13/32 x 1-3/8 inch FUSES

uss No.	No. Poles	Type Term	Net Each
845	1	Screw	.70

BLOCKS FOR 13/32 x 1-1/2 inch FUSES

Buss No.	No. Poles	Type Term	Net Each
807	1	Screw	$0.76
808	2	Screw	1.26
809	3	Screw	1.71
810	1	Pressure Lug.	1.62
811	2	Pressure Lug.	3.17
812	3	Pressure Lug	4.77
792	1	Screw	.70
421	1	Solder	.45
422	1	Solder	.45
423	1	Screw	.50
424	2	Solder	.92
426	2	Solder	.92
427	2	Screw	1.00
428	3	Solder	1.35
429	3	Screw	1.46
438	3	Screw	1.97
415	1	Screw	.55
525	2	Screw	1.15
535	3	Screw	1.70
575	2	Screw	1.22



BLOCKS FOR 13/32 x 1-1/2 inch FUSES

SIGNAL FUSE BLOCK

Base dimension 2.688" x 4.375". For use with BUSS FAN and FNJ indicating fuses.

Buss No.	No. Poles	Type Term	Net Each
3839	4	Screw	$4.40

ADD-ON FUSE BLOCKS

Make fuse block of any number of poles. Each single pole nests against next one. New poles can be added at any time. Order 1 end barrier plus any number of poles. Marking strip available to identify poles. U/L Listed 30 amp., 600 volt.

Buss No.		Type Term	Net Each
3742	End Barrier only	Screw	$0.13
3743	One Pole Block only		.90
	Marking Strip, 50" length		.41

POLARIZED BLOCKS FOR SILICON RECTIFIERS

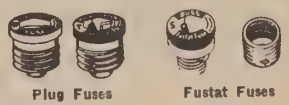
Buss No.	No. Poles	Type Term	Net Each
3794	1	Solder	$0.20
3795	2	Solder	.38
3966	4	Solder	.76

BLOCKS FOR HIGH VOLTAGE FUSES

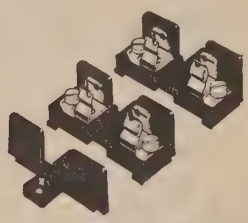
No. Buss	Poles No.	Fuse For	Each Net
4528	1	Buss HVA	$1.09
4529	1	Buss HVB	1.60
4530	1	Buss HVJ	2.21

BUSS FUSE CLIPS

Buss No	Description	For Dia. Fuse In.	Net Each
3434	Insulated Twin Clip	1/4	$0.17
5681-15	Clip	1/4	.034
5678-14	Clip and Terminal	1/4	.04
4431	Clip Assembly	1/4	.096
4432	Clip Assembly	1/4	.12
5682-01	Clip	1/4	.058
5682-41	Clip	1/4	.03
5682-44	Clip	1/4	.03
4567	Clip Assembly	1/4	.096
4583	Clip Assembly	1/4	.11
5682-02	Clip	1/4	.056
5672-11	Clip	9/32	.05
5674-41	Clip	9/32	.05
4560	Clip Assembly	9/32	.15
4585	Clip Assembly	9/32	.20
5674-01	Clip	9/32	.10
5956-16	Clip	13/32	.05
5960-61	Clip	13/32	.06
5960-07	Clip	13/32	.15
5960-63	Clip	13/32	.06
4561	Clip Assembly	13/32	.16
4586	Clip Assembly	13/32	.26
5960-09	Clip	13/32	.15



Plug Fuses Fustat Fuses



Add-On Fuse Block

FUSETRON DUAL-ELEMENT PLUG FUSES

Time-delay fuses recommended by N.E. Code. Won't blow under motor-starting or other current surges, yet provide full protection against heavy currents or short circuits. For voltages up to 125 volts. U/L Approved.

Type "T" Amperes	Net Price For Four	100
3/10, 4/10, 1/2, 6/10, 8/10, 1, 1-1/8, 1-1/4, 1-4/10, 1-6/10, 1-8/10, 2, 2-1/4, 2-1/2, 2-8/10, 3-2/10, 3-1/2, 4, 4-1/2, 5, 5-6/10, 6-1/4, 7, 8, 9, 10, 12, 14	$0.88	$18.00
15, 20, 25, 30	.48	10.00

FUSTAT FUSES AND ADAPTERS

Time-delay fuses with type S base recommended by N.E. Code. Prevents over-fusing when used with proper size adapter. For voltages up to 125. U/L Listed.

Adapters not included with Fustat fuses, order them separately and specify size.

Fustat Fuses & Amps	Adapter	Fustat Fuses & Amps	Adapter
S3/10	SA1*	S3-1/2	SA4
S4/10	SA1*	S4	SA4
S1/2	SA1*	S4-1/2	SA5§
S6/10	SA1*	S5	SA5§
S8/10	SA1*	S5-6/10	SA6-1/4#
S1	SA1*	S6-1/4	SA6-1/4#
S1-1/8	SA1-1/4*	S7	SA8
S1-1/4	SA1-1/4*	S8	SA8
S1-4/10	SA1-6/10*	S9	SA10•
S1-6/10	SA1-6/10*	S10	SA10•
S1-8/10	SA2	S12	SA15∧
S2	SA2	S14	SA15∧
S2-1/4	SA2-1/2†	S15	SA15∧
S2-1/2	SA2-1/2†	S20	SA20
S2-8/10	SA3-2/10‡	S25	SA30□
S3-2/10	SA3-2/10‡	S30	SA30□

*Adapter will also take all smaller sizes. †Adapter will also take 2, 1-8/10 sizes. ‡Adapter will also take 2-1/2, 2-1/4, 2, 1-8/10 sizes. §Adapter will also take 4. 3-1/2 sizes. #Adapter will also take 5, 4-1/2, 4, 3-1/2 sizes. •Adapter will also take 8, 7 sizes. ∧Adapter will also take 10, 9, 8, 7 sizes. □Adapter will also take 20 amp size.

Fustats — 3/10 thru 14 amp size. ..... Net $.22
15 thru 30 amp size. ..... Net .19
Adapters — SA1 thru SA30. ..... Net Each .15

CLEAR WINDOW PLUG FUSE

Shockproof — insulated with porcelain-like high voltage power lines. Top cap protects fingers from shock and cuts. Always fit fuseholders. U/L Approved.

Type "W" Amperes	Net Price For Five	100
1, 2, 3, 5, 6, 8, 10	$0.50	$9.00
15, 20, 25, 30	.47	8.30

FUSE ASSORTMENT

Sturdy metal stand holds 130 fuses. 5 fuses each, 26 different sizes individually boxed in 5" boxes. Inventory feature shows what fuses need reordering.
No. 130—Net Each $19.44

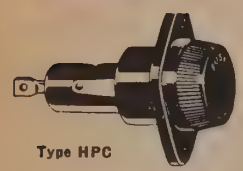


Net

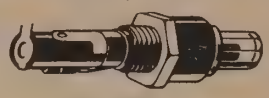
bussmann manufacturing div.

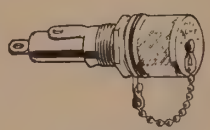
BUSS FUSEHOLDERS

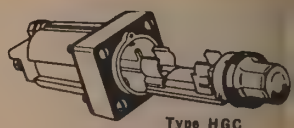
Carton Quantity 10 on all Fuseholders


Type HPC


Type HC and HN


Type HKL

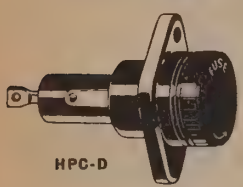

Type HMR and HMS

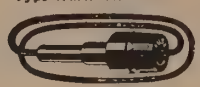

Type HGC (FHLI2U)


Series HJ and HK


Type HKA

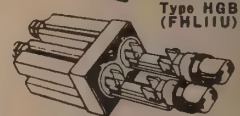

Type HGB-C (FHLIIU)

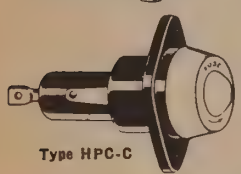

HPC-D


Series HR


Series HCM


Type HLD No. 5487


Type HGA-C (FHLI0U)


Type HPC-C


Series HH and HI


Type HLQ and HLR


Type HTA

*VOLTAGE: On lamp indicating holders shows operating range for lamp indication. On non-indicating holders shows maximum voltage of fuses commercially available that will fit holders.

NON-INDICATING FOR 1/4 x 1 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HDI	In-line	250 or less	15A	$0.17
HHI	In-line	250 or less	15A	.25
HJM	Panel	125 or less	30A	.43
HJM-CC	Panel	125 or less	30A	.43
HJM-H	Panel	125 or less	30A	.46
9969	Spring nut for panel mounting in-line holder			.034

LAMP-INDICATING FOR 1/4 x 1 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HJL	Panel	100 to 250	20A	$1.81

SHIELDED NON-INDICATING FOR 1/4 x 1 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HMS	Panel	250 or less	30A	$5.05

SHIELDED NON-INDICATING FOR 1/4 x 1-1/4 INCH FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HMR	Panel	250 or less	30A	$5.05

SIGNAL ACTIVATING-LAMP INDICATING FOR 1/4 x 1-1/4 inch INDICATING FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HKA	Panel	125 or less	5A	$3.95

LAMP INDICATING FOR 1/4 x 1-1/4 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HGA	Panel	100 to 250	30A	$4.40
HGA-C	Panel	100 to 250	30A	4.85
HGB	Panel	100 to 250	30A	3.75
HGB-C	Panel	100 to 250	30A	4.13
HKL	Panel	100 to 250	20A	1.81
HKL-X	Panel	100 to 250	20A	1.81
HKR	Panel	24 to 32	20A	2.96
HKT	Panel	10 to 14	20A	2.96
HKU	Panel	4 to 6	20A	2.96
HKX	Panel	24 to 32	20A	2.96

VISUAL INDICATING FOR 1/4 x 1-1/4 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HLD	Panel	125 or less	30A	$0.47
5487	Knob assembly for HLD holder			.25

NON-INDICATING FOR 1/4 x 1-1/4 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HCM	Panel	250 or less	18A	$0.62
HCM-H	Panel	250 or less	18A	.65
HDJ	In-line	250 or less	15A	.17
HHJ	In-line	250 or less	15A	.25
HKP	Panel	250 or less	30A	.43
HKP-CC	Panel	250 or less	30A	.43
HKP-H	Panel	250 or less	30A	.46
HLF	Panel	250 or less	30A	.43
HMB	Panel	250 or less	30A	.43
HMJ	HDJ holder w/SFE 20 fuse & wire leads			.34
HRJ	HHJ holder w/SFE 20 fuse & wire leads			.43
HTA	Panel	250 or less	15A	.43
9969	Spring nut for panel mounting in-line holders			.034

NON-INDICATING FOR 9/32 x 1-1/4 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HCM	Panel	250 or less	18A	$0.62
HCM-H	Panel	250 or less	18A	.65

NON-INDICATING FOR 13/32 x 1-3/8 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HPC-L	Panel	600 or less	5A	$0.6

NON-INDICATING FOR 13/32 x 1-1/2 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HPC	Panel	250 or less	30A	$0.6
HPC-D	Panel	250 or less	30A	1.3

VISUAL INDICATING FOR 13/32 x 1-1/2 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HPC-C	Panel	250 or less	30A	$0.8

LAMP INDICATING FOR 13/32 x 1-1/2 inch FUSES

Buss No.	Type Mounting	*Fuse Voltage	Current Capacity	Net Each
HGC	Panel	200 to 500	30A	$4.7

OTHER STANDARD AND SPECIAL FUSES, BLOCKS AND HOLDERS

If the fuses, fuse blocks and holders shown do not fit your requirements ask for information on other types. Fuses and fuse mountings to meet JAN and Military specifications also available. If you have a special problem in protection, send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

Net

© United Technical Publication

bussmann manufacturing div.

military fuses and holders

USS FUSES LISTED UNDER MIL-F-15160D

ffix S on Military type designation (e.g., F01A250V1/)A-S) indicates silver plating; if silver plating is not quired, omit (e.g., F01A250V1/500A).

Military Type Designation	Nearest Buss Equiv.	Price Each
F01A250V1/500A S	AGX1/500	$1.28*
F01A250V1/200A-S	AGX1/200	.55*
F01A250V1/100A-S	AGX1/100	.47*
F01A250V1/32A-S	AGX1/32	.41*
F01A250V1/16A-S	AGX1/16	.26*
F01A250V1/8A-S	AGX1/8	.19*
F01A250V1/4A-S	AGX1/4	.12*
F01A250V3/8A-S	AGX3/8	.12*
F01A250V1/2A-S	AGX1/2	.12*
F01A125V3/4A-S	AGX3/4	.12*
F01A125V1A-S	AGX1	.084*
F01A125V-1/2A-S	AGX1-1/2	.084*
F01A125V2A-S	AGX2	.084*
F02A250V1/100A-S	AGC1/100	.47*
F02A250V1/32A-S	AGC1/32	.41*
F02A250V1/16A-S	AGC1/16	.19*
F02A250V1/8A-S	AGC1/8	.19*
F02A250V1/4A-S	AGC1/4	.12*
F02A250V3/8A-S	AGC3/8	.12*
F02A250V1/2A-S	AGC1/2	.12*
F02A250V3/4A-S	AGC3/4	.12*
F02A250V1A-S	AGC1	.084*
F02A250V1-1/2A-S	AGC1-1/2	.084*
F02A250V2A-S	AGC2	.084*
F02A250V3A-S	AGC3	.084*
F02A250V4A-S	MTH4	.10*
F02A250V5A-S	MTH5	.10*
F02A250V6A-S	MTH6	.10*
F02A32V10A-S	AGC10	.065*
F02A32V15A-S	AGC15	.065*
F02A32V20A-S	AGC20	.065*
F02B250V1/100A-S	MDL1/100	.35*
F02B250V1/32A-S	MDL1/32	.35*
F02B250V1/16A-S	MDL1/16	.26*
F02B250V1/8A-S	MDL1/8	.26*
F02B250V1/4A-S	MDL1/4	.26*
F02B250V3/8A-S	MDL3/8	.26*
F02B250V1/2A-S	MDL1/2	.26*
F02B250V3/4A-S	MDL3/4	.26*
F02B250V1A-S	MDL1	.26*
F02B125V1-1/2A-S	MDL1-1/2	.25*
F02B125V2A-S	MDL2	.25*
F02B125V3A-S	MDX3	.19*
F02B32V5A-S	MDL5	.19*
F02B32V8A-S	MDL8	.19*
F02B32V10A-S	MDL10	.19*
F02B32V15A-S	MDL15	.19*
F02B32V20A-S	MDL20	.19*
F03A250V1A-S	ABC1	.16*
F03A250V3A-S	ABC3	.16*
F03A250V5A-S	ABC5	.14*
F03A250V8A-S	ABC8	.14*
F03A250V10A-S	ABC10	.14*
F03A250V12A-S	ABC12	.16*
F03A250V15A-S	ABC15	.16*
F03A125V20A-S	ABC20	.16*
F03A125V30A-S	ABC30	.20*
F03B250V1/100A-S	MDA1/100	.45*
F03B250V1/32A-S	MDA1/32	.45*
F03B250V1/16A-S	MDA1/16	.38*
F03B250V1/8A-S	MDA1/8	.38*
F03B250V15/100A-S	MDA15/100	.38*
F03B250V3/16A-S	MDA3/16	.38*
F03B250V1/4A-S	MDA1/4	$0.38*
F03B250V3/8A-S	MDA3/8	.38*
F03B250V1/2A-S	MDA1/2	.38*
F03B250V3/4A-S	MDA3/4	.38*
F03B250V1A-S	MDA1	.38*
F03B125V3A-S	MDA3	.26*
F03B32V5A-S	MDA5	.26*
F03B32V8A-S	MDA8	.26*
F03B32V10A-S	MDA10	.26*
F03B32V12A-S	MDA12	.26*
F03B32V15A-S	MDA15	.26*
F03B32V20A-S	MDA20	.26*
F03B32V30A-S	MDA30	.26*
F05A32V10A-S	AGS10	.11*
F05A32V15A-S	AGS15	.11*
F05A32V20A-S	AGS20	.11*
F05A32V25A-S	AGS25	.11*
F05A32V30A-S	AGS30	.11*
F05B32V10A-S	MDM10	.26*
F05B32V15A-S	MDM15	.26*
F05B32V20A-S	MDM20	.26*
F05B32V25A-S	MDM25	.26*
F05B32V30A-S	MDM30	.26*
F06A250V1A-S	ABS1	.26*
F06A250V2A-S	ABS2	.26*
F06A250V3A-S	ABS3	.26*
F06A250V5A-S	ABS5	.24*
F06A250V10A-S	ABS10	.24*
F06A250V15A-S	ABS15	.24*
F07A250V1A-S	AGU1	.16*
F07A250V2A-S	AGU2	.16*
F07A250V3A-S	AGU3	.16*
F07A32V5A-S	AGU5	.16*
F07A32V10A-S	AGU10	.16*
F07A32V15A-S	AGU15	.16*
F07A32V20A-S	AGU20	.16*
F07A32V30A-S	AGU30	.16*
F07B125V1A-S	MDR1	.41*
F07B125V2A-S	MDR2	.41*
F07B125V3A-S	MDR3	.34*
F07B32V5A-S	MDR5	.34*
F07B32V10A-S	MDR10	.34*
F07B32V15A-S	MDR15	.34*
F07B32V20A-S	MDR20	.34*
F07B32V30A-S	MDR30	.38*
F09A250V1A-S	BAN1	.16
F09A250V2A-S	BAN2	.16
F09A250V3A-S	BAN3	.16
F09A250V3-1/2A-S	BAN3-1/2	.16
F09A250V5A-S	BAN5	.16
F09A250V6A-S	BAN6	.16
F09A250V6-1/4A-S	BAN6-1/4	.16
F09A250V7A-S	BAN7	.16
F09A250V8A-S	BAN8	.16
F09A250V10A-S	BAN10	.16
F09A250V10A-S	BAN15	.16
F09A250V20A-S	BAN20	.16
F09A250V25A-S	BAN25	.16
F09A250V30A-S	BAN30	.16
F09B250V1/10A-S	FNM1/10	.37
F09B250V15/100A-S	FNM15/100	.37
F09B250V2/10A-S	FNM2/10	.37
F09B250V3/10A-S	FNM3/10	.37
F09B250V4/10A-S	FNM4/10	.37
F09B250V1/2A-S	FNM1/2	.37
F09B250V6/10A-S	FNM6/10	.37
F09B250V8/10A-S	FNM8/10	.37
F09B250V1A-S	FNM1	.37
F09B250V1-1/4A-S	FNM1-1/4	$0.37
F09B250V1-6/10A-S	FNM1-6/10	.37
F09B250V2A-S	FNM2	.37
F09B250V2-1/2A-S	FNM2-1/2	.37
F09B250V3-2/10A-S	FNM3-2/10	.37
F09B250V4A-S	FNM4	.37
F09B250V5A-S	FNM5	.37
F09B250V6-1/4A-S	FNM6-1/4	.37
F09B250V8A-S	FNM8	.37
F09B250V10A-S	FNM10	.37
F09B125V15A-S	FNM15	.37
F09B32V20A-S	FNM20	.37
F09B32V25A-S	FNM25	.37
F09B32V30A-S	FNM30	.37
F15A250V1A-S	NFA1	.16
F15A250V3A-S	NFA3	.16
F15A250V6A-S	NFA6	.16
F15A250V10A-S	NFA10	.16
F15A250V15A-S	NFA15	.16
F15A250V20A-S	NFA20	.16
F15A250V25A-S	NFA25	.16
F15A250V30A-S	NFA30	.16
F15B250V1A-S	FRN1	.48
F15B250V1-1/10A-S	FRN1-6/10	.48
F15B250V2A-S	FRN2	.48
F15B250V2-1/2A-S	FRN2-1/2	.48
F15B250V1-6/10A-S	FRN3-2/10	.48
F15B250V4A-S	FRN4	.48
F15B250V5A-S	FRN5	.48
F15B250V6-1/4A-S	FRN6-1/4	.48
F15B250V8A-S	FRN8	.48
F15B250V10A-S	FRN10	.45
F15B250V12A-S	FRN12	.45
F15B250V15A-S	FRN15	.45
F15B250V20A-S	FRN20	.45
F15B250V25A-S	FRN25	.45
F15B250V30A-S	FRN30	.45
F60C500V1/8A-S	KLM1/8	.90
F60C500V1/4A-S	KLM1/4	.90
F60C500V3/8A-S	KLM3/8	.90
F60C500V1/2A-S	KLM1/2	.90
F60C500V3/4A-S	KLM3/4	.90
F60C500V1A-S	KLM1	.90
F60C500V3A-S	KLM3	.90
F60C500V6A-S	KLM6	.90
F60C500V8A-S	KLM8	.90
F60C500V10A-S	KLM10	.90
F60C500V15A-S	KLM15	.90
F60C500V20A-S	KLM20	.90
F60C500V25A-S	KLM25	.90
F60C500V30A-S	KLM30	.90

*Add $9.00 Stamping Charge and a minimum $6.00 per thousand Silver Plating Charge per item.

FUSE CLIPS LISTED MIL-F-21346 DATED 24 APRIL 1958

FC21AN	5682-01	$0.058
FC21BN	5674-01	.10
FC21CN	5960-07	.15
FC22AN	5678-02	.10
FC22CN	5664	.23

INSTRUMENT TYPE FUSES LISTED UNDER MIL-F-23419A, DATED 19 DEC. 1966

Part No.	Type Designation	Nearest Buss Equivalent	Price Each
M23419/1-001	FM01 1/200A	GMU 1/200A	$0.87
M23419/1-002	FM01 1/100A	GMU 1/100A	.87
M23419/1-003	FM01 1/64A	GBU 1/64A	.87
M23419/1-004	FM01 1/32A	GMU 1/32A	.87
M23419/1-005	FM01 1/16A	GMU 1/16A	.66
M23419 1-006	FM01 1/10A	GMU 1/10A	.66
M23419/1-007	FM01 1/8A	GMU 1/8A	.66
M23419/1-008	FM01 2/10A	GMU 2/10A	.66
M23419/1-009	FM01 1/4A	GMU 1/4A	.66
M23419/1-010	FM01 3/10A	GMU 3/10A	.66
M23419/1-011	FM01 4/10A	GMU 4/10A	.66
M23419/1-012	FM01 1/2A	GMU 1/2A	.66
M23419/1-013	FM01 6/10A	GMU 6/10A	.66
M23419/1-014	FM01 3/4A	GMU 3/4A	.66
M23419/1-015	FM01 1A	GMU 1A	.66
M23419/1-016	FM01 1-1/2A	GMU 1-1/2A	.66
M23419/1-017	FM01 2A	GMU 2A	.66
M23419/1-018	FM01 3A	GMU 3A	.66
M23419/1-019	FM01 4A	GMU 4A	.66
M23419/1-020	FM01 5A	GMU 5A	.66

FM03 listed under MIL-F-23419A, 1/100 to 25 amps.

OTHER BUSS MIL FUSES AND BLOCKS

Fuses to MIL-F-15160D also available in styles:

F10A	F16A	F20B	F27A	F36B	F39B	F62C
F11A	F16B	F21A	F28A	F37A	F40A	F63C
F14A	F19A	F21B	F29A	F37B	F40B	F64C
F14B	F19B	F22A	F30A	F38A	F50A	F65C
F15B	F20A	F22B	F36A	F39A	F61C	F66C

Fuse Blocks to MIL-F-21346, Aircraft Limiters to MIL-F-5372C and Aircraft Blocks to MIL-F-5372C are also available.

BUSS FUSEHOLDERS LISTED UNDER MIL-F-19207B, DATED 31 AUG. 1966

Extractor post, blown fuse indicating and non-indicating types.

Buss and Military Type Designation	Electrical Rating	Price Each, Lots of 1-99	100-499	500-999
FHL10U	30A, 90-250V	$3.85	$3.36†	—
FHL11U	30A, 90-250V	3.30	2.75†	—
FHL12U	30A, 90-500V	3.75	3.25†	—
FHL17GI	20A, 90-250V	2.12	1.83	$1.52
FHL18GI-1	20A, 12-22V	3.24	2.79	2.33
FHL18GI-2	20A, 23-33V	3.24	2.79	2.33
FHL18GI-3	20A, 34-45V	3.24	2.79	2.33
FHL18GI-4	20A, 46-60V	3.24	2.79	2.33
FHL18GI-5	20A, 61-80V	3.24	2.79	2.33
FHL18GI-6	20A, 81-90V	3.24	2.79	2.33
FHL18GI-7	20A, 2.5-4V	3.24	2.79	2.33
FHL18GI-8	20A, 5-7V	3.24	2.79	2.33
FHL18GI-9	20A, 8-12V	.96	.83	.70
FHN19G	15A, 250V	1.38	1.19	1.00
FHL22W	20A, 250V	1.64	1.41	1.18
FHN23W	30A, 250V	.75	.65	.54
FHN26GI	30A, 250V	5.08	4.42†	—
FHL29G-1	30A, 12-22V	5.08	4.42†	—
FHL29G-2	30A, 23-33V	5.08	4.42†	—
FHL29G-3	30A, 34-45V	5.08	4.42†	—
FHL29G-4	30A, 46-60V	5.08	4.42†	—
FHL29G-5	30A, 61-80V	5.08	4.42†	—
FHL29G-6	30A, 81-90V	5.55	4.63†	—
FHL30G-1	30A, 12-22V	5.55	4.63†	—
FHL30G-2	30A, 23-33V	5.55	4.63†	—
FHL30G-3	30A, 34-45V	5.55	4.63†	—
FHL30G-4	30A, 46-60V	5.55	4.63†	—
FHL30G-5	30A, 61-80V	5.55	4.63†	—
FHL30G-6	30A, 81-90V	5.55	4.63†	—
FHN31GI	5A, 250V	.75	.65	.54
FHN42W	5A, 125V	.81	.68	.57

†Lots 100 Up.

© United Technical Publications

C&K Subminiature Switches

C&K Components manufactures the most complete line of subminiature switches in the world.

The "Specialty of the House" — and what this catalog is all about — is our diversified line of subminiature toggle and pushbutton switches. We make them in just about every shape, size, and configuration imaginable, so they're readily adaptable to a multitude of uses.

C&K high-quality, reliable switches combine maximum performance with minimum weight and size, and are available in one, two, three and four pole models. All of our switches feature rugged construction and simple mounting. This adds up to long-term, trouble-free operation.

Now, more than ever, when you want dependable, top-quality switches at a low price, specify C&K.

We're the people who would rather switch than fight.

Toggle Switches

General Specifications

Contact Ratings:

Coin Silver Contacts — 5 amps resistive load @ 115 VAC or 28 VDC, or 2 amps @ 250 VAC.

Brass Contacts with gold over nickel plate — 0.4 volt-amps max @ 20V MAX (AC or DC).

Coin Silver Contacts with gold over nickel plate — 5 amps resistive load @ 115 VAC or 28 VDC, or 2 amps @ 250 VAC — and 0.4 volt-amps MAX @ 20V MAX (AC or DC).

Insulation Resistance: 1000 megohms minimum. **Dielectric Strength:** 1000 volts rms at sea level.

Electric Life: 100,000 make-and-break cycles minimum on all models ending in 01 only; all other models 40,000 cycles.

Initial Contact Resistance: 10 milliohms maximum at 2-4 VDC, 1 amp.

Operating Lever: Bright chrome-plated brass. **Mounting Bushing:** Cadmium w/clear chromate over brass.

Housing: Stainless steel. **Case Material:** General purpose phenolic.

Standard Hardware Supplied :

2 Hex mounting nuts 1 Internal tooth lockwasher 1 Locking ring

Standard Configurations

SPDT
DPDT
3PDT
4PDT

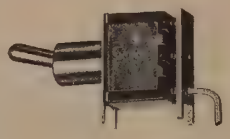


T 15/32 BUSHING W/LARGE TOGGLE



Special Configurations

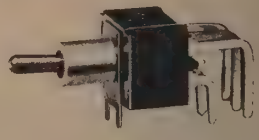
VW RIGHT ANGLE MOUNTING, P.C. SPDT



A RIGHT ANGLE MOUNTING SPDT



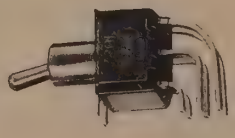
A RIGHT ANGLE MOUNTING DPDT



AV VERTICAL MOUNTING SPDT



AV VERTICAL MOUNTING DPDT



R RIGHT ANGLE MOUNTING, P.C. SPDT

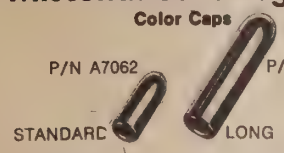


C&K COMPONENTS, INC.

quality electro-mechanical products

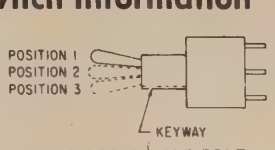
© United Technical Publications

Miscellaneous Toggle Switch Information

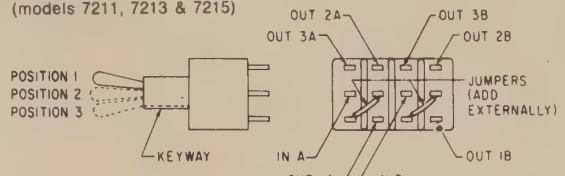


Color-Caps (Vinyl Plastisol) available for standard and long toggles at no extra cost.

A7062 or A7637	COLOR
—1	BLACK
—2	BROWN
—3	RED
—4	ORANGE
—5	YELLOW
—6	GREEN
—7	BLUE
—9	GRAY
—10	WHITE



WIRING FOR SINGLE POLE 3 POSITION SWITCH (models 7211, 7213 & 7215)



WIRING FOR 2 POLE 3 POSITION SWITCH (models 7411, 7413, 7415)

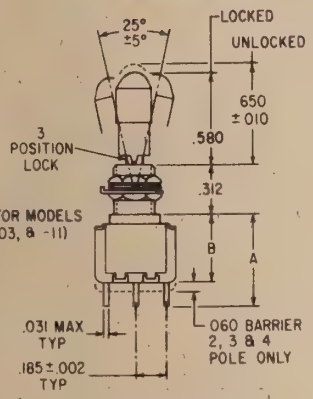
Panel Seals

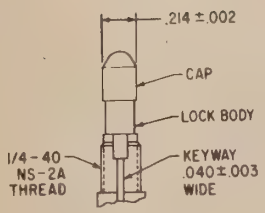
Flexible Rubber Seal Boots are available from APM-Hexseal Corp. 41 Honeck St., Englewood, New Jersey, and Multi-Flex Seals, Inc., 1811 First Ave., New York, N. Y.

These boots come in various styles and meet a number of MIL Specs for front panel switch seals.

K LOCKING LEVER







	A ±.015	B ±.015
SPDT	.580	425
DPDT	.580	425
3PDT	.645	.490
4PDT	.645	.490



FIG. 1
2 POS. LOCK
FOR MODEL -01



FIG. 2
2 POS. LOCK
FOR MODELS -07 & -13

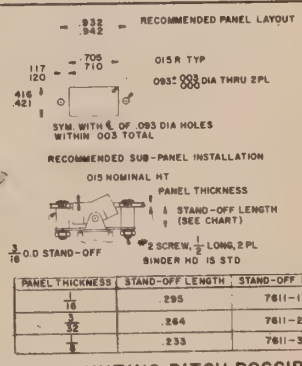


FIG. 3
1 POS. LOCK
FOR MODELS -05 & -15

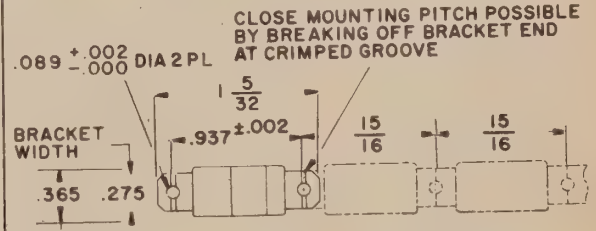
NOTES:
1. 3 position lock detail shown. See fig's 1 thru 3 for other lock details.
2. Available all models except -08 and -09.
3. Other dimensions, hardware & mounting — same as std'd
4. Available with options 5, 6, & 7.
5. Caps are normally supplied natural aluminum. Anodized red, blue, or black caps are available on request — specify color if desired.
6. Lock body is nickel plated brass.

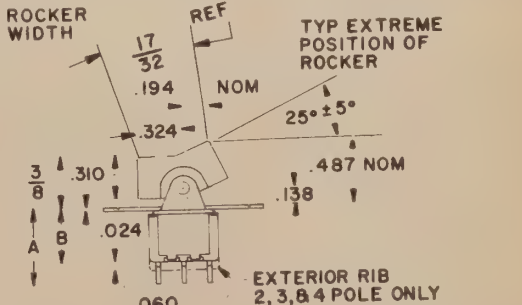
J-1 ROCKER SWITCH

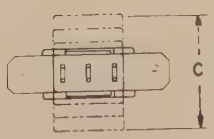




PANEL THICKNESS	STAND-OFF LENGTH	STAND-OFF P/N
1/16	.295	7611-1
3/32	.264	7611-2
1/8	.233	7611-3







	A ±.015	B ± .015	C ±.010
SPDT	.550	.395	.270
DPDT	.550	.395	.450
3PDT	.615	.460	.650
4PDT	.615	.460	.850

C&K COMPONENTS, INC.

quality electro-mechanical products

© United Technical Publications

Momentary Pushbutton Switches

General Specifications

Contact Ratings: Gold contact surfaces on copper alloy terminals (epoxy sealed terminals are standard). 1 Ampere resistive load @ 115 VAC — 28 VDC. Designed for use in dry (very low energy) circuits

Insulation Resistance: 1000 megohms minimum. **Dielectric Strength:** 1000 volts rms at sea level.

Electric Life: 60,000 cycles minimum at full load. **Mechanical Life:** 100,000 make-and-break cycles minimum.

Operating Force: 1.76 oz min per pole. **Release Force:** 1.0 oz min per pole.

Max. Allowable Force on Plunger: 10 lb. **Pushbutton:** Nylon Plunger and cap.

Mounting Bushing: Cadmium w/ clear chromate over brass. High torque to withstand 12 in-lb with no distortion or loosening of parts.

Housing: Stainless steel. **Case Material:** General purpose phenolic.

Standard Hardware Supplied :

2 Hex mounting nuts 1 Internal lockwasher 1 Locking ring

Standard Configurations

SPDT
DPDT
3 PDT
4 PDT



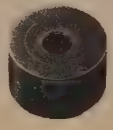
Special Configuration

R RIGHT ANGLE MOUNTING, P.C. CONFIGURATION



Press Fit Caps for Pushbutton Switches

Unless otherwise specified .200 dia. white cap is supplied.



P/N A7527
.375 Dia.



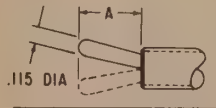
P/N A7089
.200 Dia.

Toggle and Pushbutton Basic Options

Toggle

Note: Pinning option for anti-rotation of toggle is available for all toggle-bushing combinations (normally supplied as a standard only on (P) flatted toggle). To specify, add suffix **P** to toggle suffix.

S STANDARD



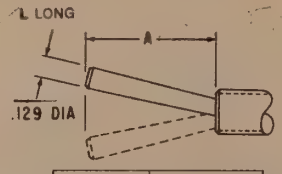
BUSHING	"A" ±.015
Y or H	.410
D	.480

M SHORT



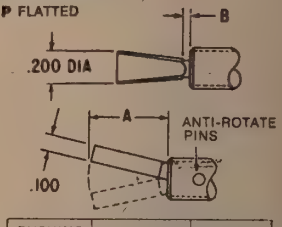
BUSHING	"A" ±.015
Y or H	200
D	.270

L LONG



BUSHING	"A" ±.015
Y or H	.840
D	.910

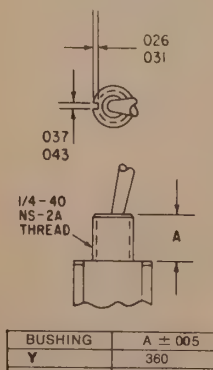
P FLATTED



BUSHING	"A" ± 015	"B" REF.
Y or H	.450	.034
D	.520	.104

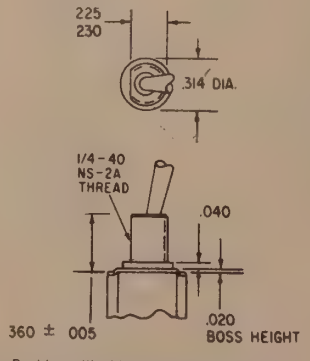
Bushings (Toggle only)

Y STANDARD AND **D** SHORT



BUSHING	A ± 005
Y	360
D	290

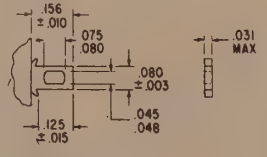
H HI-TORQUE



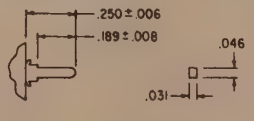
Bushing will withstand torque of 12 in-lb with no distortion or loosening of parts.

Terminals

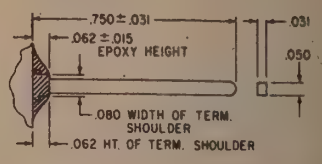
Z STANDARD



C PRINTED CIRCUIT



WB WIREWRAP
(toggle only)



Sealing

E TERMINAL SEAL
(standard for pushbutton)



C&K COMPONENTS, INC.

quality electro-mechanical products

© United Technical Publications

Ordering Guide—Toggle & Pushbutton Switches with Options

Toggle Switches

() Parenthesis Indicates Momentary Position

Poles & Throw	#1 Model No.	Toggle Lever Positions and Circuits		KEYWAY	Industrial Net Price Schedule: Less Than 25 (each)	25 to 99 (each)
SPDT	7101	ON	NONE	ON	$1.50	$1.00
	7103	ON	OFF	ON	1.77	1.18
	7105	(ON)	OFF	(ON)	1.77	1.18
	7107	ON	OFF	(ON)	1.77	1.18
	7108	ON	NONE	(ON)	1.77	1.18
	7109	NONE	ON	(ON)	1.77	1.18
DPDT	7201	ON	NONE	ON	1.95	1.30
	7203	ON	OFF	ON	2.32	1.55
	7205	(ON)	OFF	(ON)	2.32	1.55
	7207	ON	OFF	(ON)	2.32	1.55
	7208	ON	NONE	(ON)	2.32	1.55
	7209	NONE	ON	(ON)	2.32	1.55
	7211	ON	ON	ON	2.60	1.73
	7213	ON	ON	(ON)	2.87	1.92
	7215	(ON)	ON	(ON)	2.87	1.92
	Terminals Connected	2-3	2-3	1-2		
		5-6	4-5	4-5		
3 PDT	7301	ON	NONE	ON	3.50	2.34
	7303	ON	OFF	ON	3.78	2.52
	7305	(ON)	OFF	(ON)	3.78	2.52
	7307	ON	OFF	(ON)	3.78	2.52
	7308	ON	NONE	(ON)	3.78	2.52
	7309	NONE	ON	(ON)	3.78	2.52
4 PDT	7401	ON	NONE	ON	4.41	2.88
	7403	ON	OFF	ON	4.86	3.29
	7405	(ON)	OFF	(ON)	4.86	3.29
	7407	ON	OFF	(ON)	4.86	3.29
	7408	ON	NONE	(ON)	4.86	3.29
	7409	NONE	ON	(ON)	4.86	3.29
	7411	ON	ON	ON	6.27	3.92
	7413	ON	ON	(ON)	6.27	3.92
	7415	(ON)	ON	(ON)	6.27	3.92
	Terminals Connected	2-3	2-3	1-2		
		5-6	4-5	4-5		
		8-9	8-9	7-8		
		11-12	10-11	10-11		

Contacts make opposite toggle thrown.

Basic Toggle Options

Specifying Suffix for Basic Options (See Basic Option Section for Suffix Explanation)			Add Price Indicated (To Model Price)
Option No.	Description	Suffix	1 to 99 (each)
#2 TOGGLES	STD'D	S	N/C (no charge)
	SHORT	M	N/C
	LONG	L	N/C
	FLATTED	P	.50
#3 BUSHINGS	STD'D	Y	N/C
	SHORT	D	N/C
	HIGH TORQUE	H	N/C
#4 TOGGLE PINNING	(note-standard for P Toggle.)	P	.50
#5 CONTACTS & TERMINALS: CONFIGURATIONS. MAT'LS, PLATING	STD'D	Z	N/C
		ZB	N/C
		ZG	.25 Per Pole
	PRT'D CKT:	C	.10 Per Pole
		CB	.10 Per Pole
		CG	.35 Per Pole
	WIRE WRAP:	WB	.10 Per Pole
Available only for A & AV OPTIONS		WQ	.50 Per Pole
		WG	.75 Per Pole
#6 TERMINAL SEAL	EPOXY	E	.10 Per Pole
#7 POTTED BASE	EPOXY	I	.25 Per Pole

Special Toggle Configurations

Specifying Suffix for Special Configurations (See Spec. Config. Section for Suffix Explanation)			Add Price Indicated (To Model Price)	
Description	Models Available	Suffix	1 to 24 (ea.)	25 to 99 (ea.)
RIGHT ANGLE MOUNTING P. C. Available w/ options 2, 3 (except H), & 4.	7101	R or VW	1.20	1.15
	7103 thru 7109	R or VW	1.33	1.27
RIGHT ANGLE MOUNTING Available w/ options 2, 3 (except H), 4, 5 (W options only) & 6.	All Single and Dble Pole Models only.	A	.35	.35
	ALL	AV	.35	.35
15/32 BUSHING W/ LARGE TOGGLE Available w/ options 4, 5, 6, & 7.	ALL	T	.75	.75
LEVER LOCK Available w/ options 5, 6, & 7.	All models except 08 and 09	K	1.25	1.00
ROCKER SWITCH Available w/ options 5, 6, & 7.	ALL	J	.35	.35

Note — See listing of basic options for description & additional cost

Pushbutton Switches

Poles & Throw	Model No.	Industrial Net Price Schedule: Less Than 25 (each)	25 to 99 (each)
SPDT	P8121	2.55	1.70
DPDT	P8221	3.45	2.30
3 PDT	P8321	4.80	3.20
4 PDT	P8421	6.05	4.10
SPDT	P8121R	3.05	2.20

Pushbutton Options

Add Price Indicated (To Model Price)

Description	Suffix	1 to 99 (each)
Printed ck't terminals	C	10¢ per pole
Epoxy Base potted	I	25¢ per pole

(See Basic Option Section for Suffix Explanation)

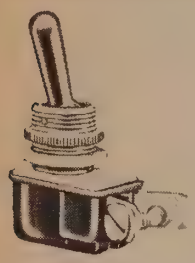
C&K COMPONENTS, INC.

quality electro-mechanical products

© United Technical Publications

CARLINGSWITCH

THE BIGGEST SINGLE NAME IN SWITCHES

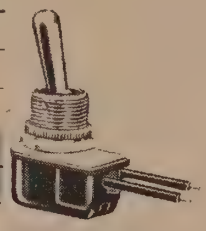


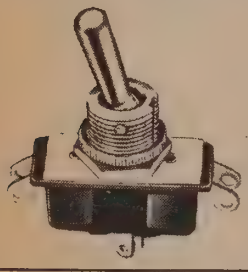
SINGLE POLE

Screw Terminals 15/32". Threaded Bushing, 15/32". Dia. Ball Toggle 3/8" long. Bat Toggle 11/16" long. U.L. Appd.

Catalog No.	Rating	Toggle
110-S-73	6A.-125V.	Bat
110-S-23	6A.-125V.	Ball
160-S-73	10A.-125V.	Bat
WIRE LEADS		
111-16-73	6A.-125V.	Bat

6" Leads Stripped ½" 105C. TFF. Wire.



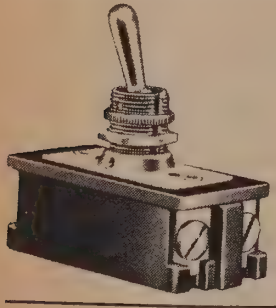


SINGLE POLE — DOUBLE POLE

SOLDER LUGS 15/32"

Threaded Bushing 15/32" Dia. Bat Toggle 11/16" long. U.L. Appd. All Have 250V. Ratings.

Catalog No.	Action	Rating
110-73	SP - ST	6A. - 125V.
112-73	SP - DT	3A. - 125V.
216-73	DP - ST	3A. - 125V.
316-73	DP - DT	3A. - 125V.
2BB62-73	SP - DT	6A. - 125V.
2BK62-73	DP - ST	6A. - 125V.
2BL62-73	DP - DT	6A. - 125V.
160-73	SP - ST	10A. - 125V.



SINGLE POLE DOUBLE POLE

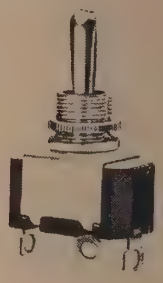
Heavy Duty AC-DC Type. 15/32" Bushing. 11/16" Bat Toggle. All Have Horsepower Ratings.

Catalog No.	RATINGS 125V.	250V.	Action
DA284*	16A.	8A.	SP - ST
DK284*	16A.	8A.	DP - ST
EA204**	20A.	10A.	SP - ST
EK204**	20A.	10A.	DP - ST

*1 H.P. 125-250V. rating.
**1½ H.P. 125-250V. rating.

SINGLE POLE





SCREW TERMINALS OR SOLDER LUGS.

Rated 15 Amps.* 125V. 10 Amps. 250VAC. 3/4 HP 125-250V. AC. except SPST is 1 HP. Rated 15/32" Dia. Threaded Bushing 15/32" Dia. Threaded Bushing 15/32" long. 11/16" Bat Toggle. U.L. Appd. Heavy Duty.

*Applicable to low voltage D.C. requirements.

Catalog No.	Terminals	Action
2FA54-73	Screw	SP - ST
2FB54-73	Screw	SP - DT
2FC54-73	Screw	SP - DT, Center Off
2FA53-73	Lugs	SP - ST
2FB53-73	Lugs	SP - DT
2FC53-73	Lugs	SP - DT, Center Off

MOMENTARY ACTION

Same Specifications as above Except SPST. 3/4HP. Rated.

SCREW TERMINALS

Catalog No.	ACTION Up	Center	Down
SINGLE POLE SINGLE THROW			
6FA54-73	Off	None	Mom. On
6FA58-73	On	None	Mom. Off
SINGLE POLE DOUBLE THROW			
6FB54-73	On	None	Mom. On
6FC54-73	Mom. On	Off	Mom. On
6FC58-73	On	Off	Mom. On

SINGLE POLE

20 AMP.

20 Amp. 125V.
10 Amp. 250V.
AC-DC



Catalog No.	Terminals	Toggle
600-C	Screw	Nickel-Bat

ALL ITEMS LISTED IN THIS CATALOG ARE CARRIED IN STOCK

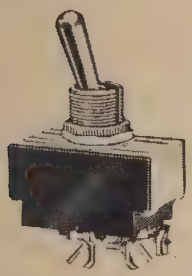
Net

© United Technical Publications

CARLINGSWITCH

THE BIGGEST SINGLE NAME IN SWITCHES

DOUBLE POLE





SCREW TERMINALS OR SOLDER LUGS

Rated 15 Amps.* 125V 10 Amps. 250V. AC. 3/4HP. 125-250V. AC. Threaded Bushing 15/32" Dia. Threaded Bushing 15/32" long. 11/16" Bat Toggle. U.L. Appd. Heavy Duty.

*Applicable to low voltage D.C. requirements.

Catalog No.	Terminals	Action
2GK54-73	Screw	DP - ST
2GL54-73	Screw	DP - DT
2GM54-73	Screw	DP - DT, Center Off
2GK50-73	Lugs	DP - ST
2GL50-73	Lugs	DP - DT
2GM50-73	Lugs	DP - DT, Center Off

MOMENTARY ACTION

Same Specifications As Above.

SCREW TERMINALS

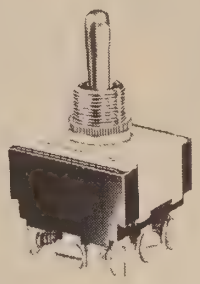
Catalog No.	ACTION		
	Up	Center	Down
DOUBLE POLE SINGLE THROW			
6GK5E-73	Off	None	Mom. On
6GK5S-73	On	None	Mom. Off
DOUBLE POLE DOUBLE THROW			
6GL5E-73	On	None	Mom. On
6GM5S-73	Mom. On	Off	Mom. On
6GM5E-73	On	Off	Mom. On



INDICATOR PLATES NICKEL PLATED

Catalog No.	Indication
YO1	ON - OFF
YO2	HI - LO

An extensive variety of indications and plate styles available for use with Carling Switches. Also a complete line of Hardware and Switch Accessories available.



THREE POLE SCREW TERMINALS

Rated 17 Amps.* 125V. AC. 12 Amps. 250V. AC. 1 HP. 1-2-3 Phase 120-600V. AC. 15/32" Dia. Bushing 15/32" long. 11/16" Bat Toggle.

*Applicable to low voltage D.C. requirements.

Catalog No.	Action
HK274-73	3P - ST
HL274-73	3P - DT
HM274-73	3P - DT, Center Off

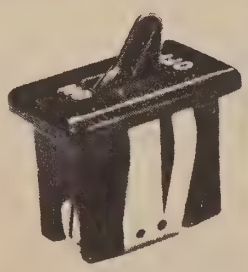
FOUR POLE SCREW TERMINALS

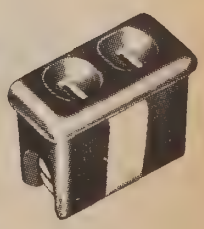
The Four Pole Switch has the same physical appearance as the Three Pole Switch pictured above. Only dimensional difference is in the width when the Fourth pole is added.

Rating 15A. 125V. 10A. 250V. AC. 15/32" Dia. Bushing. 15/32" long. 11/16" Bat Toggle. Heavy Duty.

Catalog No.	Action
1K254-13	4P - ST
IL254-73	4P - DT
1M254-73	4P - DT, Center Off

"SNAP-IN" LINE







Catalog No.	Type	Rating
215-BL	Switch	20 Amp 125V. A.C. 10 Amp 250V. A.C. ½ H.P. 125-250V. A.C.
215-WH		
222-BL-RC	Pilot Light	110-250V.
222-WH-RC		
220-BL	Outlet	15 Amp 125V. 10 Amp 250V.
220-WH		

ALL ITEMS LISTED IN THIS CATALOG ARE CARRIED IN STOCK

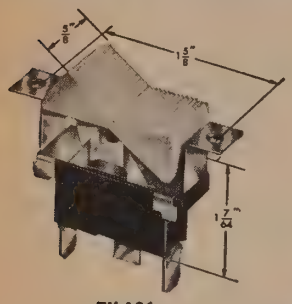
© United Technical Publications

CARLINGSWITCH

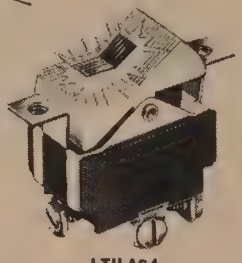
THE BIGGEST SINGLE NAME IN SWITCHES

SWITCHES-TIPPETTE* LIGHTED-TIPPETTE

*Tippette is a Carling Trademark



TILA61

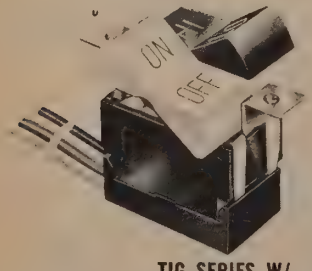


LTILA64



LTIL SERIES W/ SNAP-IN BRACKET & SILICONE SEAL (Seal is available as added feature on request)





TIG SERIES W/ DOUBLE ACTUATORS

TIL Series

CATALOG NUMBERS NOMINAL RATINGS — RATING 6 AMP—125V A.C. 3 AMP—250V A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						SINGLE POLE SINGLE THROW		
TILA60	TILA61	TILA62	TILA63	TILA64	TILA65	On	None	Off
TILA6A	TILA6B	TILA6C	TILA6D	TILA6E	TILA6F	Off	None	Mom. On
TILA6L	TILA6M	TILA6Q	TILA6R	TILA6S	TILA6T	On	None	Mom. Off
						SINGLE POLE DOUBLE THROW		
TILB60	TILB61	TILB62	TILB63	TILB64	TILB65	On	None	On
TILB6A	TILB6B	TILB6C	TILB6D	TILB6E	TILB6F	On	None	Mom. On
TILC60	TILC61	TILC62	TILC63	TILC64	TILC65	On	Off	On
TILC6A	TILC6B	TILC6C	TILC6D	TILC6E	TILC6F	On	Off	Mom. On
TILC6L	TILC6M	TILC6Q	TILC6R	TILC6S	TILC6T	Mom. On	Off	Mom. On

RATING 15 AMP—125V A.C.** 10 AMP—250V A.C. ¾ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						SINGLE POLE SINGLE THROW		
TILA50	TILA51	TILA52	TILA53	TILA54	TILA55	On	None	Off
TILA5A	TILA5B	TILA5C	TILA5D	TILA5E	TILA5F	Off	None	Mom. On
TILA5L	TILA5M	TILA5Q	TILA5R	TILA5S	TILA5T	On	None	Mom. Off
						SINGLE POLE DOUBLE THROW		
TILB50	TILB51	TILB52	TILB53	TILB54	TILB55	On	None	On
TILB5A	TILB5B	TILB5C	TILB5D	TILB5E	TILB5F	On	None	Mom. On
TILC50	TILC51	TILC52	TILC53	TILC54	TILC55	On	Off	On
TILC5A	TILC5B	TILC5C	TILC5D	TILC5E	TILC5F	On	Off	Mom. On
TILC5L	TILC5M	TILC5Q	TILC5R	TILC5S	TILC5T	Mom. On	Off	Mom. On

TIG Series (With *ONE* Tippette Lever)

CATALOG NUMBERS NOMINAL RATINGS — RATING 6 AMP—125V A.C. 3 AMP—250V A.C. ¼ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						DOUBLE POLE SINGLE THROW		
TIGK60	TIGK61	TIGK62	TIGK63	TIGK64	TIGK65	On	None	Off
TIGK6A	TIGK6B	TIGK6C	TIGK6D	TIGK6E	TIGK6F	Off	None	Mom. On
TIGK6L	TIGK6M	TIGK6Q	TIGK6R	TIGK6S	TIGK6T	On	None	Mom. Off
						DOUBLE POLE DOUBLE THROW		
TIGL60	TIGL61	TIGL62	TIGL63	TIGL64	TIGL65	On	None	On
TIGL6A	TIGL6B	TIGL6C	TIGL6D	TIGL6E	TIGL6F	On	None	Mom. On
TIGM60	TIGM61	TIGM62	TIGM63	TIGM64	TIGM65	On	Off	On
TIGM6A	TIGM6B	TIGM6C	TIGM6D	TIGM6E	TIGM6F	On	Off	Mom. On
TIGM6L	TIGM6M	TIGM6Q	TIGM6R	TIGM6S	TIGM6T	Mom. On	Off	Mom. On

RATING 15 AMP—125V A.C.** 10 AMP—250 V.A.C. ¾ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						DOUBLE POLE SINGLE THROW		
TIGK50	TIGK51	TIGK52	TIGK53	TIGK54	TIGK55	On	None	Off
TIGK5A	TIGK5B	TIGK5C	TIGK5D	TIGK5E	TIGK5F	Off	None	Mom. On
TIGK5L	TIGK5M	TIGK5Q	TIGK5R	TIGK5S	TIGK5T	On	None	Mom. Off
						DOUBLE POLE DOUBLE THROW		
TIGL50	TIGL51	TIGL52	TIGL53	TIGL54	TIGL55	On	None	On
TIGL5A	TIGL5B	TIGL5C	TIGL5D	TIGL5E	TIGL5F	On	None	Mom. On
TIGM50	TIGM51	TIGM52	TIGM53	TIGM54	TIGM55	On	Off	On
TIGM5A	TIGM5B	TIGM5C	TIGM5D	TIGM5E	TIGM5F	On	Off	Mom. On
TIGM5L	TIGM5M	TIGM5Q	TIGM5R	TIGM5S	TIGM5T	Mom. On	Off	Mom. On

**These switches are applicable to low voltage D.C. requirements. Available in 3 and 4 Pole Series. For Lighted Tippette add Prefix "L" to above numbers.

Actuator - Suffix # — 1L 5/8" Long Lined (Standard)
— 1C 5/8" Cross Serrated
— 1S 5/8" Smooth
— 2L 5/16" Long Narrow
— 2S 5/16" Short Narrow s/ears
— 3L Offset 5/8" Long Lined
— 3C Offset 5/8" Cross Serrated
— 3S Offset 5/8" Smooth

For Double Actuator Add "D" to end of above number.

For Double Actuator with interlock, Add "DI" to end of above number.

Standard Colors are WHITE, -WH and BLACK, -BL, Other colors available upon request.

Imprinting on Actuators may be had upon request.

Brackets — In addition to the illustrations shown, we offer a variety of brackets — offset, flat, angled, open ear, snap-in, etc. Specials can be made upon request. Snap-in style is designed for panel thickness of approximately .040" to .100". For mounting information and dimensions consult factory. This model bracket is available on single, double and three pole Tippettes — Single and double pole lighted Tippettes. Narrow or wide bezels.

Wire Lead Enclosures — This Snap-On enclosure is available in the single and double pole Tippette and single pole Lighted Tippette series. It is designed to protect and provide safer insulation for normally exposed lead connections.

LIGHTED TIPPETTE FEATURES

Actuators, Brackets & Accessories — Available in the same styles as listed in the Tippette Series. Lenses are Red, Amber, Clear and White. Special variations and colors available.

Lamp Characteristics

Neon (Standard)
120*-240 Volts .002 Amps

Incandescent
6 Volts .20 Amps
12 Volts .08 Amps
24 - 28 Volts .04 Amps.

*Available with "High Brightness" in 120.

ALL ITEMS LISTED IN THIS CATALOG ARE CARRIED IN STOCK

Net

© United Technical Publications

CARLINGSWITCH

THE BIGGEST SINGLE NAME IN SWITCHES

PUSH SWITCHES

MAINTAINED CONTACTS
OR
MOMENTARY CONTACTS





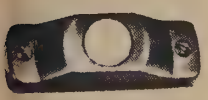


PA300 Series

ype: PP-Push, On-Push, Off. Maintained. O Normally Open. Momentary NC Normally losed. Momentary. All Have 15/32" Dia. Bush- g *Screw Terminals. Others Have Solder ugs. **Ratings up to 2 H.P. available.

Catalog No.	Rating	Type
110-SP*	6A. 125V.	P.P.
PA354**	15A. 125V.	P.P.
110-PM-OFF	6A. 125V.	N.O.
172*	10A. 250V.	N.O.
170	10A. 250V.	N.C.
16-3P-OFF	3A. 125V.	N.O.
16-3P-ON	3A. 125V.	N.C.

PUSH BUTTONS



Catalog	Base	Button
90	Black	Ivory
91	Ivory	Black



SLIDE SWITCHES

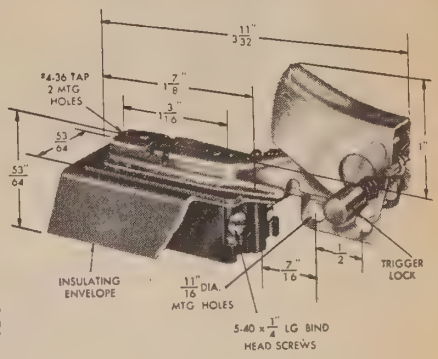
1⅛" Mounting Centers Single Poles Rated 4A 125V. AC.

Catalog No.	Action	Terminals
S60A-BL	SP - ST	Solder Lugs — 13/64" long
S60B-BL	SP - DT	

TRIGGER SWITCHES

SINGLE & DOUBLE POLE SERIES

*Note: Illustration shows "TRD" Series dimensions except for base. For base dimensions of "TRE" Series substitute 15/16" for 53/64 height shown, 1" for 53/64 width shown, and 3/16 for 7/16" dimension shown.



TRD Series Rated
16A. 125V.-8A. 250V. 1 HP. 125-250V.

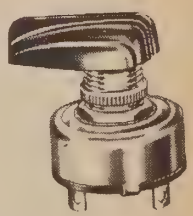
Catalog No.	Action	Has Lock	Has Envelope
TRDA284-00	SP - ST	No	No
TRDA284-06	SP --ST	Yes	Yes
TRDK284-00	DP - ST	No	No
TRDK284-06	DP - ST	Yes	Yes

TRE Series Rated
20A. 125V.-10A. 250V. 1½ HP. 125-250V.

TREA204-00	SP - ST	No	No
TREA204-06	SP - ST	Yes	Yes
TREK204-00	DP - ST	No	No
TREK204-06	DP - ST	Yes	Yes

Additional Trigger Switch Series Available.

ROTARY SWITCHES



4 Position Rotary Switch Rated 4A. 125V. AC. 1A. 125V. DC.

Catalog No.	Action Position 1 - 2 - 3 - 4
700-BL	Off-On-On-On

Knob variations and colors available. Up to 8 position rotary switch series available. Consult Factory.

In addition to the items included in this listing are thousands of variations and adaptations designed for our customers' specific needs. We are constantly engaged in the development of new products and welcome the opportunity to serve your needs.

If you do not find an item on these pages that meets your specific requirements, please contact us and we will have one of our own sales representatives discuss your requirements in detail with you. Ask them about Carling's delivery schedules which are set up to assure you of getting your switches when you need them.

COMPLETE CUSTOMER SERVICE & SATISFACTION
ENGINEERED INTO EACH PRODUCT & EVERY SALE

ALL ITEMS LISTED IN THIS CATALOG ARE CARRIED IN STOCK

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

ARROW H & H SWITCHES



DOUBLE ACTION COMPACT PUSH-PUSH SHALLOW

QUICK MAKE AND BREAK

15/32" sleeve diameter, 3 amp., UL approved. Molded phenolic base. Complete with hex and knurled nut; nickel plated. All accept snap button; supplied less insulating button (#5132). (Order separately, red or black.) 1 amp., 250V 3 amp. 125V AC-DC. Solder lug terminals with double wiping blades.

Daburn No.	Descrip.	Sleeve	Width	Lgth.	Hgt.
5160	SPST	9/16"	41/64"	1-1/32"	13/16"
5161	SPDT	9/16"	41/64"	1-1/32"	13/16"
5162	DPST	9/16"	41/64"	1-1/32"	13/16"
5163	DPDT	9/16"	41/64"	1-1/32"	13/16"

Std. Pkg. 25

MOMENTARY ACTION COMPACT PUSH SWITCH

QUICK MAKE AND BREAK

15/32" Sleeve Diameter — 3 Amp.

UL approved. Molded base. Complete with hex and knurled nut; nickel plated. All accept snap button; supplied less insulating button (#5132). (Order separately, red or black.) Solder lug terminals with double wiping blades.

Daburn No.	Descrip.	Sleeve	Width	Lgth.	Hgt.
*5166	SPST	9/16"	41/64"	1-1/32"	13/16"
5167	SPDT	9/16"	41/64"	1-1/32"	13/16"
*5168	DPST	9/16"	41/64"	1-1/32"	13/16"
5169	DPDT	9/16"	41/64"	1-1/32"	13/16"

*SPST and DPST — normally off.

Std. Pkg. 25

HEAVY DUTY SWITCHES

TOGGLE TYPE 30 AMP

UL approved. 30 Amp, 250 Volts, AC-DC, 2HP, 115V-230V AC; 1 HP, 460V AC. Used on machine tools, pumps, food machines, sanders, grinders, etc.

DABURN No.	Description	Std. Pkg.
5171	DPST	5
5172	DPST	5

METAL PUSH BUTTON TYPE

NORMALLY OPEN — 20 AMP

UL approved. 20 Amp.-250V, 2 HP 230V AC, 2 HP 250V DC. Used on floor sander, foot switch etc.

DABURN No.	Description	Std. Pkg.
5174	DPST	5

ROTO-LOCK SWITCH

20 AMP.

UL approved. 20 Amp., 120V, 240V AC.
1½ HP — 120V AC
2 HP — 120V AC
Key removable in off position only.

DABURN No.	Description	Sleeve	Std. Pkg
5176	DPST	9/16"	5
5176K0	Key only for above		5

FEED-THRU CORD SWITCH

10 AMP.

UL approved, sliding lever, black case. 10 Amp.-125V, 5 Amp.-250V. Cord hole—5/16".

DABURN No.	Description	Std. Pkg.
5178	SP	6

FEED-THRU CORD SWITCH

15 AMP.

UL approved for appliance use only. 10 Amp-250V, 15 Amp.-125V.

DABURN No.	Description	Std. Pkg.
5179	DP (3rd Wire Gd.)	5

CORD CONNECTORS

10 AMP.

Complete brown bakelite cord connector. 10 Amp.-250 Volts, end opening for wire size up to 3/8" O.D.

DABURN No.	Description	Std. Pkg.
5140	Complete	10
5140F	Female Part Only	10
5140M	Male Part Only	10

DABURN H & H RECEPTACLES

10 AMP.

SHORT FEMALE FLUSH RECEPTACLE

UL approved. 10 Amp.-250 Volts AC.

DABURN No.	Description	Std. Pkg.
5143	Lock Nut Mounting	5
5142	2 Screw Mounting	5

Complete warehouse inventories on all AH&H numbers.

RECESSED MALE RECEPTACLE

10 AMP.

DABURN No.	Description	Std. Pkg.
5144	2 Screw Mounting	5
5145	Lock Nut Mounting	5

RECESSED FEMALE RECEPTACLE

10 AMP.

DABURN No.	Description	Std. Pkg.
5146	Lock Nut Mounting	5

COMPACT RECEPTACLES — TURN TO LOCK

3 WIRE GROUNDING TYPE

FEMALE CONNECTOR — 15 AMP.-125 VOLT

Brass metal casings, corrosion resistant finish. Black bakelite.

DABURN No.	Description	Std. Pkg.
5147	Female Connector	5

MALE CONNECTOR

15 AMP.-125 VOLT

DABURN No.	Description	Std. Pkg.
5148	Male Connector	5

MALE RECEPTACLES

MALE RECEPTACLES
15 AMP.-125 VOLT

DABURN No.	Description	Std. Pkg.
5149	Male Receptacle	5

FEMALE RECEPTACLE

15 AMP.-125 VOLT

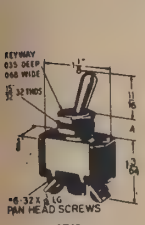
DABURN No.	Description	Std. Pkg.
5150	Female Receptacle	5

© United Technical Publications

DABURN ELECTRONICS & CABLE CORP.

CUTLER-HAMMER•CONTINENTAL-WIRT• MAGNETIC PROXIMITY SWITCHES

UTLER HAMMER POSITIVE ACTION SWITCHES



CIRCUIT IDENT. NO.	CIRCUIT
1	On-Off-On
2	On-None-Off
3	On-None-On
4	On-Off-None
5	On-On-None
6	On-None-Off (Mom.)
7	On-Off-On (Mom.)
8	Off-None-On (Mom.)
9	On (Mom.) Off-On (Mom.)
10	On-None-On (Mom.)
11	On-Off (Mom.)-None
12	On (Mom.)-On-None
13	None-Off-On (Mom.)

ST-40 SERIES
Single Pole with Screws

ST-40 Series equipped with sealed lever.

Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC. Std. Pkg. 10

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.
4360	8801K13	ST40A	AN3021-2	SPST	2
4361	8813K12	ST40B	AN3021-9	SPST	6
4362	8811K12	ST40C	AN3021-8	SPST	10
4363	8810K12	ST40D	AN3021-3	SPDT	3
4364	8800K13	ST40E	AN3021-1	SPDT	1
4365	8804K12	ST40F	—	SPDT	10
4366	8812K13	ST40G	AN3021-7	SPDT	9
4367	8809K13	ST40H	AN3021-5	SPDT	7

ST-42 SERIES
Single Pole with Solder Lugs

Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp. 28V DC. Std. Pkg. 10

4370	8803K6	ST42A	—	SPST	2
4371	8819K5	ST42B	—	SPST	6
4372	8817K5	ST42C	—	SPST	10
4373	8816K5	ST42D	—	SPDT	3
4374	8802K6	ST42E	—	SPDT	1
4375	8805K5	ST42F	—	SPDT	10
4376	8818K5	ST42G	—	SPDT	9
4377	8815K6	ST42H	—	SPDT	7

ST-45 SERIES
Per JAN-S-23 and MIL-S-6745
Single Pole

Nom. Rating Per Pole: 15 Amp.-115V AC, 20 Amp.-28V DC. Std. Pkg. 10

4440	8201K6	ST45A	AN3022-2	SPST	2
4441	8213K6	ST45B	AN3022-9	SPST	6
4442	8211K7	ST45C	AN3022-8	SPST	10
4443	8210K7	ST45D	AN3022-3	SPDT	3
4444	8200K7	ST45E	AN3022-1	SPDT	1
4445	8215K4	ST45F	AN3022-11	SPDT	10
4446	8212K6	ST45G	AN3022-7	SPDT	9
4447	8209K6	ST45H	AN3022-5	SPDT	7

ST-50 SERIES PER JAN-S-23
2 Pole with Screw Terminals

Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp. 28V DC.

4380	8822K8	ST50K	AN3027-2	*DPST	2
4381	8828K5	ST50L	—	DPST	6
4382	8826K5	ST50M	—	DPST	10
4383	8824K8	ST50N	AN3027-3	*DPDT	3
4384	8820K10	ST50P	AN3027-1	*DPDT	1
4385	8830K5	ST50R	—	DPDT	10
4386	8834K4	ST50S	AN3027-7	*DPDT	9
4387	8832K4	ST50T	AN3027-8	*DPDT	7

*Equipped with seated lever per MIL-S-6745. Std. Pkg. 10

ST-52 SERIES PER JAN-S-23
2 Pole with Solder Lugs

Nom. Rating Per Pole: 10 Amp., 115V AC, 20 Amp., 28V DC. Std. Pkg. 10

4390	8823K5	ST52K	—	DPST	2
4391	8829K5	ST52L	—	DPST	6
4391A	8827K5	ST52M	—	DPST	10
4392	8825K5	ST52N	—	DPDT	3
4393	8821K5	ST52P	—	DPDT	1
4394	8831K5	ST52R	—	DPDT	10
4395	8835K3	ST52S	—	DPDT	9
4396	8833K3	ST52T	—	DPDT	7

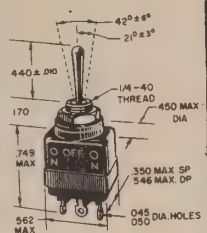
MILITARY SWITCHES

"As Small As A Dime" Built To MIL-S-8834 Specs

Designed for aircraft, missile, electronic application it is extremely compact, highly reliable, power or dry circuit switch, usable as a pre-set switch in aircraft recognition systems, walkie-talkies, instrument and communication systems. Toggle lever seal and panel bushing seal for adverse environmental conditions. Gold plated contacts.

RATINGS: 3 amps., 28V DC; 1 amp., 50V DC 2 amps., 115V AC

WEIGHT: Single pole 5.0 grams, Double pole 6.5 grams



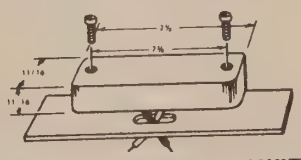
SINGLE POLE

DABURN No.	C-H	Type	Circuit
4480K1	8866K1	SPDT	on-off-on
4480K2	8866K2	SPDT	Mom. on-off-Mom. on
4480K3	8866K3	SPDT	on-off-Mom. on
4480K4	8866K4	SPDT	on-none-on
4480K5	8866K5	SPST	on-off-none
4480K6	8866K6	SPST	None-off-Mom. on
4480K7	8866K7	SPST	on-none-off
4480K8	8866K8	SPDT	None-on-Mom. off

DOUBLE POLE

4481K1	8867K1	DPDT	on-off-on
4481K2	8867K2	DPDT	Mom. on-off-Mom. on
4481K3	8867K3	DPDT	on-off-Mom. on
4481K4	8867K4	DPDT	on-none-on
4481K5	8867K5	DPST	on-off-none
4481K6	8867K6	DPST	none-off-Mom. on
4481K7	8867K7	DPST	on-none-off
4481K8	8867K8	DPDT	none-on-Mom. on

Std. Pkg. 10



MAGNETIC PROXIMITY SWITCH

For Counting Position Limiting Sequence Control Mounts in Any Position

Precision, fast acting, suitable to sequential control functions on machine tools, packaging, material handling and similar industrial devices.

Strong, encapsulated, assures freedom from contamination by cutting oils, dust, powder, chips, etc. Operates up to hundreds of millions of cycles — temperature range −30°C to +105°C. Speed (Max) 200 cycles/sec repeatability within .005".

Switch actuates when brought into proximity with ferrous metals or other magnetic materials. No mechanical linkage necessary for operation. Operating sensitivity in nom. ⅛" make, ½" break. Switch elements sealed in glass, unit is potted in epoxy resin. Case is impervious to oil, water, gas, all common solvents.

Typical actuators include indexing tables, cams, wheels, push rods, die sets, line objects such as food and beverage cans, components, parts, vehicles, rotating and swinging objects, etc.

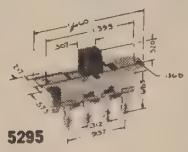
Std. Pkg. 10

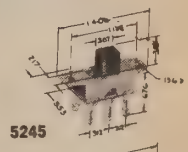
1⅛" H x 1⅛" D x 2⅞" W

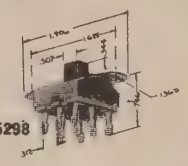
DABURN No.	Type
4499-128	SPST Norm. Open
4499-138	SPDT
4499-139	SPST Norm. Open (Hi-Load)

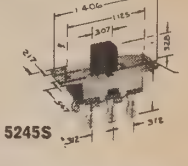
Electrical	Resistive Load		Inductive Load	
(Max. Contact Rating)	−128,−138	−139	−128,−138	−139
Amps	.5	.2	.1	1
Volt AC or DC	125	125	125	125
Watts	15	50	5	15

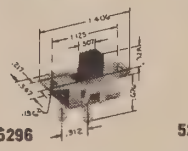
CONTINENTAL-WIRT SLIDE SWITCHES

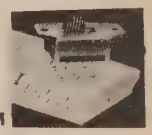












New "Swidget" Miniature Slide Switch

Mounting area is ½ of standard DPDT slide. Suitable for compact applications. UL approved.

DABURN No.	Type	Rating 125V AC-DC	Std. Pkg.
5248M	DPDT	5 Amp.	25

UL APROVED SLIDE SWITCH
STANDARD DETENT

General purpose switch for hi-fi equipment, instruments, etc. Black phenolic buttons, steel cadmium plated housing.

DABURN No.	Type	Rating at 125V Circuit DC Amp.	AC Amp.
5245	SPST	.75	.75
5246	SPDT	.75	.75
5247	DPST	.5	.5
5248	DPDT	.5	.5
5290	SPST	6.0	1.0
5291	SPDT	6.0	1.0
5292	DPST	6.0	1.0
5293	DPDT	6.0	1.0

Std. Pkg. 25

3 AND 4 POSITION SLIDE SWITCH
WITH DETENT

5294	SP 3 Pos.	.5	.5
5295	DP 3 Pos.	.5	.5
5295A	DP 3 Pos.	6.0	1.0
5295F	DP 4 Pos.	.5	.5

Std. Pkg. 25

3 AND 4 POLE SLIDE SWITCH
WITH DETENT
ALL POLES IN SAME PLANE

5298	3 PDT	.5	.5
5299*	4PDT	.5	.5

*5299 — width of switch 1.005", short terminals. Distance from mounting surface to terminal tip .595".

Std. Pkg. 25

SLIDE SWITCH — SPRING RETURN

5245S	SPST	.5	.5
5246S	SPDT	.5	.5

Std. Pkg. 25

SLIDE SWITCH SHIELD
Suitable for Electrastatic Shielding

Terminal protection. Shield is steel cadmium plated with fibre insulation.

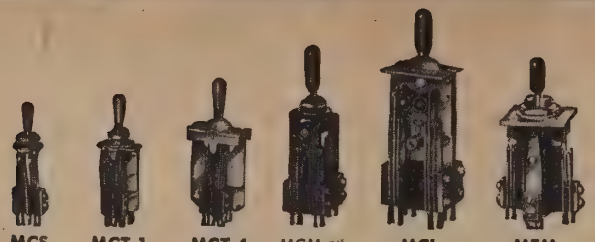
5239	Std. Pkg. 25

* Not UL Approved.

Complete warehouse inventories on all Cutler-Hammer numbers.

© United Technical Publications

A complete line of LEVER SWITCHES by GENERAL CONTROL COMPANY



MCS MCT-1 MCT-4 MCM or MCM-M MCL MFM

RATINGS

Type	Amps.*	High	Wide	Long**
MCS	1 or 3	7/8"	7/8"	2 1/16"
MCT-1	1 or 3	1 1/4"	3/4"	2 5/16"
MCT-4	1 or 3	1 1/2"	3/4"	2 17/32"
MCM	5	1 1/4"	1 1/4"	2 25/32"
MCM-M	1 or 3	1 1/4"	7/8"	2 3/4"
MCL	10	1 3/4"	1 3/8"	3 15/16"
MFM	5	1 3/4"	1 3/4"	3"

*125 volts, 60 cycles, non-inductive.
**From back panel to end of terminals.

Write for data Sheet CLRM

LEVER OPERATION

Symbol: Lock (Stays put)	Symbol: Non-lock Spring return	Three Position			Two-Position	Half Throw	Two-Position	Full Throw
Designation	MCS	S1	*S2	S3	*S4	*S5		
	MCT1 MCT4	T1	*T2	T3	*T4	*T5		
	MCM MCM-M	M1	*M2	M3	*M4	*M5	M6	*M7
	MCL	L1	*L2	L3	*L4	*L5		

*Lock and non-lock positions may be reversed. To reverse designate as RS2, RM4, RL5, etc.



MFM

SPECIAL MCM LEVER
(A) waterproof lever
$6.50 EACH, LIST

Description	Lock	Non-Lock	Folb-Forms
SYMBOL			
OPERATION			
Operation No.	M8	M9	M10	M11	M12

CONTACTS

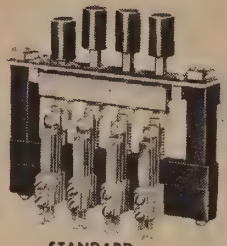
To obtain list price:— add contact prices to frame price.

Frame Types and Prices		Contact Forms / Circuit	A	B	C	D	E	F	G	H	O (No Contacts)
MCS	$ 2.50	MCS 1 amp.	0.55	0.55	0.65	*	—	0.65	—	0.65	—
		MCS 3 amp.	.65	.65	.80	*	—	.80	—	.80	—
MCT-4	$ 3.00	MCT-4 1 amp.	.55	.55	.65	.85	.95	.65	—	.65	—
		MCT-4 3 amp.	.65	.65	.80	1.00	1.15	.80	—	.80	—
MCT-1	$ 3.25	MCT-1 1 amp.	.55	.55	.65	.85	.95	.65	—	.65	—
		MCT-1 3 amp.	.65	.65	.80	1.00	1.15	.80	—	.80	—
MCM or MCM-M	$ 5.50	MCM 5 amp.	.85	.85	1.00	1.25	1.60	1.00	1.00	1.00	—
MFM	$18.50	MFM 5 amp.	.85	.85	1.00	1.25	1.60	1.00	1.00	1.00	—
MCL	$ 9.90	MCL 10 amp.	1.25	1.25	1.45	1.75	2.70	1.45	1.45	1.45	—

PUSH-BUTTON SWITCHES by GENERAL CONTROL COMPANY



LIGHTED



STANDARD

SPS-LPS FRAME PRICES 5/8" or 3/4" Button Centers

BUTTONS		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B12	SPS	$12.00	$14.15	$16.50	$19.40	$22.35	$25.25	$28.15	$31.10	$34.25	$37.45	$40.65	$43.85	$47.00	$ 50.20	$ 53.40
	LPS	21.30	26.50	31.80	38.00	44.20	50.45	56.65	62.85	70.45	77.20	85.55	90.75	97.50	104.30	111.05
B13	SPS	10.95	13.10	15.25	18.15	21.05	24.00	26.90	29.80	32.75	35.90	39.10	42.30	45.50	48.70	51.85
	LPS	20.25	25.45	30.50	36.75	42.95	49.15	55.40	61.60	69.20	75.95	84.25	89.50	96.25	103.00	109.80
B14	SPS	10.35	11.65	13.20	15.30	17.40	19.50	21.55	23.65	26.00	28.40	30.75	33.10	35.50	37.85	40.20
	LPS	19.65	24.05	28.50	33.90	39.25	44.65	50.05	55.45	62.50	68.40	74.35	80.30	86.25	92.20	98.10
B15	SPS	9.30	10.60	11.95	14.00	16.10	18.20	20.30	22.40	24.50	26.85	28.20	31.60	33.95	36.30	38.65
	LPS	18.60	23.00	27.25	32.60	38.00	43.40	48.80	54.20	60.95	66.90	72.80	78.75	84.70	90.65	96.60
B16	SPS	8.20	9.25	10.30	12.30	14.35	16.40	18.45	20.45	22.50	24.75	27.05	29.40	31.70	34.00	36.30
	LPS	17.50	21.60	25.60	30.90	36.25	41.60	46.90	52.25	58.95	64.80	70.70	76.55	82.45	88.35	94.20
B17	SPS	9.25	10.30	11.55	13.60	15.60	17.65	19.70	21.75	24.05	26.30	28.60	30.90	33.20	35.53	37.85
	LPS	18.55	22.65	26.85	32.20	37.50	42.85	48.20	53.50	60.50	66.35	72.20	78.10	84.00	89.90	95.75
B18	SPS	11.60	14.35	17.10	20.85	24.60	28.35	32.05	35.80	34.55	43.50	47.50	51.55	55.55	59.55	63.60
	LPS	20.90	26.75	32.40	39.45	46.50	53.50	60.55	67.60	76.00	83.55	91.15	98.75	106.30	113.90	121.50
B19	SPS	12.65	15.40	18.40	22.10	25.85	29.60	33.35	37.10	41.10	45.05	49.05	53.10	57.10	61.10	65.10
	LPS	21.95	27.80	33.65	40.70	47.75	54.80	61.80	68.85	77.55	85.10	92.70	100.25	107.85	115.45	123.00

Note: Additional frame operations available. Contact General Control.

OPERATIONS

B12 POSITIVE LOCK-IN LOCK-OUT
Only one button can be depressed at a time. The Momentary Release button must be actuated to release any previously depressed button before any other button can be actuated.

B13 ACCUMULATIVE LOCK
Buttons pushed in remain locked in position until released by pushing reset button.

B14 NO-TWO-INTERLOCK
Only one button can be pushed in at one time, and releases any other button.

B15 LOCK-RELEASE
Any button pushed in releases any previously pushed in button.

B16 NON-LOCK
Has no locking action; returns to normal position on release of finger pressure.

B17 NON-LOCK, NO-TWO-OPERATIVE
The same as B16 except that no two buttons can be operated simultaneously.

B18 PUSH-LOCK, PUSH-RELEASE
Any button depressed remains locked in until that button is depressed again.

B19 PUSH-LOCK, PUSH-RELEASE, (WITH LOCK-OUT)
This is the same as B18 except that only one button can be depressed at a time.

CONTACTS

CONTACT FORMS	A	B	C	D	H
1 amp silver	$0.55	$0.55	$0.65	$0.90	$0.65
3 amps paladium alloy	.65	.65	.80	1.05	.80
Direction of Throw				*	

Ratings at 125 volts A. C. n.i. * In place of a "D" contact w can offer a "C" contact adjusted to provide make before brea operation.

WRITE FOR DATA SHEET SLRM

ORDERING INFORMATION

1. Frame Type	2. Operation	3. Contacts	4. Contact Location	5. Rating	6. Button Centers
SPS4	B14	A-C-2A-2C	TOP Mounted	3 amps.	5/8"
$13.20	—	.65+.80+1.30+1.60			= $17.55

"Footrol" FOOT SWITCHES

PRICES USER NET

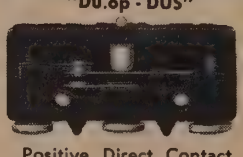


MA - $8.00 MI-23 $14.00 MC - $14.00

WRITE FOR BULLETIN FSRM

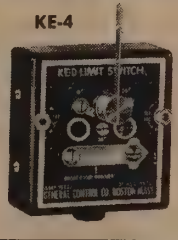
LIMIT SWITCHES

"Du.op - DUS"



Positive Direct Contact Action. Industry Size and Mounting. 20 amp. contacts. $1.80

KE-4



KE-4 light action — extensive over-travel limit switch —73° before or after contact operation. Converts to rotary switch 1 open 1 close contact per 360°.

Standard Model $18.00
Special Model 20.00

Write for Bulletin KDRM

GENERAL CONTROL COMPANY

*ALL PRICES SUBJECT TO 1967 DISCOUNT SCHEDULE

Net

© United Technical Publications

THE WORLD'S FINEST SELECTION OF MAGNETIC REED SWITCHES BY HAMLIN INC

Switch Part No.	Size	Form	Max. D.C. Contact Rating	Maximum Amps	Maximum D.C. Volts	Max. Initial Contact Resistance	Min. D.C. Breakdown Voltage	Stock Ampere Turn Pull-In Range	Actuating Magnet	Quantity Price Break 1-24	25-99	100-999	Special Features
MMRR-2-185	1	A	.3W	.010	28	.200	250	30 ±7.5	H-31	1.84	1.31	1.05	The Grain of Wheat
MINI-2-115	2	A	3W	.110	28	.200	200	20 ±7.5	H-31	2.10	1.85	1.70	The MINI-REED
MINI-DT-125	3	C	3W	.010	10	.200	200	30 ±10	H-31	6.30	5.00	4.75	Low Profile
MTRR-2-185	4	A	10W	.250	100	.150	300	30 ±7.5	H-33	1.32	.95	.75	Moderate Current & Voltage
MTRF-2-216	4	A	3W	.010	28	.150	250	37.5 ±10	H-33	3.15	2.75	2.55	For RF Frequencies
MRH-DT-175	5	C	3W	.250	28	.150	250	27.5 ±7.5	H-33	5.25	4.50	4.25	Instrument Grade
MRG-DT-175	5	C	3W	.250	28	.150	250	27.5 ±7.5	H-33	4.20	3.00	2.40	Moderate Current & Voltage
MRL-DT-186	5	C	3W	.250	28	.500	250	30 ±10	H-33	3.15	2.20	2.00	Low Cost—Commercial
MSRH-2-185	6	A	10W	.500	28	.100	300	30 ±7.5	H-33	1.58	1.28	1.00	Instrument Grade
MSRR-2-185	6	A	10W	.500	200	.100	300	30 ±7.5	H-33	1.15	.83	.66	Moderate Current & Voltage
MSRR-2CD-155	6	A	3W	.500	200	.200	300	25 ±7.5	H-33	1.32	1.12	1.06	Close Differential
MSRR-2WD-205	6	A	10W	.500	200	.100	300	35 ±7.5	H-33	1.32	1.12	1.06	Wide Differential
MSRL-2-186	6	A	10W	.500	100	.250	300	30 ±10	H-33	1.05	.70	.55	Low Cost—Commercial
MRH-2-185	7	A	10W	.500	28	.100	300	30 ±7.5	H-33	1.58	1.28	1.00	Instrument Grade
MRR-2-185	7	A	10W	.500	200	.100	300	30 ±7.5	H-33	1.15	.83	.66	Moderate Current & Voltage
MRL-2-186	7	A	10W	.500	100	.250	300	30 ±10	H-33	1.05	.70	.55	Low Cost—Commercial
MRH-15-185	7	A	10W	.500	50	.150	300	30 ±7.5	H-33	2.10	1.80	1.70	High Insulation Resistance
MRMF-2-206	7	A	3W	.010	28	.100	250	35 ±10	H-33	3.15	2.75	2.55	Thermal EMF & RF Frequencies
MRR-5-235	7	A	10W	.500	500	.100	1,000	40 ±7.5	H-33	2.10	1.85	1.70	1,000 Volt Breakdown
MRO-2-206	7	A	1W	.001	1,000	.100	2,000	35 ±10	H-33	6.30	4.50	3.60	2,000 Volt Breakdown
MRC-3-387	7	A	28W	1.0	100	.050	1,000	65 ±15	H-33	4.20	3.00	2.90	Mercury Wetted Contacts
SRR-2-425	8	A	15W	1.0	400	.060	500	70 ±7.5	H-32	.89	.64	.51	Moderate Current & Voltage
SRT-2-455	8	A	100W	3.0	250	.500	300	75 ±7.5	H-32	2.63	2.25	2.12	Inductive Loads
DRR-DT-445	9	C	3W	.5	100	.075	350	72.5 ±7.5	H-32	2.10	1.70	1.33	Moderate Current & Voltage
DRR-DTH-445	9	C	10W	.5	250	.075	1,000	72.5 ±7.5	H-32	2.63	1.88	1.50	High Breakdown Form C
DRT-DTH-445	9	C	20W	1.5	500	.150	1,000	72.5 ±7.5	H-34	4.20	3.65	3.40	Inductive Loads
DRG-2-425	10	A	15W	1.0	250	.075	500	70 ±7.5	H-34	.79	.56	.45	Low Cost—Commercial
DRR-1-425	10	A	15W	1.0	400	.060	500	70 ±7.5	H-34	.89	.64	.51	Moderate Current & Voltage
DRS-2-425	10	A	25W	1.0	250	.050	500	70 ±7.5	H-34	1.32	1.10	1.06	Dry Circuit or Hi Inrush
DRR-5-425	10	A	25W	1.0	1,000	.060	1,500	70 ±7.5	H-34	1.58	1.35	1.10	1,500 Volt Breakdown
DRT-5-425	10	A	50W	3.0	1,000	.100	1,500	70 ±7.5	H-34	2.10	1.50	1.20	Inductive Loads
DRS-5-425	10	A	50W	3.0	500	.035	1,200	70 ±7.5	H-34	2.10	1.50	1.20	High Inrush Loads
DRAC-5-999	11	A	700W	3.0	240	—	700	250 max.	H-34	5.25	4.60	4.10	3 Amp AC Power Switch
DRDC-6-999	11	A	100W	3.0	110	—	3000	250 Max.	H-34	5.25	4.60	4.10	3 Amp DC Power Switch
HRC-1-535	10	A	50W	3.0	400	.050	1,000	80 ±7.5	H-34	2.10	1.50	1.20	Mercury Wetted Contacts
DRVT-5-658	10	A	50W	3.0	3,500	.080	5,000	120 ±20	H-34	3.15	2.50	2.25	5,000 Volt Breakdown
DRVT-10-658	10	A	50W	3.0	7,500	.080	10,000	120 ±20	H-34	4.20	3.00	2.40	10,000 Volt Breakdown
DRVT-15-979	10	A	50W	3.0	12,500	.100	15,000	200 Max.	H-34	8.40	7.25	6.80	15,000 Volt Breakdown
DRVT-20-979	10	A	50W	3.0	17,500	.100	20,000	200 Max.	H-34	12.60	11.00	10.20	20,000 Volt Breakdown
DRVT-25-979	10	A	50W	3.0	20,000	.100	25,000	200 Max.	H-34	16.80	14.50	13.60	25,000 Volt Breakdown

TYPICAL DIMENSIONS

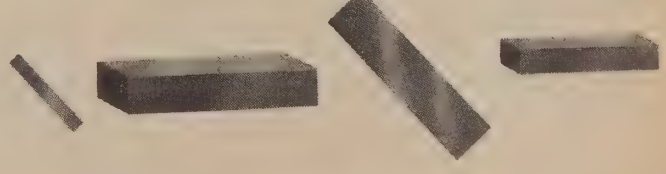
Size No. (see above)	1	2	3	4	5	6	7	8	9	10	11
Overall Length—Nominal	2.000	2.000	2.010	2.125	2.125	2.250	2.250	3.375	3.375	3.250	3.465
Glass Length—Maximum	.375	.500	.475	.560	.610	.800	.800	1.610	1.562	2.100	1.640
Glass Diameter—Maximum	.090	.070	.110x .070*	.092	.130	.090	.130	.195	.218	.218	.212

* Oval Envelope

MAGNETS BY HAMLIN INC

ALNICO V BAR MAGNETS

H-31 - 604	1/16 × 1/16 × 1/2"	.30
H-32 - 605	3/16 × 3/16 × 1"	.35
H-33 - 606	1/8 × 1/8 × 3/4"	.30
H-34 - 607	1/4 × 1/4 × 1"	.40



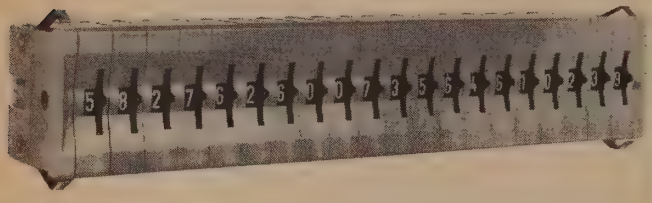
© United Technical Publications

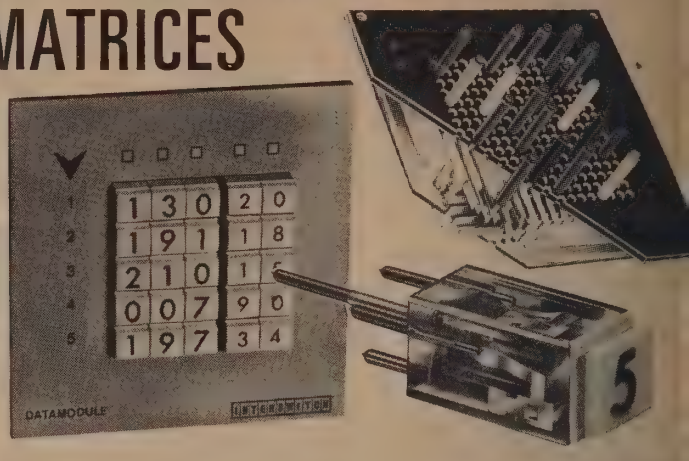
INTERSWITCH

THUMBWHEEL SWITCHES— PROGRAMMING MODULES & MATRICES

THUMBWHEEL SWITCHES

- SMALLEST PANEL AREA
- SIMPLEST MOUNTING — Snaps into Single Rectangular Cutout!
- WIDEST RANGE OF CODES, STYLES, OPTIONS.





STANDARD TYPES AND CHARACTERISTICS

Type	NOMINAL DIMENSIONS (PER MODULE) Width	Height	Depth*	NO. OF POLES & POSITIONS	TERMINALS** WW	PCP	PCC	SSL	CMC	NOTES
B	1/2"	$2^{1}/_{4}$"	$2^{5}/_{8}$"	2/2, 1/8, 1/11, 1/16	X	0	√	0	√	Largest numerals and widest choice of poles/position formats.
C	3/8"	$1^{5}/_{16}$"	$3^{1}/_{4}$"	2/2, 1/10, 1/11	X	X	0	√	0	Integral circuit board for logic elements to create active code outputs, etc.
F	3/8"	$1^{5}/_{16}$"	$2^{1}/_{16}$"	2/10, 4/2	X	X	0	√	0	Two independent P. C. boards (e.g., for dual binary codes).
H	3/8"	$1^{5}/_{16}$"	$1^{9}/_{16}$"	2/2, 1/10, 1/11	0	0	√	0	√	Largest numeral in a 3/8" switch.
K	3/8"	$1^{5}/_{16}$"	$2^{3}/_{16}$"	2/2, 1/10, 1/11	X	X	0	√	0	Largest numeral in a 3/8" switch.
S	3/8"	$1^{5}/_{16}$"	$1^{9}/_{16}$"	2/2, 1/10, 1/11	0	0	√	0	√	Sealed circuitry.
M	5/16"	$1^{5}/_{16}$"	$1^{1}/_{2}$"	2/2, 1/10, 1/11	0	0	√	0	√	Thinnest thumbwheel switch made.

* Depth of switch body, including longest terminals.
**TERMINAL CODES: WW = Wire Wrap; PCP = Printed-Circuit Pins; PCC = Printed-Circuit Connector; SSL = Short Solder-Lug; CMC = Component-mounting Connecto
TERMINAL AVAILABILITY: √ = STOCK STANDARD, X = SPECIAL ORDER ONLY, 0 = NOT AVAILABLE.

STANDARD OPTIONS AND ACCESSORIES

DIAL STOPS	PROV. FOR ILLUMINATING DIAL	TRANSLUCENT THUMBWHEELS
DIVISION PLATES	DECIMAL POINT ON MODULE	DOUBLE CHARACTERS
SPACER PLATES	DECIMAL POINT ON SPACER	UP TO 7 CHARACTERS/POSITION
BLIND SLAVE MODULES	DECIMAL POINT ON THUMBWHEEL	SPECIAL COLORED CHARACTERS
DIAL-ONLY MODULES	ILLUMINATED DECIMAL POINT	MATING P. C. CONNECTORS
MAKE-BEFORE-BREAK CONTACTS	COLORED THUMBWHEELS	COMPATIBLE GLOW-NUMERIC DISPLAY

MATRIX BOARDS

Interswitch Matrix Boards are available in nine standard 2-level models. Larger switching arrays can be readily built up from them. Appropriate nomenclature, symbols, programming stripes, can be applied. Durable multi-color or monochromatic markings can also be engraved or imprinted on the panel.

Three-level and four-level matrix boards are also available, as are special boards with split busses to accept program input at two board edges and deliver outputs from two board edges.

Standard Hole Patterns:
6mm spacing:

10 x 10	10 x 15	15 x 15	15 x 31
20 x 20	25 x 50	31 x 31	50 x 50

3mm spacing: 20 x 20

Terminal Types: solder, wire-wrap, PCB insertion pin.

Working Voltage: 220 VDC or AC RMS.

Current Rating (per contact bar): 6mm: 10A
3mm: 5A

Contact Resistance: 7 milliohms with short-circuit pin installed.

PROGRAMMING ELEMENTS

Standard elements available for use with the above Matrix Boards are:

Shorting Pins — Plug-In Lamps
Diode Plugs — Cable Plugs
Dummy Plugs — Programming Templates
Dual and Triple Shorting Pins

DATA PROGRAMMING MODULES

These are data-input logic elements (programming plug and switch body) for programming by 4-bit binary codes. They are mounted on either a matrix program board or a printed circuit board. Numerals are available in both horizontal and vertical reading orientation.

Codes: BCD 8-4-2-1
Excess 3
Aiken 2-4-2-1
Operating Voltage: 50V maximum.
Operating Current: 500 mA maximum
Rated Thermal Current: 1A
Switching Cycles (min.): 10^{4}
Contact Resistance: 5mΩ
Test Voltage: 1000V
Colors: Plugs — 7
Inscriptions — 9

INTERSWITCH

ONE OF THE **PURDY** GROUP OF COMPANIES

© United Technical Publications

TOGGLE SWITCHES — HEAVY DUTY

J-B-T INSTRUMENTS, INC.

J-B-T®

32nd Year

WHY IT PAYS TO SPECIFY J-B-T TOGGLE SWITCHES

• **J-B-T** concentrates on trouble - free switches. Among the four groups of toggle switches J-B-T produces more than 170 models made to Government Specifications. Market studies indicate that while these switches are a must in military applications, almost half are produced for non-military use where the principal requirement is dependability. J-B-T apparently is specified because:

1. **Materials are good.** For instance, in MIL and AN heavy duty models, J-B-T uses generous proportions of selected silver alloys in integral construction for contact surface areas — to add overload protection, dissipate heat, and keep contact resistance under .005 ohms.
2. **The design is good.** All MS models have silicone rubber bushing seal for sand, dust and specified toggle seal tests. Medium-duty types MS25098 and MS25100 also feature case-to-terminal sealing and a new design which provides fast break and wider gap to surpass the 125 VDC endurance tests of MIL-S-3950C.
3. **The value is good.** The many features required to meet Government standards, and J-B-T's rigid in-plant testing pay off in long, useful life. Nevertheless, because J-B-T makes **only** quality MIL or General Purpose switches, quantity production permits a surprisingly small price differential over run-of-the-mill brands.
4. **Deliveries are comparatively good.** See your distributor. Production is scheduled to back up his stocks with factory inventory of finished switches and work in process to meet predictable demand.

Cut-away view showing heavy duty MIL construction



Group I

HEAVY DUTY SINGLE- AND DOUBLE-POLE — MIL, AN, AND JAN TYPES

Series MS35058 and MS35059 to MIL-S-3950C;
Series ST40A-H, ST42A-H, ST50K-T, ST52K-T to JAN-S-23, MIL-S-21195A (Ships), or DDAX Drawings

• **MIL-S-3950C SERIES** — Single-pole MS35058 with suffix —21 and above, and double-pole MS35059 types with suffix —21 and above are recommended when maximum reliability is required. Temperature, endurance, and altitude requirements exceed earlier MS types (suffix —1 to —19), AN3021 and AN3027 switches to MIL-S-6745, and ST styles to JAN-S-23 and MIL-S-21195A (Ships). All MS switches contain a silicone rubber bushing seal to meet sand and dust and toggleseal tests.

NOMINAL RATINGS: 20 Amp. at 125 VAC, 10 Amp. at 250 VAC. For MIL Requirements on Electrical Ratings ask for Condensed Catalog TS-966A.

SIZE: Single-hole; bushing 15/32"-32NS-2A by 15/32" high; toggle lever, 11/16" long. Bodies including terminals: **SP:** 1⅛" x ⅝" x 1-1/16" deep; **DP:** 1-21/64" x ¾" x 1-1/32" or 1-13/64" deep.

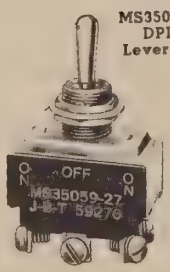
TERMINALS: Series MS35058 and Series MS35059 MIL-S-3950C switches have solderable 6-32 electro-tinned screw terminals; ST42's and ST52's use solder lug.

For more complete technical data, request Catalog TS-7.

MS35058-21
SPDT
Lever Seal



MS35059-27
DPDT
Lever Seal



SINGLE AND DOUBLE POLE HEAVY DUTY WITH LEVER SEAL					
MIL-S-3950C	Model No.	2-24★	25-49	50-99	100-249
SPST — 2 term.					
On-X-Off	MS35058-22	$1.46	$1.28	$1.10	$ .92
On-Off-X	MS35058-24	1.84	1.61	1.38	1.15
On-Off*-X	MS35058-25	1.74	1.52	1.30	1.08
X-Off-On*	MS35058-28	1.74	1.52	1.30	1.08
On-X-Off*	MS35058-29	1.67	1.46	1.25	1.04
Off-X-On*	MS35058-30	1.67	1.46	1.25	1.04
SPDT — 3 term.					
On-Off-On	MS35058-21	1.74	1.52	1.30	1.08
On-X-On	MS35058-23	1.74	1.52	1.30	1.08
On-X-On*	MS35058-26	1.87	1.64	1.40	1.17
On*-Off-On*	MS35058-27	1.87	1.64	1.40	1.17
On-Off-On*	MS35058-31	1.87	1.64	1.40	1.17
DPST — 4 term.					
On-X-Off	MS35059-22	2.06	1.88	1.50	1.21
On-Off-X	MS35059-24	2.06	1.88	1.50	1.21
On-Off*-X	MS35059-25	2.83	2.56	2.02	1.65
X-Off-On*	MS35059-28	2.55	2.33	1.85	1.50
On-X-Off*	MS35059-29	2.65	2.42	1.93	1.56
Off-X-On*	MS35059-30	2.39	2.18	1.74	1.40
DPDT — 6 term.					
On-Off-On	MS35059-21	2.39	2.18	1.74	1.40
On-X-On	MS35059-23	2.39	2.18	1.74	1.40
On-X-On*	MS35059-26	2.73	2.49	1.98	1.59
On*-Off-On*	MS35059-27	2.83	2.56	2.02	1.65
On-Off-On*	MS35059-31	2.73	2.49	1.98	1.59

TYPE TERMINALS

SINGLE AND DOUBLE POLE HEAVY DUTY§						
	JAN-S-23	Model No.	2-24★	25-49	50-99	100-249
SCREW TYPE	**SPST** — 2 term.					
	On-X-Off	ST40A	$1.25	$1.13	$ .98	$ .83
	On-X-Off*	ST40B	1.52	1.33	1.14	.95
	Off-X-On*	ST40C	1.52	1.33	1.14	.95
	SPDT — 3 term.					
	On-X-On	ST40D	1.53	1.35	1.17	.99
	On-Off-On	ST40E	1.53	1.35	1.17	.99
	On-X-On*	ST40F	1.78	1.56	1.33	1.11
	On*-Off-On*	ST40G	1.68	1.47	1.26	1.05
	On-Off-On*	ST40H	1.78	1.56	1.33	1.11
SOLDER TYPE	**SPST** — 2 term.					
	On-X-Off	ST42A	1.11	.98	.85	.72
	On-X-Off*	ST42B	1.29	1.13	.97	.81
	Off-X-On*	ST42C	1.19	1.05	.91	.77
	SPDT — 3 term.					
	On-X-On	ST42D	1.28	1.10	.96	.81
	On-Off-On	ST42E	1.28	1.10	.96	.81
	On-X-On*	ST42F	1.40	1.24	1.07	.91
	On*-Off-On*	ST42G	1.40	1.24	1.07	.91
	On-Off-On*	ST42H	1.40	1.24	1.07	.91
SCREW TYPE	**DPST** — 4 term.					
	On-X-Off	ST50K	1.89	1.41	1.20	.96
	On-X-Off*	ST50L	2.31	1.72	1.43	1.14
	Off-X-On*	ST50M	2.31	1.72	1.43	1.14
	DPDT — 6 term.					
	On-X-On	ST50N	2.21	1.66	1.38	1.10
	On-Off-On	ST50P	2.21	1.66	1.38	1.10
	On-X-On*	ST50R	2.50	1.89	1.58	1.26
	On*-Off-On*	ST50S	2.60	1.99	1.67	1.33
	On-Off-On*	ST50T	2.50	1.89	1.58	1.26
SOLDER TYPE	**DPST** — 4 term.					
	On-X-Off	ST52K	1.73	1.29	1.08	.86
	On-X-Off*	ST52L	2.02	1.52	1.27	1.00
	Off-X-On*	ST52M	2.02	1.52	1.27	1.00
	DPDT — 6 term.					
	On-X-On	ST52N	1.92	1.45	1.21	.96
	On-Off-On	ST52P	1.92	1.45	1.21	.96
	On-X-On*	ST52R	2.24	1.67	1.40	1.12
	On*-Off-On*	ST52S	2.34	1.75	1.47	1.18
	On-Off-On*	ST52T	2.24	1.67	1.40	1.12

For UL and CSA Identification and ratings on Models ST40A through ST52T, see Table on second following page.

§For UL and CSA Identification and ratings on Models ST40A through ST52T, see Table on second following page.
★ On orders for single switches, add 50c.
* Momentary

Prices shown are NET, F.O.B., Factory, domestic packing. November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

J-B-T TOGGLE SWITCHES — MEDIUM DUTY & CROSS-REFERENCE

32nd Year

J-B-T INSTRUMENTS, INC.

Group II

SINGLE & DOUBLE POLE — GOVERNMENT QUALITY

Series MS25098 and MS25100 to MIL-S-3950C; Series ST12-27 to JAN-S-23, MIL-S-21195A (Ships), or DDAX Drawings



Cut-away view showing self-wiping double-grip contacts



MS25100-23 DPDT Rear Connected; Lever Seal



ST27N, DPDT Side and Rear Connected ¼" Bushing

MEDIUM DUTY refers to current-carrying capacity rather than to life characteristics of these Group II switches which are widely used for both military and non-military applications. Some models are rated at 6 amp. at 125 VAC-DC, 3 amp. at 250 VAC-DC. Other models are rated 3 amp. at 125 VAC-DC, 1 amp. at 250 VAC-DC, as listed on next page. Self-wiping, heavily silver plated double-grip contacts provide exceptional durability. All MS25098 and MS25100 have case-to-terminal seals and silicone rubber bushing seal to meet sand and dust and toggle seal requirements.

DESIGN IMPROVEMENTS AND NOMINAL RATINGS. Significant internal improvements over earlier designs of MS25098 and MS25100 give faster break, wider gap, and increased insulation values, resulting in a longer useful life. Typical uses are: instruments, data processing, and communications circuits.

Although MIL and J-B-T general-purpose switches are substantially similar in materials and construction, differences in test procedures and test conditions cause nominal ratings for military types to differ considerably from the ratings for UL or other non-military models. (Typical ratings are shown on next page.) For instance, under MIL Specifications, switches are tested at pressures corresponding to altitudes of 65,000 ft., while non-military switches are tested to NEMA and UL procedures at sea level pressures.

SIZE AND TERMINALS — Whether MS series to latest MIL-S-3950C or ST series to Specification JAN-S-23 and MIL-S-21195A (Ships), all have solder terminals. Medium-duty types use 11/16" long, toggle lever, bushing 15/32"-32NS-2A by 15/32" (or ¼"). Bodies including terminals are: 1¼" long, 11/16" wide, 29/32" deep, except ST16A, -16B, -16C, -17A, and -27K are 1¾" long by 21/32" deep, while ST16D, -17D, -26N are 1¾" long by 29/32" deep.

SINGLE AND DOUBLE POLE MEDIUM DUTY WITH LEVER SEAL

MIL-S-3950C	Model No.	2-24★	25-49	50-99	100-249
SPST — 2 term.					
On-X-Off	MS25098-22	$1.69	$1.35	$1.27	$1.17
On-X-Off*	MS25098-29	2.17	1.77	1.65	1.49
Off-X-On*	MS25098-30	2.17	1.77	1.65	1.49
SPDT — 3 term.					
On-X-On	MS25098-23	1.94	1.55	1.45	1.31
DPST — 4 term.					
On-X-Off	MS25100-22	2.43	1.95	1.83	1.66
On-X-Off*	MS25100-29	2.84	2.27	2.13	1.94
Off-X-On*	MS25100-30	2.84	2.27	2.13	1.94
DPDT — 6 term.					
On-X-On	MS25100-23	2.63	2.11	1.98	1.81

SINGLE AND DOUBLE POLE MEDIUM DUTY§

JAN-S-23	Model No.	2-24★	25-49	50-99	100-249
SPST — 2 term.					
On-X-Off	ST12A	$1.20	$ .88	$ .80	$ .75
On-X-Off*	ST12B	1.45	1.06	.97	.91
Off-X-On*	ST12C	1.55	1.14	1.04	.97
On-X-Off	ST13A †	1.24	.91	.83	.78
On-X-Off	ST16A ‡	1.53	1.12	1.02	.96
On-X-Off*	ST16B ‡	1.59	1.17	1.06	1.00
Off-X-On*	ST16C ‡	1.59	1.17	1.06	1.00
On-X-Off	ST17A †‡	1.28	.94	.86	.80
SPDT — 3 term.					
On-X-On	ST12D	1.39	1.02	.93	.87
On-X-On	ST13D †	1.43	1.05	.96	.90
On-X-On	ST16D ‡	1.43	1.05	.96	.90
On-X-On	ST17D †‡	1.57	1.15	1.05	.98
DPST — 4 term.					
On-X-Off	ST22K	1.65	1.21	1.10	1.03
On-X-Off*	ST22L	1.90	1.39	1.27	1.19
Off-X-On*	ST22M	1.90	1.39	1.27	1.19
On-X-Off	ST23K †	1.69	1.24	1.13	1.06
On-X-Off	ST26K ‡	1.79	1.31	1.20	1.12
On-X-Off*	ST26L ‡	1.94	1.42	1.30	1.22
Off-X-On*	ST26M ‡	2.04	1.49	1.36	1.28
On-X-Off	ST27K †‡	1.83	1.34	1.22	1.15
DPDT — 6 term.					
On-X-On	ST22N	1.80	1.32	1.20	1.13
On-X-On	ST23N †	1.84	1.34	1.23	1.15
On-X-On	ST26N ‡	1.80	1.32	1.20	1.13
On-X-On	ST27N †‡	1.94	1.42	1.30	1.22

★ On orders for single switches, add 50c; X No position.
* Momentary position. †Bushing ¼" high.
‡ Side connected terminals only, except ST16D, -17D, -26N have both side and rear connected terminals.
§ For UL identification and ratings on Models ST12A through ST27N, see table on following page.

CROSS REFERENCE: AN, MS, AND ST MODEL NUMBERS WITH SIMILAR CIRCUITRY

SCREW TERMINAL				SOLDER LUG	
MIL-S-3950C See Notes A & B	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A
SPST				**SPST**	
MS35058-22	ST40A	AN3021-2	#	ST42A	MS35058-9
MS35058-29	ST40B	AN3021-9	#	ST42B	MS35058-10
MS35058-30	ST40C	AN3021-8	#	ST42C	MS35058-11
MS35058-24	#	AN3021-10	MS35058-1	#	MS35058-12
MS35058-28	#	AN3021-11	MS35058-2	#	MS35058-13
MS35058-25	#	AN3021-12	MS35058-3	#	MS35058-14
SPDT				**SPDT**	
MS35058-23	ST40D	AN3021-3	MS35058-4	ST42D	MS35058-15
MS35058-21	ST40E	AN3021-1	MS35058-5	ST42E	MS35058-16
MS35058-26	ST40F	#	MS35058-6	ST42F	MS35058-17
MS35058-27	ST40G	AN3021-7	MS35058-7	ST42G	MS35058-18
MS35058-31	ST40H	AN3021-5	MS35058-8	ST42H	MS35058-19
#	#	AN3021-6 **	#	#	#

SCREW TERMINAL				SOLDER LUG	
MIL-S-3950C See Notes A & B	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A
DPST				**DPST**	
MS35059-22	ST50K	AN3027-2	#	ST52K	MS35059-9
MS35059-29§	ST50L	AN3027-4§	#	ST52L	MS35059-10§
MS35059-30§	ST50M	AN3027-5§	#	ST52M	MS35059-11§
MS35059-24	#	AN3027-9	MS35059-1	#	MS35059-12
MS35059-28	#	AN3027-11	MS35059-2	#	MS35059-13
MS35059-25§	#	AN3027-10§	MS35059-3§	#	MS35059-14§
DPDT				**DPDT**	
MS35059-23	ST50N	AN3027-3	MS35059-4	ST52N	MS35059-15
MS35059-21	ST50P	AN3027-1	MS35059-5	ST52P	MS35059-16
MS35059-26§	ST50R	AN3027-6§	MS35059-6§	ST52R	MS35059-17§
MS35059-27	ST50S§	AN3027-7§	MS35059-7§	ST52S§	MS35059-18§
MS35059-31§	ST50T§	AN3027-8§	MS35059-8§	ST52T§	MS35059-19§

Not included in this specification. ** AN3021-6 same as AN3021-5 with jumper. § Same dimensions as MS35059-27.

NOTE A: MS and AN types use internal sand and dust toggle seal and other high performance features involving extra cost over ST types. MS types to MIL-S-3950C have a silicone rubber bushing seal to meet sand and dust, and toggle seal tests. MIL-S-3950 models are superseded by MIL-S-3950C models.
NOTE B: For heavy duty switches in the MS25068, MS35058, and MS35059 Series, MIL-S-3950C calls for SCREW TERMINALS ONLY. These terminals have SOLDERABLE FINISH and may be soldered after removal of screw.

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

TOGGLE SWITCHES—4-POLE & SP & DP UL TABLES

J-B-T INSTRUMENTS, INC.

J-B-T

32nd Year

Group III

OUTSTANDING 4-POLE SWITCHES TO MS25068 REQUIREMENTS



MS25068-27
4-pole DT
Lever Seal

• There is no mistaking the light brown color and silver printing of these distinctive J-B-T 4-pole heavy-duty switches. The superior molded body, chosen after extensive tests, features high arc resistance and low shrinkage. As a result the switches exceed the rigorous electrical endurance requirements of MS25068.

Equally important, J-B-T uses generous proportions of selected silver alloys in integral construction for contact surface areas—to add overload protection, dissipate heat, and keep contact resistance under .005 ohms. The 8 models listed here have silicone rubber bushing seals and solderable 6-32 screw terminals, the same as other heavy-duty J-B-T MS switches. Dimensions same as MS35059 except bodies including terminals: $1\frac{11}{32}$" long, $1\frac{9}{16}$" wide, $1\frac{9}{32}$" deep.

4-POLE HEAVY DUTY WITH LEVER SEAL					
MIL-S-3950C	Model No.	2-24*	25-49	50-99	100-249
4PST — 8 term.					
On-Off-X	MS25068-24	$4.50	$3.89	$3.28	$2.59
On-Off*-X	MS25068-25	5.30	4.60	3.86	3.21
X-Off-On*	MS25068-28	5.30	4.60	3.86	3.21
4PDT — 12 term.					
On-Off-On	MS25068-21	5.22	4.52	3.81	3.16
On-X-On	MS25068-23	5.30	4.60	3.86	3.21
On-X-On*	MS25068-26	6.19	4.88	4.10	3.41
On*-Off-On*	MS25068-27	6.19	4.88	4.10	3.41
On-Off-On*	MS25068-31	6.19	4.88	4.10	3.41

★ On orders for single switches, add $1.00
X No position * Momentary position

Other MS25068 Numbers: Models with suffix -1 through -13 as set forth in MIL-S-3950 are superseded by MIL-S-3950 Revision C Types. The latter are interchangeable electrically and mechanically but meet additional performance standards above the former types. Specifically, **MS25068-1** has become MS25068-21; **-3** now -23; **-5** now -31; **-7** now -27; **-10** now -26; **-11** now -24; **-12** now -28; **13** now -25.

UL IDENTIFICATION AND RATINGS*: SINGLE AND DOUBLE-POLE; HEAVY DUTY AND MEDIUM DUTY

Underwriters' Laboratories, Inc. lists under "Switches, Special Use" (File E26557) models marked with the J-B-T part number shown below. In some instances, there are minor construction differences from ST switches, but the ratings and external dimensions are the same. UL-marked types are not regularly stocked but only are manufactured in substantial production runs.

Heavy Duty — Single Pole JBT/UL/CSA Part No.**	ST Circuit Equivalent	Rating*
401	ST40A	A
402	ST40B	A
403	ST40C	A
404	ST40D	A
405	ST40E	A
406	ST40F	A
407	ST40G	A
408	ST40H	A
421	ST42A	A
422	ST42B	A
423	ST42C	A
424	ST42D	A
425	ST42E	A
426	ST42F	A
427	ST42G	A
428	ST42H	A

Heavy Duty — Double Pole JBT/UL/CSA Part No.**	ST Circuit Equivalent	Rating*
501	ST50K	A
502	ST50L	A
503	ST50M	A
504	ST50N	A
505	ST50P	A
506	ST50R	A
507	ST50S	A
508	ST50T	A
521	ST52K	A
522	ST52L	A
523	ST52M	A
524	ST52N	A
525	ST52P	A
526	ST52R	A
527	ST52S	A
528	ST52T	A

Medium Duty — Single Pole JBT/UL/CSA Part No.**	ST Circuit Equivalent	Rating*
121	ST12A	B
122	ST12B	B
123	ST12C	B
124	ST12D	C
131	ST13A	B
134	ST13D	C
161	ST16A	B
162	ST16B	B
163	ST16C	B
164	ST16D	C
171	ST17A	B
174	ST17D	C

Medium Duty — Double Pole JBT/UL/CSA Part No.**	ST Circuit Equivalent	Rating*
221	ST22K	B
222	ST22L	B
223	ST22M	B
224	ST22N	B
231	ST23K	B
234	ST23N	B
261	ST26K	B
262	ST26L	B
263	ST26M	B
264	ST26N	B
271	ST27K	B
274	ST27N	B

**NOTE: Above model numbers are basic ones for any given type and circuit. Variations, such as length of lever, have a suffix letter "J" and added suffix numbers.

*Ratings

Rating A

10 amps, 250 VAC
20 amps, 125 VAC
¾ H.P., 250 VAC
½ H.P., 125 VAC

Rating B

3 amps, 250 VAC-DC
6 amps, 125 VAC-DC

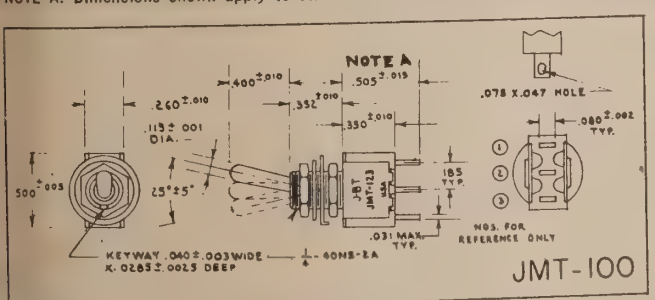
Rating C

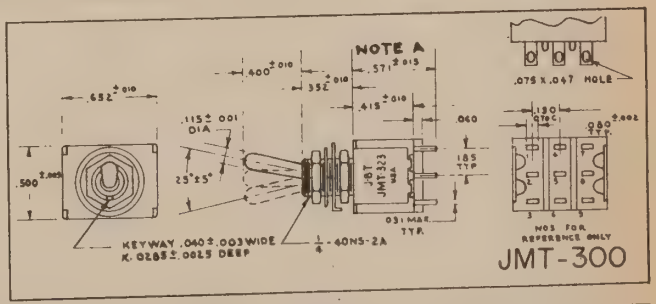
1 amp, 250 VAC-DC
3 amps, 125 VAC-DC

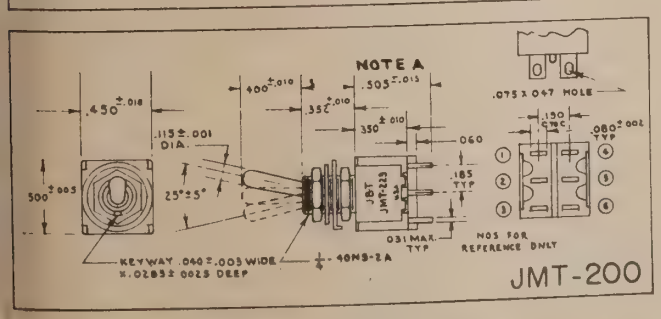
*Also CSA (File 26700)

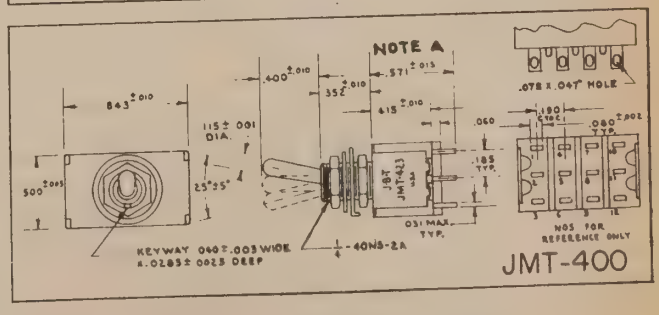
DRAWINGS FOR SUB-MINIATURE TOGGLE SWITCHES AS CATALOGED ON NEXT PAGE

NOTE A: Dimensions shown apply to standard terminals with hole. MPC switches have solid terminals, slightly larger, as shown on second following page









Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

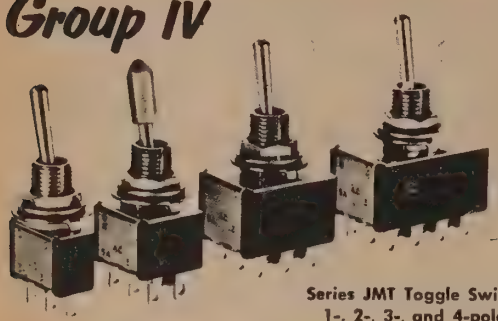
J-B-T

32nd Year ®

SUB-MINIATURE TOGGLE SWITCHES

J-B-T INSTRUMENTS, INC.

Group IV



Series JMT Toggle Switches
1-, 2-, 3-, and 4-pole DT.

SERIES JMT, SUB-MINIATURE TOGGLE SWITCHES. A BROAD LINE MANUFACTURED IN CONNECTICUT BY J-B-T.

MANUFACTURED IN J-B-T's new plant, the subminiature types illustrated on this page make up the firm's fourth and newest group of toggle switches. Series JMT combines drastic reduction in size and weight with the trouble-free construction built into standard-size J-B-T switches. Widely used in manually controlled, low-current, solid-state devices and miniaturized circuitry of computers, instruments, space, geophysical, and test apparatus, these tiny switches also have application in aircraft, communications, peripherals and bio-medical systems as well as remote control and reservation systems.

Made with a distinctive GREEN BODY, single-pole types are ¼" thin, double-pole types less than ½" square, 3-pole and 4-pole types correspondingly small. All use single-hole mounting with ¼" threaded bushing which will not turn or work loose in the J-B-T surface plate. Stringent in-plant controls assure terminals that are firmly staked and will withstand repeated soldering. Terminal holes on JMT Series accept up to three #22 wires. Dimensions are shown on the other side of this page.

SPECIFICATIONS

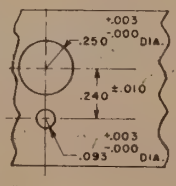
Nominal Rating: 5 Amp. resistive load, 125 VAC and 24 VDC. **Initial Contact Resistance:** 5 Milliohms max. 3 VDC, 100 Milliamps. **Insulation Resistance:** 20,000 Megohms, min. **Dielectric Strength:** 1,000 volts rms at sea level. **Life Under Load:** 100,000 make-and-break cycles minimum for all suffix-23 models; 60,000 for others. **Weight, Including Hardware:** SP, 0.19 oz.; DP, 0.23 oz.; 3-pole, 0.28 oz.; 4-pole, 0.32 oz.

MATERIALS: Switching contacts and rockers are coin silver; center terminals silver-plated. Bat handle is bright chrome-plated brass. Switch bodies are molded of plastic selected for high strength and arc resistance. Bushing, locking ring, and hex nuts are brass nickel-plated. Lockwashers are made of steel (cadmium plated) with chromate treatment. Clamps are of stainless steel.

HARDWARE AND MOUNTING

(For dimensions, see drawings on preceding page.)

Mounting hardware supplied consists of one locking ring **W-RI-12,** two hex nuts, **W-NU-11,** one internal tooth lockwasher, **W-WA-16** Knurled nut, **W-NU-12** and tapered panel dress nut, **W-NU-14,** are also available.



DIRECTION OF MOVEMENT — All JMT switches make continuity to terminal OPPOSITE throw of lever.

MOUNTING INFORMATION — When mounting switch with locking ring, use drill procedure illustrated. For push button types, see next page.

COLOR CAPS — Switches are normally supplied with bat handles. For color coding, tight-grip insulator caps are available for easy attachment before or after switches are mounted. Price, $10.00 per thousand in bulk; 2c per switch if attached. Specify color and part number:

White —**W-CAP-10A** Black —**W-CAP-10D** Yellow —**W-CAP-10G** Gray —**W-CAP-10J**
Blue —**W-CAP-10B** Brown —**W-CAP-10E** Green —**W-CAP-10H**
Red —**W-CAP-10C** Orange —**W-CAP-10F** Violet —**W-CAP-10I**



SERIES MPC, PC1 and PC2 Sub-miniature toggle switches are made with terminals for insertion in printed circuit boards; MPC for direct insertion, and PC1 and PC2 for right angle insertion. Terminals are gold plated for ease of solderability. MPC Series includes the same models as the standard JMT Series as well as such modifications as FH (Flat Handle), LL (Lever lock), 15-Series (Large Bushing) and other variations. (Illustrations approximately actual size.)



For complete technical data, request Catalog MT-40

TYPICAL MODELS

Circuitry† / Keyway	Model No.	Quantity Net Prices 2-9‡	10-29	30-99
JMT SERIES				
†SPDT — SERIES JMT-100				
On-Off-On	JMT-121	$1.95	$1.43	$1.30
On-None-On	JMT-123	1.65	1.21	1.10
On-None-On*	JMT-126	1.95	1.43	1.30
On*-Off-On*	JMT-127	2.10	1.54	1.40
On-Off-On*	JMT-131	2.10	1.54	1.40
None-On-On*	JMT-134	1.95	1.43	1.30
†DPDT — SERIES JMT-200				
On-Off-On	JMT-221	2.55	1.87	1.70
On-None-On	JMT-223	2.15	1.58	1.43
On-None-On*	JMT-226	2.55	1.87	1.70
On*-Off-On*	JMT-227	2.70	1.98	1.80
On-Off-On*	JMT-231	2.70	1.98	1.80
On-On-On	JMT-232	2.85	2.09	1.90
On-On-On*	JMT-233	3.15	2.31	2.10
None-On-On*	JMT-234	2.55	1.87	1.70
On*-On-On*	JMT-235	3.10	2.26	2.05
†3-POLE DT — SERIES JMT-300				
On-Off-On	JMT-321	4.25	3.12	2.84
On-None-On	JMT-323	3.85	2.82	2.57
On*-Off-On*	JMT-327	4.40	3.23	2.93
On-Off-On*	JMT-331	4.40	3.23	2.93
None-On-On*	JMT-334	4.50	3.30	3.00
†4-POLE DT — SERIES JMT-400				
On-Off-On	JMT-421	5.45	4.00	3.64
On-None-On	JMT-423	4.85	3.56	3.24
On*-Off-On*	JMT-427	5.60	4.10	3.74
On-Off-On*	JMT-431	5.60	4.10	3.74
On-On-On	JMT-432	6.00	4.40	4.00
On-On-On*	JMT-433	6.25	4.57	4.15
None-On-On*	JMT-434	5.90	4.32	3.93
On*-On-On*	JMT-435	6.40	4.70	4.28
MPC SERIES§				
†SPDT — SERIES MPC-100				
On-Off-On	MPC-121	2.05	1.53	1.38
On-None-On	MPC-123	1.75	1.31	1.18
On-None-On*	MPC-126	2.05	1.53	1.38
On*-Off-On*	MPC-127	2.20	1.64	1.48
†DPDT — SERIES MPC-200				
On-Off-On	MPC-221	2.65	1.97	1.78
On-None-On	MPC-223	2.25	1.68	1.51
On-None-On*	MPC-226	2.65	1.97	1.78
On*-Off-On*	MPC-227	2.80	2.08	1.88
PC1, PC2 SERIES				
†SPDT — SERIES PC1, PC2				
On-None-On	PC1-123	3.40	2.96	2.40
On-None-On	PC2-123	3.40	2.96	2.40
LFH Series — (Replaces FH Series)§				
†SPDT — SERIES LFH-100				
On-Off-On	LFH-121	2.95	2.23	2.00
On-None-On	LFH-123	2.65	2.01	1.80
On*-Off-On*	LFH-127	3.10	2.34	2.10
†DPDT — SERIES LFH-200				
On-Off-On	LFH-221	3.55	2.67	2.20
On-None-On	LFH-223	3.15	2.38	2.13
On*-Off-On*	LFH-227	3.70	2.87	2.50
LL SERIES§				
†SPDT — SERIES LL-100				
On-Off-On	LL-121	3.70	3.30	2.59
On-None-Off	LL-122	3.10	2.80	2.12
On-None-On	LL-123	3.10	2.80	2.12
†DPDT — SERIES LL-200				
On-Off-On	LL-221	4.35	3.90	3.04
On-None-Off	LL-222	3.70	3.35	2.59
On-None-On	LL-223	3.70	3.35	2.59
15 SERIES§				
†SPDT — SERIES 15-100				
On-Off-On	15-121	2.30	1.68	1.53
On-None-On	15-123	2.00	1.46	1.32
On-None-On*	15-126	2.30	1.68	1.53
On*-Off-On*	15-127	2.45	1.79	1.63
†DPDT — SERIES 15-200				
On-Off-On	15-221	2.90	2.12	1.93
On-None-On	15-223	2.50	1.83	1.66
On-None-On*	15-226	2.90	2.12	1.93
On*-Off-On*	15-227	3.05	2.23	2.03
PB SERIES				
SPDT — SERIES PB-100				
Maintained Action Switch PB-123 Push to Make Contact, and Push Again to Reverse Action.		1.95	1.47	1.30
Momentary Action Switch PB-126 Normally Open, or Normally Closed. (Determined by how wired.) See Drawing for Circuitry.		1.95	1.47	1.30

† These DT switches may also be used as ST by wiring only to applicable terminals. Example: JMT-123 can be connected as an "on and off" switch by using center terminal and terminal on one end only.
‡ On orders for single switches, add 50¢.
* Momentary position.
§ Also available 3- and 4-pole.

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

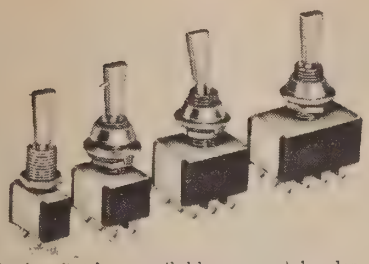
ADDITIONAL SUB-MINIATURE TOGGLE SWITCHES

J-B-T INSTRUMENTS, INC.

J-B-T

32nd Year

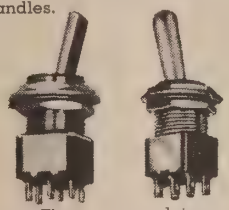
LFH SERIES with Flat Handles



SERIES LFH — provides a human engineering factor, with flat handles (paddle levers) that are easy to grasp, give good sensing of the direction of throw, and orderly panel appearance. Flatted on two sides, each lever is permanently aligned by a patented construction in its operating plane perpendicular to the flat. Standard finish is satin chrome, with bright nickel and other finishes available on special order.

The LFH Series, with .437" bushing and 22° throw is now cataloged and stocked. The earlier models, known as the FH Series, with flat handles, .352" bushing and 25° throw, are now available on special order. Both LFH and FH Series can be made in configurations corresponding to those in the JMT Series; some models are available with MPC terminals for printed circuits; some with UL listing. Also the 15 Series switches are available with flat handles.

15 SERIES with 15/32" Bushings to Match Standard Size J-B-T Toggle Switches



SERIES 15 -- Sub-miniature toggle switches combine the behind-the-panel space saving feature of the standard JMT Series with the front-of-panel appearance of standard size switches. They are used in many applications where circuitry requires switches of different capacities, but good panel design calls for uniformity. Electrical and mechanical characteristics of Series 15 switches are the same as for JMT switches given in Catalog 449, except for the larger (15/32") bushing and slightly greater weight. Mounting and hardware are the same as for standard size J-B-T toggle switches. Circuit identification caps are available in red, white, and black.

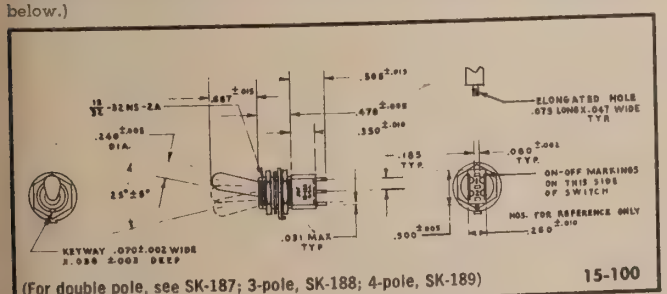
PB SERIES Push Button Switches



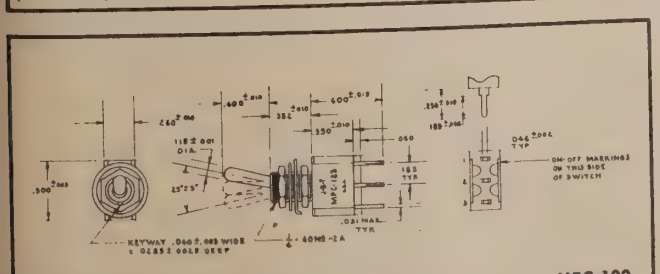
SPECIFICATIONS

Nominal Rating: 5 Amp. resistive load, 125 VAC and 24 VDC. **Initial Contact Resistance:** 5 Milliohms max., measured at 3 VDC, 100 Milliamps. **Insulation Resistance:** 10,000 Megohms, min. **Dielectric Strength:** 1,000 Volts rms at sea level. **Life Under Load:** 100,000 cycles make-and-break, min. **Force Required To Operate:** Less than 2 lbs. Rapid break generates audible click. **Weight, Including Hardware:** Single-pole 0.4 oz.

Materials And Construction: Switching contacts and rocker are coin silver; center terminal silver plated, standard. Available with gold plated current carrying parts where required for dry circuit applications. Bushing and plunger are nickel plated brass; bushing has shoulder for greater strength. Clamp is stainless steel. Body is high-strength plastic, J-B-T green and black. Standard knob (W-KN-10) is anodized natural aluminum. Anodized colors, green, blue, red, black and gold are also available at slight extra cost. Buttons of other shapes, colors, materials or with imprints are also available on substantial production runs at extra cost. **Mounting Hardware** consists of 2 hex nuts, W-NU-11 nickel plated brass, and an internal tooth lockwasher, W-WA-16. A knurled face nickel plated nut (W-NU-12) is also available. Mounting in panel is in 1/4" D-shaped hole. (See drawing below.)

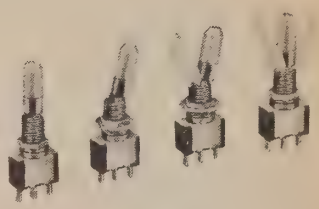


(For double pole, see SK-187; 3-pole, SK-188; 4-pole, SK-189) **15-100**



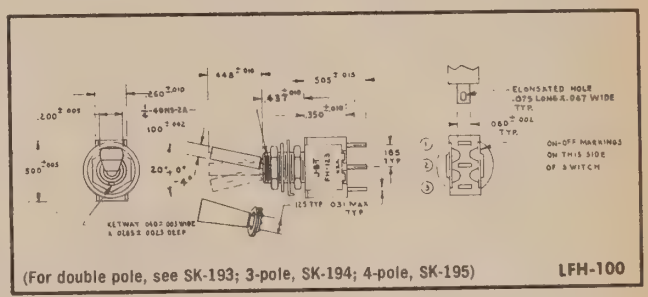
(For double pole, see SK-167; 3-pole, SK-168; 4-pole, SK-169) **MPC-100**

LL SERIES with Locking Levers

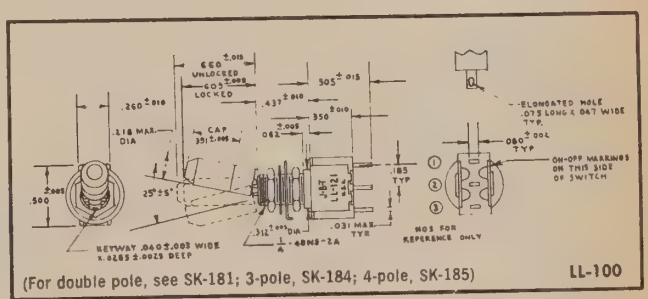


SERIES LL -- Made with spring-loaded locking mechanism to prevent accidental shifting of the lever -- a definite advantage on planes, ships, trains, or other vehicles where sudden motion might cause switching errors. Also, for test equipment other instrumentation or computer circuits where accumulated data might be lost through unintentional switching. As a human engineering factor, the operator must **think** about the switching operation before he can complete it.

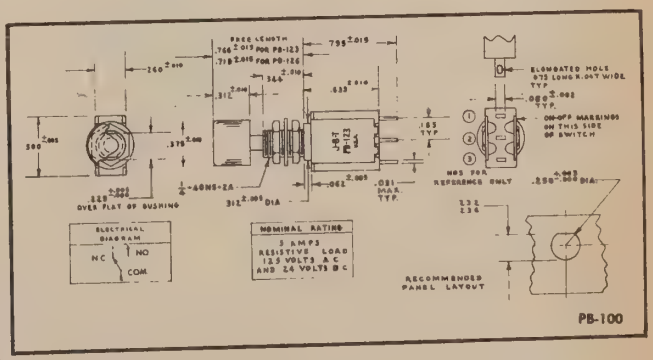
LL Series switches are normally stocked with natural aluminum caps, but for circuit identification caps can be supplied with anodized colors: red (danger), black, blue, gold or green.



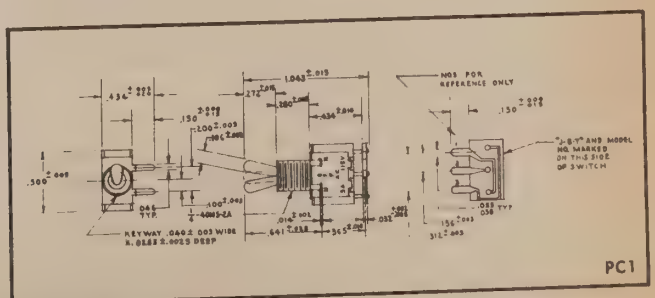
(For double pole, see SK-193; 3-pole, SK-194; 4-pole, SK-195) **LFH-100**



(For double pole, see SK-181; 3-pole, SK-184; 4-pole, SK-185) **LL-100**



PB-100



PC1

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

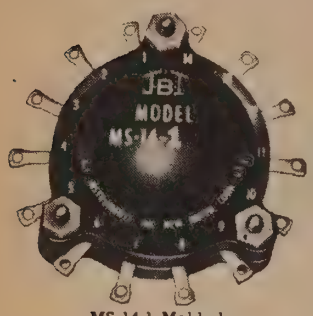
© United-Technical Publications

J-B-T

32nd Year

ROTARY SWITCHES — LAMINATED AND MOLDED

J-B-T INSTRUMENTS, INC.

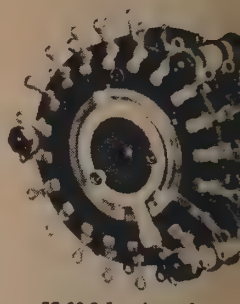


MS-14-1 Molded

- **INSTRUMENT AND TESTER TYPE**
- **14- AND 20-POSITION**
- **SINGLE AND MULTI-DECK**
- **MILITARY OR COMMERCIAL**

USES J-B-T Rotary Selector Switches are extensively used in quality test equipment, portable instruments, inspection setups, and other military aerospace and commercial applications where trouble-free, dependable performance is of major importance.

FEATURES **Extra Contacts** - 14- and 20-position designs provide extra switching capability. **Dependability** - Sturdy rotors and decks with rigid 3-post deck suspension; current-carrying parts heavily silverplated to meet 100 hour salt spray test; sharp detent mechanism to assure positive indexing; insulation resistance above 50,000 megohms. **Low Contact Loss** - Double-grip collector arms, and large area contacts, silver to silver; average contact resistance, .007 ohms or less. **Ample Dielectric** Conservatively rated at 1 amp., 125 VAC, inductive load; maximum momentary capacity (not make-and-break), 5 amp. AC or DC; maximum voltage between contacts, 1500 VAC, R.M.S.; between decks and ground, 2000 VAC, R.M.S



SS-20-2 Laminated

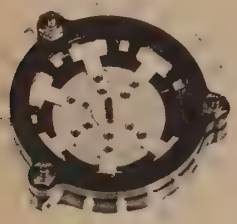
Enclosed - Molded models have all moving contacts enclosed to minimize dirt and corrosion.

Basic 14-Position: 13 circuits and "off" per deck in 2" circle **(SS-14)** or 2-3/32" circle **(MS-14)** with 25° 43' angular indexing. Supplied individually boxed with **1-1/4" Bar Knob, (KN-14),** not on bulk orders unless specified. For details, **SS-14,** 1 to 6 decks, see Print SK-42 Rev. B. **MS-14** 1 to 6 decks, Print SK-111 Rev. D, 7 decks and over, Print SK-112 Rev. C.

Basic 20-Position: 19 circuits and "off" per deck in 2-23/32" circle **(SS-20)** or 2⅝" circle **(MS-20)** with 18° angular indexing. Supplied individually boxed with 2" **Bar Knob (KN-16),** not on bulk orders unless specified. For details, **SS-20** 1 to 6 decks, see Print SK-116 Rev. A. **MS-20,** 1 to 6 decks, Print SK-113 Rev. D, 7 decks and over, Print SK-114 Rev. C.

Military or Commercial Variations: Special switches too numerous to list now are being made. Typical are: laminated models with 14 or 20 live positions, no off, designated by suffix F as in SS-14-2F or SS-20-1F*. Inquiries are invited.

***BONDED RUGGEDIZED TYPES** As indicated in the table, all molded rotary switches may be ordered with bonded construction as **MS-14B** or **MS-20B** types using cured laminations for ruggedization, shockproofing and further enclosure. This additional dependability factor adds only approx. 1/64" and 35c catalog price per deck.



MS-20-1-6DT
Double-throw Switching of 6 circuits per deck

6-POLE DOUBLE-THROW PER DECK —

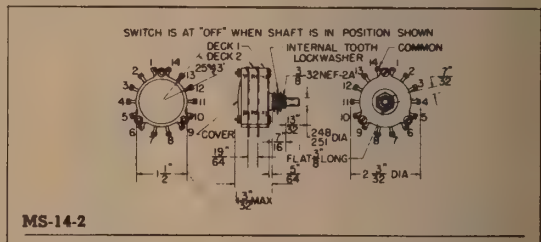
1 or 2 DECKS (DT Series). Widely used for simultaneous double-throw switching of 6 circuits per deck (18° throw). Fully enclosed - - illustration shows protective cover cut-away. Circuit arrangement printed on switch front. If DTS Shorting Type, 1500 VAC R.M.S. between contacts and ground, 1000 VAC R.M.S. between contacts. See **MS-20-1-6DT, MS-20-1-6DTS,** and **MS-20-2-6DT** in table.

ETCHED DIAL PLATES

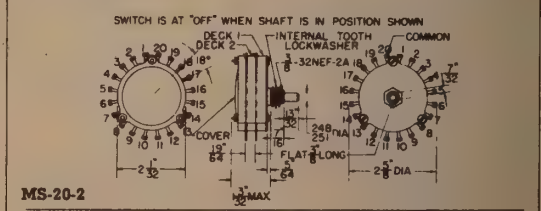
For switches below, also 20M Series. Dull black finish, raised bright numerals, 2¾" dia.

EP-13 off thru 13	**$.25**
EP-14 1 thru 14	**.25**
EP-19 off thru 19	**.25**
EP-20 1 thru 20	**.25**

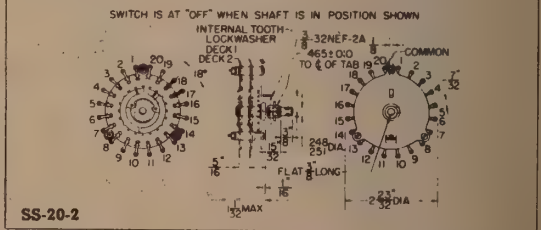




MS-14-2



MS-20-2



SS-20-2

14-POSITION ROTARY SWITCHES — 25° 43' INDEXING SERIES SS-14, MS-14, MS-14B, MAS-14, and MAS-14B

Pos. Per Circ.	Cir. (Poles) Per Deck	Decks or Gangs	Short'g or Non-Sh.	LAMINATED (SS) Standard Model	Max(d) Depth Behind Panel	Boxed Inc. Knob	MOLDED (MS) Standard Model	Max. Depth Behind Panel	Boxed Inc. Knob	Bonded Model	Max. Depth Behind Panel	Boxed Inc. Knob	Adjustable Stop Model	Max. Depth Behind Panel	Boxed Inc. Knob	Bonded Adjustable Stop Model	Max. Depth Behind Panel	Boxe Inc Kno
14	1	1	N-S	SS-14-1	27/32"	$2.45	MS-14-1	27/32"	$2.60	MS-14B-1	7/8"	$3.00	MAS-14-1	31/32"	$3.30	MAS-14B-1*	1"	$3.6
5(a)	2	1	N-S	SS-14-1A*	27/32"	2.60	—	—	—	—	—	—	—	—	—	—	—	—
14	1	1	S	SS-14-1S*	27/32"	2.50	MS-14-1S*	27/32"	2.65	MS-14B-1S*	7/8"	3.05	MAS-14-1S	31/32"	3.40	MAS-14B-1S*	1"	3.7
14	1	1	C-S(c)	SS-14-1CS*	23/32"	3.00	—	—	—	—	—	—	—	—	—	—	—	—
14	1	2	N-S	SS-14-2	1 5/32"	3.10	MS-14-2	1 3/32"	3.30	MS-14B-2	1 1/8"	4.05	MAS-14-2	1 7/32"	4.05	MAS-14B-2	1 1/4"	4.8
5(a)	2	2	N-S	SS-14-2A*	1 5/32"	3.40	—	—	—	—	—	—	—	—	—	—	—	—
14	1	2	S	SS-14-2S*	1 5/32"	3.20	MS-14-2S*	1 3/32"	3.40	MS-14B-2S*	1 1/4"	4.15	MAS-14-2S*	1 7/32"	4.20	MAS-14B-2S*	1 1/4"	4.9
14	1	3	N-S	SS-14-3	1 7/16"	3.70	MS-14-3	1 13/32"	4.00	MS-14B-3	1 15/32"	5.10	MAS-14-3	1 17/32"	4.90	MAS-14B-3*	1 19/32"	6.0
14	1	4	N-S	SS-14-4	1 23/32"	4.65	MS-14-4	1 23/32"	5.20	MS-14B-4	1 25/32"	6.65	MAS-14-4	1 27/32"	6.05	MAS-14B-4	1 15/16"	7.5
14	1	6	N-S	SS-14-6	2 13/32"	6.70	MS-14-6	2 13/32"	7.50	MS-14B-6	2 1/4"	9.70	MAS-14-6	2 17/32"	8.50	MAS-14B-6*	2 15/32"	10.7

20-POSITION ROTARY SWITCHES — 18° INDEXING SERIES SS-20, MS-20, and MS-20B

20	1	1	N-S	SS-20-1	23/32"	4.25	MS-20-1	27/32"	$3.30	MS-20B-1	7/8"	$3.65						
6(b)	2	1	N-S	SS-20-1A*	23/32"	4.40	—	—	—	—	—	—						
2	6	1	N-S	—	—	—	MS-20-1-6DT	27/32"	4.15	MS-20B-1-6DT*	7/8"	4.50						
2	6	1	S	—	—	—	MS-20-1-6DTS	27/32"	4.25	MS-20B-1-6DTS*	7/8"	4.60						
20	1	1	S	SS-20-1S*	23/32"	4.30	MS-20-1S	27/32"	3.35	MS-20B-1S*	7/8"	3.70						
20	1	2	N-S	SS-20-2	1 5/32"	5.05	MS-20-2	1 3/32"	4.15	MS-20B-2	1 1/8"	4.75						
2	6	2	N-S	—	—	—	MS-20-2-6DT	1 3/32"	5.85	MS-20B-2-6DT*	1 1/8"	6.60						
20	1	2	S	SS-20-2S*	1 5/32"	5.15	MS-20-2S	1 3/32"	4.25	MS-20B-2S*	1 1/8"	5.00						
20	1	3	N-S	SS-20-3	1 11/32"	6.20	MS-20-3	1 13/32"	5.30	MS-20B-3*	1 15/32"	6.40						
20	1	4	N-S	SS-20-4	1 23/32"	7.50	MS-20-4	1 23/32"	6.60	MS-20B-4	1 25/32"	8.10						
20	1	6	N-S	SS-20-6	2 11/32"	9.95	MS-20-6	2 13/32"	9.10	MS-20B-6	2 1/2"	11.35						

NOTES TO TABLES

* Standard Items, but not regularly stocked; check wit your electronic parts distributor.

(a) 5 positions include 4 "live" and 1 "off."

(b) 6 positions include 5 "live" and 1 "off."

(c) Complete shorting—all contacts shorted except one use.

(d) Dimensions given are for continuous rotation switch On Standard SS-14 Models only, adjustable stops also furnished, and when used, increase depth beh panel 3/32" and decrease effective bushing length 3

Non-Shorting — Break before make **Shorting** — Make before break

*"F" type decks (14 full live or 20 full live positions, no "off") available on SS-14 and SS-20 Series only. Add 35c per deck to catalog price.

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

MULTI-POLE AND LEVER TYPE SWITCHES

J-B-T INSTRUMENTS, INC.

32nd Year

IMPROVED MULTI-POLE MOLDED ROTARY SWITCHES, SERIES 20M.

• Superior Molded Material • All Models Bonded & Ruggedized • Panel Seal Available



Front View Showing Panel Locator which is Normally at 3 o'clock Position.



Rear View with Back Cover Cut Away to Show 4-Pole Construction with 4 Live Switching Contacts.

Although the new 20M- Series is ¼" longer behind the panel than the 20-position molded switches described on the preceding page, the two styles are otherwise interchangeable in dimensions. Providing 19 live positions and off, the 20M- offers these additional features:

1. **Increased Versatility of Circuitry** — up to and including four poles per deck;
2. **Upgraded Insulation Resistance and Dielectric Qualities** — by use of melamine stators and rotors (or other MIL-M-14 molded materials when specially ordered);
3. **Built-in Panel Locator or Non-Turn Device;**
4. **Extended Switch Life** — new contact design with rotor brushes of phosphor bronze heavily silver-plated;
5. **All 20M- Models are Bonded and Ruggedized Construction;**
6. **Radial Alignment of Multi-Pole Contact Surfaces** — by means of newly-designed double-ball detent with diaphragm-type springs.

VARIATIONS OF 20M- — Please request SK-142, Revision of March, 1967, or later for full dimensions and circuit diagrams. Besides the condensed listing in the accompanying table, various combinations of **shorting and non-shorting contacts for each deck** may be made. **Fixed stops** are built-in but may be altered for single-pole switches when specially ordered. **Over six decks** can be supplied for a reasonable number of poles; extra decks add 5/16" per deck and 5/16" per switch for rear support SU-3. **Ring-contact** (suffix R) may be specially ordered.

PANEL SEAL PS20M- SERIES — Sealed shaft and bushing meet the requirements of MIL-S-3786C for sealing. For details ask for SK-143, Revision of March, 1967, or later. The seal (prefix PS) adds $1.75 per switch to catalog price.

SPECIFICATIONS AND TEST DATA — Available on request.

No. of Decks	Depth Behind Panel	Poles per Deck	Model Number	Circuitry Per Pole	Rotation Positions*	Boxed Incl. Knob
1	1-3/16"	1	**20M-1201N**	19 live, 1 off	Continuous	$4.00
		1	**20M-1191NF†**	19 live, no off	1 thru 19	4.35
		1	**20M-1161N**	15 live, 1 off	20 thru 15	4.00
		2	**20M-2101N**	9 live, 1 off	20 thru 9	4.40
		3	**20M-3051N**	4 live, 1 off	20 thru 4	4.80
		4	**20M-4051N**	4 live, 1 off	20 thru 4	5.15
2	1-1/2"	1	**20M-1202N**	19 live, 1 off	Continuous	5.30
		2	**20M-2102N**	9 live, 1 off	20 thru 9	6.15
		3	**20M-3052N**	4 live, 1 off	20 thru 4	6.90
		4	**20M-4052N**	4 live, 1 off	20 thru 4	7.65
3	1-13/16"	1	**20M-1203N**	19 live, 1 off	Continuous	6.65
		2	**20M-2103N**	9 live, 1 off	20 thru 9	7.90
		3	**20M-3053N**	4 live, 1 off	20 thru 4	9.00
		4	**20M-4053N**	4 live, 1 off	20 thru 4	10.15
4	2-3/16"	1	**20M-1204N**	19 live, 1 off	Continuous	8.20
		2	**20M-2104N**	9 live, 1 off	20 thru 9	9.85
		3	**20M-3054N**	4 live, 1 off	20 thru 4	11.35
		4	**20M-4054N**	4 live, 1 off	20 thru 4	12.85
		4	**20M-4044N**	3 live, 1 off	20 thru 3	12.85
6	2-13/16"	1	**20M-1206N**	19 live, 1 off	Continuous	11.45
		1	**20M-1166N**	15 live, 1 off	20 thru 15	11.45
		2	**20M-2106N**	9 live, 1 off	20 thru 9	14.00

* See MS-20 drawing on following page for location of positions.

Notes: (1) For standard switches, knob pointer (active position) is 180° opposite flat on shaft, and off is at position 20.
(2) **NON**-shorting (N) type — (break-before-make) — is shown. For shorting type (S), add $.05 per pole per deck to catalog price. Example: 3 pole, 3 deck 20M-3053S is $9.45.
(3) All models have 18° angular indexing.
(4) Maximum **LIVE** positions per single pole, 19; per 2-pole, 9; per 3- and 4-pole, 4.
(5) Switches (such as 15 or 18 position) with all live or less than maximum live positions can be provided by fixed stops.
(6) Maximum of 9 decks for 1 pole per deck
6 decks for 2 poles per deck
4 decks for 4 poles per deck.
(7) †Suffix-F denotes all rotation positions shown are **live** with no off.

LEVER ACTION SWITCHES — 6, 5, 4, 3, and 2-Position — LAMINATED, MOLDED, & SUB-MINIATURE

LAMINATED 3- AND 4-POSITION, POSITIVE INDEXING. These lever switches are derived from the J-B-T SS-14 instrument-type rotaries. Specified for tube checkers, inspection equipment, communications systems, control consoles, and other uses where quality is important. 4-position types are interchangeable with 3-position except in length of throw (1" slot for 3-position, 1⅜" for 4-position) — mounting holes for boxed switches come with mounting hardware and KN-17 knob as illustrated; bulk shipments, without knobs. **SINGLE DECK-** spacing between centers: recommended, ¾"; minimum, 9/16". **TWO DECK-** spacing: recommended, 15/16"; minimum, 13/16". ⅜" between decks matches TV twinlead wires. **SPRING RETURN TYPE-** single deck, 3-position switches may be ordered with spring return. Lever returns to position 11°, giving momentary action at positions 9° and 10°. For dimensions on all SS-14-IL series switches, ask for drawing SK-138.

Two-Deck Lever-Action Switch

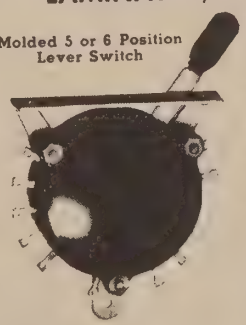


SS-14-1L4F-2

Positions Per Circuit	Circ. (Poles) Per Deck	Decks or Gangs	Short. Non-Short	Stand.* Contact Pos.	Model	Boxed Incl. Knob
3, no "off"	1	1	N-S	A	**SS-14-1L3**	$1.10
3, no "off"	2	1	N-S	B	**SS-14-1L3A**	1.25
3, no "off"	1	2	N-S	A	**SS-14-1L3-2**	1.80
3, & "off"	1	1	N-S	C	**SS-14-1L4**	1.20
4, no "off"	1	1	N-S	D	**SS-14-1L4F**	1.20
4, no "off"	1	2	N-S	D	**SS-14-1L4F-2**	2.10

* Numbers correspond to contact positions in MS-14-2 drawing on prior page. A—common at 12, contacts at 9, 10, 11; B—common at 9, 10, contacts at 6, 7, 8, 12, 13, 14; C—common and off at 12, contacts at 9, 10, 11; D—common at 12, contacts at 8, 9, 10, 11.

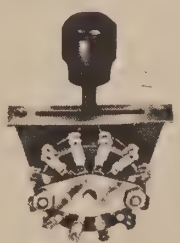
Molded 5 or 6 Position Lever Switch



MOLDED 5- and 6-POSITION, POSITIVE-INDEXING. 5 or 6 live positions, two circuits per deck, in enclosed lustrous black molded construction, adapted from the MS-20 series with electrical characteristics as shown on the next page. These models can simplify circuitry for sound systems, control, inspection, test, experimental, and hobby purposes. Individually-boxed switches come with KN-20 threaded black molded knob; bulk shipments, without knobs. For mounting data see SK-64, Rev. H on 5 position and SK-119, Rev. B on 6-position.

MS-20-1L5A-1, 5-position, 2-circuit (1 deck) $3.45.

MS-20-1L6A-1, 6-position, 2-circuits (1 deck) 3.70



Sub-Miniature 1 Dual Duty Deck

2 AND 3 POSITION, 1 TO 4 DECKS, 2 TO 8 POLES PER DECK.

SUB-MINIATURE LEVER SWITCHES Derived from the high-performance sub-miniature switches described on another page, the VL-7000 and the VL-5000 positive indexing series and the VSRL-7000 and VSRL-5000 spring return types provide excellence in lever switches. MIL materials throughout, crisp 30° indexing. Max. depth behind panel 1.250"; panel slot .962" x .062"; other details to SK-139, Rev. A and Catalog SM-33. Typical switches are:

VL-71031N, single-pole, 3-position, one-deck, non-shorting $4.80

VSRL-71031N, same as above, with spring return to center position from either side 5.80

VL-71032N, single-pole, 3-position, two deck, non-shorting 7.05

TYPE SR31 LEVER-ACTUATED SWITCHES TO MIL-S-3786C, MEDIUM AND HIGH SHOCK

Sub-miniature open construction, lever-actuated switches, similar to the one illustrated above, recently have been added to MIL-S-3786C as SR31 types. This category covers shorting and non-shorting; 1 to 4 poles per section; 1 to 4 sections per switch; Medium Shock M, as in Model VL-71031N-SR31N30C3MGC (M3786/31-034), will normally be supplied, but High Shock H is available. Typical models are priced on next page.





LEVER KNOBS

KN-17, black pointed with metal insert $0.19
KN-18, walnut, same as KN-19 0.08
KN-19, black, round, flat-type, push-on 0.08
KN-20, black, threaded, for MS-20-IL 0.20

Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

J-B-T

32nd Year

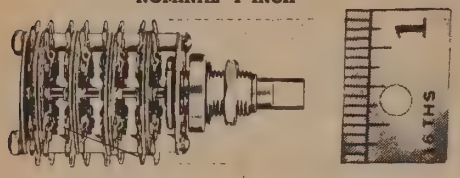
SUB-MINIATURE ROTARY AND LEVER SWITCHES

J-B-T INSTRUMENTS, INC.

SUB-MINIATURE SWITCHES MADE TO MANY PERFORMANCE LEVELS OF MIL-S-3786C, TYPE SRO5; ALSO NON-MILITARY X AND V VERSIONS.

SERIES 7000, FULL 12 LIVE SWITCHING CONTACTS PER DECK: SERIES 5000, UP TO 8 POLES PER DUAL-DUTY DECK.

NOMINAL 1 INCH



4 DECKS Series 5000

Model Number V-52114N-SRO5S30C3MGC. Terminals have hole to accept two 0.032" dia. wires, and supersede solid "T" terminals formerly supplied.

- **Precision built for Low-Current Usage where Size, Weight, Reliability are Important**
- **Unusual Versatility — More Contacts per Deck**
- **Accelerated Snap-Action Detent**
- **MIL Materials Throughout for Military & Non-Military Applications**

CAUTION—MIL-S-3786C, a sophisticated specification, spells out more than one performance level in each of several categories such as Temperature-Life, Vibration, Shock, and Altitude, J-B-T SRO5 models meet many levels.

- **USES — For test equipment, airborne and transistorized equipment, geophysical apparatus, and other miniaturized electrical and electronic devices.**

TWO BASIC SERIES — Full 12 live switching contacts per deck are available in **Series 7000** using a patented wafer design feature where rotor contacts are on the front, and switching contacts are on the rear of the same deck. 1 to 4 poles per deck 1 to 6 decks, standard.

Up to 8 poles per dual-duty deck are available in **Series 5000** which has up to 12 contacts including common on the front, and up to 12 contacts including common on the rear of the same deck. 1 to 4 poles on each side of dual-duty decks; 1 to 4 decks, standard.

THREE ROTARY TYPES — Both Basic Series are made in 3 types: **MILITARY STYLE SR05,** numbered for specific performance levels of MIL-3786C; **V TYPE,** of similar construction to SR05, but not ordinarily subjected to full military test procedures; and **X TYPE,** using the same materials as V type switches, but intended as replacements for previous models or as original components for non-military devices where requirements are similarly exacting.

LEVER SERIES (L and SR31 Types) — Outstanding design known as VL-7000 or VL-5000 Series, 1 to 4 decks. Illustrated on a preceding page.

KNOBS — Supplied with individually boxed switches on V and X types; not supplied on SR05 because separate military specification applies.

SEALED SRO5 SHAFT AND BUSHING SEAL NOW AVAILABLE ON 1" OPEN CONSTRUCTION ROTARY SWITCHES TO MIL-S-3786C

- The versatility of J-B-T 1" open construction sub-miniature rotary switches described in Catalog SM-33 is increased by the addition of shaft and bushing seals to meet the requirements of SRO5S Type to MIL-S-3786C.

Principal differences:	SRO5N	SRO5S
Sealed Shaft-to-bushing	No	Yes
Sealed Panel Bushing	No	Yes
Bushing Size	Round 3/8-32	Flatted (D-Shape)
Depth behind panel	See Table Preceding Page	.100" longer
Non-Turn Device	Yes (unless otherwise ordered)	Provided by flatted bushing
Other Details	Print SK-135 (E)	Print SK-179

DIFFERENCES BETWEEN SR05 MILITARY, V, and X — Switches other than X types use extra rugged index mechanisms and rotor construction.

	NON-MILITARY		MIL-S-3786C
ITEM	X-7000 X-5000	V-7000 V-5000	V-7000-SR05 V-5000-SR05
Terminals	Hole-type not bent	Hole-type not bent	Hole-type; normally not bent
Shaft	1/8" dia.	1/4" dia.	1/4" dia. only
Bushing	1/4"-32V UNEF 2A, 1/4" long	3/8"-32V UNEF 2A, 3/8" long	3/8"-32V UNEF 2A, 3/8" long
Rear Bridge	Black Identification	Red Identification	Stainless Steel, full number
Non-turn Device	Normally supplied	Normally supplied	Supplied, Spec. requires

FOR ADDITIONAL MODELS AND FULL SPECIFICATIONS, ASK FOR BULLETINS SM-33 AND LAYOUT SHEETS WITH CONTACT ARRANGEMENTS.

MOST FREQUENTLY ORDERED MODELS

DECKS	Circ. Poles per Deck	Pos. per Pole	Shorting, Non-Shorting	V-TYPE OR X-TYPE Model	1-24	25-49	SR05-TYPE Model*	1-24	25-49
1	1	12	N-S	V-71121N	$4.90	$4.41	V-71121N-SR05N	$5.25	$4.73
	1	12	S	V-71121S	4.90	4.41	V-71121S-SR05N	5.25	4.73
	1	12	N-S	X-71121N	4.70	4.23	—		
	1	12	S	X-71121S	4.70	4.23	—		
	2	6	N-S	V-72061N	5.15	4.64	V-72061N-SR05N	5.35	4.82
	4	3	N-S	V-74031N	5.20	4.68	V-74031N-SR05N	5.50	4.95
1 Dual Duty	2	11	N-S	V-52111N	5.25	4.73	V-52111N-SR05N	5.60	5.04
	2	11	S	V-52111S	5.25	4.73	V-52111S-SR05N	5.60	5.04
	4	5	N-S	V-54051N	5.35	4.82	V-54051N-SR05N	5.70	5.13
	4	5	S	V-54051S	5.35	4.82	V-54051S-SR05N	5.70	5.13
	8	2	N-S	V-58021N	5.55	5.00	V-58021N-SR05N	5.90	5.31
2	1	12	N-S	V-71122N	6.75	6.08	V-71122N1SR05N	7.20	6.48
	1	12	S	V-71122S	6.75	6.08	V-71122S-SR05N	7.20	6.48
	1	12	N-S	X-71122N	6.45	5.81	—		
	2	6	N-S	V-72062N	7.15	6.44	V-72062N-SR05N	7.40	6.66
	4	3	N-S	V-74032N	7.40	6.66	V-74032N-SR05N	7.90	7.11
2 Dual Duty	2	11	N-S	V-52112N	8.10	7.29	V-52112N-SR05N	8.65	7.79
	2	11	N-S	X-52112N	7.70	6.93	—		
	4	5	N-S	V-54052N	8.30	7.47	V-54052N-SR05N	8.85	7.97
3	1	12	N-S	V-71123N	8.85	7.97	V-71123N-SR05N	9.45	8.51
	2	6	N-S	V-72063N	9.13	8.24	V-72063N-SR05N	9.70	8.73
	4	3	N-S	V-74033N	9.85	8.87	V-74033N-SR05N	10.45	9.41
4	1	12	N-S	V-71124N	11.95	10.76	V-71124N-SR05N	12.70	11.43
	1	12	N-S	X-71124N	11.40	10.26	—		
6	1	12	N-S	V-71126N	16.05	14.44	V-71126N-SR05N	17.10	15.39
1 Lever	4	3	N-S	VL-74031N	5.15	4.64	VL-74031N-SR31	6.15	5.54
	2	3	N-S	VL-72031N	5.05	4.55	VL-72031N-SR31	6.05	5.45
	8	2	N-S	VL-58021N	5.45	4.36	VL-58021N-SR31	6.35	5.72
1 2DD	1	12	N-S	Bushing Seal and Lever Seal			V-71121N-SR05S	7.25	6.73
2 2DD	2	11	N-S				V-52112N-SR05S	10.65	9.79
	4	5	N-S				V-54052N-SR05S	10.85	9.97
3 2DD	1	12	N-S				V-71123N-SR05S	11.45	10.51

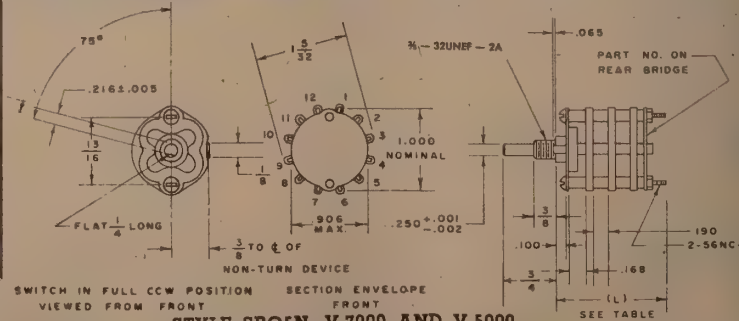
* Complete model number for a typical MIL-S-3786C rotary switch is: V-71121N-SRO5N30C3MGC, which designates specific performance levels. Likewise, for a typical lever-actuated switch; M3786/31-040. Unless otherwise ordered, switches will be furnished to this suffix (N30C3MGC). On certain models, sealed shaft and bushing are available at $2.00 extra cost; or shock type H (high impact), also at $2.00 extra, when so ordered.

SPECIFICATIONS & TEST DATA ON SR05 MILITARY STYLE

NOTE: Most of the values shown here are given in the Specification and do not indicate the extent to which the test results of J-B-T switches were more favorable.
Current-carrying capacity: 5 amps at standard ambient conditions.
Current-breaking capacity: 750 MA at 30 VDC; 300 MA at 120 VDC; 1 AMP at 115 VAC Non-Inductive.
Initial Contact Resistance: 005. ohms max.
Contact Resistance: To MIL-STD-202D, Method 307, which requires Initial — 20 milliohms After Moisture Resistance Test — 30 milliohms; After Life Test — 40 milliohms.
Materials: Terminals (double-wiping): gold-plated 90% silver alloy. **Rotor Contacts** J-B-T #1800 Silver Alloy. **Shaft & Frame:** Stainless steel, passivated.
Insulation: Wafer, glass epoxy laminate to MIL-P-18177C Type GEB, NEMA G-11; Rotor ceramic to MIL-I-10A, Grade L-623.
Life Rotational; Temperature-Life Characteristic C, 25,000 rotational cycles at 10 cpm Temperature —65°C to +125°C; 25,000 cycles at 70,000', room ambient temperature
Vibration: Grade 3 of Table III MIL-S-3786C, 10 to 2000 cps. Tested in accordance with MIL-STD-202D, Method 204. Test Condition B.
SHOCK: Shock Type M, Medium Impact per Table IV, MIL-S-3786C. Tested in accordance with MIL-STD-202D, Method 205. Mating contacts did not open for more than 10 microseconds. Shock Type H, High Impact, Method 207; specifies not more than 5 milliseconds and does not automatically cover Type M Impact.

MAXIMUM DEPTH (L) BEHIND PANEL, INCHES

	1-Deck	2-Decks	3-Decks	4-Decks	5-Decks	6-Decks
Series V-7000-SR05N or X-7000	0.640	0.918	1.196	1.474	1.752	2.030
Series V-5000-SR05N or X-5000	0.640	0.918	1.196	1.474	—	—



STYLE SRO5N, V-7000 AND V-5000

For SR05S with panel and bushing seals, add .100 to (L) in table above, per Print SK-179.

Prices shown are NET, F.O.B., Factory, domestic packing. November 1, 1970, subject to change. Quantity prices on request.

Net

© United Technical Publications

REMARKABLE NEW 12 POSITION ROTARY SWITCHES

J-B-T INSTRUMENTS, INC.

J-B-T

32nd Year

V/M SERIES 12-POSITION ROTARY SWITCHES
ULTRA-HIGH QUALITY WITH ADJUSTABLE TORQUE DETENT

This unusually fine family of fully enclosed rotary switches is being produced in J-B-T's thoroughly modern new plant. Used in precise laboratory test apparatus, test set-ups, telemetering, meter switching, calibration operations, and similar applications where circuit stability is essential to accuracy and repeatability. The V/M Series virtually eliminates the influence of extraneous factors to the circuitry, and the initial electrical and mechanical characteristics remain substantially unchanged throughout the long useful life of the switch.

SPECIFICATIONS (apply only to VMCS7 Models with coin silver contacts and rotor blades.): **Initial Contact Resistance,** .002 ohms; **Maximum Inductance,** less than .03 microhenry; **Capacitance between Segments,** less than 2 PFD; **Thermal EMF,** less than 1 microvolt; **Current Carrying Capacity,** 5 amp.; **Dielectric Strength,** 1000 volts, rms, 60 cy. — terminals to ground and terminals to terminals; **Insulation Resistance,** greater than 500,000 megohms; **Life Cycling** (make and break), 100,000 cycles at 1 amp., 120 VAC, res. and ind., and 28 VDC res. and ind.

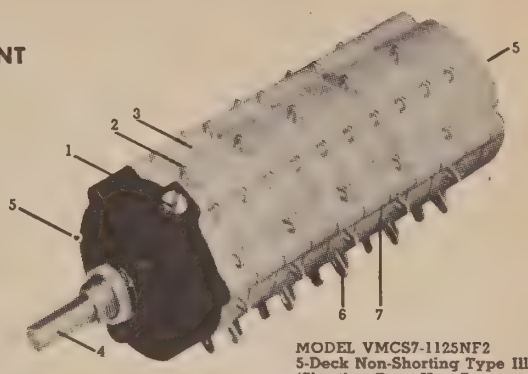
DIMENSIONS: diameter over terminals 1⅞"; bushing ⅜-32 x ⅜" long; non-turn device ⅛" diam., 17/32" from shaft centerline.

NOTES:

*Model Number shown is for VMCS7, with coin silver contacts and rotor blades. For nickel silver, model number would be VMNS7; for silver plated brass contacts and nickel silver rotor blades, VMSB7.

**Unlike other J-B-T rotary switches, VM series is normally shorting type; for non-shorting construction add 50¢ per deck per switch, Net. Made only on special order.

† Includes knob and mounting hardware. Quantity prices on request.



MODEL VMCS7-1125NF2
5-Deck Non-Shorting Type Illustrated
(Shorting Type Has Common Deck Adjacent to Front of Switch)

FEATURES:

(1) Adjustable detent action for variable torque (or factory set for 4 inch-lbs. max.) (2) Unusually sturdy molded-in terminals, .032" thick; accomodate two #18 wires. (3) Distinctive color-coded glass alkyd or diallyl phthalate decks — **gray** for coin silver alloy contacts and rotor blades; **blue** for nickel silver; and **green** for silverplated brass. (4) Husky ¼" stainless steel shaft. (5) Permanent identification of positions 0 through 11, cast in detent housing and molded in rear deck. (6) Integral connections between contacts and terminals — no mechanical joints. (7) Enclosed decks may be stacked for explosion-proof switch, per methods 3 and 4 of MIL-E-5272.

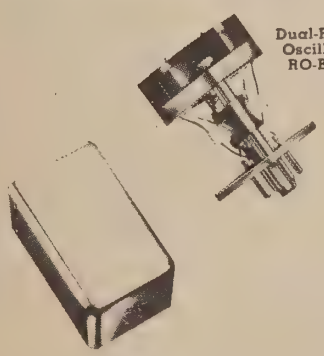
REPRESENTATIVE MODELS AND BASE PRICES
VMCS7, VMNS7, AND VMSB7 ROTARY SWITCHES

Model Number* (Shorting type)	Poles Per Deck	Positions Per Pole	No. of Decks	Shorting** Non-Sht'g	NET EACH — Quantity 1-9† VMCS7 Coin Silver	VMNS7 Nickel Silver	VMSB7 S.P. Brass	"L" Length Behind Panel
VMCS7-1121SF1	1	12	1	S	$16.00	$10.50	$ 9.25	1⅝" max.
VMCS7-2061SF2	2	6	1	S	19.50	12.50	11.25	1⅝" max.
VMCS7-1122SF1	1	12	2	S	24.10	15.00	13.75	2 3/16" max.
VMCS7-2062SF2	2	6	2	S	27.60	17.00	15.75	2 3/16" max.
VMCS7-1124SF1	1	12	4	S	40.30	24.00	22.75	3 1/16" max.
VMCS7-2064SF2	2	6	4	S	43.80	26.00	24.75	3 1/16" max.

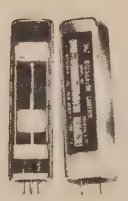
RESONANT REED RELAYS AND OSCILLATOR CONTROLS

Applications: selective-calling mobile communication equipment, remote data transmission, and simultaneous or sequential coding and decoding.

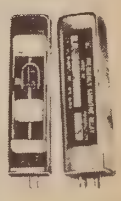
For further data, ask for Bulletins 162-R and D664A. Inquiries are invited on combination relay-oscillator types.



Dual-Reed Oscillator Control RO-B10B-188.0



Single-Reed Oscillator Control RO-D62E-250.3 (Vibration-Isolated in All Planes)



Relay RR-DO2E-250.3 (Vibration-Isolated in All Planes)

J-B-T frequency-sensitive electro-mechanical relays (decoders) are highly stable control devices. They intermittently make and break contacts when a signal of the same frequency as the tuned reed is received. Although the reed has a high Q, the bandwidth at which the relay responds will be proportional to the input signal level.

RO-B Oscillator Controls (sometimes known as tone generators or encoders) are dual-reed units internally shock mounted and of sealed construction. These units control the frequency of oscillation in vacuum tube or transistor oscillator circuits. The RO-B type oscillator control is recommended where accurate and stable AC signals are required.

RR-D types are internally shock-mounted resonant reed relays, which are square, sealed units with 7-pin miniature plug. They now are the most widely used J-B-T relays.

RO-D types are single-reed, internally shock mounted oscillator controls for applications where space saving is of importance. Dimensionally they are identical to RR-D relays.

TYPICAL REED RELAY AND OSCILLATOR CONTROL SPECIFICATIONS

Model	Enclosure	Mounting & Connections	Frequency Range CPS	DC Coil Resistance (Standard)	Accuracy to	Change per °C —40° to + 100°C	Individually Boxed
RR-DO2E-Reed Relay	25/32" sq. x 3 1/32" lg sealed	7 Pin Miniature Plug In	67 to 1600	600 ohms	±0.1%	±0.0025%	19.00**
RO-B10B-Oscillator Control†	1 33/64" sq x 2 7/16" long sealed	Octal Plug In	67 to 600	2200 ohms/coil	±0.1%	±0.003 %	26.00**
RO-D62E-Oscillator Control	25/32" sq. x 3 1/32" lg sealed	7 Pin Miniature Plug In	67 to 1600	600 ohms	±0.1%	±0.0025%	18.00**

** For frequencies 400 cps and up, add $1.00 to catalog price.

† Dual reed construction.

J-B-T INSTRUMENTS, INC. Electrical Instruments, Testers, Switches and Other Components

(For other J-B-T Products, see Sec. 2900)

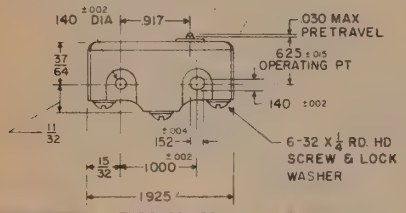
Prices shown are NET, F.O.B., Factory, domestic packing, November 1, 1970, subject to change. Quantity prices on request.

© United Technical Publications

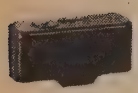
LICON
DIVISION ILLINOIS TOOL WORKS INC.

single-break switches
Types 10 & 08, General Purpose
Type 23, Miniature Type 25, Thin

TYPES 10 & 08



TYPE 10-122

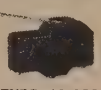

TYPE 10-122


TYPE 10-222


TYPE 10-322


TYPE 10-422


Type 10-522


TYPE 10-622


TYPE 10-722


TYPE 10-822


TYPE 10-922

Types 10 & 08 are high capacity industrial switches featuring low movement differential, long life and precise operation. The serpentine snap action switch mechanism provides positive electrical contact with high vibration resistance. The 15 a Type 10 meets the requirements of MIL-S-8805/ Type 08 is a heavy duty 22.5 amp version. Both listed, CSA approved.

Licon No.	Description (Actuators)	Pre-Travel (Max.)	Over-Travel (Min.)	Movement Diff. (Max.)	Operating Force	Release Force (Min.)	Terminal Type	Circuit	List Pric
10-122	Pin Plunger	.030	.005	.002	10 oz. ±3	3 oz.	Internal Screw Lockwasher	SPDT	$1.9
10-222	Spring Plunger	.030	1/64	.002	10 oz. ±3	3 oz.	"	"	$2.3
10-322	Panel Mount Plunger	.030	1/32	.002	10 oz. ±3	3 oz.	"	"	4.0
10-422	Leaf Spring	5/32	1/16	.050	6 oz.	5 oz.	"	"	2.0
10-522	Roller Leaf Spring	3/16	1/16	.050	6 oz.	5 oz.	"	"	2.8
10-622	Pivoted Rigid Lever	13/32	.156	.045	3½ oz.	.5 oz.	"	"	2.3
10-722	Pivoted Roller Lever	5/16	5/32	.045	3½ oz.	.5 oz.	"	"	2.9
10-822	Compact Plunger	.030	.062	.002	10 oz. ±3	3 oz.	"	"	2.4
10-922	Roller Plunger	.030	.140	.002	10 oz. ±3	3 oz.	"	"	7.7
10-72207	Roller Lever	.156	.056	.030	8.5 oz.	1.5 oz.	"	"	3.5

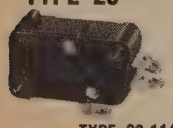
Note: Other terminal styles, actuator types, and circuit options are available. Contact factory.

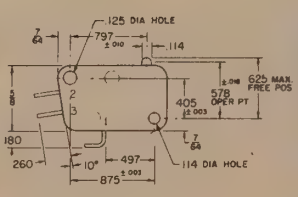
ELECTRICAL RATINGS

TYPE 10
15A, 125/250 VAC, 480 VAC
15A Res 5A Ind 5A motor, 28 VDC
⅓ HP @ 125 VAC
½ HP @ 250 VAC .5 Amp 125 VDC

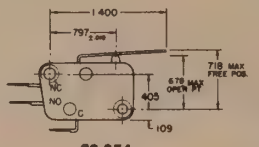
TYPE 08
22.5A, 125/250/480 VAC,
⅓ HP 125 VAC ½ HP 250 VA
.5A 125 VDC
Pilot Duty 350 VA 125/250 V

TYPE 23


TYPE 23-114

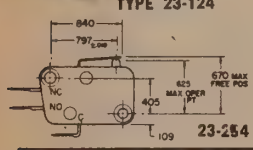



TYPE 23-154

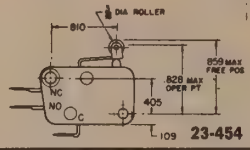


23-354

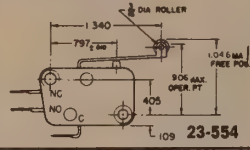

TYPE 23-124



23-254



23-454



23-554

LICON Type 23 Miniature Series offers excellent mechanical and electrical life. A unique "heat dam" slot to eliminate the flow of solder and flux inside the switch is provided on models having solder terminals. Also available with screw or quick connect terminals. Integral type roller and straight level actuators are available. Tested to over 10 million cycles mechanical life, 5 million at pi duty. Electrical ratings are based on 50,000 cyc at full rated load. At one-half rated load, expect life increases to 200,000 cycles, nominal. Swit case is molded phenolic material. The Type 23 operational to 275°F, ambient.

ELECTRICAL RATINGS UL & CSA Listed*

125/250 VAC	15 Amps, 60 Cycles ⅓ H.P.* Sea Level
28 VDC	Res: 10 Amps Ind: 6 Amps Motor: 6 Amps
125 VDC	½ Amp*
250 VDC	¼ Amp*

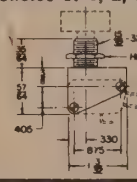
*Standard operating force (10 ± 4 oz.), Series 100, 200 & 400 switches only. Consult factory for rating on lower force switches.

Licon No.	Description	Operating Force	Terminal Type	Circuit	List Pric
23-114	Standard Plunger	10±4 oz.	Solder	SPDT	$1.1
23-1141	Standard Plunger	10±4 oz.	Solder	NC	1.0
23-1142	Standard Plunger	10±4 oz.	Solder	NO	1.0
23-124	Standard Plunger	10±4 oz.	4-40 Screw	SPDT	1.1
23-1241	Standard Plunger	10±4 oz.	4-40 Screw	NC	1.0
23-1242	Standard Plunger	10±4 oz.	4-40 Screw	NO	1.0
23-154	Standard Plunger	10±4 oz.	187 Series Amp Conn.	SPDT	1.0
23-1541	Standard Plunger	10±4 oz.		NC	.9
23-1542	Standard Plunger	10±4 oz.		NO	.9
23-254	.840" Lever	10±4 oz.		SPDT	1.1
23-354	1.40" Lever	10±4 oz.		SPDT	1.1
23-454	.810" Roller Lever	10±4 oz.		SPDT	1.3
23-554	1.34" Roller Lever	10±4 oz.		SPDT	1.3

TYPE 73

Low cost pushbutton series utilizing the type 23 basic switch. Choice of 1, 2, and 3 pole versions.


1 POLE



BUTTON CODE

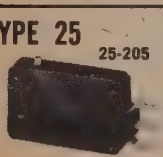
Square (.600 x .530)	Round (.950 Dia.)	Description	List * Price
80-701280	80-701284	Red	.25
80-701281	80-701285	Green	.25
80-701282	80-701286	Ivory	.25
80-701283	80-701287	Black	.25

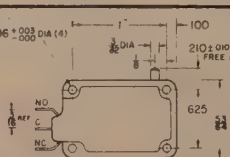
TYPE 73 Actuator Only**

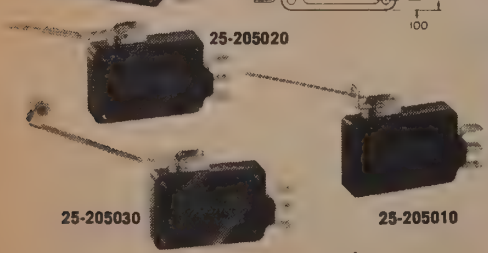
Licon Part No.	No. Poles	Mounting	List Price
73-2910	1	15/32-32 Bushing	$1.05
73-2920	2	15/32-32 Bushing	1.10
73-2930	3	15/32-32 Bushing	1.15
73-2911	1	5/8-24 Bushing	1.05
73-2921	2	5/8-24 Bushing	1.10
73-2931	3	5/8-24 Bushing	1.15

**Specify basic switch with slash number e.g. 73-2910/154

TYPE 25


25-205





The Type 25 is a unique Form C switch using a coil spring mechanism as opposed to a stressed blade. The mechanism is quite similar to the exclusive LICON Butterfly double-break mechanism, and the off-center plunger version provides extremely light operating forces to 27 grams. The Type 25 offers long life and a 12 Amp rating; excellent conta wiping action, low contact resistance, high sho and vibration resistance. The thin switch is d signed for commercial applications which requi reliability at low price. Typical applications inclu coin and vending machines, timers and counte

ELECTRICAL RATINGS UL Listed

Dependent on location of actuating plunger and operating force.

SPDT — Form C	On Center	Off Center
125/250 VAC	12 Amps	6 Amps

*The 25-103 (on center — 60 gm. max. oper. force) is rated at 6A, 125/250 VAC.

RELIABILITY

Pilot Duty Life
Up to 20 million cycles
Mechanical Life
On-Center 20 million cycles
Off-Center 50 million cycles

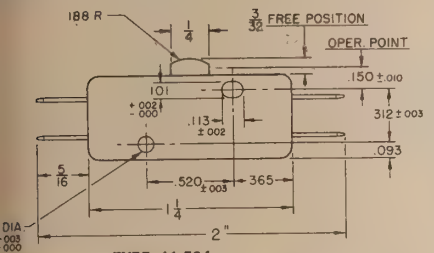
Licon No.	Description	Plunger Location	Operating Force (Max.)	Terminal Type*	List Pric
25-100	Basic Switch	On-Center	3-6 oz.	Solder	$1.4
25-101	Basic Switch	On-Center	6-10 oz.	Solder	1.4
25-102	Basic Switch	On-Center	12-16 oz.	Solder	1.4
25-103	Basic Switch	On-Center	60 gm	Solder	1.4
25-205	Basic Switch	Off-Center	25 gm	Solder	1.4
25-205010	Integral Wire Actuator	Off-Center	2½ gm	Solder	1.7
25-205020	Flat Leaf Actuator	Off-Center	2½ gm	Solder	1.7
25-205030	Roller Lever Actuator	Off-Center	2½ gm	Solder	2.0
25-206	Basic Switch	Off-Center	44 gm	Solder	1.4
25-207	Basic Switch	Off-Center	60 gm	Solder	1.5

* Subject To Quantity Discount
© United Technical Publicatio

LICON
DIVISION ILLINOIS TOOL WORKS INC.

double-break switches
Type 11, Miniature; Type 14, Heavy Duty
Type 16 & Type 18, Subminiature
Type 22 & Type 26, Double Pole
Type 36, Subminiature Triple Pole

TYPE 11



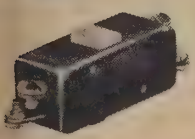
TYPE 11-504

TYPE 11-504



Type 11-104

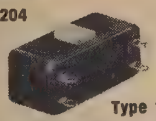






Type 11-114

Type 11-204



Type 11-304



71-2010 (ACTUATOR ONLY)

MEETS THE REQUIREMENTS OF MIL-S-8805/11

The LICON Type 11 is a general purpose switch for military and industrial applications. Especially adaptable for direct actuation by moving cams. The ammonia-free switch case provides protection against contact corrosion even at extremely high temperatures . . . positive actuator button alignment . . . sturdy base for terminal stability. The two circuit double break switching mechanism, consisting of beryllium copper switch blades and stainless steel operating spring, provides a high current capacity in a small package size. The knife-edge pivot design eliminates "flickering" and "teasing" and assures chatter-free switch operation even when the plunger is within .010 of trip point with vibration resistance of 40G's up to 500 cps and 25G's up to 2000 cps. The Type 11 series has been life tested to over 20 million mechanical cycles. Variations in operating characteristics, terminal types and actuators give added flexibility. Variations in operating and reset forces are available from 70 grams to 40 ounces. Movement differentials are available from .010 to .030 with a maximum of .040 for special switch design. Excellent contact wiping action.

MINIATURE

Licon No.	Description	Pre-travel (Max.)	Over-travel (Min.)	Movement Differential (Max.)	Oper. Force	Release Force (Min.)	Terminal Type	Circuit	List * Price
11-104	Std. Momentary	.050	.015	.020±.005	8±3 oz.	4 oz.	Solder End	SPDT	$1.55
11-204	Std. Momentary	.050	.015	.020±.005	8±3 oz.	4 oz.	#4 Screw End	Form Z	1.70
11-114	Reset Switch	.050	.015	.020±.005	3.5±2 oz.	4±2 oz.	Solder End	Form Z	1.85
11-304	Momentary	.050	.015	.020±.005	8±3 oz.	4 oz.	Solder Side	Form Z	1.65
11-214	Reset Switch	.050	.015	.020±.005	3.5±2 oz.	4±2 oz.	#4 Screw End	Form Z	1.95
11-314	Reset Switch	.050	.015	.020±.005	3.5±2 oz.	4±2 oz.	Solder Side	Form Z	1.90
11-504	Momentary	.050	.015	.020±.005	8±3 oz.	4 oz.	1/4" Quick Disconnect End	Form Z	1.60

71-1040 (ACTUATOR ONLY)



71-2657 (ACTUATOR ONLY)



ELECTRICAL SPECIFICATIONS
SPDT, TWO CIRCUIT
• UL Listed — 10 Amps @ 125/250 VAC
½ HP @ 125 VAC
¾ HP @ 250 VAC

28 VDC	Ratings	Sea Level
Form X or Y	Res.	15 Amps
	Ind.	10 amps

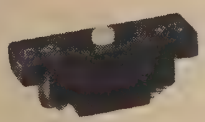
ACTUATORS (ONLY)

Licon No.	Description	No. Poles	List * Price
71-1040	Roller Lever	1	$ .90
71-1330	One-way Roller Lever	1	4.05
71-2077	Push Button for Straight Line Operation	2	2.40
71-2010	Overtravel Plunger	1	1.40
71-2657	½"	1	2.15

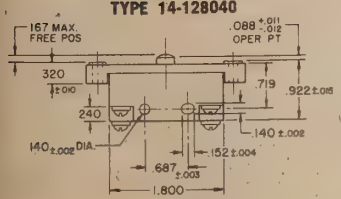
MS PART NUMBERS

Licon No.	MS Number	List * Price
11-188051	MS 25342-1	$2.70
11-288051	MS 25344-1	2.70
11-388051	MS 25343-1	2.70

TYPE 14



TYPE 14-128040





TYPE 14-1241



TYPE 14-72403



TYPE 14-324

The Type 14 is specially designed for heavy duty use on high current applications:

- Positive wiping action of the large silver contacts eliminates contact welding.
- Stainless steel springs are heat-treated to prevent hydrogen embrittlement.
- Mounting holes for single or multiple gang mounting.
- Offset terminal design permits easy wiring, and provides excellent insulation barrier.
- Movement differential available from .010" to over .040".
- 100 gram to 2 lb. operation force available.
- Auxiliary mounting plate available for panel mounting.
- Nylon operating button to reduce mechanical wear.

HEAVY DUTY

Licon No.	Description	Terminal Type	Circuit	List * Price
14-12403	Basic Switch, Vertical Mount Cover Plate	#6 Sems with Cup Washer	SPDT	$3.20
14-124	Basic Switch, Horizontal Mounting			3.00
14-1241	Reset Switch			3.50
14-128040	Heavy Duty Vertical Mounting			3.20
14-324	1/4" Overtravel Panel Mounting			4.60
14-624	Pivoted Lever			3.60
14-724	Pivoted, Roller Lever			4.10
14-72403	Pivoted, Roller Actuator			4.30

ELECTRICAL RATINGS

Volts	AC Steady	AC In-Rush	DC D.T.	DC S.T.
28	20	80	10	25
125	20	80	.5	2.0
250	20	80	.2	.5
480	20	50		
600	5	10		

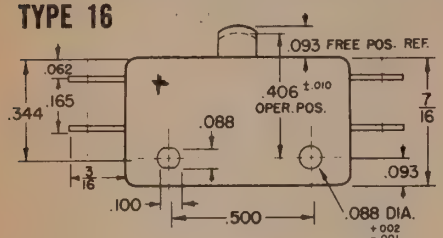
UL Listed
20 Amp 125/250/480 VAC
1 HP 125 VAC
2 HP 250 VAC

* Subject To Quantity Discount

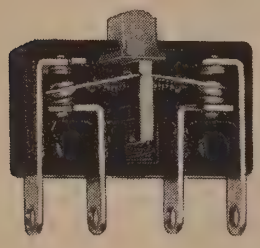
LICON
DIVISION ILLINOIS TOOL WORKS INC.

double-break switches

TYPE 16

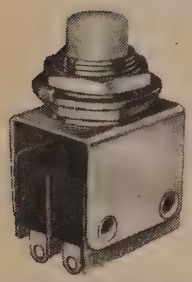


16-104





TYPE 16-104



76-2230 (ACTUATOR ONLY)

The subminiature double break Type 16 offers twice the electrical rating of most conventional stressed blade switches. Twice as many contact surfaces and air gaps greatly increase heat dissipation ability and permit a big 10 amp rating. Type 16 has been tested to over 20 million mechanical cycles with 100,000 cycles at a full 10 amps, 750,000 cycles at 5 amps. The exclus butterfly double break mechanism provides contact bounce, excellent resistance to shock vibration, dual circuit control, low contact re tance, and substantial contact wiping action. Av able in MIL-approved versions to MIL-S-8805

SUBMINIATURE

Licon No.	Description	Pre-travel (Max.)	Over-travel (Min.)	Operating Force	Release Force (Min.)	Movement Differ-ential	Terminal Type	Cir-cuit	L Pr
16-104	Standard Momentary Plunger	.050	.012	5 +3/-2 oz.	2 oz.	.020±.005	End Solder	SPDT Form Z	$2
16-304	Standard Momentary Plunger	.050	.012		2 oz.	.020±.005	Side Solder		2
16-404	Standard Momentary Plunger	.050	.012		2 oz.	.020±.005	Bottom Solder*		2
16-114	Reset Switch Plunger	.050	.012		Reset 3±1 oz.	.020±.005	End Solder Bottom		2
16-504	Standard Momentary Plunger	.050	.012		2 oz.	.020±.005	Quick Connect†		2
16-204	Standard Momentary Plunger	.050	.012		2 oz.	.020±.005	Screw End		2
16-40421	Diallyl Case - Gold Contacts	.050	.012		2 oz.	.020±.005	Solder Bottom		3
16-40401	Phenolic Case - Gold Contacts	.050	.012		2 oz.	.020±.005	Solder Bottom		2
16-4042	Diallyl Case	.050	.012		2 oz.	.020±.005	Solder Bottom		2

ACTUATORS (ONLY)

Licon No.	Description	No. Poles	List* Price
76-1200	Rigid Roller Lever	1	$1.00
76-1210	Rigid Lever	1	.55
76-2190	Pushbutton	2	2.35
76-2220	Pushbutton	1	2.20
76-2230	Multi-Pole Pushbutton	2	1.50
76-2240	Multi-Pole Pushbutton	4	3.45
76-2250	Multi-Pole Pushbutton	3	2.45
76-2260	Pushbutton	1	2.30
76-2350	Pushbutton	1	1.85
76-4210	2 Position Toggle, Maintained	2	4.95
76-4220	2 Position Toggle, Maintained	3	5.25
76-4260	2 Position Toggle, Maintained	4	5.55
76-4270	2 Position Toggle, Maintained	5	5.70
76-2100	Pushbutton, Maintained	2	4.00

MILITARY APPROVED SWITCHES

P.N.	M.S. No.	List Price
16-188051	(MS 25476-1)	$3.45
16-388051	(MS 27217-2)	3.45
16-488051	(MS 27217-1)	3.45

ELECTRICAL RATINGS

UL Listed
10 Amps @ 125/250 VAC
28 VDC L/R = .026

		Sea Level	60,000 Fe
Form X or Y Single Circuit	Res.	10 Amps	10 Amp
	Ind.	7.5 Amps	3.5 Amp
	Lamp	4 Amps	—
Form Z Two Circuit	Res.	10 Amps	10 Amp
	Ind.	5 Amps	2 Amp
	Lamp	3 Amps	—



TYPE 16-304

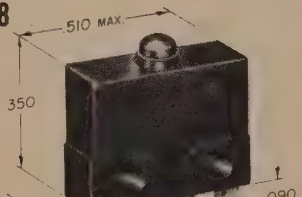


TYPE 16-404

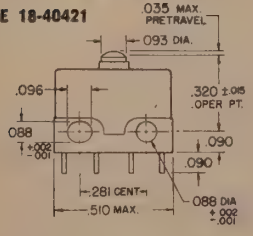


76-1200 (ACTUATOR ONL

TYPE 18



TYPE 18-40421







78-30000 (ACTUATOR ONLY) 78-31000 (ACTUATOR ONLY)

The Type 18 series is a sub-subminiature single-pole double-break snap-action switch utilizing the exclusive LICON® Butterfly® double-break mechanism. All the product features of the Type 16 (above) are included with Type 18 in an even smaller package size. Available in MIL approved versions to MIL-S-8805/76.
Diallyl hi-temp plastic case, gold plated contacts and solder lug terminals are standard. Operat temperature −65°F to 400°F.

Mechanical Life: 10,000,000 cycles nomi
Pilot Duty Life: 10,000,000 cycles nomi
Full Rated Load: 10,000 cycles nomi
One-Half Rated Load: 750,000 cycles nomi

SUB-SUBMINIATURE DOUBLE BREAK SWITCHES

Licon No.	Description	Pretravel (Max.)	Overtravel (Min.)	Movement Differential (Max.)	Operating Force	Release Force (Min.)	Terminal Type	Circuit	L Pr
18-40121	Basic Switch	.035	.006	.015±.005	5 oz.	1½ oz.	Solder Lug	SPNC-DB	$3
18-40221	Basic Switch	.035	.006	.015±.005	5 oz.	1½ oz.	Solder Lug	SPND-DB	3
18-40421	Basic Switch	.035	.006	.015±.005	5 oz.	1½ oz.	Solder Lug	SPDT-DB	3
18-488051	MS 27257-1(B)	—	—	—	—	—	—	—	3

ACTUATORS (ONLY)

Licon No.	Description	List* Price
78-30000	Leaf Actuator	$.50
78-31000	Roller Leaf Actuator	.75

ELECTRICAL RATINGS

UL Lis

- 125/250 VAC 7 Amps
- 28 VDC L/R = .026

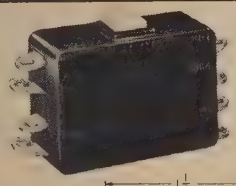
		Sea Level
SPDT-DB and Form "C" (Ext. Com.) (Form Z)	Res.	4 Am
	Ind.	3 Am
SPNO-DB or SPNC-DB (Form X) (Form Y)	Res.	8 Am
	Ind.	5 Am

* Subject To Quantity Discount
© United Technical Publicatio

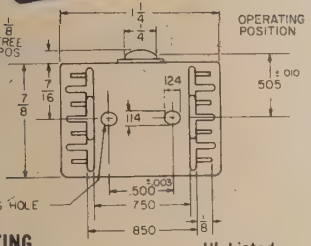
LICON
DIVISION ILLINOIS TOOL WORKS INC.

double-break switches

TYPE 22



TYPE 22-204



TYPE 22-304

Compact double pole break switch utilizing two butterfly mechanisms with simultaneous transfer of both poles (within .004" plunger travel). Eliminates the use of two individual switches in many applications. Features fine silver contacts, resistance to shock and vibration, extra long mechanical and electrical life, self lubricating nylon button, plus positive wiping action. Available in version approved to MIL-S-8805/15.

Licon No.	Description	Pre-travel (Max.)	Over-travel (Min.)	Movement Differential (Max.)	Operating Force	Release Force (Min.)	Terminal Type	Circuit	List * Price
22-114	Reset Switch	.060	.015	.028±.005	9±4 oz.	Reset 1.0±4 oz.	Solder End	DPDT	$5.15
22-204	Basic Switch, Momentary	.060	.015	.028±.007	17±5 oz.	4 oz.	#4 Screw End	DPDT	4.95
22-304	Basic Switch, Momentary	.060	.015	.028±.007	17±5 oz.	4 oz.	Solder Side	DPDT	4.95
22-104	Basic Switch, Momentary	.060	.015	.028±.007	17±5 oz.	4 oz.	Solder End	DPDT	4.95
22-504	Basic Switch, Momentary	.060	.015	.028±.007	17±5 oz.	4 oz.	¼" Quick Disconnect End Terminals	DPDT	4.95

ELECTRICAL RATING
10 Amps @ 125/250 VAC
½ HP @ 125 VAC
¾ HP @ 250 VAC

UL Listed

30 VDC	Ratings	Sea Level
Form XX or YY	Res. Ind.	15 Amps 10 Amps
Form ZZ	Res. Ind.	10 Amps 7 Amps

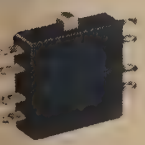
ACTUATORS (ONLY)

Licon No.	Description	List Price*
72-1150	Roller Lever	$.55
72-1160	Rigid Lever	1.15
72-2080	Overtravel Plunger	1.65

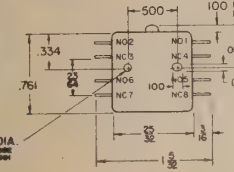
MILITARY APPROVED

Licon No.	MS No.	List Price*
22-188051	MS 25348-1	$7.05
22-388051	MS 25349-1	7.05

TYPE 26



TYPE 26-804



6-1200 (ACTUATOR ONLY)





76-2260 (ACTUATOR ONLY)

Type 26 Series is a subminiature double pole switch utilizing two LICON® Butterfly double-break mechanisms. Provides simplified control of multiple circuit applications, eliminating dual components, in a very small package size.

Transfer Time: 4 milliseconds, including 1 millisecond bounce (2-4 discernible bounces, nominal)

Shock & Vibration: No contact chatter at 25 G's, 10 to 2000 cps

Simultaneously: Poles transfer within .004 plunger travel as standard

Tested to over 20 million cycles mechanical and pilot duty. Electrical life 100,000 cycles nominal at full rated load; 75,000 cycles at one-half load.

Licon No.	Description	Pre-travel (Max.)	Over-travel (Min.)	Movement Differential (Max.)	Operating Force	Release Force (Min.)	Terminal Type	Circuit	List * Price
26-801	Standard, Momentary	.050	.012	.020±.010	12±4 oz.	4 oz.	End Solder	DPNC-DB	$6.05
26-802	Standard, Momentary							DPNO-DB	6.05
26-804	Standard, Momentary							DPDT-BB	6.05
26-80401	Same as 804, but Non-Simultaneous							DPDT-BB	5.00
26-8042	Hi Temp Diallyl Case (-65°-400°F)							DPDT-BB	6.80
26-80421	Same as 8042 but Non-Simultaneous							DPDT-BB	5.80
26-901	Standard, Momentary							DPNC-DB	6.05
26-902	Standard, Momentary						Side Solder	DPNO-DB	6.05
26-904	Standard, Momentary							DPDT-BB	6.05
26-90401	Same as 904, but Non-Simultaneous							DPDT-BB	5.00
26-9042	Hi Temp Diallyl Case (-65°-400°F)							DPDT-BB	6.80
26-90421	Same as 9042, but Non-Simultaneous							DPDT-BB	5.80
26-804201	Diallyl Case, Gold Plated Contacts							DPDT-BB	7.60
26-904201	Diallyl Case, Gold Plated Contacts							DPDT-BB	7.60

ELECTRICAL RATING
8 Amps @ 125/250 VAC
28 VDC L/R = .026

UL Listed

Form XX or YY	Res. Ind.	8 Amps 7.5 Amps
Form ZZ	Res. Ind.	8 Amps 5 Amps

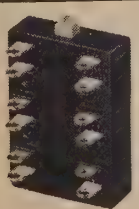
ACTUATORS (ONLY)

Licon No.	Description	List Price *
76-1200	Roller Lever	$1.00
76-2260	Overtravel	2.30

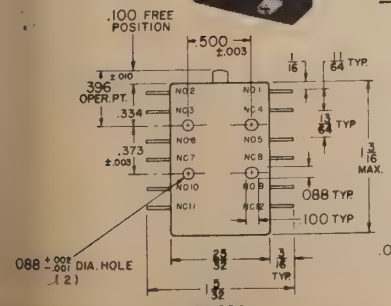
MILITARY APPROVED

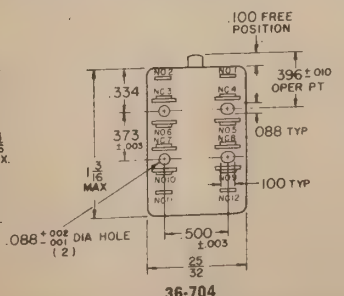
Licon No.	MIL. No.	List Price *
26-888051	M 8805/77-001	$7.80
26-988051	M 8805/77-002	7.80

TYPE 36



36-704





Licon No.	Description	Pre-travel (Max.)	Over-travel (Min.)	Movement Differential (Max.)	Operating Force	Release Force (Min.)	Terminal Type	Circuit	List * Price
36-604	Standard, Simultaneous Action	.050	.012	.020±.010	16±4 oz.	4 oz.	Solder End	3PDT-DB	$9.20
36-704	Standard, Simultaneous Action	.050	.012	.020±.010	16±4 oz.	4 oz.	Solder Side	3PDT-DB	9.20
36-60401	Non-Simultaneous	.050	.012	.020±.010	16±4 oz.	4 oz.	Solder End	3PDT-DB	8.15
36-70401	Non-Simultaneous	.050	.012	.020±.010	16±4 oz.	4 oz.	Solder Side	3PDT-DB	8.15

Type 36 Series is an exclusive subminiature triple pole switch utilizing three Butterfly double-break mechanisms. Simplified control of multipole circuit eliminates three individual switches and complementing actuators. All Type 26 actuators are interchangeable with Type 36.

ELECTRICAL RATINGS
- 8 Amps @ 125/250 VAC
- 28 VDC

LR = .026

UL Listed

Form XXX or YYY	Res. Ind.	10 Amps 7.5 Amps
Form ZZZ	Res. Ind.	10 Amps 5 Amps

LICON
DIVISION ILLINOIS TOOL WORKS INC.

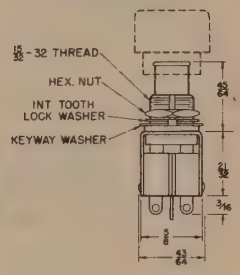
illuminated pushbutton switches

TYPE 01
Illuminated Pushbutton Switch



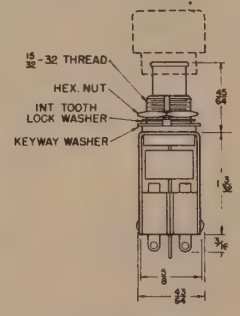
MOMENTARY CONTACT — **15/32 - 32 BUSHING**





MAINTAINED CONTACT — **15/32 - 32 BUSHING**





The Type 01 lighted pushbutton switch combines a single bulb panel indicator with a multi-pole switch package. Provides visual reminder that circuit is on or off. Available with red, white, yellow, green, or blue lens caps, 5/8" and 3/4" round or square, and 1 1/3" diameter round; solid or projected color illumination. Order lens cap separately. Available in one and two-pole Form C or Form Z contact arrangements. Switch rated at 10 amps, 250 VAC 30 VDC. Momentary, maintained, solenoid held a indicator models. One hole mounting with choi of 15/32" or 5/8" bushing. Uses T-1 3/4 lamps with scre flange 9100R or slide base (not included in price (For electrical and mechanical characteristics basic switch see Type 16 basic switch data). Mee requirements of MIL-S-22885/27.

TYPICAL CONFIGURATIONS (ORDER LENS CAP SEPARATELY)

Licon No.	Description	Bushing	Lamp Type	No. Poles	Circuitry	Pre-travel (Max.)	Over-travel (Min.)	Operating Force (Max.)	Release Force (Min.)	Lis Pric
01-14500	Indicator Only	15/32 x 32	Screw	—	—	—	—	—	—	$3.5
01-36500	Indicator Only	5/8 x 24	Flange	—	—	—	—	—	—	3.5
01-145510	Momentary	15/32 x 32	Screw	1	SPDT, Form C	.093	.012	18 oz.	3 oz.	5.4
01-145530	Momentary	15/32 x 32	Screw	1	SPDT, Form Z*	.093	.012	18 oz.	3 oz.	5.6
01-365510	Momentary	5/8 x 24	Flange	1	SPDT, Form C	.093	.012	18 oz.	3 oz.	5.4
01-365530	Momentary	5/8 x 24	Flange	1	SPDT, Form Z*	.093	.012	18 oz.	3 oz.	5.6
01-145610	Momentary	15/32 x 32	Screw	2	SPDT, Form C	.093	.012	18 oz.	3 oz.	7.3
01-145630	Momentary	15/32 x 32	Screw	2	SPDT, Form Z*	.093	.012	18 oz.	3 oz.	7.8
01-365610	Momentary	5/8 x 24	Flange	2	SPDT, Form C	.093	.012	18 oz.	3 oz.	7.3
01-365630	Momentary	5/8 x 24	Flange	2	SPDT, Form Z*	.093	.012	18 oz.	3 oz.	7.8
01-145110	Maintained	15/32 x 32	Screw	1	SPDT, Form C	.187	.005	6 lbs.	—	7.9
01-145130	Maintained	15/32 x 32	Screw	1	SPDT, Form Z*	.187	.005	6 lbs.	—	8.2
01-365110	Maintained	5/8 x 24	Flange	1	SPDT, Form C	.187	.005	6 lbs.	—	7.9
01-365130	Maintained	5/8 x 24	Flange	1	SPDT, Form Z*	.187	.005	6 lbs.	—	8.2
01-145210	Maintained	15/32 x 32	Screw	2	SPDT, Form C	.187	.005	6 lbs.	—	9.7
01-145230	Maintained	15/32 x 32	Screw	2	SPDT, Form Z*	.187	.005	6 lbs.	—	10.3
01-365210	Maintained	5/8 x 24	Flange	2	SPDT, Form C	.187	.005	6 lbs.	—	9.7
01-365230	Maintained	5/8 x 24	Flange	2	SPDT, Form Z*	.187	.005	6 lbs.	—	10.3
01-145531	Solenoid held,	15/32 x 32	Screw	1	SPDT, Form Z*	.093	.005	18 oz.	—	12.6
01-365531	28 VDC, .400	5/8 x 24	Flange	1	SPDT, Form Z*	.093	.005	18 oz.	—	12.6
01-145631	Amp. Dropout	15/32 x 32	Flange	2	SPDT, Form Z*	.093	.005	18 oz.	—	14.8
01-365631	Volt., 17 VDC	5/8 x 24	Flange	2	SPDT, Form Z*	.093	.005	18 oz.	—	14.8
01-375110	Maintained	5/8 x 24	Slide-base	1	SPDT, Form C	.187	.005	6 lbs.	—	7.9
01-375130	Maintained	5/8 x 24	Slide-base	1	SPDT, Form Z*	.187	.005	6 lbs.	—	8.2
01-375210	Maintained	5/8 x 24	Slide-base	2	SPDT, Form C	.187	.005	6 lbs.	—	9.7
01-375230	Maintained	5/8 x 24	Slide-base	2	SPDT, Form Z*	.187	.005	6 lbs.	—	10.3
01-375510	Momentary	5/8 x 24	Slide-base	1	SPDT, Form C	.093	.012	18 oz.	3 oz.	5.4
01-375630	Momentary	5/8 x 24	Slide-base	2	SPDT, Form Z*	.093	.012	18 oz.	3 oz.	7.8

*Double Break

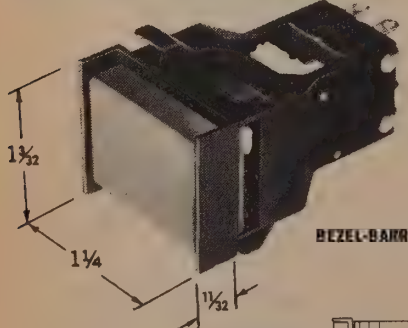
LENS CAP (SOLID COLOR) ORDERING INFORMATION

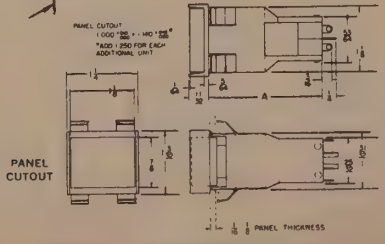
Licon No.	Cap Shape	Cap Size	For Bushing	List * Price
01-93131X	Round	5/8"	15/32-32	$.45
01-94131X	Round	5/8"	5/8-24	.45
01-93141X	Round	3/4"	15/32-32	.55
01-94141X	Round	3/4"	5/8-24	.55
01-93181X	Round	1 1/8"	15/32-32	.75

Licon No.	Cap Shape	Cap Size	For Bushing	List Price
01-94181X	Round	1 1/8"	5/8-24	$.75
01-91131X	Square	5/8"	15/32-32	.45
01-92131X	Square	5/8"	5/8-24	.45
01-91141X	Square	3/4"	15/32-32	.55
01-92141X	Square	3/4"	5/8-24	.55

CAP COLOR INDICATION — Add proper suffix to number for cap color indication. **White:** Suffix **1** Re
Suffix **2** **Green:** Suffix **3** **Blue:** Suffix **4** **Yellow:** Suffix **5** Example: 01-931311 White cap, solid color

TYPE 01-800 Snap-in Illuminated Matrix Mounting Switch





Note: A Dimension Momentary 1.56" - Maintained 2.00"

Type 01-800 single-lamp lighted pushbutton switch offers time-saving snap-in front panel mounting without tools for panels 1/16 to 1/8" thick (standard). Bezel barrier designed for horizontal or vertical matrix styles. Choice of screen colors with solid or projected illumination. Choice of momentary or maintained (push-on, push-off) contact types in one, two, three and four pole switch configurations; indicator-only units. SPDT-DB (Form Z) switch rat 10 amps, 125/250 VAC; UL Listed. Uses T-1 flange bulbs (not included in price); simple fro panel lamb servicing without tools. Compact 1 1/8" 7/8" lens cap gives ample space for engraving hot stamping.

TYPICAL CONFIGURATIONS (DOES NOT INCLUDE LENS CAP)

Licon No.	Description	Lamp Type	No. Poles	Circuitry	Pre-travel (Max.)	Over-travel (Min.)	Operating Force (Max.)	Lis Pric
01-865000	Indicator Only	T-1 3/4 Flange	—	—	—	—	—	$2.1
01-865130	Maintained	T-1 3/4 Flange	1	SPDT, Form Z	.187	.005	96 oz.	5.8
01-865230	Maintained	T-1 3/4 Flange	2	SPDT, Form Z	.187	.005	96 oz.	7.5
01-865530	Momentary	T-1 3/4 Flange	1	SPDT, Form Z	.093	.012	18 oz.	3.8
01-865630	Momentary	T-1 3/4 Flange	2	SPDT, Form Z	.093	.012	18 oz.	5.5

LENS CAP

Color	Solid Color	List Price	Projected Color	List Price *
White	01-951911	$.70	01-951921	$1.10
Red	01-951912	.70	01-951922	1.10
Green	01-951913	.70	01-951923	1.10
Blue	01-951914	.70	01-951924	1.10
Yellow	01-951915	.70	01-951925	1.10
Amber	01-951916	.70	01-951926	1.10
Orange	01-951917	.70	01-951927	1.10

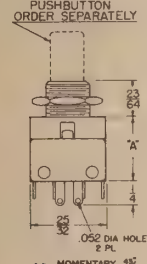
* Subject To Quantity Discount
© United Technical Publicatio

LICON
DIVISION ILLINOIS TOOL WORKS INC.

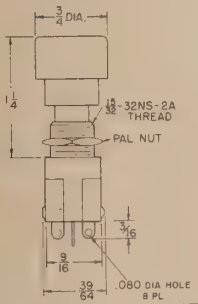
illuminated pushbutton switches

YPE 01-700
ne-Lite Pushbutton Switches









Low cost, momentary or maintained, Type 01-700 lighted pushbutton combines long life, double-break switch and lamp base in one plastic housing. Choice of cylindrical, translucent lens caps or regular 01 Series lens caps (if plunger converter is used). Bulb replaceable from front of panel; uses screw-base T-1¾ lamp, not supplied. Switch mechanism is one or two-pole momentary with SPDT (Form Z or C) contact. UL Listed at 10 A. 125/250 VAC.

TYPICAL CONFIGURATIONS (WITHOUT LENS CAPS)

Licon No.	Description	Bushing	Lamp Type	No. Poles	Circuitry	Pre-travel (Max.)	Over-travel (Min.)	Operating Force (Max.)	Release Force (Min.)	List * Price
01-74500	Indicator Only	15/32 x 32	Screw	—	—	—	—	—	—	$1.80
01-745510	Momentary	15/32 x 32	Screw	1	SPDT, Form C	.093	.012	1 lb.	2 oz.	3.10
01-745530	Momentary	15/32 x 32	Screw	1	SPDT, Form Z*	.093	.012	1 lb.	2 oz.	3.30
01-745610	Momentary	15/32 x 32	Screw	2	SPDT, Form C	.093	.012	1 lb.	2 oz.	3.80
01-745630	Momentary	15/32 x 32	Screw	2	SPDT, Form Z*	.093	.012	1 lb.	2 oz.	4.20
01-745110	Maintained	15/32 x 32	Screw	1	SPDT, Form C	.187	.005	48 oz.	—	4.10
01-745130	Maintained	15/32 x 32	Screw	1	SPDT, Form Z*	.187	.005	48 oz.	—	4.30
01-745210	Maintained	15/32 x 32	Screw	2	SPDT, Form C	.187	.005	48 oz.	—	4.80
01-745230	Maintained	15/32 x 32	Screw	2	SPDT, Form Z*	.187	.005	48 oz.	—	5.20

Note: Refer to 01-600 section for 01-748 switch module ordering information.

TRANSLUCENT LENS CAPS

Momentary — Specify number. ..... *List Price **20c**

Licon No.	Color	Licon No.	Color	Licon No.	Color
80-010764	Green	80-010766	Yellow	80-010768	White
80-010765	Red	80-010767	Blue		

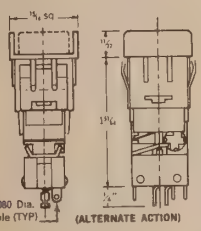
Maintained — Specify number. ..... *List Price **30c**

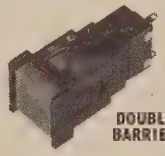
86-010576	Green	86-010578	Yellow	86-010580	White
86-010577	Red	86-010579	Blue		

Plunger Converters — For use with regular 01 Series lens caps.
Licon No. 86-010574 Maintained ..... *List Price **30c**
Licon No. 86-010824 Momentary ..... *List Price **20c**

YPE 01-600









The Type 01-600 Series is a new line of lighted pushbutton switches from LICON offering versatility and flexibility at low cost. The easy to install snap-in housing is available in bezel, single barrier or double barrier design. Individual or matrix mounting is possible with a single panel cutout. A large selection of ¾" lens caps is available in solid and projected colors.

OPERATING CHARACTERISTICS

MOMENTARY

Pretravel	.093 max.
Overtravel	.012 min.
Operating Force	1 lb. max.
Release Force	2 oz. min.

ALTERNATE ACTION

Pretravel	.187 max.
Overtravel	.005 min.
Operating Force	48 oz. max.

ORDERING INFORMATION
COMPLETE SWITCH CODING

01-6 X X X X X

amp Style
. Extended, screw base socket

lluminated Display
.. No lens cap (order separately, 01-9114XX)

ction & No. of Poles
. No Switch, indicator only
. Alternate actuator, 1 pole
. Alternate actuator, 2 pole
. Momentary actuator, 1 pole
. Momentary actuator, 2 pole

witch Circuitry
. No Switch, indicator only
SOLDER TERM
. 16-403 Form C
. 16-40421 Form Z Hi Temp Gold
. 16-404 Form Z
. 16-4042 Form Z Hi Temp
TAPER TAB TERM
. 16-503 Form C
. 16-50421 Form Z Hi Temp Gold
. 16-504 Form Z
. 16-5042 Form Z Hi Temp

lousing Style
.. Vertical row mount with vertical barriers
.. Horizontal row mount with vertical barriers
.. Vertical row mount with single vertical barrier
.. Horizontal row mount with single vertical barrier
.. Vertical row mount without barriers
.. Horizontal row mount without barriers

INDIVIDUAL MODULE CODING

SWITCH MODULE ONLY

01-700 SWITCH CODING 01-748XX0

Action and No. of Poles
0. No Switch, indicator only
1. Alternate actuator, 1 pole
2. Alternate actuator, 2 pole
5. Momentary actuator, 1 pole
6. Momentary actuator, 2 pole

Switch Circuitry
0. No Switch, indicator only
SOLDER TERM
1. 16-403 Form C
2. 16-40421 Form Z Hi Temp Gold
3. 16-404 Form Z
4. 16-4042 Form Z Hi Temp
TAPER TAB TERM
5. 16-503 Form C
7. 16-50421 Form Z Hi Temp Gold
8. 16-504 Form Z
9. 16-5042 Form Z Hi Temp

HOUSING MODULE ONLY

01-600 HOUSING 01-60000X

Housing Coding
1. Vertical row mount with vertical barriers
2. Horizontal row mount with vertical barriers
3. Vertical row mount with single vertical barrier
4. Horizontal row mount with single vertical barrier
5. Vertical row mount without barriers
6. Horizontal row mount without barriers

LENS CAPS

01-9114XX

Lens Color

SOLID COLORED LENS	WHITE LENS — PROJECTED COLOR
11) White	21) White
12) Red	22) Red
13) Green	23) Green
14) Blue	24) Blue
15) Yellow	25) Yellow
16) Amber	26) Amber
17) Orange	27) Orange

(Other colors available, contact factory)

LAMP INFORMATION

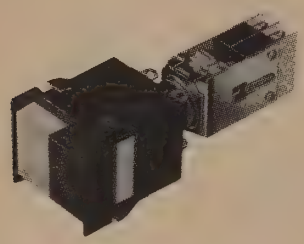
The Type 01-600 Switches accept T-1¾ screw base lamps which are replaceable from the front of the panel without tools. The lamps **do not move** during switch operation.

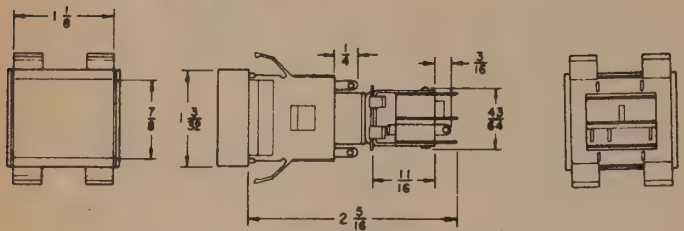
LICON
DIVISION ILLINOIS TOOL WORKS INC.

illuminated pushbutton switches

TYPE 02

Type 02 two-lamp lighted switch is identical in external appearance with 01-800 Series. Features same time-saving snap-in front panel mounting with no tools. Designed for panels 1/16 to 1/8" thick, as standard. Horizontal or vertical matrix mounting. One, two, three and four pole momentary or maintained (push-on, push-off) switch configurations plus indicator-only styles. Size 1 1/8 x 7/8". Employs 76-27XX Series snap-on switch module. Complete unit requires selection of housing, lens cap, and switch module.





(MOMENTARY) ALTERNATE 2 5/32

	Momentary	Maintained
Operating Force	14 ± 4 oz.	96 oz. max.
Pretravel	.093 max.	.187 max.
Overtravel	.012 min.	.005 min.

HOUSING (ONLY) ORDERING GUIDE

TYPE 02 MODULAR CODING — HOUSING CODE 02-7X

1. Screw Base Lamp Sockets, Operator
2. Groove Base Lamp Sockets, Operator
*3. Flange Base Lamp Sockets, Operator
4. Screw Base Lamp Sockets, Indicator
5. Groove Base Lamp Sockets, Indicator
*6. Flange Base Lamp Sockets, Indicator

LENS CAP (ONLY) ORDERING GUIDE

02-6 X X X

I. Light Display
II. Left/Top Color
III. Right/Bottom Color

I. LIGHT DISPLAY

1) Full Screen	Solid Color
2) Vertical Split	
3) Horizontal Split	
4) Full Screen	Projected Color
5) Vertical Split	
6) Horizontal Split	

II. LENS CAP COLOR

III. 1) White
2) Red
3) Green
4) Blue
5) Yellow
6) Amber
7) Orange

SNAP-ON SWITCH MODULE (ONLY) ORDERING GUIDE 76-27XX SERIES

76-27 X

I. Actuator/Poles
II. Circuitry (Ea. Pole)

I. ACTUATOR/POLES

1) Alternate Actuator, 1 Pole
2) Alternate Actuator, 2 Pole
3) Alternate Actuator, 3 Pole*
4) Alternate Actuator, 4 Pole†
5) Momentary Actuator, 1 Pole
6) Momentary Actuator, 2 Pole
7) Momentary Actuator, 3 Pole*
8) Momentary Actuator, 4 Pole†

II. CIRCUITRY (Ea. Pole)

1) Form C
2) Form Z, hi-temp gold contacts
3) Form Z
4) Form Z, hi-temp

*Will use one T-16 and one T-26 basic switches for 3 Pole configuration.
†Will use T-26 switches for 4 Pole configuration.

TYPE 02 COMPLETE ASSEMBLY ORDERING GUIDE

02- X X X X X X

I. Lamp Socket
II. Light Display
III. Left/Top Color
IV. Right/Bottom Color
V. Switch Action & No. of Poles
VI. Switch Circuitry
VII. Solenoid

I. Lamp Socket
1) Screw Base
2) Groove
3) Flange Base

II. Light Display
1) Solid Color, Full Screen
2) Solid Color, Vert. Split
3) Solid Color, Horiz. Split
4) Projected Color, Full Screen
5) Projected Color, Vertical Split
6) Projected Color, Horizontal Split

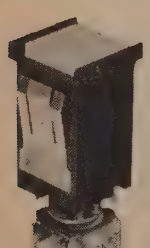
III. Color
1) White
2) Red
3) Green
4) Blue
5) Yellow
6) Amber
7) Orange

V. Switch Action and No. of Poles
0) Indicator Only
1) One Pole Alternate
2) Two Pole Alternate
3) Three Pole Alternate
4) Four Pole Alternate
5) One Pole Momentary
6) Two Pole Momentary
7) Three Pole Momentary
8) Four Pole Momentary

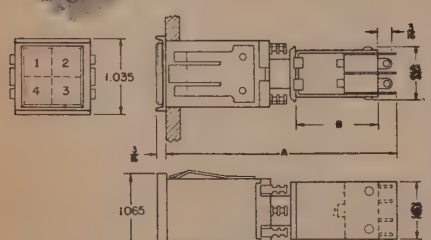
VI. Switch Characteristic
0) No. Switch, Indicator Only
1) SPDT — Form C
2) SPDT — Form Z, hi-temp gold contacts
3) SPDT — Form Z
4) SPDT — Form Z, hi-temp
9) SPDT —Form Z, meet requirements of MS27217-1

VII. Solenoid
0) No Solenoid
1) 28 Volt
2) 6 Volt

TYPE 04 Lighted Pushbutton Switches, Indicators, Components DESIGNED TO MEET REQUIREMENTS OF MIL-S-22885/72



EXTRUDED-BEZEL BARRIER



	"A" dim.	"B" dim.
Momentary action	2 7/8 max.	1 1/16
Maintained action	3 3/16 max.	1 3/32

Type 04 illuminated pushbutton switches combine four-bulb panel indicator 7/8" square with multipole switching. Color display meets all Human Factors Engineering standards for intensity and color distribution. Choice of full or split screens. Projected or solid color illumination. Four different styles: Momentary or maintained contact; solenoid held; with Form C or Form Z contact arrangements; and indicator-only units. Switch rated at 10 amps, 250 VAC or 28 VDC. Uses T-1 3/4 flange bulbs (not included in price). Simple front panel lamp servicing without tools. Choice of flange, barrier, bezel or bezel barrier mounts. Order each module individually. A light module, housing module and switch module make complete assembly. Light module and housing module makes indicator-only. A single Type 04 can replace up to four separate panel lights and four toggle switches in one-fourth the panel area. The extreme short length saves substantial "behind the panel" space.

ORDERING INFORMATION

Licon® Type 04 lighted pushbutton switches can be ordered as completely assembled units, indicator only or components can be ordered separately. Please refer to order guide below, then follow step by step procedure outlined, to determine correct part number for ordering. On matrix mounted assemblies consult factory.

ORDERING GUIDE

Item	Consists of	Follow Steps
Complete Switch	Housing, Light Module, Switch Module, Solenoid Module*	1, 2A, 3A, 3B, 4, 5
Indicator	Housing, Light Module	1, 2A, 3A, 3B
Individual Components Only	—	1, 2B

ORDERING COMPLETE SWITCH

Refer to charts and select proper code numbers following the step by step procedure to determine correct part number.

STEP 1	STEP 2A	STEP 3A	STEP 4	STEP 5	STEP 3B
04-5 Prefix	Select Housing Code from Chart I	Select Light Module Code from Chart II	Select Switch Module Code from Chart III	Select Solenoid Module (if required)	Select Filter Color By Quadrant

ORDERING INDICATOR ONLY

Refer to Charts I and II for proper code numbers following step by step procedure to determine correct part number

STEP 1	STEP 2A	STEP 3A	STEP 3B
04-5 Use Prefix Above	Select Housing Code from Chart I	Select Light Module Code from Chart II	Select Filter Colors By Quadrant

© United Technical Publicatio

ITW ILICON
DIVISION ILLINOIS TOOL WORKS INC.

illuminated pushbutton switches

TYPE 04 (Cont'd)

STEP 1 (P/N Prefix) — Select proper part prefix code.

Item	Code
Complete Switch	04-5
Indicator Only	04-5
Switch Housing Only	04-7
Indicator Housing Only	04-2
Light Module Only	04-6
Switch Module Only	76-27
Solenoid Module Only	04-9

STEP 2A (Housing) — For complete switch or indicator — Select proper code number from Chart I to be added to prefix chosen.

STEP 2B (Code) — For individual components only — Refer to proper chart indicated below and select code number to be added to proper prefix.

Item	Chart No.
Switch Housing	I
Indicator Housing	I
Light Module	II
Switch Module	III
Solenoid Module	IV

STEP 3A (Light Module) — For complete switch or indicator — Select proper code number from Chart II to be added to prefix chosen.

STEP 3B — Select display screen color — Refer to drawings 1A and 1B and write down the first letter of the colors desired in quadrants one through four (ex. all red is RRRR).

STEP 4 (Switch Module) — For complete switch only — Select proper 2 digit code actuator/circuitry from Chart III to be added to prefix chosen.

STEP 5 (Solenoid Module) — For complete switch only (if required) — Select proper code from Chart IV to be added to prefix chosen.

BARRIERS — If required the individual barriers are ordered separately and not included in switch and indicator part number.

Flush Barrier Code		Protruding Barrier Code	
70-3051	Black	70-3061	Black
70-3052	White	70-3062	White
70-3053	Grey	70-3063	Grey

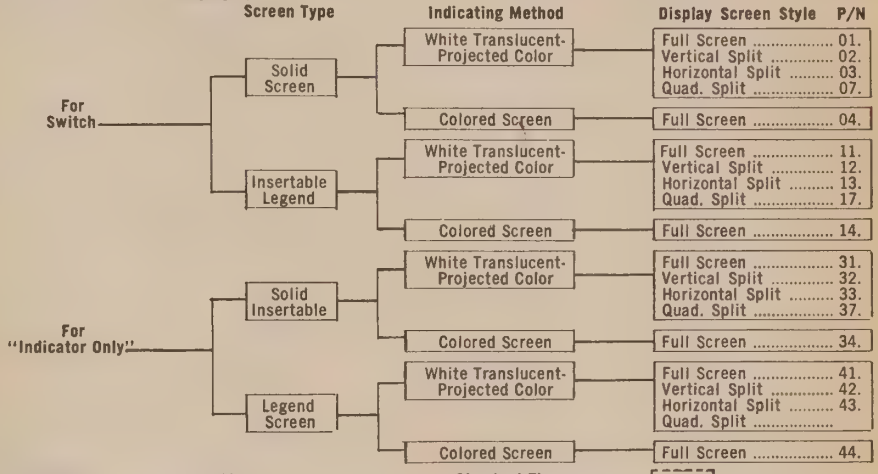
CHARACTERISTICS

		Momentary	Maintained
Operating Force	1 - 2 Poles	60 oz. max.	96 oz. max.
	3 - 4 Poles	75 oz. max.	96 oz. max.
Pretravel		.125 ± .060	.125 ± .060
Overtravel		.012 min.	.005 min.
Movement Differential		.020 ± .010	

CHART I — HOUSING MODULE

Description	Code
Special — All following digits serial	0
Flange Mount 1/8" Panel	1
Flange Mount 1/4" Panel	2
Flange Mount 3/8" Panel	3
Flange Mount 1/2" Panel	4
Barrier Mount	5
Bezel — Black	6
Bezel — Clear	7
Bezel Barrier — Black	8
Bezel Barrier — Clear	9

CHART II — LIGHT MODULE



DRAWING 1A & 1B — COLOR

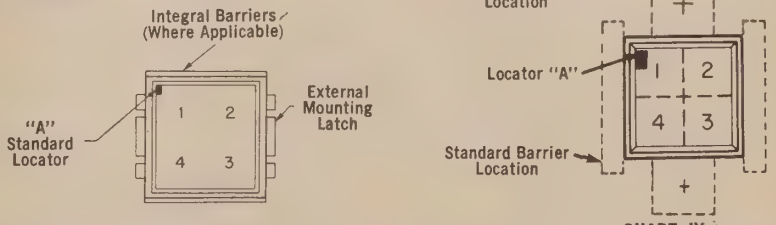


CHART III — SWITCH MODULE

ACTUATOR Actuator/Poles	Code
Alternate, 1 Pole	1
Alternate, 2 Pole	2
Alternate, 3 Pole*	3
Alternate, 4 Pole†	4
Momentary, 1 Pole	5
Momentary, 2 Pole	6
Momentary, 3 Pole*	7
Momentary, 4 Pole†	8

CIRCUITRY (each pole) Description	Code
Form C	1
Form Z, Hi-temp. gold contacts	2
Form Z	3
Form Z, Hi-temp.	4

*Will use 1 T-16 and 1 T-26 basic switches for 3 pole configuration.
†Will use 2 T-26 switches for 4 pole configuration.
Write coded part number in the corresponding blank in **Step VI.**

CHART IV — SOLENOID MODULE

Description	Code
Special — All following digits serial	0
Solenoid Hold, 28 Volts	1
Solenoid Hold, 6 Volts	2

ELECTRICAL RATING (Applies to Type 16 Basic Switch)

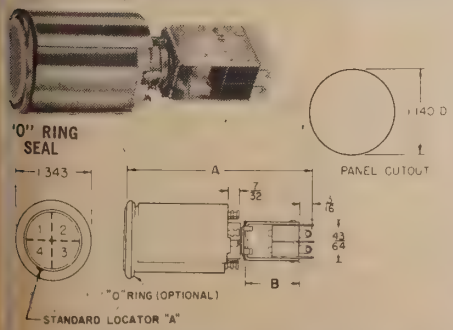
UL Listed

- 10 Amps @ 125/250 VAC
- 28 VDC L/R = .026

		Sea Level	60,000 Feet
Form X or Y Single Circuit	Res.	10 Amps	10 Amps
	Ind.	7.5 Amps	3.5 Amps
	Lamp	4 Amps	—
Form Z Two Circuit	Res.	10 Amps	10 Amps
	Ind.	5 Amps	2 Amps
	Lamp	3 Amps	—

Minimum expected basic switch life is 100,000 cycles at full rated load; 750,000 cycles at one-half rated load.

TYPE 44 Sealed Illuminated Pushbutton Switches



Type 44 switches combines four-bulb indications in a round sealed or unsealed configuration with multi-pole switch control. Display intensity, reliability and electrical capacity meet or exceed most rigid commercial or military requirements. Full or split screens with projected or solid color illumination. Momentary or maintained contact for one, two, three or four pole configurations, solenoid held or as indicator only. Switch rated at 10 Amps, 125/250 VAC or 28 VDC. T-1¾ lamps easily serviced from front of panel without special tools. Easy clamp-on mounting of housing from front panel in 1.140" cut-out. Overall size 3 31/32" x 1 31/32" x 1.343" maximum.

CHARACTERISTICS

	Momentary	Maintained	Solenoid Hold Down
Operating Force	75 oz. max.	96 oz. max.	75 oz. max.
Pretravel	.125 ± .060	.125 ± .060	.125 ± .060
Overtravel	.010 min.	.005 min.	.005 min.
Movement Diff.	.020 ± .010		
Rated Voltage of Solenoid			28 VDC
Drop Out Voltage			17 VDC
Rated Current			.050 amp

SEE ORDERING GUIDE ON NEXT PAGE

Note: A DIMENSION MOMENTARY 3" MAX. ALTERNATE 3 31/32" MAX.
B DIMENSION MOMENTARY 1 1/16" ALTERNATE 1 3/32"

TYPE 44 Sealed Illuminated Pushbutton Switches (Cont'd)

ORDERING INFORMATION FOR TYPE 44 LIGHTED SWITCHES

Licon Type 44 lighted pushbutton switches can be be ordered as completely assembled units, indicator only, or components can be ordered separately. Please refer to order guide below, then follow the step by step procedure outlined to determine correct part number for ordering.

ORDERING GUIDE

Item	Consists of	Follow Steps
Complete Switch	Housing, Light Module Switch Module, Solenoid Module*	1, 2A, 3A, 3B, 4, 5
Indicator Only	Housing, Light Module	1, 2A, 3A, 3B
Individual Components Only	—	1, 2A, 2B

EXAMPLES:

TO ORDER COMPLETE SWITCH . . . Refer to charts below and select proper code numbers following the step by step procedure to determine correct part number.

	STEP 1	STEP 2A	STEP 3A	STEP 4	STEP 5	STEP 3B
Sealed	44-0	.....	.....	.....	.....	.....
Unsealed	44-5	.....	.....	.....	.....	.....
	Prefix	Select Housing Code Chart I	Select Light Module Code Chart II	Select Switch Module Code Chart III	Select Solenoid Module Code Chart IV	Select Filter Colors By Quadrant

TO ORDER INDICATOR ONLY . . . Refer to proper charts and select code numbers following the step by step procedure to determine correct part number.

	STEP 1	STEP 2A	STEP 3A	STEP 3B
Sealed	44-0	.....	.....	.....
Unsealed	44-5	.....	.....	.....
	Preffix	Select Housing Code Chart I	Select Light Module Code Chart II	Select Filter Colors By Quadrant

STEP 1 (P/N Prefix) — Select Proper part prefix code.

Item	CODE Sealed	Unsealed
Complete Switch	44-0	44-5
Indicator Only	44-0	44-5
Housing Module Only	44-7	44-2
Light Module Only	44-6	44-1
Switch Module Only	76-27	76-27
Solenoid Module Only	44-9	44-9

STEP 2A (Housing) — For complete switch or indicator select proper code number from Chart I to be added to prefix chosen.

STEP 2B — For individual components only — Refer to proper chart indicated below and select code number to be added to proper prefix.

Item	Chart
Housing	I
Light Module	II
Switch Module	III
Solenoid Module	IV

STEP 3A (Light Module) — For complete switch or indicator — Select proper two digit code number from Chart II to be added to switch or indicator prefix.

CHART I — Housing Module

Item	Cod
Housing for Complete Switch	8
Housing for Indicator Only	9

CHART II — Light Module

Function	Screen Type	Indicating Method	Style Display Screen
For Switch	Solid Screen	White Translucent-Projected Color	Full Screen .....
			Vertical Split ...
			Horizontal Split
			Quad. Split .....
		Colored Screen	Full Screen .....
For Indicator Only	Solid Screen	White Translucent-Projected Color	Full Screen .....
			Vertical Split ...
			Horizontal Split
			Quad. Split .....
		Colored Screen	Full Screen .....

CHART III — Switch Module

ACTUATOR Description	Code	CIRCUITRY (ea. po Description
Alternate, 1 Pole	1	Form C
Alternate, 2 Pole	2	Form Z, Hi-temp.
Alternate, 3 Pole*	3	gold contacts
Alternate, 4 Pole†	4	Form Z
Momentary, 1 Pole	5	Form Z, Hi-temp.
Momentary, 2 Pole	6	*Will use 1 T-16 a
Momentary, 3 Pole*	7	T-26 basic switche
Momentary, 4 Pole†	8	3 pole configuratio
		†Will use 2 T-26 swit
		for 4 pole configura

CHART IV — Solenoid Module

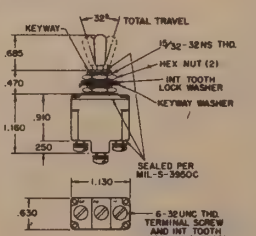
Description	C
Special — All following digits serial	
Solenoid Hold, 28 Volts	
Solenoid Hold, 6 Volts	

STEP 3B — Select display screen color — Refe quadrant drawing above and select by using first letter of the color desired in each quad one through four (ex. all red is RRRR).
STEP 4 (Switch Module) — For complete switch — Select proper 2 digit code from Chart III t added to switch prefix chosen.
STEP 5 — For complete switch only (if require Select proper code from Chart IV to be adde switch prefix chosen.

TYPE 51 Aircraft Toggle Switches

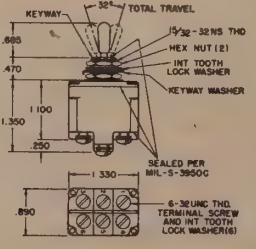


1 POLE 51-1121
(MS 24523-21)



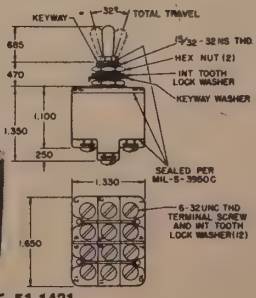


2 POLE 51-1221
(MS 24524-21)





4 POLE 51-1421
(MS 24525-21)



Type 51 heavy duty toggle switches are designed to meet the sealed switch requirements of MIL-S-3 military approvals MS24523, for the one pole version; MS242524, for the two pole version; MS24525, for the four pole version. Designed and constructed for use in heavy duty industrial aircraft applications.

A diallyl phthalate case assures dependable operation in a temperature range of −85° to +25 The Type 51 is designed with contacts that are larger than competitive units for higher load capac and better heat dissipation.

ELECTRICAL RATINGS

Number of Poles	CURRENT CAPACITY (AMPS) 28 Volts D.C. Lamp Load	Res.	Ind.	115 Volts A.C. 60 & 400 Hz Lamp Load	Res.	Ind.	230 VAC Res.	250 VDC Res.	115 VDC Res.	Circuitry	Circuitry Reference Code Number
One	5	20	15	3	15	10	6	0.5	0.75	Maintained	-21, -22, -23, -24, -33
	4	15	10	2	15	7	6	0.5	0.75	Momentary	25, 26, 27, 28, 29, 30, 31,
Two	7	20	15	4	15	15	6	0.5	0.75	Maintained	21, 22, 23, 24, 33
	5	18	10	2	11	8	6	0.5	0.75	Momentary	25, 26, 27, 28, 29, 30, 31,
Four	5	20	12	4	15	15	6	0.5	0.75	Maintained	21, 22, 23, 24, 33
	4	18	10	2	11	8	6	0.5	0.75	Momentary	25, 26, 27, 28, 29, 30, 31,

ORDERING GUIDE

51 — X X X

I. Actuator
1) Toggle

II. Pole Designation
1) 1 Pole
2) 2 Pole
4) 4 Pole
0) Special — All Following Digits are Serial

III. & IV. Circuitry

Circuitry No.	Actuator Position Right	Center	Left (Keyway)
21	On	Off	On
22	On	None	Off
23	On	None	On
24	On	Off	None
25	On	MomOff	None
26	On	None	MomOn
27	MomOn	Off	MomOn
28	None	Off	MomOn
29	On	None	MomOff
30	Off	None	MomOn
31	On	Off	MomOn
32	MomOn	On	None
33	On	On	None

© United Technical Publicati

LICON
DIVISION ILLINOIS TOOL WORKS INC.

aircraft toggle switches

TYPE 51 Aircraft Toggle Switches (Cont'd)

Standard Bat Handle

LICON P/N	Government Designation	List Price*	LICON P/N	Government Designation	List Price*	LICON P/N	Government Designation	List Price*
51-112100	(MS24523-21)	$4.40	51-122100	(MS24524-21)	$7.20	51-142100	(MS24525-21)	$11.45
51-112200	(MS24523-22)	4.40	51-122200	(MS24524-22)	7.20	51-142200	(MS24525-22)	11.45
51-112300	(MS24523-23)	4.40	51-122300	(MS24524-23)	7.20	51-142300	(MS24525-23)	11.45
51-112400	(MS24523-24)	5.10	51-122400	(MS24524-24)	7.20	51-142400	(MS24525-24)	11.45
51-113300	(MS24523-33)	5.10	51-123300	(MS24524-33)	7.20	51-143300	(MS24525-33)	11.45
51-112900	(MS24523-29)	4.40	51-122900	(MS24524-29)	7.20	51-142900	(MS24525-29)	11.45
51-113100	(MS24523-31)	4.40	51-123100	(MS24524-31)	7.20	51-143100	(MS24525-31)	11.45
51-113000	(MS24523-30)	4.40	51-123000	(MS24524-30)	7.20	51-143000	(MS24525-30)	11.45
51-112700	(MS24523-27)	4.40	51-122700	(MS24524-27)	7.20	51-142700	(MS24525-27)	11.45
51-112600	(MS24523-26)	4.40	51-122600	(MS24524-26)	7.20	51-142600	(MS24525-26)	11.45
51-112500	(MS24523-25)	5.10	51-122500	(MS24524-25)	7.20	51-142500	(MS24525-25)	11.45
51-113200	(MS24523-32)	5.10	51-123200	(MS24524-32)	7.20	51-143200	(MS24525-32)	11.45
51-112800	(MS24523-28)	5.10	51-122800	(MS24524-28)	7.20	51-142800	(MS24525-28)	11.45

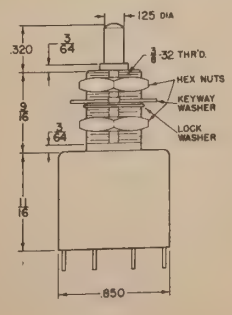
Lever Lock Versions

LICON P/N	Government Designation	List Price*	LICON P/N	Government Designation	List Price*	LICON P/N	Government Designation	List Price*
51-212101	(MS24658-21A)	$8.35	51-222101	(MS24659-21A)	$11.15	51-242101	(MS24660-21A)	$15.40
51-212102	(MS24658-21B)	8.35	51-222102	(MS24659-21B)	11.15	51-242102	(MS24660-21B)	15.40
51-212103	(MS24658-21D)	8.35	51-222103	(MS24659-21D)	11.15	51-242103	(MS24660-21D)	15.40
51-212104	(MS24658-21E)	8.35	51-222104	(MS24659-21E)	11.15	51-242104	(MS24660-21E)	15.40
51-212105	(MS24658-21F)	8.35	51-222105	(MS24659-21F)	11.15	51-242105	(MS24660-21F)	15.40
51-212106	(MS24658-21G)	8.35	51-222106	(MS24659-21G)	11.15	51-242106	(MS24660-21G)	15.40
51-212107	(MS24658-21H)	8.35	51-222107	(MS24659-21H)	11.15	51-242107	(MS24660-21H)	15.40
51-212108	(MS24658-21J)	8.35	51-222108	(MS24659-21J)	11.15	51-242108	(MS24660-21J)	15.40
51-212109	(MS24658-21K)	8.35	51-222109	(MS24659-21K)	11.15	51-242109	(MS24660-21K)	15.40
51-212110	(MS24658-21L)	8.35	51-222110	(MS24659-21L)	11.15	51-242110	(MS24660-21L)	15.40
51-212111	(MS24658-21M)	8.35	51-222111	(MS24659-21M)	11.15	51-242111	(MS24660-21M)	15.40
51-212112	(MS24658-21N)	8.35	51-222112	(MS24659-21N)	11.15	51-242112	(MS24660-21N)	15.40
51-212113	(MS24658-21P)	8.35	51-222113	(MS24659-21P)	11.15	51-242113	(MS24660-21P)	15.40
51-212203	(MS24658-22D)	8.35	51-222203	(MS24659-22D)	11.15	51-242203	(MS24660-22D)	15.40
51-212205	(MS24658-22F)	8.35	51-222205	(MS24659-22P)	11.15	51-242205	(MS24660-22F)	15.40
51-212206	(MS24658-22G)	8.35	51-222206	(MS24659-22G)	11.15	51-242206	(MS24660-22G)	15.40
51-212303	(MS24658-23D)	8.35	51-222303	(MS24659-23D)	11.15	51-242303	(MS24660-23D)	15.40
51-212305	(MS24658-23F)	8.35	51-222305	(MS24659-23F)	11.15	51-242305	(MS24660-23F)	15.40
51-212306	(MS24658-23G)	8.35	51-222306	(MS24659-23G)	11.15	51-242306	(MS24660-23G)	15.40
51-212404	(MS24658-24E)	9.05	51-222404	(MS24659-24E)	11.15	51-242404	(MS24660-24E)	15.40
51-212405	(MS24658-24F)	9.05	51-222405	(MS24659-24F)	11.15	51-242405	(MS24660-24F)	15.40
51-212409	(MS24658-24K)	9.05	51-222409	(MS24659-24K)	11.15	51-242409	(MS24660-24K)	15.40
51-212411	(MS24658-24M)	9.05	51-222411	(MS24659-24M)	11.15	51-242411	(MS24660-24M)	15.40
51-212505	(MS24658-25F)	9.05	51-222505	(MS24659-25F)	11.15	51-242505	(MS24660-25F)	15.40
51-212605	(MS24658-26F)	8.35	51-222605	(MS24659-26F)	11.15	51-242605	(MS24660-26F)	15.40
51-212704	(MS24658-27E)	8.35	51-222704	(MS24659-27E)	11.15	51-242704	(MS24660-27E)	15.40
51-212710	(MS24658-27L)	8.35	51-222710	(MS24659-27L)	11.15	51-242710	(MS24660-27L)	15.40
51-212712	(MS24658-27N)	8.35	51-222712	(MS24659-27N)	11.15	51-242712	(MS24660-27N)	15.40
51-212804	(MS24658-28E)	9.05	51-222804	(MS24659-28E)	11.15	51-242804	(MS24660-28E)	15.40
51-212905	(MS24658-29F)	8.35	51-222905	(MS24659-29F)	11.15	51-242905	(MS24660-29F)	15.40
51-213005	(MS24658-30F)	8.35	51-223005	(MS24659-30F)	11.15	51-243005	(MS24660-30F)	15.40
51-213104	(MS24658-31E)	8.35	51-223104	(MS24659-31E)	11.15	51-243104	(MS24660-31E)	15.40
51-213105	(MS24658-31F)	8.35	51-223105	(MS24659-31F)	11.15	51-243105	(MS24660-31F)	15.40
51-213109	(MS24658-31K)	8.35	51-223109	(MS24659-31K)	11.15	51-243109	(MS24660-31K)	15.40
51-213110	(MS24658-31L)	8.35	51-223110	(MS24659-31L)	11.15	51-243110	(MS24660-31L)	15.40
51-213111	(MS24658-31M)	8.35	51-223111	(MS24659-31M)	11.15	51-243111	(MS24660-31M)	15.40
51-213112	(MS24658-31N)	8.35	51-223112	(MS24659-31N)	11.15	51-243112	(MS24660-31N)	15.40
51-212304	(MS24658-32E)	9.05	51-223204	(MS24659-32E)	11.15	51-243204	(MS24660-32E)	15.40
51-213304	(MS24658-33E)	9.05	51-223304	(MS24659-33E)	11.15	51-243304	(MS24660-33E)	15.40
51-213305	(MS24658-33F)	9.05	51-223305	(MS24659-33F)	11.15	51-243305	(MS24660-33F)	15.40
51-213309	(MS24658-33K)	9.05	51-223309	(MS24659-33K)	11.15	51-243309	(MS24660-33K)	15.40
51-213311	(MS24658-33M)	9.05	51-223311	(MS24659-33M)	11.15	51-243311	(MS24660-33M)	15.40

TYPE 65 Subminiature Environment-free Sealed Switch



65-4012 OVERTRAVEL PLUNGER



Type 65 Series offers dependable, environment-free snap-action switching with ratings up to 10 Amps, 30 VDC. Conserve design space, and deliver ruggedness and reliability.

Type 65 consists of a basic Licon® Type 16 subminiature switch enclosed in a seamless, corrosion resistant aluminum housing. A positive "O" ring plunger seal plus epoxy terminal potting provides protection against dust, moisture, oil spray, and corrosive atmospheres. Type 65's meet the immersion requirements of MIL-E-5272 Procedure I. The basic snap action switches conform to military specifications. "O" ring plunger sealing plus ice scraper ring assures trouble-free actuation at high altitudes.

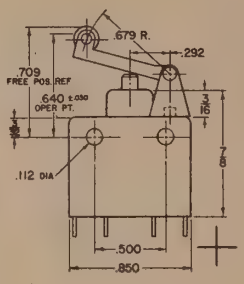
LICON
DIVISION ILLINOIS TOOL WORKS INC.

metal enclosed industrial limit switches

TYPE 65 Subminiature Environment-free Sealed Switch (Cont'd)



65-3010 ROLLER-LEVER



SWITCH ORDERING INFORMATION

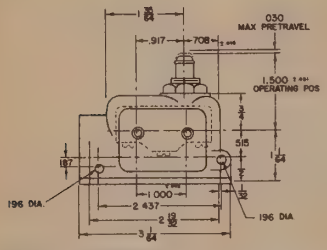
Use the following code for convenience and accuracy in ordering Type 65 basic switches. The num following the dash indicate actuator, terminal style, circuitry and mounting hole dimensions.

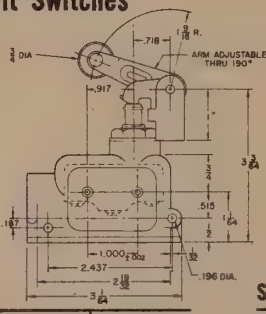
COMPLETE PART CODE
TYPE 65 — X X X

I. Actuator
II. Terminal Style
III. Circuitry
IV. Mounting Hole Dimensions

I. **Actuator**—1) Rigid Lever 2) Pin Plunger 3) Roller Lever 4) Overtravel Plunger (⅜" bushing moun
II. **Terminal Style**—0) Solder terminal 1) Taper tab, quick disconnect 3) Special, all following c series 4) 1' #18 MIL-W-5086 potted wire leads 5) 3' #18 MIL-W-5086 potted wire leads 6) 6' MIL-W-5086 potted wire leads
III. **Circuitry**—1) SPDT, two circuit 2) SPNC 3) SPNO 4) SPDT 5) DPDT
IV. **Mounting Hole Dimension**—0) ½" centers, .112 dia. (#4-40 screws) 1) ⅜" centers, .088 (#2-56 screws), 2) No mounting holes (for 65-400 series only).

TYPE 30 Metal Enclosed Industrial Limit Switches







30-100



30-400

The LICON® Type 30 switches feature accurate repeatability, long and precise electrical control for limit, safety and interlock operat Advanced designing provides durable switch protection, multiple m ing and actuating flexibility that exceeds the average requirem The Type 30 is available with Type 10, Type 11, and Type 22 Basic Switc

DIE-CAST HOUSINGS

P/N	Description	List Price*
30-100	O.T. Plunger, Side Mount	$4.95
30-120	O.T. Plunger, Base Mount	4.95
30-200	Internal Sealed O.T. Plunger, Side Mount	6.50
30-220	Internal Sealed O.T. Plunger, Base Mount	6.50
30-300	Roller Lever Actuator, Side Mount	8.85
30-320	Roller Lever Actuator, Base Mount	8.85
30-400	Internal Sealed Roller Lever, Side Mount	10.00
30-420	Internal Sealed Roller Lever, Base Mount	10.00
30-500	Roller Plunger Actuator, Side Mount	8.85
30-520	Roller Plunger Actuator, Base Mount	8.85
30-600	Palm Button Actuator, Side Mount	10.55
30-620	Palm Button Actuator, Base Mount	10.55
30-700	Internal Sealed Roller Plunger, Side Mount	9.60
30-720	Internal Sealed Roller Plunger, Base Mount	9.60
30-800	Internal Sealed One Way Roller, Side Mount	11.60
30-820	Internal Sealed One Way Roller, Base Mount	11.60
30-900	One Way Roller, Side Mount	10.55
30-920	One Way Roller, Base Mount	10.55
30-200010	Sealed O.T. Plunger With External Boot Seal, Side Mount (Formerly 30-20033)	7.75
30-220010	Sealed O.T. Plunger With External Boot Seal, Base Mount	7.75

SPLIT HOUSINGS

P/N	(Former P/N)	Description	List Price*
30-140	(30-100301)	O.T. Plunger, Side Mount	$5.10
30-150	(30-100302)	O.T. Plunger, Base Mount	5.10

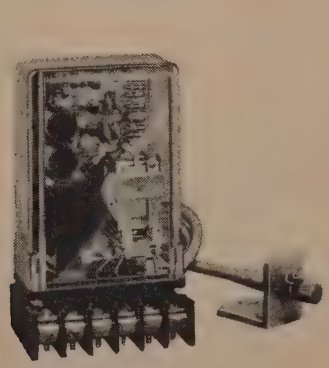
SPLIT HOUSINGS (Continued)

P/N	(Former P/N)	Description	List
30-240	(30-200301)	Internal Sealed O.T. Plunger, Side Mount	$
30-250	(30-200302)	Internal Sealed O.T. Plunger, Base Mount	
30-340	(30-300301)	Roller Lever Actuator, Side Mount	
30-350	(30-300302)	Roller Lever Actuator, Base Mount	
30-440	(30-400301)	Internal Sealed Roller Lever, Side Mount	1
30-450	(30-400302)	Internal Sealed Roller Lever, Base Mount	1
30-540	(30-500301)	Roller Plunger Actuator, Side Mount	
30-550	(30-500302)	Roller Plunger Actuator, Base Mount	
30-640	(30-600301)	Palm Button Actuator, Side Mount	1
30-650	(30-600302)	Palm Button Actuator, Base Mount	1
30-740	(30-700301)	Internal Sealed Roller Plunger, Side Mount	
30-750	(30-700302)	Internal Sealed Roller Plunger, Base Mount	
30-840	(30-800301)	Internal Sealed, One Way Roller, Side Mount	1
30-850	(30-800302)	Internal Sealed One Way Roller, Side Mount	1
30-940	(30-900301)	One Way Roller, Side Mount	1
30-950	(30-900302)	One Way Roller, Base Mount	1

INDIVIDUAL COMPONENTS

P/N	Description	List
73-1900	Roller Lever Actuator (Alone)	$
73-1910	Palm Button Actuator (Alone)	
73-1920	One-Way Roller Actuator (Alone)	
80-300610	Split Case Housing Bottom Half, Base Mount	
80-300609	Split Case Housing Bottom Half, Side Mount	
80-300502	Diecast Housing Bottom Plate, For Side Mount	
80-300508	Diecast Housing Bottom Plate, For Base Mount	
30-030	Diecast Terminal Enclosure, Side Mount	

TYPE 70-700 Proximity Switch



Ultra compact switch for precision control without physical contact. Consists of a control module (2.53" x 3.75" x 1.35") which contains a 10 amp DPDT relay plug-in terminal block (2.19" x 2.66" x .84"), potted sensor with 20' cable, and potentiometer for sensitivity control. Senses both ferrous and non-ferrous metals. Up to 1000 operations per minute possible. Sensing range for .750" dia. s is .110" to .261"; for .440" dia. sensor, .048 .148" (sensing ranges based on .235" dia. stai steel target). Nominal power input, 115 V, 6 with 105 amp draw. Ambient operating temper is −30° to +250°F for remote sensor; 0 +150°F for control module.

LICON No.	Description	List Price *
70-7021	Complete unit with .440" Sensor	$90.00
70-7022	Complete unit with .750" Sensor	90.00
70-7010	Electronics pack	60.00
70-7011	Base pin socket	6.50
70-7012	.750" Sensor Only	18.00
70-7020	.440" Sensor Only	18.00
70-7018	Potentiometer	5.50
70-7025	Nema Class I Enclosure	14.00

* Subject To Quantity Discount
© United Technical Publicati

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

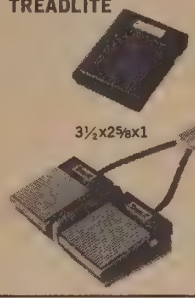
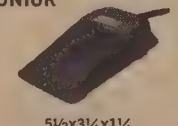
This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

LINEMASTER

America's Footswitch Leader

TREADLITE  3¼x2⅝x1	T-51-S T-51-D T-52-S T-51-SC *T-51-SC3 *T-51-SC36 T-51-S TWIN	SINGLE STAGE MOMENTARY SINGLE STAGE MAINTAINED TWO STAGE MOMENTARY T-51-S COMPLETE WITH 6' CORD SET & SERIES PLUG TWO MOMENTARY SWITCHES ON ONE BASE	SPDT SPDT BOTH STAGES SPDT BOTH SPDT	7 AMP 125-250 VAC 1/6 H.P. 125 VAC	Lowest Cost Foot Switch Formed Steel Housing. Wt.—7 ozs. Similar to T-51-SC Except Grounded 3 Conductor Cord and 3 Prong Series Plug. **With Grounded 3 Conductor Cord, No Plug.
COMPACT  2⅞x2½x1⅛ 	491-S 491-D 492-S 494-S 491-SC *491-SC3 **491-SC36 491-S TWIN 3B-25A2-S	MOMENTARY MAINTAINED MOMENTARY MOMENTARY 491-S COMPLETE WITH 6' CORD SET & SERIES PLUG TWO MOMENTARY SWITCHES ON ONE BASE MOMENTARY FOOT OPERATED AIR VALVE	SPDT SPST SPDT DPDT BOTH SPDT	10A 125 VAC 10A 125 VAC 20A 125-250 VAC 10A 125 VAC 5A 250 VAC 3-WAY AIR VALVE	Completely Enclosed Interior Switch. Formed Steel Housing. Wt.—7 oz. *Similar to 491-SC Except Grounded 8 Ft. 3 Conductor Cord and 3 Prong Series Plug. **With 6 Ft. Grounded 3 Conductor Cord, No Plug. 25 CFM @ 100 PSI
CLIPPER  4½x3½x1½ 	632-S 632-D 635-S 634-D 636-S 632-S TWIN 3C25A2-S	MOMENTARY MAINTAINED MOMENTARY MAINTAINED TWO STAGE MOMENTARY TWO MOMENTARY SWITCHES ON ONE BASE MOMENTARY FOOT OPERATED AIR VALVE	SPDT SPDT DPDT DPDT BOTH STAGES SPDT BOTH SPDT	20A 125-250 VAC 20A 125-250 VAC 15A 125-250 VAC 10A 125 VAC 5A 250 VAC 15A 125-250 VAC 20A 125-250 VAC 3-WAY AIR VALVE	Cast Iron Housing. Also Available with Safety Guard or 7" Wide Treadle. Wt.—2¼ lbs. Twin Has Connecting Interwiring Tube So That Only One Cable Is Used. 25 CFM @ 100 PSI.
JUNIOR  5½x3¼x1¼	121-S	MOMENTARY	SPDT	20A 125-250 VAC 1HP 125-250 VAC	Cast Aluminum Housing. Low Tapered Treadle Permits Easy Operation. Wt.—1 lb.
CADET  3⅝x1⅛	HB-2 *HB-3 **HB-36	MOMENTARY	SPST-N.O.	7A 125 VAC 1/6 H.P. 125 VAC	Round Switch Operates From Any Position. Switch Comes Complete With Cord Set. Wt.—11 ozs. *Similar To HB-2 Except Grounded 6 Ft. 3 Conductor Cord and 3 Prong Series Plug. **No Plug

MANY OTHER STANDARD MODELS ARE AVAILABLE—WRITE FOR CATALOG

"When awkward jobs hold you up—a LINEMASTER FOOT SWITCH is your third hand!"

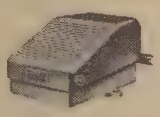
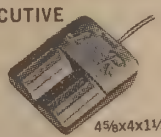
Write To Us For Complete Catalog.

LINEMASTER SWITCH CORPORATION

© United Technical Publicatio

A Modern FOOTSWITCH for Every Use

PRECISION-BUILT • DEPENDABLE • RUGGED • ECONOMICAL • OVER 1000 APPLICATIONS

NAUTILUS  8x4x2¼	WP-541-S WP-541-D	MOMENTARY MAINTAINED	SPDT SPDT	20A 125-250 VAC 12A 125 VAC 6A 250 VAC	Completely Waterproof. Can Be submerged.
SENIOR  7x4x3¼	MOMENTARY 4141-S 4142-S 4143-S 4351-S	MAINTAINED 4141-D 4142-D 4143-D 4351-D	DPST DPDT SPDT TPST	20A 125-250 VAC&DC 10A 125 VAC&DC 5A 250 VAC&DC 15A 125 VAC&DC 10A 250 VAC&DC 15A 125-230 VAC 5A 575 VAC	Cast Iron Housing. Also Available With Complete Safety Guard. Wt.—5¼ lbs.
HERCULES  8⅞x4⅝x4½	531-SW* 532-SW* 533-SW* 534-SW* 535-SW*	571-DW* 572-DW* 573-DW* 574-DW* 575-DW*	SINGLE STAGE SINGLE STAGE SINGLE STAGE TWO STAGE THREE STAGE	SPDT DPDT TPDT SPDT SPDT	20 AMPS 125-480 VAC 1 H.P. 115-230 VAC	Cast Iron Housing. Wt.—7¼ lbs. Also Available With No Guard or Complete Hood. All Models Available in Explosion Proof Version. *Add Letter "N" For Model Without Guard; Add Letter "H", For Model With Full Side Shields.
POTENTIOMETER  8⅞x4⅝x4½	2 WATT 500 500-A 500-N 500-AN 500-H 500-AH	5 WATT 505 505-A 505-N 505-AN 505-H 505-AH	2 WATT Specify maximum resistance required. Available up to 5.0 megohms.	5 WATT Specify maximum resistance required. Available up to 25000 ohms.	Standard Model Wt. Approx. 7¼ lbs. Details on request
LEKTRO-LOK  5x2½x1⅛	L-2-S L-4-S	TWO MOMENTARY SWITCHES SIDE BY SIDE	BOTH SIDES SPDT BOTH SIDES DPDT	15A 125-250 VAC 10A 125 VAC 5A 250 VAC	Stamped Metal Housing. Wt.—10 oz.
EXECUTIVE  4⅝x4x1⅛	B-2-S B-4-S	TWO MOMENTARY SWITCHES SIDE BY SIDE	BOTH SIDES SPDT BOTH SIDES DPDT	15A 125-250 VAC 10A 125 VAC 5A 250 VAC	Stamped Metal Housing. Wt.—14 oz.
DUPLEX  8¼x3½x2	475-S	MOMENTARY	BOTH SIDES SPDT	15A 125-250 VAC	Cast Aluminum Housing. Wt.—1¾ lbs.

Linemaster also manufactures many other types of foot controls with electronic impulse circuits, gear driven potentiometers, air valves, special cordsets, finishes, etc.

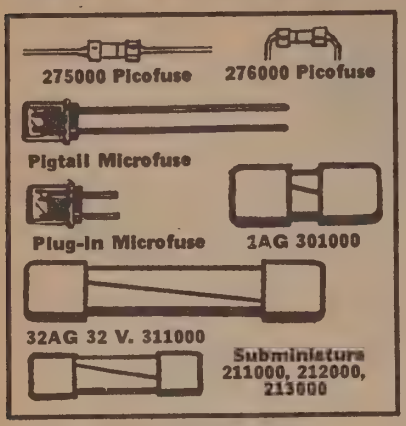
Write To Us For Complete Catalog.

LINEMASTER SWITCH CORPORATION

Printed in U.S.A.

© United Technical Publications

LITTELFUSE Quality Fuses



SUBMINIATURE FUSES

A must for servicing European electronic equipment. **Size:** 20 mm x 5 mm (.8" x .2").

FAST ACTING (250 V) TYPE F

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
212.100	1/10	$1.74	$29.00	$23.20
212.125	1/8	1.74	29.00	23.20
212.200	2/10	1.41	23.50	18.80
212.250	1/4	1.41	23.50	18.80
212.300	3/10	1.41	23.50	18.80
212.400	4/10	1.41	23.50	18.80
212.500	1/2	1.41	23.50	18.80
212.600	6/10	1.41	23.50	18.80
212.700	7/10	1.41	23.50	18.80
212.800	8/10	1.41	23.50	18.80
212001	1	1.11	18.50	14.80
2121.25	1-1/4	1.11	18.50	14.80
21201.6	1-6/10	1.11	18.50	14.80
212002	2	1.11	18.50	14.80
21202.5	2-1/2	1.11	18.50	14.80
212003	3	1.11	18.50	14.80
212004	4	1.11	18.50	14.80
212005	5	1.11	18.50	14.80
212006	6	1.11	18.50	14.80

MEDIUM ACTING (250 V) TYPE M

Net per 5 . . . . . $ 1.44
Net per 100: 100 . . . $24.00; 500 . . . 19.20

L.F. No.	Amp Rtg.	L.F. No.	Amp Rtg.	L.F. No.	Amp Rtg.
211.100	1/10	211.500	1/2	211002	2
211.200	2/10	211.600	6/10	211003	3
211.250	1/4	211.800	8/10	211005	5
211.300	3/10	211001	1		
211.400	4/10	21101.6	1-6/10		

SLO BLO FUSES (250 V) TYPE T

Net per 5 . . . . . $ 1.44
Net per 100: 100 . . . $24.00; 500 . . . 19.20

213.100	1/10	213.600	6/10	21302.5	2-1/2
213.125	1/8	213.700	7/10	213003	3
213.200	2/10	213.800	8/10	213004	4
213.250	1/4	213001	1	213005	5
213.300	3/10	2131.25	1-1/4	213006	6
213.400	4/10	21301.6	1-6/10		
213.500	1/2	213002	2		

SUBMINIATURE (125 V MAX.)

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
271.500	1/2	$1.41	$23.50	$18.80
27101.5	1-1/2	1.11	18.50	14.80

SUBMINIATURE PICOFUSES

For computer, micro-electronic and areo-space circuits of 125 V or less where short-circuit currents as high as 300 amps occur. High accuracy in blowing time at 300% of rating and higher is ideal for sequential switching or in circuits requiring redundancy. Blow time 4 hours min. at 100% of rating; 5 secs. max. at 200%. Amperage printed on body; can be color-coded at additional cost. Ceramic body only 7/32" lg. x 5/64" dia.; tin-coated copper leads .025" dia. Order **275** (prefix) for axial leads 1 9/16" long for diode clip or in-circuit mounting; **276** for radial leads 1 3/8" long for use in printed circuits or receptacles. *Avg., cold.

L.F. No.	Amp Rtg.	Res., Ohms*	Net per 5	Net per 100	
				100	500
275.125	1/8	2.0	$2.13	$35.50	$28.40
275.250	1/4	.71	2.13	35.50	28.40
275.375	3/8	.43	2.13	35.50	28.40
275.500	1/2	.26	2.13	35.50	28.40
275.750	3/4	.157	1.86	31.00	24.80
275001	1	.125	1.86	31.00	24.80
27501.5	1-1/2	.074	1.86	31.00	24.80
275002	2	.055	1.86	31.00	24.80
275003	3	.035	1.86	31.00	24.80
275004	4	.022	1.86	31.00	24.80
275005	5	.014	1.86	31.00	24.80

MICROFUSE SUBMINIATURE FUSES

For printed circuits and other minimum space uses. Ultra-fast blowing. Plug-in types use holder (listed on another page); pigtail types for soldering. Short circuit interrupting capacity 125 V, 10,000 amps DC. **Blow Specs:** 100%, 4-hour min.; 200%, 5-sec. max. **Size:** 1/4" dia. x 1 1/2" (fuse body). Plug-in, transparent cap type listed. Use prefix **272** for plug-in, metal cap; prefix **279** for pigtail, transparent cap; prefix **278** for pigtail, metal cap.

Plug-In L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
273.002	1/500	$5.13	$85.50	$68.40
273.005	1/200	5.13	85.50	68.40
273.010	1/100	5.13	85.50	68.40
273.015	1/64	5.13	85.50	68.40
273.031	1/32	5.13	85.50	68.40
273.050	1/20	4.29	71.50	57.20
273.062	1/16	4.29	71.50	57.20
273.100	1/10	4.29	71.50	57.20
273.125	1/8	4.29	71.50	57.20
273.200	2/10	4.29	71.50	57.20
273.250	1/4	4.29	71.50	57.20
273.300	3/10	4.29	71.50	57.20
273.400	4/10	4.29	71.50	57.20
273.500	1/2	4.29	71.50	57.20
273.600	6/10	4.29	71.50	57.20
273.700	7/10	4.29	71.50	57.20
273.750	3/4	4.29	71.50	57.20
273.800	8/10	4.29	71.50	57.20
273001	1	4.29	71.50	57.20
27301.5	1-1/2	4.29	71.50	57.20
273002	2	4.29	71.50	57.20
273003	3	4.29	71.50	57.20
273004	4	4.29	71.50	57.20
273005	5	4.29	71.50	57.20

HIGH RELIABILITY MICROFUSES

For zero defect programs. Hermetically sealed; gold-plated terminals for soldered or plug-in connections. Fuse rating identified on each fuse. Test data and traceability records are supplied and maintained. Proven performance in the Gemini "critical parts" manned space program. Voltage rating 125 V, blow time same as 273 series; time/current characteristics certified to 1% AQL per MIL-Std-105, Inspection Level II. Short circuit interrupting capacity at 125 V, 10,000 amps DC. **Size:** Fuse cap and body, .290" lg., leads for 262 "plug-in" series .170". Pigtail on 268 series 1.0". Use prefix **268** for pigtail type (e.g., **268.002**).

Plug-In L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
262.002	1/500	$15.00	$250.00	$200.00
262.005	1/200	15.00	250.00	200.00
262.010	1/100	15.00	250.00	200.00
262.015	1/64	15.00	250.00	200.00
262.031	1/32	15.00	250.00	200.00
262.050	1/20	15.00	250.00	200.00
262.062	1/16	15.00	250.00	200.00
262.100	1/10	15.00	250.00	200.00
262.125	1/8	15.00	250.00	200.00
262.200	2/10	15.00	250.00	200.00
262.250	1/4	15.00	250.00	200.00
262.300	3/10	15.00	250.00	200.00

HIGH RELIABILITY PICOFUSES

For soldering into circuits or insertion into diode type clips and mtgs. Fuses rated at 125 V or less and will interrupt short circuit currents to 300 amps at 125 VDC Non-hygroscopic ceramic bodies. Withstands 5-lb. axial pull test. Blow time 4 hours min., 100% rating; 5 secs. max., 200% rating. Insulation resistance is 1 meg min. measured with 100 V supply. **Size:** Body 7/32" lg., .078" dia. Leads are .025" dia., 1 9/16" lg., gold-plated copper.

Net per 5 . . . . . $15.00
Net per 100: 100 . . $250.00; 500 . . $200.00

L.F. No.	Amp Rtg.	L.F. No.	Amp Rtg.
265.125	1/8	26501.5	1 1/2
265.250	1/4	265002	2
265.375	3/8	265003	3
265.500	1/2	265004	4
265.750	3/4	265005	5
265001.	1		

7AG FUSES (32 V OR LESS)

Blow Time: 110%, 4-hr. min.; 135%, 1 hr. max.; 200%, 20-sec. max. Lg. 7/8", dia. 1/4".

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
303001	1	$0.42	$7.00	$5.60
30302.5	2-1/2	.42	7.00	5.60
303004	4	.42	7.00	5.60
303006	6	.30	5.00	4.00
303015	15	.30	5.00	4.00
303020	20	.30	5.00	4.00
303030	30	.30	5.00	4.00

1AG FUSES (32 V OR LESS)

Blow Time: 110%, 4-hr. min.; 135%, 1 hr. max.; 200%, 20-sec. max. Lg. 7/8", dia. 1/4".

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
301001	1	$0.42	$7.00	$5.60
301002	2	.42	7.00	5.60
30102.5	2-1/2	.42	7.00	5.60
301003	3	.42	7.00	5.60
301005	5	.30	5.00	4.00
301006	6	.30	5.00	4.00
30107.5	7-1/2	.30	5.00	4.00
301010	10	.30	5.00	4.00
301015	15	.30	5.00	4.00
301020	20	.30	5.00	4.00
301025	25	.30	5.00	4.00
301030	30	.30	5.00	4.00

3AG FUSES (32 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 20-sec. max. Length 1 1/4", dia. 1/4".

311004	4	$0.42	$7.00	$5.60
311005	5	.30	5.00	4.00
311006	6	.30	5.00	4.00
31107.5	7-1/2	.30	5.00	4.00
311008	8	.30	5.00	4.00
311010	10	.30	5.00	4.00
311015	15	.30	5.00	4.00
311025	25	.30	5.00	4.00
311030	30	.30	5.00	4.00
311035	35	.30	5.00	4.00

3AG FUSES (250 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Length 1 1/4", dia. 1/4". U/L Approved.

312.010	1/100	$2.37	$39.50	$31.60
312.031	1/32	2.07	34.50	27.60
312.062	1/16	.93	15.50	12.40
312.100	1/10	.93	15.50	12.40
312.125	1/8	.93	15.50	12.40
312.150	15/100	.93	15.50	12.40
312.175	.175	.93	15.50	12.40
312.187	3/16	.93	15.50	12.40
312.200	2/10	.93	15.50	12.40
312.250	1/4	.60	10.00	8.00
312.300	3/10	.60	10.00	8.00
312.375	3/8	.60	10.00	8.00
312.500	1/2	.60	10.00	8.00
312.600	6/10	.60	10.00	8.00
312.750	3/4	.60	10.00	8.00
312001	1	.42	7.00	5.60
3121.25	1-1/4	.42	7.00	5.60
31201.5	1-1/2	.42	7.00	5.60
31201.6	1-6/10	.42	7.00	5.60
312002	2	.42	7.00	5.60
31202.5	2-1/2	.42	7.00	5.60
312003	3	.42	7.00	5.60
312004	4	.51	8.50	6.80
312005	5	.51	8.50	6.80
312006	6	.51	8.50	6.80
312007	7	.51	8.50	6.80
312008	8	.75	12.50	10.00

3AG SLO BLO FUSES

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 5-sec. min. Length 1 1/4", dia. 1/4". U/L Approved thru 5 amps.

313.010	1/100	$1.77	$29.50	$23.60
313.031	1/32	1.77	29.50	23.60
313.062	1/16	1.32	22.00	17.60
313.100	1/10	1.32	22.00	17.60
313.125	1/8	1.32	22.00	17.60
313.150	15/100	1.32	22.00	17.60
313.175	.175	1.32	22.00	17.60
313.187	3/16	1.32	22.00	17.60
313.200	2/10	1.32	22.00	17.60
313.250	1/4	1.32	22.00	17.60
313.300	3/10	1.32	22.00	17.60
313.375	3/8	1.32	22.00	17.60
313.400	4/10	1.32	22.00	17.60
313.500	1/2	1.32	22.00	17.60
313.600	6/10	1.32	22.00	17.60
313.700	7/10	1.32	22.00	17.60
313.750	3/4	1.32	22.00	17.60
313.800	8/10	1.32	22.00	17.60
313001	1	1.32	22.00	17.60
31301.2	1-2/10	1.23	20.50	16.40
3131.25	1-1/4	1.23	20.50	16.40
31301.5	1-1/2	1.23	20.50	16.40
31301.6	1-6/10	1.23	20.50	16.40
313002	2	1.23	20.50	16.40
31302.5	2-1/2	.96	16.00	12.80
31302.8	2-8/10	.96	16.00	12.80
313003	3	.96	16.00	12.80
31303.2	3-2/10	.96	16.00	12.80
313004	4	.96	16.00	12.80
313005	5	.96	16.00	12.80
3136.25	6-1/4	.96	16.00	12.80
313007	7	.96	16.00	12.80
313008	8	.96	16.00	12.80
313010	10	.96	16.00	12.80
313015	15	.96	16.00	12.80
313020	20	.96	16.00	12.80
313025	25	.96	16.00	12.80
313030	30	.96	16.00	12.80

Net
© United Technical Publications

LITTELFUSE Quality Fuses

3AG SLO BLO PIGTAIL FUSES (125 V)

Blow Time: 110%, 4-hr. min.; 135%, 1 hr. max.; 200%, 5-sec. min. Lg. 1¼", dia. ¼", 1½" pigtails. U/L App. thru 3.2 amps.

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
315.010	1/100	$2.16	$36.00	$28.80
315.031	1/32	2.16	36.00	28.80
315.062	1/16	1.59	26.50	21.20
315.100	1/10	1.59	26.50	21.20
315.125	1/8	1.59	26.50	21.20
315.150	.15	1.59	26.50	21.20
315.175	.175	1.59	26.50	21.20
315.187	3/16	1.59	26.50	21.20
315.200	2/10	1.59	26.50	21.20
315.250	1/4	1.59	26.50	21.20
315.300	3/10	1.59	26.50	21.20
315.375	3/8	1.59	26.50	21.20
315.400	4/10	1.59	26.50	21.20
315.500	1/2	1.59	26.50	21.20
315.600	6/10	1.59	26.50	21.20
315.700	7/10	1.59	26.50	21.20
315.750	3/4	1.59	26.50	21.20
315.800	8/10	1.59	26.50	21.20
315001	1	1.59	26.50	21.20
31501.2	1-2/10	1.50	25.00	20.00
3151.25	1-1/4	1.50	25.00	20.00
31501.5	1-1/2	1.50	25.00	20.00
31501.6	1-6/10	1.50	25.00	20.00
315002	2	1.50	25.00	20.00
31502.5	2-1/2	1.32	22.00	17.60
31502.8	2-8/10	1.32	22.00	17.60
315003	3	1.32	22.00	17.60
31503.2	3-2/10	1.32	22.00	17.60
315004	4	1.32	22.00	17.60
315005	5	1.32	22.00	17.60

3AG PIGTAIL FUSES (250 V)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Length 1¼", dia. ¼", 1½" pigtails.

318.010	1/100	$2.94	$49.00	$39.20
318.031	1/32	2.67	44.50	35.60
318.062	1/16	1.23	20.50	16.40
318.100	1/10	1.23	20.50	16.40
318.125	1/8	1.23	20.50	16.40
318.150	15/100	1.23	20.50	16.40
318.175	.175	1.23	20.50	16.40
318.187	3/16	1.23	20.50	16.40
318.200	2/10	1.23	20.50	16.40
318.250	1/4	.93	15.50	12.40
318.375	3/8	.93	15.50	12.40
318.500	1/2	.93	15.50	12.40
318.750	3/4	.93	15.50	12.40
318001	1	.75	12.50	10.00
3181.25	1-1/4	.75	12.50	10.00
31801.5	1-1/2	.75	12.50	10.00
31801.6	1-6/10	.75	12.50	10.00
318002	2	.75	12.50	10.00
31802.5	2-1/2	.75	12.50	10.00
318003	3	.75	12.50	10.00
318004	4	.78	13.00	10.40
318005	5	.78	13.00	10.40
318006	6	.78	13.00	10.40
318007	7	.78	13.00	10.40
318008	8	.93	15.50	12.40

3AG INDICATING FUSES (125 V)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max. Length 1¼", dia. ¼".

334.750	3/4	$2.49	$41.50	$33.20
334001	1	1.98	33.00	26.40
33401.5	1-1/2	1.98	33.00	26.40
334002	2	1.98	33.00	26.40
334003	3	1.98	33.00	26.40
334004	4	1.98	33.00	26.40
334005	5	1.98	33.00	26.40
334006	6*	2.73	45.50	36.40
334008	8*	2.73	45.50	36.40
334010	10*	2.73	45.50	36.40
334012	12*	2.73	45.50	36.40
334015	15*	2.73	45.50	36.40
334020	20*	2.73	45.50	36.40

*32 volt.

3AB TINY MIGHTY (250 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 30-sec. max. Length 1¼", dia. ¼". U/L Approved thru 15 amps.

314.125	1/8	$0.81	$13.50	$10.80
314.250	1/4	.81	13.50	10.80
314.375	3/8	.81	13.50	10.80
314.500	1/2	.81	13.50	10.80
314.750	3/4	.81	13.50	10.80
314001	1	.81	13.50	10.80
314002	2	.81	13.50	10.80
314003	3	.81	13.50	10.80
314004	4	.81	13.50	10.80
314005	5	.72	12.00	9.60
314006	6	.72	12.00	9.60
314007	7	.72	12.00	9.60
314008	8	.72	12.00	9.60
314010	10	.72	12.00	9.60
314012	12	.81	13.50	10.80
314015	15	.81	13.50	10.80
314020	20	.81	13.50	10.80
314025	25	.99	16.50	13.20
314030	30	.99	16.50	13.20

LIMITED CURRENT (250 V) TYPE C

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Prices for applicable **fuse holders** available upon request.

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
332.031	1/32	$1.98	$33.00	$26.40
332.062	1/16	1.32	22.00	17.60
332.125	1/8	.96	16.00	12.80
332.187	3/16	.96	16.00	12.80
332.250	1/4	.78	13.00	10.40
332.300	3/10	.78	13.00	10.40
332.375	3/8	.78	13.00	10.40
332.400	4/10	.78	13.00	10.40
332.500	1/2	.78	13.00	10.40
332.700	7/10	.78	13.00	10.40
332.750	3/4	.78	13.00	10.40
332001	1	.48	8.00	6.40
3321.25	1-1/4	.48	8.00	6.40
33201.5	1-1/2	.48	8.00	6.40
3321.75	1-3/4	.48	8.00	6.40
332002	2	.48	8.00	6.40
33202.5	2-1/2	.48	8.00	6.40
332003	3	.48	8.00	6.40
33203.5	3-1/2	.54	9.00	7.20
332004	4	.54	9.00	7.20
332005	5	.54	9.00	7.20
332006	6	.54	9.00	7.20
332007	7*	.54	9.00	7.20
332008	8*	.81	13.50	10.80
332010	10*	.81	13.50	10.80

*125 volt.

LC SLO BLO (125 V) TYPE N

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 5-sec. min. Prices for applicable **fuse holders** upon request.

333.010	1/100	$1.77	$29.50	$23.60
333.031	1/32	1.77	29.50	23.60
333.062	1/16	1.32	22.00	17.60
333.100	1/10	1.32	22.00	17.60
333.150	15/100	1.32	22.00	17.60
333.200	2/10	1.32	22.00	17.60
333.250	1/4	1.32	22.00	17.60
333.300	3/10	1.32	22.00	17.60
333.400	4/10	1.32	22.00	17.60
333.700	7/10	1.32	22.00	17.60
333.750	3/4	1.32	22.00	17.60
333.800	8/10	1.32	22.00	17.60
333001	1	1.32	22.00	17.60
3331.25	1-1/4	1.32	22.00	17.60
33301.6	1-6/10	1.32	22.00	17.60
3331.75	1-3/4	1.32	22.00	17.60
333002	2	1.32	22.00	17.60
33302.5	2-1/2	1.32	22.00	17.60
33302.8	2-8/10	1.32	22.00	17.60
333003	3	1.32	22.00	17.60
33303.2	3-2/10	1.32	22.00	17.60
33303.5	3-1/2	1.32	22.00	17.60
333004	4	1.32	22.00	17.60
333005	5	1.32	22.00	17.60
3336.25	6-1/4*	1.32	22.00	17.60
333007	7*	1.32	22.00	17.60

*32 volt.

SFE AUTO FUSES (32 V OR LESS)

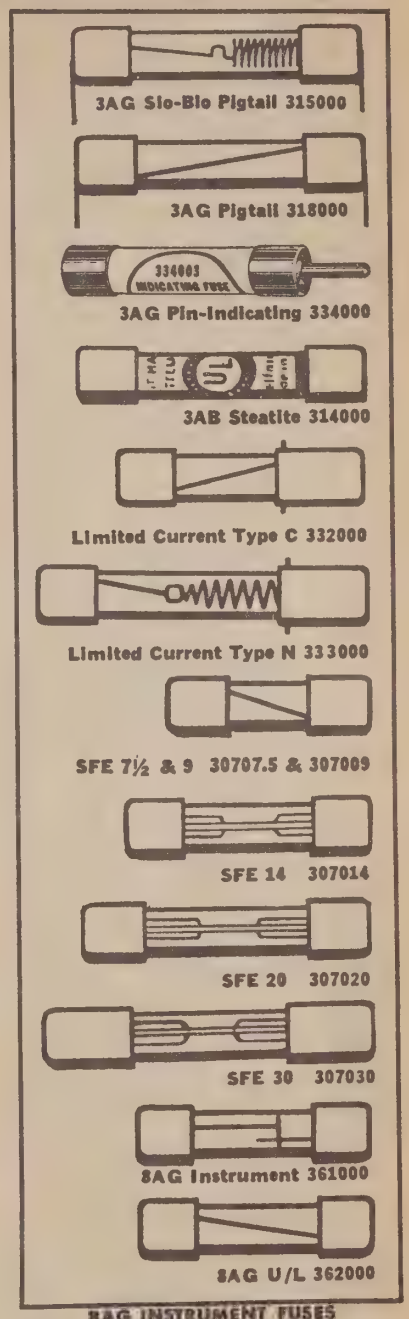
Blow Time: 110%, 4-hour min.; 135%, 0–1 hour; 150%, 20 amps or less 0–15 sec., 30 amps or less 0–30 sec. Dia. ¼".

L.F. No.	Amp Rating	Lgth. In.	Net per 5	Net per 100	
				100	500
307004	4	5/8	$0.30	$5.00	$4.00
307006	6	5/8	.30	5.00	4.00
30707.5	7-1/2	5/8	.30	5.00	4.00
307009	9	5/8	.30	5.00	4.00
307014	14	1 1/16	.30	5.00	4.00
307020	20	1 1/4	.30	5.00	4.00
307030	30	1 1/16	.30	5.00	4.00

8AG FUSES

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Length 1", dia. ¼". U/L Approved.

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
362.125	1/8	$0.93	$15.50	$12.40
362.250	1/4	.60	10.00	8.00
362.375	3/8	.60	10.00	8.00
362.500	1/2	.60	10.00	8.00
362.750	3/4	.60	10.00	8.00
362001	1	.42	7.00	5.60
36201.5	1-1/2	.42	7.00	5.60
362002	2	.42	7.00	5.60
36202.5	2-1/2	.42	7.00	5.60
362003	3	.42	7.00	5.60
362005	5	.42	7.00	5.60
362006	6	.42	7.00	5.60
362008	8	.30	5.00	4.00
362010	10	.30	5.00	4.00
362012	12	.30	5.00	4.00
362015	15	.30	5.00	4.00
362020	20	.30	5.00	4.00
362025	25	.30	5.00	4.00
362030	30	.30	5.00	4.00



8AG INSTRUMENT FUSES

Blow Time: 100%, 4-hour min.; 200%, 5-sec. max. Length 1", dia. ¼".

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
361.002	1/500	$6.36	$106.00	$84.80
361.005	1/200	2.73	45.50	36.40
361.010	1/100	2.37	39.50	31.60
361.031	1/32	2.07	34.50	27.60
361.062	1/16	1.32	22.00	17.60
361.100	1/10	.93	15.50	12.40
361.125	1/8	.93	15.50	12.40
361.187	3/16	.93	15.50	12.40
361.200	2/10	.93	15.50	12.40
361.250	1/4	.60	10.00	8.00
361.375	3/8	.60	10.00	8.00
361.400	4/10	.60	10.00	8.00
361.500	1/2	.60	10.00	8.00
361.750	3/4	.60	10.00	8.00
361001	1	.42	7.00	5.60
36101.5	1-1/2	.42	7.00	5.60
361002	2	.42	7.00	5.60
361003	3	.42	7.00	5.60
361004	4	.42	7.00	5.60
361005	5	.42	7.00	5.60

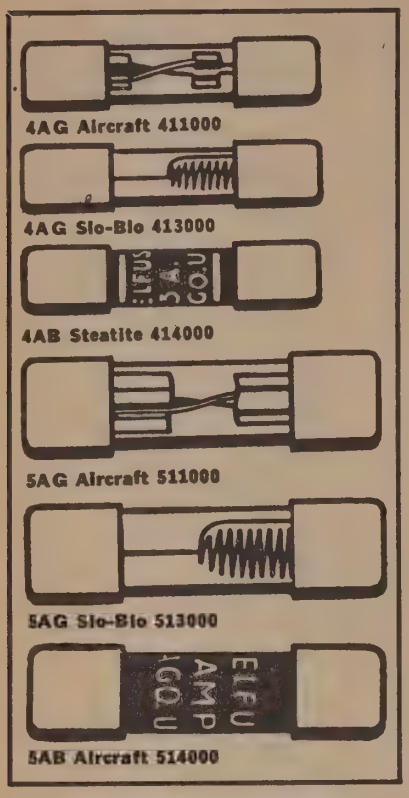
9AG FUSES (32 V OR LESS)

Blow Time: 100%, 4-hour min.; 125%, 0–1 hour; 200%, 0–25 seconds. Lg. 1 7/16", dia. ¼".

306050	50	$0.60	$10.00	$8.00

© United Technical Publications

LITTELFUSE Fuses, Fuse Puller



4AG QUICK-ACTING FUSES (250 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Length 1¼", dia. 9/32".

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
412.062	1/16	$1.86	$31.00	$24.80
412.125	1/8	1.41	23.50	18.80
412.150	15/100	1.41	23.50	18.80
412.250	1/4	.66	11.00	8.80
412.500	1/2	.66	11.00	8.80
412001	1	.63	10.50	8.40
41201.5	1-1/2	.63	10.50	8.40
412002	2	.63	10.50	8.40
41202.5	2-1/2	.63	10.50	8.40
412003	3	.63	10.50	8.40
412005	5	.54	9.00	7.20
412008	8*	.54	9.00	7.20

*125 volts.

4AG SLO BLO AIRCRAFT FUSES (250 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 5-sec. min. Length 1¼", dia. 9/32".

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
413.062	1/16	$1.68	$28.00	$22.40
413.100	1/10	1.68	28.00	22.40
413.125	1/8	1.68	28.00	22.40
413.150	15/100	1.68	28.00	22.40
413.200	2/10	1.68	28.00	22.40
413.250	1/4	1.68	28.00	22.40
413.300	3/10	1.68	28.00	22.40
413.400	4/10	1.68	28.00	22.40
413.500	1/2	1.68	28.00	22.40
413.600	6/10	1.68	28.00	22.40
413.750	3/4	1.68	28.00	22.40
413.800	8/10	1.68	28.00	22.40
413001	1	1.68	28.00	22.40
4131.25	1-1/4	1.68	28.00	22.40
41301.5	1-1/2	1.68	28.00	22.40
41301.6	1-6/10	1.68	28.00	22.40
413002	2	1.68	28.00	22.40
41302.5	2-1/2	1.32	22.00	17.60
413003	3	1.32	22.00	17.60
41303.2	3-2/10	1.32	22.00	17.60
413004	4	1.32	22.00	17.60
413005	5	1.32	22.00	17.60
4136.25	6-1/4	1.32	22.00	17.60
413008	8	1.32	22.00	17.60
413010	10	1.32	22.00	17.60
413015	15	1.32	22.00	17.60
413020	20	1.32	22.00	17.60
413025	25	1.32	22.00	17.60
413030	30	1.32	22.00	17.60

4AG AIRCRAFT FUSES

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Length 1¼", dia. 9/32".

L.F. No.	Amp Rating	Net per 5	Net per 10	
			100	500
411010	10	$0.54	$9.00	$7.20
411015	15	.54	9.00	7.20
411020	20	.54	9.00	7.20
411025	25	.54	9.00	7.20
411030	30	.54	9.00	7.20
411035	35	.63	10.50	8.40
411040	40	.63	10.50	8.40

4AB FUSES (STEATITE)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 30-sec. max. Length 1¼", dia. 9/32".

414001	1	$1.29	$21.50	$17.20
414002	2	1.29	21.50	17.20
414003	3	1.29	21.50	17.20
414005	5	1.20	20.00	16.00
414006	6	1.20	20.00	16.00
414008	8	1.20	20.00	16.00
414010	10	1.20	20.00	16.00
414015	15	1.20	20.00	16.00
414020	20	1.20	20.00	16.00
414025	25	1.20	20.00	16.00
414030	30	1.20	20.00	16.00
414035	35	1.29	21.50	17.20
414040	40	1.29	21.50	17.20

5AG AIRCRAFT FUSES

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 20-sec. max. Length 1½", dia. 13/32".

L.F. No.	Amp Rating	Net per 5	Net per 100	
			100	500
511010	10	$0.78	$13.00	$10.40
511015	15	.78	13.00	10.40
511020	20	.78	13.00	10.40
511025	25	.78	13.00	10.40
511030	30	.78	13.00	10.40
511035	35	.78	13.00	10.40
511040	40	.78	13.00	10.40
511050	50	.78	13.00	10.40
511060	60	.78	13.00	10.40

5AG QUICK-ACTING FUSES (250 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10-sec. max. Length 1½", dia. 13/32".

512001	1	$0.78	$13.00	$10.40
512002	2	.78	13.00	10.40
512003	3	.78	13.00	10.40
512004	4	.78	13.00	10.40
512005	5	.78	13.00	10.40
512008	8*	.78	13.00	10.40

*125 volts.

5AG SLO BLO FUSES (250 V OR LESS)

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 5-sec. min. Length 1½", dia. 13/32".

513.500	1/2	$2.07	$34.50	$27.60
513001	1	2.07	34.50	27.60
513002	2	2.07	34.50	27.60
513003	3	1.68	28.00	22.40
513004	4	1.68	28.00	22.40
513005	5	1.68	28.00	22.40
513010	10	1.68	28.00	22.40
513015	15	1.68	28.00	22.40
513020	20	1.68	28.00	22.40
513025	25	1.86	31.00	24.80
513030	30	1.86	31.00	24.80

5AB AIRCRAFT FUSES

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 30-sec. max. Length 1½", dia. 13/32".

514001	1	$0.96	$16.00	$12.80
514002	2	.96	16.00	12.80
514003	3	.96	16.00	12.80
51403.5	3-1/2	.96	16.00	12.80
514005	5	.96	16.00	12.80
514006	6	.96	16.00	12.80
5146.25	6-1/4	.96	16.00	12.80
514007	7	.96	16.00	12.80
514008	8	.96	16.00	12.80
514010	10	.96	16.00	12.80
514015	15	.96	16.00	12.80
514020	20	.96	16.00	12.80
514025	25	.96	16.00	12.80
514030	30	.96	16.00	12.80

HIGH VOLTAGE FUSES

Designed for use in aircraft radio equipment, transmitting equipment, X-ray apparatus, high voltage rectifiers, etc., for circuits up to 20 kW DC or 30 kVA AC. Fuses are fiber enclosed with cadmium plated end caps. Two principles of arc suppression are employed: (1) Multi-break fuse wire which blows at each half inch of its length; (2) Ceramic baffles break the arc into several parts and quench it. **Blow Time:** 110%, 4-hour min.; 135%, 0–1 hour; 200% 0–2 minutes.

1000-VOLT (3" x 13/32")

L.F. No.	Amp Rating	Net Each	Net per 100	
			100	500
621.375	3/8	$0.35	$29.50	$23.60
621.500	1/2	.35	29.50	23.60
621.750	3/4	.35	29.50	23.60
621001	1	.35	29.50	23.60
62101.5	1-1/2	.35	29.50	23.60
621002	2	.35	29.50	23.60

2500-VOLT (4½" x 13/32")

L.F. No.	Amp Rating	Net Each	Net per 100	
			100	500
622.500	1/2	$0.50	$42.00	$33.60
622.750	3/4	.50	42.00	33.60
622001	1	.50	42.00	33.60
62201.5	1-1/2	.50	42.00	33.60
622002	2	.50	42.00	33.60

3000-VOLT (5½" x 13/32")

L.F. No.	Amp Rating	Net Each	Net per 100	
			100	500
623.500	1/2	$0.77	$64.00	$51.20
623.750	3/4	.77	64.00	51.20
623001	1	.77	64.00	51.20
62301.5	1-1/2	.77	64.00	51.20
623002	2	.77	64.00	51.20

1000-VOLT (3" x 13/16")

L.F. No.	Amp Rating	Net Each	Net per 100	
			100	500
701.062	1/16	$0.94	$78.00	$62.40
701.125	1/8	.94	78.00	62.40
701.250	1/4	.94	78.00	62.40
701.375	3/8	.94	78.00	62.40
701.500	1/2	.94	78.00	62.40
701.750	3/4	.94	78.00	62.40
701001	1	.94	78.00	62.40
70101.5	1-1/2	.94	78.00	62.40
701002	2	.94	78.00	62.40

5000-VOLT (5" x 13/16")

L.F. No.	Amp Rating	Net Each	Net per 100	
			100	500
702.062	1/16	$0.94	$78.50	$62.80
702.125	1/8	.94	78.50	62.80
702.250	1/4	.94	78.50	62.80
702.375	3/8	.94	78.50	62.80
702.500	1/2	.94	78.50	62.80
702.750	3/4	.94	78.50	62.80
702001	1	.94	78.50	62.80
70201.5	1-1/2	.94	78.50	62.80
702002	2	.94	78.50	62.80
70202.5	2-1/2	.94	78.50	62.80
702003	3	.94	78.50	62.80

10,000-VOLT (10" x 13/16")

L.F. No.	Amp Rating	Net Each	Net per 100	
			100	500
703.062	1/16	$1.86	$155.00	$124.00
703.125	1/8	1.86	155.00	124.00
703.250	1/4	1.86	155.00	124.00
703.175	3/8	1.86	155.00	124.00
703.500	1/2	1.86	155.00	124.00
703.750	3/4	1.86	155.00	124.00
703001	1	1.86	155.00	124.00
70301.5	1-1/2	1.86	155.00	124.00
703002	2	1.86	155.00	124.00
703003	3	1.86	155.00	124.00

FUSE PULLER ASSORTMENT

• Easy removal & installation

Puller slips over glass body of fuse; metal slide collar holds fuse in locked position. Fuse may then be withdrawn or replaced with ease.



L.F. No. 094091—Net/Assortment. $6.00

Net

© United Technical Publications

LITTELFUSE

CIRCUIT BREAKERS, MOUNTINGS AND CLIPS

MOUNTINGS FOR RECTIFIERS

L.F. No.	Description	Net Each, Lots of 5	Net per 100	
			100	500
099062	Single pole, 3/16" base	$0.20	$17.00	$13.60
099063	Double pole, 3/16" base	.39	32.50	26.00
099065	Double pole, 1/16" base	.26	21.50	17.20
099065-3	1/16" Bakelite insulator	.02	2.00	1.60
099067	Single pole 1/16" base	.11	9.00	7.20
099067-3	1/16" Bakelite insulator	.01	1.00	.80

STANDARD FUSE CLIPS (PHOSPHOR BRONZE, NICKEL PLATED)

L.F. No.	Fuse Adaptation	Type	Net Each, Lots of 5	Net per 100	
				100	500
101001	SFE, 3AG, 8AG, 3AB	Ear	$0.03	$2.50	$2.00
101002	SFE, 3AG, 8AG, 3AB	Earless	.03	2.80	2.24
101003*	SFE, 3AG, 8AG, 3AB	Lug	.04	3.30	2.64
103001	4AG, 4AB	Ear	.05	4.15	3.32
104002	4AG, 4AB	Earless	.05	4.15	3.32
105001	5AG	Ear	.06	5.00	4.00
105002	5AG	Earless	.05	4.15	3.32
107001	3/16" dia.	Ear	.08	6.50	5.20
107002	3/16" dia.	Earless	.08	7.00	5.60
109001	13/16" dia.	Ear	.30	25.00	20.00
109002	13/16" dia.	Earless	.30	25.00	20.00

*Unplated, bright dip.

STANDARD FUSE CLIPS (BERYLLIUM COPPER, SILVER PLATED)

121001	SFE, 3AG, 8AG, 3AB	Ear	$0.06	$4.85	$3.88
121002	SFE, 3AG, 8AG, 3AB	Earless	.06	4.85	3.88
121004	SFE, 3AG, 8AG, 3AB	Lug	.17	14.00	11.20
123001	4AG, 4AB	Ear	.10	8.50	6.80
123002	4AG, 4AB	Earless	.10	8.50	6.80
125001	5AG, hi-volt	Ear	.15	12.50	10.00
125002	5AG, hi-volt	Earless	.15	12.50	10.00
127001	3/16" dia.	Ear	.37	31.00	24.80
127002	3/16" dia.	Earless	.37	31.00	24.80
129001	13/16" dia.	Ear	.88	73.00	58.40
129002	13/16" dia.	Earless	.88	73.00	58.40

3AG MOUNTINGS

L.F. No.	Description	Net Each, Lots of 5	Net per 100	
			100	500
351009	Hinged can cover, 2 pole	$1.76	$146.50	$117.20
351010	Spare, 1 pole	.20	17.00	13.60
352001	Through panel, 1 pole	.34	28.50	22.80
353001	Panel, 1 pole	.60	50.00	40.00

3AG MOUNTINGS WITH SCREW TERMINALS—TYPE T

L.F. No.	Description	Net Ea. Lots of 5	Net per 100	
			100	500
356001	1 pole	$0.40	$33.00	$26.40
356002	2 pole	.77	64.00	51.20
356003	3 pole	1.17	97.50	78.00
356004	4 pole	1.93	160.50	128.40
356005	5 pole	2.39	199.00	159.20
356006	6 pole	2.81	234.50	187.60
356007	7 pole	3.31	276.00	220.80
356008	8 pole	3.77	314.50	251.60
356009	9 pole	4.22	352.00	281.60
356010	10 pole	4.66	388.00	310.40
356011	11 pole	5.10	425.00	340.00
356012	12 pole	5.47	455.50	364.40

3AG MOUNTINGS WITH SOLDER TERMINALS—TYPE S

357001	1 pole	$0.20	$17.00	$13.60
357002	2 pole	.37	31.00	24.80
357003	3 pole	.58	48.50	38.80
357004	4 pole	.80	60.50	48.50
357005	5 pole	.89	74.50	59.60
357006	6 pole	1.05	87.50	70.00
357007	7 pole	1.19	99.50	79.60
357008	8 pole	1.36	113.50	90.80
357009	9 pole	1.53	127.50	102.00
357010	10 pole	1.70	142.00	113.60
357011	11 pole	1.88	156.50	125.20
357012	12 pole	2.04	170.00	136.00

8AG MOUNTINGS

383001	1 pole*	$0.55	$45.50	$36.40
383002	1 pole†	.37	30.50	24.40

*Thru-panel. †Meter back.

8AG MOUNTINGS WITH SOLDER TERMINALS—TYPE S

L.F. No.	Description	Net Ea. Lots of 5	Net per 100	
			100	500
387001	1 pole	$0.20	$17.00	$13.60
387002	2 pole	.37	31.00	24.80
387003	3 pole	.58	48.50	38.80
387004	4 pole	.80	60.50	48.50
387005	5 pole	.89	74.50	59.60
387006	6 pole	1.05	87.50	70.00
387007	7 pole	1.19	99.50	79.60
387008	8 pole	1.36	113.50	90.80
387009	9 pole	1.53	127.50	102.00
387010	10 pole	1.70	142.00	113.60
387011	11 pole	1.88	156.50	125.20
387012	12 pole	2.04	170.00	136.00

4AG FUSE MOUNTINGS WITH SCREW TERMINALS—TYPE T

L.F. No.	Description	Net Ea. Lots of 5	Net per 100	
			100	500
456001	1 pole	$0.55	$45.50	$36.40
456002	2 pole	1.00	83.00	66.40
456003	3 pole	1.46	122.00	97.60
456004	4 pole	2.57	214.50	171.60
456005	5 pole	3.23	269.00	215.20
456006	6 pole	3.82	318.00	254.40
456007	7 pole	4.49	374.00	299.20
456008	8 pole	5.11	426.00	340.80
456009	9 pole	5.74	478.00	382.40
456010	10 pole	6.36	530.00	424.00
456011	11 pole	6.98	581.50	465.20
456012	12 pole	7.50	625.00	500.00

5AG MOUNTINGS WITH SCREW TERMINALS—TYPE T

556001	1 pole	$0.60	$50.00	$40.00
556002	2 pole	1.15	96.00	76.80
556003	3 pole	1.70	142.00	113.60
556004	4 pole	3.14	261.50	209.20
556005	5 pole	3.91	325.50	260.40
556006	6 pole	4.63	386.00	308.80
556007	7 pole	5.44	453.50	362.80
556008	8 pole	6.20	517.00	413.60
556009	9 pole	6.97	580.50	464.40
556010	10 pole	7.69	640.50	512.40
556011	11 pole	8.44	703.00	562.40
556012	12 pole	9.07	756.00	604.80

HIGH VOLTAGE FUSE HOLDERS

For 701000 Series Fuses.

L.F. No.	Size, In. L. x H.	Net Each	Net per 100	
			100	500
711001	2½ x 1⅝	$2.05	$170.50	$136.40
For 702000 Series Fuses.				
711002	6½ x 1⅝	$2.21	$184.50	$147.60
For 703000 Series Fuses.				
711003	12 x 3	$5.48	$457.00	$365.60
For 621000 Series Fuses.				
631001	4 x 1¾	$1.11	$92.50	$74.00
For 622000 Series Fuses.				
631002	5¼ x 1¾	$1.60	$133.00	$106.40
For 623000 Series Fuses.				
631003	6¼ x 1¾	$1.77	$147.50	$48.00

TV SNAP-ON FUSE HOLDERS

094025	10 holders*	$2.47	.....	.....
350130	Holders†	.21	$17.00	$14.00

*In plastic box of 10. †Bulk.

MANUAL RESET CIRCUIT BREAKERS

Exact replacement protector for TV circuits. Ideal for current overload protection for model railroads, toy transformers, hair dryers, small appliances, tools, wiring, etc. For 125 VAC operation. Size, 1¾" x 13/16" x ½".

L.F. No.*	Trip Rating Amps	Skin Pack Net Ea.*	Bulk Pkg. Box of 5
815.650	.650	$0.84	$3.90
815.800	.800	.84	3.90
815001	1	.84	3.90
8151.25	1.25	.84	3.90
81501.5	1.5	.84	3.90
8151.75†	1.75	.84	3.90
815002†	2	.84	3.90
8152.25†	2.25	.84	3.90
81502.5†	2.5	.84	3.90
8152.75†	2.75	.84	3.90
815003†	3	.84	3.90
8153.25†	3.25	.84	3.90
815004†	4	.84	3.90
81504.5†	4.5	.84	3.90
815005	5	.84	3.90
815006	6	.84	3.90
815007†	7	.84	3.90

*Add **C** when ordering (i.e., 815002**C**).

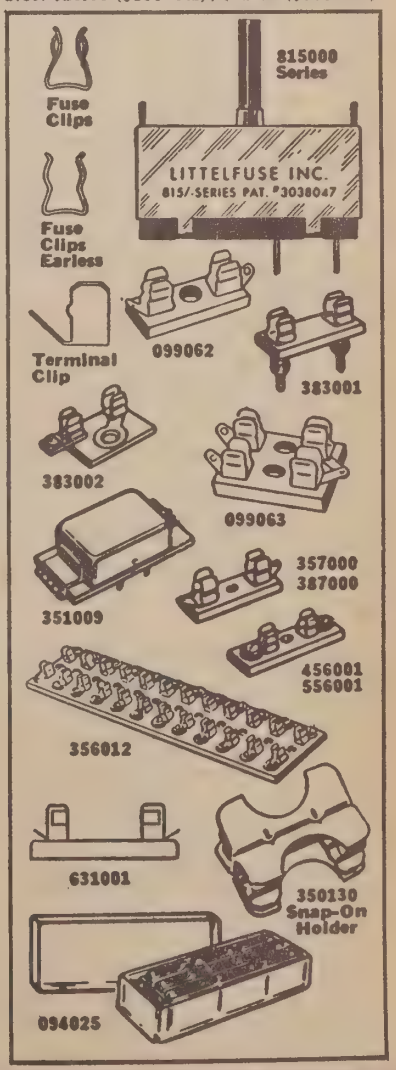
L.F. No. 094084 Bulk Assortment—Ten circuit breakers from the above listing as indicated by (†). Net Each **$7.80**

L.F. No. 094085 Card Assortment—Same, but card packaging. Net Each.... **$8.40**

L.F. No. 094073 Card Assortment for Color TV—One each 8151.75, 8152.25, 8152.75, 815003, 815007; two 81504.5, three 8153.25. Net Each..... **$8.40**

L.F. No. 094074 Bulk Assortment for Color TV—Same, but bulk packaging. Net Each..... **$7.80**

L.F. No. 815(000) PA-Circuit Breaker Adapter Plate—Net Each **$0.18**; 100 Net: **$15.00** ($100 lots); **$12.00** ($500 lots).



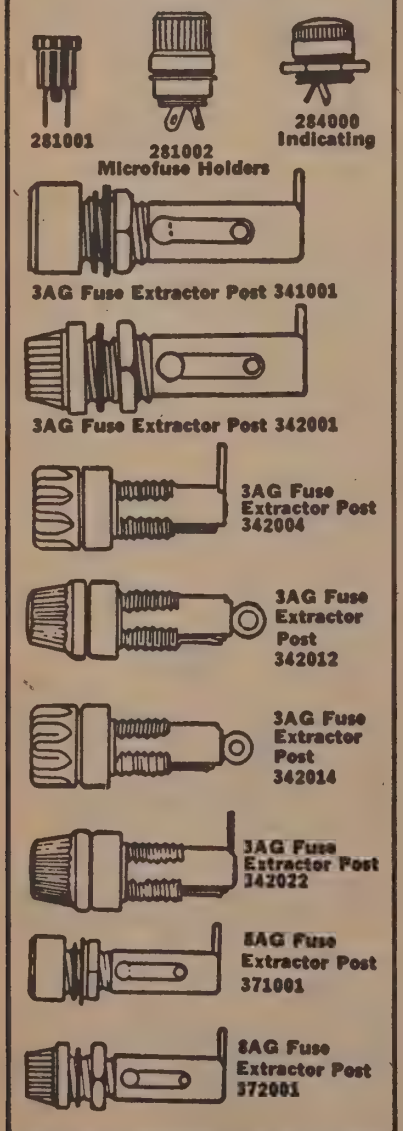
LITTELFUSE Fuses and Holders

FUSES AND ASSORTMENTS

ECON TIME-DELAY PLUG FUSES

Dual-element plug type fuses provide additional protection against blowing during motor starting cycle. U/L Approved. For 125-volt operation.

L.F. No.	Amp Rating	Net per Box of 4	Net per 100
TE3/10	3/10	$0.88	$18.00
TE4/10	4/10	.88	18.00
TE8/10	8/10	.88	18.00
TE1	1	.88	18.00
TE1-1/8	1–1/8	.88	18.00
TE1-1/4	1–1/4	.88	18.00
TE1-4/10	1–4/10	.88	18.00
TE1-6/10	1–6/10	.88	18.00
TE1-8/10	1–8/10	.88	18.00
TE2	2	.88	18.00
TE2-1/4	2–1/4	.88	18.00
TE2-1/2	2–1/2	.88	18.00
TE3-2/10	3–2/10	.88	18.00
TE3-1/2	3–1/2	.88	18.00
TE4	4	.88	18.00
TE4-1/2	4–1/2	.88	18.00
TE5	5	.88	18.00
TE5-6/10	5–6/10	.88	18.00
TE6-1/4	6–1/4	.88	18.00
TE7	7	.88	18.00
TE8	8	.88	18.00
TE9	9	.88	18.00
TE10	10	.88	18.00
TE12	12	.88	18.00
TE14	14	.88	18.00
TE15	15	.48	10.00
TE20	20	.48	10.00
TE25	25	.48	10.00
TE30	30	.48	10.00



CLEARSITE ONE-TIME PLUG HOUSE FUSES

Full visibility design for positive, clear indication of fuse condition. For 125 VAC or DC. U/L Approved. Use with standard Edison base fuse holders.

L.F. No.	Amp Rating	Net per Box of 5	Net per 100
CP10	10	$0.50	$9.00
CP15	15	.47	8.30
CP20	20	.47	8.30
CP25	25	.47	8.30
CP30	30	.47	8.30

UNIVERSAL AUTO FUSE ASSORTMENT

Emergency fuse kit with ten popular replacement fuses for any car.
Littelfuse No. 094092—Net per card of 20 ..... **$18.75**

FUSE CADDY

Standard fuse caddy for servicemen to carry in tube caddy. Fifteen compartments for 75 fuses; 3 spare compartments. See-thru plastic top for easy identification.
Littelfuse No. 094037—Net Ea. **$10.97**

LIMITED-CURRENT FUSE CADDY

Handy, all-inclusive limited-current fuse caddy complete with 75 fuses of 15 different types. 3 extra (spare) compartments.
Littelfuse No. 094041—Net Each **$14.67**

FUSEMASTER DISPLAY

Fuse wall rack with 60 individual compartments for easy, instant self-service. Holds index card on back of rack. Ideal for servicemen, laboratories, etc.
Littelfuse No. 094047—Complete with 100 assorted fuses. Net Each..... **$17.88**
Littelfuse No. 094048—Empty rack. Net Each..... **$1.25**

FUSE HOLDERS, RETAINERS

MICROFUSE HOLDERS

For mounting of 273000 Series Microfuse. Type 281002 is front panel mounting; 281001 ideal for printed circuit board mtg.; 284000 Series front panel mtg. with indicator bulb.

L.F. No.	Voltage Range	Net Each	Net per 100	
			100	500
281001	.....	$0.29	$24.00	$19.20
281002	.....	.77	64.00	51.20
282001	.....	1.31	109.00	87.20
282002	.....	1.24	103.00	82.40
284004	2½–7	2.21	184.00	147.20
284005	7–16	2.21	184.00	147.20
284006	16–32	2.21	184.00	147.20
284003	100–125	1.55	129.00	103.20

MICROFUSE INDICATING HOLDERS—RF SHIELDED

284107	12–22 V	$7.82	$651.50	$521.20
284108	23–33 V	8.83	735.50	588.40
284109	34–45 V	8.83	735.50	588.40
284110	46–60 V	8.83	735.50	588.40
284111	61–80 V	8.83	735.50	588.40
284112	81–90 V	8.83	735.50	588.40
284113	90–125 V	6.07	505.50	404.40

3AG FUSE EXTRACTOR POSTS

L.F. No.	Type	Net Each	Net per 100	
			100	500
340255A	R/F shld'd (FHN26G2)	$5.05	$420.50	$336.40
340256A	R/F shld'd (FHN20G)	5.05	420.50	336.40
341001A	Screw	.62	51.50	41.20
342001A	Finger	.62	51.50	41.20
342004A	Miniature	.52	43.00	34.40
342005A	Miniature*	.62	51.50	41.20
342006	Watertight	2.36	196.50	157.20
342012A	Miniature	.43	36.00	28.80
342013A	Miniature*	.53	44.00	35.20
342014A	Miniature	.43	36.00	28.80
342015A	Miniature*	.53	44.00	35.20
342021A	FHN 26W	3.20	266.50	213.20
342022A	Miniature	.52	43.00	34.40
342023A	Miniature*	.62	51.50	41.20
342024A	FHN 26G2	1.32	110.00	88.00
342025A	FHN 20G	1.36	113.50	90.80

*Dust-proof.

8AG FUSE EXTRACTOR POSTS

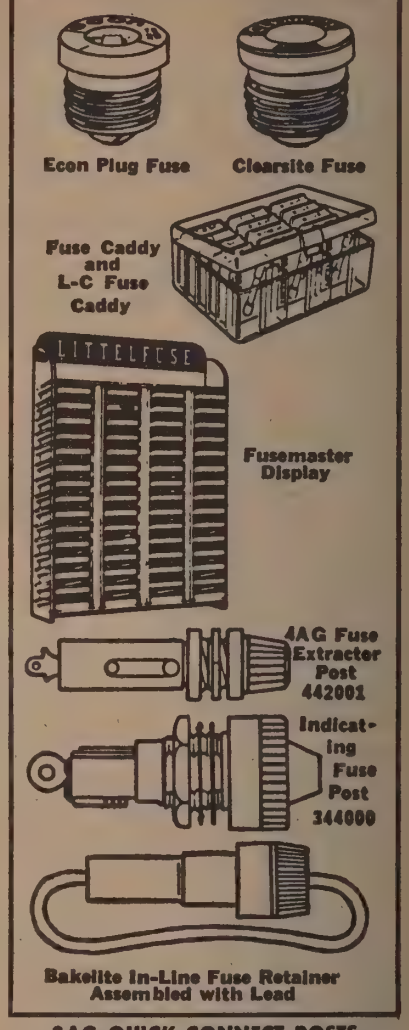
371001A	Screw	$0.62	$51.50	$41.20
372001A	Finger	.62	51.50	41.20
372003	FHN31G2	2.65	221.00	176.80

4AG FUSE EXTRACTOR POSTS

442001A	Finger	$1.25	$104.50	$83.60
442006	Watertight	2.36	196.50	157.20
442008A	Watertight	3.20	266.50	213.20

5AG FUSE EXTRACTOR POSTS

570001	Non-watertight	$1.27	$106.00	$84.80
571004	Watertight	$1.39	$116.00	$92.80



3AG QUICK-CONNECT POSTS

L.F. No.	Description	Net Each	Net per 100	
			100	500
342028A	3/16" terminals	$0.50	$42.00	$33.60
342038A	3/16" terminals	.50	42.00	33.60
342048A	3/16" terminals	.50	42.00	33.60
342058A	3/16" terminals	.50	42.00	33.60

3AG INDICATING FUSE POSTS

L.F. No.	Voltage	Net Each	Net per 100	
			100	500
344006A	2½–7 V	$2.96	$247.00	$197.60
344012A	7–16 V	2.96	247.00	197.60
344024A	16–32 V	2.96	247.00	197.60
344125A	100–125 V	1.81	151.00	120.80
344250A	200–250 V	1.81	151.00	120.80

SERIES 346000 LIMITED CURRENT FUSE HOLDERS

For use with regular and Slo-Blo Type C and N limited current fuses. Specify amperage when ordering. **$15.00**
Net per 100..... **$60.00**

UNIVERSAL FUSE RETAINER

Comes with three different length springs for fuse sizes 7½ SFE thru 3AG.
L.F. No. 150145—Net Each..... **43¢**
Net 100..$36.00; Lots 500, Net 100 . $28.80

BAKELITE® IN-LINE FUSE RETAINERS ASSEMBLED WITH 19" LEAD

L.F. No.	Use with Fuses	Net Ea., Lots of 5	Net per 100	
			100	500
155004A	SFE 4, 1AG	$0.43	$36.00	$28.80
155006A	SFE 6	.43	36.00	28.80
15507.5A	SFE 7½	.43	36.00	28.80
155009A	SFE 9, 7AG	.43	36.00	28.80
155014A	SFE 14	.43	36.00	28.80
155020A	SFE 20, 3AG	.43	36.00	28.80

®Bakelite Corp.

Net
© United Technical Publications

LITTELFUSE

MILITARY FUSES AND FUSEHOLDERS

FUSES—TO MIL-15160 & MIL-F-23419; FUSEHOLDERS—TO MIL-F-19207

CARTRIDGE FUSES TO SPECIFICATION MIL-F-15160

Type Designation MIL-F-15160	Nearest Comm. Equiv.	Littelfuse No. Nickel Plated Caps	Littelfuse No. Silver Plated Caps	Net per 1000, Lots of 1-99	100-499	500-999
FO1A250V 1/200A	361000 Series	364.005	366.005	$546.00	$455.00	$364.00
FO1A250V 1/100A		364.010	366.010	474.00	395.00	316.00
FO1A250V 1/32A		364.031	366.031	414.00	345.00	276.00
FO1A250V 1/16A		364.062	366.062	264.00	220.00	176.00
FO1A250V 1/8A		364.125	366.125	186.00	155.00	124.00
FO1A250V 1/4A		364.250	366.250	120.00	100.00	80.00
FO1A250V 3/8A		364.375	366.375	120.00	100.00	80.00
FO1A250V 1/2A		364.500	366.500	120.00	100.00	80.00
FO1A250V 3/4A		364.750	366.750	120.00	100.00	80.00
FO1A125V 1A		364001	366001	84.00	70.00	56.00
FO1A125V 1-1/2A		36401.5	36601.5	84.00	70.00	56.00
FO1A125V 2A		364002	366002	84.00	70.00	56.00
FO2A250V 1/100A	312000 Series	392.010	397.010	474.00	395.00	316.00
FO2A250V 1/32A		392.031	397.031	414.00	345.00	276.00
FO2A250V 1/16A		392.062	397.062	186.00	155.00	124.00
FO2A250V 1/8A		392.125	397.125	186.00	155.00	124.00
FO2A250V 1/4A		392.250	397.250	120.00	100.00	80.00
FO2A250V 3/8A		392.375	397.375	120.00	100.00	80.00
FO2A250V 1/2A		392.500	397.500	120.00	100.00	80.00
FO2A250V 3/4A		392.750	397.750	120.00	100.00	80.00
FO2A250V 1A		392001	397001	84.00	70.00	56.00
FO2A250V 1-1/2A		39201.5	39701.5	84.00	70.00	56.00
FO2A250V 2A		392002	397002	84.00	70.00	56.00
FO2A250V 3A		392003	397003	84.00	70.00	56.00
FO2A250V 4A		392004	397004	102.00	85.00	68.00
FO2A250V 5A		392005	397005	102.00	85.00	68.00
FO2A250V 6A		392006	397006	102.00	85.00	68.00
FO2A32V 10A	311000 Series	392010	397010	60.00	50.00	40.00
FO2A32V 15A		392015	397015	60.00	50.00	40.00
FO2A32V 20A*		392020	397020	60.00	50.00	40.00
FO2B250V 1/100A	313000 Series	393.010	398.010	356.00	295.00	236.00
FO2B250V 1/32A		393.031	398.031	356.00	295.00	236.00
FO2B250V 1/16A		393.062	398.062	264.00	220.00	176.00
FO2B250V 1/8A		393.125	398.125	264.00	220.00	176.00
FO2B250V 1/4A		393.250	398.250	264.00	220.00	176.00
FO2B250V 3/8A		393.375	398.375	264.00	220.00	176.00
FO2B250V 1/2A		393.500	398.500	264.00	220.00	176.00
FO2B250V 3/4A		393.750	398.750	264.00	220.00	176.00
FO2B250V 1A		393001	398001	264.00	220.00	176.00

Type Designation MIL-F-15160	Nearest Comm. Equiv.	Littelfuse No. Nickel Plated Caps	Littelfuse No. Silver Plated Caps	Net per 1000, Lots of 1-99	100-499	500-999
FO3A250V 1A	314000 Series	394001	399001	$162.00	$135.00	$108.00
FO3A250V 3A		394003	399003	162.00	135.00	108.00
FO3A250V 5A		394005	399005	144.00	120.00	96.00
FO3A250V 8A		394008	399008	144.00	120.00	96.00
FO3A250V 10A		394010	399010	144.00	120.00	96.00
FO3A250V 12A		394012	399012	162.00	135.00	108.00
FO3A250V 15A		394015	399015	162.00	135.00	108.00
FO3A125V 20A		394020	399020	162.00	135.00	108.00
FO3A125V 30A		394030	399030	198.00	165.00	132.00
FO3B250V 1/16A	323000 Slo-Blo Series Ceramic Body	390.062	395.062	372.00	310.00	248.00
FO3B250V 1/8A		390.125	395.125	372.00	310.00	248.00
FO3B250V 15/100A		390.150	395.150	372.00	310.00	248.00
FO3B250V 3/16A		390.187	395.187	372.00	310.00	248.00
FO3B250V 1/4A		390.250	395.250	372.00	310.00	248.00
FO3B250V 3/8A		390.375	395.375	372.00	310.00	248.00
FO3B250V 1/2A		390.500	395.500	372.00	310.00	248.00
FO3B250V 3/4A		390.750	395.750	372.00	310.00	248.00
FO3B250V 1A		390001	395001	372.00	310.00	248.00
FO6A250V 1A	414000 Series	494001	499001	258.00	215.00	172.00
FO6A250V 2A		494002	499002	258.00	215.00	172.00
FO6A250V 3A		494003	499003	258.00	215.00	172.00
FO6A250V 5A		494005	499005	240.00	200.00	160.00
FO6A250V 10A		494010	499010	240.00	200.00	160.00
FO6A250V 15A		494015	499015	240.00	200.00	160.00
FO7A250V 1A	512000 Series	590001	595001	156.00	130.00	104.00
FO7A250V 2A		590002	595002	156.00	130.00	104.00
FO7A250V 3A		590003	595003	156.00	130.00	104.00
F27A1000V 3/8A	621000 Series	628.375	626.375	354.00	295.00	236.00
F27A1000V 1/2A		628.500	626.500	354.00	295.00	236.00
F27A1000V 3/4A		628.750	626.750	354.00	295.00	236.00
F27A1000V 1A		628001	626001	354.00	295.00	236.00
F27A1000V 1½A		62801.5	62601.5	354.00	295.00	236.00
F27A1000V 2A		628002	626002	354.00	295.00	236.00
F28A2500V 1/2A	622000 Series	629.500	627.500	504.00	420.00	336.00
F28A2500V 3/4A		629.750	627.750	504.00	420.00	336.00
F28A2500V 1A		629001	627001	504.00	420.00	336.00
F28A2500V 1½A		62901.5	62701.5	504.00	420.00	336.00
F28A2500V 2A		629002	627002	504.00	420.00	336.00

*307000 Series. **NOTE:** Add **$9.00** stamping charge, each rating any quantity, and **$6.00** silver plating charge per 1000 pieces. Minimum silver plating charge **$6.00** per amperage. Suffix **S** to Type Designation (e.g., FO2A250V 3/4A**S**) indicates that silver plated fuse caps are required.

MICROFUSES TO MILITARY SPECIFICATION MIL-F-23419

Type Designation MIL-F-23419	V Rating	Nearest Comm. Equiv.	Littelfuse Catalog No.	Net per 1000, Lots of 1-99	100-499	500-999
FM02 1/500A	125 V	273000 Series	274.002	$1500.00	$1250.00	$1000.00
FM02 1/200A	125 V		274.005	1500.00	1250.00	1000.00
FM02 1/100A	125 V		274.010	1500.00	1250.00	1000.00
FM02 1/64A	125 V		274.015	1500.00	1250.00	1000.00
FM02 1/32A	125 V		274.031	1500.00	1250.00	1000.00
FM02 1/16A	125 V		274.062	1290.00	1080.00	860.00
FM02 1/10A	125 V		274.100	1290.00	1080.00	860.00
FM02 1/8A	125 V		274.125	1290.00	1080.00	860.00
FM02 2/10A	125 V		274.200	1290.00	1080.00	860.00
FM02 1/4A	125 V		274.250	1290.00	1080.00	860.00
FM02 3/10A	125 V		274.300	1290.00	1080.00	860.00

Type Designation MIL-F-23419	V Rating	Nearest Comm. Equiv.	Littelfuse Catalog No.	Net per 1000, Lots of 1-99	100-499	500-999
FM02 4/10A	125 V	273000 Series	274.400	$1290.00	$1080.00	$860.00
FM02 1/2A	125 V		274.500	1290.00	1080.00	860.00
FM02 6/10A	125 V		274.600	1290.00	1080.00	860.00
FM02 3/4A	125 V		274.750	1290.00	1080.00	860.00
FM02 1A	125 V		274001	1290.00	1080.00	860.00
FM02 1½A	125 V		27401.5	1290.00	1080.00	860.00
FM02 2A	125 V		274002	1290.00	1080.00	860.00
FM02 3A	125 V		274003	1290.00	1080.00	860.00
FM02 4A	125 V		274004	1290.00	1080.00	860.00
FM02 5A	125 V		274005	1290.00	1080.00	860.00

PICOFUSES TO MILITARY SPECIFICATION MIL-F-23419

FM04 1/8A	125 V	275000 Series	277.125	$618.00	$515.00	$412.00
FM04 1/4A	125 V		277.250	618.00	515.00	412.00
FM04 3/8A	125 V		277.375	618.00	515.00	412.00
FM04 1/2A	125 V		277.500	618.00	515.00	412.00
FM04 3/4A	125 V		277.750	540.00	450.00	360.00
FM04 1A	125 V		277001	540.00	450.00	360.00
FM04 1½A	125 V	275000 Series	27701.5	$540.00	$450.00	$360.00
FM04 2A	125 V		277002	540.00	450.00	360.00
FM04 3A	125 V		277003	540.00	450.00	360.00
FM04 4A	125 V		277004	540.00	450.00	360.00
FM04 5A	125 V		277005	540.00	450.00	360.00

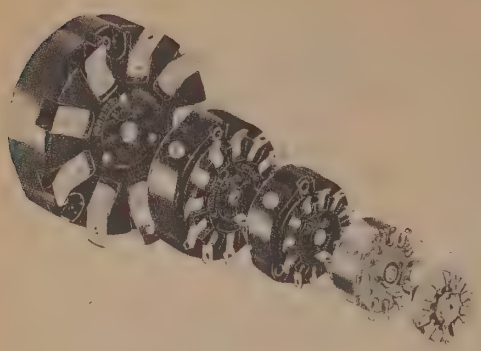
FUSEHOLDERS TO MILITARY SPECIFICATION MIL-F-19207

Type Designation MIL-F-19207	Description	Littelfuse Catalog No.	Nearest Comm. Equiv.	Net per 1000, Lots of 1-99	100-499	500-999
FHL 17G2	90–250V Indicating	349250	344125	$2214.00	$1845.00	$1476.00
FHL 18G2-1	12– 22V Indicating	349012	344024	3324.00	2770.00	2216.00
FHL 18G2-2	23– 33V Indicating	349023	344024	3324.00	2770.00	2216.00
FHL 18G2-3	34– 45V Indicating	349034	.....	3324.00	2770.00	2216.00
FHL 18G2-4	46– 60V Indicating	349046	.....	3324.00	2770.00	2216.00
FHL 18G2-5	61– 80V Indicating	349061	.....	3324.00	2770.00	2216.00
FHL 18G2-6	81– 90V Indicating	349081	.....	3324.00	2770.00	2216.00
FHL 18G2-7	2.5–4 V Indicating	349002	.....	3324.00	2770.00	2216.00
FHL 18G2-8	5–7 V Indicating	349005	.....	3324.00	2770.00	2216.00
FHL 18G2-9	8–12 V Indicating	349008	.....	3210.00	2675.00	2140.00
FHL 44G-1	Microfuse-Ind. 12– 22 V	284007	284006	3642.00	3035.00	2428.00
FHL 44G-2	Microfuse-Ind. 23– 33 V	284008	284006	3642.00	3035.00	2428.00
FHL 44G-3	Microfuse-Ind. 34– 45 V	284009	.....	3660.00	3050.00	2440.00
FHL 44G-4	Microfuse-Ind. 46– 60 V	284010	.....	3660.00	3050.00	2440.00
FHL 44G-5	Microfuse-Ind. 61– 80 V	284011	.....	3660.00	3050.00	2440.00
FHL 44G-6	Microfuse-Ind. 81– 90 V	284012	.....	2502.00	2085.00	1668.00
FHL 45G	Microfuse-Ind. 90–125 V	284013	284003	1362.00	1135.00	908.00
FHN 20G	3AG Miniature	342025	342004	1320.00	1100.00	880.00
FHN 26G2	3AG Miniature	342024	342012	2652.00	2210.00	1768.00
FHN 31G2	8AG Extractor	372003	372001	3198.00	2665.00	2132.00
FHN 19W	4AG Waterproof	442008	442006	3198.00	2665.00	2132.00
FHN 26W	3AG Waterproof	342021	342006			

Suffix **W** to Type Designation indicates watertight; suffix **G**, drip-proof.

© United Technical Publications

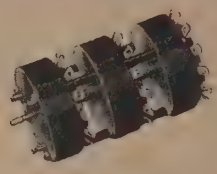
OHMITE power tap switches, high current, non-shorting type



Introducing

MODEL 711
Smallest Switch for Its Rating







Ohmite single pole, rotary, multi-position switches have proven their durability over many years in demanding applications. Such applications are found in switchboards, arc welders, spot welders, battery chargers, motor controls, tapped transformers, X-ray equipment, diathermy equipment, radio transmitters, electrical machine tools and many other products. Six sizes, including the new, miniature Model 711, provide a choice of ratings from 7 amperes at 125 volts to 100 amperes at 300 volts AC. A choice of the number of taps is provided up to the maximums indicated. All switches are enclosed except for the Models 711 and 111. All switches feature the slow-break, quick-make action deemed so desirable for switching of AC current.

The five sizes offering ratings from 15 amperes to 100 amperes (Models 111, 212, 312, 412 and 608) feature all ceramic, arc-proof bodies and solid silver alloy, fixed and movable contacts. The large, thick, silver-alloy fixed contact disks are permanently welded to copper studs. These, in turn, are riveted and soldered to sturdy terminal lugs, assuring a permanent mechanical and electrical joint. The rotor (moving) contact, also of solid silver-alloy, is riveted and soldered to the contact arm. Face of the rotor contact is slightly rounded assuring a perfect seating of the contacts with a slight rubbing, self-cleaning motion on every operation.

The new Model 711 tap switch was designed to achieve high curre capability with small size. It is actually smaller than many low curre instrument switches. It interrupts 7 amperes at 125 VAC and can carry amperes AC or DC. The Model 711 features a melamine phenolic body w solid silver alloy fixed and movable contacts. Dual-purpose terminals all connection by soldering or by means of 3/16" quick-connectors. This swit is stocked as a single, unenclosed unit, but is available made-to-order enclosed tandem assemblies up to 10 units or as a single enclosed un

The following Ohmite Tap Switches are listed by the Underwrite Laboratories, Inc., Reexamination Service for use where the acceptability combination (with other apparatus) has been determined by them: Mod 111, 212, 312 and 412. Variations from the basic switch design, identifi by suffixes A, B, C, or X are also Underwriters' approved. When t switches are not factory installed, screw terminals are specified by t Underwriters' Laboratories for Model 312 and soldering lugs for Model 4 Further information on terminal fittings is available on request. When Underwriters' approved unit is required, specify this on the order.

MODEL 711 TAP SWITCH

Alternating Current Rating **7 Amps. 125 Volts** — Diameter 1⅛" — Shaft Diameter ¼" — Standard Mounting: For ⅛" panel maximum, by means of ⅜"-32 threaded bushing and hex. nut. See mounting illustration "A." Weight, single unit: .047 lb. approximately. Dual-purpose terminals accept ¾" quick-connectors as well as soldering. Non-turn lug can be positioned at "12, 3, 6, and 9 o'clock."

Depth Behind Panel		Single Unit
		13/16"
No. of Taps	Total Rotation	Catalog No.[1]
3	60°	711-3
4	90°	711-4
5	120°	711-5
6	150°	711-6
7	180°	(711-7)
8	210°	711-8
9	240°	(711-9)
10	270°	(711-10)
11	300°	(711-11)
Recommended Knobs— (See p. 22 for description)		Catalog No. 5103A

MODEL 111 TAP SWITCH

Alternating Current Rating **15 Amps. 125 Volts** — Diameter 1¾" — Shaft Diame ¼" — Standard Mounting: For ¼" panel maximum, by means of ⅜"-32 threa bushing and hex. nut. See mounting illustration "A." For Tandem Mounting illustration "B." Weight, single unit: .16 lb. approximately.

Depth Behind Panel		Single Unit	2 in Tandem
		1⅛"	2¾"
No. of Taps	Total Rotation	Catalog No.[1]	Catalog No.[1]
3	60°	111-3	111-3 -T2
4	90°	111-4	111-4 -T2
5	120°	111-5	111-5 -T2
6	150°	111-6	111-6 -T2
7	180°	111-7	(111-7 -T2)
8	210°	111-8	111-8 -T2
9	240°	111-9	(111-9 -T2)
10	270°	111-10	(111-10-T2)
11	300°	111-11	111-11-T2
Recommended Knobs— (See p. 22 for description)		Catalog No. 5150A to 5116A	Catalog No. 5109A or 5110A

MODEL 212 TAP SWITCH

Alternating Current Rating **20 Amps. 150 Volts** — Diameter 2¼" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, by means of ⅜"-32 threaded bushing and hex. nut — See mounting illustration "C." Tandem Mounting for ¼" panel maximum, three No. 10-32 flat-head machine screws ⅜" long — See mounting illustration "D." Weight, single unit: .4 lb. approximately.

Depth Behind Panel		Single Unit	2 in Tandem	3 in Tandem
		1¾"	4⅜"	6⅞"
No. of Taps	Total Rotation	Catalog No.[1]	Catalog No.[1]	Catalog No.[1]
3	60°	212-3	212- 3-T2	212- 3-T3
4	90°	212-4	212- 4-T2	(212- 4-T3)
5	120°	212-5	(212- 5-T2)	(212- 5-T3)
6	150°	212-6	212- 6-T2	212- 6-T3
7	180°	212-7	(212- 7-T2)	(212- 7-T3)
8	210°	212-8	212- 8-T2	(212- 8-T3)
9	240°	212-9	(212- 9-T2)	(212- 9-T3)
10	270°	212-10	(212-10-T2)	(212-10-T3)
11	300°	212-11	(212-11-T2)	(212-11-T3)
12	330°	212-12	212-12-T2	(212-12-T3)
Recommended Knobs (See p. 22 for description)		Catalog No. 5150A or 5116A	Catalog No. 5111A or 5112A	Catalog No. 5111A or 5112A

MODEL 312 TAP SWITCH

Alternating Current Rating **30 Amps. 300 Volts** — 150V A.C. between taps Diameter 3⅝" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel ma mum, three No. 10-32 flat-head machine screws ⅜" long — See mtg. illus. " Weight, single unit: .75 lb. approx.

Depth Behind Panel		Single Unit	2 in Tandem	3 in Tandem
		2¼"	4⅝"	7"
No. of Taps	Total Rotation	Catalog No.[1]	Catalog No.[1]	Catalog No.[1]
3	60°	312-3	(312- 3-T2)	(312- 3-T3)
4	90°	312-4	(312- 4-T2)	312- 4-T3
5	120°	312-5	312- 5-T2	312- 5-T3
6	150°	312-6	312- 6-T2	(312- 6-T3)
7	180°	312-7	(312- 7-T2)	(312- 7-T3)
8	210°	312-8	312- 8-T2	312- 8-T3
9	240°	312-9	(312- 9-T2)	312- 9-T3
10	270°	312-10	(312-10-T2)	312-10-T3
11	300°	312-11	(312-11-T2)	(312-11-T3)
12	330°	312-12	(312-12-T2)	312-12-T3
Recommended Knobs (See p. 22 for description		Catalog No. 5109A or 5110A	Catalog No. 5111A or 5112A	Catalog No. 5111A or 5112A

[1] **Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stockin distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.**

© United Technical Publication

OHMITE power tap switches, high current, non-shorting type

MODEL 412 TAP SWITCH

Alternating Current Rating **50 Amps. 300 Volts** — 150V. A.C. between taps — Diameter 4¾₁₆" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum three No. 10-32 flat-head machine screws ⅜" long — See mtg. illus. "E." Weight, single unit: 1.4 lbs. approx.

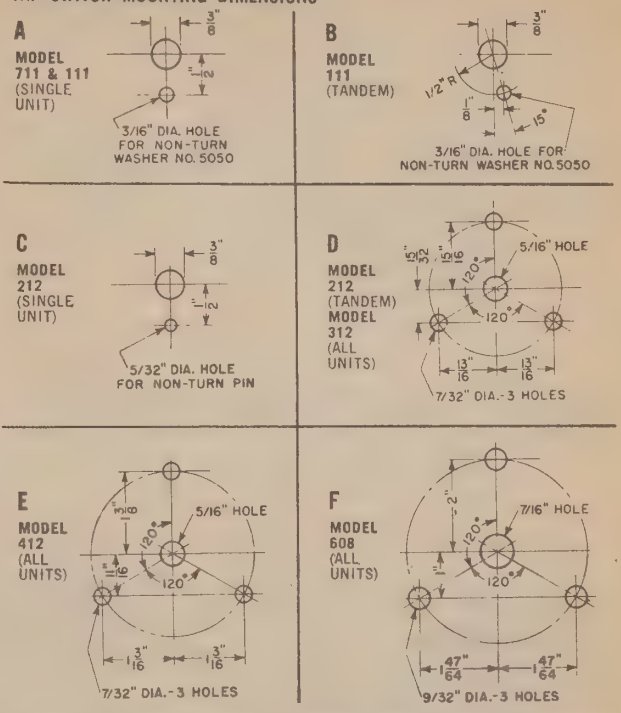
Depth Behind Panel		Single Unit	2 in Tandem	3 in Tandem
		2¾₁₆"	5³²⁄₃₂"	7⅝"
No. of Taps	Total Rotation	Catalog No.[1]	Catalog No.[1]	Catalog No.[1]
3	60°	412-3	412- 3-T2	(412- 3T-3)
4	90°	412-4	(412- 4-T2)	412- 4-T3
5	120°	412-5	(412- 5-T2)	412- 5-T3
6	150°	412-6	(412- 6-T2)	412- 6-T3
7	180°	412-7	412- 7-T2	(412- 7-T3)
8	210°	412-8	412- 8-T2	412- 8-T3
9	240°	412-9	(412- 9-T2)	(412- 9-T3)
10	270°	412-10	412-10-T2	412-10-T3
11	300°	412-11	(412-11-T2)	(412-11-T3)
12	330°	412-12	412-12-T2	412-12-T3
Recommended Knobs (see p 22)		Catalog No. 5111A or 5112A	Catalog No. 5111A or 5112A	Catalog No. 5111A or 5112A

MODEL 608 TAP SWITCH

Alternating Current Rating **100 Amps. 300 Volts** — Diameter 6" — Shaft Diameter ⅜" — Standard Mounting: For 1" panel maximum, three flat-head machine screws ¼"-20 x 1¼" — See mounting illustration "F." Weight, single unit: 5 lbs. approx.

Depth Behind Panel		Single Unit	2 in Tandem	3 in Tandem
		3¾₁₆"	6¹³⁄₁₆"	10⅝₁₆"
No. of Taps	Total Rotation	Catalog No.[1]	Catalog No.[1]	Catalog No.[1]
3	80°	608-3	(608- 3-T2)	(608- 3-T3)
4	120°	608-4	(608- 4-T2)	(608- 4-T3)
5	160°	608-5	(608- 5-T2)	608- 5-T3
6	200°	608-6	608- 6-T2	608- 6-T3
7	240°	608-7	(608- 7-T2)	(608- 7-T3)
8	280°	608-8	608- 8-T2	608- 8-T3
Recommended Knobs (see p 22)		Catalog No. 5104A or 5105A	Catalog No. 5104A, 5115 or 5105A	Catalog No. 5115

TAP SWITCH MOUNTING DIMENSIONS



ALL CERAMIC OPEN TYPE TAP SWITCHES

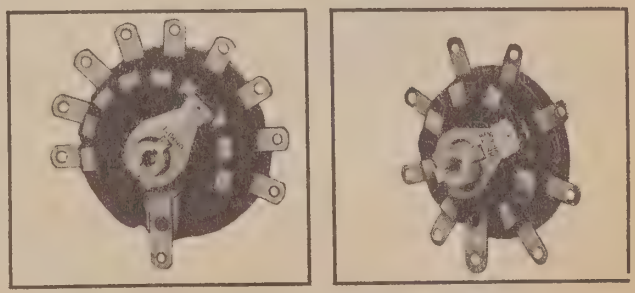
Designed to transfer currents of several amperes in circuits requiring high voltage insulation. Ceramic body construction is the same as employed in Models J and K rheostats (see page 21). Monel metal taps; silver-graphite brush.

SHORTING TYPE SWITCH: Moving contact bridges closely spaced taps completing a new circuit before breaking the previous one. Switch arm is not indexed and can be left in any position.

NON-SHORTING SWITCH: Positively indexed, moving contact completely disconnects from one tap before contacting succeeding tap.

Switches up to 8 taps are approximately 3¼" diameter including lugs; to 12 tap switches are approximately 4¼" diameter. Switches can be ordered assembled 2 to 3 in tandem. Single hole mounting by means of ⅜" diameter bushing and hexagon nut accommodates panels up to ¼" thick (maximum). The "non-turn" lug requires a 3/16" panel hole ½" below the center of the shaft. Shaft diameter is ¼". Recommended knob, Stock No. 5150, see page 22.

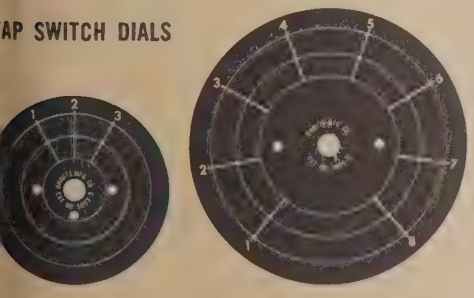
Maximum current capacity is 7 amperes but only 3 amperes at 120 V.A.C. should be interrupted. Current ratings are less for all direct current circuits above 20 volts, for inductive circuits and high voltages.



SHORTING TYPE†		NON-SHORTING TYPE†	
No. of Contacts	Catalog No.[1]	No. of Contacts	Catalog No.[1]
4	(T-504-S)	3	(T-503)
5	(T-505-S)	4	(T-504)
6	(T-506-S)	5	T-505
7	(T-507-S)	6	T-506
8	(T-508-S)	7	(T-507)
9	(T-1009-S)	8	(T-508)
10	(T-10010-S)	9	(T-1009)
11	(T-10011-S)	10	(T-10010)
12	(T-10012-S)	11	(T-10011)
		12	(T-10012)

†Avg. Wt. T-500 Series .28 lb.; T-100 Series .68 lb.

TAP SWITCH DIALS

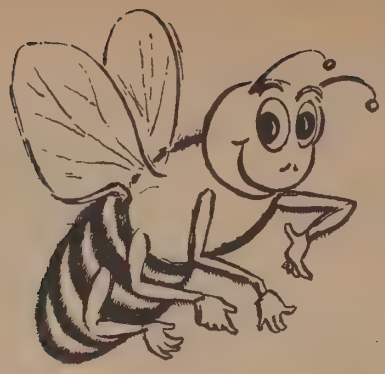


Dials for Ohmite tap switches are made of aluminum, etched and enameled black. Dial markings are bright aluminum. The number of dial calibrations or position markings agree with the actual number of positions on the switch. Note, in the table, that dials for switches Model 212 and 312 are available in two diameters to suit the recommended knob.

Catalog No.[1]	For Model	For Knob	Dial Dia.
5002-*	111 212 (Single) 312 (Single)	5109 5116 5150	2¾"
5003-*	212 (Tandem) 312 (Tandem) 412	5111 5152A	3¾"
5004-*	608	5104 5115	5½"

*Specify no. of positions as a suffix.

© United Technical Publications



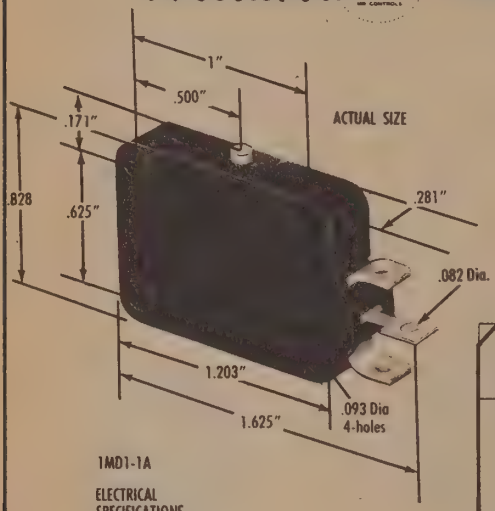
BEE-LINE S.O.S.*

*switches on the shelf

Robertshaw CONTROLS COMPANY

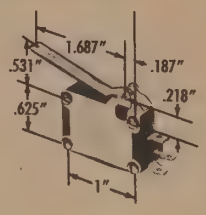
Write for our complete catalog

Robertshaw MINIATURE SWITCHES

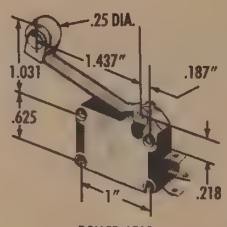


1MD1-1A

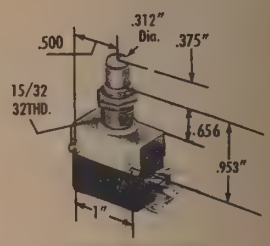
ELECTRICAL SPECIFICATIONS
UL LISTED
10 Amps. 125-250 VAC
5 AMPS 250 VAC



HINGED LEAF ACTUATOR NO. A18



ROLLER LEAF ACTUATOR NO. A18M



PANEL MOUNT PLUNGER ACTUATOR NO. A14

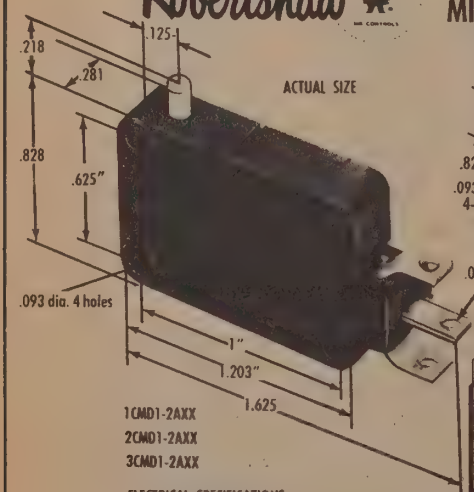
MECHANICAL SPECIFICATIONS

Model No.	Actuator Kit Model No.*	Maximum Operating Force	Minimum Release Force	Maximum Pretravel	Overtravel	Maximum Movement Differential
1MD1-1A	—	6 oz.	1.5 oz.	1/32 in.	.025 in. Max.	.007 in.
1MD1-1A	A18	2 oz.	.5 oz.	5/32 in.	1/16 in. Min.	.050 in.
1MD1-1A	A18M	2 oz.	.5 oz.	3/32 in.	1/16 in. Min.	.050 in.
1MD1-1A	A14	12 oz.	3.0 oz.	1/32 in.	7/32 in. Min.	.050 in.
2MD1-1A	—	10 oz.	3.0 oz.	1/32 in.	.025 in. Max.	.007 in.
2MD3-1A	—	10 oz.	3.0 oz.	1/32 in.	.025 in. Max.	.015 in.
3MD3-1A	—	16 oz.	4.0 oz.	1/32 in.	.025 in. Max.	.015 in.

* Switch and actuator are ordered and shipped separately. All switches have solder terminals.

ORDER BY MODEL NUMBER ONLY

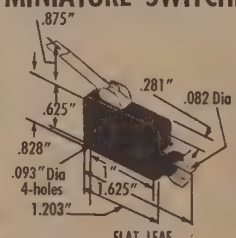
Robertshaw MINIATURE SWITCHES (LIGHT OPERATING FORCE)



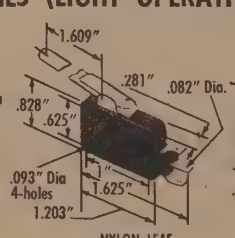
1CMD1-2AXX
2CMD1-2AXX
3CMD1-2AXX

ELECTRICAL SPECIFICATIONS
3 Amp. 125-250 VAC
3 Amp. 28VDC

U.L. LISTING
3 Amp. 125-250 VAC



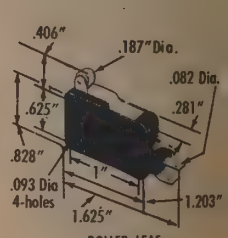
FLAT LEAF ACTUATOR
1CMD1-2AXX-A24
2CMD1-2AXX-A24



NYLON LEAF ACTUATOR
1CMD1-18AXX-A27



WIRE LEAF ACTUATOR
1CMD1-2AXX-A22
2CMD1-2AXX-A22



ROLLER LEAF ACTUATOR
1CMD1-1AXX-A23M

MECHANICAL SPECIFICATIONS

Model No.	Actuator	Maximum Operating Force	Minimum Release Force	Maximum Pretravel	Maximum Overtravel	Maximum Movement Differential
1CMD1-2AXX	—	20-27 gms.	12 gms.	.040 in.	.062 in.	.030 in.
2CMD1-2AXX	—	33-44 gms.	15 gms.	.040 in.	.062 in.	.030 in.
3CMD1-2AXX	—	45-60 gms.	20 gms.	.040 in.	.062 in.	.030 in.
1CMD1-1AXX-A23M	Roller Leaf	5-8 ozs.	2 ozs.	.040 in.	.050 in.	.030 in.
1CMD1-2AXX-A22	Wire Leaf	2.5 gms.	Above characteristics are not applicable to these switches			.500 in.
2CMD1-2AXX-A22	Wire Leaf	4 gms.				.500 in.
1CMD1-2AXX-A24	Flat Leaf	2.5 gms.				.500 in.
2CMD1-2AXX-A24	Flat Leaf	4 gms.				.500 in.
1CMD1-18AXX-A27	Nylon Leaf	6 gms.				.233 in.

All switches have solder terminals.

ORDER BY MODEL NUMBER ONLY

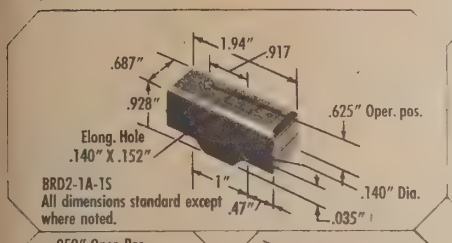
© United Technical Publication

Robertshaw BASIC GENERAL PURPOSE SWITCHES

ELECTRICAL SPECIFICATIONS

15 Amps, 120-240-480 volts A.C.
⅛ HP, 120 VAC
¼ HP, 250 VAC

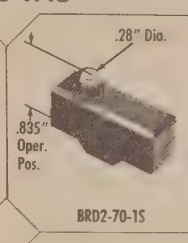
½ Amp, 120 VDC
¼ Amp, 240 VDC
Listed by U.L. and C.S.A.



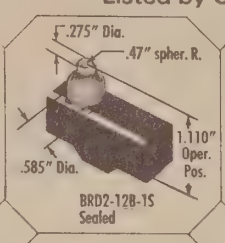
BRD2-1A-1S
All dimensions standard except where noted.



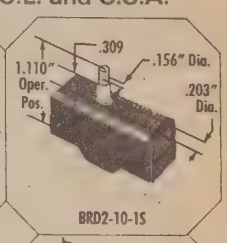
BRD2-1AB-1S
Sealed



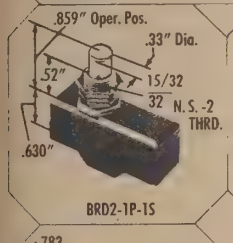
BRD2-70-1S



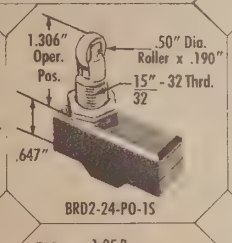
BRD2-12B-1S
Sealed



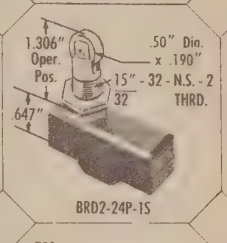
BRD2-10-1S



BRD2-1P-1S



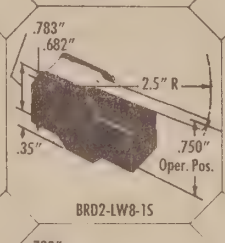
BRD2-24-PO-1S



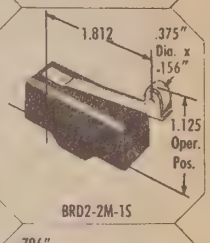
BRD2-24P-1S



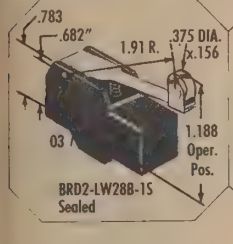
BRD2-5L-1S



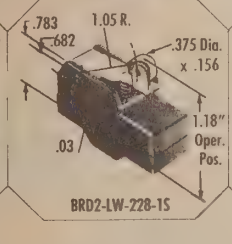
BRD2-LW8-1S



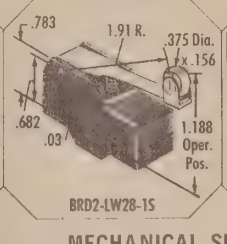
BRD2-2M-1S



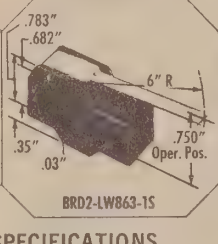
BRD2-LW288-1S
Sealed



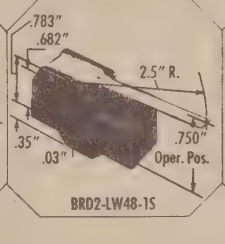
BRD2-LW-228-1S



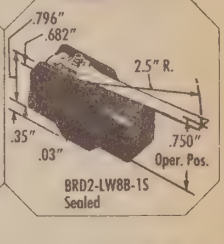
BRD2-LW28-1S



BRD2-LW863-1S



BRD2-LW48-1S



BRD2-LW88-1S
Sealed

MECHANICAL SPECIFICATIONS

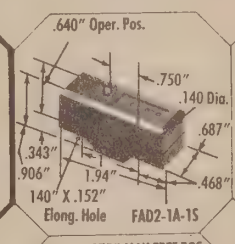
*Model No.	Operating Force	Minimum Release Force	Maximum Pretravel	Minimum Overtravel	Movement Differential
BRD2-1A-1S	9-13 oz.	4 oz.	.020 in. Max.	.005 in.	.0004 to .002 in.
BRD2-1AB-1S	9-15 oz.	4 oz.	.090 in. Max.	.005 in.	.0004 to .002 in.
BRD2-1P-1S	9-13 oz.	4 oz.	.010-.025 in.	7/32 in.	.0004 to .002 in.
BRD2-2M-1S	5 oz. Max.	½ oz.	.156 in. Max.	1/32 in.	.050 in. Max.
BRD2-5L-1S	5 oz. Max.	½ oz.	.156 in. Max.	1/32 in.	.050 in. Max.
BRD2-10-1S	9-13 oz.	4 oz.	.010-.025 in.	1/16 in.	.003 in. Max.
BRD2-12B-1S	13-19 oz.	4 oz.	.005-.095 in.	.062 in.	.003 in. Max.
BRD2-24P-1S	9-13 oz.	4 oz.	.010-.025 in.	.140 in.	.0004 to .002 in.
BRD2-24PO-1S	9-13 oz.	4 oz.	.010-.025 in.	.140 in.	.003 in. Max.

*Model No.	Operating Force	Minimum Release Force	Maximum Pretravel	Minimum Overtravel	Movement Differential
BRD2-70-1S	9-13 oz.	4 oz.	.010-.025 in.	1/16 in.	.003 in. Max.
BRD2-LW8-1S	2½ oz. Max.	½ oz.	9/32-13/32 in.	.187 in.	.016-.078 in.
BRD2-LW8B-1S	2½ oz. Max.	½ oz.	.156 in. Max.	.187 in.	.016-.078 in.
BRD2-LW28-1S	3½ oz. Max.	¾ oz.	.125-.281 in.	.156 in.	.012-.062 in.
BRD2-LW28B-1S	3½ oz. Max.	¾ oz.	.125-.281 in.	.156 in.	.012-.062 in.
BRD2-LW48-1S	1 oz. Max.	⅛ oz.	.156-.328 in.	.187 in.	.016-.078 in.
BRD2-LW228-1S	6 oz. Max.	1½ oz.	.045-.140 Min.	.080 in.	.006-.031 in.
BRD2-LW863-1S	1 oz. Max.	⅛ oz.	½-1 in.	½ in.	.187 in. Max.

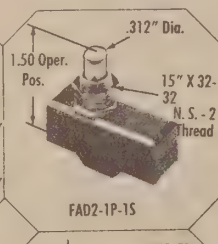
* Switches listed have 6-32 x 7/32 Binder Hd. Screw w/cup washer. Switches are also available with solder, or quick disconnect or side facing terminals. ORDER BY MODEL NUMBER ONLY

Robertshaw HEAVY DUTY GENERAL PURPOSE SWITCHES

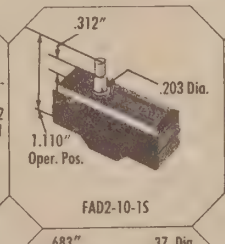
All dimensions standard except where noted.



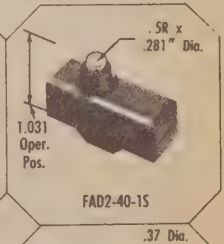
FAD2-1A-1S



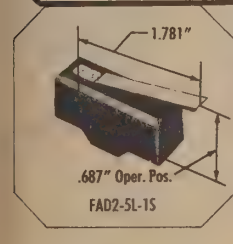
FAD2-1P-1S



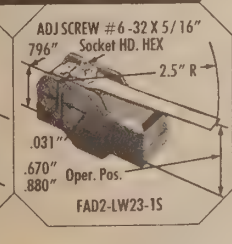
FAD2-10-1S



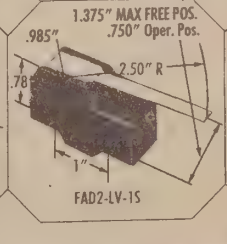
FAD2-40-1S



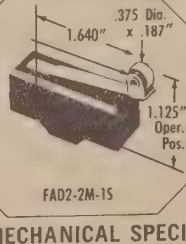
FAD2-5L-1S



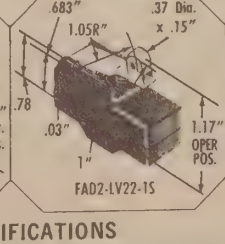
FAD2-LW23-1S



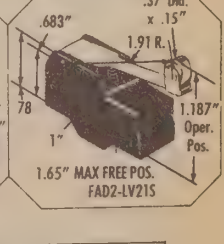
FAD2-LV-1S



FAD2-2M-1S



FAD2-LV22-1S



FAD2-LV21S

ELECTRICAL SPECIFICATIONS

21 Amps 120-240-480 VAC
1 HP, 120 VAC
2 HP, 240 VAC
Listed by U.L. and C.S.A.

MECHANICAL SPECIFICATIONS

Model No.*	Maximum Operating Force	Minimum Release Force	Maximum Pretravel	Minimum Overtravel	Maximum Movement Differential
FAD2-1A-1S	14-22 oz.	10 oz.	.050 in.	.005 in.	.0075 in.
FAD2-1P-1S	14-22 oz.	10 oz.	.050 in.	.219 in.	.0075 in.
FAD2-10-1S	14-22 oz.	10 oz.	.050 in.	1/16 in.	.0075 in.
FAD2-40-1S	14-22 oz.	10 oz.	.050 in.	1/32 in.	.0075 in.
FAD2-5L-1S	9 oz.	1 oz.	11/32 in.	1/32 in.	.065 in.
FAD2-LW23-1S	2½ oz.	½ oz.	.375 in.	.093 in.	.007-.050 in.
FAD2-LV-1S	2½ oz.	½ oz.	5/8 in.	.078 in.	.109 in.
FAD2-2M-1S	9 oz.	1 oz.	11/32 in.	1/32 in.	.065 in.
FAD2-LV22-1S	6 oz.	1 oz.	1/4 in.	1/32 in.	3/64 in.
FAD2-LV2-1S	2½ oz.	½ oz.	15/32 in.	1/16 in.	.085 in.

ORDER BY MODEL NUMBER ONLY * Switches listed have 6-32 x 7/32 Binder Hd. Screw w/cup washer. Switches are also available with solder or quick disconnect terminals.

© United Technical Publications

SPECIALTIES MANUFACTURING CO.

SPEMCO® H & H SWITCHES

TOGGLE SWITCHES 2 POSITION — MAINTAINED



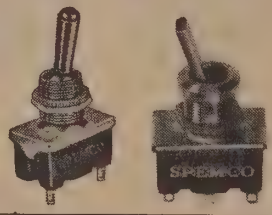
3 AMP — AC/DC

U.L. approved, 1 amp 250 V 3 amp 125 V. AC/DC. Laminated bakelite base. Nickel plated finish.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
*1120	SPST	15/32"	1 3/16"	1/2"	35/64"	$ .78
1122	SPDT	15/32"	1 1/2"	1/2"	35/64"	1.02
1124	DPST	15/32"	1 3/4"	21/32"	9/16"	1.44
1126	DPDT	15/32"	1 3/4"	21/32"	29/32"	1.65
*1121	SPST	1"	1 3/4"	1/2"	35/64"	1.11
1123	SPDT	1"	1 3/16"	1/2"	35/64"	1.32
1125	DPST	1"	1 3/16"	21/32"	35/64"	1.77
1127	DPDT	1"	1 3/4"	21/32"	29/32"	2.01
**1135	SPST	15/32"	1 3/4"	1/2"	35/64"	.78
**1136	SPDT	15/32"	1 1/2"	1/2"	35/64"	1.02
**1137	DPST	15/32"	1 3/4"	21/32"	9/16"	1.44
**1138	DPDT	15/32"	1 3/16"	21/32"	29/32"	1.65
**1121-B	SPST	1"	1 3/16"	1/2"	35/64"	1.11
**1123-B	SPDT	1"	1 1/2"	1/2"	35/64"	1.32
**1125-B	DPST	1"	1 3/4"	21/32"	35/64"	1.77
**1127-B	DPDT	1"	1 3/16"	21/32"	29/32"	2.01

Sleeve Diameter — 15/32" *3 Amp 250 V **Bat Lever

"COMPACT" SWITCH



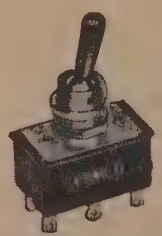
3 AMP — AC/DC

U.L. approved, 1 amp 250 V, 3 amp 125 V, AC/DC. Knife blade contacts. Back wired.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
METAL BAT LEVER						
1205	SPST	15/32"	1 1/32"	41/64"	53/64"	$1.11
1206	SPDT	15/32"	1 1/32"	41/64"	53/64"	1.29
1207	DPST	15/32"	1 1/32"	41/64"	53/64"	1.59
1208	DPDT	15/32"	1 1/32"	41/64"	53/64"	1.80
METAL PADDLE LEVER — SATIN CHROME FINISH						
1205-P	SPST	15/32"	1 1/32"	41/64"	53/64"	$1.53
1206-P	SPDT	15/32"	1 1/32"	41/64"	53/64"	1.80
1207-P	DPST	15/32"	1 1/32"	41/64"	53/64"	2.10
1208-P	DPDT	15/32"	1 1/32"	41/64"	53/64"	2.40

Sleeve Diameter — 15/32"

BAT LEVER MOLDED BAKELITE SWITCH



6 AMP — AC/DC

U.L. approved, 3 amp 250 V, 6 amp 125 V, (except #1143). Back conected, wiping blade contacts. Positive action.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1142	SPST	15/32"	1 1/4"	11/16"	15/16"	$1.11
*1143	SPDT	15/32"	1 1/4"	11/16"	15/16"	1.29
1144	DPST	15/32"	1 1/4"	11/16"	15/16"	1.59
1145	DPDT	15/32"	1 1/4"	11/16"	15/16"	1.80

Sleeve Diameter — 15/32" *1 Amp. 250 V

BALL OR BAT* LEVER TOGGLE SWITCH



6 AMP — AC/DC

U.L. approved, 3 amp 250 V, 6 amp 125 V, molded bakelite base. Nickel plated finished. With 6" wire leads.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1154	SPST	3/8"	7/8"	1/2"	5/16"	$1.14
*1154-B	SPST	3/8"	7/8"	1/2"	5/16"	1.14

Sleeve Diameter — 15/32" *Bat lever

UTILITY SERIES



15 AMP AC

U.L. approved, 10 amp 250 V, AC, 15 amp 125 V, AC. Slow Make and Slow Break, butt type contacts.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1185	SPST	15/32"	1 7/32"	5/8"	31/32"	$ .96
1186	SPDT	15/32"	1 9/32"	5/8"	31/32"	1.14
1188	DPST	15/32"	1 5/16"	3/4"	1 1/16"	1.53
1194	DPDT	15/32"	1 5/16"	3/4"	1 1/16"	1.89
*1198	3PST	15/32"	1 5/16"	1 7/16"	1 1/16"	3.27
*1227	3PDT	15/32"	1 5/16"	1 7/16"	1 1/16"	3.96
*1228	4PDT	15/32"	1 5/16"	1 7/16"	1 1/16"	5.46

Sleeve Diameter — 15/32" *Rated at 10 amp 250 V AC, 15 amp 125 V A 1 H.P. 1-2-3 PH 120 V AC

POWER SWITCHES



10 AMP — AC/DC

U.L. approved, 5 amp 250 V, 10A. 125 V, 3/4 H.P. 240 V, AC 1/2 H.P. 250 V, DC.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1133	SPST	11/32"	1 5/16"	17/32"	1 1/16"	$1.41
**1133-B	SPST		1 5/16"	17/32"	1 1/16"	.99

Sleeve Diameter — 15/32" **Flush Mounting Square Leve

POWER SWITCHES



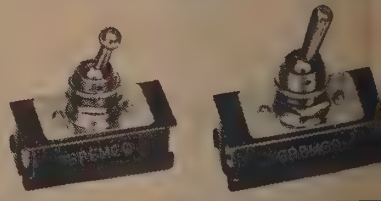
14 AMP — AC/DC

U.L. approved, 7A, 250 V, 14A, 125 V, 3/4 H.P. 250 V, sliding wedge contacts. Fast "break" reduces the tendency to arc.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1161-A	DPDT	13/32"	2"	1 5/16"	1"	$4.95

Sleeve Diameter — 3/4"

POWER SWITCHES



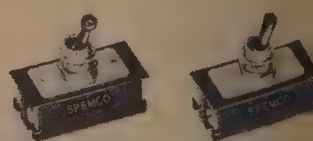
16 AMP — AC/DC

U.L. approved, 8A, 250 V, 16A, 125 V, 1 H.P. 125-250 V.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1159	DPST	15/32"	1 3/4"	1 3/16"	25/32"	$1.62
*1159-B	DPST	15/32"	1 3/4"	1 3/16"	25/32"	1.62
**1159-C	SPDT	15/32"	1 3/4"	1 3/16"	25/32"	1.62

Sleeve Diameter — 15/32" *Bat Lever **Rated at 6A, 250 V, 12A, 125 V.

POWER SWITCHES



20 AMP — AC/DC

U.L. approved, 10A, 250 V, 20A, 125 V, 1 1/2 H.P. 125-250 V.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1134	DPST	15/32"	2"	31/32"	7/8"	$2.76
*1134-B	DPST	15/32"	2"	31/32"	7/8"	2.76

Sleeve Diameter — 15/32" *Bat Leve

Net

© United Technical Publication

POWER SWITCHES

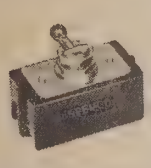


20 AMP — AC/DC

U.L. approved, 10 A, 250 V, 20A, 125 V, 1½ H.P. 250 V, D.C. 2 H.P. 230 V, A.C. 5A, 600 V, 3⅝" mounting centers.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1161-D	DPDT	None	2½"	1 19/32"	1 21/32"	$7.80

POWER SWITCHES





20 AMP — AC/DC

U.L. approved, 20A, 250 V, 1½ H.P., 125 V, 2 H.P. 250 V. Quick make and break contacts.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
*1170	DPST	15/32"	2¼"	1⅛"	15/32"	$3.78
**1170-S	DPST	11/32"	2¼"	1⅛"	15/32"	3.78

Sleeve Diameter — 15/32"

*Bat Lever
**Sleeve Diameter — ½"

HEAVY DUTY TOGGLE SWITCHES

30 AMP — AC/DC

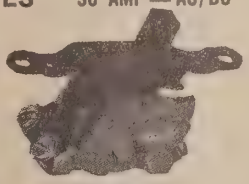
ROLLER TYPE LEVER



1190

SQUARE BAKELITE LEVER

1191

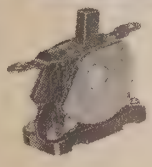


SQUARE BAKELITE LEVER



1191-B

SQUARE BAKELITE LEVER



1191-A

U.L. approved, 30A, 250 V, 2 H.P. 115 V.-230 V, AC 1 H.P. 460 V. AC. Strap type mounting.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1190	DPST	None	2⅝"	1 5/16"	1¾"	$3.20
1191	DPST	None	2⅝"	1 5/16"	1¾"	3.20
*1191-A	DPST	None	2¾"	1 7/16"	2 1/32"	4.00
**1191-B	3PST	None	2¾"	2½"	2 1/32"	12.50

*30A, 250 V, 600 V, 2 H.P. 115 V, 600 V.
**30A, 250 V, 20A, 600 V, 2 H.P. 115-575 V, 3 P.H. AC.

2 POSITION — MOMENTARY



3 AMP — AC/DC

U.L. approved, 3 Amp. 125 V. (except 1166). Laminated bakelite base. Nickel plated finish.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
**1166	SPST	15/32"	1¾"	½"	35/64"	$1.47
1167	SPDT	15/32"	1 9/16"	½"	35/64"	1.53
*1155	DPST	15/32"	1 9/16"	21/32"	35/64"	1.95
1150	DPDT	15/32"	1 9/16"	21/32"	29/32"	2.16

Sleeve Diameter — 15/32"

*1166 Normally Off *1155 Normally Off
**3 Amp. 250 V, AC/DC

2 POSITION — MOMENTARY





15 AMP — AC

Slow make and slow break butt contacts. U.L. approved, 10A, 250 V, AC, 15A, 125 V, AC. ¾ H.P., 120-240 V, AC. Screw terminals.

SPEMCO No.	Circuit	MOM Action	Sleeve Length	Length	Width	Height	Net Each
1196	SPST	On-Off	15/32"	1 7/32"	5/8"	31/32"	$1.41
1241	SPDT	On-On	15/32"	1 7/32"	5/8"	31/32"	1.62
*1197	DPST	On-Off	15/32"	1 5/16"	¾"	1 7/16"	2.19
*1242	DPDT	On-On	15/32"	1 5/16"	¾"	1 1/16"	2.49

Sleeve Diameter — 15/32"

*Rated at 10A, 250 V, AC, 15A, 125 V, AC, ¾ H.P., 115-230 V, AC.

3 POSITION CENTER OFF — MAINTAINED



6 AMP — AC/DC

U.L. approved, 3A, 250 V, 6A, 125 V.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1175	SPDT	15/32"	1 27/32"	1 1/16"	1 3/32"	$2.10
1176	DPDT	15/32"	1 27/32"	1 1/16"	1 3/32"	2.49

Sleeve Diameter — 15/32"

3 POSITION CENTER OFF — MAINTAINED





14 AMP — AC/DC

POSITIVE OFF POSITION. U.L. approved, 7A, 250 V, 14A, 125 V, ¾ H.P. 250 V.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1161	DPDT	13/32"	2"	1 5/16"	1"	$4.95
*1177	3PDT	21/32"	2"	2 1/16"	1 1/8"	7.50
**1178	4PDT	31/32"	2"	2 5/16"	1 1/8"	9.45

Sleeve Diameter — ¾"
*Rated 5A, 250 V, 10A, 125 V, ½ H.P., 115-230 V, AC 3PH.
**Rated 5A, 250 V, 10A, 125 V, ½ H.P., 115-230 V, AC 2PH.

3 POSITION CENTER OFF — MAINTAINED





15 AMP — AC

Slow make and break butt contacts. U.L. approved, 10A, 250 V, AC, 15A, 125 V AC, ¾ H.P., 120-240, AC.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1187	SPDT	15/32"	1 9/32"	5/8"	31/32"	$1.14
1189	DPDT	15/32"	1 5/16"	¾"	1 1/16"	1.89
*1199	3PDT	15/32"	1 5/16"	1 7/16"	1 1/16"	3.96
**1201	4PDT	15/32"	1 5/16"	1 7/16"	1 1/16"	5.40

Sleeve Diameter — 15/32"
*Rated at 10A, 250 V, AC, 15A, 125 V, AC, 1 H.P. 1-2-3 P.H., 120 V, AC.
**Rated at 10A, 250 V, AC, ½ H.P., 115-230 V, AC.

3 POSITION CENTER OFF — MAINTAINED



20 AMP — AC/DC

Quick make, quick break contacts. Three hole strap mounting. POSITIVE OFF POSITION. U.L. approved, 20A, 250 V, 30A, 125 V. 3⅝" mounting center.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
*1161-B	DPDT	None	2½"	1 19/32"	1 21/32"	$7.80
**1161-C	DPDT	None	2 7/8"	1 13/16"	2"	10.65

*Rated at 10A, 250 V, 20A, 125 V, 1½ H.P., 250 V, DC. 2 H.P., 230 V, AC, 5A, 600 V.
**Rated at 20A, 250 V, 30A, 125 V, 2 H.P., 250 V, AC/DC.

TOGGLE SWITCHES
3 POSITION CENTER OFF — MOMENTARY



15 AMP — AC

U.L. approved, 10A, 250 V, AC, 15A, 125 V, AC, ¾ H.P., 120-240 V, AC. (115-230 V. AC acceptable).

SPEMCO No.	Circuit	Mom. • Action	Length	Width	Height	Net Each
1195	SPDT	•On-Off-On•	1 3/32"	5/8"	31/32"	$1.56
1243	SPDT	On-Off-On•	1 3/32"	5/8"	31/32"	1.65
*1193	DPDT	•On-Off-On•	1 5/16"	¾"	1 1/16"	2.52
*1244	DPDT	On-Off-On•	1 5/16"	¾"	1 1/16"	2.43
**1236	3PDT	•On-Off-On•	1 5/16"	1 7/16"	1 1/16"	4.32
**1235	3PDT	On-Off-On•	1 5/16"	1 7/16"	1 1/16"	4.32
*1237	4PDT	•On-Off-On•	1 5/16"	1 7/16"	1 1/16"	8.70

Sleeve Diameter and Length — 15/32"
*Rated at 10A, 250 V, AC, 15A, 125 V, AC, ¾ H.P., 115-230 V, AC.
**Rated at 10A, 250 V, AC, 15A, 125 V, AC, 1 H.P., 1-2-3 Ph. 120 V, AC.

© United Technical Publications

SPECIALTIES MANUFACTURING CO.

SPEMCO® H & H SWITCHES

TOGGLE SWITCHES

15 AMP — AC

U.L. approved, 10A, 250 V, 15A, 125 V. AC.



SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1245	Off-On-Mom-On	15/32"	1 3/32"	3/4"	1 1/16"	$3.27
*1246	On-On-On	15/32"	1 3/32"	3/4"	1 1/16"	$1.98

Sleeve Diameter — 15/32" *3 circuit, 3 position.

DOUBLE ACTION / PUSH-PUSH SWITCHES

3 AMP — AC/DC

Quick make and break, U.L. approved, 1 Amp. 250 V, 3 Amp, 125 V, solder lug terminals, wiping blade mechanism.



SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1215	SPST	9/16"	1 1/32"	41/64"	13/16"	$1.41
**1215-B	SPST	9/16"	1 1/32"	41/64"	13/16"	1.71
*1215-R	SPST	9/16"	1 1/32"	41/64"	13/16"	1.71
1216	SPDT	9/16"	1 1/32"	41/64"	13/16"	1.59
**1216-B	SPDT	9/16"	1 1/32"	41/64"	13/16"	1.92
*1216-R	SPDT	9/16"	1 1/32"	41/64"	13/16"	1.92
1217	DPST	9/16"	1 1/32"	41/64"	13/16"	2.04
**1217-B	DPST	9/16"	1 1/32"	41/64"	13/16"	2.37
*1217-R	DPST	9/16"	1 1/32"	41/64"	13/16"	2.37
1218	DPDT	9/16"	1 1/32"	41/64"	13/16"	2.16
**1218-B	DPDT	9/16"	1 1/32"	41/64"	13/16"	2.46
*1218-R	DPDT	9/16"	1 1/32"	41/64"	13/16"	2.46

Sleeve Diameter — 15/32" *Red Button **Black Button (just number-nickel)

6 AMP — AC/DC

U.L. approved, 3 Amp. 250 V, 6 Amp. 125 V, wiping blade contacts.

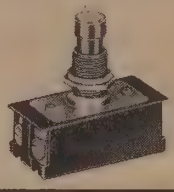


SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1156	SPST	9/16"	1 3/32"	1/2"	9/16"	$1.29
*1156-A	SPST	9/16"	1 3/32"	1/2"	9/16"	1.62
**1156-B	SPST	9/16"	1 3/32"	1/2"	9/16"	1.62

Sleeve Diameter — 15/32" *Red Button **Black Button

16 AMP — AC/DC

U.L. approved, 8A, 250 V, 16A, 125 V, 1 H.P., 125-250 V. Wiping contacts.



SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1247	DPST	9/16"	1 3/4"	13/16"	25/32"	$2.76
*1248	DPST	9/16"	2"	1"	7/8"	3.81

Sleeve Diameter — 15/32" *Rated at 10A, 250 V, 20A, 125 V, 1 1/2 H.P. 125-250 V.

PUSH SWITCHES — MOMENTARY CONTACT

1 AMP — AC

U.L. approved, 1A, 125 V, AC, 3/4A, 125 V, DC. Slow make, slow break.



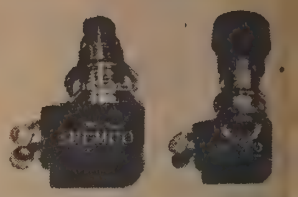
SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
*1158-A	2 Circuit 1 Open/ 1 Closed	1 9/16"	7/16"	1/2"	17/32"	$1.41
**1158-B	2 Circuit 1 Open/ 1 Closed	1 9/16"	7/16"	1/2"	17/32"	1.41

Sleeve Diameter — 15/32" *Red Button **Black Button

PUSH SWITCHES — MOMENTARY CONTACT

3 AMP — AC

U.L. approved, 3 Amp, 120 V, AC. Slow make and break. 1/10 H.P. 120 V, AC, 1A, 250 V, AC.



SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1141	SPST N/C	9/16"	1 1/16"	9/16"	1/2"	$ .69
1141-A	SPST N/O	9/16"	1 1/16"	9/16"	1/2"	.69
*1157-A	SPST N/O	9/16"	1 1/16"	9/16"	1/2"	1.17
**1157-B	SPST N/O	9/16"	1 1/16"	9/16"	1/2"	1.17
*1157-C	SPST N/C	9/16"	1 1/16"	9/16"	1/2"	1.17
**1157-D	SPST N/C	9/16"	1 1/16"	9/16"	1/2"	1.17

Sleeve Diameter — 15/32" *Red Button **Black Butto

3 AMP — AC/DC

Quick make and break, U.L. approved, 1 Amp. 240 V, 3 Amps. 125 V, AC/DC, double wiping blade mechanism.



SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1219	SPST	9/16"	1 1/32"	41/64"	13/16"	$1.74
**1219-B	SPST	9/16"	1 1/32"	41/64"	13/16"	2.04
*1219-R	SPST	9/16"	1 1/32"	41/64"	13/16"	2.04
1220	SPDT	9/16"	1 1/32"	41/64"	13/16"	2.01
**1220-B	SPDT	9/16"	1 1/32"	41/64"	13/16"	2.31
*1220-R	SPDT	9/16"	1 1/32"	41/64"	13/16"	2.31
1221	DPST	9/16"	1 1/32"	41/64"	13/16"	2.34
**1221-B	DPST	9/16"	1 1/32"	41/64"	13/16"	2.64
*1221-R	DPST	9/16"	1 1/32"	41/64"	13/16"	2.64
1222	DPDT	9/16"	1 1/32"	41/64"	13/16"	2.52
**1222-B	DPDT	9/16"	1 1/32"	41/64"	13/16"	2.82
*1222-R	DPDT	9/16"	1 1/32"	41/64"	13/16"	2.82

Sleeve Diameter — 15/32" *Red Button **Black Button (just number-nickel)

6 AMP — AC/DC

U.L. approved, 6 Amp. 125 V, 3 Amp. 250 V, AC/DC.



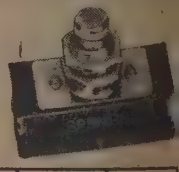
SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1146	SPST N/O	1/2"	1 1/4"	1 1/16"	15/16"	$2.10
*1147	SPDT	1/2"	1 1/4"	1 1/16"	15/16"	2.28
1148	DPST N/O	1/2"	1 1/4"	1 1/16"	15/16"	2.58
1149	DPDT	1/2"	1 1/4"	1 1/16"	15/16"	2.79

Sleeve Diameter — 15/32" *Rated at 1A, 250 V, 6A, 125 V

MOMENTARY POWER SWITCHES

16 AMP — AC/DC

U.L. approved, 8 Amp. 250 V, 16A, 125 V, 1 H.P., 125-250 V.

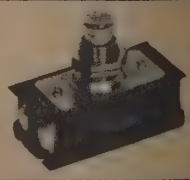


SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1160	DPST N/O	7/16"	1 3/4"	1 3/16"	1 3/16"	$2.37
1160-A	DPST N/C	7/16"	1 3/4"	1 3/16"	1 3/16"	2.37

Sleeve Diameter — 15/32"

20 AMP — AC/DC

U.L. approved, 10 Amp, 250 V, 20 Amp, 125 V, 1 1/2 H.P., 125-250 V.



SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1230	DPST N/O	7/16"	2"	1"	7/8"	$3.72
1231	DPST N/C	7/16"	2"	1"	7/8"	3.72

Sleeve Diameter — 15/32"

Net

© United Technical Publications

METAL PUSHBUTTON TYPE NORMALLY OPEN



20 AMP

U.L. approved, 20A, 250 V, 2 H.P., 230 V, AC, 250 V, DC. Quick make and break.

SPEMCO No.	Circuit	Length	Width	Height	Net Each
1192	DPST N/O	2 3/32"	1 3/4"	1 1/4"	$4.00

NYLON PUSHBUTTON TYPE NORMALLY OPEN



20 AMP

U.L. approved, 20A, 120-240 V, AC, 2 H.P., 240 V, AC. Enclosed bakelite, side wired. Natural color. Nylon push button.

SPEMCO No.	Circuit	Length	Width	Height	Net Each
1240	DPST N/O	2 1/4"	1 1/4"	1"	$4.00

Mounting strap 3 3/32" 3/4" dis. 2 holes.

ROTARY CANOPY SWITCHES 2 POSITION — MAINTAINED



3 AMP — AC/DC

U.L. approved, 1A, 250 V, 3A, 125 V. Fixed plastic handle.

SPEMCO No.	Circuit	Stem	Wire Lead	Net Each
1179	SPST	7/16"	6"	$.66



3 AMP — AC/DC

U.L. approved, 1A, 250 V, 3A, 125 V, (except #1128)

SPEMCO No.	Circuit	Spindles Length	Sleeve Length	Length	Width	Height	Net Each
*1128	SPST	1 1/8"	3/8"	1 3/16"	3/4"	5/16"	$1.26
1129	SPDT	1 1/8"	3/8"	1 7/16"	3/4"	5/16"	1.53
1130	DPST	1 1/8"	3/8"	1 1/2"	3/4"	11/32"	1.89
1131	DPDT	1 1/8"	3/8"	1 1/2"	3/4"	1 1/8"	2.28

Sleeve Diameter — 11/32" *Rated at 3 Amp, 250 V, AC/DC.

ROTO-LOCK SWITCH



3 AMP — AC/DC

U.L. approved, 1A, 250 V, 3A, 125 V, (except SPST switches). One key supplied with each switch.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
*1128-K	SPST (Key removable in Off position only)	15/32"	1 3/16"	3/4"	5/16"	$2.10
1128-KA	Key only for above switch					.27
*1128-KE	SPST (Key removable in either position)	15/32"	1 3/16"	3/4"	5/16"	2.10
1129-K	SPDT (Key removable in either position)	15/32"	1 3/16"	1/2"	5/16"	2.13
1131-K	DPDT (Key removable in either position)	15/32"	1 3/16"	3/4"	3/4"	2.82
1128-KEA	Key only, fits 1128-KE, 1129-K, 1131-K					.27

Sleeve Diameter — 15/32" *Rated at 3 Amp, 250 V.



20 AMP — AC

U.L. approved, 20A, 120-240 AC, 1 1/2 H.P., 120 V, AC, 2 H.P., 120 V, AC. Slow make and break. Key removable in OFF position ONLY.

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
1130-K	DPST	3/16"	1 13/64"	1 11/64"	31/32"	$3.15
1130-KA	Key only for above switch					.33

Sleeve Diameter — 15/32"

LOCKING BRACKET



FOR ALL BAT HANDLE TOGGLE OR MOMENTARY SWITCHES — ANY AMP

Fits over 15/32" Sleeve Diameter

SPEMCO No.	Net Each
1226 — Bracket	$2.22
1226-A — Key only	.33

TUMBLER LOCK SWITCH



6 AMP — AC/DC

Security type tumbler lock switch, with single hole mounting sleeve. Quick make and break wiping action, and therefore can be considered for both medium power (up to maximum rating) or low energy circuits. All 6 Amp, 125 V, AC/DC, 3 Amp, 250 V, AC/DC — except 1261 and 1265, which are rated at 6 Amp, 125 V, AC/DC, 1 Amp, 250 V, AC/DC.

Circuit	Key Removable In Off Only		Key Removable In Either Position	
	SPEMCO No.	Net Each	SPEMCO No.	Net Each
SPST	1264	$10.90	1260	$10.90
SPDT	*1265	11.20	*1261	11.20
DPST	1266	11.50	1262	11.50
DPDT	1267	11.90	1263	11.90

*Rated at 1 Amp, 250 V, 6 Amp, 125 V.

INDICATING SLIDE LEVER SWITCH



6 AMP — AC/DC

U.L. approved, 3A, 250 V, 6A, 125 V, screw terminal.

SPEMCO No.	Circuit	Length	Width	Height	Net Each
1174	SP	7/8"	1/2"	11/32"	$1.74

Tongue-mounting hole.

PORTABLE TOOL HANDLE SWITCH



16 AMP — AC

U.L. approved, 8A, 250 V, 16A, 125 V, 1 H.P., 250 V. Quick make and break with locking latch.

SPEMCO No.	Circuit	Length	Width	Height	Net Each
1168	DPST N/O	1 3/4"	13/16"	7/8"	$2.40

FEED-THROUGH CORD SWITCH



10 AMP

U.L. approved, 5 Amp, 250 V, 10 Amp, 125 V, black bakelite case with sliding lever 5/16 cord hole.

SPEMCO No.	Circuit	Net Each
1163	SP	$1.86

15 AMP

13/32" (.406) inch cord hole for Appliance use only. U.L. approved, 10 Amp, 250 V, 15 Amp, 125 V.



SPEMCO No.	Circuit	Net Each
1164	DP (with 3rd wire ground)	$5.85

MILITARY TYPE TOGGLE SWITCHES

Manufactured of materials and in accordance with specification MIL-S-3950, MS-25098 and MS-35058 — Single Pole. MS-25100 and MS-35059 — Double Pole.





MS Part No.	Up Position	Center Position	Down Position Keyway Side	Each List
MS-25098-22	On	None	Off	$2.21
MS-25098-23	On	None	On	2.34
MS-25100-22	On	None	Off	2.81
MS-25100-23	On	None	On	3.00
MS-35058-21	On	Off	On	2.24
MS-35058-22	On	None	Off	1.96
MS-35058-23	On	None	On	2.24
MS-35058-24	On	Off	None	1.96
MS-35058-25	On	Mom. Off	None	2.24
MS-35058-26	On	None	Mom. On	2.37
MS-35058-27	Mom. On	Off	Mom. On	2.37
MS-35058-28	None	Off	Mom. On	2.24
MS-35058-29	On	None	Mom. Off	2.17
MS-35058-30	Off	None	Mom. On	2.17
MS-35058-31	On	Off	Mom. On	2.37
MS-35059-21	On	Off	On	2.89
MS-35059-22	On	None	Off	2.56
MS-35059-23	On	None	On	2.89
MS-35059-24	On	Off	None	2.56
MS-35059-25	On	Mom. Off	None	3.33
MS-35059-26	On	None	Mom. On	3.23
MS-35059-27	Mom. On	Off	Mom. On	3.33
MS-35059-28	None	Off	Mom. On	3.05
MS-35059-29	On	None	Mom. Off	3.15
MS-35059-30	Off	None	Mom. On	2.89
MS-35059-31	On	Off	Mom. On	3.23

© United Technical Publications

SPECIALTIES MANUFACTURING CO.

SPEMCO® H & H SWITCHES

SUBMINIATURE SWITCHES

Meeting requirements of MIL-S-3950 as applicable to SCL-6305

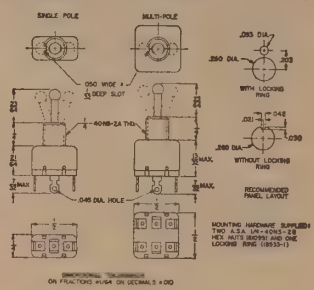
SPEEMCO Subminiature Switches are 1/10 the volume of the standard switch.

Photos are actual size of switches.

U.L. approved, 5A, 125 V, AC, 5A, 29 V DC butt type contacts, sleeve diameter ¼", combination solder, quick connect terminals ball lever.

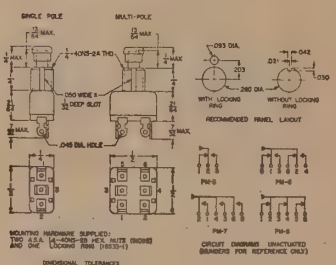


ACTUAL SIZE





ACTUAL SIZE



SPEMCO No.	Circuit	One Ext. Position Kwy. Side	Center Position	Other Ext. Position	MS Part No.	Net Each
TC-3	SPDT	On	Off	On		$3.00
*TC-3-M	SPDT	On	Off	On	MS-75028-21	3.20
TE-3	SPDT	Mom. On	Off	On		3.20
*TE-3-M	SPDT	Mom. On	Off	On	MS-75028-31	3.40
TG-3	SPDT	Mom. On	Off	Mom. On		3.20
*TG-3-M	SPDT	Mom. On	Off	Mom. On	MS-75028-27	3.40
TM-3	SPDT	Mom. On	None	On		3.20
*TM-3-M	SPDT	Mom. On	None	On	MS-75028-26	3.40
TS-1	SPST	Off	None	On		2.80
*TS-1-M	SPST	Off	None	On	MS-75028-22	3.00
TS-2	DPST	Off	None	On		3.40
*TS-2-M	DPST	Off	None	On	MS-75029-22	3.60
TS-3	SPDT	On	None	On		3.00
*TS-3-M	SPDT	On	None	On	MS-75028-23	3.20
TC-6	DPDT	On	Off	On		3.90
*TC-6-M	DPDT	On	Off	On	MS-75029-21	4.10
TE-6	DPDT	Mom. On	Off	On		5.00
*TE-6-M	DPDT	Mom. On	Off	On	MS-75029-31	5.20
TG-6	DPDT	Mom. On	Off	Mom. On		5.00
*TG-6-M	DPDT	Mom. On	Off	Mom. On	MS-75029-27	5.20
TM-6	DPDT	Mom. On	None	On		5.00
*TM-6-M	DPDT	Mom. On	None	On	MS-75029-26	5.20
TS-6	DPDT	On	None	On		3.90
*TS-6-M	DPDT	On	None	On	MS-75029-23	4.10
11-B Black rubber boot for above.						1.00

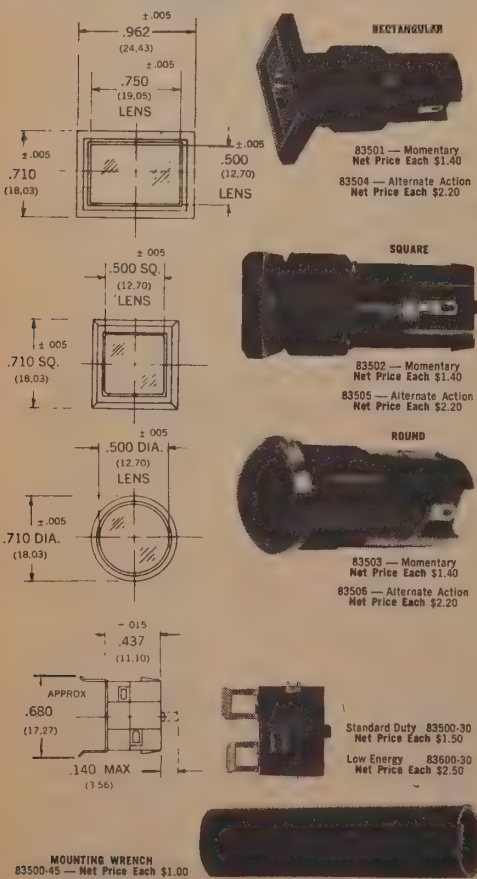
*Bat Lever

SPEMCO No.	Circuit	Sleeve Length	Length	Width	Height	Net Each
PM-3	SPDT	¼"	½"	¼"	35/64"	$2.86
PM-6	DPDT	¼"	½"	¼"	35/64"	3.51
PM-7	3PST N/O	¼"	½"	¼"	35/64"	3.31
PM-8	3PST N/C	¼"	½"	¼"	35/64"	4.65
10-B Black rubber boot						1.00

SUBMINIATURE PUSHBUTTON SWITCHES—MOMENTARY

SPEEMCO Subminiature Switches are 1/10 the volume of the standard switch. Photo is actual size of switch.
U.L. approved, 2 Amp, 29 V, DC, 1 Amp, 115 V, AC butt type contacts, combination solder, quick connect terminals supplied with standard .215" white buttons. When colored buttons are required, add 10 cents to cost of switch. Colors: black, red, yellow, green and brown.

LIGHTED PUSHBUTTON SWITCHES



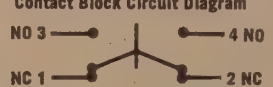
These Push Button Switches, both lighted and non-illuminated as well as indicators only, offer the maximum in design flexibility. From 31 standard components, 25,344 different switches may be built. The "Building Block" concept means you can construct your own Pushbuttons through easy fingertip assembly. No tools are required. Lenses come in three shapes: round, square and rectangular; each in seven colors. Actuators are either momentary or alternate action. Snap-on contact blocks can build up to 4-pole momentary or 3-pole alternate action pushbutton switches.

The component parts have been U.L. listed for both standard duty and dry circuit or logic load applications:

Standard Duty — Silver Contacts	Low Energy — Gold Plated Contacts
5 Amps. 125 VAC	For applications under 100 Milliwatts
2 Amps. 250 VAC	Minimum rating — 10 Micro
5 Amps. 28 VDC	Amps. 50 MV

At these ratings the switches minimum mechanical and electrical life has been tested to exceed 100,000 cycles.

Contact Block Circuit Diagram



Type of Circuit	Wire to Terminals
Form A	3-4
Form B	1-2
Form C	1-3 Common 2-4
Form Z	1-2-3-4

Contacts are momentary or alternate action depending on which Actuator-Indicator is used. Each contact block is 2 circuit and contact mechanism is of positive snap-acting design. Each contact block must be used on same polarity.

Number of Contact Blocks Needed			
SPST	1	3PST	3
SPDT	1	3PDT	3
DPST	2	4PST	4
DPDT	2	4PDT	4

LENS		Net Each	LENS		Net Each	LENS		Net Each
Rectangular	White 83500-70	.20	Square	White 83500-80	.20	Round	White 83500-90	.20
Rectangular	Red 83500-71	.20	Square	Red 83500-81	.20	Round	Red 83500-91	.20
Rectangular	Green 83500-72	.20	Square	Green 83500-82	.20	Round	Green 83500-92	.20
Rectangular	Blue 83500-73	.20	Square	Blue 83500-83	.20	Round	Blue 83500-93	.20
Rectangular	Yellow 83500-74	.20	Square	Yellow 83500-84	.20	Round	Yellow 83500-94	.20
Rectangular	Amber 83500-75	.20	Square	Amber 83500-85	.20	Round	Amber 83500-95	.20
Rectangular	Black 83500-76	.20	Square	Black 83500-86	.20	Round	Black 83500-96	.20

LAMPS

Use standard incandescent midget grove base lamp size T-1¾ 6 Volt (#337), 14 Volt (#336), 28 Volt (#334).

OPTIONAL FEATURES

Snap-on clip to convert any actuator to indicator — 83500-51
Snap-on chrome bezel (round only) — 83500-46
Mounting wrench — 83500-45

HOW TO ORDER:

a) Determine lens shape and color — specify catalog number.
b) Determine shape and action of actuator-indicator required — specify catalog number
c) Determine number poles required, standard duty or low energy — specify catalog number.
d) Determine optional features.

Net

© United Technical Publications

GP3-Z1 — Z2
HD3-Z1 — Z2

GP3-T1 — T2
HD3-T1 — T2

GP3-Q1 — Q2
HD3-Q1 — Q2

GP3-Y1 — Y2
HD3-Y1 — Y2

GP3-X1 — X2
HD3-X1 — X2

GP3-W1 — W2
HD3-W1 — W2

GP3-V1 — V2
HD3-V1 — V2

GP3-U1 — U2
HD3-U1 — U2



GENERAL PURPOSE PRECISION SWITCHES—SPDT

H & H General Purpose Precision Switches feature high electrical rating combined with very low operating force and long life. SPDT units may be wired normally open or normally closed.
UL and CSA approved: 15 amp. 480 VAC, ½ amp. 125 VDC, ¼ amp. 250 VDC.

SPEMCO No. Solder Lug	List Each	SPEMCO No. Screw Term.	List Each	*1 Actuator	Operating Force	Pretravel	Overtravel
GP3-Z1	$1.80	GP3-Z2	$1.90	Pin Type	9 to 13 oz.	.015″ max.	.005″ min.
GP3-T1	2.05	GP3-T2	2.30	Flexible Leaf	5 oz. max.	3/32″ max.	Not over 1/16″
GP3-Q1	2.70	GP3-Q2	2.85	Std. Roller Leaf	5 oz. max.	5/32″ max.	Not over 1/16″
GP3-Y1	2.35	GP3-Y2	2.40	Rigid Hinge Lever	2½ oz.	3/8″ max.	.219″ min.
GP3-X1	2.95	GP3-X2	3.00	Std. Roller Lever	3½ oz. max.	5/32″ max.	.156″ min.
GP3-W1	2.95	GP3-W2	3.00	Short Roller Lever	6 oz. max.	1/8″ max.	3/32″ min.
GP3-V1	2.40	GP3-V2	2.45	Short Overtravel Button	9 to 13 oz.	1/8″ max.	1/16″ min.
GP3-U1	4.00	GP3-U2	4.10	Panel Mounted Plunger	9 to 13 oz.	1/4″ max.	1/32″ min.

HEAVY DUTY PRECISION SWITCHES—SPDT

H & H Heavy Duty Precision Switches provide high inrush capacity and retain similar performance and actuating characteristics found in the General Purpose units.
SPDT switches can be wired normally open or normally closed. UL and CSA approved: 20 amp. 480 VAC, 10 amp. 125 VAC "L" load, ½ amp. 125 VDC, ¼ amp. 250 VDC, 1 H.P. 120 VAC, 2 H.P. 240 VAC.

SPEMCO No. Solder Lug	List Each	SPEMCO No. Screw Term.	List Each	*1 Actuator	Operating Force	Pretravel	Overtravel
HD3-Z1	$2.15	HD3-Z2	$1.95	Pin Type	14 to 22 oz.	.050″ max.	.010″ min.
HD3-T1	2.45	HD3-T2	2.30	Flexible Leaf	9 oz. max.	11/32″ max.	Not over 1/16″
HD3-Q1	3.05	HD3-Q2	2.85	Std. Roller Leaf	9 oz. max.	11/32″ max.	Not over 1/16″
HD3-Y1	2.75	HD3-Y2	2.50	Rigid Hinge Lever	2½ oz. max.	5/8″ max.	.078″ min.
HD3-X1	3.30	HD3-X2	3.10	Std. Roller Lever	2½ oz. max.	15/32″ max.	1/16″ min.
HD3-W1	3.30	HD3-W2	3.10	Short Roller Lever	6 oz. max.	1/4″ max.	1/32″ min.
HD3-V1	2.70	HD3-V2	2.45	Short Overtravel Button	14 to 22 oz.	.050″ max.	.093″ min.
HD3-U1	4.35	HD3-U2	4.10	Panel Mounted Plunger	14 to 22 oz.	.050″ max.	.219″ min.

*1 Switches are mounted by two .140 inch diameter holes on one inch centers.

CORD CONNECTORS

10 AMP



Brown Bakelite Cord Connector Complete, 7/8″ O.D. x 2½″ long. 10 amps. 250 volts. End opening for wire size up to 3/8″ O.D.

SPEMCO No.	Description	Net Each
1162	Complete	$2.58
1162-F	Female Part	1.32
1162-M	Male Part	1.32

PHENOLIC SNAP-ON BUTTON

SPEMCO No.	Color	Net Each
1212-B	Black	$.33
1212-R	Red	.33
1212-W	White	.33

HARDWARE

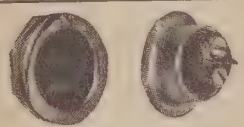
For 15/32″ diameter sleeve.



SPEMCO No.	Description	Net Each
1132-HL	Hi-Lo Plate	$0.51
1132	On and Off Plate	.051
1132-H	Hex Nut	.036
1132-K	Knurled Nut	.036
1210	Lockwasher	2.85 per C
1211	Locking Ring	5.10 per C

RECEPTACLES

SHORT FEMALE FLUSH RECEPTACLES — 10 AMP



U.L. approved, 10 amp. 250 volts AC.

SPEMCO No.	Description	Net Each
80326	2 Screw Mounting	$1.47
80327	Lock Nut Mounting	2.31

RECESSED MALE RECEPTACLES — 10 AMP



SPEMCO No.	Description	Net Each
80328	2 Screw Mounting	$1.65
80329	Lock Nut Mounting	2.31

RECESSED FEMALE RECEPTACLES — 10 AMP



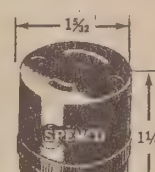
SPEMCO No.	Description	Net Each
80331	Lock Nut Mounting	$2.31

TURN TO LOCK COMPACT RECEPTACLES — 3-WIRE GROUNDING TYPE

15 AMP — 125 VOLT

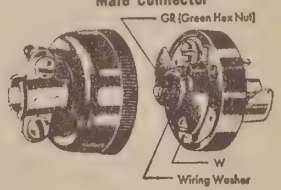
Brass metal casings, finished to resist corrosion. Black bakelite is standard.

Female Connector



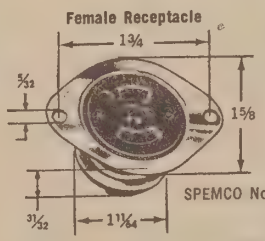
SPEMCO No. 1250 — Net Price Each $2.76

Male Connector



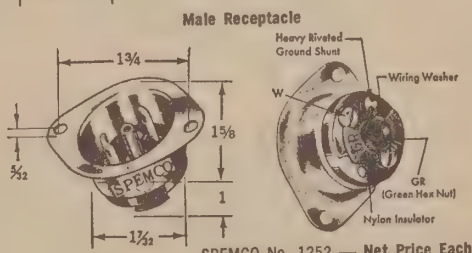
SPEMCO No. 1251 — Net Price Each $2.10

Female Receptacle



SPEMCO No. 1253 — Net Price Each $2.97

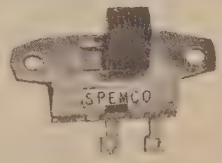
Male Receptacle



SPEMCO No. 1252 — Net Price Each $2.55

All aforementioned switches, connectors and receptacles are manufactured by H & H for Specialties Manufacturing Co.

SLIDE SWITCHES



Housings are made of steel and are cadmium plated, 1 13/32″ long, 25/64″ wide and 1 1/8″ mounting centers.

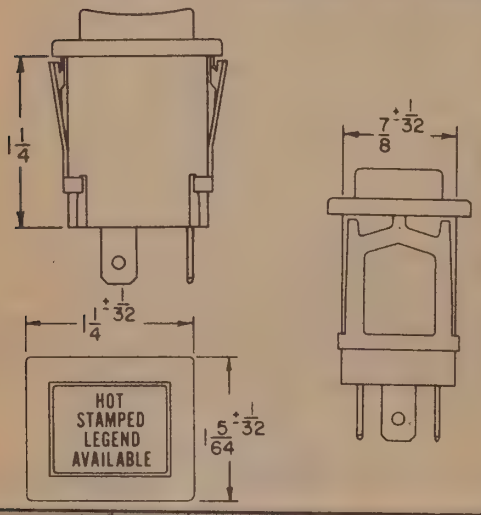
SPEMCO No.	Description	Net Each
1180	SPST 3A-AC .5A-DC 125 V	$.156
1181	SPDT .75A AC-DC 125 V	.168
1182	DPST .5A AC-DC 125 V	.216
1183	DPDT 3A-AC .5A-DC 125 V	.258

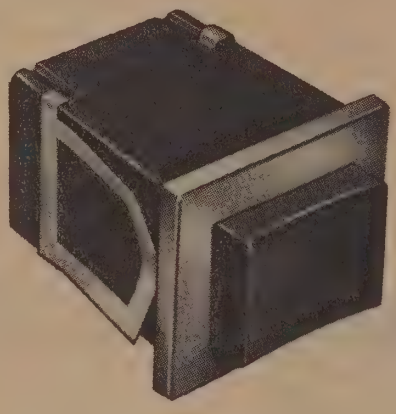
© United Technical Publications

LIGHTED PUSH-BUTTON SWITCHES

molex®

Both the Molex 1175 and 1820 are lighted push button switches that are sturdy well-designed and offer a wide choice of features. They are available in alternate action; momentary normally open or momentary normally closed models. The switch snaps mount into place and are offered with spade terminals. Many variations are possible. The button comes in red, amber, white and green.





1175 SWITCH



1820 SWITCH

Catalog Number	Volts AC	Amps	Lamp	Button Color	Legend	Legend Color	Switch Action	1-9 Each	10-24 Each	25-49 Each	50-Over Each
117510	6	2	Incandescent	W, R, G, A	None	N/A	PP	$3.38	$2.76	$2.46	$2.34
							MNO, MNC	3.42	2.80	2.49	2.37
117520	14	2	Incandescent	W, R, G, A	None	N/A	PP	3.33	2.73	2.42	2.30
							MNO, MNC	3.38	2.76	2.46	2.34
117530	28	2	Incandescent	W, R, G, A	None	N/A	PP	3.45	2.83	2.51	2.38
							MNO, MNC	3.50	2.86	2.54	2.41
117540	125*	8.5	Neon	W, R, G, A	None	N/A	PP	3.61	2.95	2.62	2.49
							MNO, MNC	3.70	3.02	2.69	2.56
117560	6	2	Incandescent	W, R, G, A	ON or OFF	W, B	PP	3.62	2.96	2.63	2.50
							MNO, MNC	3.66	3.00	2.66	2.53
117570	14	2	Incandescent	W, R, G, A	ON or OFF	W, B	PP	3.58	2.93	2.60	2.47
							MNO, MNC	3.62	2.96	2.63	2.50
117580	28	2	Incandescent	W, R, G, A	ON or OFF	W, B	PP	3.70	3.02	2.69	2.56
							MNO, MNC	3.74	3.06	2.72	2.58
117590	125*	8.5	Neon	W, R, G, A	ON or OFF	W, B	PP	3.85	3.15	2.80	2.66
							MNO, MNC	3.94	3.22	2.86	2.72
182010	6	2	Incandescent	W, R, G, A	None	N/A	PP	3.84	3.14	2.79	2.65
							MNO, MNC	3.99	3.27	2.90	2.76
182020	14	2	Incandescent	W, R, G, A	None	N/A	PP	3.86	3.16	2.81	2.67
							MNO, MNC	4.02	3.29	2.92	2.77
182030	28	2	Incandescent	W, R, G, A	None	N/A	PP	3.84	3.14	2.79	2.65
							MNO, MNC	3.99	3.27	2.90	2.76
182040	125*	9	Neon	W, R, G, A	None	N/A	PP	3.73	3.05	2.71	2.57
							MNO, MNC	3.88	3.18	2.82	2.68
182060	6	2	Incandescent	W, R, G, A	ON or OFF	W, B	PP	4.08	3.34	2.97	2.82
							MNO, MNC	4.24	3.47	3.08	2.93
182070	14	2	Incandescent	W, R, G, A	ON or OFF	W, B	PP	4.10	3.36	2.98	2.83
							MNO, MNC	4.26	3.48	3.10	2.95
182080	28	2	Incandescent	W, R, G, A	ON or OFF	W, B	PP	4.08	3.34	2.97	2.82
							MNO, MNC	4.24	3.47	3.08	2.93
182090	125*	9	Neon	W, R, G, A	ON or OFF	W, B	PP	3.97	3.25	2.89	2.75
							MNO, MNC	4.13	3.38	3.00	2.85

* Component U.L. & C.S.A. Recognized.

Mechanical Life of switches is 25,000 cycles. Many test out at considerably more. Bezels (1175 series only) are all high quality chrome-plated. Housings, 1175, are precision molded of durable phenolic; 1820 housings are of long lasting highest quality nylon — buttons are mar-resistant nylon. Both switches are designed for panel mounting. Minimum panel thickness .031". Mounting clips supplied with 1175-1820 have integrally molded mounting ears. Terminals are standard ¼ male tab for 1175; ⅜ male tab for 1820. Use WALDOM female Q-D terminal SS-1090 and SS-1187 respectively. Tabs also have solder hole for soldering wire lead if desirable.

NOTES:

1. Pricing includes permanently installed lamp, 6-volt application, Bulb No. 2114; 14-volt application, Bulb No. 2182; 125-volt application, NE 2H, 35K resistor.
2. a. Push-On; Push-Off — add suffix PP to catalog number.
   b. Momentary-Normally Open — add suffix MNO to catalog number.
   c. Momentary-Normally Closed — add suffix MNC to catalog number.
3. Buttons available in White, Red, Green, and Amber. Add first initial of color to suffix after designating switch action and button color.
4. Two standard legends ar available. They are OFF and ON. Add actual word to catalog number after designating switch action and button color.
5. Color of hot stamping on button is standardized as follows:

HOT STAMPING COLOR
White
Black

BUTTON COLOR
Red, Green, Amber, White

Recommended Panel Cutout Dimension:
1175 Switch 1.115" x .915"
1820 Switch 1.215" x .500"

ORDERING EXAMPLES:

(a) To obtain a 6-volt unit, momentary action normally open, with red button and no legend—specify Catalog No. 117510-MNO-R for 1175 series or 182010 — MNO-R for 1820 series switch.

(b) To obtain a 125-volt unit, push-on, push-off, with yellow button, hot stamped START — Specify Catalog No. 117590-PP-R ON for 1175 series or 182090 PP-R ON for 1820 series switch.

Dimensions of 1820 Swith:
Bezel Dimensions — 1 3/32" x 3/4"
Button Size — 1 3/16" x 3/16"
Depth of Housing — 2 1/4"

These products are manufactured by Molex Products Company, and are available from Electronic/Electrical Distributors through Waldom Electronics, Inc.

© United Technical Publications

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors

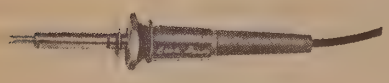


SOLDERING IRONS AND ACCESSORIES

Specify voltage, wattage and other options on each order. If your plug needs differ from standard (plug cap on 2-wire cord, NEMA-type plug on 3-wire cord) specify plug manufacturer's name and catalog number.

For complete catalog of AB soldering equipment, ask for Catalog No. 230CP.

LITTLE DANDY



The economy-priced miniature iron that stands up to production line conditions. Steel cored heating element with non-ceramic insulator. Molded handle, aerated finger grip (impervious to oil, perspiration). Balanced, non-roll design. Plug type tips.

Cat. No.	Wattage Std.	Wattage Spec.	Tip Dia.	Shpg. Wt.	Net
3108	20	25/30	1/8"	½ lb.	$5.15
3110	25	30/35	3/16"	½ lb.	5.15
3112	40	50/60	¼"	½ lb.	6.90

NOTES: Three wattage options each model (3108: 20, 25, 30. 3110: 25, 30, 35. 3112: 40, 50, 60.) For 3-wire cord with NEMA plug, add "S3" to catalog number and $0.70 to price.

BANTAMS



Small irons of traditional American Beauty quality in a wide range of inputs and tip diameters.

Cat. No.	Wattage	Tip Dia.	Shpg. Wt.	Net
3114	60	¼"	1 lb.	$8.80
3118	30	1/8"	¾ lb.	7.00
3118-X	50	1/8"	¾ lb.	8.00
3118-XP	50	1/8"	¾ lb.	8.00
3118-SC	30	1/8"	¾ lb.	7.00
3118-SCP	30	1/8"	¾ lb.	7.00
3120	30	3/16"	¾ lb.	7.10
3120-X	50	3/16"	¾ lb.	8.00
3120-XP	50	3/16"	¾ lb.	8.00
3120-SC	30	3/16"	¾ lb.	7.10
3120-SCP	30	3/16"	¾ lb.	7.10

NOTES: In above catalog numbers, "X" means "extra heat for continuous duty only"; "SC" means "short casing"; "P" means "pencil type handle". For 3-wire cord with NEMA plug, add "S3" to catalog number and $1.40 to price.

B-SERIES IRONS



Best miniature at any price. Advanced design. Precise balance, floating element for fast heat recovery. *Boxed with 3 assorted tips.

Cat. No.	Wattage	Tip Point Diameter	Shpg. Wt.	Net
B-2000L	22.5	*	½ lb.	$11.35
B-2500-L	30	*	½ lb.	11.35

NOTES: *1 each 1/8" chisel, 1/16" chisel, 1/8" cone. For 3-wire cord with NEMA plug, add "S3" to catalog number and $0.70 to price.

STANDARD IRONS

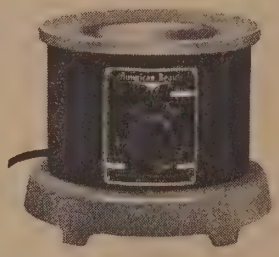


Production lines around the world use hundreds of thousands of these proven American Beauties.

Cat. No.	Wattage Std.	Wattage Spec.	Tip Dia.	Shpg. Wt.	Net
3125	60	75	¼"	1 lb.	$ 8.80
3128	60	75	¼"	1 lb.	8.00
3138	100	130/150	3/8"	2 lbs.	11.35
3138-X	175	—	3/8"	2 lbs.	12.75
3138-Y	100	130/150	¼"	2 lbs.	11.35
3138-XY	175	—	¼"	2 lbs.	8.00
3158	200	—	5/8"	3 lbs.	14.00
3158-X	250	300	5/8"	3 lbs.	15.40
3178	300	—	7/8"	4 lbs.	18.45
3178-X	300	400	7/8"	4 lbs.	19.75
3198	550	675	1¼"	5¾ lbs.	22.85

NOTES: "X" in catalog number means "extra hot, for continuous duty only." For 3-wire cord with NEMA plug, add "S3" to catalog number and $1.40 to price.

GENERAL PURPOSE SOLDER POTS

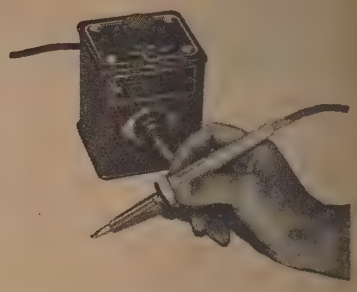


Crucibles of cast iron, chemically stable to keep solder pure. Center tapped for dross skimmer or extra fixturing. Wide lipped for extra fixture mounting. Shallow; 1½" deep. Heat solder to 400° in 15 minutes — 750° in 25 minutes. Adjustable, direct reading thermostat.

Cat. No.	Solder Capacity	Shpg. Wt.	Net
300	1 lb.	6½ lbs.	$33.35
301	(Same as NO. 300, with dross skimmer)	6½ lbs.	36.60
600	2½ lbs.	9 lbs.	35.10
601	(Same as NO. 600, with dross skimmer)	9 lbs.	38.30

NOTES: Standard cords are 2-wire SJO; for 3-wire cord, add "S3" to catalog number and $1.40 to price.

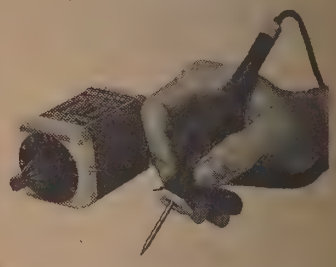
V-3000 SYSTEM



New type system dependably dials and maintains any tip temperature from 350° to 750°. High reserve for fast recovery. Iron is 40-watt, uses any 3/16" plug type tip.

Cat. No.	Wattage	Shpg. Wt.	Net
V-3000	Variable	5 lbs.	$47.00

TRANSFORMER TYPE IRONS



Use these American Beauties where isolation from line voltage is necessary. Heating elements in tips for quick tip heat changes. T-6 has variable heat dial. T-12 and T-30, non-variable.

Cat. No.	Wattage Std.	Wattage Spec.	Tip Dia.	Shpg. Wt.	Net
T-6	Variable		9/64"	1½ lbs.	$25.50
T-12E/W T-1216	17	20	1/16"	1½ lbs.	17.00
T-30E/W T-3016	30	25	1/16"	2 lbs.	19.15

INFINITELY VARIABLE POWER CONTROL UNIT



Dials and accurately controls soldering iron tip heat. (Also reliably controls small motor speeds.) Wattage: zero to 125W; infinitely variable, stepless. Fused. Pilot lighted.

Cat. No.	Shpg. Wt.	Net
477	3¾ lbs.	$25.50

Net

© United Technical Publications

AMERICAN BEAUTY

SOLDERING IRONS AND ACCESSORIES

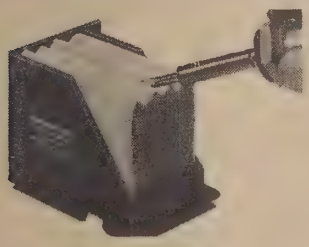
SAFETY SOLDERING IRON STAND



Gravity controlled. Opens, closes automatically. Operator doesn't look up from work. Accommodates all miniature irons.

Cat. No.	Descrip.	Shpg. Wt.	Net
575	Soldering Stand	1 lb.	$3.35

ONE-PASS TIP CLEANERS



Cleans all sides of tip in one motion. Eliminates tip damage, linting, stray solder pellets. Rubberized base, bored for mounting.

Cat. No.	Descrip.	Shpg. Wt.	Net
480	Complete set	½ lb.	$2.50
480-S	Sponges only (ea.)	3 oz.	.16

TEMPERATURE REGULATING STANDS



Maintains soldering iron at preset temperature during idle and intermittent use. Minimizes warmup, prevents overheating, saves current. Pilot light. Adjustable to length of iron.

Cat. No.	Use	Shpg. Wt.	Net
475	For 100W-600W irons	3¼ lbs.	$11.35
476	For 30W-85W irons	3¼ lbs.	11.35

NOTES: For performated guard (as shown) add "SG" to catalog number and $1.40 to price. Standard cord is HPD; if you want either 2-wire or 3-wire SJO cord specify on order.

DRI-WICK

"The de-soldering tool on a spool"



Any place you can put solder in, you can take it out with Dri-Wick. Just lay Dri-Wick on joint and apply tip of soldering iron. Capillary action draws all solder out of joint, ready for salvage or re-work. Made of specially woven copper, each strand coated with water-white resin. Packed 5 ft. per spool, 25 spools per carton.

Cat. No.	For Solder Pad Size	Net (per spool) 1 to 24	Net (per spool) Unbroken Cartons
484-1	.060" or smaller	$1.49	$1.19
484-2	.060" to .125"	1.49	1.19
484-3	.125" to .190"	1.49	1.19
484-4	.190" to .250"	1.69	1.35
484-6	.250" or larger	1.49	1.19

LITTLE DANDY DE-SOLDERING TOOL



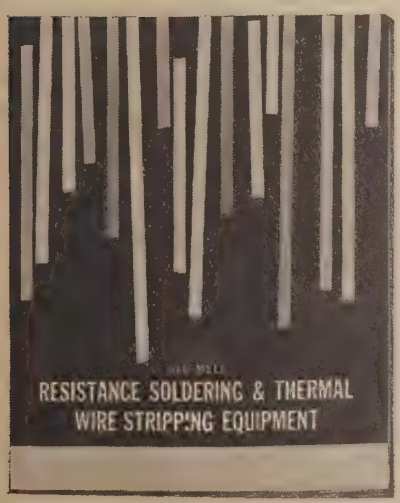
Hollow tip surrounds connection, melts solder, vacuums work clean. Use on miniature or standard components in printed circuits and some conventional wiring. Tool combines new, simplified de-soldering attachment with Little Dandy (#3112) handle and heating element. Heats to working temperature in 2 minutes. Tips are replaceable. Plug-type insertion of attachment into heating element.

Cat. No.	Description	Shpg. Wt.	Net
490	Tool Complete	½ lb.	$13.25
495	De-soldering attachment only	½ lb.	6.90
497-60	Tip only w/ .060" aperture	¼ lb.(dz.)	.48
497-50	Tip only w/ .050" aperture	"	.48
497-40	Tip only w/ .040" aperture	"	.48
497-30	Tip only w/ .030" aperture	"	.48

NOTE: For 3-wire cord with NEMA plug, order "490-S3" and add $ to price.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

RESISTANCE-TYPE SOLDERING & THERMAL WIRE STRIPPING EQUIPMENT



Complete, single source for newest equipment from simplest to most sophisticated

RESISTANCE-TYPE SOLDERING

Power units, control consoles, handpieces, accessories . . . Basic building blocks for your automated soldering systems

THERMAL WIRE STRIPPING

Combinations of power and control units, handpieces and accessories for fast, nick free stripping of thermoplastics and other heat strippable insulations

NEW CATALOGS AND PRICING NOW READY

Ask for "American Electrical Heater Company publication Nos. 25PSW & 37WCP"

TOOLS BY

CHANNEL LOCK®

Specially Designed ELECTRONICS PLIERS

Four matched, long-reach pliers with precision matched jaws, hand honed cutting edges. Drop forged of special analysis steel, properly heat treated. Polished finish. Smooth, dipped plastic, blue grips.

No.	Size	Net
718G	8″	$2.87
728G	7½″	3.07
738G	8″	2.87
748G	8″	2.87



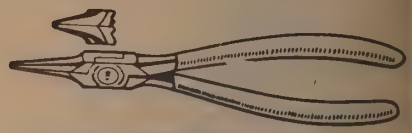
NO. 718G FLAT NOSE PLIERS

Precision-matched jaws give firm grip in hard-to-reach places.



NO. 728G DIAGONAL CUTTER

Patented wire-stripping notch that **really works!**



NO. 738G ROUND NOSE PLIERS

You can pick up a hair with these precision machined points.



NO. 748G END CUTTER

Fine enough to cut a human hair, sturdy enough to cut 12 gauge copper wire.

TONGUE AND GROOVE PLIERS



The **original, genuine** tongue and groove plier. Patented, non-slip undercut channels. Patented reinforcing rib for extra strength. Dipped plastic grips optional at slight extra cost.

No.	Size	Adjust	Capacity	Net
420	9½″	5	1½″	$2.67
424	4½″	4	½″	2.13
426	6½″	5	⅞″	2.07
430	10″	7	2″	2.80
440	12″	7	2¼″	2.93
460G	16″	8	4¼″	4.13

LINEMEN'S PLIER—Bevel Nose



Polished steel finish. Knurled grips. Side cutter. Dipped plastic grips optional at slight extra cost.

No.	Size	Net
3046	6″	$3.07
3047	7″	3.43
3048½	8½″	3.87

LINEMEN'S PLIER—Rounded Nose



Polished steel finish. Knurled grips. Side cutter. Dipped plastic grips optional at slight extra cost.

No.	Size	Net
346	6″	$3.06
347	7″	3.43
348½	8½″	3.87

WIREMASTER PLIER



Finest wire-cutting plier ever made. Joint rivet closer to cutting edge provides 40% more cutting power than standard design pliers. Special enclosed-joint construction holds cutter edges in perfect alignment for life of plier. Dipped plastic grips optional at slight extra cost.

No.	Size	Net
349	9″	$4.80

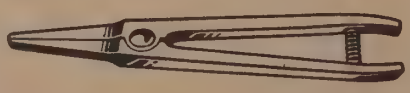
ELECTRICIAN'S WIRING PLIER



Triple-use wiring plier: Cuts, strips insulation, loops wire. Patented wire stripping notches strip insulation from 14 and 12 gauge copper wire quickly, cleanly. Dipped plastic grips optional at slight extra cost.

No.	Size	Net
337-W	7″	$3.06

HEATSORB CLAMP



Specially designed "heat sink" that prevents heat damage to electronic components during soldering. Also a handy, self-gripping "third hand" that holds and retrieves small parts in close work.

No.	Size	Net
46	5″	$1.00

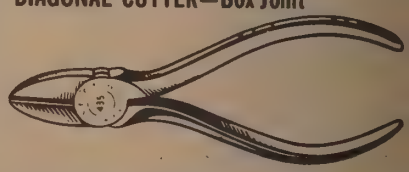
LONG NOSE PLIER



Point 3/32″ round. Polish steel finish. Knurled grips. Dipped plastic grips optional at slight extra cost.

No.	Size	Side Cutter	Net
317½	7½″	With	$3.20
3017½	7½″	Without	2.53
326	6″	With	2.80
3026	6″	Without	2.32

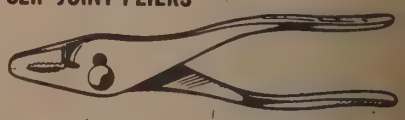
DIAGONAL CUTTER—Box Joint



Precision honed cutting edges. Polished steel finish. Knurled grips. Dipped plastic grips optional at slight extra cost.

No.	Size	Net
435	5″	$2.53
436	6″	2.80
437	7″	3.33

SLIP JOINT PLIERS



Thin Nose. Polished steel. Wire cutting shear.

No.	Size	Net
516	6″	$1.73

With Side Cutter. Polished steel. Precision tool with fine cutting edge.

No.	Size	Net
537	7″	$3.07

Heavy Duty With Cutter. Finest quality. Polished steel.

No.	Size	Net
546	6″	$2.00
548	8″	2.33
5410	10″	2.67

Net

© United Technical Publications

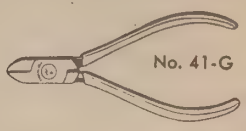
TOOLS BY

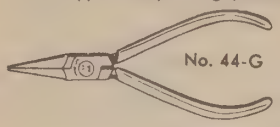
CHANNEL LOCK®

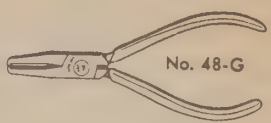
Little Champ PRECISION PLIERS

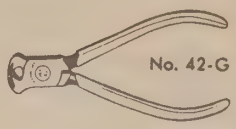
Finest quality, small precision pliers specially designed for electronic work. Drop forged from high grade steel, polished to jeweller's finish. Dipped blue plastic grip handles.

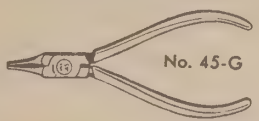
No.	Style	Length	Net
41G	Diagonal Cutter	4¼"	$2.80
41GS	Diagonal Cutter, Coiled Spring	4¼"	3.00
42G	End Cutting Nipper	4"	2.80
43G	Needle Nose, No Side Cutter, Plain Nose	4¾"	2.37
43GS	Needle Nose, No Cutter, Plain Nose, Coiled Spring	4¾"	2.57
44G	Plain Nose	4¾"	2.37
45G	Round Nose	4½"	2.67
47G	Needle Nose, Side Cutter Nose Serrations	4¾"	2.80
47GS	Needle Nose, Side Cutter, Nose Serrations, Coiled Spring	4¾"	3.00
48G	Transverse End Cutter	4¾"	2.93
49G	Curved Needle Nose	4½"	2.80

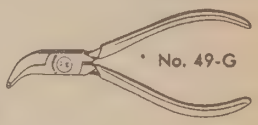


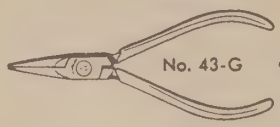


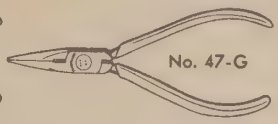












SCREWDRIVERS AND NUTDRIVERS

Blades forged from tough chrome vanadium steel. Tips ground lengthwise for greater end strength and snug fit in screw slot. Opaque blue plastic (UL) handles are shockproof, breakproof and shaped for non-slip grip.

ROUND SHANK



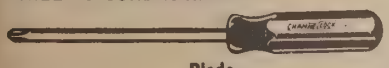
No.	Blade Size, In.	Net	No.	Blade Size, In.	Net
181RD	⅛ x 1	$ .56	31610RD	⅜ x 10	$1.12
3164RD	⅜ x 4	.84	144RD	¼ x 4	1.05
3166RD	⅜ x 6	.91	146RD	¼ x 6	1.12
3168RD	⅜ x 8	.99	5166RD	⅝ x 6	1.27

SQUARE SHANK



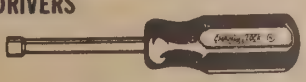
No.	Blade Size, In.	Net	No.	Blade Size, In.	Net
141SQ	¼ x 1	$ .71	5166SQ	⅝ x 6	$1.33
3164SQ	⅜ x 4	.91	5168SQ	⅝ x 8	1.47
144SQ	¼ x 4	1.07	388SQ	⅜ x 8	1.68
146SQ	¼ x 6	1.19	3812SQ	⅜ x 12	2.59
148SQ	¼ x 8	1.27			

PHILLIPS SCREWDRIVERS



No.	Blade Size, In.	Net
102-SP	¼ x 1⅝	$ .99
101-P	⅜ x 3	.96
102-P	¼ x 4	1.12
103-P	⅝ x 6	1.49
104-P	⅜ x 8	1.83

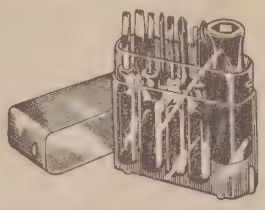
NUTDRIVERS



Hex	Lgth.	Net	Hex	Lgth.	Net
3/16	3	$1.05	11/32	3	$1.05
7/32	3	1.05	3/8	3	1.05
1/4	3	1.05	7/16	3½	1.27
9/32	3	1.05	1/2	3½	1.27
5/16	3	1.05			

SCREWDRIVER KIT

Pocket-size, handy bench sets, color coded. Special E-Z Grip handle included.

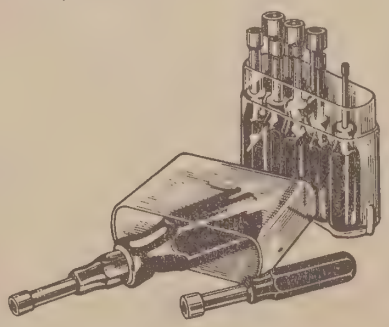


SD-5 Set Includes—
5 Screwdrivers: 3/32", 1/8", 5/32", 3/16", 1/4"
3 Phillips Head: No. 0, No. 1 and No. 2

Net $4.40

NUTDRIVER KIT

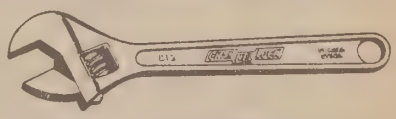
Pocket-size, handy bench sets, color coded. Special E-Z Grip handle included.



ND-1 Set Includes—
10 Nutdrivers: 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8"

Net $6.00

ADJUSTABLE WRENCHES



Drop forged of special analysis steel. Chrome plated. Dipped plastic grips optional at slight extra cost.

No.	Size	Capacity	Net	No.	Size	Capacity	Net
804	4"	½"	$2.47	810	10"	1⅛"	$3.63
806	6"	¾"	2.51	812	12"	1 15/16"	5.25
808	8"	15/16"	2.85	815	15"	1 11/16"	7.95

ELECTRICIAN'S KNIFE



2½" precision-honed blade. 3" self-locking screwdriver. Unbreakable phenolic plastic handle.

No.	Closed Length	Net
11	3¾"	$2.80

SKINNING KNIFE



3" precision-honed blade. Self-locking. Unbreakable phenolic plastic handle.

No.	Closed Length	Net
10	4"	$3.13

TOOL HOLSTERS



Highest quality top grain leather. Stress points reinforced with rivets. Convenient knife or wrench snap.

No.	Size	No. Pkts.	Net
1	9¼" x 8½"	5	$4.60
2	9¼" x 10½"	5	5.07

SUPERIOR PLASTIC GRIPS



For maximum hand comfort, durable molded plastic grips. Blue color for good visibility, reduces plier loss. Easy to install. Order by desired grip size.

Plier Size	Grip Size	Net
6"	Small	$ .47
7"	Medium	.50
8", 9½", 10"	Large	.53

© United Technical Publications

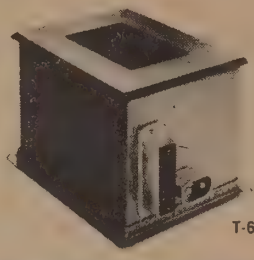
Net

CAIG LABORATORIES INC.

SOLDER BATHS


T-50


R-4A


T-6


T-2

RECTANGULAR AND ROUND SOLDER BATHS

Catalog No.	Watts	Volts	Approx. Temperature (°C)	Approx. Temperature (°F)	Internal Dimensions Approx. (Inches) Length	Width	Depth	Contents Approx. (CC)	Heat Control	Weight Approx. (Lbs.)	Price
T-50	65	115	300	572	1.10	0.78	0.55	7	Full Heat	1.00	$ 9.75
T-100	130	115	340	644	2.37	1.18	1.18	25	Full Heat	1.50	10.50
T-2*	240	115	600	1112	—	0.97 dia.	1.84	17	Full & Half	3.00	28.00
T-4*	400	115	410	770	2.00	2.00	3.28	220	Full & Half	8.50	40.00
T-6*	1000	115	560	1040	4.69	3.13	2.39	570	Full & Half	11.25	61.00
T-9**	2800	230	650	1202	6.50	5.33	3.94	2080	3 Step Sw.	31.00	175.00
T-44	600	115	288	550	4.00	4.00	2.00	10 lbs.	Automatic	15.00	54.60
T-66C	1900	115	454	850	6	6	2	25 lbs.	Automatic	30	97.00
T-66	1900	115	538	1000	6	6	2	25 lbs.	Full Heat	30	85.00
T-48	1200	115	288	550	8.00	4.00	2.00	20 lbs.	Automatic	23.00	75.75
T-412	1500	230	372	700	12.00	4.00	2.00	30 lbs.	Automatic	35.00	108.75
T-420	2500	230	372	700	20.00	4.00	4.00	100 lbs.	Automatic	60.00	184.00
T-612	2000	230	372	700	12.00	6.00	4.00	90 lbs.	Automatic	57.00	149.50
T-912	1600	230	372	700	12.00	9.00	2.00	70 lbs.	Automatic	49.00	161.00
T-1212	2000	230	372	700	12.00	12.00	2.00	90 lbs.	Automatic	55.00	189.75
T-1218‡	2800	230	372	700	18.00	12.00	2.00	135 lbs.	Automatic	70.00	230.00
T-1418‡	3000	230	372	700	18.00	14.00	2.00	175 lbs.	Automatic	60.00	290.00
R-1.5A†	200	115	288	550	—	1.50 dia.	1.50	1 lb.	Automatic	5.00	33.00
R-1.5AX†	500	115	538	1000	—	1.50 dia.	1.50	1 lb.	Automatic	7.00	69.00
R-4A†	300	115	288	550	—	3.00 dia.	1.50	4 lbs.	Automatic	6.00	37.00
R-10A†	500	115	288	550	—	3.50 dia.	2.50	10 lbs.	Automatic	11.00	47.00
R-20A†	1100	115	372	700	—	5.00 dia.	4.00	20 lbs.	Automatic	33.00	97.00
R-40A	1500	230	372	700	—	6.00 dia.	6.00	40 lbs.	Automatic	40.00	115.00
R-80X	3000	230	538	1000	—	8.00 dia.	5.50	80 lbs.	Full Heat	45.00	155.00
R-80AXP	3000	230	538	1000	—	8.00 dia.	5.50	80 lbs.	Automatic	60.00	310.00
R-4X	800	115	538	1000	—	3.00 dia.	1.50	4 lbs.	Full Heat	6.00	44.00
R-4AX†	900	115	538	1000	—	3.00 dia.	1.50	4 lbs.	Automatic	9.00	74.75

NOTES: (*) Can be Switched to Half Wattage Rating. (**) With 3-Step Switch. (†) Non-Indicating Thermostat Bimetal Control. (‡) For Partlow Indicating Control add $150.00 to Base Price. Otherwise non-indicating thermostat supplied, control knob.

Stem thermometer may be attached to some baths–add $18.00.



PYROMETERS INDICATING

Model IPL-500, low temperature, indicating pyrometer, range 0° to +650°F, scale 3½", graduations: 5°F, Dimensions 7" H. x 6" W. x 6" L., 15 feet #20 ga. I/C thermocouple & lead wire. Weight 4 lb. Price $40.50
Extra thermocouple. Price 14.50

Model IPH-500, high temperature, indicating pyrometer, range 0° to +2000°F, scale 3½", graduations: 20°F, Dimensions 7" H. x 6" W. x 6" L., #14 ga. C/A thermocouple ¼" dia. x 12" long, protected ceramic beads, 3 feet lead wire. Weight 4 lb. Price $40.50
Extra thermocouple. Price $14.50

INPUT VOLTAGE REGULATOR

(SOLID STATE CONTROL)

Model RSCR-600, infinite, constant control of voltage, rated up to 600 watts @ 115 volts A.C. Control in-put voltage to any resistive load — such as soldering iron, solder pot, even control speed of small fractional HP-A.C.-D.C. motors. Amps. 3.5 max. Just plug-in load and set knob for any heat or speed requirement. Supplied with 3 wire rubber covered conductor wire, 5 feet, and standard grounding plug. Red Light Indicator. On-Off switch. Size 2¼ x 2¼ x 4. Weight approx. 1 lb.

Price $21.00

* Model RSCR-1200 same as above except rated 1200 watts, 10 amps, 115 volts $29.00

Model R-1800 — Input Voltage Regulator — rated up to 1800 watts, 115 volts, works on Bi-Metal per cent time basis. Price $21.00

Net

© United Technical Publications

DESCO *

PROPERLY PROPORTIONED MINIATURE TOOLS

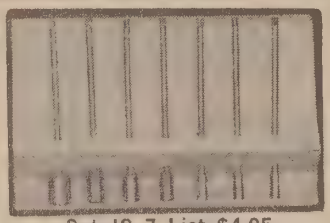
For precision instrument and model work use Desco "7" Miniature Nut Drivers. Available with Tenite handles, or for use with jewelers' screw driver handles. Also made with 5½" long shanks for those hard-to-get-to places.

DESCO "7" Sizes across flats
5/64 3/32 7/64 1/8 5/32 3/16 1/4

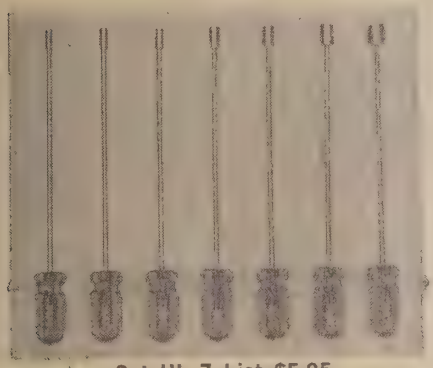


Set HS 7 List $5.95

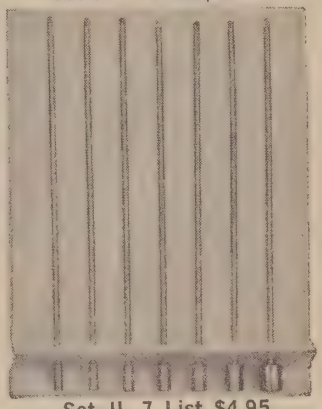




Set JS 7 List $4.95



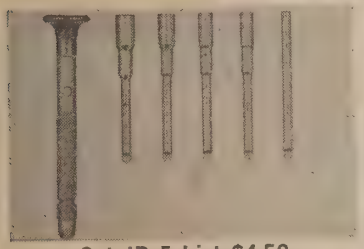
Set HL 7 List $5.95



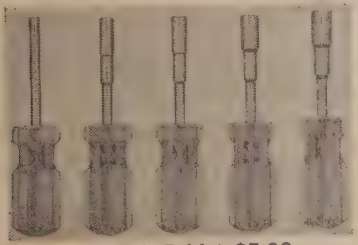
Set JL 7 List $4.95

NON-MAGNETIC NUT DRIVERS available in HL7 and HS 7 series only.
Specify "No-Mag" with the code number — same prices.

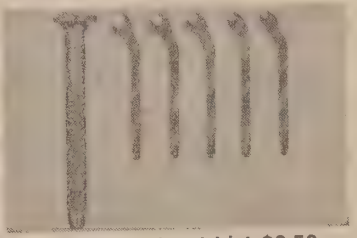
INTRODUCING THE DESCO "5" Series of Miniature Tools



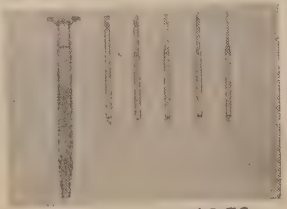
Set JD 5 List $4.50



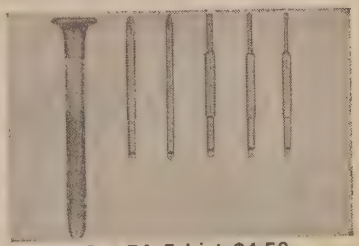
Set HD 5 List $5.00
Deeper and more rugged than the "7" Series. Made only in 5/64, 3/32, 7/64, 1/8 and 5/32.



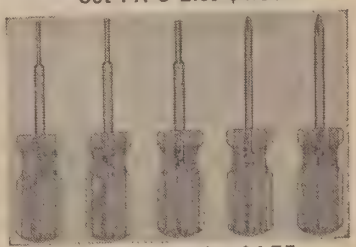
Set EW 5 Steel List $3.50
Set EWN 5 Non-Magnetic List $4.50
A practical miniature end wrench to fit the smallest nuts made 5/64 3/32 7/64 1/8 5/32.



Set SS 5 List $2.50
Contains four screw driver blades and a fine scriber.



Set PA 5 List $4.50



Set PAH 5 List $4.75
Includes the two smallest Phillips drivers and the three smallest Allen wrenches.

All of the DESCO "5" and "7" Series are complete as shown.

* T. M.

DESCO MFG. CO.

EDSYN INC — SOLDERING + DESOLDERING

15954 ARMINTA ST., VAN NUYS, CALIF. 91406
Cable Address: EDSYNEX Phone (213) 989-2324
TELEX NO. 65-1469

The World's Most Unique Line of Practical Solder Handling Tools.



EDSYN'S Soldering, Desoldering and Resoldering product line offers customers the widest range of solderability. Soldapullt desoldering tools vacuum up solder swiftly and efficiently. ERSA Soldering tools offer fast soldering cycles. Our Soldavac desoldering tool is a new model featuring both good performance and low cost. EDSYN'S Soldasip Resoldering Tip is our first of a continuing venture into the field of soldering. The Soldasip Resoldering Tip was designed with the capability to both apply solder or sip it up. It also has incorporated in its design a temperature adjust range from high to medium to low. Soldasip Resoldering Tip sells for the same price as an Ersadur replacement tip. With all these added features, your cost does not increase — only your solderability. To help acquaint you and increase your solderability, EDSYN is offering an experimenter's solderability kit. TRY IT! on a 30-Day Free Trial. Order X-34.

	UNIT	PRICE
	Quantity	Each
DS007-17 Deluxe Model Soldapullt® desoldering tool	1-25	$9.95
	26-50	$9.20
	51-100	$8.45
	101-500	$7.70
wt. 5 oz. △□	501-up	$7.20
DRT008-18 Deluxe Replacement Tips	1-25	$2.00
	26-50	$1.75
	51-100	$1.50
fits on Deluxe Model DS007 only	101-up	$1.25
SS001-11 Standard Model Soldapullt® desoldering tool	1-25	$5.95
	26-50	$5.50
	51-100	$5.00
	101-500	$4.50
wt. 4 oz. △□	501-up	$4.00
SRT002-12 Standard Replacement Tips	1-25	$1.50
	26-50	$1.25
	51-100	$1.00
fits Standard Model SS001 and Soldavac Model SV026 only	101-up	$ .75
MMS005-15 Micro Tipped Standard Model Soldapullt® desoldering tool	1-25	$6.95
	26-50	$6.50
	51-100	$6.00
	101-500	$5.50
wt. 4 oz. △□	501-up	$5.00
MRT006-16 Micro Replacement Tips	1-25	$1.50
	26-50	$1.25
	51-100	$1.00
fits Micro tipped Standard Model MMS005 only	101-up	$ .75
LTS003-13 Long Tipped Standard Model Soldapullt® desoldering tool	1-25	$6.95
	26-50	$6.50
	51-100	$6.00
	101-500	$5.50
wt. 4 oz. △□	501-up	$5.00
LRT004-14 Long Tipped Replacement Tips	1-25	$2.00
	26-50	$1.75
	51-100	$1.50
fits Long tipped Standard Model LTS003 only	101-up	$1.25
SV026 Soldavac™ desoldering tool	1-25	$2.95
	26-50	$2.80
	51-100	$2.65
	101-500	$2.50
wt. 3 oz. △□	501-up	$2.35
SRT002-12 Soldavac™ Replacement Tips	1-25	$1.50
	26-50	$1.25
	51-100	$1.00
fits Soldavac Model SV026 and Soldapullt Model SS001 only	101-up	$ .75

	UNIT	PRICE
	Quantity	Each
45ET011-21 45 Degree Extension Tip and Cleaning Shaft	1-25	$2.75
	26-50	$2.50
	51-100	$2.25
fits all models except Micro Tip MMS005	101-up	$2.00
LET012-22 Long Extension Tip and Cleaning Shaft	1-25	$2.25
	26-50	$2.00
	51-100	$1.75
fits all models except Micro Tip MMS005	101-up	$1.50
MET013-23 Micro Extension Tip and Cleaning Shaft	1-25	$2.00
	26-50	$1.75
	51-100	$1.50
fits all models except Micro Tip MMS005	101-up	$1.25
MIN014-24 Mini Tip Extension and Cleaning Shaft	1-25	$2.00
	26-50	$1.75
	51-100	$1.50
fits all models except Micro Tip MMS005	101-up	$1.25

AM010-20 Direct Factory Trade In

Customers may trade in their old, worn out Soldapullt, Ersa or Soldavac tools at a cost of only 60% of the retail price.

OLD TOOLS MUST ACCOMPANY TRADE IN REQUEST

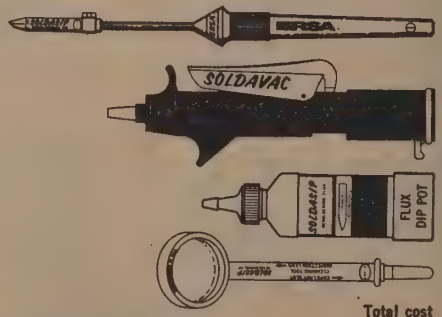
Trade in allowance examples

SS001-11	1-25 pcs.	26-50 pcs.
Retail cost	$5.95	$5.50
Trade in allowance	$2.38	$2.20
Your cost	$3.57	$3.30
15% handling chg.	.54	.50
Total	$4.11	$3.80

X-34 Experimenter's SOLDER ABILITY Kit

AVAILABLE AS DIRECT FACTORY OFFER OR FROM PARTICIPATING DISTRIBUTORS.

$10.95 — 30 DAY FREE TRIAL



ERSA	$6.50
SOLDAVAC	$2.95
SOLDASIP FLUX DIP POT	$1.75
	$1.50
Total cost	$12.70
You save	$1.75
Your cost only	$10.95

For fast soaking action, Use both our Soldasip Resoldering Flux and Soldasip Burnishing tool.

		UNIT	PRICE
		Quantity	Each
BT028	**Soldasip™ Burnishing Tool**	1-25	$1.50
		26-50	$1.40
		51-100	$1.30
		101-up	$1.20
RBB029	**Soldasip™ Burnishing Tool Blades**	1-25	$ .50
		26-50	$ .40
		51-up	$ .30

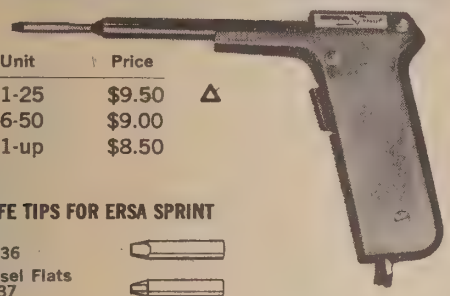
△ 6 month warranty on tools only. Warranty does not include tips.
□ 12 page instruction included with tools

Net

© United Technical Publications

+ RESOLDERING = SOLDER (EDSYN T.M.) ABILITY

* ERSA SPRINT 850KD/115V-35 INSTANT SOLDER GUN



Unit	Price
1-25	$9.50
26-50	$9.00
51-up	$8.50

△

ERSADUR LONG LIFE TIPS FOR ERSA SPRINT

Chisel Form Tip
Part No. 852KD-36

Conical with Chisel Flats
Part No. 852LD-37

Conical Tip
Part No. 852BD-38

Extra Long Angle Face
Part No. 852VD-39



Unit	Price
1-25	$1.95
26-50	$1.75
51-up	$1.50

EDSYN SOLDASIP RESOLDERING TIP FOR ERSA SPRINT

Part No. ST070

Sips up solder like a sponge or solders like a dream . . . TRY IT!

* ERSA TIP 16 16KD/115V-40 STANDARD TYPE SOLDERING IRON



△

Unit	Price
1-25	$6.50
26-50	$6.00
51-up	$5.50

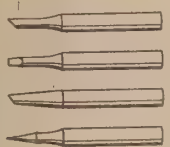
ERSADUR LONG LIFE TIPS FOR ERSA TIP 16

Angle Face Tip
Part No. 172/15LD-41

Chisel Form Tip
Part No. 172/15KD-42

Reinforced Angle Face
Part No. 172/15SD-43

Pencil Form Tip
Part No. 172/15BD-44



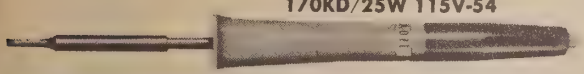
Unit	Price
1-25	$1.95
26-50	$1.75
51-up	$1.50

EDSYN SOLDASIP RESOLDERING TIP FOR ERSA TIP 16

Part No. ST025

Sips up solder like a sponge or solders like a dream . . . TRY IT!

* ERSA MULTITIP 170KD/8W 115V-52 △ 170KD/15W 115V-53 170KD/25W 115V-54



COMBINATION STANDARD TYPE AND PISTOL GRIP SOLDERING IRON

8 WATT 15 WATT 25 WATT

Unit	Price
1-25	$6.50
26-50	$6.00
51-up	$5.50

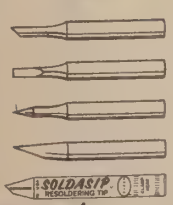


PISTOL GRIP OPTIONAL AT EXTRA COST

ERSADUR LONG LIFE TIPS FOR ERSA MULTITIP

EDSYN SOLDASIP RESOLDERING TIP FOR ERSA MULTITIP

8 WATT	15 WATT	25 WATT	
172/8LD-55	172/15LD-41	172/25LD-59	Angle Face Tip
172/8KD-56	172/15KD-42	172/25KD-60	Chisel Form Tip
172/8BD-57	172/15BD-44	172/25BD-61	Pencil Form Tip
172/8SD-58	172/15SD-43	172/25SD-62	Reinforced Angle Face
ST071	ST025	ST072	Soldasip Tip



RF027 SOLDASIP™ RESOLDERING FLUX

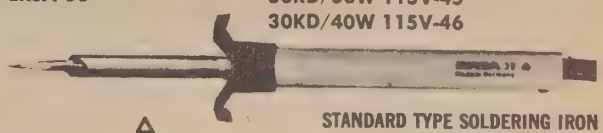


wt. 4 oz.

Unit	Price
1-25	$1.95
26-50	$1.75
51-up	$1.50

1-25	$1.75
26-50	$1.65
51-100	$1.55
101-up	$1.45

* ERSA 30 30KD/30W 115V-45 30KD/40W 115V-46



△

STANDARD TYPE SOLDERING IRON

Unit	Price
1-25	$5.75
26-50	$5.25
51-up	$4.75

ERSADUR LONG LIFE TIPS FOR ERSA 30

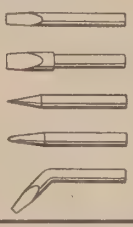
Straight Chisel Tip
Part No. 32KD-47

Reinforced Chisel Tip
Part No. 32SD-48

Pencil Form Tip
Part No. 32BD-49

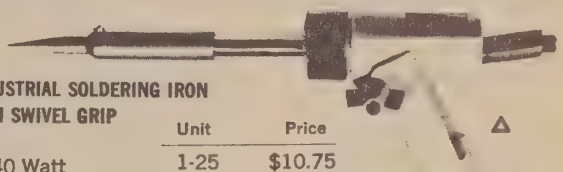
Bevelled Both Sides
Part No. 32LD-50

45° Bent Chisel Tip
Part No. 32JD-51



Unit	Price
1-25	$1.95
26-50	$1.75
51-up	$1.50

* ERSA VARIUS 550KD/40W 115V-63 550KD/50W 115V-64



△

INDUSTRIAL SOLDERING IRON WITH SWIVEL GRIP

	Unit	Price
40 Watt or 50 Watt	1-25	$10.75
	26-50	$10.25
	51-up	$9.75

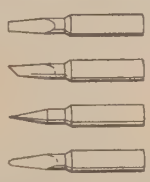
ERSADUR LONG LIFE TIPS FOR ERSA VARIUS

Chisel Form Tip
Part No. 552KD-65

Angle Face Tip
Part No. 552LD-66

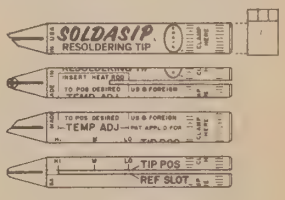
Pointed Tip
Part No. 552BD-67

Bevelled Both Sides
Part No. 552VD-68



Unit	Price
1-25	$3.00
26-50	$2.75
51-up	$2.50

SOLDASIP™ RESOLDERING TIP



THE MOST UNIQUE RESOLDERING TIP AVAILABLE, FITS ON ERSA SOLDERING TOOLS. SIPS UP SOLDER LIKE A SPONGE OR SOLDERS LIKE A DREAM . . . TRY IT!

wt. 2 oz.

"O" RINGS

0-SS30	Standard Soldapullt "O" Ring	
0-DS31	Deluxe Soldapullt "O" Ring	1-50 $ .25
0-SVB32	Soldavac Black Plunger "O" Ring	51-up $ .20
0-SVW33	Soldavac White Bumper "O" Ring	

STE009 FREE SAMPLE FOR EVALUATION

CHECK ONE ONLY

Ersa Tip 16 — 16ST/115V-40 with Soldasip Resoldering Tip ☐

Soldavac SV026 desoldering tool ☐

REQUEST FOR NO CHARGE SAMPLE MUST BE ON YOUR COMPANY STATIONERY

Covered by one or more of the following U.S. and Foreign Patents: U.S. 3,114,026, 3,263,889, 3,443,734, D.215.216, D.215,197, Argentina 170,878, 170,560, Australia 286,159, Belgium 687,337, 666,113, 698,167. 698,168, 727,281, 722,132, 727,280, Canada 746,275, 730,450, 800.801, 822,266. 250.31,484, Costa Rica 1577. Denmark 43,332, France 1.428,006, 1,522,810, 1,525,445, Germany 1,259,682, 1,289.393, 5254, 5255, Great Britain 995.949. 1,069,720, 1,110,209, 1,131,195, 938,499, Israel 4534, Italy 707,813, 744,991, 807,692, 807,693, 840,490, Japan 474,814, 510,038, 533,917, 533.918, Luxembourg 54.252, 54,251, 58,178, 57,113, 58,179, New Zealand 142.931, 149,086, 149,087, Sweden 218,639, Switzerland 456,311, 458,024, 458,886, Other U.S. and Foreign Patents Pending.

* Irons come equipped with KD chisel form tips. Any other tip may be substituted upon request.

Prices subject to change without notice. Prices higher outside the continental limits of the U. S. A.

© COPYRIGHT 1970 BY EDSYN, INC.

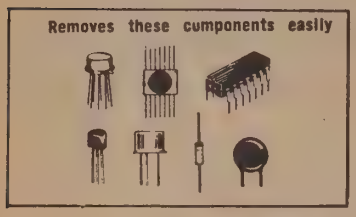
PRINTED IN U.S.A.

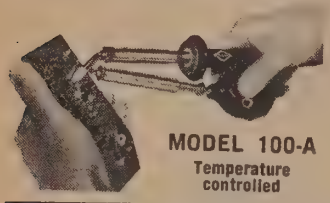
ENTERPRISE DEVELOPMENT CORPORATION

The Original Desoldering Iron

It solders too . . . easier, faster, better!

- Removes soldered components in seconds without damage
- For servicing, updating and reworking PC boards
- Only desoldering iron approved for military use

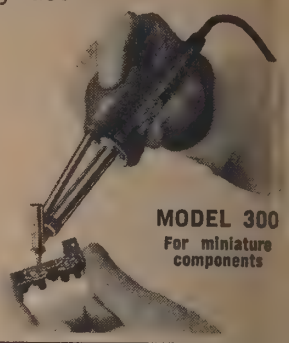




MODEL 100-A DESOLDERING IRON (LEFT)

120 VAC 75 W

	List	1-5	6-23	24-Up
Model 100-A (with 2-wire cord).....	$27.50	$20.65	$18.60	$16.75
Model 100-A-3 (with 3-wire cord).....	28.85	21.65	19.50	17.55
Model 100-A-3TL (with 3-wire cord twist lock cap)		PRICES ON REQUEST		



	List	1-5	6-23	24-Up
Model 300 (with 2-wire cord).....	$15.95	$11.95	$10.85	$ 9.75
Model 300 (with 3-wire cord).....	17.50	13.15	11.85	10.65

9-Piece Desoldering Kit

Kit Model 300K with Model 300 Iron illustrated.

Military models available. Prices on request.

Kit Model 300MDK
Stock No. FSN 3439-907-5806.

Kit Model 100A-MDK
Stock No. FSN 3439-917-5632.

New Kit Model 100-AK with Model 100-A iron also available.

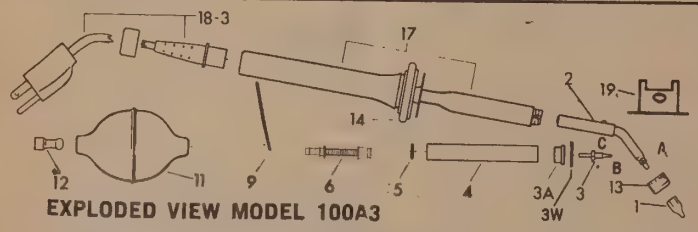


Includes everything needed to handle virtually any desoldering or re soldering job. Includes the model iron desired, assorted tips, tip cleanin tool, and metal stand for the iron. All come in a handy, lifetime stee storage box with hasp. Kit model number indicates the model iron in cluded. Special kits available for military use.

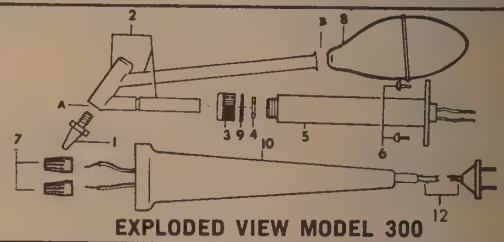
KIT PRICES

	List	1-11	12-49	50-up
Model 300K (w/2 wire cord).....	$26.55	$19.90	$17.90	$16.1
Model 300K-3 (w/wire cord).....	27.85	20.90	18.80	16.9
Model 100-AK (w/2 wire cord).....	36.50	27.40	24.65	22.2
Model AK-3 (w/3 wire cord).....	37.85	28.40	25.55	23.0

Box, Stand and Cleaning Tool Available Separately — Write for Prices



EXPLODED VIEW MODEL 100A3



EXPLODED VIEW MODEL 300

PARTS SCHEDULE

MODEL 100A PARTS SCHEDULE

Fig. No.	Part No.	Description	List	Industrial Cost
1	100T.096	Replaceable Desoldering Tip 1B....	$3.00/3Pk.	$2.25/3Pk.
1	100T.078*	Replaceable Desoldering Tip 1A....	3.00/3Pk.	2.25/3Pk.
1	100T.067	Replaceable Desoldering Tip.....	3.00/3Pk.	2.25/3Pk.
1	100T.059	Replaceable Desoldering Tip 1C....	3.00/3Pk.	2.25/3Pk.
1	100T.046	Replaceable Desoldering Tip.....	3.30/3Pk.	2.50/3Pk.
1	100T.035	Replaceable Desoldering Tip 1D....	3.30/3Pk.	2.50/3Pk.
1	100TP	6 Assorted Tips for Model 100A....	6.00	3.50
2	2A	Tip Body (750°F. Std.) (600°F. Special)	3.35	2.50
3	3S	Front Connecting Tube	.60	.45
3A	3B	Front Air Seal	.60	.45
3W	3W	Protective Washer	.15	.10
4	4A	Solder Collection Tube	1.45	1.10
5	5A	"O" Ring (2 supplied)	.40/2	.30/2
6	6BCO	Air Seal Coupling (Rear)	3.70	2.80
9	9A	Supporting Bracket	.68	.50
11	11	Vacuum Bulb	1.35	1.00
12	12	Valve	.60	.45
13	13	Female Tip Fastening Nut	.90	.65
14	14	Rubber Shock Absorber	.90	.65
17	17	75W Iron (less cord)	11.00	2.25
17	17-2	75W Iron (w/2 wire cord)	12.50	9.40
17	17-3	75W Iron (w/3 wire cord)	13.95	10.45
18	18-2	2-Wire Cord only	2.00	1.50
18	18-3	3-Wire Cord only	3.35	2.50
18	18-3TL	3-Wire Twist Lock Cord only	4.65	3.50
19	300-KS	Iron Stand	.50	.35

*Standard Tip

MODEL 300 PARTS SCHEDULE

Fig. No.	Part No.	Description	List	Industrial Cost
1	300T.090	Replaceable Desoldering Tip	$3.00/3Pk.	$2.25/3Pk.
1	300T.078	Replaceable Desoldering Tip	3.00/3Pk.	2.25/3Pk.
1	300T.063*	Replaceable Desoldering Tip	3.00/3Pk.	2.25/3Pk.
1	300CT.063	Premium Desoldering Tip	4.50/3Pk.	3.30/3Pk.
1	300T.059	Replaceable Desoldering Tip	3.00/3Pk.	2.25/3Pk.
1	300T.046	Replaceable Desoldering Tip	3.00/3Pk.	2.25/3Pk.
1	300T.038	Replaceable Desoldering Tip	3.00/3Pk.	2.25/3Pk.
1	300TP	6 Assorted Tips for Model 300	6.00	4.50
2	300-BE	Sub-Assembly (w/part nos. 300-5, 300-6, & 300-13)	6.40	4.80
2	300-BECO	Sub-Assembly — Complete w/Tip, Fastening Nut & Bulk (ready to use)	8.50	6.35
3	300-13	Sub-Assembly Fastening Nut	.50	.35
4	300-5	Sub-Assembly Retaining Ring	.10	.08
5	300-17E	(New) Ceramic Filled Heating Element 40W	4.35	3.25
6	300-17SC	Screws (3 required)	.30/3	.23/3
7	300-17TC	Terminal Connectors (2 required)..	.40/2	.30/2
8	300-11.100	Vacuum Bulb 1 oz. Heavy Duty.....	1.10	.80
9	300-6	Sub-Assembly Retaining Pin.....	.14	.10
10	300-17HA	Handle	.60	.45
12	300-18-2	2-Wire Cord Set	1.50	1.15
12	300-18-3	3-Wire Cord Set	2.70	2.00
	300-17CO-2	40W Iron w/2 Wire Cord	8.25	6.20
	300-17CO-3	40W Iron w/3 Wire Cord	9.50	7.30
	300-KS	Iron Stand	.50	.35

*Standard Tip

REPLACEABLE TIPS FOR ENDECO MODEL 100-A

Fig. No.	Part No.	Description	Formerly	Tip I.D.	Tip O.D.
1	100T.078*	Desoldering Tip	1A	.078	.156
1	100T.067	Desoldering Tip		.067	.135
1	100T.059	Desoldering Tip	1C	.059	.125
1	100T.046	Desoldering Tip		.046	.095
1	100T.035	Desoldering Tip	1D	.035	.078
1	100T.096	Desoldering Tip	1B	.096	.187

* Standard as Supplied on Iron.

Price Subject to Change Without Notice

REPLACEABLE TIPS FOR ENDECO MODEL 300

Fig No.	Part No.	Description	Tip I.D.	Tip O.D.
1	300T.090	Desoldering/Resoldering Tip.....	.090	.170
1	300T.078	Desoldering/Resoldering Tip.....	.078	.155
1	300T.063	Desoldering/Resoldering Tip.....	.063	.135*
1	300CT.063	Industrial Desoldering Tip.....	.063	.135
1	300T.059	Desoldering/Resoldering Tip.....	.059	.125
1	300T.046	Desoldering/Resoldering Tip.....	.046	.095
1	300T.038	Desoldering/Resoldering Tip.....	.038	.078

* Standard as Supplied on Iron.

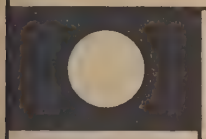
Trade Discount Applies To List Prices Only
© United Technical Publications

GREENLEE TOOL CO

A Unit of Ex-Cell-O Corporation XLO

CHASSIS PUNCHES

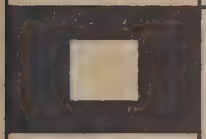
ROUND, SQUARE, "KEY," AND "D" TYPES





NO. 730 ROUND PUNCH

Swiftly cuts clean, accurate holes in radio chassis for sockets, switches, controls and other equipment. Operates simply with an ordinary wrench for drive power . . . just insert in a small drilled hole and turn drive screw. No reaming or filing . . . hole is smooth, perfect. 29 sizes from 1/2" to 3 1/8" diameter. New Ball-Bearing Drive available for even easier, speedier operation.





NO. 731 SQUARE PUNCH

Cuts square or oblong openings as desired. Available in five sizes for making 1/2", 5/8", 3/4", 7/8", and 1" square holes. Drive screw fits into 1/2" hole, which can be drilled or made with 1/2" No. 730 GREENLEE Round Punch. Operates with an ordinary wrench for drive power. Individually packed.

NO. 731-R KHP RELAY PUNCH

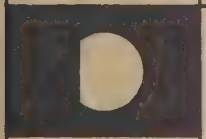
Makes clean, accurate, *finished* holes in up to 16-gauge metal for Potter & Brumfield KHP miniature relay sockets. Makes 1.015" x .859" hole.





NO. 732 "KEY" PUNCH

Quickly, easily cuts holes for keyed radio sockets. Operates on same principle as other GREENLEE Radio Chassis Punches . . . an ordinary wrench supplies the drive power. In five sizes to make openings of 15/32", 15/16", 1 11/64", 1 17/64", 1 21/64". Drive screw fits into 1/2" hole. Individually packed.





NO. 733 "D" PUNCH

Simplifies and speeds the work of making "D"-shaped openings for high-frequency, miniature tube sockets and other equipment using this type opening. Available in 1/2" and 5/8" sizes. Operates on same principle as other GREENLEE Radio Chassis Punches with an ordinary wrench supplying the drive power. Drive screw fits into 3/8" drilled hole. Individually packed.





NO. 734 DOUBLE "D" PUNCH

Quickly makes standard electrical receptacle openings. Cuts standard hole 1 1/8" dia. across parallel sides, 1 3/8" dia. across rounded ends. Simply insert into a 1/2" hole and turn with an ordinary wrench. Does the work in less than five minutes . . . eliminates all tedious hand filing . . . gives a smooth, perfect opening.

No. 730 ROUND PUNCH

Size	Net User Price	Size	Net User Price
1/2"	$2.85	1 3/4"	$6.30
9/16"	2.85	1 7/8"	7.80
5/8"	2.85	2"	8.35
11/16"	2.85	2 1/8"	9.00
3/4"	2.85	2 1/4"	9.30
13/16"	2.85	2 1/2"	15.10
7/8"	2.85	2 3/4"	21.00
15/16"	3.20	2 25/32"	13.75
1"	3.20	3"	29.00
1 1/16"	3.35	3 1/8"	30.50
1 1/8"	3.35	Following sizes also available with larger drive screw for cutting thicker metals (No. 730X)	
1 5/32"	3.35		
1 3/16"	3.35		
1 7/32"	5.75		
1 1/4"	3.35	1 1/8"	6.80
1 5/16"	4.15	1 3/16"	6.80
1 3/8"	4.15	1 1/4"	6.80
1 1/2"	4.55	1 3/8"	7.85
1 5/8"	5.50	1 1/2"	8.90

No. 731 SQUARE PUNCH

Size	Net User Price	Size	Net User Price
1/2"	$7.45	7/8"	$9.50
5/8"	7.45	1"	9.80
3/4"	8.10		

No. 731-R KHP RELAY PUNCH

Size	Net User Price
1.018" x .861"	$15.00

No. 731-R KU & KUP RELAY PUNCH

Size	Net User Price
1 1/4" x 1 3/8"	$22.60

No. 732 "KEY" PUNCH

Size	Net User Price	Size	Net User Price
15/32"	$6.90	1 17/64"	$ 9.20
15/16"	7.25	1 21/64"	10.15
1 11/64"	7.80		

No. 733 "D" PUNCH

Size	Net User Price	Size	Net User Price
1/2"	$5.60	5/8"	$5.95

No. 734 DOUBLE "D" PUNCH

Size	Net User Price
1 1/8" x 1 3/8"	$29.80

© United Technical Publications

GC ELECTRONICS

ALIGNMENT TOOLS & Service Aids

REAMER AND SCRAPER TIP

Twist-proof, chrome plated steel to shed solder. Printed circuit type solder aid tool with straight tip. Reamer and scraper tips for scraping joints or reaming out lug holes. Both ends are insulated from one another.

No.		Std. Pkg.	Net
9069	Reamer and Scraper	12	.90

TIP DETAIL



BRUSH AND FORKED TIP

Chrome plated steel to shed solder. Printed circuit type solder aid tool with brush on one end, forked tip on the other. Forked tip is for twisting or holding wires. Both ends are insulated from one another.

No.		Std. Pkg.	Net
9073	Brush and Forked Tip	12	.95



BRUSH AND SCRAPER TIP

Printed Circuit type solder aid with brush on one end for dusting away excess solder chips, and scraper tip for scraping joints. Both ends are insulated from one another.

No.		Std. Pkg.	Net
9074	Brush and Scraper Tip	12	.95



STRAIGHT PROBE AND FORKED TIP

Prevents solder from sticking. A must for the serviceman's bench or tool kit. Made from heat-treated tool steel, nickel plated to eliminate solder from sticking. Forked tip on one end, straight probe on the other.

GC No.	Walsco		Std. Pkg.	Net
9075	2570	Forked and Straight Tip	12	.90



ANGLE PROBE AND FORKED TIP

Nickel plated tool steel prevents solder from sticking to tool. Forked tip on one end for twisting or holding wires, angled probe on the other end.

GC No.	Walsco		Std. Pkg.	Net
9076	2571	Forked and Angled Tip	12	.90





SPEEDEX AUTOMATIC WIRE STRIPPER

Equipped with "Trig-O-Matic" Stay-Open feature; keeps wires from being crushed.

No.	For Sizes Listed Below
744	12 to 20 Wire
744-A	14 to 30 Wire
744-B	10 to 18 Wire
744-C	8 to 10 Wire
744-D	16, 18, 20, 22 Wires
744-E	14, 16, 18 Wires
744-F	10, 12, 14 Wires
744-G	For No. 18 POSJ or Parallel Wire
744-H	For 300 ohm TV and FM twin transmission line
744-I	10, 12, 14, 16, 18, 20, 22 Wire
744-M	10 to 20 Wire
744-N	Straight Cutter Blades

Cat. No. 744..... **Net $5.93**



SPEEDEX SPEED-O-MATIC WIRE STRIPPER

Fully automatic delayed return action to prevent crushing fine wires. The Speed-O-Matic combines the features of all Speedex Wire Strippers.

No.	For Sizes Listed Below
766	12 to 20 Wire
766-A	14 to 30 Wire
766-B	10 to 18 Wire
766-C	8 to 10 Wire
766-D	16, 18, 20, 22 Wire
766-E	14, 16, 18 Wire
766-F	10, 12, 14 Wire
766-G	For No. 18 POSJ or Parallel Wire
766-H	For 300 ohm TV and FM twin transmission line
766-I	10, 12, 14, 16, 18, 20, 22 Wire
766-M	10 to 20 Wire
766-N	Straight Cutter Blades

Cat. No 766 ..... **Net $5.93**



SPEEDEX STANDARD WIRE STRIPPER

Popular inexpensive Speedex model for 90% of all stripping jobs. Blades are inter-changeable, hardened and precision ground to razor sharp edges

No.	For Sizes Listed Below
733	12 to 20 Wire
733-A	14 to 30 Wire
733-B	10 to 18 Wire
733-C	8 to 10 Wire
733-D	16, 18, 20, 22 Wires
733-E	14, 16, 18 Wires
733-F	10, 12, 14 Wires
733-G	For No. 18 POSJ or Parallel Wire
733-H	For 300 ohm TV and FM twin transmission line
733-I	10, 12, 14, 16, 18, 20, 22 Wire
733-M	10 to 20 Wire
733-N	Straight Cutter Blades

Cat. No. 733..... **Net $4.77**



GC's New, Handy MULTI-COMBO ALIGNMENT TOOL KIT

Features three of the most useful alignment tools for radio and television service all in a handy pocket saver. Also included is one Extend-it adapter which permits making a combination of eight tools from this kit. Tools in this kit are GC 8867 Tel-a-Turn tool, GC 8282 Hex alignment tool, GC 9090 Adjustable Shorty screw driver, and Extend-it adapter.

No	Description	Dealer Net
8456	Multi-Combo Tool Kit	1.99

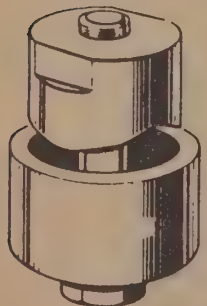
CONTACT BURNISHING TOOL KIT "A Must For Contact Maintenance"

A complete kit for the servicing of re lays, switches, etc., where critical con tact points must be kept clean for idea operating conditions. Contains one two ounce bottle No. 210-2 Contact Cleane and Burnishing Tool.

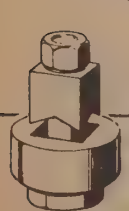
GC No.	Walsco		Std. Pkg.	Net
9339	19-K	Complete Kit.....	12	.9
9338	529	Burnishing Tool....	24	.3

CHASSIS PUNCHES

ROUND PUNCHES



SQUARE PUNCHES



METER HOLE PUNCHES (Round) For Standard Meters



DESCRIPTION	PART NO.	GREENLEE PART NO.	PUNCH SIZE	PILOT BOLT SIZE	PILOT HOLE DRILL SIZE	NET EACH
ROUND PUNCHES	3050-R	730 1/2	1/2"	1/4"	5/16"	$2.85
	3052-R	730 9/16	9/16"	1/4"	5/16"	2.85
	3062-R	730 5/8	5/8"	1/4"	3/8"	2.85
	3069-R	730 11/16	11/16"	3/8"	7/16"	2.85
	3075-R	730 3/4	3/4"	3/8"	7/16"	2.85
	3081-R	730 13/16	13/16"	3/8"	7/16"	2.85
	3087-R	730 7/8	7/8"	3/8"	7/16"	2.85
	3094-R	730 15/16	15/16"	3/8"	7/16"	3.20
	3100-R	730 1"	1"	3/8"	7/16"	3.20
	3106-R	730 1-1/16	1-1/16"	3/8"	7/16"	3.35
	3112-R	730 1-1/8	1-1/8"	3/8"	7/16"	3.35
	3116-R	730 1-5/32	1-5/32"	3/8"	7/16"	3.35
	3119-R	730 1-3/16	1-3/16"	3/8"	7/16"	3.35
	3125-R	730 1-1/4	1-1/4"	3/8"	7/16"	3.35
	3131-R	730 1-5/16	1-5/16"	3/8"	7/16"	7.02
	3137-R	730 1-3/8	1-3/8"	1/2"	9/16"	4.15
	3150-R	730 1-1/2	1-1/2"	1/2"	9/16"	4.55
	3162-R	730 1-5/8	1-5/8"	3/4"	7/8"	5.50
	3175-R	730 1-3/4	1-3/4"	3/4"	7/8"	6.30
	3187-R	730 1-7/8	1-7/8"	3/4"	7/8"	7.80
	3200-R	730 2"	2"	3/4"	7/8"	8.35
	3212-R	730 2-1/8	2-1/8"	3/4"	7/8"	15.21
	3225-R	730 2-1/4	2-1/4"	3/4"	7/8"	9.30
	3250-R	730 2-1/2	2-1/2"	3/4"	7/8"	15.10
	3275-R	730 2-3/4	2-3/4"	3/4"	7/8"	19.00
	3300-R	730 3"	3"	3/4"	7/8"	29.00
SQUARE PUNCHES	3050-S	731 1/2	1/2"	1/4"	3/8"	7.99
	3062-S	731 5/8	5/8"	3/8"	1/2"	7.99
	3075-S	731 3/4	3/4"	3/8"	1/2"	8.67
	3087-S	731 7/8	7/8"	3/8"	1/2"	10.19
	3100-S	731 1"	1"	3/8"	1/2"	10.52
METER HOLE PUNCHES (Round) For Standard Meters	3278	730 M	2-25/32"	3/4"	7/8"	13.75

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

Net

© United Technical Publications

GC ELECTRONICS

SERVICE AIDS



GC 7-PIN MINIATURE TEST SOCKET ADAPTER
Cat. No 9247 Net 1.65



GC 9-PIN MINIATURE TEST SOCKET ADAPTER
Cat. No. 9249 **Net 1.87**



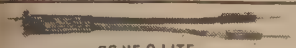
GC 8-PIN OCTAL TEST SOCKET ADAPTER
Cat. No. 9248 **Net 1.57**



GC DUAL TUBE PIN STRAIGHTENER
A handy, miniature pin straightener for 7-pin and 9-pin miniature tubes. Metal inserts on either end of the tool body, each of hardened metal for accuracy and long life.
Cat. No. 9092 **Net 3.20**



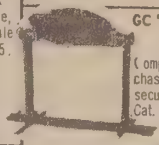
GC HEX-KEY AND SPLINE WRENCH KIT
For both hex and spline type screws. 12 wrenches in leatherette case
Cat. No. 5028 GC 560 Walsco **Net 1.59**



GC NE-O-LITE
Electrical circuit tester...easy to use with a Neon Glow Lamp which varies in light intensity according to voltages. Traces all types of trouble, such as grounded lines, open circuits, short circuits, etc.
Cat. No 5100 **Net .50**



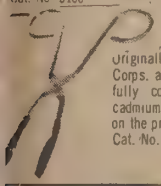
GC MINIATURE TUBE PIN STRAIGHTENER
Precision-constructed steel die, for straightening pins on fragile miniature tubes of the 1S5, 6AK5, 9002 variety.
For 7-pin Min. Tubes (red base)
Cat. No. 5191 **Net 1.00**
For 9-pin Jumbo Tubes (blue base)
Cat. No. 8105 **Net 1.00**



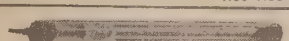
GC "QUICK-RIG" RADIO-PHONO CHASSIS REPAIR CRADLE
Complete 360 degree rotation to lock chassis at best working angle. Clamps securely, makeshift setups, all metal.
Cat. No. 5212 **Net 7.95**



GC POCKET HEX KEY WRENCH SET
7 popular size wrenches. .050 to 3/16" fitted in a steel case-like pocket knife blades.
Cat. No. 9124 GC 564 Walsco **Net 1.83**



GC TUBE & PARTS EXTRACTOR
Originally designed by the U.S. Signal Corps. as standard equipment. Skillfully constructed of spring steel, cadmium plated. Has rubber cushion on the prongs.
Cat. No. 5092 **Net .98**



GC TV "HIGH-VOLT" SAFETY PROBE & TESTER
Handy tester for quickly checking TV high voltage circuits. Tester will glow when high voltage is okay.
Cat. No. 8836 **Net 2.13**



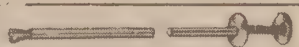
GC NO-JOLT TOOL GRIPS
Modernizes old tools with new safety grip handles. Grease and oil resistant.
Cat. No 5647 GC Small (1 pair) Net .23
Cat. No. 521 Walsco
Cat. No. 5648 GC Med. (1 pair) Net .27
Cat. No 522 Walsco



GC SPEEDEX FUSE PULLERS
Inexpensive...non-slip, fuse puller. Safe and handy for cartridge fuses.
Cat. No 5525 Midget size for fuses 1/4" to 1-2" diameter **Net .60**
Cat. No. 5526 Pocket size for fuses 1/2" to 1-1/2" dia. Voltages to 200 amps at 250 volts and 100 amps at 600 volts. **Net 1.30**



GC AMO MINIATURE TUBE PULLER
AMO makes it possible to easily remove or insert miniature tubes such as 6AG5, 50B5, etc. It works on the suction and vacuum principle.
Cat. No. 5093 For 7-pin tubes **Net 2.50**
Cat. No. 8106 For 9-pin tubes **Net 2.50**



GC HANDY PICK-UP TOOL
One of the handiest tools you can have in your home, shop, office or farm. Tool is 15 inches long.
Cat. No. 5089 GC 2563 Walsco **Net 1.15**



GC PHONO TURNTABLE STAND
Stand raises the turntable about 15" above the bench for repairs. Easily adjusted to all sizes and types of phono turntables. Sturdily made of steel.
Cat. No. 5205 **Net 5.45**



GC DUPLEX TUBE PIN STRAIGHTENER
The handiest tubepin straightener for both miniature and jumbo miniature tubes of the 7- and 9-pin types.
Cat. No. 8655 **Net 2.00**



GC 4-IN-1 TUBE GADGET
Four tools in one. Pure rubber, will not break
Cat. No. 9130 **Net 1.65**



New SUPER DELUXE UNBREAKABLE PLEXIGLASS SERVICEMANS MIRROR
Unbreakable plexiglass mirror with special swivel mount. Can be adjusted to old set height and to low boy height.
Dimensions: 10" x 12"

No.	Std. Pkg.	Net
8381 Mirror & Stand	1	11.45



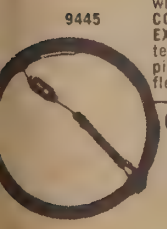
COLOR TV SERVICE MIRROR
High quality polished glass mirror in metal frame, nickel plated, 10" x 12". Complete with adjustable, collapsible stand for easy storage.
Cat. No. 8390 **Net 6.95**

COLOR TV SERVICE AIDS



RCA COLOR TV HARNESSES & SOCKETS FOR SERVICE & REPLACEMENT

Part No.	Description	Net
9436	**ADAPTER SOCKET** ..... Converts 23" & 25" CRT Base to 21" type for use with current test equipment. RCA No. 937848; Admiral No. BP196.	3.50
9437	**UNIVERSAL KINESCOPE SOCKET EXTENSION**..... **CABLE**—fits all 21", 23" and 25" round and rectangular CRT. 48" leads. RCA No. 13B111 and 937846; Admiral No. BP191.	7.50
9438	**KINESCOPE EXTENSION SOCKET** ..... 48" leads—converts a 23" or 25" CRT base to 21" type for use with current test equipment. RCA No 13B111 and 937847; Admiral No. BP190.	8.95
9439	**KINESCOPE SOCKET EXTENSION CABLE**..... For all 21AXP or equivalent round picture tubes. Extends kinescope socket cable for chassis removal when servicing, or use with color test tube jig. Admiral No. BP192.	4.95
9441	**REPLACEMENT SOCKET & LEADS** ..... For 21" color tubes—24" leads.	2.25
9443	**REPLACEMENT SOCKET & LEADS** ..... For 23" and 25" color tubes—24" leads.	2.25
9447	**DEFLECTION YOKE EXTENSION CABLE**..... For 21" color tubes—48" leads. Use with all 21AXP22 or equivalent tubes. Extends yoke cable for servicing chassis without removing picture tube.	4.85
9448	**DEFLECTION YOKE EXTENSION CABLE**..... 48" leads extend yoke cable when chassis is removed for servicing. For 23" or 25" picture tubes. Male octal plug one end, push-on connectors on other end for connecting to deflection yoke, or test jig.	1.95
9453	**ANODE EXTENSION** ..... High voltage extension cable with 48" leads for use when TV chassis is removed from set for servicing.	1.85
9445	**CONVERGENCE MAGNET DEFLECTION YOKE**..... **EXTENSION.** For RCA, Admiral, Motorola, Zenith. Extension leads for chassis removal without removing picture tube. For RCA CTC7 to CTC15 chassis. Deflection yoke extension for RCA 600 & 700 series.	4.95



GC DEGAUSSING COIL *PROFESSIONAL MODEL*
Eliminates stray magnetic fields in color TV sets as required prior to purity adjustment. Durable, molded hi-impact case. Supplied with 9' cord, momentary push-button switch which permits de-energizing of coil without pulling plug. Safe, easy to use; will last a lifetime.
Cat. No. 9317 Net 19.95



7" DEGAUSSING COIL *IN-THE-HOME MODEL*
For the home or serviceman. Molded of hi-impact plastic with momentary push-button switch, this coil will easily fit into tube caddy or will hang on the back of TV set. Low cost...easy resale to TV set owner.
Cat. No 2592 **Net 5.95**

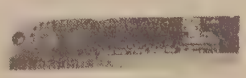
GC SERVICE AIDS



SLAB TYPE CLUTCH-HEAD SCREWDRIVERS
The only tools for servicing the Admiral Tilt-Out Tuner TV sets. Two sizes are available. A must for working on Color TV sets.
Cat. No. 12-015 for No. 6 clutch-head screws **Net 1.95**
Cat. No. 12-016 for No.8 clutch-head screws **Net 1.95**



GC TV 3-WAY ANTENNA KLIP
Buy them by the bag and have clips ready to sell and ready to install on TV sets.
Cat No. 9015-X bag of 10 **Net 1.80**



GC TUBE PIN STRAIGHTENER
Plastic 6" rule: tube pin straightener for Compactrons, large 7-pin, 9 and 10 pin, and 7-pin tubes. Drilled holes for bench mounting.
Cat. No. 9135 **Net .59**



"QUICK SNAP" ANTENNA CLIP
New side clip allows fast connecting with antenna lines; ideal for the service bench. Accepts A-N-P, Pin, and flat terminal type lines.
Cat. No. 9030 bag of 2 clips **Net .49**



REACH-ALL PEN OILER
Precision instrument oiler. Features extending and retracting tube. Disposes a drop or fraction of a drop of high quality oil.
Cat. No. 984 **Net .99**



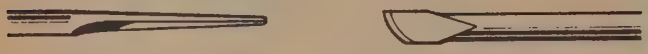
GC 3-STEP TAP
Three-in-1 tool for tapping or rethreading holes. 3 most popular tap sizes: 6 32, 8 32 and 10 32. Heavy plastic handle.
Cat. No. 8871 G.C. 2574 Walsco **Net 3.75**

WRITE FOR CATALOG #FR-71 FOR COMPLETE LISTINGS

GC ELECTRONICS

SOLDERING AIDS

REAMER AND SCRAPER TIP

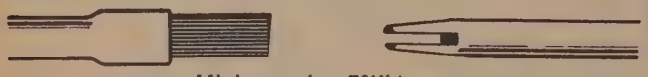


Miniature size, 5¾" long

Twist-proof, chrome plated steel to shed solder. Printed circuit type solder aid tool with straight tip. Reamer and scraper tips for scraping joints or reaming out lug holes. Both ends are insulated from each other.

GC No.		Net
9069	Reamer and Scraper Hex Plastic Handle	.90
9469	Reamer and Scraper Hex Wood Handle	.90

BRUSH AND FORKED TIP



Miniature size, 5¾" long

Chrome plated steel to shed solder. Printed circuit type solder aid tool with brush on one end, forked tip on the other. Forked tip is for twisting or holding wires. Both ends are insulated from each other.

GC No.		Net
9073	Brush and Forked Tip Hex Plastic Handle	.95
9473	Brush and Forked Tip Hex Wood Handle	.95

BRUSH AND SCRAPER TIP



Miniature size, 5¾" long

Printed Circuit type solder aid with brush on one end for dusting away excess solder chips, and scraper tip for scraping joints. Both ends are insulated from each other.

GC No.		Net
9074	Brush and Scraper Tip Hex Plastic Handle	.95
9474	Brush and Scraper Tip Hex Wood Handle	.95

STRAIGHT AND FORKED TIP REAMER



Miniature size, 5¾" long

Prevents solder from sticking. Made from heat-treated tool steel, nickel plated to eliminate solder from sticking. Forked tip on one end, straight probe on the other.

GC No.		Net
9075	Forked and Straight Tip Hex Plastic Handle	.90
9475	Forked and Straight Tip Hex Wood Handle	.90

ANGLE REAMER AND FORKED TIP



Miniature size, 5¾" long

Nickel plated tool steel prevents solder from sticking to tool. Forked tip on one end for twisting or holding wires, angled reamer on the other end.

GC No.		Net
9076	Forked and Angled Tip Hex Plastic Handle	.90
9476	Forked and Angled Tip Hex Wood Handle	.90

STRAIGHT REAMER AND FORKED TIP



Standard size, 7½" long

Standard type soldering aid tool, with straight reamer for cleaning out lug holes. Forked tip is ideal for twisting or holding wires. Steel, chrome plated to prevent solder from sticking to tool.

GC No.		Net
9086	Straight Reamer and Forked Tip Hex Plastic Handle	1.03
9486	Straight Reamer and Forked Tip Hex Wood Handle	1.03

HEAVY DUTY BRUSH AND FORKED TIP



Standard size, 7½" long

Made of special stainless steel with hardened probe. Solder will not stick to it. One end has a stiff wire brush for cleaning solder off terminals. The other end is machined to help in unsoldering wires which are wrapped around terminals and lugs, and holding wires.

GC No.		Net
9088*	Brush and Forked Tip Hex Plastic Handle	1.03
9488	Brush and Forked Tip Hex Wood Handle	1.03

*FSN 5120-767-9126

ANGLE REAMER AND FORKED TIP



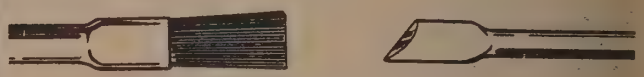
Standard size, 7½" long

Handy, fine point probe specially designed to aid in probing and soldering printed circuits. Made with special stainless steel hardened probes, solder will not stick to it.

GC No.		Net
9093*	Angle Reamer and Forked Tip Hex Plastic Handle	1.03
9487	Angle Reamer and Forked Tip Hex Wood Handle	1.03

*FSN 3432-P-49-N-363

BRUSH AND SCRAPER TIP



Standard size, 7½" long

Fine stainless steel brush and hardened steel scraper are required to scrape and clean the silicone resin from the printed circuit before any repair can be made. Saves time on printed circuits.

GC No.		Net
9094*	Brush and Scraper Hex Plastic Handle	1.03
9484*	Brush and Scraper Hex Wood Handle	1.03

*FSN 3432-P-49-N-364

*FSN 5120-767-9126

3 IN 1 HEX CORE TOOL



Delrin alignment tool

For adjusting coil slugs. Both ends are Hex shaped. One end is .100" with undercut shaft; the other end is .075" and .100".

GC No.		Net
9302	3 in 1 Hex Core Tool	.55

Net

© United Technical Publications

HUNTER TOOLS

HUNTER INDUSTRIES — *A Division of Hunter Industries*

YOUR SINGLE SOURCE FOR THE MOST COMPLETE LINE OF PRECISION ELECTRONIC ASSEMBLY TOOLS

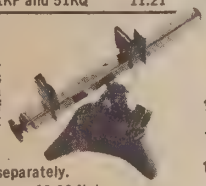
LEAD BENDING GAUGE



Fast, accurate lead forming with perfect reliability . . . no nicks! Up to 1200 component leads per hour may be formed with the simple precise Hunter Gauge offered in 4 standard sizes. All models have 40 lead forming positions. Light-weight, high-impact, Cycolac plastic.

Stock No.	Description	Price
51KL	¼ watt size, .375 to 1.50"	4.50
51KM	½ watt size, .050 to 1.50"	4.50
51KN	Set of 1 ea. 51KL and 51KM	9.00
51KP	1 watt size, .75 to 2.50"	5.63
51KQ	2 watt size, .875 to 2.50"	5.63
51KR	Set of 1 ea. 51KP and 51KQ	11.21

QUICK ADJUST VISE



Fully positionable, quick action vise, to meet the needs of the electronics/aerospace industry. Combination of vise, positioner, and cast iron base.

62E4 — Price 34.13 Net

Each unit is also available separately.

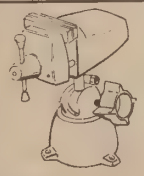
62E1— Positioner only. Price — 12.00 Net

62E2-1- Vise only. Price 14.40 Net

62E3— Combination of positioner (62E1) and vise (62E2) only. Price 26.40 Net

62K3— Cast iron base. Price 7.73 Net

PANA-VISE



Solves holding problems for small complicated assemblies. **82** —Complete with base and vertical head. Unit 8" high, 6" long, 5" wide. Pivots work 360 degrees in any tangent to half a sphere, achieves any compound angle. Price 17.30 Net

CIRCUIT TESTERS



Traces any circuit **54** — dead or alive — to 600 volts A.C. or D.C. Signal light clearly visible in the tip at point of contact. Sturdy — pocket size — with plated brass parts; shock proof case. Price 4.98 Net

MAGIC TIP SCREWHOLDER

Holds screws tight when inserting or removing. Center pin grips screw tightly at slightest pressure.



Stock No.	Overall Length	Slot Fits Screw	Net Price
10E3	2½"	#00 to #2	2.01
10E4	4"	#00 to #2	2.39
10E7	7"	#00 to #2	2.45
10M3	3½"	#3 to #6	1.89
10M5	5¼"	#3 to #6	2.33
10M8	8¼"	#3 to #6	2.57
10M12	11¼"	#3 to #6	2.81
10A	4"	#6 to #10	2.01
10B	6¼"	#7 to #10	2.45
10C	7½"	#7 to #10	2.49
10D	11¼"	#7 to #10	2.79

NUT DRIVERS

These nut drivers have hollow shafts. Color coded Tenite II plastic handles identify size.



Stock No.	Hex-agon Size	Overall Length	Color	Net Price
19W	5/32"	6¾"	Maroon	1.02
20	3/16"	6¾"	Black	1.02
20A	7/32"	6¾"	Brown	1.02
20B	¼"	6¾"	Red	1.02
20C	5/32"	6¾"	Orange	1.02
20D	5/16"	6¾"	Amber	1.02
20E	11/32"	6¾"	Green	1.02
20F	3/8"	6¾"	Blue	1.02
20G	7/16"	7"	Brown	1.19
20H	½"	7"	Red	1.19
20H1	9/16"	7¼"	Orange	1.34
20I	¼"	3"	Red	1.92
20J	5/16"	3"	Amber	1.92
20K	3/8"	3"	Blue	1.92

HUNTER KNIVES



E20 — Utility knife. Blade is replaceable. Made of light weight aluminum. Knife is 5/16" in diameter and 5" long. Price .60 Net

HEX DRIVERS

Screwdriver type wrenches for speedy drive socket screws. Tempered shafts. Plastic handles.



Stock No.	Size	Overall	Net Price
4Y	.028	4"	.72
4Z	.035	4"	.72
5	.050	4 5/8"	.60
5A	1/16"	5 1/8"	.63
5B	3/64"	6"	.66
5C	5/32"	6 3/8"	.69
5C1	3/64"	6¾"	.72
5D	1/8"	6¾"	.72
5D1	3/64"	7"	.72
5E	5/32"	7 5/8"	.72
5F	3/16"	8"	.80
5G	7/32"	8 3/8"	.89

"SMITTY" WRENCHES



Convenient, easy to use, gives the right key size when you want it.

1P4 — 6" handle, 5" blades. 5/32, 1/8, 5/32, 3/16, 7/32, ¼. Price 2.55 Net

1P5 — 4" handle, 2" blades. 5/32, 1/8, 5/32, 3/16, 7/32. Price 1.26 Net

1P6 — 3" handles, 2" blades. .050, 1/16, 3/64, 5/32, 1/8, 5/32. Price 1.23 Net

1P7 — 3" handle, 2" blades. .050, 1/16, 3/64, 5/32, 7/64, 1/8, ¾. Price 1.26 Net

1P8 — 4" handle, 3" blades. 5/32, 7/64, 1/8, 3/64, 5/32, 3/16, 7/32, ¼. Price 1.82 Net

THERMAL WIRE STRIPPER



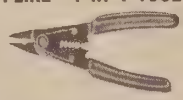
Plier is 8" long, ½" wide at tip, 2½" wide at handle, ⅞" thick with 36" cord. Plier stripper weighs only 8 oz., total unit weighs only 3 lbs. Ideal for research and development work.

80 — Standard control box, plier-type wire stripper. Price 85.05 Net

80C — Same as above but with heavy duty (3-wire) cord and grounds. Price 89.54 Net

80A — Replacement filaments for plier-type stripper. Price 3.15 Net

"PLIKE" 4 IN 1 TOOL



Holds, Crimps, Cuts and Strips solid wire in gauges #12 thru #22 and stranded wire #14 thru #24.

55 — Plike, w/plastic grips and spring. Price 2.63 Net.

HUNTER SUB-MINIATURE TOOLS



K24M — Master set of sub-miniature tools consisting of jewelers handle, red plastic handle, wrench blades 3/64, 5/32, 1/8, 3/32, screwdriver blades .055, .070, .080, .100, Phillips blades #0, #1, awl, spline blades .033-4, .048-4, .048-6, .060-6, .069-4, nut driver blades 3/64, 5/32, 7/64, 1/8, 3/32 and hex key blades .028, .035, .050, 1/8, 5/64. Price 12.72 Net

HUNTER EREMADIUM CUTTERS

These specially tempered eremadium cutting edges are designed for cutting newer wires containing nickel, iron, etc., up to 22 gauge wire. The most popular are the cutters with full flush or semi-flush cutting edges, lasting 3 to 5 times longer.





A95E — Full flush cut plier 4" long, designed to cut 22 gauge wire or less. Price 5.91 Net

A95EL — Same as A95 only with leaf spring. Price 6.14 Net

A97E — Semi-flush cut plier 4" long, designed to cut 22 gauge wire or less. Price 5.01 Net

A97EL — Same as A97E only with leaf spring. Price 5.24 Net

A86E — Tape Jaw Dyke 4¾" long for No. 20-22 gauge wire. Semi-flush cut. Price 6.33 Net

A86EL — Same as an A86E only with leaf spring. Price 6.56 Net

EREMADIUM
CHROME VANADIUM STEEL

HUNTER TIP-O-DYKE



Special precise full flush cutting instruments that will cut flat, soft nickel ribbon wire and increase reliability. Cuts at tip with perfect angle.

A90E — 4¾" overall, 22 gauge AS copper wire. Price 11.91 Net.

A90EL — Same as an A90E only with leaf spring. Price 12.14 Net.

EREMADIUM
CHROME VANADIUM STEEL

HUNTER PLIERS



A11— 4¾" narrow chain nose. Smooth jaws, radius edges will not mar wire. Price 4.11 Net

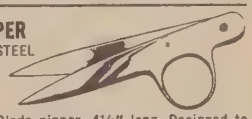
A11L— Same as A11 only with leaf spring. Price 4.34 Net

A14-4½ - A14-6– Extra long needle nose, 4½". Optional: 6". Radius edges. Price 4.65 6" Price 5.31

A14L-4½ - A14L-6– Same as an A14-4½ only with leaf spring. Price 4.88 - 6" 5.54

HUNTER NIPPER

CHROME PLATED STEEL



F213 — Straight Blade nipper, 4½" long. Designed to be held in palm of hand and keep fingers free for use. Price 2.76 Net

F213A — Same as an F213 only heavy duty. Price 3.12 Net

F214 — Same as an F213 only with curved blades. Price 3.00 Net

HUNTER SCISSORS

NICKEL PLATED STEEL



F299 — Straight blade electronic shear. 5" long. Price 2.46 Net

HUNTER SCISSOR CLAMPS

STAINLESS STEEL



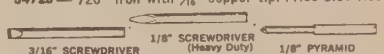
F35 — Straight end scissor clamp. 5" long. Precision box joint, fine serrated jaws. Lock, opens easily. Cushion-grip handles. Price 5.04 Net

F36 — Same as an F35, only with curved end. Price 5.04 Net

HUNTER SOLDERING IRON & TIPS



S4725 — 720° iron with 3/16" copper tip. Price 3.59 Net

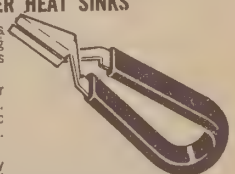


S13C — Screwdriver type 3/16" copper tip. Price .41 Net

S14C — Pyramid type 1/8" copper tip. Price .41

S25C — Screwdriver type heavy duty 1/8" copper tip. Price .41 Net

HUNTER HEAT SINKS



Absorbs and dissipates heat instantly during soldering — protects delicate components.

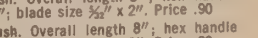
51G — Small model for delicate work. 1¼-ins. long. Coated plastic handle. Tweezer nose. Price .56 Net

51F — Medium Duty Unit. Plastic coated handles. Fed. Stock No. 3439-856-9497. Price .69 Net

51E — Heavy Duty. Has copper jaw. Plastic covered handle. Fed. Stock No. 3439-856-9496. Price .75 Net

HUNTER SOLDERING AIDS

Blades of non-magnetic steel to which solder won't adhere. Plastic handle; hex shaped, won't roll off table.



REGULAR MODELS

51 — Fork & Hook. Overall length 8"; hex handle size 3/8" x 3"; blade size 5/32" x 2". Price .90

51A — Fork & Brush. Overall length 8"; hex handle size 3/8" x 3"; blade size 5/32" x 2". Price .90

51B — Knife & Brush. Overall length 8"; hex handle size 3/8" x 3"; blade size 5/32" x 2". Price .90

51C — Fork & Reamer. Overall length 8"; hex handle size 3/8" x 3"; blade size 5/32" x 2". Price .90

MICRO MODELS

51C1 — Fork & Hook. Overall length 6"; hex handle size ¼" x 3"; blade size 1/8 x 1½". Price .90

51C2 — Fork & Reamer. Overall length 6"; hex handle size ¼" x 3" blade size 1/8 x 1½". Price .90

SOLDERING IRONS

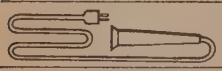
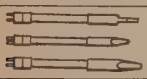
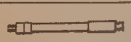
6 to 240 VOLTS 12 to 140 WATTS

A complete line of high quality soldering irons specifically designed for production-line soldering in the electronic, instrument, and communications industries — including irons for soldering miniature and subminiature components. Also ideally suited for intermittent operations such as repair, maintenance, laboratory work, and electronic kit construction. Irons up to 1250 watts are available.

PENLINE-120 SOLDERING IRONS — 120 VOLTS; 25, 30, 40 AND 45 WATTS



Lowest cost GE iron; ideally suited for light to medium production in electronics, communications, and allied industries, for repair and maintenance operations, and by the "do-it-yourself" electronics kit builder.

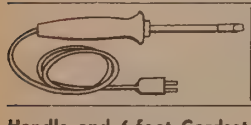
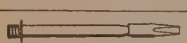
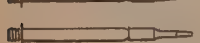
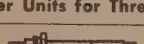
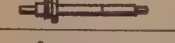
Description		Cat. No.
Handle and 6-foot Cordset		
	Two-conductor	6D400*
	Three-conductor, with NEMA standard plug	6D400G2
Tip and Heater Units — Ironclad		
	3/16" Chisel Tip 30 watts	6D410*
	1/32" Chisel Tip 30 watts	6D411*
	3/8" Chisel Tip 45 watts	6D412*
Heater for Threaded Tips		
	25 watts	6D415
	30 watts	6D414
	40 watts	6D413*

Use interchangeable threaded tips listed on next page.

LIGHTWEIGHT SOLDERING IRONS — 120 VOLTS; 40 AND 60 WATTS

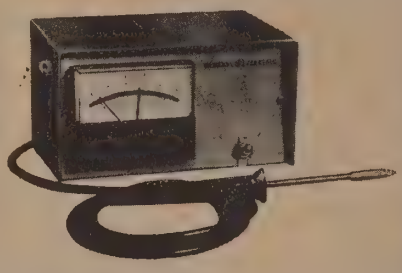


Ideal for light and medium production-line soldering and maintenance and repair operations in electronics and communications industries. Tip and heater units can be changed in seconds.

Complete Iron — Includes handle and 6-foot cordset, and tip and heater unit — 60 watts		
	1/4" Ironclad Chisel Tip	6A273*
	3/16" Ironclad Pyramid Tip	6A283*
	3/16" Ironclad Chisel Tip	6A283G23
Handle and 6-foot Cordset		
	Two-conductor	6A273G62
	Three-conductor with NEMA standard plug	6A273G63
Tip and Heater Units — 60 watts		
	1/4" Ironclad Chisel Tip	6A300
	3/16" Ironclad Pyramid Tip	6A301
	3/16" Ironclad Chisel Tip	6A301G4
Heater Units for Threaded Tips		
	40 watts	6A304
	60 watts	6A301G7

Use interchangeable threaded tips listed on next page.
* UL Listed.

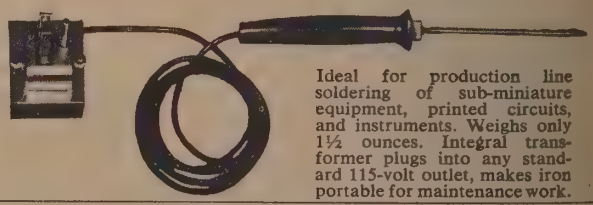
TEMPERATURE CONTROLLED SOLDERING IRON — 120 VOLTS; UP TO 135 WATTS



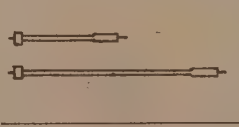
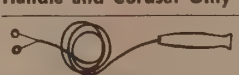
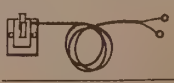
2½-ounce temperature controlled soldering iron maintains selected temperature which can be varied for wide range of work without changing irons or tips. The iron's 135-watt capacity enables it to handle high-mass joints, yet its precision temperature control makes it suitable for the smallest of microminiature jobs without exceeding temperature limitations. Ideal for high production and high quality work, laboratory use, service shops, and wherever temperature limits are specified.

Description	Cat. No.
Complete Iron — Includes Control Box, Handle and 5-foot Cordset, and 1/8-inch and 3/16-inch Chisel Tip and Heater Units	6A490
Control Box Only	6A488
Handle and 5-foot Cordset Only	6A491
1/8-inch Chisel Tip and Heater Unit Only	6A492G2
3/16-inch Chisel Tip and Heater Unit Only	6A492G3

MINIATURE SOLDERING IRONS — 6 VOLTS, 12 WATTS



Ideal for production line soldering of sub-miniature equipment, printed circuits, and instruments. Weighs only 1½ ounces. Integral transformer plugs into any standard 115-volt outlet, makes iron portable for maintenance work.

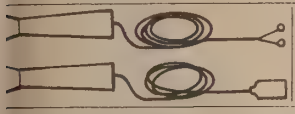
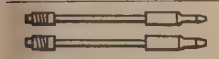
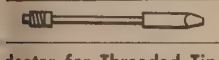
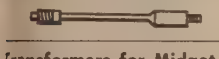
Complete Iron — Includes tip and heater unit, 6-foot cordset, and transformer with grounded plug.		
	1/8" Chisel Tip 3" Shank	6A428G3
	1/8" Chisel Tip 6" Shank	6A428G4
	1/8" Pyramid Tip 3" Shank	6A428G7
	1/8" Pyramid Tip 6" Shank	6A428G8
Complete Iron Less Transformer — Includes tip and heater unit, and 6-foot cordset with terminals		
	1/8" Chisel Tip 3" Shank	6A428G5
	1/8" Chisel Tip 6" Shank	6A428G6
Renewal Tip and Heater Units		
	1/8" Chisel Tip 3" Shank	6A429G3
	1/8" Chisel Tip 6" Shank	6A429G4
	1/8" Pyramid Tip 3" Shank	6A429G5
	1/8" Pyramid Tip 6" Shank	6A429G6
Handle and Cordset Only		
	6-foot Cordset with Terminals	6A428G62
Renewal Transformer — Includes — 6-foot integral cordset		
	6-volt Secondary 115-volt Primary	6A430

© United Technical Publications

MIDGET SOLDERING IRONS — 6 VOLTS; 18 to 45 WATTS (with transformers)



A versatile iron for light production in electronics, and communication industries — handles like a pencil, weighs about 1¾ oz. Tip renewal is easy and fast — complete tip and heater unit can be changed in a few seconds. Heat output can be varied from 18 to 45 watts with standard GE transformers.

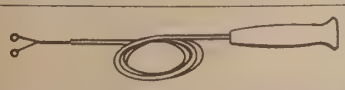
Description		Cat. No.
Handle and 6-foot cordset		
	For single- and 4-tap transformers	6A203
	For transformer with 3-heat switch	6A203G2
Tip and Heater Units — All ironclad tips		
	¼" Chisel Tip 25 watts	6A211
	⅛" Cone Tip 25 watts	6A213
	3/16" Pyramid Tip 25 watts	6A215
	3/16" Chisel Tip 25 watts	6A217
	⅜" Chisel Tip 45 watts	6A211G31
Heater for Threaded Tips		
	25 watts	6A221
Transformers for Midget Iron — 115-volt Primary‡		
	Single Tap 6.3-volt secondary	6A362G2
	Four Tap 5.4/5.7/6.0/6.3-volt secondary	6A364G2
	With Three-heat Switch 4.9/6.3/6.9-volt secondary For use only with Handle and Cordset 6A203G2.	6A434

‡ Single- and four-tap transformers are available with 240-volt primary in quantities of 36 or more, specify catalog number desired and note on order, "except with 240-volt primary." Use interchangeable threaded tips.

MIGHTY MIDGET SOLDERING IRON — 12 VOLTS; 100 WATTS



A lightweight iron with high heat capacity for heavy soldering where larger irons, up to 200 watts, prove unwieldy for rapid repetitive soldering, such as production soldering of tuner chassis, tinware, can seams, etc.

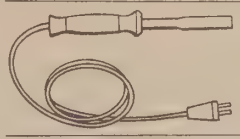
Description		Cat. No.
Handle and Cordset — Two-conductor		
		6A210G61
Tip and Heater Unit — Ironclad		
	½" Chisel Tip 60 watts	6A211G54
	½" Chisel Tip 80 watts	6A211G50
	½" Chisel Tip 100 watts	6A211G33
Transformer for Mighty Midget — 115-volt primary		
	Four Tap — for 55/70/85/100 watts (115-volt primary, 12-volt secondary)	6A364G7

* UL Listed.

6A160 SERIES SOLDERING IRONS — 120 VOLTS§, 75 TO 140 WATTS



Ideal for medium to heavy production, and maintenance and repair operations. Available with any of 12 different tips, calorized or ironclad.

Description		Cat. No.
Complete Iron Less Tip — Includes 6-foot two-conductor cordset		
	75 Watts	6A161*
	100 Watts	6A162*
	110 Watts	6A162G6*
	125 Watts	6A162G3*
	140 Watts	6A162G12

Tips — Fit all irons listed above

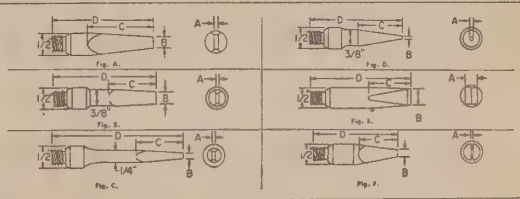


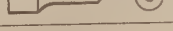
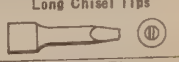
Fig.		A	B	C	D	
A. ½"-Dia. Chisel	Calorized	1/32	3/16	1½	2⅜	6D1P1
	Ironclad	1/16	3/32	1½	2⅜	6D1P2
	Calorized	1/16	3/32	2¾	4	6D1P3
	Ironclad	3/32	¼	2¾	4	6D1P4
	Calorized	3/32	¼	1¼	2⅛	6D1P11
B. ⅜"-Dia. Chisel	Ironclad	1/16	3/16	1⅛	2⅜	6D1P8
	Calorized	1/32	3/32	1⅛	2⅜	6D1P6
	Ironclad	1/16	3/16	1⅛	2⅜	6D1P7
C. ¼"-Dia. Chisel	Ironclad	1/16	⅛	1	3⅛	6D1P5
D. Cone	Ironclad	1/16	1/16	13/16	2 3/16	6D1P12
E. Pointed Chisel	Ironclad	¼	13/32	1	1⅞	6D1P9
	Ironclad	¼	13/32	1	2⅜	6D1P10
F. Slim Chisel	Ironclad	1/16	5/32	⅞	2	6D1P19

Renewal Heater — 120 Volts§

	75 Watts	6A31
	100 Watts	6A32
	110 Watts	7C342
	125 Watts	8A88
	140 Watts	7C616

§ Also available for 240-volt operation.

INTERCHANGEABLE THREADED TIPS For Penline-120, Pistol-grip, Lightweight, and Midget Irons

Description (Copper Tip, Surface Plating)		Cat. No.
Spade Tips 	1/16" Dia—Nickel	6D4P1
	1/16" Dia—Ironclad	6D4P2
	⅛" Dia—Nickel	6D4P3
	5/32" Dia—Ironclad	6D4P4
Chisel Tips 	1/16" Dia—Nickel	6D4P5
	1/16" Dia—Ironclad	6D4P21
	3/32" Dia—Ironclad	6D4P6
	⅛" Dia—Nickel	6D4P7
	⅛" Dia—Ironclad	6D4P22
	5/32" Dia—Ironclad	6D4P8
	3/16" Dia—Nickel	6D4P9
	3/16" Dia—Ironclad	6D4P10
	5/32" Dia—Nickel	6D4P11
	3/16" Dia—Ironclad	6D4P12
Long Chisel Tips 	3/16" Dia—Nickel	6D4P13
	5/32" Dia—Ironclad	6D4P14
Pyramid Tips 	⅛" Dia—Nickel	6D4P15
	5/32" Dia—Ironclad	6D4P16
	11/32" Dia—Nickel	6D4P17
	⅜" Dia—Ironclad	6D4P18
Cone Tips 	⅛" Dia—Nickel	6D4P19
	5/32" Dia—Ironclad	6D4P20

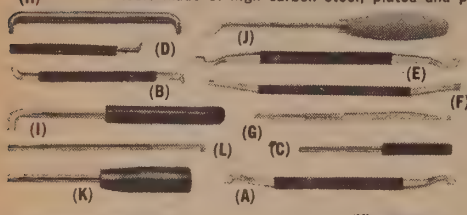
© United Technical Publications

RELAY & ELECTRONIC TOOLS

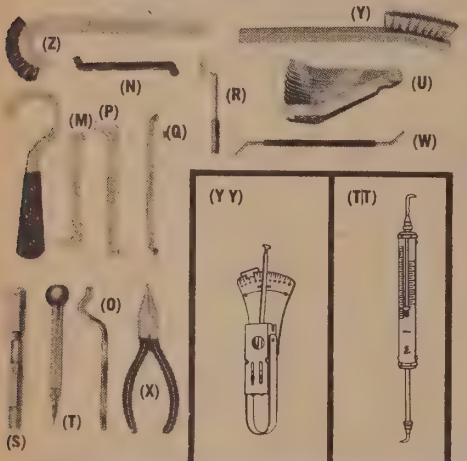
FOR PRODUCTION, SERVICE & MAINTENANCE

RELAY SPRING ADJUSTING TOOLS

All tools made of high carbon steel, plated and polished. heat treated and tempered to exact requirements. Insulated handles for work on live equipment.



(A) SA-2	Offset type, 6½" long, saw slot both ends .032"	$2.98
(B) SA-6A	Cross & lengthwise slots, 5½" long. Slot .030"	$2.95
(C) SA-7	One end saw slot straight 4½" long. Slot .015"	$1.75
(D) SA-8	Heavy duty. Round head, 4½" long. Cross slot .045"	$2.98
(E) SA-16	Offset type 6½" long, saw slot both ends .018"	$3.28
(F) SA-17	Offset slim type. Saw slot both ends .023" 8" long	$3.84
(G) SA-20	Opposite-faced thin headed slots. 7" long Slots .022"	$3.90
(H) SA-24	Crosswise slots. 5½" long, Slots .040 & .028"	$2.88
(I) SA-25	Angled. 6½" long. Saw slot .032"	$2.98
(J) SA-143	Bent, 8" long, Saw slot .025"	$2.86
(K) SA-163	Straight driver type, 5½" long, cross slot .038"	$2.77
(L) SA-175	Closely set saw slot, 5¼" long, slot .031"	$2.92



RELAY & INSTRUMENT TOOLS

(M) AB-21	Adjuster, Armature, 4" long, slot width each end .110"	$1.88
(N) AB-20	Adjuster, Armature, 3 slots .114"	$1.98
(O) SB-22	Adjuster, Armature stop, 5" long, slots .032"	$1.98
(P) S-187	Adjuster, double dog, 4" long, slot both ends. 3/32"	$2.14
(Q) S-201	Adjuster, aid spring, 4¼" long, slot both ends .034"	$3.18
(R) J-34	Adjuster, pole piece, 3" long	$1.68
(S) FW-24	Hex wrench, double end, with screw driver, 4¾" long, 7/32" and ¼" hexagon	$3.10
(T) J-23	Screwdriver, guide pin 4½" long	$3.60
(U) T-255	Angled thickness gauge, 9 blades .009" to .026"	$2.24
(V) BC-23	Bank cleaner, abrasive surface 1½" dia. 6" long	$3.58
(W) S-457	Wire & spring aid, bent 30° opposite ends, 5½" long	$3.40
(X) PL-8	Spring duck bill plier, 5½" long	$5.34
(Y) WB-65	Nickel silver wire brush, 9" long	$2.40
(Z) HB-75	Curved hair brush. Radius 1¾", Length 8"	$2.70

SPRING TENSION GAUGES (YY)

Precision-made to accurately determine the setting, testing and adjusting of relay spring tension and other delicate electronic tensioned movable components.

G-10	0-10 grams	$7.48	GP-50	0-50 grams (preset)	$7.98
G-30	0-30 grams	$7.48	G-300	0-300 grams	$7.48
G-50	0-50 grams	$7.48	G-700	0-700 grams	$8.96
G-150	0-150 grams	$7.48	G-14	0-1400 grams	$8.90

PUSH–PULL TENSION GAUGES (TT)

GPP-1	0-1000 grams	$29.80	GPP-5	0-500 gr./16 oz. in.	$16.50
GPP-2	0-110 grams	$14.50	GPP-25	0-2500 gr./80 oz. in.	$32.50

TOOL KITS

MASTER 15-PIECE RELAY TOOL KIT



Precision-made and professionally-designed group of new tools for adjusting and maintaining relays, contactors, switches, controls, and other components for the telecommunication and electronic industries.

Packed in Deluxe zippered leather case for protection of tools.

Kit contains: 2 spring adjusters, tension & thickness gauges, Duck Bill plier, Screw Driver, Tweezer, Mirror, 4-way Tool, Brush, Armature & Stop Benders, Contact Spray. Contact Burnisher. **KIT K-55 $37.60**

Kit KR-6 Compact Relay Kit, leather case (not illustrated) **$22.00**

MASTER 20-PIECE ELECTRONIC TOOL SET

Designed for assembly, service and repair. High quality tools were specially produced for serving, adjusting, trouble-shooting, of complex equipment and assembly work. Kit comes in durable leather zippered case for easy portability. Set contains Chain Nose, Groove Grip and Diagonal cutting pliers. Standard and Phillips screwdrivers, Magnifier, Solderingiron, Straight and Bent Nose tweezers, Solder aid, Alignment tool, 2 Needle files, Pin vise, Solder Core, 3/16" and 1/4" Nut drivers, 2 jewelers screwdrivers, Pen Burnisher with 12 blades. **KIT K-600 ..... Price $32.90**

Kit KE-7 Compact Electronic Set, vinyl case (not illustrated) **$12.90**



RELAY & CONTACT BURNISHERS

DIAMOND BURNISHERS



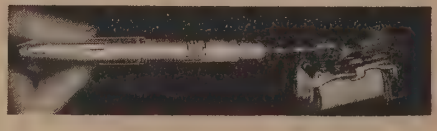
Exclusive Features:
- Strong abrasive power
- Long lasting

Consists of abrasive Diamond particles - Developed for any type contacts: Silver, Platinum, Gold, Palladium, Tungsten, Molybdenum - Length 5⅝" - Diamond coated face 1" x ¼" - Nylon Shaft - Three types to meet every application: Type 200 (coarse) for Industrial Relays - Type 300 (medium) for Intermediate and Telephone relays - Type 400 (fine) for Sensitive Relays.

K-234 Set of 3 ..... **$14.85** Individual spatulas and Kits packaged in rigid plastic boxes.

D-200 Coarse $4.95
D-300 Medium $4.95
D-400 Fine $4.95

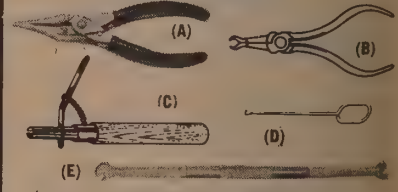
POCKET-TYPE BURNISHERS



Handy, lightweight tool with replaceable blades, adjustable for length and rigidity. For any type contacts, of any precious metal. Contact burnisher leaves no grit or dust on contact. Hard-tempered steel blades for minimum contact wear. Rust proof, with chrome plated barrel and pocket clip, aluminum chuck. Clear plastic cap for use with "live" contacts. Overall length, 5½". dia. ⅜".

P-4 Pen—With 12 RB4 Blades. Net Each.....**$3.90**
P-6 Pen—With 12 RB6 Blades. Net Each..... **3.90**
RB4 (¼" w. 1¼" l.) or **RB6** (3/16" w. x 1¾" l.)
Replacement Blades — .007" thick. Net, Pkg. 25 **$3.75**

SPECIALIZED TOOLS



(A) PLS-7	Parallel Duck bill plier, 6" long	$7.98
(B) S-42	Plier, lamp cap extractor, 5" long	$4.96
(C) S-339	Switchboard lamp extractor	$2.45
(D) M-120	Hook spring pull, 6"	$1.48
M-125	Hook spring push, 6"	$1.48
(E)	Open end wrenches, 8" long, DW-4 ¼" DW-16 3/16", DW-32 7/32"	$3.48 ea.

CONTACT OUR CUSTOM-MADE TOOL DEPARTMENT FOR SPECIAL REQUIREMENTS
Write for New Free Catalog... OVER 500 JIC PRECISION TOOLS
JONARD INDUSTRIES CORP. PRECISION TOOLS DIV.

Net

© United Technical Publications

PRECISION TOOLS

FOR PRODUCTION, SERVICE & MAINTENANCE

PRECISION DYNAMOMETER TENSION GAUGES

LARGE — Round Tip



SMALL — Flat Tip



Accurately measure forces required to actuate all sensitive mechanisms . . .

Available in two sizes and a total of thirteen ranges. Measure in both directions. Equipped with maximum reading pointer that retains reading.
Price: Large — $31.25 Small — $13.55

LARGE GAUGES

Type	Range In Grams	Conversion In Ounces
GD-50	60-500	18
GD-100	100-1000	32
GD-200	200-2000	70
GD-400	400-4000	140

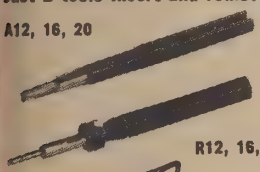
SMALL GAUGES

Type	Range In Grams	Conversion In Ounces
GD-1	0-10	3/8
GD-2	2-20	3/4
GD-3	4-35	1 5/16
GD-5	6-50	1 3/4
GD-10	10-100	3 1/2
GD-15	15-150	5 1/4
GD-20	20-200	7
GD-25	30-250	9
GD-30	40-350	12

CONTACT INSERTION / REMOVAL TOOLS AND KITS

Just 2 tools insert and remove contacts on all types of connectors . . .

A12, 16, 20



R12, 16, 20



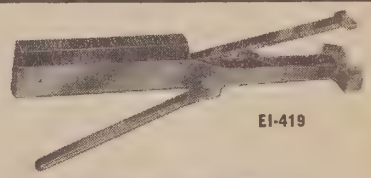
AMPHENOL, CINCH, BENDIX, CANNON, PYLE, etc. . . .

INSERTION				REMOVAL			
Type	Color	Size	Price	Type	Color	Size	Price
A-12	Yellow	12	$14.90	R-12	Yellow	12	$19.90
A-16	Blue	16	$14.50	R-16	Blue	16	$18.90
A-20	Red	20	$14.00	R-20	Red	20	$18.50

KITS

KA-260 — 3 PIECE CONTACT INSERTION TOOL KIT
Consists of one each A-12, A-16, A-20 .....Price $39.50

KR-260 — 3 PIECE CONTACT REMOVAL TOOL KIT
Consists of one each R-12, R-16, R-20 .....Price $51.50



EI-419

EI-419 INSERTING AND EXTRACTING TOOL

For printed circuit boards, connector assemblies, telephone-cord stoppers, flat-packs, IC's and many other applications.

Precision made, with leaf spring to remain in open position. Made of special alloy, molded finger-grip type handle for easy gripping. Fully nickel-chrome plated. Overall length 6½". .....Price $8.90

INNOVATIONS IN SERVICE, PRODUCTION & LAB TOOLS

WASH AND LUBE SPRAYS



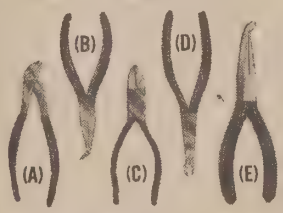
24 oz.



8 oz.

JIC-22 ELECTRO-WASH
Degrease, eliminate grease, dirt, oil. No carbon-tet, safe, no residue, non-flammable. Std. pkg: 12 pcs. $3.25 ea. 6 pcs. $3.50 ea. Sample order $4.00 ea.

JIC-33 ELECTRO LUBRI-FOAM
Cleans, lubricates, protects, polishes. Exclusive foam action. Eliminates noise, non-flammable. Std. pkg: 24 pcs. $2.25 ea. 12 pcs. $2.50 ea. Sample order $3.00 ea.



(A) PL-4 — MIDGET "GROOVE-GRIP" PLIERS. 5" $3.00

(B) PLS-1 — DUCK BILL, PARALLEL, BENT NOSE PLIER. 5".. $5.82

(C) PLS-2 — DIAGONAL ANGLE, FLUSH CUTTING AND STRIPPING PLIER. 5" $6.46

(D) PLS-5 — HEAT COIL PLIER. 6" $6.24

(E) PLS-9 — DUCK BILL, BENT NOSE, 90°, PLIER. $5.96

ECONOMY AND POCKET TYPE BURNISHERS



OB TYPE



PB TYPE

ECONOMY BURNISHERS — Leave no grit or dust and will not affect contact points. Plastic handles for working on live contacts.

OB-1 — For fine contacts. Abrasive coated, 3½" long, 3/16" wide, .007" thick.
Pkg. 12 pcs. Price $4.20 Pkg. 48 pcs. Price $14.40

OB-2 — For extra-fine contacts. 3½" long, ¼" wide, .010" thick.
Pkg. 12 pcs. Price $6.00 Pkg. 48 pcs. Price $20.16

OB-3 — General purpose type. Abrasive-coated. Hard molded handle. 3½" long, ¼" wide, .010" thick.
Pkg. 12 pcs. Price $9.00 Pkg. 24 pcs. Price $15.60

OB-4 — For industrial use. Abrasive-coated. Hard molded handle. 3½" long, ¼" wide, .020" thick.
Pkg. 12 pcs. Price $10.20 Pkg. 24 pcs. Price $18.75

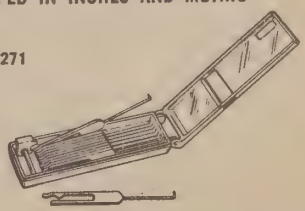
POCKET-TYPE BURNISHERS — Used for cleaning general type contacts. Supplied with 6 non-residual abrasive replaceable blades and/or 6 rods stored in pen barrel, as noted. Pen made of sturdy plastic for dielectric work. Length 4½". Diameter 3/8". Blades 3/16" wide, 1¾" long, .007" or .0035" thick.

		Price
PB-3	Pen with 6 blades .0035" thick	$4.20
PB-3R	Same as PB-3 plus 6 abrasive rods	5.20
PB-7	Pen with 6 blades .007" thick	4.10
B-3	Pkg. 25 Repl. blades for PB-3 (.0035")	3.65
B-3R	Pkg. 50 Repl. rods for PB-3	12.50
B-7	Pkg. 25 Repl. blades for PB-7 (.007")	3.55

UNIQUE GAUGE SET

STAMPED IN INCHES AND METRIC

T-271



T-271 — WIRE THICKNESS GAUGE SET. Extremely versatile. Designed for use in restricted places. Gauges can be used in or out of case. 9 round blades, .006", .008", .016", .020", .028", .031", .039", .046", .059" and one flat blade .004" thick. Blades 3" long, tips bent 90° x 3/16" high. Overall case size: 1¼" wide x ½" high x 4" long. .....Price $19.40

SPECIALIZED TOOLS



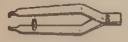
C-356



M-117



S-391



S-340



E-421

C-356 — CONNECTOR TOOL. Serves as terminal winding device, pull strength tester and spring hook. Insulated, 7" long. .....Price $7.90

S-391 — SPRING REMOVER. Adjusts, inserts and removes relay springs in tight spaces or hard to reach places. 6½" long. Tips bent 90° angle with .042" slots each end.....Price $3.46

M-117 — SPIN-TYPE SPANNER WRENCH. For use on odd shaped or extremely thin nuts and where regular nut driver cannot be used. Swivel head. 4" long. .....Price $4.20

S-340 — EXTRACTOR, TWEEZER TYPE. Extracts miniature, lamps, caps, readouts, flatpacks, IC's, p.c. components, etc. ½" normal opening closes to 1/16" with stop guide. 3½" long. Price $3.20

E-421 — EXTRACTOR, TERMINAL. Will extract terminals of most types. Finger-grip "T" type handle. Tip bent to 90° angle and tapered to fine point with center notch. Overall length 3". Price $3.60

CONTACT OUR CUSTOM-MADE TOOL DEPARTMENT FOR SPECIAL REQUIREMENTS
Write for New Free Catalog... OVER 500 JIC PRECISION TOOLS
JONARD INDUSTRIES CORP. PRECISION TOOLS DIV.

KESTER SOLDER COMPANY
DIVISION OF LITTON INDUSTRIES

Manufacturing quality Solders and Fluxes since 1899.



KESTER "44" RESIN CORE SOLDER

Kester's "44" Resin Core Solder — a revolutionary solder advancement — featuring an amazing, fast-acting, instant-wetting non-corrosive and non-conductive flux that (1) makes soldering faster than ever before and (2) provides a permanent stronger, longer-lasting bond.

ALL PRICES PER POUND					INDUSTRIAL USER			DEALER
Alloy	Unit (Spl.)	Kester Part Number	Dia. Ga.	Suggested List Price per lb.	1-10 (5%)	11-24 (15%)	25-99 (25%)	(33⅓%) Any Quan.
40/60	1 lb.	24-4060-0061	.062 (16)	$2.54	$2.41	$2.16	$1.91	$1.69
40/60	5 lb.	26-4060-0061	.062 (16)	2.48	2.36	2.11	1.86	1.65
40/60	1 lb.	24-4060-0066	.093 (13)	2.44	2.32	2.07	1.83	1.63
40/60	5 lb.	26-4060-0066	.093 (13)	2.38	2.26	2.02	1.79	1.59
50/50	1 lb.	24-5050-0061	.062 (16)	3.00	2.85	2.55	2.25	2.00
50/50	5 lb.	26-5050-0061	.062 (16)	2.94	2.79	2.50	2.21	1.96
50/50	1 lb.	24-5050-0066	.093 (13)	2.90	2.76	2.47	2.18	1.93
50/50	5 lb.	26-5050-0066	.093 (13)	2.84	2.70	2.41	2.13	1.89
60/40	1 lb.	24-6040-0018	.025 (23)	5.22	4.96	4.44	3.92	3.48
60/40	5 lb.	26-6040-0018	.025 (23)	4.72	4.48	4.01	3.54	3.15
60/40	1 lb.	24-6040-0027	.031 (21)	4.18	3.97	3.55	3.14	2.79
60/40	5 lb.	26-6040-0027	.031 (21)	3.78	3.59	3.21	2.84	2.52
60/40	1 lb.	24-6040-0039	.040 (19)	4.02	3.82	3.42	3.02	2.68
60/40	5 lb.	26-6040-0039	.040 (19)	3.62	3.44	3.08	2.72	2.41
60/40	1 lb.	24-6040-0053	.050 (18)	3.80	3.61	3.23	2.85	2.53
60/40	5 lb.	26-6040-0053	.050 (18)	3.50	3.33	2.98	2.63	2.33
60/40	1 lb.	24-6040-0061	.062 (16)	3.38	3.21	2.87	2.54	2.25
60/40	5 lb.	26-6040-0061	.062 (16)	3.28	3.12	2.79	2.46	2.19
60/40	1 lb.	24-6040-0066	.093 (13)	3.28	3.12	2.79	2.46	2.19
60/40	5 lb.	26-6040-0066	.093 (13)	3.18	3.02	2.70	2.39	2.12
63/37	1 lb.	24-6337-0018	.025 (23)	5.36	5.09	4.56	4.02	3.57
63/37	5 lb.	26-6337-0018	.025 (23)	4.86	4.62	4.13	3.65	3.24
63/37	1 lb.	24-6337-0027	.031 (21)	4.32	4.10	3.67	3.24	2.88
63/37	5 lb.	26-6337-0027	.031 (21)	3.92	3.72	3.33	2.94	2.61
63/37	1 lb.	24-6337-0039	.040 (19)	4.16	3.95	3.54	3.12	2.77
63/37	5 lb.	26-6337-0039	.040 (19)	3.76	3.57	3.20	2.82	2.51
63/37	1 lb.	24-6337-0053	.050 (18)	3.94	3.74	3.35	2.96	2.63
63/37	5 lb.	26-6337-0053	.050 (18)	3.64	3.46	3.09	2.73	2.43
63/37	1 lb.	24-6337-0061	.062 (16)	3.52	3.34	2.99	2.64	2.35
63/37	5 lb.	26-6337-0061	.062 (16)	3.42	3.25	2.91	2.57	2.28
63/37	1 lb.	24-6337-0066	.093 (13)	3.42	3.25	2.91	2.57	2.28
63/37	5 lb.	26-6337-0066	.093 (13)	3.32	3.15	2.82	2.49	2.21

NOTE: Available in other sizes ranging from .005 to .250.

NOTE: Above also available for Fed. Spec. QQ-S-571d.

NOTE: Kester "44" Resin Core Solder, designed for electronic and electrical work, replaces Kester "Resin-Five" Core Solder and Kester Plastic Rosin Core Solder. This important innovation now allows you to reduce shelf inventory. Kester "44" Resin Core Solder actually outperforms "Resin-Five" and Plastic Rosin Core Solders. This important innovation is a result of Kester's continuing research connected with the Electronic Industry. Kester "44" Resin Core Solder is unsurpassed in Flux activity without danger of Flux residue corrosion or conductivity.

Plastic Rosin Core Solder still available to meet Federal Specification QQ-S-571d, Type R.

KESTER TV-RADIO SOLDER



New and improved product. The small package of Kester "Resin-Five" Core Solder in the practical (round) wire-size of .062" (1/16"). Ideal for the Serviceman's Kit . . . or for those sales to the occasional user for soldering TV, Radio components . . . everything electrical or electronic.

Kester Part No.	Weight	Unit	Suggested List Price	DEALER (33⅓%) Any Quan.
84-4060-0327	10 lbs.	Case (10 Ctns.-100 Boxes)	$39.00	$26.00
83-4060-0327	1 lb.	Carton (10 Boxes)	3.90	2.60

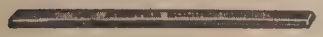
Trade Discount Applies To List Prices Only

© United Technical Publications

KESTER SOLDER COMPANY
DIVISION OF LITTON INDUSTRIES

Manufacturing quality Solders and Fluxes since 1899.

KESTER BAR SOLDER



Available in all the tin-lead alloys, including those for body work. The uniform distribution of tin-lead alloys in the bar provides for more efficient and easy application.

DESCRIPTION	ALL PRICES PER POUND				DEALER
	Kester Part No.	Alloy	Unit	Suggested List Price Per Pound	(33⅓%) Any Quantity
Kester Bar Solder	04-3070-0000	30% Tin 70% Lead	1 lb. Bar (Av. Weight)	$1.74	$1.16
	04-4060-0000	40% Tin 60% Lead	1 lb. Bar (Av. Weight)	2.10	1.40
	04-5050-0000	50% Tin 50% Lead	1 lb. Bar (Av. Weight)	2.40	1.60
	04-6040-0000	60% Tin 40% Lead	1 lb. Bar (Av. Weight)	2 84	1.89
	04-6337-0000	63% Tin 37% Lead	1 lb. Bar (Av. Weight)	3.04	2.03

KESTER SOLID WIRE SOLDER

DESCRIPTION	ALL PRICES PER POUND				DEALER
	Kester Part No.	Alloy	Unit	Suggested List Price Per Pound	(33⅓%) Any Quantity
Kester Solid Wire Solder Standard Diameter .125″ (⅛″)	14-3070-0125	30% Tin 70% Lead	1 lb. Spool	$2.00	$1.33
	16-3070-0125		5 lb. Spool	1.92	1.28
	18-3070-0125		20 lb. Spool	1.88	1.25
	19-3070-0125		50 lb. Reel	1.88	1.25
	14-4060-0125	40% Tin 60% Lead	1 lb. Spool	2.30	1.53
	16-4060-0125		5 lb. Spool	2.22	1.48
	18-4060-0125		20 lb. Spool	2.18	1.45
	19-4060-0125		50 lb. Reel	2.18	1.45
	14-5050-0125	50% Tin 50% Lead	1 lb. Spool	2.66	1.77
	16-5050-0125		5 lb. Spool	2.58	1.72
	18-5050-0125		20 lb. Spool	2.54	1.69
	19-5050-0125		50 lb. Reel	2.54	1.69
	14-6040-0125	60% Tin 40% Lead	1 lb. Spool	3.22	2.15
	16-6040-0125		5 lb. Spool	3.14	2.09
	18-6040-0125		20 lb. Spool	3.10	2.07
	19-6040-0125		50 lb. Reel	3.10	2.07

All Kester solid wire solders available in other diameters upon request.
NOTE: Above also available for Fed. Spec. QQ-S-571d.

KESTER SOLDERING FLUXES

Kester has the latest development in practical Fluxes, efficiently formulated to meet all manufacturing techniques, including highly specialized assembly procedures, such as automation and modular techniques, as well as a highly efficient Rosin Residue Remover.

DESCRIPTION	ALL PRICES PER UNIT				DEALER
	Kester Part No.	Unit	Weight	Suggested List Price Per Pound	(33⅓%) Any Quantity
Kester Soldering Flux Formula No. 1544	61-0000-0581	Pint	2 lbs.	$2.50	$1.67
	62-0000-0581	Quart	4 lbs.	4.20	2.80
	63-0000-0581	Gallon	16 lbs.	10.90	7.27
Kester Soldering Flux Formula No. 1587	61-0000-0486	Pint	2 lbs.	2.50	1.67
	62-0000-0486	Quart	4 lbs.	4.20	2.80
	63-0000-0486	Gallon	16 lbs.	10.90	7.27
Kester Rosin Residue Remover Formula No. 930	61-0000-0598	Pint	2 lbs.	2.50	1.67
	62-0000-0598	Quart	4 lbs.	4.20	2.80
	63-0000-0598	Gallon	16 lbs.	10.90	7.27

© United Technical Publications

The original "wedge-type" screwdriver

QUICK-WEDGE®

SCREW-HOLDING SCREWDRIVERS

HOLDS - STARTS - DRIVES - SETS the Screw — Unconditionally Guaranteed

17 Different Sizes Handle Every Screwdriving Job!



Last digit(s) of model number indicates blade length. "E" after number indicates electrical sizes with color-matched, shockproof, Vinyl covered tubing. Not available on No. 1732.

© 1970 Kedman Company
Quick-Wedge Reg. U.S. Pat. Off.

• One screwdriver drives many sizes of screws • Shockproof, unbreakable Tenite II handle • Hollow-ground bit fits any slotted screw • Use instead of conventional screwdriver • Tough, durable spring steel blades. Positively will not mar screw slot • Fast positive action — easy to use • No pressure wedge to wear out • Foolproof construction.

Prices subject to change without notice. Net Prices effective January 1, 1970.

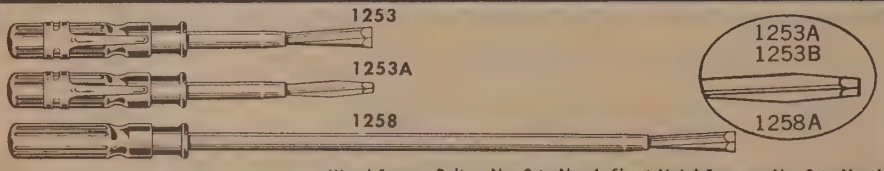
ULTRA-MINIATURE



0-80 and other extremely tiny screws

No.	Blade Diam.	Blade Tip Thickness	Wt. Lbs. Per Box*	Each** Price
1253B	1/8"	.012"	9 oz.	$1.36
1253B-E	1/8"	.012"	9 oz.	1.49

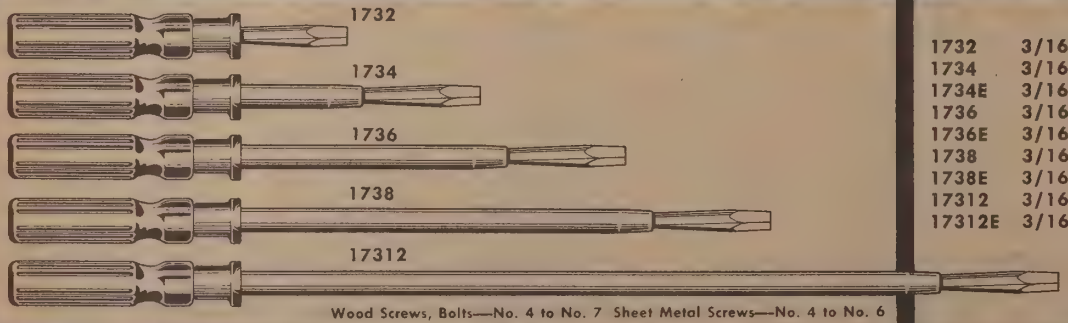
MIDGET



Wood Screws, Bolts—No. 0 to No. 4 Sheet Metal Screws—No. 2 to No. 4

1253	1/8"	.020"	9 oz.	$1.13
1253E	1/8"	.020"	9 oz.	1.27
1253A	1/8"	.020"	9 oz.	1.27
1253AE	1/8"	.020"	9 oz.	1.40
1258	1/8"	.020"	15 oz.	1.36
1258E	1/8"	.020"	15 oz.	1.49
1258A	1/8"	.020"	15 oz.	1.49
1258AE	1/8"	.020"	15 oz.	1.63

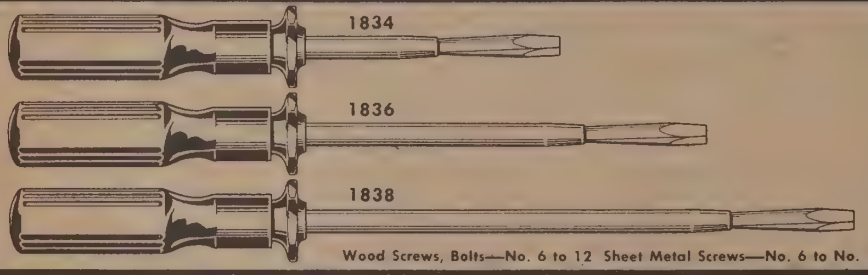
SMALL



Wood Screws, Bolts—No. 4 to No. 7 Sheet Metal Screws—No. 4 to No. 6

1732	3/16"	.031"	3/4	$1.18
1734	3/16"	.031"	1	1.22
1734E	3/16"	.031"	1	1.36
1736	3/16"	.031"	1 1/4	1.27
1736E	3/16"	.031"	1 1/4	1.40
1738	3/16"	.031"	1 1/2	1.32
1738E	3/16"	.031"	1 1/2	1.44
17312	3/16"	.031"	2	1.44
17312E	3/16"	.031"	2	1.58

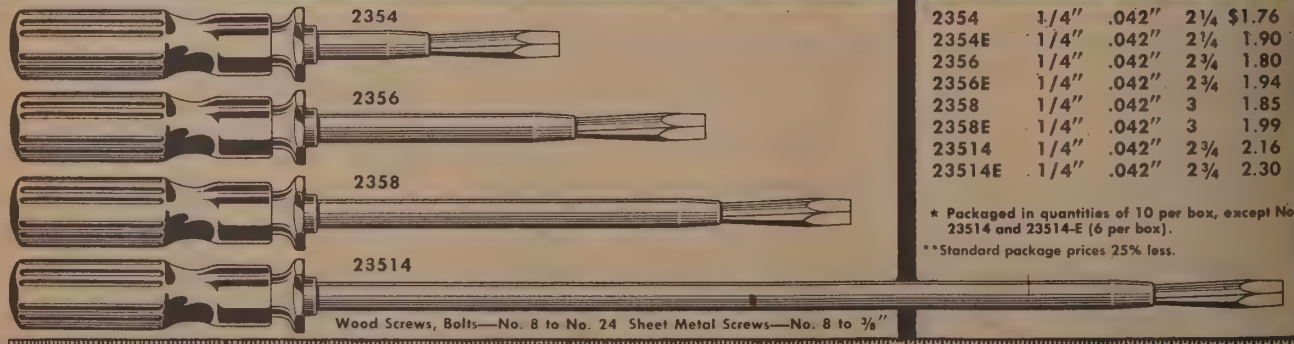
MEDIUM



Wood Screws, Bolts—No. 6 to 12 Sheet Metal Screws—No. 6 to No. 12

1834	3/16"	.037"	1 3/4	$1.68
1834E	3/16"	.037"	1 3/4	1.80
1836	3/16"	.037"	2	1.72
1836E	3/16"	.037"	2	1.85
1838	3/16"	.037"	2 1/4	1.76
1838E	3/16"	.037"	2 1/4	1.90

HEAVY DUTY

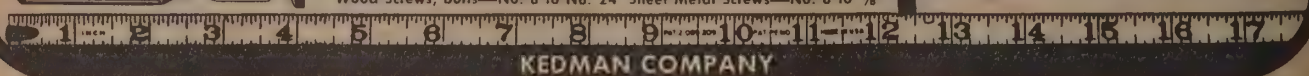


Wood Screws, Bolts—No. 8 to No. 24 Sheet Metal Screws—No. 8 to 3/8"

2354	1/4"	.042"	2 1/4	$1.76
2354E	1/4"	.042"	2 1/4	1.90
2356	1/4"	.042"	2 3/4	1.80
2356E	1/4"	.042"	2 3/4	1.94
2358	1/4"	.042"	3	1.85
2358E	1/4"	.042"	3	1.99
23514	1/4"	.042"	2 3/4	2.16
23514E	1/4"	.042"	2 3/4	2.30

★ Packaged in quantities of 10 per box, except Nos. 23514 and 23514-E (6 per box).

**Standard package prices 25% less.



KEDMAN COMPANY

© United Technical Publications

MASTER HEAT TOOLS

FLAMELESS HEAT GUNS

200–1000°F of heat that travels right to the job. Ideal for shrink tubing, soldering and de-soldering, setting pre-coated rivets, softening, molding, welding and forming plastics; also quick-dries paint, plastic finishes, or parts. Speeds plastic and epoxy curing, invaluable in vinyl repair. Hundreds of other uses.

Adjustable air intake controls output temperature; double-jacketed heater; housing made of rugged die-cast aluminum. 8-foot, 3-wire, oil-resistant cord with molded plug safety keyed to element amperage. 400 cycle models available.

Attachments: a. exclusive cone has ¼″ orifice that focuses heat on a concentrated area and a patented adjustable air diffuser that eliminates back pressure and heat loss. Part No. A-206-HG. **$12.95. b. Nozzle adapter** — required for baffles A-145-HG and A-150-HG. Part No. A-100-HG. **$2.95. c. Baffle** — for tubing to ¾″ OD, requires A-100-G adapter. Part No. A-145-HG. **$2.75. d. Baffle** — for tubing to 1¼″ OD, requires A-100-HG nozzle adapter. Part No. A-150-HG. **$2.95. e. Extra wide baffle** — for long tubing to ¾″ OD. Part No. A-203-HG. **$17.95. f. Baffle** — for tubing to 1¾″ OD. Part No. A-205-HP. **$16.95.**

STANDARD MODELS

Standard Model	Temp. F.°	Voltage	Amp.	Price
HG-201	200/300	120	5	$44.30
HG-202	200/300	230	3	51.95
HG-301	300/500	120	12	44.30
HG-302	300/500	230	5	51.95
HG-501	500/750	120	14	49.90
HG-502	500/750	230	8	55.25
HG-751	750/1000	120	20	59.95
HG-752	750/1000	230	9	67.85

Los Angeles approved and chrome models also available


Standard heat gun

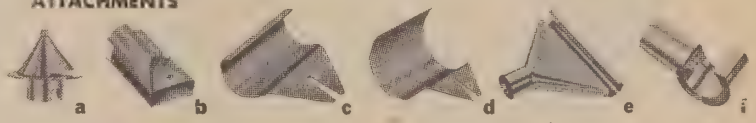
U.L. LISTED MODELS

Model	Temp. F.°	Voltage	Amp.	Price
HG-1201-U	200/300	120	5	$54.30
HG-1301-U	300/500	120	12	54.30
HG-1501-U	500/750	120	14	59.90

U.L. Listed models feature "Mitey-Mite" fuse, a trigger guard that covers the switch, a permanently attached stand, and U.L. Listed wiring.

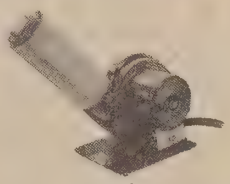

U.L. Listed heat gun

ATTACHMENTS



FLAMELESS HEAT BLOWERS

Master Blowers deliver air at up to 800°F. Heavy-duty motor for continuous use. Three-way switch provides hot or unheated air. Deluxe model (AHD) features convenient handle; adjustable intake that regulates temperature; and adjustable, removable base for 180° positioning flexibility.


Model AH


Model AHD

AH SERIES

Model	Temp. F.°	Voltage A.C.	Amp.	Price
AH-301	300	120	10	$56.65
AH-302	300	230	5	68.35
AH-501	500	120	14	59.95
AH-502	500	230	6	71.65
AH-751	700	120	18	78.35
AH-752	700	230	11	90.25

Los Angeles approved models also available

AHD SERIES

Deluxe Model	Temp. F.°	Voltage A.C.	Amp.	Price
AHD-301	300/400	120	10	$69.15
AHD-302	300/400	230	5	80.85
AHD-501	500/600	120	14	72.45
AHD-502	500/600	230	6	84.15
AHD-751	700/800	120	18	90.85
AHD-752	700/800	230	11	102.75

Los Angeles approved models also available

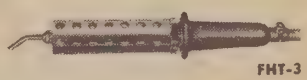
FLAMELESS HEAT TORCHES

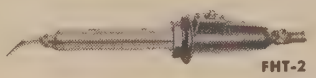
Pinpoints heat precisely where you want it. Ideal for shrink-tubing, plastic welding, heating micro-parts or constricted areas. Your choice of predetermined temperatures from 200°–1000°F. Uses shop air or inert gas; weighs one pound. Furnished with 10-ft. hose, 3-wire cord and stand.

Torch elements — an element of your choice is included with each torch (see chart). Specify model number and wattage. If no element is specified, a 550 watt, 120V element will be supplied. 230V elements are available.

Accessories and attachments: a. Universal multipurpose tip; supplied with each torch. Part No. SS-1. **$5.00. b. Combination welding and tacking tip;** eliminates need for two tips during welding. Part No. SS-2. **$8.50. c. Universal high-speed welding tips;** for ⅛″ and 5/32″ plastic welding rod. Part No. SS-3. For 3/16″ plastic welding rod, Part No. SS-4. Either size **$27.50. d. Air gauge and regulator;** Part No. A-207-FT. **$12.95. e. Steel carrying case;** Part No. A-201-FT. **$8.95. Stand** (not shown); holds torch when not in use; supplied with torch. Part No. A-202-FT. **$1.50.**


FHT-1


FHT-3


FHT-2


FHT-4

HEAT TORCHES

Model	Description	Price
FHT-1	With Switch and Shield	$89.50
FHT-2	With Switch Only	85.50
FHT-3	With Shield Only	79.00
FHT-4	No Switch or Shield	75.00

TORCH ELEMENTS

Element Wattage	Temperatures/ Air Pressure	Temperatures/ Air Pressure
250	250° F/8 p.s.i.	500° F/2 p.s.i.
350	350° F/8 p.s.i.	700° F/2 p.s.i.
450	450° F/8 p.s.i.	850° F/2 p.s.i.
550	550° F/8 p.s.i.	1050° F/2 p.s.i.



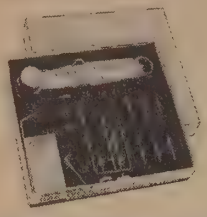
ACCESSORIES

Printed in U.S.A.

(Form K-150)

MICROFLAME, INC. GAS WELDERS

DEALER PRICE SCHEDULE



MICROFLAME DELUXE TORCH KIT NO. 4000

The Deluxe Microflame Torch Kit contains the Microflame Torch, 6 oxygen cylinders, 3 LP gas cylinders, spark igniter, 3 welding tips, 4 six inch gold/silver alloy brazing rods, a two-way bench bracket for mounting on bench or pegboard PLUS booklet on "HOW TO WELD."



MICROFLAME INDUSTRIAL TORCH NO. 5000

The Industrial Torch is comprised of the basic Microflame Torch plus large capacity oxygen and LP tanks, valves, regulator and accessories. Oxygen capacity is 75 liters; LP gas capacity is 26.7 fluid ounces. The Industrial Torch set is packaged in a heavy-duty carton.



MICROFLAME TORCH NO. 1000

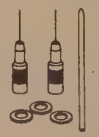
The Microflame Torch is a self contained, miniature gas welding tool which produces over 5000° pin-point flame using miniature gas cylinders. It is designed for welding, brazing and soldering of small parts, and is basically applied like standard gas welding equipment. Supplied complete with cylinders.



BRAZING ROD KIT NO. 3100

Now, for the first time, there is a complete MICROFLAME torch brazing kit that enables you to securely join together all the various metals found in the home or shop. Kit includes the following: Silver Solder Rods, Aluminum Solder Rods, Silver Solder Flux, Aluminum Solder Flux, Sandpaper, Fiberfrax* board, Complete Brazing and Solder Instruction Manual.

* Fiberfrax is a registered trademark of Carborundum Company

Part No. & Illustration	Name, Description & Unit Quantity	Sugg. Dealer
4000 	**DELUXE Miniature Torch-Set** Deluxe set includes torch, flame tips, bench bracket, spark lighter, brazing rods, 6 oxygen, 3 butane, welding book and instructions. (1)	$19.47
1000 	**Miniature Torch Set** Contains torch, flame tips, torch tube, gaskets, butane and oxygen cylinders, and instructions. (1)	12.97
1001 	**Oxygen Cylinder** Fits all Torches (10)	.49
1002 	**Butane Cylinder** Fits all Torches (6)	.33
1003, 1004, 1005 	**Flame Tips** Fits all Torches (1 Set)	1.00
	Cylinder Gaskets Fits all Torches (1 Set)	.40
	Torch Taper Tip Tube Fits all Torches (1)	1.32
1006, 1007 	**Oxygen Piercing Knob** Fits all Torches (1)	1.00
	Butane Piercing Knob Fits all Torches (1)	1.00
1008 	**Spark Lighter** (1)	.33
5000 	**Industrial Torch Set** Contains a complete Model 1000 Miniature Torch Set — plus Industrial capacity oxygen and propane gas tanks, valves, hoses, adapters, bracket, spark lighter & instructions. (1)	71.46
5001 	**Industrial Adapter Kit and Bracket** Hoses & valves to convert a miniature torch for industrial application contains Hose Set, Oxygen & Propane valves & bracket. (1)	35.31
5002 	**Hose Set** Set of 2 hoses & adapter cartridges for Model 2000 & 5000 Tocrh Set (1)	8.00
5003 	**Industrial Bracket** Holds oxygen & propane tanks — for Industrial Torch Set (1)	8.00
5004 	**Oxygen Regulator Valve** For Model 5000 Torch (1)	12.00
5005 	**Propane Valve** For Model 5000 & 2000 Torch Set (1)	6.13

Part No. & Illustration	Name, Description & Unit Quantity	Sugg. Dealer
5006, 5007 	**Oxygen Gas Tank** For Model 5000 (1)	$14.67
	Propane Gas Tank For Model 2000 & 5000 (1)	2.13
5008 	**Oxygen Pressure Gauge (optional)** For #5004 Oxygen Regulator (1)	7.47
5009 	**Industrial Adapter** Adapter to oxygen regulator for Commercial oxygen tank (1)	8.00
5010 	**Gasket for #5004 Regulator** For #5004 Regulator 3 to a package (1 set)	.27
5011	**Hose Set — 15 Ft.** Same at 5002 Except in 15 Ft. Length (1)	12.00
2002 	**Hose Set** Set of 2 hoses and adapter cartridges for Model #2000 Industrial Torch Set (1)	8.00
2004, 2005 	**Oxygen Regulator** For Model #2000 Industrial Torch Set (1)	7.45
	Propane Valve For Model #2000 Industrial Torch Set (1)	2.13
2006, 2007 	**Oxygen Gas Tank** For Model #2000 Industrial Torch Set (1)	13.27
	Propane Gas Tank For Model #2000 Industrial Torch Set (1)	2.13
3000 	**Microflame Brazing Rods** Gold/Silver alloy Brazing Rods (1 pk.)	
	3000A — 4 per pack	3.33
	3000B — 12 per pack (1 pk.)	9.27
3100 	**Microflame Brazing Rod Kit** Kit contains — 18 silver solder brazing rods, 6 aluminum brazing rods, 2 jars flux, hot block, sandpaper, brush, instruction book (1)	6.60
3101 	**Silver Solder Brazing Rods** (12)	1.73
3102 	**Aluminum Brazing Rods** (6)	.67
3103 	**Flux Silver Solder** (1 jar)	.33
3104 	**Flux Aluminum** (1 jar)	.33

Net

© United Technical Publications

Moody® PRECISION HAND TOOLS

Screw Driver & Awl Set

Contains four interchangeable screw driver blades and an awl. Complete with swivel top, knurled chuck type handle.

Sizes .055", .070", .080", .100", awl

Cat. No. SC-5 **List $2.50**

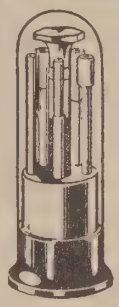


Socket Wrench Set

Five interchangeable box or socket wrenches that fit the same magnetic handle. Thread sizes #00, #0, #1.

Sizes (all hex) 5/64", 3/32", 7/64", 1/8", 5/32"

Cat. No. BW-5 **List $5.50**

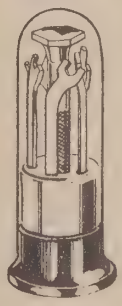


Offset Open End Wrench Set

Contains five offset open end wrenches, interchangeable in the chuck handle.

Sizes 5/64", 3/32", 7/64", 1/8", 5/32"

Cat. No. OE-5 **List $3.50**



Tap Drill Set

Contains five tap drills. Handle has a solid-locking chuck-nose and swivel-top. A companion piece to the Moody TS-5 Tap Set.

Drill Sizes 3/64", #53, #50, #47, #43

Cat. No. 70 **List $5.50**



Cross Recessed Driver & Allen Type Wrench Set

Contains five interchangeable tools with chuck-type, swivel top handle. A torque hole in the handle enables fastenings to be set up tight.

Cross recessed drivers #0, #1
Allen type wrenches #4, #6, #8

Cat. No. PA-5 **List $3.50**



Tap Set

Contains five interchangeable taps and handle for cutting inside threads. Torque hole in handle enables you to maintain a steady firm leverage.

Tap Sizes 0-80, 1-72, 2-56 3-48, 4-40

Cat. No. TS-5 **List $10.00**

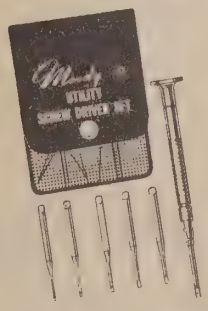


Utility Screw Driver Set

Consists of a precision screw driver and six interchangeable blades. The screw driver handle is knurled for positive gripping.

Sizes .025", .040",.055", .070", .080",.100"

Cat. No. 52 List $3.25



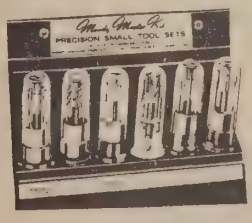
Machinist Scriber



Approximately 8½" overall with a right angle point and a straight point, both properly tapered and swaged into a knurled aluminum finger grip handle.

Cat. No. MS-2 **List $1.10**

Moody Master Kit



A popular compact kit of six tool sets, stored in a leatherette case. Contains Screw Driver & Awl Set, Cross Recessed Driver & Allen Type Wrench Set, Socket Wrench Set, Offset Open End Wrench Set, Tap Drill Set, Tap Set.

Cat. No. MMK-6 **List $35.00**

Send for Free Catalog on the complete line of Moody Tools

MOODY MACHINE PRODUCTS CO., INC.
44 Dudley Street
Providence, Rhode Island
02905



Moody® MACHINE PRODUCTS CO., INC.

ERSIN

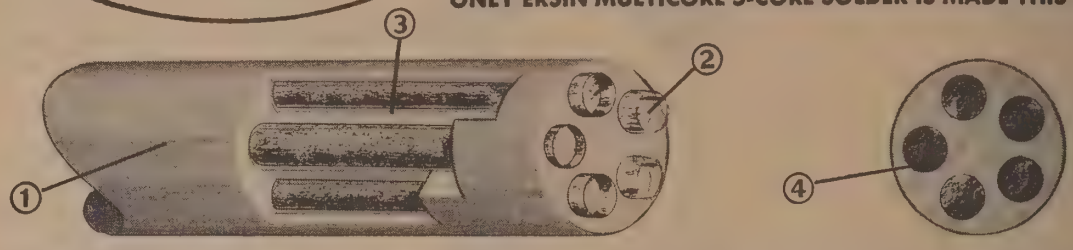
Multicore

5-core wire rosin solder

Available in 1-lb. and 7-lb. reels

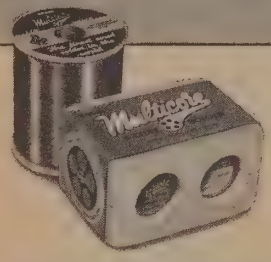
This is no ordinary solder!

ONLY ERSIN MULTICORE 5-CORE SOLDER IS MADE THIS WAY



These illustrations show the construction of ERSIN Multicore 5-Core Solder. Multicore solder is made only from pure virgin metals (1) with 5 cores of exclusive extra-active, non-corrosive ERSIN Flux (2). Multicore's special manufacturing process locates the 5 cores of ERSIN Flux close to each other and at the perimeter, so that there is only an ultra-thin wall of solder between the cores of flux and the work (3). This unique core configuration (4) also keeps the flux near the heat source, to melt faster—wet the metal more effectively. This enables ERSIN Multicore solder to produce the consistently reliable joints for which it is known.

Conforms to Federal Specification QQ-S-571



EXCLUSIVE PACKAGING IN POLYSTYRENE AND SKIN-WRAP FOR UTMOST PROTECTION IN SHIPPING AND STORAGE

STANDARD TIN/LEAD ALLOYS AND GAUGES

Available from stock: 63/37; 60/40; 50/50; 40/60; Savbit; Special Alloys—H.M.P. (High Melting Point, 565° F.); L.M.P. (Low Melting Point, 354° F.). Other alloys upon request.

Gauges: 14 s.w.g. (.080") through 24 s.w.g. (.022"). NOTE: Soldering iron tips should always be 108° F. above melting point of alloy.

NEEDLE FINE GAUGES

For microminiaturization, integrated circuits and other similar requirements. Off-the-shelf delivery in alloys 63/37 and 60/40, in even gauges from 28 s.w.g. (.014") through 34 s.w.g. (.009").

COPPER LOADED SAVBIT ALLOY

Copper-loaded SAVBIT stops the wear and erosion of copper soldering iron tips...increases tip life by 1,000%.

Characteristics and specifications: Savbit Alloy is available in Ersin Multicore 5-core solder containing non-corrosive extra-fast Ersin Flux in 14, 16, 18, 20, 22 and 24 gauge. Melting point: Virtually the same as standard tin/lead alloys. Excellent conductivity, tensile and shear strength.



HIGH PURITY EXTRUDED BAR SOLDER

The same superior quality solder as in Multicore 5-Core Wire Rosin solder. Highest purity is achieved by advanced quality control, possible only with the Extrusion process. Extreme uniformity and smooth texture, without the cross-graining of cast bars. Virgin metals. Conforms to Federal Specification QQ-S-571d with respect to alloy composition in Sn60 (60/40), Sn63 (63/37), and Sn50 (50/50). Skin wrapped for distributors; bulk-packed for manufacturers. Also, low antimony "EXTRUSOL" Commercial Bar Solder—bulk packed.

ERSIN LIQUID FLUXES

Made to the high quality standards of Ersin Multicore. Three formulas. No. 5380 meets Military Specification MIL-F-14256C, Type A (Activated). No. 0360 meets Military Specification MIL-F-14256C, Type W (Non-activated). Other commercial liquid fluxes available such as: No. 4370 highly activated commercial flux. Foam, water soluble, protective coatings and cleaners upon request.

NEW SOLDERABILITY TEST MACHINE



A precision instrument to determine the solderability of component termination wires that operates on a principle entirely different from, and superior to, the immersion method—electronic digital timing. Accurate, positive, totally reliable, yet economical because no technician is needed to operate it, and tests are run with great rapidity. Developed in association with I.E.C. Built in England by Multicore Solders, Ltd. Complies with I.E.C. Publication 68-2 Test T. Descriptive literature available on request.

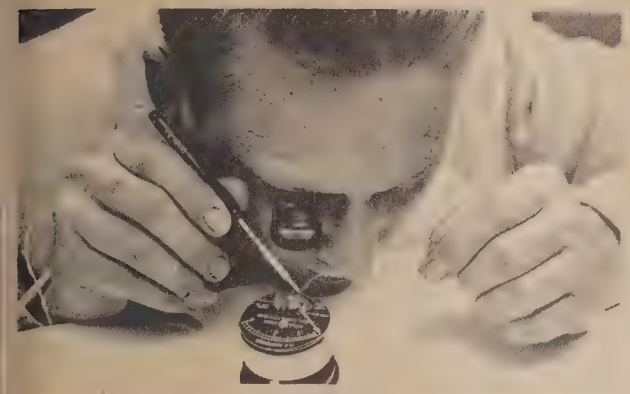
FREE evaluation test samples, "Modern Solders" technical booklet, and fully detailed information on any of these products will be sent promptly. Address request, on company letterhead, to: Multicore Sales Corp.

MULTICORE SALES CORP. Div. British Industries Co.

© United Technical Publications

ORYX

PRECISION SOLDERING EQUIPMENT



WHY PRODUCTION MANAGERS CHOOSE ORYX SOLDERING IRONS

1. MINIATURE SIZE

ORYX soldering irons are small and easy to handle as pencils. Their miniature size helps to speed any precision soldering operation. Damage to adjacent components is eliminated. If you can see it, you can solder it with ORYX!

2. FEATHER WEIGHT

A standard, utility-type 100 watt soldering iron weighs about 2 lbs. The so-called pencil-type irons typically weigh between 2 and 6 ounces. ORYX soldering irons, by contrast, weigh as little as ¼ ounce. This true feather weight virtually eliminates hand fatigue. Workers can turn out many more joints per hour with fewer rejects.

3. HIGH EFFICIENCY

All ORYX soldering irons utilize a unique element-in-the-tip design principle. By generating the heat within the tip, far fewer watts are needed to achieve results comparable to much larger irons. This principle also provides quicker heat recovery because the heat path between element and joint is so very short. The need for large insulating handles is eliminated.

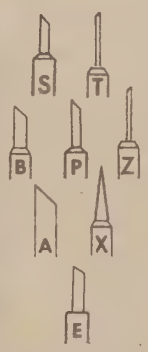
LOW-VOLTAGE SOLDERING IRONS

MODEL S-S—(As shown in photograph). Eyepiece model less than 5" long, for precise finger control. Weighs 7 grams. Nominal temperature 575°F. Furnished with 1/16" S tip. Also takes T tip. 4.5-volts, 4.5-watts (Use 54204-T tapped transformer for 4.5 volts) .....Net $5.95

MODEL 6A—The most popular Oryx soldering iron. Designed for printed circuit soldering. Weighs only ¼ oz. Nominal temperature 690°F. Furnished with 3/32" removable B tip. Also takes other tips listed below. 6-volts, 6-watts. Net $5.95

MODEL 9-6—Similar to model 6A, but greater heat capacity. Weighs ¼ ounce. Nominal temperature 750°F. Furnished with 1/32" A tip. Also takes B tip. 6-volts, 8.3 watts $5.95

MODEL 11-6—Special model for high-temperature solders. Temperature 835°F. Weighs ¼ oz. Furnished with 3/32" solid nickel E tip. Nickel tip provides long life at high temperatures. 6-volts, 10-watts .....Net $7.45



REPLACEMENT TIPS for low-voltage soldering irons.

Type	Material	Plating	Diameter	For Model	Net Ea.
A	Copper alloy	Nickel	1/32"	9-6	$ .54
B	Copper alloy	Nickel	3/32"	6A, 9-6	.54
E	Solid Nickel	—	3/32"	11-6	1.80
P	Copper alloy	Nickel	1/16"	6A	.60
S	Copper alloy	Nickel	1/16" (short)	5-S	.60
T	Gold and copper	Nickel	1/25"	5-S, 6A	2.85
V-PL	Copper alloy	Iron	3/32"	6A, 9-6	1.80
X	Copper alloy	Nickel	1/25" (pointed)	6A	.90
X-PL	Copper alloy	Iron	1/25" (pointed)	6A, 9-6	1.85
Z	Copper alloy	Nickel	1/25"	6A	.85
Z-PL	Copper alloy	Iron	1/25"	6A	1.80

TRANSFORMER

for low-voltage soldering irons.



TAPPED TRANSFORMER—Output 4½ to 6-volts in ½ v. steps. For exact temperature control on all ORYX 6-volt tools. Operates on 115 V. AC—ready to plug in. Model 54204-T .....Net $7.80 ea.

TELVAC

LABORATORY TOOLS / APPARATUS

VACUUM TWEEZER SYSTEM

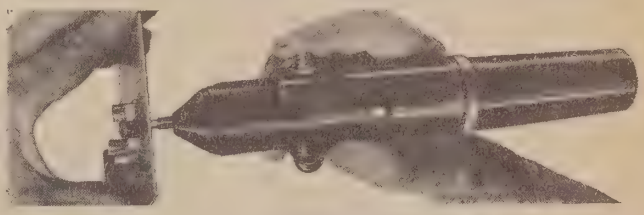
This new parts-handling system positively and precisely lifts parts varying in size from microscopic to those weighing several ounces. Parts are handled without damage or contamination. Defects caused by pinching, scratching, or marring are eliminated. Critical surfaces are protected. Vacuum is turned on and off with forefinger. For 115 V. A.C. Complete system, ready to plug in.

Complete System K-150

Net ea. $36.50



"IN-CIRCUIT" TRANSISTOR TESTER



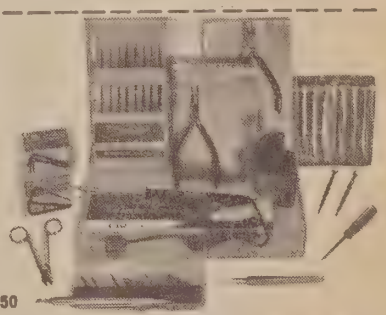
A new test instrument for the circuit designer or test technician. Makes rapid "go-no go" evaluations of semiconductors while they are still in the circuit. Checks cut-off and conduction on PNP and NPN transistors and diodes without the need for costly unsoldering. To use, the operator sets the selector switch to NPN or PNP. He then presses the tester's sharp spring-loaded pins (arranged in TO-5 configuration) against the transistor's printed circuit connections. Open and shorted transistors are readily identified by noting the condition of the tester's pilot light. Diodes and unmounted transistors are similarly tested using a set of extending leads and clips. An optional 7-position diode adapter may be used to test diodes in the circuit. Furnished complete with extending leads and alkaline battery, ready to operate.

MODEL SC-4 TESTER .....Net $74.50 ea.
MODEL 1330 DIODE ADAPTER .....Net 19.50 ea.

INSTRUMENT REPAIR KIT

A 35-piece kit of fine precision tools for the instrument shop or laboratory. Includes miniature soldering iron, taper-jaw diagonal cutter, needle-nose plier, precision screwdriver kit, tiny stub-nose scrissors, eye loupe, needle-file set, 11-piece knife set, hex wrench set, spline-key set, soldering aid set, and a precision Dumont-type tweezer.

MODEL K-50..... Net $59.50



NEEDLE FILES

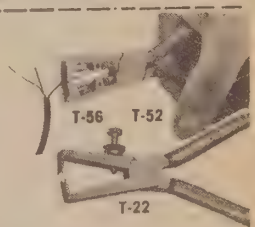


Precision Swiss needle files with vinyl cushion finger grips. Set of 8 precision Telvac files in plastic case. No. 3 cut.

Cat. No. 2000 (4" styles) ..... Net $6.95 ea.
Cat. No. 2100 (6¼" styles) ..... Net 8.95 ea.

WIRE STRIPPERS

Unique wire-stripping pliers. Just squeeze and pull! Models T-52 and T-56 require no operator adjustment. Use T-52 for #8 to #24 wires and T-56 for #18 to #28 wires. T-22 is set by operator to required wire size from #8 to #24. Tool steel heads have razor-sharp edges. All models have red vinyl cushion grips.



T-52 .....Net $8.35 ea. **T-56** .....Net $11.95 ea. **T-22** .....Net $4.95 ea.

ORYX-TELVAC tools available from distributors everywhere. Ask for complete catalog.

TELVAC INSTRUMENT CO — **NATIONAL SALES AGENT FOR ORYX-TELVAC TOOLS**

© United Technical Publications

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

SOLDERING AND DE-SOLDERING EQUIPMENT

Designed BY Professionals FOR Professionals

Choose from Ungar's three lines of precision soldering and de-soldering equipment . . . The STANDARD, IMPERIAL and PRINCESS. Each offers full-scale interchangeability of components – handles, heating units, soldering tips and tiplets, de-soldering tips and accessories.

THE STANDARD LINE	For most electronic soldering. Designed for the production line, lab technician and electronic service technician.
THE IMPERIAL	The most versatile line for continuous production line usage . . . sub-assembly and systems work.
THE PRINCESS LINE	For precision soldering in micro-miniature circuitry.

Each line is designed to let you custom-tailor your soldering iron to meet your individual requirement.

UNGAR MAKES IT EASY TO SELECT THE RIGHT HEATING ELEMENT FOR EVERY SOLDERING REQUIREMENT.

HEATING ELEMENT SELECTION CHART

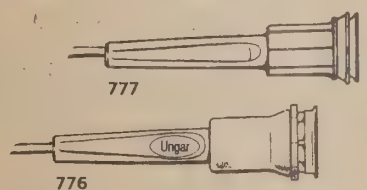
Select temperature or wattage from chart. Idle temperatures (±5%) for the part numbers indicated were recorded at 120 volts AC input.

NOMINAL RATED WATTS AND VOLTS	700°F.	725°F.	750°F.	800°F.	825°F.	850°F.	875°F.	900°F.	950°F.	1000°F.	1050°F.	1150°F.	1200°F.
10W 120V AC		6910 (P)											
15W 120V AC		6206 (P)					6915 (P)						
18W 120V AC									6918 (P)				
27W* 120V AC	535 ¥ 537 (S)		533 (S)			539 536 (S)							
25W 115V AC			6202 (I)										
30W 115V AC				6201 (I)									
40W 115V AC								6200 (I)					
44W† 120V AC				1233 (S)		1235 1236 1239 (S)		1237 (S)					
56½ W‡ 120V AC					4045 (S)			4035 4037 (S)		4033 (S)			4036 (S)
60W 115V AC												6203 (I)	
100W 115V AC											6207 (I)		

(P) Princess Line (I) Imperial Line (S) Standard Line ¥ Copper Tips – All other temperature readings with plated tips.

"STANDARD LINE" SOLDERING TOOLS

ALL PARTS THREAD TOGETHER WITH FINGERTIP EASE



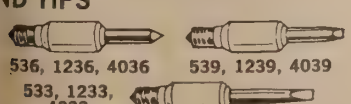
MODEL 777 "CLEAN ROOM" HANDLE

Features "Clean Room" grip for the electronic industry, plus handle is in pastel shade for less eye fatigue of the operator. Full contact spring socket; stainless steel heat deflector; new octagonal guard washer; plated socket terminals; new ceramic and glass insulator; thermo-stabilized phenolic body; polyvinyl insulated cord. Tips cannot wobble. For 120V AC/DC.

Ungar Model 777 Handle–Net each, 1-9 **$1.87** 10-49 **$1.53** 50 Up **$1.40**

Ungar Model 776 Handle–Same, but red with cork grip.
Net each, 1-9 . . . . . **$1.87** 10-49 . . . . . **$1.53** 50 Up **$1.40**

INTEGRAL HEATING UNITS AND TIPS



536, 1236, 4036 539, 1239, 4039

533, 1233, 4033

23½W at 110V AC/DC; 27W at 120V AC/DC. 37½W at 110V AC/DC. 44W at 120V AC/DC. 47½W at 110W AC/DC; 56½W at 120V AC/DC.

Ungar No.	Description	Net Each, Lots of 1-9	10-49	50 UP
533	°23½-27W copper, long taper chisel tip	$1.62	$1.33	$1.21
536	°23½-27W copper, pyramid tip	1.62	1.33	1.21
539	°23½-27W copper, short taper chisel tip	1.62	1.33	1.21
1233	†37½-44W copper, long taper chisel tip	2.35	2.10	1.85
1236	†37½-44W silver-plated, solid Armco iron pyramid tip	2.35	2.10	1.85
1239	†37½-44W silver-plated, solid Armco iron chisel tip	2.35	2.10	1.85
4033	†47½-56½W iron clad, silver-plated, long chisel tip	3.38	2.78	2.54
4036	‡47½-56½W iron clad, silver-plated, pyramid tip	3.38	2.78	2.54
4039	‡47½-56½W iron clad, silver-plated, taper chisel tip	3.38	2.78	2.54

Net

© United Technical Publications

INTERCHANGEABLE HEATING UNITS, TIPS & TIPLETS

Heating Units Temperature Range: 825°-1200°F for Super Hi-Heat Series #4000 rated 47½-56½ W; 800°-900°F for Hi-Heat Series #1200 rated 37½-44 W; and 700°-850°F for Standard Series #500, rated 23½-27 W.

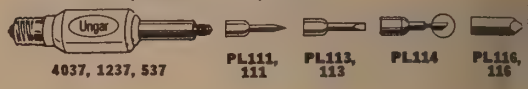
Note: "Standard Line" components are interchangeable with each other but, may NOT be used with "Imperial® Line" items.

THREAD-ON HEATING UNITS AND TIPS

Ungar No.	Description	Net Each, Lots of 1-9	10-49	50 Up
4037	825°-1200°F, 56½-watt unit*	$3.38	$2.78	$2.54
1237	800°-900°F, 44-watt unit*	2.35	2.10	1.85
537	700°-850°F, 27-watt unit*	1.88	1.55	1.41
PL111	Iron clad pencil, ¾" long	.85	.70	.64
PL113	Iron clad chisel, ¾" long	.85	.70	.64
PL114	Iron clad stepped micro-spade	.85	.70	.64
PL116	Iron clad pyramid, 5/16" long	.85	.70	.64
111	Unplated copper pencil	.43	.36	.33
113	Unplated copper chisel	.43	.36	.33
116	Unplated copper pyramid, 5/16" long	.43	.36	.33

*At 110 volts.

Provide 100% increase in recovery rate; greater heat transfer. Stops tip seizure from oxidation or solder; passivated plating prevents barrel oxidation and surface flaking. Tips copper alloy, iron clad silver-plated or unplated.



*23½ W at 110 V AC/DC; 27 W at 120 V AC/DC. †37½ W at 110 V AC/DC; 44 W at 120 V AC/DC. ‡47½ W at 110 V AC/DC; 56½ W at 120 V AC/DC.

HEATING UNITS AND THREAD-ON SOLDERING TIPLETS



Ungar No.	Description	Net Each, Lots of 1-9	10-49	50 Up
535	*⅛" tap unit for 300 and 7100 Series Tiplets	$1.62	$1.33	$1.21
1235	†⅛" tap unit for 300 and 7100 Series Tiplets	2.35	2.10	1.85
4035	‡⅛" tap unit for 300 and 7100 Series Tiplets	3.38	2.78	2.54
7012	Precision point, unplated copper, ⅛" dia.	.65	.53	.49
7062	Precision point, iron clad, ⅛" dia.	1.22	1.00	.91
PL331	Iron clad, silver-plated 1" pencil, ⅛" dia.	.65	.53	.49
331	Plain copper version of PL331 Tiplets	.27	.22	.20
PL332	Iron clad, silver-plated 1" offset pencil, ⅛" dia.	.65	.53	.49
332	Plain copper version of PL332 Tiplets	.27	.22	.20
7154	Iron clad, silver-plated stepped pencil	.65	.53	.49
PL333	Iron clad, silver-plated 1" long chisel, ⅛" dia.	.65	.53	.49
333	Plain copper version of PL333 Tiplets	.27	.22	.20
7155	Iron clad, silver-plated stepped chisel	.65	.53	.49
PL338	Iron clad, silver-plated 1¾" tapered needle, ½" dia.	.65	.53	.49
PL340	Iron clad, silver-plated ¾" micro-needle, 3/64" dia.	.65	.53	.49
4045	‡47½-56½ W 3/16" tap unit for Series 800 Tiplets	3.38	2.78	2.54
PL823	Iron clad, silver-plated 1" pyramid, 3/16" dia.	.75	.62	.56
823	Plain copper version of PL823 Tiplets	.32	.26	.24
PL824	Iron clad, silver-plated 1" chisel, 5/16" dia.	.75	.62	.56
824	Plain copper version of PL824 Tiplets	.32	.26	.24
PL833	Iron clad, silver-plated 1¾" chisel, 5/16" dia.	1.07	.88	.80
PL834	Iron clad, silver-plated 1¾" offset chisel, 3/16" dia.	1.07	.88	.80

ALL SOLDERING IRONS AND HEATING UNITS U/L LISTED.

SOLDERING KITS FOR EVERY REQUIREMENT

Ungar No 7070 All-Purpose Soldering Kit. Complete 44 Watt soldering kit with Model 776 handle; No. 1237 heating unit; three copper tips (111, 113 and 116).
Net each, 1-5..$5.50 6-11..$4.95 12 & Up..$4.40

Ungar No. 7929 Soldering Kit with No. 7901 handle and heating unit; copper tip No. 113; No. 400 Kleen-Tip sponge and tray; No. 7951 wire stripper.
Net each, 1-9..$3.90 10-49..$3.55 50 & up..$3.15

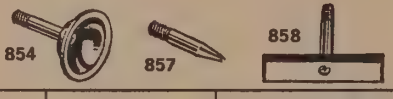
Ungar No. 7930 complete Hot Knife Kit. Includes No. 4025 Hot Knife blade and heating unit and No. 777 handle.
Net each, 1-9..$5.75 10-49..$5.20 50 & up..$4.60

Ungar No. 7075 Heavy Duty Soldering Kit. Complete 56½ Watt soldering kit with Model 777 handle. No. 4037 heating unit; three copper tips, (111, 113 and 116).
Net each, 1-9..$6.50 10-49..$5.85 50 & Up..$5.20



SOLDERING IRON HOLDER. Protects operator from burns; prevents iron breakage. Use with Ungar 776 or 777 handle. Attaches easily to bench; angle adjustable.
Ungar No. 8000 Holder–Net each, 1-9 $2.12 10-19 $1.74 50 Up $1.69

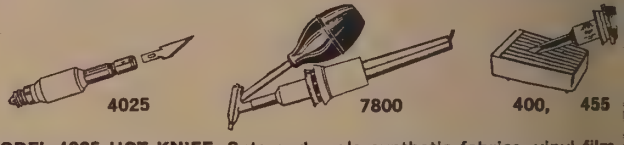
DE-SOLDERING TIPS & KITS



Ungar No.	Tip Type	Size, in. O.D. x L.	Net Each, Lots of 1-9	10-49	50 Up
857	Slotted	1" x 1/16"	90c	74c	68c
856	5/8" Cup	5/8"	90c	74c	68c
855	¾" Cup	¾"	90c	74c	68c
854	1" Cup	1"	90c	74c	68c
858	Bar	1½" x ⅜"	90c	74c	68c

Ungar No. 270 De-Soldering Kit–With five most popular tips (Nos. 854, 855, 856, 857 and 858), No. 776 handle and No. 4045 heating unit in metal case. Net each, 1-5....8.60 6-11....$7.05 12 & Up....$6.45

UNGAR SOLDER-OFF BULB. De-soldering bulb with TFE tip facilitates accurate printed circuit soldering and cleaning. May be used with "Imperial" and "Standard Line" soldering irons. (Not illustrated.)
Net each, 1-9 .....$1.37 10-49 .....$1.12 50 & Up $1.03



MODEL 4025 HOT KNIFE. Cuts and seals synthetic fabrics, vinyl film, styrofoam and other plastics. Easly cuts coatings on PC boards. Blade temp., 500°F. Replaceable, tempered steel blade.
Ungar Model 4025 Hot Knife–Net ea., 1-9 $3.90 10-49 $3.21 50 up $2.93

HOT-VAC DESOLDERING, CLEANING TOOL. For printed circuit desoldering and cleaning; also for heat shrinkable tubing. Tip uses coating to prevent solder clogging the orifice. For use with Model 777 handle.
Ungar Model 7800 Hot-Vac Tool–Net each, 1-5 .....$12.95
Net each, 6-11 ..... $10.65 12 Up $9.70

Ungar Model 7806 (.057") or **7813** (.069")–Replacement tips for above; hole dia. shown in parenthesis.
Net each, 1-9 .....83c 10-49 .....68c 50 Up 63c

Ungar Model 7812 (.033")–Same as above.
Net, 1-9 .....$1.17 10-49 .....96c 50 Up 88c

KLEEN-TIP SPONGE. Specially processed sponge provides the surest way to clean soldering tips. Removes oxidation, prevents contamination and insures soldering reliability. Phenolic tray. Fastens to bench.
Ungar No. 400–Net each, 1-9 ..$1.22 10-49 ..$1.00 50 Up .. 91c

Ungar No. 455 Refill Sponge–Individually packaged.
Net each, 1-9 .....48c 10-49 .....40c 50 Up 36c

NEW UNGAR QUICK HEAT SOLID STATE SOLDER GUN



WEIGHS ONLY 5 OZ.!

Designed for damage-free soldering of sensitive semiconductor devices by servicemen, lab technicians and electronics hobbyists. For replacement purposes, soldering tips are independent of the heating cartridge. Tip is electrically isolated from the heating element with a grounded 3-wire cord set. Heat cardridge locks into the gun barrel by means of a knurled nut; loosening the nut allows rotation of the entire cartridge to orient the threaded-on tips to any desired position. All basic parts are separately replaceable. Unit has a power indicator lamp. A HI-LO dual-heat, selector switch allows a choice of 500°F or 900°F tip temperature range. Complete unit comes with heat cartridge, interchangeable tellurium copper soldering tip, and 3-wire cord with NEMA plug. Weight, 5 oz. less line cord.

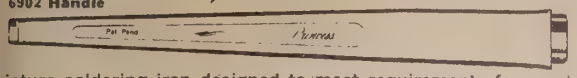
Ungar No.	Description	Net Each, Lots of 1-3	4-11	12 Up
6760	Complete solder gun	10.95	9.95	8.95
6751	Heat cartridge	4.90	4.45	3.95
6755*	Long chisel tip, .535" length	.40	.36	.33
6753*	Short chisel tip, .410" length	.40	.36	.33
6754*	Pyramid tip, .410" length	.40	.36	.33

*Has .250" diameter.

© United Technical Publications

Ungar. / Princess® SOLDERING TOOLS, ACCESSORIES

6902 Handle

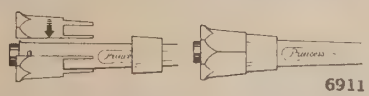


Miniature soldering iron designed to meet requirements for precision micro-electronic circuitry and high density assembly. Offer thermo-efficiency and work capacity never before achieved in small feather-weight irons. Slim design, turquoise handle assures deft soldering. Choice of easy-to-assemble units thread together for versatility in tip shapes and temperature capabilities. Low initial investment, economical maintenance and inexpensive parts replacement.

PRINCESS HANDLES Slim, cool design is molded of heat-resistant nylon pastel turquoise color. Midget thread-in socket accepts any Princess heat capsule. Choice of 2-conductor and 3-conductor (NEMA) vinyl-covered cords. For 120V AC/DC operation. Weight: .05 oz., less cord; 3.0 oz., with cord.

Ungar No.	Cord Type	Net Each, Lots of 1-9	10-49	50 Up
6902	2-conductor with plug	$3.43	$2.99	$2.64
6903	3-conductor with NEMA plug	4.57	3.97	3.51

NEW PRINCESS "MINI" COOL-GRIP



6911

Reduces fingertip temperature as much as 25-30%. Fits all Princess handles. **Ungar No. 6911** Cool-Grip only, handle not included. Net ea., 1-9 . . . . . **$.97** 10-49 . . . . . **$.87** 50 & Up . . . . . **$.77**

HEAT CAPSULES Threaded to accept the special thread-in Princess soldering nibs and mating to the Princess handles with finger-tip ease. Also accept "Standard Line" ⅛" tiplets if desired (will not accept Imperial tips). Choice of three wattages and temperature ranges to suit most production requirements. For 120V AC/DC operation. Size, 2¾" long; extends 1½" from handle. Wt., 0.2 oz.

Ungar No.	Watts	Temperature Range	Net Each, Lots of 1-9	10-49	50 Up
6910	10	550°F to 650°F	$4.20	$3.65	$3.23
6915	15	700°F to 800°F	4.20	3.65	3.23
6918	18	900°F to 1000°F	4.20	3.65	3.23

PRINCESS SOLDERING NIBS Choice of 24 Kt. gold-plated iron clad or cadmium copper tips in four standard shapes. Finger-tip ⅛" thread-in use on any Princess heat capsule listed above. Ungar's ⅛" Standard Line tiplets may also be used (see listing on another page). Wt., .03 oz.

Ungar No.	Shape	Material	Lgth., In.	Tip Stepped to:	Net Each, Lots of 1-9	10-49	50 Up
6950	Pencil	Cadmium copper	.61	.080" x .015"	$0.42	$0.36	$0.32
6951	Screwdriver	Cadmium copper	.68	.080" x .055"	.42	.36	.32
6952	Spade, 45°	Cadmium copper	.61	.080" dia.	.42	.36	.32
6953	Precis. point	Cadmium copper	.61	.095" x .005"	.77	.67	.59
6960	Pencil	Gold-pl. iron clad	.62	.090" x .015"	.72	.62	.55
6961	Screwdriver	Gold-pl. iron clad	.62	.090" x .060"	.72	.62	.55
6962	Spade, 45°	Gold-pl. iron clad	.62	.090" dia.	.72	.62	.55
6963	Precis. point	Gold-pl. iron clad	.61	.095" x .010"	1.40	1.22	1.08

PRINCESS MINIATURE SOLDER CUP

For tinning micro-miniature leads and components or de-soldering requirements. Adjustable, thermostatically controlled temperatures (400-750°F); corrosion proof, bronze melt cup; rugged diecast construction. Uses standard Ungar No. 4037 heating unit. Cup depth, ⅜"; dia. 1.0"; capacity, 1 oz. Power required, 120V AC/DC. Weight, 1¼ lbs.



Ungar No. 7000 Miniature Soldering Cup–With 3-wire cord and grounded NEMA plug. Net each, 1-3 **$23.75** 4-11 **$20.65** 12 Up **$18.25**

PRINCESS DUAL INLINE AND TO-5 EXTRACTORS



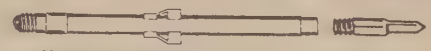
6982



6983

No. 6982 extracts up to 16-pin dual inline IC's; use 6948 de-solder tip or 7000 de-solder cup. No. 6983 extracts most TO-5 encased devices; use with Nos. 6943, 6944, 6945, or 6946 TO de-solder tips.

Ungar No. 6982 and 6983 Extractors–Either Model. Net each, 1-9 . . . . . **$2.00** 10-49 . . . . . **$1.55** 50 Up **$1.55**



6910, 6915, 6918 Heat Capsules — Nib

PRE-ASSEMBLED PRINCESS COMBINATIONS

MODEL 6975 SOLDERING IRON

All-in-one package provides a complete Princess soldering iron with three interchangeable copper nibs. Includes one 6902 handle with 2-conductor cord and plug, one 6910 Heat Capsule rated 10 watts, one 6950 pencil nib, one 6951 screwdriver nib and one 6952 spade nib.

Ungar No. 6975 Princess Assembly–Net each, 1-9 . . . . . **$8.45** 10-49 . . . . . **$7.35** 50 Up **$6.45**

NEW PRINCESS MODEL 6992 DE-SOLDERETTE



6992

Featherweight de-soldering tool for fast, safe removal of integrated circuits, chips and micro-miniature modules. Its 18-watt heat capsule delivers 600°F tip temperature. Also features Ungarized white coating inside and outside of collector body and stainless steel lined replaceable tip with .033" aperture. No sticking or clogging. Includes arm and bulb, check valve, two-wire handle.

Ungar No. 6992 Princess de-Solderette'–Net each, 1-9 . . . . . **$16.42** 10-49 . . . . . **$14.28** 50 Up **$12.63**

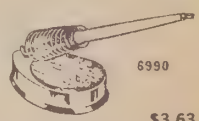
MODEL 6900 SOLDERING STATION

Fully assembled iron with three interchangeable copper nibs, plus Princess holder with cleaning sponge. Includes: 6902 handle with 2-conductor cord and plug, 6910 heat capsule rated 10 watts, 6950 pencil nib, 6951 screwdriver nib, 6952 spade nib, and 6990 soldering iron holder complete with cleaning sponge.

Ungar No. 6900 Soldering Station–Net each, 1-9 . . . . . **$11.95** 10-49 . . . . . **$10.35** 50 Up **$9.20**

PRINCESS SOLDERING IRON HOLDER

Comes with specially-processed slit sponge for tip cleaning.



6990

Ungar Model 6990 Holder–Net each, 1-9 . . . . . **$3.63** 10-49 . . . . . **$3.16** 50 Up **$2.79**

Ungar No. 6991 Sponge Refill–Replaceable sponge for above holder. Net each, 1-9 . . . . . **55c** 10-49 . . . . . **48c** 50 Up **42c**

PRINCESS IC DE-SOLDER KIT

Ideally suited for PC boards ½₂" or less, using low-density circuitry, unplated eyelets or mounting holes. Includes 3-wire grounded Princess handle, 18-watt heat capsule and three (No. 6945, 6947, 6948) de-solder tips. (Not Illustrated.)

Ungar No. 6939 De-solder Kit–Net each, 1-3 . . . . . **$14.80** 4-11 . . . . . **$13.00** 12 Up **$11.30**

DE-SOLDER TIPS



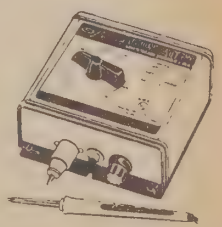
6940 6941 6944 6945 6947 6948

Iron-clad, nickel-plated and pre-tinned tips may be used with Ungar "Standard" line heating units No. 535, 1235 and 4035 or Princess heat capsules (for lower or higher tip temperatures).

Ungar No.	Tip Temp. at 18 W	Description	Net Each, Lots of 1-9	10-49	50 Up
6940	680°F	Flat pack (Hook)	$2.30	$2.00	$1.77
6941	720°F	Flat pack (Bar)	2.18	1.90	1.70
6943	700°F	TO pkg. (cup) .6" dia.	2.18	1.90	1.70
6944	710°F	TO pkg. (cup) .5" dia.	2.18	1.90	1.70
6945	720°F	TO pkg. (cup) ⅜" dia.	2.18	1.90	1.70
6946	780°F	TO pkg. (cup) .28" dia.	2.18	1.90	1.70
6947	750°F	Slotted (lead and tab) straightener	1.83	1.59	1.41
6948	570°F	Dual inline IC	2.50	2.20	1.90

PRINCESS LOW VOLTAGE SOLDERING SYSTEM

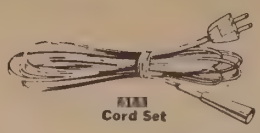
Complete soldering system includes transformer, handle, heat capsule, plus three tips. **Transformer:** Completely isolated 12-volt system provides maximum thermal recovery for production soldering. Case is grounded with 3-wire cord and NEMA plug. U/L Listed. Input, 120V AC, 60 Hz. Output, 1.3 amps, 10V AC, 60 Hz. Bayonet 3-amp fuse and pilot light. **Soldering Pencil:** Heat resistant nylon handle with flexible vinyl cord and 4-pin connector. Heat capsule provides tip temperatures 400°F to 900°F; rated 18 watts at 12V AC. **Tips:** "Standard Line" Ungar ⅛" tiplets and Princess soldering nibs may be used; cadmium copper or iron clad.

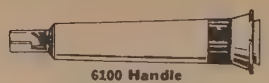


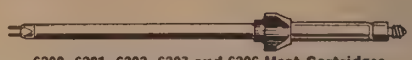
Ungar No.	Description	Net Each, Lots of 1-3	4-11	12 Up
6970	Complete station with transformer, handle, heat capsule and 6961, 6950 and 6952 soldering nibs	$31.65	$27.50	$24.35
6971	Replacement, low voltage heat capsule only (12V, 18W)	5.23	4.55	4.03
6972	Low voltage transformer	19.25	16.74	14.81
6973	Replacement handle only	5.23	4.55	4.03

© United Technical Publications

Ungar® / Imperial® SOLDERING TOOLS


6101 Cord Set


6100 Handle


6200, 6201, 6202, 6203 and 6206 Heat Cartridges

Interchangeable cord sets, tips and heat cartridges ideal for critical micro-miniature components. Reliable, low wattage, high temperature performance. Perma-Cool handle has double cushion of air combined to 5 heat-transistion surfaces for continuous cooling. Components individually packaged on cards; assemble to suit your needs. **Not interchangeable with "Standard Line."**

PERMA-COOL COLORED HANDLES

In cool, pastel turquoise, proven to reduce operator fatigue. Virtually indestructable, handles are made of high strength plastic resin. Diecast heat sink built-in. Pencil type design for easy handling. U/L Listed. Size, 0.8" O.D. at grip; 4.7" lg. Weight, 1 oz.

Ungar No. 6100–Handle only. Net each, 1-9 ..... **$1.72**
10-99 ..... **$1.39** 100 Up **$1.29**

IMPERIAL COMPLETE SOLDERING IRONS

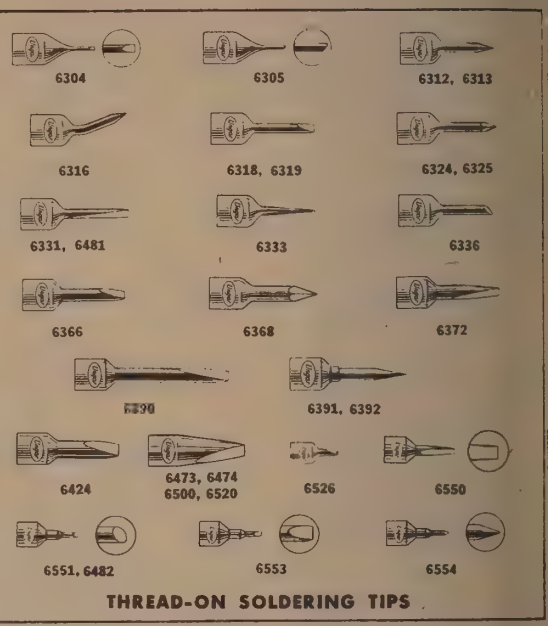
Ungar No. 6010–Includes one 6100 handle, one 6102 cord set, one 6200 heat cartridge and three assorted Mini-Tips.
Net each, 1-5 ..... **$9.00** 6-11 ..... **$7.30** 12 Up **$6.75**

Ungar No. 6601–Heavy-duty iron includes handle, cord set, 6207 (100 W) heat cartridge and 6520 tip.
Net each, 1-5 ..... **$12.50** 6-11 ..... **$10.15** 12 Up **$9.40**

INTERCHANGEABLE CORD SETS

Instantly adapts your iron to any 2 or 3 wire outlet. Molded female connector plugs onto the Perma-Cool handle without tools. Vinyl-covered cord, 18 gauge, 65 strands extra-flexible copper; terminals and connectors molded polyvinyl chloride. Center conductor (3-wire type) is insulated with green polyvinyl. Weight: 2½ oz., 2-wire; 4 oz., 3- wire.

Ungar No.	Description	Net Each, Lots of		
		1-9	10-99	100 Up
6102	Standard 2-wire cord set with plug	$2.50	$2.03	$1.88
6103	3-wire cord set with NEMA plug	3.67	2.97	2.75



THREAD-ON SOLDERING TIPS

INTERCHANGEABLE LONG-LIFE HEAT CARTRIDGES

Stainless steel, sealed cartridge with element at tip and threaded end for quick tip changes; keeps heat at tip where it belongs. Six ratings available: **6200:** 40 watts for 750-950°F; accepts all tip Nos. 6304 through 6482. Size, 7½" l. x .363" dia. (2½" l. from flange). Wt., 1.1 oz. **6201:** Same. but 30 watts for 650-850°F. **6202:** Same, but 25 watts for 600-800°F. **6203:** 60 watts for heat range, 850-1150°F. Accepts all iron clad gold-plated tips plus No. 6526 beryllium oxide tip, 750°-800°F; 7⅛" long; wt., 1.2 oz. **6206:** Miniature 15-watt for 614-743°F; use with tip Nos. 6550-6554 only. 6⅞" lg. x .312" dia. (2" lg. from flange) wt., 0.89 oz. **6207:** 100-watt cartridge; use only with tip No. 6520; replacement for unit in 6601 complete iron. Wattage rating at 115 volts. U/L Listed.

Ungar No.	Rated Watts	Net Each, Lots of			Ungar No.	Rated Watts	Net Each, Lots of		
		1-9	10-99	100 Up			1-9	10-99	100 Up
6200	40	$4.63	$3.76	$3.48	6203	60	$5.32	$4.31	$3.99
6201	30	4.63	3.76	3.48	6206	15	4.63	3.76	3.48
6202	25	4.63	3.76	3.48	6207	100	7.10	5.76	5.33

THREAD-ON SOLDERING TIPS

Completely interchangeable with the Imperial line (NOT interchangeable with Ungar "Standard Line"). Thread onto heat cartridge (either 25, 30, 40 or 60 watt models) with fingertip ease. Available in beryllium oxide (repels solder), copper alloy or long life, 24 kt. gold-plated iron clad types.

MINI-TIP® FOR 6200, 6201, 6202 OR 6203 HEAT CARTRIDGES

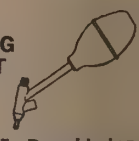
Ungar No.	Shape	Material	Size, In. O.D. x L.	Temp. (°F)*With Cartridge Rated			Net Each, Lots of		
				25 W	30 W	40 W	1-9	10-99	100 Up
6304	Micro-chisel	Iron clad	3/64 x ½	750	800	890	$ 1.20	$ 0.97	$ 0.90
6305	Micro-spade	Iron clad	3/64 x ½	750	800	890	1.20	.97	.90
6312	Pencil	Copper	⅛ x ¾	750	800	910	.53	.43	.40
6313	Pencil	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6316	Offset pencil	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6318	Long taper chisel	Copper	⅛ x ¾	750	800	890	.53	.43	.40
6319	Long taper chisel	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6324	Long taper pyramid	Copper	⅛ x ¾	750	800	890	.53	.43	.40
6325	Long taper pyramid	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6331	Screwdriver	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6333	Needle	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6336	Spade	Iron clad	⅛ x ¾	690	750	860	1.20	.97	.90
6366	Long taper chisel	Iron clad	3/16 x ¾	680	730	850	1.42	1.15	1.06
6368	Long taper pyramid	Copper	3/16 x ¾	...	...	...	.65	.53	.49
6372	Screwdriver	Iron clad	3/16 x ¾	680	730	850	1.42	1.15	1.06
6390	Screwdriver	Iron clad	3/16 x 1½	600	650	750	1.45	1.18	1.09
6391	Precision point	Copper#	...	...	...	...	.85	.69	.64
6392	Precision point	Iron clad	...	...	...	...	1.67	1.35	1.25
6424	Long taper chisel	Iron clad	¼ x ¾	680	730	850	1.45	1.18	1.09
6473	Long taper chisel	Copper	⅜ x ¾	...	...	...	.65	.53	.49
6474	Long taper chisel	Iron clad	⅜ x ¾	670	730	840	1.67	1.35	1.25
6481	Tapered screwdriver	Iron clad	¾ x 3/32	690	750	860	1.20	.97	.90
6482	Micro-spade	Iron clad	3/64 x ½	700	770	860	1.20	.97	.90
6526†	Chisel	Beryllium	...	475	550	575	15.17	12.30	11.38
6520‡	Long taper chisel	Copper#	...	...	...	...	1.45	1.18	1.09
6500‡	Long taper chisel	Iron clad	...	...	...	...	2.83	2.30	2.13

MICRO-TIP® FOR 6206 15-WATT HEAT CARTRIDGE ONLY

6550	Tapered screwdriver	Iron clad	.040 x .40	614-743 at 15 W	$1.40	$1.14	$1.05
6551	Stepped spade	Iron clad	.050 x .40	614-743 at 15 W	1.40	1.14	1.05
6553	Stepped chisel	Iron clad	.050 x .40	614-743 at 15 W	1.40	1.14	1.05
6554	Stepped pencil	Iron clad	.050 x .40	614-743 at 15 W	1.40	1.14	1.05

*Slight variation in line voltage will give ±25°F deviation. †Micro-Tip with adapter and tip protector.
‡For 100-watt 6207 cartrdge or 6601 iron only. #Unplated.

DE-SOLDERING ATTACHMENT



Ungar No. 6825 De-soldering Tool–For printed circuit use. Tip coated to prevent cloggi... Fits 25- to 60-watt cartridges.
Net each, 1-5 ..... $10.70
6-11 .. **$8.70** 12 Up .. **8.00**

Ungar No. 7806 (.057") or **7813** (.069") **Replacement Tips**–
Net each, 1-9 ..... **83c**
10-49 .... **68c** 50 Up **63c**

Ungar No. 7812 (.033")–Same as above. Net ea. 1-9 ... **$1.17**
10-49 .. **$0.96** 50 Up .. **.88**

SAFETY-GUARD HOLDER



Ungar No. 6800–Designed especially for Imperial irons. Protects against hot tip burns or handle damage. Attaches to top or underside of bench. Black with gold cage guard.
Net each, 1-9 ..... **$2.12**
10-49 .. **$1.72** 50 Up .. **1.59**

ANTI-SEIZE

Special lubricant lengthens tip and heating unit life. For use with Princess, Imperial and "Standard Line" tools. Reduces thread seizure. Improves heat transfer.

Ungar No. 8001–½ oz. tube.
Net each, 1-9 ..... **70c**
10-49 .... **58c** 50 Up **53c**

Ungar®
Division of Eldon Industries, Inc.

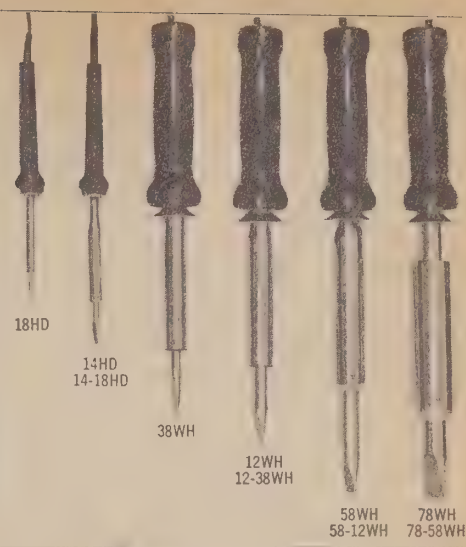
© United Technical Publications

WALL BRAND SOLDERING PRODUCTS

SINCE 1864

MADE IN USA

HOT AIR GUNS AND TIPS



HD Type and WH Type Heavy-duty Irons

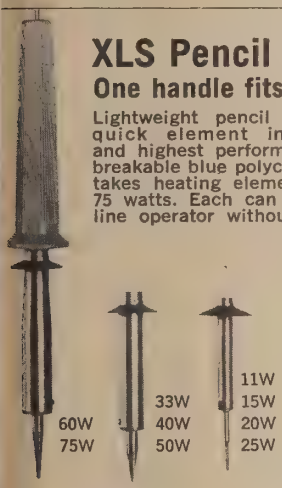
Wallbrand heavy-duty irons are engineered for highest efficiency performance. Rugged construction assures long-life for demanding production line needs. No radionic interference. Triple-life resistance wire wound on pure mica and constant tip temperature with extra fast recovery permits continuous heavy-duty use. 120 volts AC or DC. Other voltages available on request. Handles remain cool after long hours of operation. Tips are easily changed. Special irons customized to particular requirements.

Model	Watt Input	Tip Dia.	Length W/O Tip	Thermo/ Gram Value
18HD	25	1/8″	6⅝″	300
14HD	40	1/4″	7½″	900
38WH	80	3/8″	10¼″	1500
12WH	125	1/2″	10¼″	2000
12-38WH	125	3/8″	10¼″	2000
12-38HC	155	3/8″	10¼″	3500
58WH	200	5/8″	12¼″	3500
58-12WH	200	3/8″	12¼″	3500
78WH	300	7/8″	12⅜″	5400
78-58WH	300	5/8″	12⅜″	5400

XLS Pencil Iron

One handle fits 9 elements

Lightweight pencil series features quick element interchangeability and highest performance. Cool, unbreakable blue polycarbonate handle takes heating elements from 11 to 75 watts. Each can be changed by line operator without special tools. Available with either 2 or 3 wire cord. Uses regular or iron plated tips. Elements encased in long-life stainless steel jackets.



DH (DUO HEAT) Pencil

Pat. Pending

Developed for use in intermittent soldering operations

Revolutionary lightweight pencil operates continuously at low heat, but has higher heat available when needed. Constant low heat is adequate for light to medium jobs, get high heat instantly by pressing handle switch; tip and element life infinitely increased. Indestructible molded handle stays cool and comfortable. Wide variety of plug-in tips easily interchangeable.



Model	Continuous Low Heat	High Heat
DH-1	15W 520°F	47W 920°F
DH-2	20W 630°F	53W 975°F

IDL INSTANT DEPENDABLE LASTING IRON

Pat. Pending

3 oz. pencil controlled by thermal time delay relay

Heats in seconds. No transformer. When handle button is depressed 180W element heats initially until soldering temperature is reached. Thermal time delay relay then cuts in 40W element automatically. Pencil cannot overheat. Interchangeable plug-in 1/8″ tips need no special tools to change. Unbreakable handle stays cool. Especially good for diversified light to medium jobs.



Trig-R-Heat Gun

Feather light 14 oz. gun has no transformer. Reaches hard-to-get at spots easily. Tips will not deform. Heats and recovers instantly. Rugged, precision built. Tip and element assemblies changed easily.



Model	Tip Size	Max. Watts	Min. Watts	AC/DC Volts	Weight W/O Cord
214LT	1/4″	400	150	120	14 oz.
212LT	1/2″	500	300	120	24 oz.
TIP AND ELEMENT ASSEMBLY					
214TE	1/4″	400	150	120	6 oz.
212TE	1/2″	500	300	120	16 oz.

864 Commercial Duty Iron

Pencil iron has cool, molded plastic handle, balanced for comfort. Triple-life resistance wound. Copper tip maintains constant temperature.



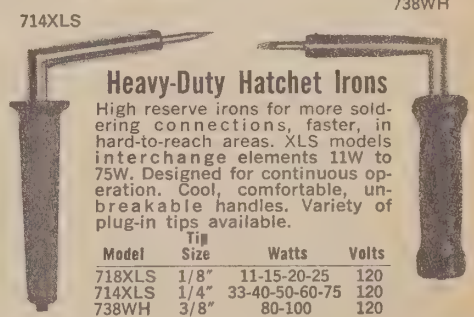
Tip Size	Watts	Volts
3/16″	30	120
3/16″	40	120

738WH

714XLS

Heavy-Duty Hatchet Irons

High reserve irons for more soldering connections, faster, in hard-to-reach areas. XLS models interchange elements 11W to 75W. Designed for continuous operation. Cool, comfortable, unbreakable handles. Variety of plug-in tips available.



Model	Tip Size	Watts	Volts
718XLS	1/8″	11-15-20-25	120
714XLS	1/4″	33-40-50-60-75	120
738WH	3/8″	80-100	120

Soldering Pencil Holder

Can be mounted on top, in front or below bench. Adjusts to any angle. Bench model includes tip cleaning sponge and tray. SPH for up to 5/8″ shaft. Model SIH for up to 1″ shafts.

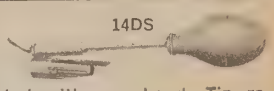


(SIH not shown)

14DS

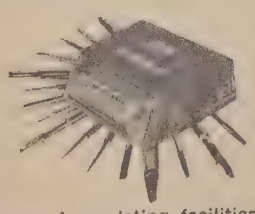
Desoldering Tool

Keeps solder in molten state in reservoir. Operated with one hand. Tip replaceable with two openings — .080″ dia. and .064″ dia. Fits 614, 14HD, 714XLS and XLS 33W to 75W series.

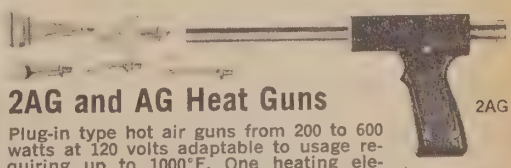


Tips and Tip Dispenser

Tip sizes from 1/8″ through 7/8″ in wide variety of configurations for specific industrial and commercial needs. Three grades — **Anniversary type:** Super finished, iron and chrome plated. **Wallklad:** Iron coated and chrome plated. For production and critical lab use. **Wallbrand:** Commercial, copper, nickel plated. Wall's own iron plating facilities produce high quality long-life tips. 1/8″ through 3/8″ iron plated or copper tips available in handy tip dispenser. Tips individually sealed in color-coded continuous belting, plastic envelope.







2AG and AG Heat Guns

Plug-in type hot air guns from 200 to 600 watts at 120 volts adaptable to usage requiring up to 1000°F. One heating element fits both models. Pistol grip available with trigger (extra cost), opens air and heat at same time. Five tip styles interchangeable. Special tips on request. 3-wire cord assembly. Guns include neoprene air hose, hose fittings, pressure regulator and gauge. Send for Bulletin HG-1265.

WALL MANUFACTURING CO.

Industrial soldering irons and pencils are built to exceed Federal specification W-S-570. Wallbrand soldering products are UL and CSA listed.

© United Technical Publications

SCREW DRIVERS

VACO®

- Precision Ground...Unconditionally Guaranteed
- Comfordome® Slo-Burn S/B AMBERYL® Handles are easy on the hands
- Nickel-Chrome Plated #6150 Steel Blades will not rust or corrode

ROUND BLADE SCREW DRIVERS

Pocket Clip Styles

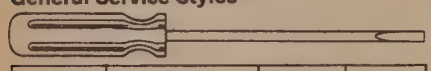


Stock No.	Blade Diameter and Length	Overall Length	Price
A 010	3/32" x 1 3/8"	3 1/8"	$ .34
A 230-2	1/4" x 2"	3 3/4"	.36
A 130-2	1/8" x 2"	3 7/8"	.44
A 130-3	1/8" x 3"	4 7/8"	.44
A 116-2	3/32" x 2"	4 1/2"	.52
A 116-3	3/32" x 3"	5 1/2"	.52
A 116-4	3/32" x 4"	6 1/2"	.52
A 131-2	1/8" x 2"	4 1/2"	.52
A 131-3	1/8" x 3"	5 1/2"	.52

Electrical and Cabinet Styles

A 216-2	1/8" x 2"	4 3/4"	.75
A 216-3	1/8" x 3"	5 3/4"	.82
A 216-4	1/8" x 4"	6 3/4"	.85
A 216-6	1/8" x 6"	8 3/4"	.87
A 216-8	1/8" x 8"	10 3/4"	.94
A 216-10	1/8" x 10"	12 3/4"	1.04

General Service Styles

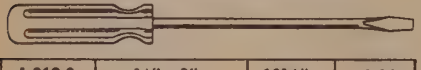


A 316-3	3/16" x 3"	6 1/2"	1.04
A 316-4	3/16" x 4"	7 1/2"	1.11
A 316-6	3/16" x 6"	9 1/2"	1.24
A 316-8	3/16" x 8"	11 1/2"	1.31
A 316-10	3/16" x 10"	13 1/2"	1.42
A 416-3	1/4" x 3"	6 5/8"	1.33
A 416-4	1/4" x 4"	7 5/8"	1.35
A 416-6	1/4" x 6"	9 5/8"	1.42
A 416-8	1/4" x 8"	11 5/8"	1.50
A 416-10	1/4" x 10"	13 5/8"	1.64

Heavy Duty Styles (Keystone)

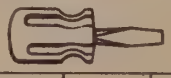
A 516-4	5/16" x 4"	8"	1.72
A 516-6	5/16" x 6"	10"	1.80
A 516-8	5/16" x 8"	12"	1.92

Extra Heavy Duty Styles (Keystone)



A 616-6	3/8" x 6"	10 1/4"	2.14
A 616-8	3/8" x 8"	12 1/4"	2.29
A 616-10	3/8" x 10"	14 1/2"	2.59

Stubby Styles



A 132	1/4" x 1 1/4"	3"	1.02
A 135	5/16" x 1 3/4"	3 7/8"	1.33

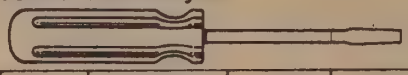
OFFSET SCREW DRIVERS—REGULAR TYPE



Stock No.	For Screw No.	Overall Length	Price
VO 1	2 to 6	3"	$ .59
VO 2	6 to 10	4"	.94
VO 3	8 to 12	5"	1.07
VO 4	12 to 16	6"	1.35

SQUARE BLADE SCREW DRIVERS

General Service Styles



Stock No.	Blade Size and Length	Overall Length	Price
C 33	3/16" x 3"	6 1/2"	$1.31
C 34	3/16" x 4"	7 1/2"	1.35
C 36	3/16" x 6"	9 1/2"	1.40
C 38	3/16" x 8"	11 1/2"	1.50

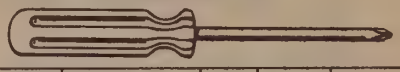
Medium Duty Styles

C 43	1/4" x 3"	6 5/8"	1.52
C 44	1/4" x 4"	7 5/8"	1.62
C 46	1/4" x 6"	9 5/8"	1.69
C 48	1/4" x 8"	11 5/8"	1.86
C 410	1/4" x 10"	13 5/8"	2.14
C 54	5/16" x 4"	8 1/2"	2.14
C 56	5/16" x 6"	10 1/2"	2.23
C 58	5/16" x 8"	12 1/2"	2.25
C 510	5/16" x 10"	14 1/4"	2.46

Heavy Duty Styles

C 66	3/8" x 6"	10 1/2"	2.46
C 68	3/8" x 8"	12 1/2"	2.63
C 610	3/8" x 10"	14 1/2"	3.00
C 612	3/8" x 12"	16 1/2"	3.15

PHILLIPS SCREW DRIVERS



Stock No.	Handle Diameter and Length	Point No.	Overall Length	Price
P 01	5/8" x 2 3/4"	0	5 1/4"	$ .90
P 1	7/8" x 3 1/2"	1	6 1/2"	1.21
P 2	1" x 3 5/8"	2	7 7/8"	1.52
P 3	1 1/16" x 4"	3	10"	2.08
P 4	1 3/16" x 4 1/2"	4	12 1/2"	2.46
P 5	1 1/4" x 2 1/8"	2	3 7/8"	1.33
P 6	1 1/8" x 1 3/4"	1	3"	1.21

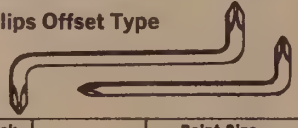
Pocket Clip Type

P 12	1/2" x 2 1/2"	0	5"	.90

Extra Long Blade

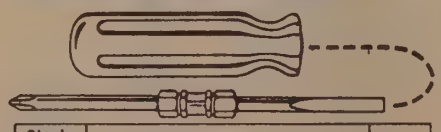
P 18	7/16" x 3 1/2"	1	11 1/2"	1.35
P 28	1" x 3 5/8"	2	11 5/8"	1.57
P 212	1" x 3 5/8"	2	15 5/8"	1.77
P 202	1 3/16" x 4 1/2"	2	24 1/2"	2.92

Phillips Offset Type



Stock No.	Style	Point Size On End	Price
P 111	Single End	#1 on Both Ends	$ .65
P 120	Double End	#1 and #2	.82
P 222	Single End	#2 on Both Ends	.72
P 230	Double End	#2 and #3	1.35
P 340	Double End	#3 and #4	1.57

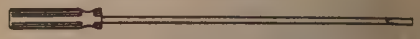
REVERSIBLE SCREW DRIVERS



Stock No.	Type and Size of Blade	Price
DU 2	No. 1 Phillips x 3/16" Regular	$1.75
DUH 4	No. 2 Phillips x 1/4" Regular	2.11
DU 5	No. 2 Phillips x 1/4" Reg. (Stubby)	2.11
DU 11	No. 1 Phillips x 3/16" Reg. plus 1/4" Hex.	2.04
DUP 12	No. 1 Phillips x No. 2 Phillips	2.33
DU 34	3/16" Regular x 1/4" Regular	2.04
DU 45	1/8" Clutch Head x 3/32" Clutch Head	1.80
DU 68	3/16" Clutch Head x 1/4" Clutch Head	2.31

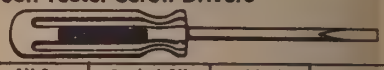
SPECIALTY SCREW DRIVERS

Radio & Television Aligners



Stock No.	Size or Type	Overall Length	Price
AT 55	—	7 1/2"	$ .90
AT 510	—	12 1/2"	1.05

Neon Tester Screw Drivers



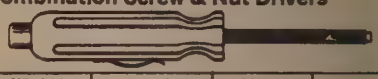
AN 2	Pocket Clip	5 1/2"	1.31
AN 44	—	7 5/8"	2.14

Double End Nut Drivers



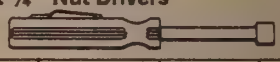
DE 810	1/4" & 5/16"	6"	1.31
DE 1210	5/16" & 3/8"	6"	1.57

Combination Screw & Nut Drivers



ND 141	Regular	5 1/2"	1.31

Midget 1/4" Nut Drivers



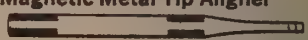
PK 8	—	3 3/4"	.77

Slimline Drivers



A 86	—	5 3/16"	.96
A 99	—	8"	1.16

Non-Magnetic Metal Tip Aligner



AT 45	—	5 1/2"	.73

Insulated Screw Drivers



Stock No.	Handle Size	Overall Length	Color Key	Price
VR 261	3/4" x 3"	9"	Grey	$1.27
VR 361	7/8" x 3 1/2"	9 1/2"	Black	1.47

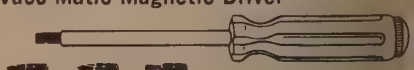
Beryllium Copper (Non-Magnetic)



Round

Stock No.	Handle Size	Overall Length	Price
VB 210	5/8" x 2 3/4"	12 3/4"	$1.79

Vaco-Matic Magnetic Driver



70035	1 1/8" x 4 1/4"	9"	$3.75

Steel Tapes



Stock No.	Size	Price
70120	1/2" x 10'	$2.25
70126	1/2 x 6'	1.50
70128	1/2" x 8'	1.80
70146	1/4" x 6'	1.30
71120	1/2" x 10' Automatic	2.90
71346	3/4" x 16' Automatic	6.50

Net

© United Technical Publications

NUT DRIVERS
SCREW LAUNCHERS
SPECIALTY TOOLS

HOLLOW SHAFT NUT DRIVERS



- Extra Hard Tempered Sockets
- Beautiful Polished Nickel-Chrome Finish
- Large Colored-For-Size Handles

Extra Small Hex Size

Stock No.	Handle Dia. and Length	Hex Size	Overall Length	Handle Color	Price
S 5	7/8" x 3 1/2"	5/32"	6 1/2"	Amber	1.26

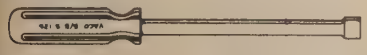
3" Shaft Length

S 6	1" x 3 5/8"	3/16"	6 5/8"	Black	1.26
S 7	1" x 3 5/8"	7/32"	6 5/8"	Amber	1.26
S 8	1" x 3 5/8"	1/4"	6 5/8"	Red	1.26
S 9	1" x 3 5/8"	9/32"	6 5/8"	Amber	1.26
S 10	1" x 3 5/8"	5/16"	6 5/8"	Amber	1.26
S 11	1" x 3 5/8"	11/32"	6 5/8"	Green	1.26
S 12	1" x 3 5/8"	3/8"	6 5/8"	Blue	1.26
S 14	1 1/16" x 4"	7/16"	7"	Brown	1.56
S 16	1 1/16" x 4"	1/2"	7"	Orange	1.56

Extra Large Hex Size 4" Shaft Length

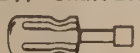
S 18	1 1/16" x 4"	9/16"	8"	Amber	1.98
S 20	1 1/16" x 4"	5/8"	8"	Amber	2.25

Extra Long 6" Shaft Length



S 66	1" x 3 5/8"	3/16"	9 5/8"	Black	1.59
S 86	1" x 3 5/8"	1/4"	9 5/8"	Red	1.59
S 106	1" x 3 5/8"	5/16"	9 5/8"	Amber	1.59
S 116	1" x 3 5/8"	11/32"	9 5/8"	Green	1.59
S 126	1" x 3 5/8"	3/8"	9 5/8"	Blue	1.59
S 146	1 1/16" x 4"	7/16"	10"	Brown	1.88
S 166	1 1/16" x 4"	1/2"	10"	Orange	1.88

Stubby Style 1 1/4" Shaft Length



SS 8	1 1/4" x 2 1/8"	1/4"	3 1/2"	Amber	1.11
SS 10	1 1/4" x 2 1/8"	5/16"	3 1/2"	Amber	1.11
SS 12	1 1/4" x 2 1/8"	3/8"	3 1/2"	Amber	1.11

SP-500 Plastic Boxed Set



An elegant two tone gift or storage box with hinged cover contains these five popular sizes: 3/16", 1/4", 5/16", 11/32", 3/4". Size of box is 5" wide x 7" long x 1 1/8" deep.

Price $6.86

K-7 Stand Up—Hang Up Kit



An ideal kit for the workbench or to roll up and store in the tool box. Contains the following drivers: S6, S8, S10, S11, S12, S14, S16.

Price $11.05

S-700 All Metal Stand

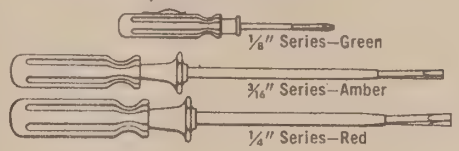


Seven of the most popular nut driver sizes are fitted into this metal stand especially designed for the workbench or for hanging on the wall. Contains one each of: S6, S8, S10, S11, S12, S14, S16.

Price $10.37

SCREW LAUNCHERS

hold . . . start . . . drive screws with power and comfort



Unique design, double blade bit grips screws securely while working in tight quarters or awkward places. Easy to operate.

Stock No.	Blade Size	Handle Size	Overall Length	Price
K-21*	Mini Tip	5/16" x 2 3/4"	5 3/4"	$1.65
K-23*	1/8" x 3"	5/16" x 2 3/4"	5 3/4"	1.45
K-28	1/8" x 8"	5/16" x 2 3/4"	10 3/4"	1.75
K-34	5/16" x 4"	7/8" x 3 1/2"	7 1/2"	2.10
K-36	3/16" x 6"	7/8" x 3 1/2"	9 1/2"	2.15
K-38	3/16" x 8"	7/8" x 3 1/2"	11 1/2"	2.20
K-44	1/4" x 4"	1" x 3 5/8"	7 5/8"	2.20
K-46	1/4" x 6"	1" x 3 5/8"	9 5/8"	2.30
K-48	1/4" x 8"	1" x 3 5/8"	11 5/8"	2.35

Phillips Screw Launchers



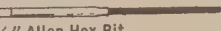
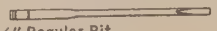
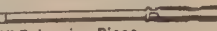
Stock No.	Length	Price
K-13	3"	$1.98
K-14*	5"	2.46
K-15	5"	2.30
K-16	7"	2.41
K-19	9"	2.51

*Pocket Clip Style

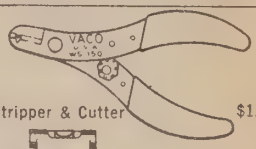
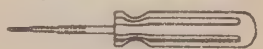
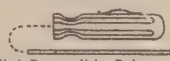
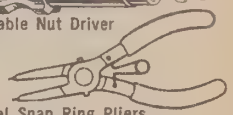
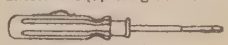
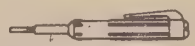
SNAP DRIVERS & COMPONENTS

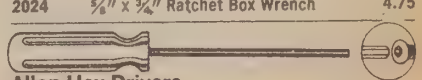


Interchangeable blades snap into Vaco handle . . . holds like one piece tool. Build your own kit of specialty blades.

Stock No.	Description	Price
		
ZH-1	Medium Duty Handle	$1.31
ZH-2	Heavy Duty Handle	1.79
		
ZA-1	1/16" Allen Hex Bit	.85
ZA-2	5/64" Allen Hex Bit	.87
ZA-3	3/32" Allen Hex Bit	.90
ZA-35	7/64" Allen Hex Bit	.94
ZA-4	1/8" Allen Hex Bit	.94
ZA-45	9/64" Allen Hex Bit	.96
ZA-5	5/32" Allen Hex Bit	.96
ZA-6	3/16" Allen Hex Bit	1.02
		
ZB-24	1/8" Regular Bit	.65
ZB-34	3/16" Regular Bit	.82
ZB-45	1/4" Regular Bit	.82
		
ZP-01	No. 0 Phillips Bit	.77
ZP-14	No. 1 Phillips Bit	.82
ZP-24	No. 2 Phillips Bit	.87
		
ZS-6	3/16" Nut Driver Bit	.94
ZS-8	1/4" Nut Driver Bit	.94
ZS-10	5/16" Nut Driver Bit	.94
ZS-11	11/32" Nut Driver Bit	.94
ZS-12	3/8" Nut Driver Bit	.94
ZS-14	7/16" Nut Driver Bit	1.21
ZS-16	1/2" Nut Driver Bit	1.21
		
ZT-310	3-in-1 Tapping Tool Blade	2.78
		
ZX-56	5" Extension Piece	1.31

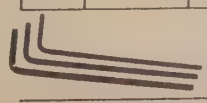
SPECIALTY TOOLS

Stock No.	Description	Price
		
WS-150	Wire Stripper & Cutter	$1.70
		
ML-7	Magnetic Level & Protractor	3.75
		
TT-31	3-in-1 Tapping Tool	2.94
		
DU-1*	Mini Reversible Driver	1.34
		
SA-711	Adjustable Nut Driver	4.15
		
210	Internal Snap Ring Pliers	3.10
220	External Snap Ring Pliers	3.10
		
K-21*	Mini Screw Launcher	1.65
K-23*	1/8" x 3" Screw Launcher	1.45
		
K-14*	5" Phillips Screw Launcher	2.46
		
TK-500	100-500V Circuit Tester	1.10
		
HK-17	Hex Key Wrench Set	1.57
		
810	1/4" x 5/16" Ratchet Box Wrench	3.10
1214	3/8" x 7/16" Ratchet Box Wrench	3.50
1618	1/2" x 9/16" Ratchet Box Wrench	4.60
2022	5/8" x 11/16" Ratchet Box Wrench	4.75
2024	5/8" x 3/4" Ratchet Box Wrench	4.75



Allen Hex Drivers

Stock No.	Handle Size	Hex Size	Cap Screw	Set Screw	Price
AL 2	3/4" x 3"	.050"	0 & 1	3 & 4	$1.09
AL 4	3/4" x 3"	1/16"	2	5 & 6	1.09
AL 5	3/4" x 3"	5/64"	3 & 4	8	1.09
AL 6	7/8" x 3 1/2"	3/32"	5 & 6	10	1.09
AL 7	7/8" x 3 1/2"	7/64"	7	--	1.26
AL 8	7/8" x 3 1/2"	1/8"	8	1/4	1.26
AL 9	7/8" x 3 1/2"	9/64"	9	--	1.26
AL 10	7/8" x 3 1/2"	5/32"	10	5/16	1.26
AL 12	7/8" x 3 1/2"	3/16"	1/4	3/8	1.26
AL 14	1" x 3 5/8"	7/32"	5/16	7/16	1.39
AL 16	1" x 3 5/8"	1/4"		1/2	1.39

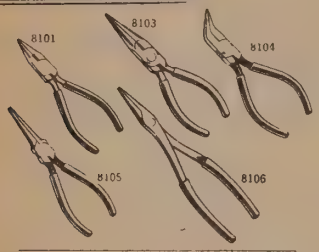


HEX KEY WRENCHES, in above sizes, are available in short, long, extra long, and 12" lengths.

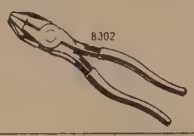
© United Technical Publications

PLIERS • WRENCHES

- Precision Ground and Polished Heads
- Milled Sure Grip Jaws, Hand Honed Cutters
- Cushion Grip Handles
- Unconditionally Guaranteed



Stock No.	Description	Price
8101	Short Ndle. Nose w/Cut. 5"	$4.25
8102	Long Ndle. Nose w/Cut. 6"	4.55
8103	Long Ndle. Nose w/Cut. 7"	5.25
8104	Curved Nose 6"	4.60
8105	Long Nose 6"	4.30
8106	Long Needle Nose 7½"	4.60



8301	Lineman's Side Cut. 6½"	$4.40
8302	Lineman's Side Cut. 7½"	5.10
8303	Lineman's Side Cut. 8¾"	6.10



8401	Slip Joint 6½"	$2.10
8402	Slip Joint 8"	2.60
8403	6" Slip Joint w/Cutter	3.05

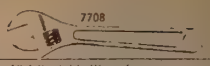


8602	Vacgruv Plier Wrench 6"	$3.50
8604	Vacgruv Plier Wrench 10"	4.50





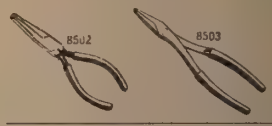
9101	Midget Long Nose 4½"	$4.30
9102	Midget Round Nose 4½"	4.30
9201	Midget Diagonal 4½"	4.30
9202	Midget End Cutter 4½"	4.30
9501	Midget Flat Nose 4½"	4.30
9601	Midget Vacgruv 5"	4.30



7704	4" Adjustable Wrench	$3.60
7706	6" Adjustable Wrench	3.60
7708	8" Adjustable Wrench	4.00
7710	10" Adjustable Wrench	5.25
7712	12" Adjustable Wrench	7.35



8201	Diagonal Cutter 4½"	$4.00
8202	Diagonal Cutter 5"	4.10
8203	Diagonal Cutter 6"	4.50
8204	Diagonal Cutter 7½"	5.15
8205	H. D. Diagonal Cutter 7¼"	4.70



8501	Flat Nose w/ Cutter 6"	$4.75
8503	Flat Nose 7½"	4.50

VACOMBO® KITS



KIT NO. TV-27 Deluxe 27-piece kit contains practically every hand tool necessary for TV and radio work, plus extra pockets for pliers and other personal tools. Size, 20" x 13½". Price...$31.91



KIT NO. ZB-50 A fine, all-purpose snap driver kit of interchangeable regular and Phillips blades that fit same handle. Includes durable leatherette bag. Size, 6½" x 7". Price.. $5.04

KIT NO. ZBX-51 Same as Vaco No. ZB-50 except includes 5" blade extension. Price.. $6.29



KIT NO. RT-14 Handy 14-piece snap driver kit for radio and TV service men. Contains nut drivers, Phillips and regular drivers, heavy duty handle, and 5" blade extension which doubles the usefulness of each blade. Size, 10½" x 8". Price...$14.47



KIT NO. ZS-60 A most versatile and complete hexagon nut driver kit for radio, TV or any other work requiring speedy nut setting. All sockets are super hard. Size, 6½" x 7". Price.. $6.47

KIT NO. ZSX-61 Same as Vaco Kit No. ZS-60 except includes 5" blade extension. Price.. $7.61



KIT NO. ZA-70 This useful snap driver kit consists of 6 Allen type hexagon blades plus handle and bag. Services screw numbers 4, 5, 6, 8, 10, ¼", 5/16", and 3/8". Size, 6½" x 7". Price...$6.18



KIT NO. ZC-80 Specially designed snap driver kit includes socket head (Robertson), Phillips, and regular blades; particularly suited for Canadian use. Size, 6½" x 7". Price...$6.72



KIT NO. ZF-40 Here is a special snap driver kit designed to take care of all popular sizes of fluted spline or Bristol type recess head screws used on electronic and electrical equipment, air conditioning, refrigeration, and office machines. Size, 6½", x 7". Price...$5.82

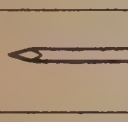
RATCHET DRIVERS QUALITY FASTENERS

VACO POW'RIVETS . . . the blind rivet for foolproof fastening every time



Step 1 Step 2 Step 3

THERE IS A DIFFERENCE! Only Vaco Pow'-Rivets adapt to hole size variance, and pull up snug regardless of material thickness. That's why 4 sizes do the job of 11 ordinary rivets. Three step illustration at left shows unique "bubble action" sequence which assures positive, goof-proof fastening every time.



Stock No.	Dia. "D"	Length "L"	Grip Range	Head Dia. "HD"	Head Ht. "HH"	Hole Size	Drill
425	⅛	.400	To .250	.215	.044	.136	#29
528	5/32	.470	To .280	.255	.057	.166	#19
631	3/16	.530	To .312	.349	.070	.199	#8
650	3/16	.720	To .500	.349	.070	.199	#8
400	Assortment Pak						

Available in 50¢ Paks, Dollar $ Paks, "C" (100) Paks, and "MB" (1000) Paks.

VACO POW'RIVETER



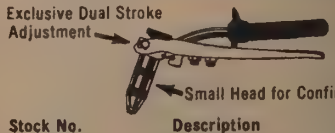
Stock No.	Description	List Price
495	Popular Rivet Tool for ⅛", 5/32", 3/16" Rivets	$5.95

RATCHET DRIVERS



Stock No.	Handle Dia. and Length	Overall Length	Blade Dia.	Price
111001	1⅛" x 4¼"	10"	¼"	$3.21
111002	1⅜" x 4½"	10½"	5/16"	3.48
111004	1⅛" x 4¼"	Handle Only	For use with Snap Blades	3.75

VACO PROFESSIONAL POW'RIVETER



Stock No.	Description	List Price
175002	Unique 2 in 1 Action for Professional Applications	$26.00

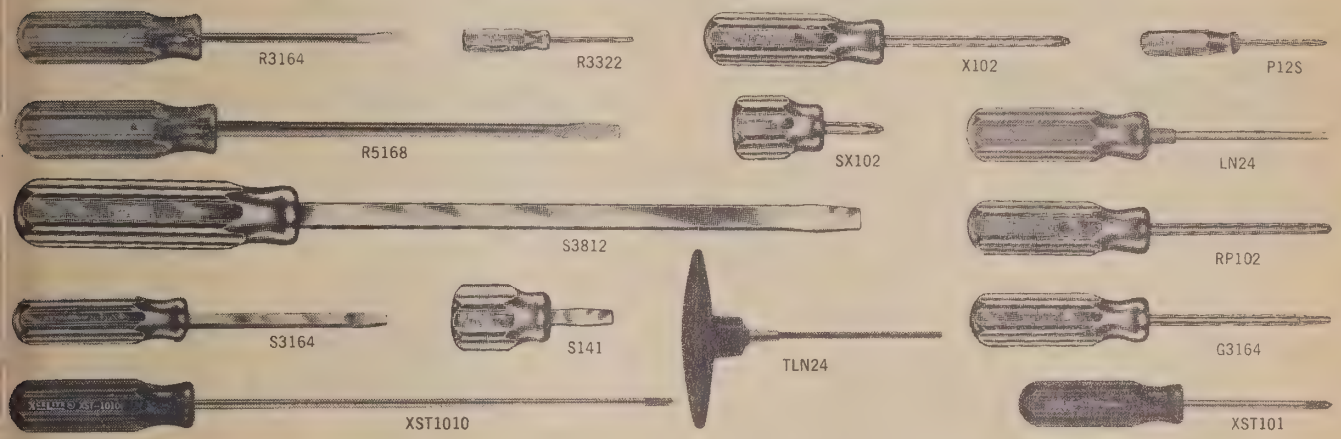
Trade Discount Applies To List Prices Only

© United Technical Publications

XCELITE® QUALITY PROFESSIONAL TOOLS

SCREWDRIVERS

AISI 6150 chrome vanadium steel blades, plastic (UL) handles.



Items with **asterisk(*)** have non-magnetic, non-sparking, rust- and corrosion-resistant beryllium-copper blades.

Phillips items with **double asterisk(**)** have specially treated tips finished in black oxide for extremely close, precision fit.

Allen type items with **dagger(†)** have Tee handles.

ROUND BLADE

Regular

Number	Blade	Overall	List
R182	1/8" x 2"	4 5/8"	$ .70
R184	1/8" x 4"	6 5/8"	.80
BR184*	1/8" x 4"	6 5/8"	1.50
R186	1/8" x 6"	8 5/8"	.90
BR186*	1/8" x 6"	8 5/8"	1.55
R188	1/8" x 8"	10 5/8"	1.05
R1810	1/8" x 10"	12 5/8"	1.20
BR1810*	1/8" x 10"	12 5/8"	1.80
R5323	3/32" x 3"	5 5/8"	.90
R5324	3/32" x 4"	6 5/8"	.90
R5325	3/32" x 5"	7 5/8"	.95
R5328	3/32" x 8"	10 5/8"	1.20
R3163	3/16" x 3"	6 5/8"	1.15
R3164	3/16" x 4"	7 5/8"	1.25
BR3164*	3/16" x 4"	7 5/8"	2.25
R3166	3/16" x 6"	9 5/8"	1.40
R3168	3/16" x 8"	11 5/8"	1.55
BR3168*	3/16" x 8"	11 5/8"	3.00
R31610	3/16" x 10"	13 5/8"	1.80
R142	1/4" x 2"	6 1/8"	1.40
R144	1/4" x 4"	8 1/8"	1.65
BR144*	1/4" x 4"	8 1/8"	2.75
R146	1/4" x 6"	10 1/8"	1.80
BR146*	1/4" x 6"	10 1/8"	3.30
R148	1/4" x 8"	12 1/8"	1.90
BR148*	1/4" x 8"	12 1/8"	3.60
R1410	1/4" x 10"	14 1/8"	2.00
R5164	5/16" x 4"	8 1/8"	1.85
R5166	5/16" x 6"	10 1/8"	2.00
R5168	5/16" x 8"	12 1/8"	2.15
R388	3/8" x 8"	12 1/2"	2.90

Pocket Clip Style

R3322	3/32" x 2"	4 1/4"	$ .60
R3323	3/32" x 3"	5 1/4"	.65
R3324	3/32" x 4"	6 1/4"	.70
R181	1/8" x 2"	4 1/4"	.60
BR181*	1/8" x 2"	4 1/4"	.80
R183	1/8" x 3"	5 1/4"	.65
R184 1/2	1/8" x 4"	6 1/4"	.70

* Beryllium-copper blade.

CLUTCH HEAD (Type G)

Number	Tip	Blade	Overall	List
G3324	3/32"	1/8"x4"	6 1/4"	$1.45
G183	1/8"	3/16"x3"	6 5/8"	1.45
G5324	3/32"	3/16"x4"	7 5/8"	1.75
G3164	3/16"	1/4"x4"	8 1/8"	1.75
G146	1/4"	3/32"x6"	10 1/8"	2.15
G5166	5/16"	3/8"x6"	10 1/2"	2.65

SQUARE BLADE

Regular

Number	Blade	Overall	List
S3163	3/16" x 3"	6 5/8"	$1.25
S3164	3/16" x 4"	7 5/8"	1.40
S3166	3/16" x 6"	9 5/8"	1.55
S3168	3/16" x 8"	11 5/8"	1.75
S31610	3/16" x 10"	13 5/8"	2.10
S142	1/4" x 2"	6 1/8"	1.45
S144	1/4" x 4"	8 1/8"	1.70
S146	1/4" x 6"	10 1/8"	1.85
S148	1/4" x 8"	12 1/8"	2.00
S1424	1/4" x 24"	28 1/8"	2.50
S5162	5/16" x 2"	6 1/4"	1.60
S5164	5/16" x 4"	8 1/4"	1.85
S5166	5/16" x 6"	10 1/4"	2.10
S5168	5/16" x 8"	12 1/4"	2.30
S51610	5/16" x 10"	14 1/4"	2.65
S51612	5/16" x 12"	16 1/4"	3.15
S388	3/8" x 8"	12 1/2"	3.25
S3812	3/8" x 12"	17 7/8"	4.25
S3818	3/8" x 18"	23 7/8"	4.75
S7166	7/16" x 6"	11 7/8"	3.75
S71612	7/16" x 12"	17 7/8"	4.50
S71618	7/16" x 18"	23 7/8"	5.25

Stubby

S3161	3/16" x 1"	2 3/4"	$ .95
S141	1/4" x 1"	3 1/4"	1.05
S5161	5/16" x 1"	3 1/4"	1.05

PHILLIPS

Extra Long

Number	Point	Blade	Overall	List
X1010	1	3/16" x 10"	13 5/8"	$2.00
XST1010**	1	3/16" x 10"	13 5/8"	2.25
X1020	2	1/4" x 10"	14 1/8"	2.25
XST1020**	2	1/4" x 10"	14 1/8"	2.50
X2020	2	1/4" x 20"	24 1/8"	3.75

Regular

X100	0	1/8" x 2"	4 1/2"	$ .90
BRX100*	0	1/8" x 2"	4 5/8"	1.13
XST100**	0	1/8" x 2"	4 5/8"	1.00
X101	1	3/16" x 3"	6 5/8"	1.35
BRX101*	1	3/16" x 3"	6 5/8"	2.80
XST101**	1	3/16" x 3"	6 5/8"	1.50
X108	1	3/16" x 6"	9 5/8"	1.60
X102	2	1/4" x 4"	8 1/8"	1.65
BRX102*	2	1/4" x 4"	8 1/8"	3.00
XST102**	2	1/4" x 4"	8 1/8"	1.85
X103	3	5/16" x 6"	10 1/4"	2.40
BRX103*	3	5/16" x 6"	10 1/4"	6.12
X104	4	3/8" x 8"	12 1/2"	3.00
BRX104*	4	3/8" x 8"	12 1/2"	8.25

Stubby

SX101	1	3/16" x 1 7/16"	2 15/16"	$1.25
SX102	2	1/4" x 1 5/16"	3 5/16"	1.40

Pocket Clip Style

P12S	0	1/8" x 2"	4 1/4"	$ .80

* Beryllium-copper blade. ** Black oxide tip.



SCREWDRIVER ASSORTMENTS

Selected popular sizes in compact plastic cases.

No. SDR11 — List $7.10
Contains R182, R5324, R3166, R144, R5166 round blade screwdrivers.

No. SDX-22 — List $8.10
Contains X100, X101, X102, X103, SX102 Phillips screwdrivers.

No. SRX33 — List $9.20
Contains R184, R3166, R144, R5166 round blade and X101, X102 Phillips screwdrivers.

No. SDS44 — List $9.70
Contains S141, S3164, S144, S5166, S388 square blade screwdrivers.

ALLEN TYPE

Number	Hex	Blade	Overall	List
LN20	.050"	4"	6 5/8"	$1.30
BRLN20*	.050"	4"	6 5/8"	1.75
TLN20†	.050"	4"	5 1/4"	1.30
LN21	1/16"	4"	6 5/8"	1.30
BRLN21*	1/16"	4"	6 5/8"	1.75
TLN21†	1/16"	4"	5 1/4"	1.30
LN22	5/64"	4"	6 5/8"	1.30
BRLN22*	5/64"	4"	6 5/8"	1.75
TLN22†	5/64"	4"	5 1/4"	1.30
LN23	3/32"	4"	7 1/8"	1.30
BRLN23*	3/32"	4"	7 1/8"	1.75
TLN23†	3/32"	4"	5 1/4"	1.30
LN764	7/64"	4"	7 1/8"	1.30
BRLN764*	7/64"	4"	7 1/8"	2.00
TLN764†	7/64"	4"	5 1/4"	1.30
LN24	1/8"	4"	7 1/8"	1.40
BRLN24*	1/8"	4"	7 1/8"	2.00
TLN24†	1/8"	4"	5 1/4"	1.40
LN964	9/64"	4"	7 1/8"	1.40
BRLN964*	9/64"	4"	7 1/8"	2.25
TLN964†	9/64"	4"	5 1/4"	1.40
LN25	5/32"	6"	9 1/8"	1.40
BRLN25*	5/32"	4"	7 1/8"	2.25
TLN25†	5/32"	4"	5 1/4"	1.40
LN26	3/16"	6"	10 1/8"	1.40
BRLN26*	3/16"	4"	8 1/8"	2.50
TLN26†	3/16"	4"	5 1/4"	1.40
LN27	7/32"	6"	10 1/8"	1.60
TLN27†	7/32"	4"	5 1/4"	1.60
LN28	1/4"	6"	10 1/8"	1.60
TLN28†	1/4"	4"	5 1/4"	1.60

BRLN990* — Complete set of BRLN Allens in roll-up case. **List $19.50**

LN11 — Complete set of LN Allens in roll-up case. **List $16.50**

TLN11 — Complete set of TLN Allens in kit. **List $16.50**

* Beryllium-copper blade.
† Tee handle.

FREARSON (Reed & Prince)

Number	Point	Blade	Overall	List
RP101	1	3/16" x 3"	6 5/8"	$1.35
RP102	2	1/4" x 4"	8 1/8"	1.70
RP103	3	5/16" x 6"	10 1/4"	2.40
RP104	4	3/8" x 8"	12 1/2"	3.00

SCRULOX®

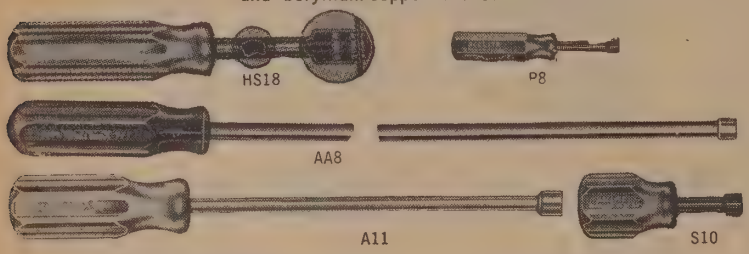
Number	Tip	Blade	Overall	List
SL-00	#00	3 1/2"	7 1/4"	$1.55
SL-0	#0	3 1/2"	7 1/4"	1.55
SL-1	#1	3 1/2"	7 1/4"	1.55
SL-2	#2	3 1/2"	7 1/4"	1.55
SL-3	#3	3 1/2"	7 1/4"	1.55

© United Technical Publications

XCELITE® QUALITY PROFESSIONAL TOOLS

NUTDRIVERS (Color-Coded Handles)

Polished-plated, steel shafts, plastic (UL) handles.
Precision, cold drawn, case hardened sockets.
Hollow shaft items with **asterisk(*)** have non-magnetic, non-sparking brass shafts and beryllium-copper sockets.



REGULAR SHAFT

Number	Handle Color	Hex Opening	List
	(6⅛" Overall Length)		
5	Amber	5/32"	$1.50
4MM	Black	4mm/.1575"	1.60
4.5MM	Black	4.5mm/.1773"	1.60
5	Black	3/16"	1.50
5MM	Black	5mm/.1968"	1.60
5.5MM	Black	5.5mm/.2167"	1.60
7	Brown	7/32"	1.50
6MM	Black	6mm/.2362"	1.60
8	Red	1/4"	1.50
7MM	Black	7mm/.2756"	1.60
9	Orange	9/32"	1.50
10	Amber	5/16"	1.50
8MM	Black	8mm/.3150"	1.60
11	Green	11/32"	1.50
9MM	Black	9mm/.3543"	1.60
12	Blue	3/8"	1.50
	(6⅝" Overall Length)		
10MM	Black	10mm/.3937"	1.95
11MM	Black	11mm/.4331"	1.95
	(6½" Overall Length)		
14	Brown	7/16"	1.85
16	Red	1/2"	1.85

STUBBY

	(3⅛" Overall Length)		
S6	Black	3/16"	$1.30
S8	Red	1/4"	1.30
S10	Amber	5/16"	1.30
S11	Green	11/32"	1.30
S12	Blue	3/8"	1.30

POCKET CLIP STYLE

	(3½" Overall Length)		
P3	Amber	3/32"	$ .95
3MM	Black	3mm/.1181"	1.60
P4	Red	1/8"	.95
3.5MM	Black	3.5mm/.1379"	1.60
P5	Amber	5/32"	.95
P6	Black	3/16"	.95
P7	Brown	7/32"	.95
P8	Red	1/4"	.95
P9	Orange	9/32"	.95
P10	Amber	5/16"	.95
P11	Green	11/32"	.95
P12	Blue	3/8"	.95

3-17MM — Complete 18-pc set of Metric nutdrivers in carton. **List $34.25**

4-13MM — 10-pc. set of Metric nutdrivers in carton (4MM thru 8MM, 10MM, 11MM, 13MM). **List $17.45**

HOLLOW SHAFT

Number	Handle Color	Hex Opening	List
	(6¼" Overall Length)		
HS6	Black	3/16"	$1.70
BRHS6*	Black	3/16"	4.00
HS7	Brown	7/32"	1.70
	(7¼" Overall Length)		
HS8	Red	1/4"	1.70
BRHS8*	Red	1/4"	4.00
HS9	Orange	9/32"	1.70
HS10	Amber	5/16"	1.70
BRHS10*	Amber	5/16"	4.25
HS11	Green	11/32"	1.70
BRHS11*	Green	11/32"	4.38
HS12	Blue	3/8"	1.70
BRHS12*	Blue	3/8"	4.75
HS13	Amber	13/32"	1.95
HS14	Brown	7/16"	1.95
BRHS14*	Brown	7/16"	5.63
12MM	Black	12mm/.4724"	2.25
HS15	Amber	15/32"	1.95
HS16	Red	1/2"	1.95
BRHS16*	Red	1/2"	6.25
13MM	Black	13mm/.5118"	2.25
HS17	Amber	17/32"	2.05
14MM	Black	14mm/.5512"	2.25
HS18	Orange	9/16"	2.05
15MM	Black	15mm/.5905"	2.50
HS19	Amber	19/32"	2.30
	(7⅝" Overall Length) (Metric 7¼" Overall Length)		
HS20	Amber	5/8"	2.30
16MM	Black	16mm/.6299"	2.50
17MM	Black	17mm/.6693"	2.50
HS22	Amber	11/16"	3.50
HS24	Amber	3/4"	3.50

EXTRA LONG — HOLLOW SHAFT

	(9" Overall Length)		
A6	Black	3/16"	$2.05
A7	Brown	7/32"	2.05
A8	Red	1/4"	2.05
A9	Orange	9/32"	2.05
A10	Amber	5/16"	2.05
A11	Green	11/32"	2.05
A12	Blue	3/8"	2.05

SUPER LONG — FOR TV SERVICE

	(20⅞" Overall Length)		
AA8	Red	1/4"	$6.00
AA10	Amber	5/16"	6.00

***BRHS6-16** — Complete set of BRHS nutdrivers in "see thru" case. **List $34.75**

* Beryllium-copper socket.

NUTDRIVER SETS (Color-Coded Handles)

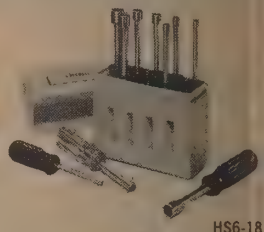
No. HS6-18 CARRYING CASE **List $19.90**
Contains hollow shaft Nos. HS6, HS7, HS8, HS9, HS10, HS11, HS12, HS14, HS16 and HS18.

No. 127TB "TRAY BIEN" **List $11.25**
Contains solid shaft Nos. 6, 7, 8, 9, 10, 11 and 12.

No. 137TB "TRAY BIEN" **List $12.75**
Contains solid shaft Nos. 6, 8, 10, 11 and 12 and hollow shaft Nos. HS16 and HS18.

No. 147TB "TRAY BIEN" **List $14.90**
Contains hollow shaft Nos. HS8, HS9, HS10, HS11, HS12, HS14 and HS16.









NUTDRIVER ASSORTMENTS



Selected popular sizes in compact plastic cases.

No. 157 **List $11.50**
Contains 6, 8, 10, 11, 12, 14, 16 regular shaft nutdrivers.

No. 167 **List $12.35**
Contains 8, 10, 11, 12 regular shaft and HS14, HS16, HS18 hollow shaft nutdrivers.

No. 177 **List $12.80**
Contains HS6, HS8, HS10, HS11, HS12, HS14, HS16 hollow shaft nutdrivers.

RATCHET SETS

No. 1001 Ratchet Socket Wrench Set — ¼" Sq. Drive
Contains nine 6-pt. sockets (3/16", 7/32", ¼", 9/32", 5/16", 11/32", 3/8", 7/16", ½"), two 10-pt. sockets (¼" & 5/16"), 2" extension, 4½" reversible ratchet handle, 5¾" spinner/extension with ¼" square insert in handle end for use with ratchet, molded plastic case with free initials. **List $18.60**



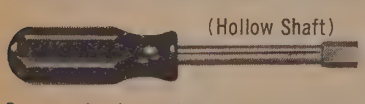
No. XL70
Midget Ratchet Offset Screwdriver Set Contains twelve Allen hex type screw bits (.050", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", ¼", 5/16"), two slotted screw bits (¼", 3/8"), two Phillips screw bits (#1 and #2), ¼" hex to ¼" square adapter bit, 3¾" reversible ratchet handle, 6" spinner/extension with ¼" square insert in handle end for use with adapter bit and ratchet, molded plastic case with free initials. **List $14.60**



No. XL75
Midget Ratchet Offset Screwdriver Kit Contains two slotted screw bits (3/16" and ¼"), two Phillips screw bits (#1 and #2), 3¾" reversible ratchet handle, plastic snap fastener case. **List $4.64**



EXTERNAL HEX NUTDRIVER



For removing inverted Palnuts on radio, TV, Hi-Fi control shafts. 6½" overall length. 7/16" external hex.

Number	Handle Color	List
PN-716	Black	$1.75

TERMINAL WRENCHES

For spanner nuts on external antenna and earphone jacks of transistor radios and CB walkie-talkies. 3⅝" overall length.



Number	Handle Color	Spanner Nut O.D.	List
TW32	Green	¼"	$.90
TW140	Red	5/16"	.95

Trade Discount Applies To List Prices Only
© United Technical Publications

XCELITE® QUALITY PROFESSIONAL TOOLS

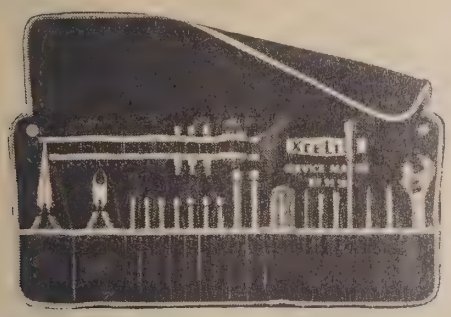
SERIES "99" SERVICE KITS, BLADES, AND HANDLES



No. 99MP MULTI-PURPOSE TOOL KIT — **List $48.75**

39-piece kit contains 99-1 (Regular) and 99-4 (Tee) handles, ten regular nutdrivers (99-5 thru 99-16), nine Allen Hex type screwdrivers (99-20, thru 99-26), nine Bristol Multiple Spline screwdrivers (99-61 thru 99-69), three slotted screwdrivers (99-811, 99-250, 99-312), two Phillips screwdrivers (99-821, 99-822), two reamers (99-38, 99-39), awl/scriber (99-70), extension blade (99-X5).

99MPK, Canvas case only.....List $5.75



No. 99SM SERVICE MASTER — **List $46.50**

23-piece kit contains 99-1 (Regular) and 99-3 (Stubby) handles, nine regular and three stubby nutdrivers (99-6 thru 99-16), two slotted screwdrivers (99-811, 99-812), one Phillips screwdriver (99-821), two reamers (99-38, 99-39), extension blade (99-X10), 6″ long nose cushion grip plier (52CG), 5″ diagonal cushion grip plier (55CG), 6″ adjustable wrench (46C).

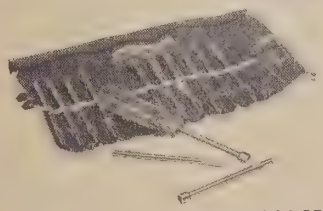
99SMK, Canvas case only.....List $4.75

ROLL KITS

No. 99PR ROLL KIT — **List $16.00**

Contains nine regular nutdrivers (99-6 thru 99-16), 99-811 and 99-250 (slotted) and 99-821 and (Phillips) screwdriver blades, 99-1 handle (Regular).

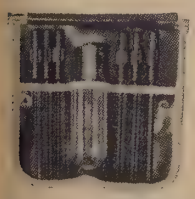
99K, Kit only .....**List $1.88**



No. 99JR ROLL KIT — **List $14.25**

Contains seven regular nutdrivers (99-6 thru 99-12) four screwdriver blades 99-811 and 99-812 (Slotted), and 99-821 and 99-822 (Phillips), 99-2 handle (Junior).

99KJR, Kit only .....List $1.88



No. 99LN ROLL KIT — **List $7.75**

Contains six Allen type screwdriver blades (99-21, 22, 23, 24, 25, 26) and 99-1 handle (Regular).

No. 99-30 CLEAR PLASTIC POUCH — **List $5.70**

Heat sealed plastic snap case with size numbers on pockets for convenient selecting and storing. Contains six Allen type screwdriver blades (99-21, 22, 23, 24, 25 and 26).

PLASTIC VIEW KITS



No. 99SL — **List $6.50**

Contains five Scrulox® screwdriver blades for square recess screws (SL 00, 0, 1, 2, 3), 99-1 handle (Regular).

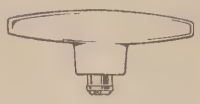
No. 99PV4 — **List $4.60**

Contains three slotted screwdriver blades (99-811, 99-250, 99-312), 99-1 handle (Regular).

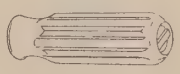
No. 99PV6 — **List $6.40**

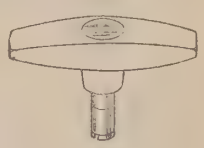
Contains three slotted screwdriver blades (99-811, 99-250, 99-312), two Phillips screwdriver blades (99-821, 99-822), 99-1 handle (Regular).





	List
Handles: 99-1 Regular (1¼″ x 4⅛″)	$1.20
99-2 Junior (1″ x 3⅛″)	1.15
99-3 Stubby (1⅛″ x 2″)	1.10
99-4 Tee (1″ x 3⅜″)	1.60





Reversible Ratcheting Handles: 99-1R Regular (1¼″ x 4½″)	8.25
99-4R Tee (3½″ x 2⅜″)	8.25



Nutdriver Blades: 99-5 (5/32″), 99-6 (3/16″), 99-7 (7/32″), 99-8 (¼″), 99-9 (9/32″), 99-10 (5/16″), 99-11 (11/32″), 99-12 (⅜″)	1.10
99-14 (7/16″), 99-16 (½″)	1.35
Stubby Nutdriver Blades: 99-S8, 99-S10, 99-S12	.90



Allen Hex Type Screwdriver Blades: 99-20 (.050″), 99-21 (1/16″), 99-22 (5/64″), 9-23 (3/32″), 99-764 (7/64″), 99-24 (⅛″), 99-964 (9/64″), 99-25 (5/32″), 99-26 (3/16″)	1.00



Bristol Multiple-Spline Type Screwdriver Blades: 99-61 (.048″, flute), 99-62 (.060″, 6-flute), 99-63 (.069″, 4-flute), 99-64 (.072″, 6-flute), 99-65 (.076″, 4-flute), 99-66 (.096″, 6-flute), 99-67 (.111″, 6-flute), 99-68 (.145″, 6-flute), 99-69 (.183″, 6-flute)	1.00

Frearson and Clutch Head Reversible Screwdriver Blades:



99-83 Frearson (3/16″ and 5/32″)	1.85



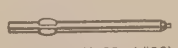
99-84 Clutch Head (3/16″ G and 5/32″ G)	1.85



Slotted Screwdriver Blades: 99-811 (3/16″), 99-250 (¼″), 99-312 (5/16″)	1.10



Phillips Screwdriver Blades: 99-821 (#1), 99-822 (#2)	1.10



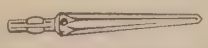
Scrulox Screwdriver Blades: 99SL-00 (#00), 99SL-0 (#0), 99SL-1 (#1), 99SL-2 (#2), 99SL-3 (#3)	1.10



Palnut Driver Blades (External Hex): 99-716 (7/16″), 99-816 (½″)	1.75
99-PAL (1 ea., 99-716 & 99-816 on card)	3.50



Awl/Scriber: 99-70 (4½″ overall length)	1.10



Reamers: 99-38 (⅛″ - ⅜″)	2.75
99-39 (¼″ - ½″)	3.50



Extension Blades: 99-X5 (adds 4″ reach to single-end blades)	1.60
99-X10 (adds 7″ reach to single-end blades)	1.75

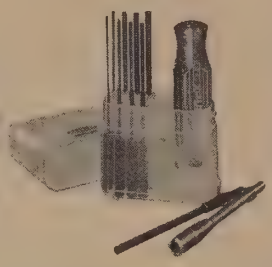
© United Technical Publications

XCELITE® QUALITY PROFESSIONAL TOOLS

COMPACT SETS

Series "99" Sets

Each set contains a Series "99" regular handle and various Series "99" interchangeable blades and extension. See-thru plastic case is pocket size, has flat base that permits its use as a bench stand.



No. 99PS-40 ALLEN HEX TYPE SCREWDRIVER SET

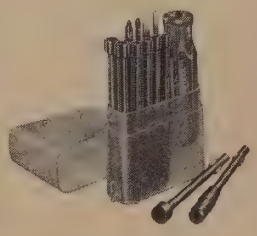
Includes nine Allen Hex type screwdriver blades (99-20 thru 99-26), 99-X5 extension blade, 99-1 handle, and see-thru case. **List $12.38**

No. No. 99PS-42BR BERYLLIUM-COPPER ALLEN HEX TYPE SCREWDRIVER SET

Includes nine berryllium-copper Allen Hex type screwdriver blades (same sizes as 99-20 thru 99-26), handle with brass spring chuck, and see-thru case. **List $18.13**

No. 99PS-41MM METRIC ALLEN HEX TYPE SCREWDRIVER SET

Includes seven metric Allen Hex type blades (99-71 thru 99-77 in mm sizes 1.27, 1.5, 2, 2.5, 3, 4, 5), 99-X5 extension blade, 99-1 handle, and see-thru case. **List $12.38**

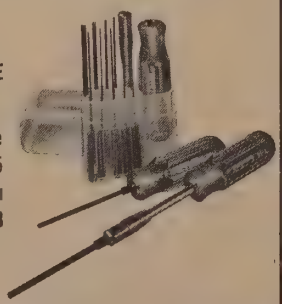


No. 99-PS50 NUTDRIVER/SCREWDRIVER SET

Includes seven regular nutdriver blades (99-6 thru 99-12), two slot tip screwdriver blades (99-811 and 99-812), two Phillips screwdriver blades (99-821 and 99-822), 99-X5 extension blade, 99-1 handle, and see-thru case. **List $15.25**

No. 99PS-51MM METRIC NUTDRIVER SET

Includes ten metric nutdriver blades (99-4 thru 99-11 in mm sizes 4, 4.5, 5, 5.5, 6, 7, 8, 9, 10, 11), 99-X5 extension blade, 99-1 handle, and see-thru case. **List $14.90**



No. 99PS-60 BRISTOL MULTIPLE-SPLINE TYPE SCREWDRIVER SET

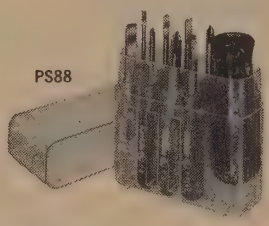
Includes nine Bristol Multiple-Spline type screwdriver blades (99-61 thru 99-69), 99-X5 extension blade, 99-1 handle, and see-thru case. **List $12.38**

Convertible Nutdriver and Screwdriver Sets

Black plastic torque amplifier handle (1" x 3⅛") slips over handles of pocket size (3½") nutdrivers and screwdrivers . . . provides larger grip, extends reach and increases driving power to that of standard size tools. See-thru plastic case fits pocket, stands upright on bench.

No. PS7 NUTDRIVER/SCREWDRIVER SET

Contains two nutdrivers (¼" and 5/16"), two slot tip screwdrivers (3/16" and 3/32"), two Phillips screwdrivers (#0 and #1), hollow handle, and case. **List $7.13**





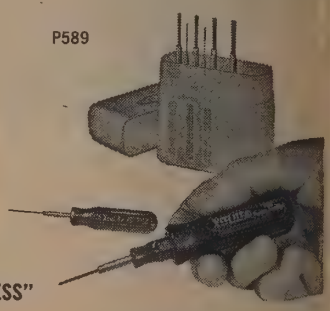
No. PS88 SCREWDRIVER SET

Contains five slot tip screwdrivers (3/32", ⅛", 5/32", 3/16", ¼"), three Phillips screwdrivers (#0, #1, #2), hollow handle, and case. **List $7.45**

No. PS120 NUTDRIVER SET

Contains ten color coded nutdrivers (3/32" thru ⅜"), hollow handle, and case. **List $10.25**





No. PS44 SCRULOX "SQUARE RECESS" SCREWDRIVER SET

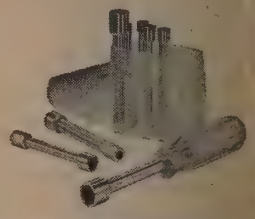
Includes five Scrulox screwdrivers (#1 thru #14), one nutdriver (¼"), hollow handle, and case. **List $7.25**

No. PS89 ALLEN HEX TYPE SCREWDRIVER SET

Contains eight Allen hex type screwdrivers (hex sizes .028", .035", .050", 1/16", 5/64", 3/32", 7/64", ⅛"), hollow handle, and case. **List $7.25**

No. HSC-1 INTERCHANGEABLE HOLLOW SHAFT NUTDRIVER SET

Contains special thru-drilled handle and eight interchangeable hollow nutdriver shafts in 3/16", ¼", 5/16", 11/32", ⅜", 7/16", ½", 9/16" hex sizes. Screwdriver blade may be run down through center of handle and hollow nutdriver shaft to make combination locknut/slotted screw adjustments. **List $14.75**



No. 150 TOOL HOLSTER

Has tape holder, knife clip, and 5 tool pockets. Durably made of pliable saddle leather with natural cowhide finish. Features comfortable hip-contoured back, hot-waxed stitching, and brass rivets.. **List $7.31**



No. K22 ELECTRICIAN'S KNIFE

Two blades. One is combination insulation-scraper and screwdriver. Has positive lock when open .....**List $3.89**



Trade Discount Applies To List Prices Only
© United Technical Publications

XCELITE QUALITY PROFESSIONAL TOOLS

COMBINATION-REVERSIBLE BLADE SCREWDRIVERS AND KITS

AISI 6150 chrome vanadium steel blades, plastic (UL) handles.
Patented spring holds blades securely. 7/16" hex opening doubles as a nutdriver.

COMPLETE UNITS

Regular Type	List
CR1—No. 25 handle & RB1 blade	$2.65
CR2—No. 25 handle & RB2 blade	2.65
CR3—No. 25 handle & RB3 blade	2.65
Stubby Type	
CS1—No. 26 handle & SB1 blade	$2.50
CS2—No. 26 handle & SB2 blade	2.50

HANDLES ONLY

25—Regular	$1.15
26—Stubby	1.10

BLADES ONLY

Regular Type	List
RB1—No. 1 Phillips & 3/16" Slotted	$1.55
RB2—No. 2 Phillips & 1/4" Slotted	1.55
RB3—No. 3 Phillips & 5/16" Slotted	1.55
RB12—No. 1 & No. 2 Phillips	1.80
GB1—3/16"G & 5/32"G Clutch	1.85
GB2—5/16"G & 1/4"G Clutch	1.85
Stubby Type	
SB1—No. 1 Phillips & 3/16" Slotted	$1.45
SB2—No. 2 Phillips & 1/4" Slotted	1.45
GS1—3/16"G & 5/32"G Clutch	1.60

POCKET ROLL KITS

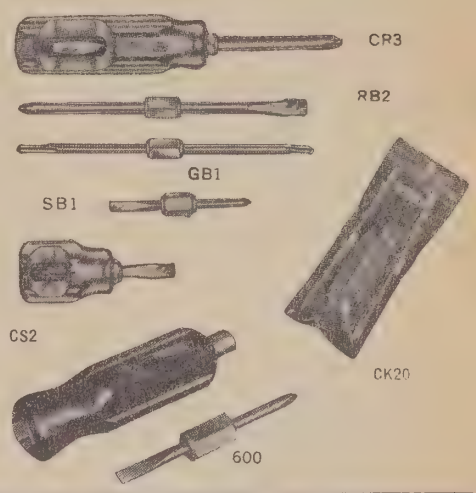
CK2 — Contains RB1, RB2 blades and No. 25 handle $5.25
CK3 — Same as CK2, plus RB3 blade 6.88
CK5 — Same as CK2, plus RB3, GB1, and GB2 blades 10.25

PLASTIC VIEW KITS

SK20 — Contains SB1, SB2 blades and No. 26 handle $4.35
CK20 — Contains RB1, RB2 blades and No. 25 Handle 5.25
CK23 — Same as CK20, plus RB3 blade 6.88

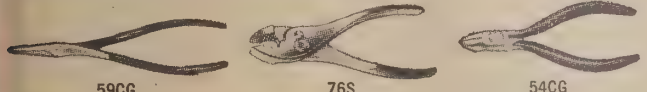
COMBINATION SCREW AND NUTDRIVER TOOL

600—Handy 4-way tool with pocket clip. 1/4" and 7/16" hex openings. Reversible SB1 blade ..... List $2.85

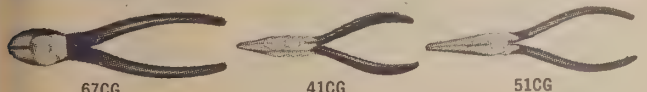


PLIERS

Precision-machined forged alloy steel. Perfectly aligned jaws. Hand-honed, mated cutting edges. Polished heads.



Number		List
59CG	— CHAIN NOSE ELECTRICIAN'S PLIERS (8") — Cushion Grip	$5.54
75C	— COMBINATION SLIP JOINT PLIERS (5") — Chrome-Plated	2.60
76C	— COMBINATION SLIP JOINT PLIERS (6") — Chrome-Plated	2.70
76S	— Satin Finish	1.68
78C	— COMBINATION SLIP JOINT PLIERS (8") — Chrome-Plated	3.20
54CG	— DIAGONAL PLIERS (Midget 4") — Cushion Grip	4.98
64CG	— DIAGONAL SEMI-FLUSH CUTTING PLIERS (Midget 4") — Cushion Grip	6.36
55CG	— DIAGONAL PLIERS (5") — Cushion Grip	5.10
66CG	— DIAGONAL PLIERS (6") — Cushion Grip	5.54



Number		List
67CG	— DIAGONAL PLIERS (7") — Cushion Grip	5.54
41CG	— LONG NOSE PLIERS (Midget 4")—Without Side Cutters—Cushion Grip	4.56
52CG	— LONG NOSE PLIERS (6½")—Without Side Cutters—Cushion Grip	4.44
51CG	— LONG NOSE PLIERS (6½")—With Side Cutters—Cushion Grip	5.63



Number		List
56CG	— NEEDLE NOSE PLIERS (6") — Cushion Grip	$5.24
58CG	— RADIO AND TV PLIERS (6") — Cushion Grip	6.74
60CG	— SIDE CUTTING PLIERS (6") — Cushion Grip	5.52
68CG	— SIDE CUTTING PLIERS (8") — Cushion Grip	6.65
62CG	— TRANSVERSE CUTTING PLIERS (6") — Cushion Grip	6.14
53CG	— UTILITY PLIERS (6") — Forged Rib-Lock — Cushion Grip	4.58
63CG	— UTILITY PLIERS (10") — Forged Rib-Lock — Cushion Grip	6.21

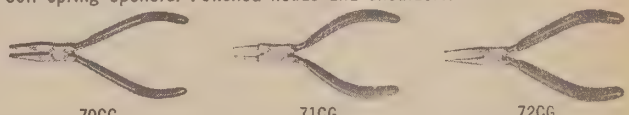
ELECTRONIC SNIPS



6½" size. Shearing action of pointed blades (1½" cut) prevents peaks on fine wire and filaments. Useful also for removing insulation and cutting light sheet metal. Coil spring opens blades . . . latch holds them closed. Cushion grip (No. 86CG) ..... List 4.85

MINIATURE ELECTRONIC PLIERS

Small, lightweight. For handling fine wires. All cushion grip handles. Coil spring openers. Polished heads and shoulders.



Number		List
70CG	— FLAT NOSE PLIERS (4½")	$5.28
71CG	— ROUND NOSE PLIERS (4½")	6.06
72CG	— CHAIN NOSE PLIERS (4")	5.66



Number		List
73CG	— SPECIAL TIP CUTTING PLIERS (4½")	$7.71
74CG	— DIAGONAL FLUSH CUTTING PLIERS (4")	7.31
69CG	— RADIO AND TV PLIERS (5")	8.12

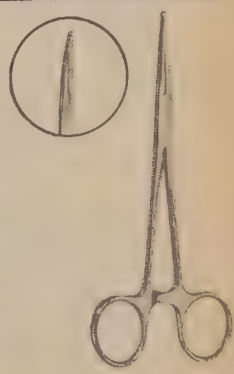
ADJUSTABLE WRENCHES



Thin - pattern permits access to close-quarter work. Chrome - plated forged alloy steel. Polished heads.

Plain Handle Number	List	Size	Cushion Grip Number	List
44C	$4.32	4"	44CG	$4.70
46C	4.38	6"	46CG	4.76
48C	5.00	8"	48CG	5.39
40-10C	6.38	10"	40-10CG	6.90
40-12C	9.20	12"	40-12CG	9.86

REGULAR AND JR. SEIZER®



Outreach, outhold needle nose pliers. Clamp tightly. Hold wires for soldering and serve as heat sinks. Retrieve small parts. Two-position snap-lock. Stainless steel, box-joint construction. Precision machined and tempered.

Regular 6" Seizers have serrated jaws. Jr. Seizers are 5" long, have smooth jaws that won't mar delicate materials.

Number		List
42H	—6" Straight Nose	$6.20
43H	—6" Curved Nose	6.40
32H	—5" Straight Nose	6.20
33H	—5" Curved Nose	6.40

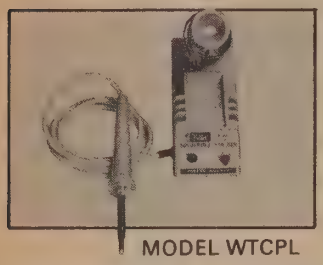
© United Technical Publications

Weller industrial soldering tools

for greater efficiency... lower operating costs and maximum safety

CONTROLLED OUTPUT SOLDERING TOOLS...

Automatically controls output and temperature independent of line voltage.



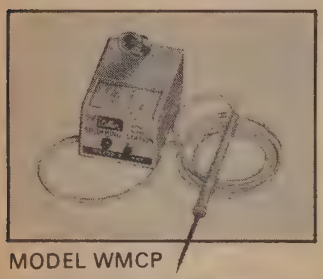
MODEL WTCPL

MODEL WTCPL. Controlled output low voltage soldering with power unit isolated for protection of sensitive devices. Temperatures of 500°F., 600°F. and 700°F. are predetermined by tip selection. Cord set will not burn. Stand will not heat sink. Built-in on/off switch and pilot light. 60W, 120V, 3 wire cord. Comes with 3/16", 700°F. screwdriver tip. New cool blue color. Also available without built-in on/off switch and pilot light as MODEL WTCP.



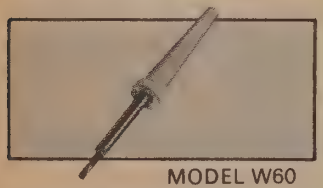
MODEL WTCP

MODEL WMCP. Weller's new "MINI-TOOL" for micro-soldering, automatically controls output and temperature with power unit isolated and shielded for protection of sensitive devices. Has fixed temperature, interchangeable tips, low voltage operation, built-in on/off switch and pilot light. Available in 3 temperature ranges; WMCP . . . 650°F., WMCP-1 . . . 550°F., WMCP-2 . . . 750°F. control 20W, 120V, 50/60 Hz. 3 wire cord. Comes with 1/8" chisel tip. New cool blue color.



MODEL WMCP

MODEL W60. Low cost, portable, line voltage operation. Automatic control of output and temperature 60W, 2 wire cord. Comes with 700°F., 1/4" screwdriver tip. Model W60-3, 3 wire cord set. New cool blue color. For complete station order PH60 stand.



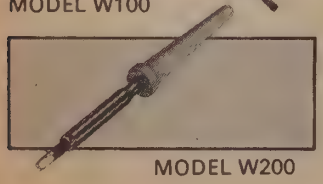
MODEL W60

MODEL W100. Low cost, portable, line voltage operation. Automatic control of output and temperature. 100W, 2 wire cord. Comes with 700°F., 3/8" screwdriver tip. Model W100-3, 3 wire cord set. New cool blue color. For complete station order PH100 stand.



MODEL W100

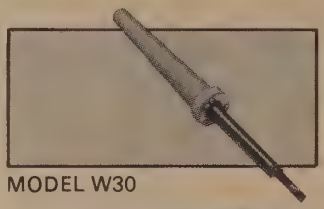
MODEL W200. Low cost, portable, line voltage operation. Automatic control of output and temperature. 200W, 2 wire cord. Comes with 700°F., 1/2" chisel tip. Model W200-3, 3 wire cord set. New cool blue color.



MODEL W200

UNCONTROLLED SOLDERING TOOLS...

For lowest cost soldering operations not requiring high efficiency tool.



MODEL W30

MODEL W30. Uncontrolled line voltage soldering tool. All stainless steel construction, 30W, 120V, 2 wire cord, with 1/4" screwdriver tip. New cool blue color. Model W30-3, 3 wire cord set.



MODEL W50

MODEL W50. Uncontrolled line voltage soldering tool. All stainless steel construction. 50W, 120V, 2 wire cord, with 3/8" screwdriver tip. New cool blue color. Model W30-3, 3 wire cord set.

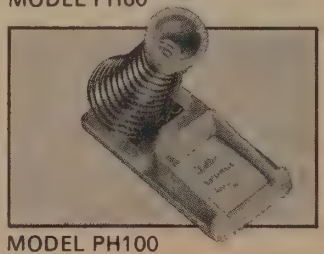
SOLDERING TOOLS STANDS...

Have heavy cast iron bases and built-in sponge holders. Design precludes any possible heat sinking of Weller controlled tools. New cool blue color.



MODEL PH60

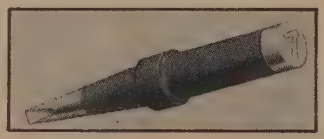
MODEL PH60. Accommodates Weller Models W30, W60, and any soldering tool with a barrel diameter up to 15/32".



MODEL PH100

MODEL PH100. Accommodates Weller Models W50, W100 and any soldering tool with a barrel diameter up to 19/32".

TIPS AND ACCESSORIES



All Weller Industrial Soldering Tips have unique heavy iron plating with anti-oxidation coating thereby eliminating freezing... No other tip offers these features!

A complete line of Wellercote tips and accessories are available to greatly extend the effectiveness of Weller Soldering Tools.

FOR COMPLETE INFORMATION, WRITE OR CALL FOR WELLER'S LATEST INDUSTRIAL SOLDERING TOOLS CATALOG.

All Weller products are available in Canada.

Weller

PRODUCTION SOLDERING TOOLS FOR ELECTRONIC MANUFACTURING

A DIVISION OF COOPER INDUSTRIES, INC.

13043

© United Technical Publications

Weller Dual Heat Soldering Guns

The original and most widely used guns with features that are still unmatched.



3 Dual Heat Models

Model 8200—100/140 watts
Model D440—145/210 watts
Model D550—240/325 watts

Trigger controlled dual heat. Two trigger positions permit instant switching to high or low heat to suit the job.

Instant heat. Tip reaches full heat a few seconds after trigger is pulled. Heat goes off when trigger is released.

High efficiency tip slips easily into difficult places.

Spotlight illuminates work, eliminates shadows.

Maximum operating comfort. Compact design and perfect balance make precision soldering easy, eliminate fatigue.

New Weller Soldering Accessories on hang cards

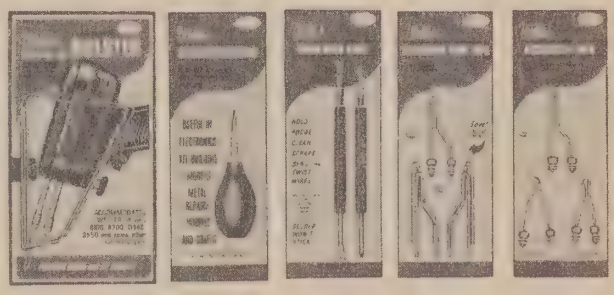
Soldering Gun Holster for all Weller guns. Prevents burns and tip damage. Screws to bench leg or wall. No. AC100.

Desoldering Bulb. A must for neat removal of solder. Useful in kit building, electronics, metal repairs. No. AC303P.

Soldering Aids. Two double-end tools have reamer, fork, brush and scraper. Handy for work with wires. No. AC300P.

Soldering Gun Tips. Five replacement tips plus two tip nuts. For Weller Gun Models 8100, 8200 and D440—No. AC101P. For Weller Gun Models D550, 8250A and 8250C—No. AC102P.

Accessory Tips. Three tips for soldering, cutting, smoothing. For Weller Gun Models 8100, 8200 and D440—No. AC103P. For Weller Gun Models D550, 8250A and 8250C—No. AC104P.





Weller TEMPMATIC®

Temperature Controlled Soldering Tool

Does both light and heavy duty soldering. Most versatile portable soldering tool on the market. Does the work of a pencil iron and soldering gun. Exclusive replaceable POWERHEAD contains Weller's temperature control system. Protects components in delicate work situations. Yet the tool also does heavy soldering jobs. Heats fast. Recovers fast. Weighs only 7 ounces.

Model GT7A comes with 700°F. chisel point POWERHEAD.

Model GT6B comes with 600°F. conical point POWERHEAD.



Weller MARKSMAN Irons

Rugged, general purpose irons featuring stainless steel barrel, replaceable tip. Model for model, they outperform bigger irons that cost more.

MODEL NO.	WATTAGE/ 120V	WEIGHT
SP23*	25	1¾ oz.
SP40	40	2 oz.
SP80	80	4 oz.
SP120	120	10 oz.
SP175	175	16 oz.

*Also available in kit with solder, extra tips and soldering aid. Model SP23K.



Weller Pencil Iron

Ideal for soldering in miniaturized circuits. 115 volts. Provides tip temperature of 860°F. with 25 watt input. High efficiency. Rapid recovery. Interchangeable 1/16", 3/32", 1/8" and 3/16" tips available. Model WPS.

Weller A DIVISION OF COOPER INDUSTRIES, INC.

© United Technical Publications

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

PRODUCT INDEX & PART NUMBER INDEX

ESSEX Stancor/RBM | STANCOR

PRODUCT INDEX

Audio 14, 15, 16
Control 34, 35
Filament 27, 28
Filter Choke 29, 30
Inverter 31, 32
Isolation/Audio 36
Pico Miniature Transistor 19, 20, 21
Pico Toroids or Inductors 22
Plate 37
Power 23, 24, 25, 26, 33
Rectifier 31, 32, 33, 34
Transistor 17, 18
Vibrator 28
Output Transformers.. 10, 11, 12
Output Trans Chart 9
Line Matching Tech Data Sheet 13
Selecting Correct Power Trans. 25
See page 8 for Product Listing of Hermetically Sealed Units
See page 38 for new OEM pricing program from Stancor

PART NUMBER INDEX

Stancor No.	Page	Sec	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec	Price
1BC-150	26	3	35.15	A-3822	11	1	3.18	A-4352	14	3	6.62	A-4798	12	1	4.26	A-8108	12	4	6.55
1BS-150	26	3	36.82	A-3823	11	1	4.53	A-4407	12	2	12.84	A-4799	12	3	4.63	A-8109	12	3	3.79
2BC-150	26	3	28.49	A-3824	11	1	4.66	A-4431	10	1	2.59	A-7947	11	5	4.16	A-8114	10	2	2.46
2BS-150	26	3	25.99	A-3825	11	1	3.87	A-4432	10	3	4.98	A-7949	11	5	4.90	AS1	19	1	8.68
A1	19	1	6.86	A-3829	15	9	39.59	A-4702	15	5	6.83	A-8050	11	2	18.35	AS2	19	1	8.51
A2	19	1	6.70	A-3830	11	1	5.55	A-4705	14	2	4.16	A-8051	11	2	15.02	AS3	19	1	10.30
A3	19	1	8.51	A-3831	10	3	4.22	A-4706	14	2	3.27	A-8052	11	2	18.57	AS4	19	1	9.49
A4	19	1	7.68	A-3833	14	1	5.11	A-4708	14	2	4.74	A-8053	11	2	17.89	AS5	19	1	9.49
A5	19	1	7.68	A-3836	14	1	3.50	A-4709	14	3	9.08	A-8054	11	2	19.72	AS6	19	1	10.79
A6	19	1	9.01	A-3837	11	5	6.16	A-4711	15	3	4.26	A-8056	11	2	22.40	ASM1	19	1	9.10
A-52C	15	2	3.89	A-3838	12	2	7.66	A-4713	15	5	3.64	A-8060	11	2	18.69	ASM2	19	1	8.94
A-53	15	1	3.40	A-3839	10	4	8.75	A-4719	15	2	7.84	A-8061	11	2	18.69	ASM3	19	1	10.71
A-53C	15	2	3.48	A-3841	10	2	6.94	A-4723	15	5	3.42	A-8062	11	2	18.65	ASM4	19	1	9.92
A-62C	15	2	3.42	A-3842	10	4	8.44	A-4742	14	2	5.24	A-8063	11	2	18.63	ASM5	19	1	9.92
A-63C	15	2	4.11	A-3845	15	9	8.34	A-4744	14	1	3.37	A-8064	11	2	18.69	ASM6	19	1	11.21
A-64C	15	2	3.52	A-3848	11	1	3.89	A-4745	15	2	10.06	A-8066	11	2	16.06	BD-1	15	8	50.12
A-73C	15	2	4.87	A-3849	11	1	4.87	A-4747	14	2	4.31	A-8070	10	1	2.79	BI-1	14	4	44.31
A-2203	10	1	4.16	A-3850	11	1	4.53	A-4748	14	1	4.44	A-8072	11	2	26.75	BI-2	14	4	54.24
A-2312	10	4	3.67	A-3851	10	3	10.36	A-4749	14	1	10.36	A-8076	12	4	8.73	BI-3	14	4	44.99
A-2313	10	2	3.52	A-3852	11	1	6.48	A-4752	15	5	4.31	A-8077	12	4	5.59	BI-4	14	4	48.99
A-2855	11	1	5.57	A-3856	11	1	3.94	A-4761	15	7	14.25	A-8078	12	4	6.12	BI-5	14	4	76.76
A-3250	10	2	5.55	A-3857	10	4	3.20	A-4762	15	7	16.43	A-8079	12	4	5.92	BI-6	14	4	46.10
A-3303	10	4	12.45	A-3870	11	1	6.27	A-4765	15	7	17.63	A-8080	12	3	4.11	BI-7	14	4	37.13
A-3304	10	3	9.31	A-3871	15	9	6.85	A-4770	10	2	8.51	A-8081	12	3	4.94	BM-1	15	11	105.60
A-3307	10	3	12.40	A-3872	10	3	7.29	A-4773	15	4	8.90	A-8082	12	3	5.16	BO-1	11	3	24.62
A-3309	10	1	2.79	A-3876	10	1	2.05	A-4774	15	4	4.24	A-8083	12	3	3.03	BO-2	11	3	35.22
A-3310	10	1	9.90	A-3877	10	1	2.05	A-4778	14	3	6.72	A-8084	12	3	3.64	BO-5	11	3	34.72
A-3311	10	3	9.36	A-3878	10	2	2.31	A-4779	14	3	3.72	A-8087	12	1	2.79	BO-6	11	3	38.07
A-3315	10	4	12.56	A-3879	10	2	2.48	A-4780	14	3	6.86	A-8088	12	1	3.52	BO-9	11	3	38.00
A-3326	11	1	2.16	A-3880	11	1	5.88	A-4781	12	3	4.81	A-8090	14	1	2.61	BR-1	15	12	139.10
A-3327	10	2	2.74	A-3881	10	2	2.39	A-4782	12	3	4.88	A-8091	14	1	3.05	C-1	19	2	4.31
A-3328	10	1	2.04	A-3882	11	5	11.29	A-4783	12	3	5.00	A-8092	10	1	3.02	C-2	19	2	6.22
A-3329	10	2	2.04	A-3883	11	5	4.26	A-4784	12	3	4.40	A-8093	10	4	3.33	C-3	19	2	6.55
A-3330	10	1	2.72	A-3885	10	3	11.10	A-4785	12	3	5.18	A-8094	10	3	6.83	C-4	19	2	6.55
A-3332	10	1	2.29	A-3890	11	1	8.45	A-4786	12	3	5.14	A-8095	12	1	3.96	C-1001	29	3	4.57
A-3335	10	4	3.94	A-3891	15	10	16.15	A-4787	12	3	4.26	A-8096	12	1	5.53	C-1002	29	2	3.64
A-3336	10	1	3.07	A-3892	15	10	23.62	A-4788	12	3	4.81	A-8097	12	1	6.03	C-1003	29	2	3.24
A-3337	10	1	3.50	A-3893	15	10	24.51	A-4789	12	3	4.03	A-8098	10	3	13.30	C-1080	29	1	2.42
A-3496	10	4	3.66	A-3894	15	10	26.70	A-4790	12	1	4.14	A-8099	12	1	3.52	C-1215	29	1	2.87
A-3800	10	3	9.40	A-3898	15	10	182.02	A-4791	12	1	4.03	A-8101	11	5	2.57	C-1227	29	1	2.79
A-3801	10	3	11.21	A-3899	15	10	191.53	A-4792	12	1	4.74	A-8102	12	3	4.50	C-1277	29	1	3.39
A-3802	10	3	20.63	A-4208	15	6	9.23	A-4793	12	1	4.92	A-8103	12	3	6.23	C-1279	29	1	2.70
A-3808	15	9	21.26	A-4212	15	6	9.21	A-4794	12	1	4.96	A-8104	11	5	5.25	C-1325	29	1	2.68
A-3812	15	9	4.26	A-4292	15	5	3.79	A-4795	12	1	5.99	A-8105	12	3	4.20	C-1333	29	1	2.72
A-3817	14	1	4.59	A-4350	12	2	6.11	A-4796	12	1	5.92	A-8106	12	4	5.57	C-1355	29	2	3.48
A-3818	11	5	6.14	A-4351	14	3	6.79	A-4797	12	1	4.77	A-8107	12	4	7.33	C-1400	30	2	6.81

© United Technical Publications

Net

ESSEX Stancor/RBM | STANCOR

PART NUMBER INDEX

Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price
C-1401	30	2	9.03	CIS-1	14	3	23.92	P-2126	37	3	315.17	P-6315	25	2	24.79	P-8027	37	2	177.29
C-1402	30	2	11.71	CIS-2	14	3	11.47	P-2520	37	3	272.27	P-6317	26	3	20.70	P-8028	37	2	185.19
C-1403	30	2	15.60	COC-1	10	1	10.97	P-3020	27	4	12.69	P-6318	26	3	20.35	P-8029	37	2	227.27
C-1404	30	2	28.66	COC-2	10	2	10.82	P-3024	27	1	7.12	P-6333	28	3	16.24	P-8030	37	3	166.13
C-1405	30	2	71.65	COS-1	10	1	16.15	P-3026	27	1	6.49	P-6338	28	1	12.08	P-8031	37	2	221.15
C-1410	29	3	6.94	COS-2	10	2	16.24	P-3060	27	1	8.49	P-6348	23	4	10.08	P-8032	37	3	206.44
C-1411	29	3	8.62	CS-1	19	2	5.74	P-3062	27	1	7.09	P-6358	24	2	8.45	P-8033	37	3	245.33
C-1412	29	4	10.12	CS-2	19	2	7.99	P-3064	27	3	7.16	P-6371	36	5	33.41	P-8034	37	3	233.78
C-1413	30	1	21.07	CS-3	19	2	8.36	P-4004	25	4	25.70	P-6375	35	4	5.57	P-8035	37	3	290.04
C-1414	30	1	27.66	CS-4	19	2	8.36	P-4019	27	3	7.77	P-6376	35	4	6.53	P-8040	37	1	20.52
C-1415	30	1	89.21	CSM-1	19	2	6.03	P-4022	28	2	14.17	P-6377	35	4	6.96	P-8041	37	1	29.99
C-1420	29	2	6.94	CSM-2	19	2	8.45	P-4026	27	1	3.92	P-6378	35	4	12.67	P-8042	37	1	39.28
C-1421	29	3	7.09	CSM-3	19	2	8.77	P-4062	28	10	6.75	P-6379	35	4	19.81	P-8043	37	1	153.37
C-1515	29	1	3.05	CSM-4	19	2	8.77	P-4063	28	10	8.23	P-6383	36	6	20.81	P-8044	37	2	68.12
C-1645	30	2	8.97	DCT-1	32	1	20.33	P-4082	27	1	6.73	P-6385	36	6	32.43	P-8130	27	4	4.35
C-1646	29	3	12.01	DCT-2	32	1	31.47	P-4083	27	1	7.03	P-6387	36	6	86.03	P-8150	26	4	12.08
C-1702	30	2	10.18	F-25	27	1	20.09	P-4086	27	2	42.24	P-6389	36	6	125.69	P-8151	26	4	17.43
C-1703	29	4	8.73	F-54	27	1	15.43	P-4088	27	1	5.37	P-6390	36	6	186.30	P-8155	23	3	14.63
C-1706	29	1	2.00	F-58	27	1	21.39	P-4089	27	3	8.75	P-6410	36	5	10.25	P-8158	23	1	15.63
C-1707	29	1	2.65	F-63	27	2	16.43	P-4091	27	3	11.21	P-6411	36	5	4.00	P-8164	24	2	20.65
C-1708	29	2	3.42	F-65	27	3	19.39	P-4096	27	4	11.84	P-6412	36	5	5.16	P-8166	24	4	28.92
C-1709	29	2	3.11	F-104	27	3	19.98	P-4097	27	4	9.81	P-6415	36	7	34.69	P-8167	23	5	32.21
C-1710	29	3	5.12	F-106	27	4	22.64					P-6425	26	6	4.59	P-8169	25	3	22.90
C-1718	30	2	6.51	F-210	27	1	24.24	P-5000	27	1	7.99	P-6426	26	6	2.22	P-8170	25	3	21.18
C-1720	30	2	18.41	F-210H	27	1	23.40	P-5002	27	4	57.13	P-6428	28	4	8.33	P-8171	25	3	25.44
C-1721	29	4	11.80	F-215H	27	1	31.47	P-5008	28	2	13.80	P-6429	28	5	12.43	P-8172	23	5	18.98
C-1722	29	4	13.17	F-510H	27	2	37.15	P-5009	28	2	10.82	P-6430	28	4	7.77	P-8173	23	4	6.94
C-1723	29	1	2.37	F-516	27	2	30.71	P-5014	27	3	6.05	P-6431	28	5	14.69	P-8174	23	4	8.25
C-2303	29	3	3.40	F-520HB	27	2	53.30	P-5015	27	3	8.31	P-6432	27	2	14.91	P-8175	24	2	13.78
C-2304	29	3	3.57	F-530	27	2	35.72	P-5016	27	4	8.70	P-6433	27	2	9.23	P-8176	24	5	18.48
C-2305	29	2	6.27	F-610	27	3	28.75	P-5059	24	4	22.74	P-6434	28	6	8.08	P-8177	24	2	16.28
C-2307	30	2	15.24	F-615	27	2	20.31	P-5062	36	1	10.36	P-6454	27	1	6.51	P-8178	26	4	17.72
C-2308	29	4	15.61	F-712	27	3	30.21	P-5063	36	1	12.80	P-6455	27	1	5.74	P-8179	26	4	13.97
C-2309	29	3	3.50	F-725	27	3	50.38	P-5064	36	1	13.23	P-6456	27	3	6.23	P-8180	27	4	4.11
C-2317	15	13	7.59	F-751	27	3	77.44	P-5065	36	1	17.06	P-6457	27	3	20.68	P-8181	23	2	4.48
C-2318	29	1	2.44	F-1010	27	4	29.27	P-6007	25	4	20.81	P-6458	27	4	8.08	P-8190	27	2	4.33
C-2325	29	3	3.61	GSD-75	35	5	14.22	P-6010	24	3	12.12	P-6459	26	5	6.64	P-8191	27	2	4.63
C-2326	29	4	4.14	GSD-100	35	5	15.09	P-6011	24	4	11.67	P-6461	27	4	12.51	P-8193	33	5	15.08
C-2327	29	3	2.74	GSD-150	35	5	15.44	P-6012	24	4	13.62	P-6462	27	3	7.64	P-8194	33	5	24.25
C-2328	30	1	5.49	GSD-250	35	5	23.70	P-6013	24	5	14.26	P-6463	28	3	11.04	P-8195	32	2	18.94
C-2332-1	11	4	19.98	GSD-350	35	5	24.11	P-6014	25	2	16.93	P-6464	27	3	8.60	P-8196	33	5	10.36
C-2334	29	4	6.79	GSD-500	35	5	25.63	P-6123	36	5	209.29	P-6465	27	2	2.74	P-8197	33	5	7.10
C-2335	29	3	7.88	GSD-750	35	5	39.62	P-6124	36	1	79.85	P-6466	27	3	4.40	P-8198	33	5	6.57
C-2340	15	14	40.22	GSD-1000	35	5	50.56	P-6125	36	5	114.24	P-6467	27	1	4.40	P-8331	24	2	21.37
C-2343	29	4	2.61	GSD-1500	35	5	61.55	P-6131	28	10	9.82	P-6468	27	2	17.65	P-8332	23	5	23.31
C-2344	29	1	1.96	GSD-2000	35	5	84.88	P-6133	27	1	6.33	P-6469	27	4	4.14	P-8333	24	1	22.92
C-2345	29	1	4.44	IS-50	36	4	25.18	P-6134	27	2	2.76	P-6471	28	8	8.20	P-8334	23	5	27.44
C-2346	29	1	2.28	IS-100	36	4	34.52	P-6135	27	1	7.59	P-6476	28	8	6.97	P-8335	24	2	24.42
C-2347	30	1	3.64	IS-150	36	4	38.28	P-6137	27	2	14.73	P-6477	28	8	4.96	P-8336	23	1	19.43
C-2685	30	3	5.51	IS-250	36	4	42.70	P-6138	27	3	10.23	P-6478	28	8	5.75	P-8337	24	2	20.92
C-2686	30	3	10.03	NCF-1550	35	1	13.21	P-6139	27	4	9.77	P-6480	28	8	5.83	P-8338	24	3	27.05
C-2687	30	3	11.08	NCF-1650	35	1	10.25	P-6141	36	1	21.53	P-6481	28	8	6.92	P-8339	24	3	19.67
C-2688	30	3	11.54	NCF-2425	35	1	7.47	P-6143	25	5	19.96	P-6482	28	9	13.15	P-8340	24	5	28.21
C-2689	30	3	20.02	NCF-2450	35	1	11.03	P-6144	28	1	11.12	P-6489	28	9	5.51	P-8341	25	1	21.87
C-2690	30	3	9.45	NCF-2475	35	1	10.80	P-6146	23	2	13.47	P-6490	28	8	5.40	P-8342	25	1	24.99
C-2691	30	3	13.15	NCF-24100	35	1	16.63	P-6160	36	5	25.16	P-6491	28	10	5.85	P-8343	25	1	23.87
C-2692	30	3	47.10	NCF-24150	35	1	19.39	P-6161	36	5	27.57	P-6492	27	2	16.21	P-8344	25	1	21.61
C-2704	29	3	4.53	NCF-3250	35	1	11.66	P-6166	32	3	18.80	P-6493	28	9	8.21	P-8345	24	5	20.92
C-2705	29	4	9.32	NCF-3275	35	1	11.62	P-6287	36	1	10.25	P-6494	28	9	5.22	P-8346	25	5	21.39
C-2706	30	1	7.94	NCF-32150	35	1	20.78	P-6298	36	5	84.18	P-6495	28	9	7.88	P-8347	25	4	26.51
C-2707	29	1	2.20	P-45	37	1	51.04	P-6299	36	8	16.74	P-6496	32	3	18.04	P-8348	25	2	21.89
C-2708	30	1	3.48	P-67	37	1	48.08	P-6302	27	2	52.24	P-6497	28	9	6.05	P-8349	25	1	24.70
C-2709	30	1	6.57	P-1240	37	2	72.02	P-6305	27	2	63.51	P-6499	28	8	11.27	P-8350	24	5	23.77
C-2717	29	4	5.09	P-1512	37	2	193.49	P-6308	27	3	9.97	P-8025	37	2	151.87	P-8351	25	1	21.33
CIC-1	14	3	17.87	P-1834-3	28	7	16.63	P-6309	27	3	12.56	P-8026	37	2	165.74	P-8352	24	1	24.66

© United Technical Publications

PART NUMBER INDEX

ESSEX Stancor/RBM | STANCOR

Stancor No.	Page	Sec.	Price
P-8353	23	4	28.42
P-8354	23	4	24.38
P-8355	24	1	19.43
P-8356	23	5	18.46
P-8357	27	4	6.55
P-8358	27	4	5.31
P-8359	23	2	10.97
P-8360	25	5	20.59
P-8361	34	6	4.29
P-8362	34	6	4.46
P-8363	34	6	4.85
P-8364	34	6	5.62
P-8365	24	1	18.19
P-8366	25	2	22.24
P-8367	24	1	23.25
P-8369	24	3	25.88
P-8370	24	2	27.57
P-8371	24	3	22.92
P-8372	23	2	16.37
P-8373	24	1	22.37
P-8374	23	3	18.96
P-8375	24	1	22.74
P-8376	23	5	19.67
P-8377	23	5	18.32
P-8378	24	1	21.61
P-8379	23	1	16.02
P-8380	27	3	5.29
P-8381	24	1	19.96
P-8382	23	3	13.08
P-8383	23	2	19.87
P-8384	27	4	4.20
P-8385	27	2	2.76
P-8386	23	1	15.17
P-8388	27	4	7.27
P-8389	27	2	2.79
P-8390	34	2	3.27
P-8391	34	2	3.40
P-8392	34	2	3.53
P-8393	34	2	4.48
P-8394	34	3	3.59
P-8395	34	3	3.74
P-8396	34	3	3.89
P-8397	34	3	4.27
P-8600	34	4	3.07
P-8601	34	4	3.33
P-8602	34	4	3.63
P-8603	34	4	4.14
P-8606	27	4	9.07
P-8607	27	4	9.07
P-8608	27	4	9.07
P-8609	27	4	9.07
P-8610	34	5	3.15
P-8611	34	5	3.00
P-8612	34	5	3.33
P-8613	34	5	4.16
P-9000C	23	2	20.91
PA-8421	23	2	4.72
PC-8301	37	5	13.38
PC-8302	37	5	15.71
PC-8303	37	5	24.38
PC-8304	37	5	22.51
PC-8305	37	5	26.99
PC-8306	37	5	23.59
PC-8401	23	3	8.57
PC-8402	23	3	8.55
PC-8403	23	4	9.36
PC-8404	23	4	10.21
PC-8405	23	5	11.32
PC-8406	24	3	8.71
PC-8407	24	3	8.75
PC-8408	24	4	9.88
PC-8409	24	4	11.73
PC-8410	24	5	13.99
PC-8411	25	2	17.37
PC-8412	25	5	17.28
PC-8413	25	5	21.35
PC-8414	25	5	20.79
PC-8417	23	2	8.93
PC-8418	23	3	7.23
PC-8419	23	4	8.51
PC-8420	23	4	9.31
PC-8422	24	3	13.88
PC-8431	23	4	7.86
PC-8432	23	4	8.62
PC-8433	23	4	9.36
PC-8434	23	4	10.19
PC-8436	24	4	8.94
PC-8437	24	3	8.94
PC-8438	24	4	10.19
PC-8439	24	4	11.40
PC-8441	25	2	14.95
PC-8442	25	4	16.84
PCC-40	23	3	15.45
PCC-55	23	5	16.32
PCC-60	24	2	19.15
PCC-70	24	4	17.43
PCC-85	24	4	18.93
PCC-105	24	4	22.31
PCC-120	25	2	24.48
PCC-150	25	2	26.20
PCC-200	25	3	35.04
PCC-250	25	5	32.04
PCC-24250	35	3	55.96
PCF-2025	35	2	8.66
PCF-2050	35	2	11.40
PCF-24075	35	2	12.82
PFC-24250	35	2	32.45
PCO-150	10	4	23.00
PCO-150A	10	4	20.37
PCO-200	10	3	25.60
PCR-55	26	1	17.06
PCR-70	26	1	20.78
PCR-85	26	1	18.98
PCR-105	26	1	22.57
PCR-120	26	1	25.57
PCR-150	26	1	31.14
PCR-200	26	1	31.97
PCR-300	26	1	42.61
PCT-14	16	1	11.56
PCT-15	16	1	11.01
PCT-16	16	1	14.78
PCT-17	16	1	9.82
PCT-21	16	1	9.16
PCT-23	16	1	9.99
PCT-25	16	1	9.95
PCT-30	16	1	9.62
PCT-31	16	1	9.71
PCT-39	16	1	9.40
PCT-43	16	1	9.60
PCT-54	16	1	9.60
PCT-60	16	1	8.42
PCT-61	16	1	8.42
PCT-62	16	1	8.84
PCT-70	16	2	8.53
PCT-71	16	2	8.73
PCT-76	16	2	9.40
PCT-77	16	2	8.33
PCT-116	16	2	7.83
PCT-117	16	2	6.62
PCT-118	16	2	6.88
PCT-128	16	2	6.66
PM-8401	23	3	9.01
PM-8402	23	3	8.81
PM-8403	23	4	9.69
PM-8404	23	4	10.36
PM-8405	23	5	12.40
PM-8406	24	3	8.70
PM-8407	24	3	8.99
PM-8408	24	4	11.27
PM-8409	24	4	11.75
PM-8410	24	5	13.97
PM-8411	25	2	17.39
PM-8412	25	5	18.19
PM-8418	23	3	6.05
PM-8419	23	4	8.36
PM-8420	23	4	9.97
PM-8422	24	3	15.48
PM-8423	24	2	10.36
PMT-1	19	3	5.09
PMT-2	19	3	5.25
PMT-3	19	3	5.40
PMT-4	19	3	5.42
PMT-5	19	3	5.09
PMT-6	19	3	5.74
PMT-7	19	3	6.81
PMT-8	19	3	7.09
PMT-9	19	3	7.64
PMT-10	19	4	6.22
PMT-11	19	4	6.22
PMT-12	19	4	6.53
PMT-13	19	4	5.25
PMT-14	19	4	5.25
PMT-15	19	4	8.47
PMT-16	19	4	6.25
PMT-17	19	4	8.75
PMT-18	19	4	5.42
PMT-19	19	4	4.31
PMT-20	19	4	4.31
PMT-21	19	4	5.14
PMT-22	19	4	4.87
PMT-23	19	4	4.87
PMT-24	19	4	5.42
PMT-25	19	4	5.98
PMT-26	19	4	5.98
PMT-27	19	4	5.98
PMT-28	19	4	5.42
PMT-29	19	4	5.42
PMT-30	19	4	5.42
PMT-31	19	4	5.14
PMT-32	19	4	5.14
PMT-33	19	4	5.42
PMT-34	19	4	5.42
PMT-35	19	4	5.42
PMT-36	19	4	5.42
PMT-37	19	4	5.70
PMT-38	19	4	6.25
PMT-39	19	4	4.74
PMT-40	19	4	4.88
PMT-41	19	4	7.51
PMT-50	20	1	6.22
PMT-51	20	1	6.38
PMT-52	20	1	5.25
PMT-53	20	1	4.87
PMT-54	20	1	5.25
PMT-55	20	1	7.51
PMT-56	20	1	4.87
PMT-57	20	1	6.22
PMT-58	20	1	6.38
PMT-59	20	1	6.22
PMT-60	20	1	6.22
PMT-61	20	1	6.22
PMT-62	20	1	6.55
PMT-63	20	1	4.74
PMT-64	20	1	4.57
PMT-65	20	1	4.40
PMT-66	20	1	4.40
PMT-67	20	1	6.55
PMT-68	20	1	7.20
PMT-69	20	1	5.25
PMT-70	20	1	7.09
PMT-71	20	1	6.53
PMT-72	20	1	5.74
PMT-73	20	1	6.22
PMT-74	20	1	6.81
PMT-75	20	1	7.64
PMT-76	20	2	5.40
PMT-77	20	2	5.25
PMT-78	20	2	7.51
PMT-79	20	2	7.84
PMT-80	20	2	6.22
PMT-81	20	2	5.74
PMT-82	20	2	6.55
PMT-83	20	2	5.25
PMT-84	20	2	5.25
PMT-85	20	2	4.57
PMT-86	20	2	6.22
PMT-87	20	2	6.86
PMT-88	20	2	6.86
PMT-89	20	2	6.38
PMT-90	20	2	5.25
PMT-91	20	2	7.84
PMT-92	20	2	5.57
PMT-94	21	1	7.51
PMT-95	21	1	7.20
PMT-96	21	1	6.22
PMT-97	21	1	6.22
PMT-98	21	1	6.86
PMT-99	21	1	5.40
PMT-100	21	1	7.51
PMT-101	21	1	6.86
PMT-102	21	1	6.86
PMT-103	21	1	7.51
PMT-104	21	1	6.22
PMT-105	21	1	6.55
PMT-106	21	1	6.38
PMT-107	21	1	6.22
PMT-108	21	1	5.90
PMT-109	21	1	5.57
PMT-110	21	1	5.40
PMT-111	21	1	6.86
PMT-112	21	1	6.22
PMT-113	21	1	7.20
PMT-114	21	1	6.86
PMT-115	21	1	5.74
PMT-116	21	1	6.86
PMT-117	21	1	5.09
PMT-118	21	2	7.51
PMT-119	21	2	7.51
PMT-120	21	2	6.22
PMT-121	21	2	6.22
PMT-122	21	2	6.86
PMT-123	21	2	5.40
PMT-124	21	2	5.74
PMT-125	21	2	6.05
PMT-126	21	2	7.51
PMT-127	21	2	7.84
PMT-128	21	3	7.68
PMT-129	21	3	7.51
PMT-130	21	3	6.38
PMT-131	21	3	7.07
PMT-132	21	3	7.20
PMT-133	21	3	7.68
PMT-134	21	3	6.38
PMT-135	21	3	7.99
PMT-136	21	3	7.34
PMT-137	21	3	7.03
PMT-138	21	3	6.81
PMT-139	21	3	5.74
PMT-140	21	3	5.57
PMT-141	21	3	5.40
PMT-142	21	3	6.81
PMT-143	21	3	6.38
PMT-144	21	3	6.86
PMT-145	21	3	7.12
PMT-146	21	3	6.64
PMTF-50	20	1	6.55
PMTF-51	20	1	6.70
PMTF-52	20	1	5.57
PMTF-53	20	1	5.18
PMTF-54	20	1	5.57
PMTF-55	20	1	7.84
PMTF-56	20	1	5.18
PMTF-57	20	1	6.55
PMTF-58	20	1	6.70
PMTF-59	20	1	6.55
PMTF-60	20	1	6.55
PMTF-61	20	1	6.55
PMTF-62	20	1	6.86
PMTF-63	20	1	5.09
PMTF-64	20	1	4.88
PMTF-65	20	1	4.74
PMTF-66	20	1	4.74
PMTF-67	20	1	6.86
PMTF-68	20	1	7.51
PMTF-69	20	1	5.57
PMTF-70	20	1	7.55
PMTF-71	20	1	6.96
PMTF-72	20	1	5.74
PMTF-73	20	1	6.22
PMTF-74	20	1	7.25
PMTF-75	20	1	8.14
PMTF-76	20	2	5.74
PMTF-77	20	2	5.57
PMTF-78	20	2	7.84
PMTF-79	20	2	8.16

© United Technical Publications

Net

ESSEX Stancor/RBM | STANCOR

PART NUMBER INDEX

Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price	Stancor No.	Page	Sec.	Price
PMTF-80	20	2	6.55	PMTF-146	21	3	7.77	PMTM-73	20	1	9.16	PMTM-139	21	3	10.71	PMTS-66	20	1	6.38
PMTF-81	20	2	6.05	PMTM-1	19	3	7.29	PMTM-74	20	1	9.53	PMTM-140	21	3	10.56	PMTS-67	20	1	8.51
PMTF-82	20	2	6.86	PMTM-2	19	3	7.46	PMTM-75	20	1	10.69	PMTM-141	21	3	10.40	PMTS-68	20	1	9.16
PMTF-83	20	2	5.57	PMTM-3	19	3	7.60	PMTM-76	20	2	8.90	PMTM-142	21	3	11.99	PMTS-69	20	1	7.20
PMTF-84	20	2	5.57	PMTM-4	19	3	7.59	PMTM-77	20	2	8.75	PMTM-143	21	3	11.36	PMTS-70	20	1	9.44
PMTF-85	20	2	4.88	PMTM-5	19	3	7.29	PMTM-78	20	2	11.01	PMTM-144	21	3	11.88	PMTS-71	20	1	8.70
PMTF-86	20	2	6.55	PMTM-6	19	3	7.94	PMTM-79	20	2	11.34	PMTM-145	21	3	12.30	PMTS-72	20	1	7.68
PMTF-87	20	2	7.20	PMTM-7	19	3	9.53	PMTM-80	20	2	9.71	PMTM-146	21	3	11.78	PMTS-73	20	1	8.16
PMTF-88	20	2	7.20	PMTM-8	19	3	9.92	PMTM-81	20	2	9.23	PMTS-1	19	3	6.86	PMTS-74	20	1	9.07
PMTF-89	20	2	6.70	PMTM-9	19	3	10.69	PMTM-82	20	2	10.05	PMTS-2	19	3	7.03	PMTS-75	20	1	10.18
PMTF-90	20	2	5.57	PMTM-10	19	4	8.51	PMTM-83	20	2	8.75	PMTS-3	19	3	7.20	PMTS-76	20	2	7.99
PMTF-91	20	2	8.16	PMTM-11	19	4	8.51	PMTM-84	20	2	8.75	PMTS-4	19	3	7.22	PMTS-77	20	2	7.84
PMTF-92	20	2	5.90	PMTM-12	19	4	9.14	PMTM-85	20	2	8.07	PMTS-5	19	3	6.86	PMTS-78	20	2	10.14
PMTF-94	21	1	7.86	PMTM-13	19	4	7.51	PMTM-86	20	2	9.71	PMTS-6	19	3	7.51	PMTS-79	20	2	10.45
PMTF-95	21	1	7.55	PMTM-14	19	4	7.51	PMTM-87	20	2	10.36	PMTS-7	19	3	9.07	PMTS-80	20	2	8.84
PMTF-96	21	1	6.57	PMTM-15	19	4	11.86	PMTM-88	20	2	10.36	PMTS-8	19	3	9.44	PMTS-81	20	2	8.36
PMTF-97	21	1	6.57	PMTM-16	19	4	8.75	PMTM-89	20	2	9.88	PMTS-9	19	3	10.18	PMTS-82	20	2	9.16
PMTF-98	21	1	7.22	PMTM-17	19	4	12.25	PMTM-90	20	2	8.75	PMTS-10	19	4	7.99	PMTS-83	20	2	7.84
PMTF-99	21	1	5.77	PMTM-18	19	4	7.59	PMTM-91	20	2	11.34	PMTS-11	19	4	7.99	PMTS-84	20	2	7.84
PMTF-100	21	1	7.86	PMTM-19	19	4	6.03	PMTM-92	20	2	8.75	PMTS-12	19	4	8.70	PMTS-85	20	2	7.20
PMTF-101	21	1	7.22	PMTM-20	19	4	6.03	PMTM-94	21	1	11.56	PMTS-13	19	4	7.03	PMTS-86	20	2	8.84
PMTF-102	21	1	7.22	PMTM-21	19	4	7.20	PMTM-95	21	1	11.23	PMTS-14	19	4	7.03	PMTS-87	20	2	9.49
PMTF-103	21	1	7.86	PMTM-22	19	4	6.81	PMTM-96	21	1	10.27	PMTS-15	19	4	11.29	PMTS-88	20	2	9.49
PMTF-104	21	1	6.57	PMTM-23	19	4	6.81	PMTM-97	21	1	10.27	PMTS-16	19	4	8.33	PMTS-89	20	2	9.01
PMTF-105	21	1	6.90	PMTM-24	19	4	7.59	PMTM-98	21	1	10.92	PMTS-17	19	4	11.66	PMTS-90	20	2	7.84
PMTF-106	21	1	6.73	PMTM-25	19	4	8.36	PMTM-99	21	1	9.45	PMTS-18	19	4	7.22	PMTS-91	20	2	10.45
PMTF-107	21	1	6.57	PMTM-26	19	4	8.36	PMTM-100	21	1	11.56	PMTS-19	19	4	5.74	PMTS-92	20	2	8.16
PMTF-108	21	1	6.25	PMTM-27	19	4	8.36	PMTM-101	21	1	11.08	PMTS-20	19	4	5.74	PMTS-94	21	1	10.58
PMTF-109	21	1	5.92	PMTM-28	19	4	7.59	PMTM-102	21	1	11.08	PMTS-21	19	4	6.85	PMTS-95	21	1	10.27
PMTF-110	21	1	5.77	PMTM-29	19	4	7.59	PMTM-103	21	1	11.56	PMTS-22	19	4	6.48	PMTS-96	21	1	9.29
PMTF-111	21	1	7.22	PMTM-30	19	4	7.59	PMTM-104	21	1	10.27	PMTS-23	19	4	6.48	PMTS-97	21	1	9.29
PMTF-112	21	1	6.57	PMTM-31	19	4	7.20	PMTM-105	21	1	10.58	PMTS-24	19	4	7.22	PMTS-98	21	1	9.93
PMTF-113	21	1	7.55	PMTM-32	19	4	7.20	PMTM-106	21	1	10.43	PMTS-25	19	4	7.96	PMTS-99	21	1	8.49
PMTF-114	21	1	7.22	PMTM-33	19	4	7.59	PMTM-107	21	1	10.27	PMTS-26	19	4	7.96	PMTS-100	21	1	10.58
PMTF-115	21	1	6.09	PMTM-34	19	4	7.59	PMTM-108	21	1	9.93	PMTS-27	19	4	7.96	PMTS-101	21	1	9.93
PMTF-116	21	1	7.22	PMTM-35	19	4	7.59	PMTM-109	21	1	9.62	PMTS-28	19	4	7.22	PMTS-102	21	1	9.93
PMTF-117	21	1	5.44	PMTM-36	19	4	7.59	PMTM-110	21	1	9.45	PMTS-29	19	4	7.22	PMTS-103	21	1	10.58
PMTF-118	21	2	7.86	PMTM-37	19	4	7.97	PMTM-111	21	1	10.92	PMTS-30	19	4	7.22	PMTS-104	21	1	9.29
PMTF-119	21	2	7.86	PMTM-38	19	4	8.75	PMTM-112	21	1	10.27	PMTS-31	19	4	6.85	PMTS-105	21	1	9.62
PMTF-120	21	2	6.57	PMTM-39	19	4	7.03	PMTM-113	21	1	11.23	PMTS-32	19	4	6.85	PMTS-106	21	1	9.45
PMTF-121	21	2	6.57	PMTM-40	19	4	7.20	PMTM-114	21	1	10.92	PMTS-33	19	4	7.22	PMTS-107	21	1	9.29
PMTF-122	21	2	7.22	PMTM-41	19	4	9.81	PMTM-115	21	1	9.79	PMTS-34	19	4	7.22	PMTS-108	21	1	8.97
PMTF-123	21	2	5.77	PMTM-50	20	1	9.16	PMTM-116	21	1	7.64	PMTS-35	19	4	7.22	PMTS-109	21	1	8.64
PMTF-124	21	2	6.09	PMTM-51	20	1	9.32	PMTM-117	21	1	9.14	PMTS-36	19	4	7.22	PMTS-110	21	1	8.49
PMTF-125	21	2	6.42	PMTM-52	20	1	8.16	PMTM-118	21	2	12.52	PMTS-37	19	4	7.59	PMTS-111	21	1	9.93
PMTF-126	21	2	7.86	PMTM-53	20	1	6.81	PMTM-119	21	2	12.52	PMTS-38	19	4	8.33	PMTS-112	21	1	9.29
PMTF-127	21	2	8.20	PMTM-54	20	1	8.16	PMTM-120	21	2	11.99	PMTS-39	19	4	6.55	PMTS-113	21	1	10.27
PMTF-128	21	3	8.03	PMTM-55	20	1	10.45	PMTM-121	21	2	11.99	PMTS-40	19	4	6.70	PMTS-114	21	1	9.93
PMTF-129	21	3	7.86	PMTM-56	20	1	6.81	PMTM-122	21	2	11.88	PMTS-41	19	4	9.32	PMTS-115	21	1	8.81
PMTF-130	21	3	6.73	PMTM-57	20	1	9.16	PMTM-123	21	2	11.14	PMTS-50	20	1	8.16	PMTS-116	21	1	9.93
PMTF-131	21	3	7.38	PMTM-58	20	1	9.32	PMTM-124	21	2	11.47	PMTS-51	20	1	8.36	PMTS-117	21	1	8.49
PMTF-132	21	3	7.55	PMTM-59	20	1	9.16	PMTM-125	21	2	11.82	PMTS-52	20	1	7.20	PMTS-118	21	2	11.21
PMTF-133	21	3	8.03	PMTM-60	20	1	9.16	PMTM-126	21	2	12.52	PMTS-53	20	1	6.48	PMTS-119	21	2	11.21
PMTF-134	21	3	6.73	PMTM-61	20	1	9.16	PMTM-127	21	2	12.86	PMTS-54	20	1	7.20	PMTS-120	21	2	10.66
PMTF-135	21	3	8.38	PMTM-62	20	1	9.49	PMTM-128	21	3	12.86	PMTS-55	20	1	9.49	PMTS-121	21	2	10.66
PMTF-136	21	3	7.71	PMTM-63	20	1	7.68	PMTM-129	21	3	12.69	PMTS-56	20	1	6.48	PMTS-122	21	2	10.56
PMTF-137	21	3	7.38	PMTM-64	20	1	7.51	PMTM-130	21	3	11.36	PMTS-57	20	1	8.16	PMTS-123	21	2	9.84
PMTF-138	21	3	7.16	PMTM-65	20	1	7.34	PMTM-131	21	3	12.25	PMTS-58	20	1	8.36	PMTS-124	21	2	10.18
PMTF-139	21	3	6.09	PMTM-66	20	1	7.34	PMTM-132	21	3	12.38	PMTS-59	20	1	8.16	PMTS-125	21	2	10.49
PMTF-140	21	3	5.92	PMTM-67	20	1	9.49	PMTM-133	21	3	12.86	PMTS-60	20	1	8.16	PMTS-126	21	2	11.21
PMTF-141	21	3	5.77	PMTM-68	20	1	10.14	PMTM-134	21	3	11.36	PMTS-61	20	1	8.16	PMTS-127	21	2	11.53
PMTF-142	21	3	7.16	PMTM-69	20	1	8.16	PMTM-135	21	3	13.17	PMTS-62	20	1	8.51	PMTS-128	21	3	11.53
PMTF-143	21	3	6.73	PMTM-70	20	1	9.92	PMTM-136	21	3	12.52	PMTS-63	20	1	6.70	PMTS-129	21	3	11.36
PMTF-144	21	3	7.22	PMTM-71	20	1	9.14	PMTM-137	21	3	12.21	PMTS-64	20	1	6.55	PMTS-130	21	3	10.06
PMTF-145	21	3	7.47	PMTM-72	20	1	8.68	PMTM-138	21	3	11.99	PMTS-65	20	1	6.38	PMTS-131	21	3	10.92

© United Technical Publications

PART NUMBER INDEX

ESSEX Stancor/RBM | STANCOR

Stancor No.	Page	Sec.	Price
PMTS-132	21	3	11.04
PMTS-133	21	3	11.53
PMTS-134	21	3	10.06
PMTS-135	21	3	11.88
PMTS-136	21	3	11.21
PMTS-137	21	3	10.88
PMTS-138	21	3	10.66
PMTS-139	21	3	9.42
PMTS-140	21	3	9.27
PMTS-141	21	3	12.38
PMTS-142	21	3	10.66
PMTS-143	21	3	10.06
PMTS-144	21	3	10.71
PMTS-145	21	3	10.97
PMTS-146	21	3	10.45
PS-8415	23	2	3.02
PS-8416	23	2	4.14
PSC-40	23	3	22.18
PSC-55	23	5	23.55
PSC-60	24	2	25.47
PSC-70	24	4	24.90
PSC-85	24	4	26.90
PSC-105	24	4	31.84
PSC-120	25	2	32.49
PSC-150	25	2	40.13
PSC-165	26	2	49.58
PSC-200	25	3	40.89
PSC-205	26	2	42.11
PSC-250	25	5	44.44
PSO-150	10	4	28.10
PSO-200	10	3	38.67
PSR-55	26	1	21.22
PSR-70	26	1	29.10
PSR-85	26	1	23.20
PSR-105	26	1	29.25
PSR-120	26	1	33.84
PSR-150	26	1	42.77
PSR-200	26	1	39.52
PSR-300	26	1	66.34
PSU-2000	36	9	23.99
PSU-3000	36	9	30.36
PT-1	22	1	5.40
PT-2	22	1	5.40
PT-3	22	1	5.40
PT-4	22	1	5.40
PT-5	22	1	5.40
PT-6	22	1	5.40
PT-7	22	1	5.40
PT-8	22	1	5.40
PT-9	22	1	5.40
PT-10	22	1	5.40
PT-11	22	1	5.40
PT-12	22	1	5.40
PT-13	22	1	5.40
PT-14	22	1	5.40
PT-15	22	1	5.40
PT-16	22	1	5.40
PT-17	22	1	5.40
PT-18	22	1	6.14
PT-19	22	1	6.14
PT-20	22	1	6.14
PT-21	22	1	6.14
PT-22	22	1	6.14
PT-23	22	1	6.14
PT-24	22	1	6.14
PT-25	22	1	6.14
PT-26	22	1	6.14
PT-27	22	1	6.14
PT-28	22	1	6.14
PT-29	22	1	6.14
PT-30	22	1	6.14
PT-31	22	1	8.16
PT-32	22	1	8.16
PT-33	22	1	8.16
PT-34	22	1	8.16
PT-35	22	1	9.81
PT-36	22	1	9.81
PT-37	22	1	9.81
PT-38	22	2	6.22
PT-39	22	2	6.22
PT-40	22	2	6.22
PT-41	22	2	6.22
PT-42	22	2	6.22
PT-43	22	2	6.22
PT-44	22	2	6.22
PT-45	22	2	6.22
PT-46	22	2	6.22
PT-47	22	2	6.22
PT-48	22	2	6.22
PT-49	22	2	6.22
PT-50	22	2	6.22
PT-51	22	2	6.22
PT-52	22	2	6.22
PT-53	22	3	6.22
PT-54	22	3	6.22
PT-55	22	3	6.22
PT-56	22	3	6.22
PT-57	22	3	6.22
PT-58	22	3	6.22
PT-59	22	3	6.96
PT-60	22	3	6.96
PT-61	22	3	6.96
PT-62	22	3	6.96
PT-63	22	3	6.96
PT-64	22	3	7.94
PT-65	22	3	7.94
PT-66	22	3	7.94
PT-67	22	3	7.94
PT-68	22	3	7.94
PT-69	22	3	9.16
PT-70	22	3	9.16
PT-71	22	3	9.16
PT-72	22	3	9.97
PT-73	22	3	9.97
PT-74	22	4	5.09
PT-75	22	4	5.09
PT-76	22	4	5.09
PT-77	22	4	5.09
PT-78	22	4	5.09
PT-79	22	4	5.09
PT-80	22	4	5.09
PT-81	22	4	5.09
PT-82	22	4	5.09
PT-83	22	4	5.09
PT-84	22	4	5.09
PT-85	22	4	5.09
PT-86	22	4	5.09
PT-87	22	4	5.09
PT-88	22	4	5.09
PT-89	22	4	5.09
PT-90	22	4	5.09
PT-91	22	4	5.74
PT-92	22	4	5.74
PT-93	22	4	5.74
PT-94	22	4	5.74
PT-95	22	4	5.74
PT-96	22	4	5.74
PT-97	22	4	5.74
PT-98	22	4	5.74
PT-99	22	4	5.74
PT-100	22	4	6.38
PT-101	22	4	6.38
PT-102	22	4	6.38
PT-103	22	4	7.20
PT-104	22	4	7.20
PT-8311	37	4	29.90
PT-8312	37	4	64.40
PT-8313	37	4	45.71
PT-8314	37	4	60.70
PT-8315	37	4	62.53
PTH-1	22	1	9.97
PTH-2	22	1	9.97
PTH-3	22	1	9.97
PTH-4	22	1	9.97
PTH-5	22	1	9.97
PTH-6	22	1	9.97
PTH-7	22	1	9.97
PTH-8	22	1	9.97
PTH-9	22	1	9.97
PTH-10	22	1	9.97
PTH-11	22	1	9.97
PTH-12	22	1	9.97
PTH-13	22	1	9.97
PTH-14	22	1	9.97
PTH-15	22	1	9.97
PTH-16	22	1	9.97
PTH-17	22	1	9.97
PTH-18	22	1	10.79
PTH-19	22	1	10.79
PTH-20	22	1	10.79
PTH-21	22	1	10.79
PTH-22	22	1	10.79
PTH-23	22	1	10.79
PTH-24	22	1	10.79
PTH-25	22	1	10.79
PTH-26	22	1	10.79
PTH-27	22	1	10.79
PTH-28	22	1	10.79
PTH-29	22	1	10.79
PTH-30	22	1	10.79
PTH-31	22	1	13.73
PTH-32	22	1	13.73
PTH-33	22	1	13.73
PTH-34	22	1	13.73
PTH-35	22	1	16.19
PTH-36	22	1	16.19
PTH-37	22	1	16.19
PTH-38	22	2	10.79
PTH-39	22	2	10.79
PTH-40	22	2	10.79
PTH-41	22	2	10.79
PTH-42	22	2	10.79
PTH-43	22	2	10.79
PTH-44	22	2	10.79
PTH-45	22	2	10.79
PTH-46	22	2	10.79
PTH-47	22	2	10.79
PTH-48	22	2	10.79
PTH-49	22	2	10.79
PTH-50	22	2	10.79
PTH-51	22	2	10.79
PTH-52	22	2	10.79
PTH-53	22	3	10.79
PTH-54	22	3	10.79
PTH-55	22	3	10.79
PTH-56	22	3	10.79
PTH-57	22	3	10.79
PTH-58	22	3	10.79
PTH-59	22	3	11.62
PTH-60	22	3	11.62
PTH-61	22	3	11.62
PTH-62	22	3	11.62
PTH-63	22	3	11.62
PTH-64	22	3	12.60
PTH-65	22	3	12.60
PTH-66	22	3	12.60
PTH-67	22	3	12.60
PTH-68	22	3	12.60
PTH-69	22	3	13.73
PTH-70	22	3	13.73
PTH-71	22	3	13.73
PTH-72	22	3	14.54
PTH-73	22	3	14.54
PTH-74	22	4	9.66
PTH-75	22	4	9.66
PTH-76	22	4	9.66
PTH-77	22	4	9.66
PTH-78	22	4	9.66
PTH-79	22	4	9.66
PTH-80	22	4	9.66
PTH-81	22	4	9.66
PTH-82	22	4	9.66
PTH-83	22	4	9.66
PTH-84	22	4	9.66
PTH-85	22	4	9.66
PTH-86	22	4	9.66
PTH-87	22	4	9.66
PTH-88	22	4	9.66
PTH-89	22	4	9.66
PTH-90	22	4	9.66
PTH-91	22	4	10.30
PTH-92	22	4	10.30
PTH-93	22	4	10.30
PTH-94	22	4	10.30
PTH-95	22	4	10.30
PTH-96	22	4	10.30
PTH-97	22	4	10.30
PTH-98	22	4	10.30
PTH-99	22	4	10.30
PTH-100	22	4	10.95
PTH-101	22	4	10.95
PTH-102	22	4	10.95
PTH-103	22	4	12.43
PTH-104	22	4	12.43
PTM-1	22	1	12.60
PTM-2	22	1	12.60
PTM-3	22	1	12.60
PTM-4	22	1	12.60
PTM-5	22	1	12.60
PTM-6	22	1	12.60
PTM-7	22	1	12.60
PTM-8	22	1	12.60
PTM-9	22	1	12.60
PTM-10	22	1	12.60
PTM-11	22	1	12.60
PTM-12	22	1	12.60
PTM-13	22	1	12.60
PTM-14	22	1	12.60
PTM-15	22	1	12.60
PTM-16	22	1	12.60
PTM-17	22	1	12.60
PTM-18	22	1	13.41
PTM-19	22	1	13.41
PTM-20	22	1	13.41
PTM-21	22	1	13.41
PTM-22	22	1	13.41
PTM-23	22	1	13.41
PTM-24	22	1	13.41
PTM-25	22	1	13.41
PTM-26	22	1	13.41
PTM-27	22	1	13.41
PTM-28	22	1	13.41
PTM-29	22	1	13.41
PTM-30	22	1	13.41
PTM-31	22	1	16.35
PTM-32	22	1	16.35
PTM-33	22	1	16.35
PTM-34	22	1	16.35
PTM-35	22	1	18.81
PTM-36	22	1	18.81
PTM-37	22	1	18.81
PTM-38	22	2	13.41
PTM-39	22	2	13.41
PTM-40	22	2	13.41
PTM-41	22	2	13.41
PTM-42	22	2	13.41
PTM-43	22	2	13.41
PTM-44	22	2	13.41
PTM-45	22	2	13.41
PTM-46	22	2	13.41
PTM-47	22	2	13.41
PTM-48	22	2	13.41
PTM-49	22	2	13.41
PTM-50	22	2	13.41
PTM-51	22	2	13.41
PTM-52	22	2	13.41
PTM-53	22	3	13.41
PTM-54	22	3	13.41
PTM-55	22	3	13.41
PTM-56	22	3	13.41
PTM-57	22	3	13.41
PTM-58	22	3	13.41
PTM-59	22	3	14.21
PTM-60	22	3	14.21
PTM-61	22	3	14.21
PTM-62	22	3	14.21
PTM-63	22	3	14.21
PTM-64	22	3	15.23
PTM-65	22	3	15.23
PTM-66	22	3	15.23
PTM-67	22	3	15.23
PTM-68	22	3	15.23
PTM-69	22	3	16.35
PTM-70	22	3	16.35
PTM-71	22	3	16.35

© United Technical Publications

Net

ESSEX Stancor/RBM | STANCOR

PART NUMBER INDEX

Stancor No.	Page	Sec.	Price
PTM-72	22	3	17.17
PTM-73	22	3	17.17
PTM-74	22	4	12.27
PTM-75	22	4	12.27
PTM-76	22	4	12.27
PTM-77	22	4	12.27
PTM-78	22	4	12.27
PTM-79	22	4	12.27
PTM-80	22	4	12.27
PTM-81	22	4	12.27
PTM-82	22	4	12.27
PTM-83	22	4	12.27
PTM-84	22	4	12.27
PTM-85	22	4	12.27
PTM-86	22	4	12.27
PTM-87	22	4	12.27
PTM-88	22	4	12.27
PTM-89	22	4	12.27
PTM-90	22	4	12.27
PTM-91	22	4	12.91
PTM-92	22	4	12.91
PTM-93	22	4	12.91
PTM-94	22	4	12.91
PTM-95	22	4	12.91
PTM-96	22	4	12.91
PTM-97	22	4	12.91
PTM-98	22	4	12.91
PTM-99	22	4	12.91
PTM-100	22	4	13.56
PTM-101	22	4	13.56
PTM-102	22	4	13.56
PTM-103	22	4	14.37
PTM-104	22	4	14.37
PTP-1	22	1	11.62
PTP-2	22	1	11.62
PTP-3	22	1	11.62
PTP-4	22	1	11.62
PTP-5	22	1	11.62
PTP-6	22	1	11.62
PTP-7	22	1	11.62
PTP-8	22	1	11.62
PTP-9	22	1	11.62
PTP-10	22	1	11.62
PTP-11	22	1	11.62
PTP-12	22	1	11.62
PTP-13	22	1	11.62
PTP-14	22	1	11.62
PTP-15	22	1	11.62
PTP-16	22	1	11.62
PTP-17	22	1	11.62
PTP-18	22	1	12.43
PTP-19	22	1	12.43
PTP-20	22	1	12.43
PTP-21	22	1	12.43
PTP-22	22	1	12.43
PTP-23	22	1	12.43
PTP-24	22	1	12.43
PTP-25	22	1	12.43
PTP-26	22	1	12.43
PTP-27	22	1	12.43
PTP-28	22	1	12.43
PTP-29	22	1	12.43
PTP-30	22	1	12.43
PTP-31	22	1	15.37
PTP-32	22	1	15.37
PTP-33	22	1	15.37
PTP-34	22	1	15.37
PTP-35	22	1	17.82
PTP-36	22	1	17.82
PTP-37	22	1	17.82
PTP-38	22	2	12.43
PTP-39	22	2	12.43
PTP-40	22	2	12.43
PTP-41	22	2	12.43
PTP-42	22	2	12.43
PTP-43	22	2	12.43
PTP-44	22	2	12.43
PTP-45	22	2	12.43
PTP-46	22	2	12.43
PTP-47	22	2	12.43
PTP-48	22	2	12.43
PTP-49	22	2	12.43
PTP-50	22	2	12.43
PTP-51	22	2	12.43
PTP-52	22	2	12.43
PTP-53	22	3	12.43
PTP-54	22	3	12.43
PTP-55	22	3	12.43
PTP-56	22	3	12.43
PTP-57	22	3	12.43
PTP-58	22	3	12.43
PTP-59	22	3	13.25
PTP-60	22	3	13.25
PTP-61	22	3	13.25
PTP-62	22	3	13.25
PTP-63	22	3	13.25
PTP-64	22	3	14.21
PTP-65	22	3	14.21
PTP-66	22	3	14.21
PTP-67	22	3	14.21
PTP-68	22	3	14.21
PTP-69	22	3	15.37
PTP-70	22	3	15.37
PTP-71	22	3	15.37
PTP-72	22	3	16.19
PTP-73	22	3	16.19
PTP-74	22	4	11.27
PTP-75	22	4	11.27
PTP-76	22	4	11.27
PTP-77	22	4	11.27
PTP-78	22	4	11.27
PTP-79	22	4	11.27
PTP-80	22	4	11.27
PTP-81	22	4	11.27
PTP-82	22	4	11.27
PTP-83	22	4	11.27
PTP-84	22	4	11.27
PTP-85	22	4	11.27
PTP-86	22	4	11.27
PTP-87	22	4	11.27
PTP-88	22	4	11.27
PTP-89	22	4	11.27
PTP-90	22	4	11.27
PTP-91	22	4	11.95
PTP-92	22	4	11.95
PTP-93	22	4	11.95
PTP-94	22	4	11.95
PTP-95	22	4	11.95
PTP-96	22	4	11.95
PTP-97	22	4	11.95
PTP-98	22	4	11.95
PTP-99	22	4	11.95
PTP-100	22	4	12.70
PTP-101	22	4	12.70
PTP-102	22	4	12.70
PTP-103	22	4	13.41
PTP-104	22	4	13.41
PV-6441	36	3	32.73
PV-6442	36	3	38.50
PV-6443	36	3	46.07
PV-6444	36	3	70.21
R-63	29	4	53.93
R-65	30	1	150.41
R-103	30	1	71.67
R-105	30	1	163.87
RC-1055	29	2	6.51
RC-1085	29	2	9.27
RC-1540	29	1	6.79
RC-1555	29	2	7.79
RC-1585	29	2	10.19
RC-8105	29	2	13.21
RC-8150	29	3	12.60
RC-8200	29	4	19.61
RC-8250	29	4	17.30
RC-8300	29	4	24.12
RC-12105	29	2	13.17
RC-12150	29	3	15.13
RC-12200	29	4	15.02
RP-400	33	1	17.85
RP-600	33	1	21.02
RP-800	33	1	18.24
RP-1600	33	1	17.13
RP-2000	33	1	16.47
RP-2500	33	1	18.32
RS-1055	29	2	9.16
RS-1085	29	2	9.97
RS-1540	29	1	8.66
RS-1555	29	2	10.82
RS-1585	29	2	14.08
RS-8105	29	2	12.60
RS-8150	29	3	16.63
RS-8200	29	4	15.26
RS-8250	29	4	20.96
RS-8300	29	4	28.62
RS-12105	29	3	13.26
RS-12150	29	3	14.36
RS-12200	29	4	23.51
RT-201	31	1	8.51
RT-202	31	1	10.42
RT-204	31	1	15.76
RT-206	31	1	20.66
RT-208	31	1	26.90
RT-408	31	1	64.21
RT-2012	31	1	41.68
RT-4012	31	1	97.31
SD-50	36	2	11.62
SD-100	36	2	16.11
SD-150	36	2	22.74
SD-250	36	2	26.88
SD-500	36	2	33.60
SD-1000	36	2	55.59
SPCT-10	16	2	1.37
SR-300	15	13	40.21
SR-500	15	13	44.56
TA-1	17	1	3.46
TA-2	17	1	3.26
TA-3	17	1	2.70
TA-4	17	1	4.22
TA-5	17	1	5.99
TA-6	17	1	6.40
TA-7	17	1	3.46
TA-8	17	1	6.49
TA-9	17	1	6.49
TA-10	17	1	6.60
TA-11	17	1	5.25
TA-12	17	1	3.26
TA-13	17	1	7.51
TA-14	17	1	18.50
TA-15	15	15	2.66
TA-16	15	15	3.05
TA-17	15	15	11.17
TA-18	18	1	4.57
TA-19	18	1	5.42
TA-20	18	1	5.83
TA-21	18	1	5.09
TA-22	18	1	5.09
TA-23	18	1	5.03
TA-24	18	1	4.83
TA-25	18	1	5.31
TA-26	18	1	5.31
TA-27	18	1	5.55
TA-28	18	1	5.31
TA-29	18	1	4.83
TA-30	18	1	5.09
TA-31	18	1	5.31
TA-32	18	1	5.55
TA-33	18	1	5.37
TA-34	18	1	5.12
TA-35	18	1	4.38
TA-36	18	1	4.83
TA-37	18	1	4.83
TA-38	18	1	4.48
TA-39	18	2	4.59
TA-40	18	2	5.31
TA-41	18	2	4.38
TA-42	18	2	4.96
TA-43	18	2	5.55
TA-44	18	2	5.31
TA-45	18	2	5.12
TA-46	18	2	5.31
TA-47	18	2	5.31
TA-48	17	2	3.70
TA-49	17	2	5.85
TA-50	17	2	3.90
TA-51	17	2	3.29
TA-52	18	2	5.22
TA-53	18	1	4.85
TA-54	18	1	4.29
TA-55	18	2	6.36
TA-56	17	1	4.75
TA-57	17	1	4.63
TA-58	17	1	3.61
TA-59	17	1	3.72
TA-60	17	1	7.40
TA-61	17	1	3.81
TA-62	17	1	2.92
TA-63	18	2	5.77
TAPC-5	18	4	6.59
TAPC-19	18	3	5.40
TAPC-26	18	3	5.40
TAPC-27	18	3	5.55
TAPC-28	18	3	5.55
TAPC-30	18	3	5.40
TAPC-31	18	3	5.55
TAPC-32	18	3	5.55
TAPC-34	18	3	5.55
TAPC-35	18	3	4.79
TAPC-36	18	3	5.40
TAPC-38	18	3	4.90
TAPC-47	18	5	5.40
TAPC-52	18	5	5.22
TAPC-63	18	5	6.29
TC-1	30	3	2.02
TC-2	30	3	1.76
TP-1	34	1	7.10
TP-2	34	1	5.00
TP-3	34	1	6.68
TP-4	34	1	11.21
TP-5	34	1	6.09
UM-114	18	6	4.66
UME-11	16	3	9.31
UME-12	16	3	8.01
UME-13	16	3	9.31
UME-14	16	3	7.88
UME-15	16	3	8.01
UME-16	16	3	8.20
UME-17	16	3	11.29
UME-18	16	3	7.14
UME-19	16	3	9.75
UME-20	16	3	9.77
UME-21	16	3	11.08
UME-22	16	3	8.07
UME-23	16	3	9.34
UME-24	16	3	8.20
UME-25	16	3	8.20
UME-26	16	3	8.20
UME-27	16	4	8.20
UME-28	16	4	9.40
UME-29	16	4	8.70
UME-30	16	4	9.32
UME-31	16	4	8.05
UME-32	16	4	8.20
UME-33	16	4	11.73
UME-34	16	4	10.23
UME-35	16	4	9.08
UME-36	16	4	8.07
UME-37	16	4	7.14
UME-38	16	4	7.14
UME-39	16	4	8.20
WF-20	14	5	25.20
WF-21	14	5	32.50
WF-22	14	5	25.38
WF-28	14	5	22.00
WF-30	14	5	22.42
WF-35	14	5	21.83
WF-36	14	5	39.67

© United Technical Publications

PRODUCT INDEX & PART NUMBER INDEX

ESSEX Stancor/RBM | STANCOR

HERMETICALLY SEALED

Audio 38, 39
Filament 38, 41
Filament 400 cycle 41
Inductors (Toroidal) 40
Isolation 41
Power 38, 39
Power 400 cycle 41
Pulse 40
Reactors (Filter) 40, 41
Rectifier 40

These Hermetically Sealed units available until stock is depleted.

Stancor No.	Page	Sec.	Price
4FH-63	41	4	53.65
4FH-65	41	4	53.65
4FH-610	41	4	53.65
4FH-620	41	4	53.65
4FMS-65	41	3	35.15
4FMS-122	41	3	35.15
4FMS-2415	41	3	27.75
4IMS-160	41	9	27.75
4PHC-165	41	6	79.55
4PHC-200A	41	6	72.15
4PHR-300	41	6	109.15
4PMS-40	41	5	49.95
4PMS-55	41	5	42.55
4PMS-70	41	5	42.55
4PMS-85	41	5	42.55
4PMS-105	41	5	42.55
4PMS-120	41	5	42.55
4PMS-150	41	5	72.15
4PMS-165	41	5	72.15
4PMS-200A	41	5	72.15
4PMS-300	41	5	92.50
4RH-2120	41	8	9.81
4RH-2165	41	8	12.95
4RH-2200	41	8	12.95
4RMS-240	41	7	14.80
4RMS-255	41	7	24.05
4RMS-270	41	7	46.25
4RMS-285	41	7	14.80
4RMS-2120	41	7	14.62
4RMS-2150	41	7	20.35
4RMS-2165	41	7	14.62
4RMS-2200	41	7	18.50
4RMS-2300	41	7	22.20
4RMS-3120	41	7	11.62
AMS-1	38	1	24.40
AMS-3	38	1	21.28
AMS-6	38	1	17.58
AMS-7	38	1	35.15
AMS-8	38	1	27.75
AMS-9	38	1	46.25
BIH-1	38	5	35.15
BIH-7	38	5	35.15
BIH-8	38	5	29.60
BIH-10	38	5	29.97
BOH-2	38	4	26.83
BOH-4	38	4	35.15
BOH-9	38	4	35.61
CIH-1	39	1	35.15
CIH-2	39	1	15.26
COH-1	39	2	18.50
COH-2	39	2	35.15
FH-25	41	1	38.85
FH-58	41	1	38.85
FH-65	41	1	46.25
FH-210	41	1	16.51
FH-215H	41	1	38.85
FH-510H	41	1	38.85
FH-520HB	41	1	57.35
FH-610	41	1	53.65
FMS-2	41	2	53.65
FMS-3	41	2	53.65
FMS-5	41	2	53.65
FMS-8	41	2	53.65
FMS-23	38	3	24.05
FMS-53	38	3	24.05
FMS-62	38	3	24.05
FMS-65	38	3	21.28
FMS-210	38	3	24.05
FMS-210H	38	3	27.75
FMS-510	38	3	24.05
FMS-510H	38	3	28.68
HRP-400	40	1	59.20
HRP-600	40	1	59.20
HRP-800	40	1	59.20
HRP-1600	40	1	59.20
HRP-2000	40	1	58.28
HRP-2500	40	1	58.28
PE-50	40	3	13.34
PE-75	40	3	9.99
PE-500	40	3	10.71
PE-700	40	3	12.03
PHC-55	39	4	19.45
PHC-70	39	4	37.00
PHC-105	39	4	36.08
PHC-120	39	4	36.08
PHC-150	39	4	53.65
PHC-165	39	6	53.65
PHC-200	39	4	53.65
PHC-200A	39	6	53.65
PHC-250	39	4	53.65
PHR-55	39	5	27.75
PHR-70	39	5	35.15
PHR-105	39	5	53.65
PHR-120	39	5	53.65
PHR-150	39	5	42.55
PHR-200	39	5	53.65
PMS-70	38	2	53.65
PMS-70A	38	2	53.65
PMS-150	38	2	39.78
PMS-175	38	2	35.15
PMS-250	38	2	53.65
PMS-350	38	2	53.65
PMS-550	38	2	35.15
PMS-800	38	2	53.65
RH-1055	40	4	15.73
RH-1085	40	4	17.58
RH-1585	40	4	18.50
RH-8105	40	4	20.35
RH-8150	40	4	20.35
RH-8200	40	4	20.35
RH-12105	40	4	20.35
RH-12150	40	4	20.35
RH-12200	40	4	25.90
TAMS-1	39	3	27.75
TAMS-2	39	3	27.75
TAMS-3	39	3	27.75
TAMS-4	39	3	27.75
TAMS-5	39	3	27.75
TAMS-6	39	3	27.75
TAMS-7	39	3	27.75
TAMS-8	39	3	27.75
TAMS-9	39	3	27.75
TAMS-10	39	3	27.75
TAMS-11	39	3	27.75
TAMS-12	39	3	27.75
TM-1A	40	2	9.99
TM-2A	40	2	9.99
TM-5A	40	2	9.99
TM-8A	40	2	9.99
TM-80A	40	2	9.99
TM-100A	40	2	9.99
TM-200A	40	2	9.99
TM-500A	40	2	9.99
TM-800A	40	2	9.79

ESSEX Stancor/RBM | STANCOR

OUTPUT TRANSFORMER CHART

A simplified selection of the proper transformer for use as a replacement in radio receivers or in the construction of audio amplifiers. **To use this chart,** check the first column for the tube being used, then read across for the applicable operating characteristics and correct Stancor transformer. In most cases, two Stancor part numbers are indicated in order to give a choice of Mounting styles.

Tube	Use	Class	Watts	Load Res. in Ohms	Stancor Part No.	Universal Type
1A5-GT	S.	A	.10	25K	A-3327	
1AC5	S.	A	.05	25K	A-3327	
1AG4	S.	A	.035	12K	A-3879	A-3822
1B8-GT	S.	A	.21	14K	A-3881	A-3848
1C5-GT	S.	A	.24	8K	A-3329	A-3848
1D8-GT	S.	A	.20	12K	A-3879	A-3822
1E7-G (GT)	S.	A	.29	16K	A-3881	A-3848
	P.P.	A	.575	24K	A-3857	
1F4	S.	A	.31	16K	A-3881	A-3848
1F5-G	S.	A	.31	16K	A-3881	A-3848
1G5-G	S.	A	.55	9K	A-3879	A-3822
1G6-GT	P.P.	B	.675	12K	A-3831	A-3856
1J5-G	S.	A	.45	13.5K	A-3881	A-3848
1J6-G (GT) (GX)	P.P.	B	2.1	10K	A-3831	A-3856
1LA4	S.	A	.1	25K	A-3327	
1LB4	S.	A	.2	12K	A-3879	A-3822
1N6-G (GT)	S.	A	.1	25K	A-3327	
1Q5-GT	S.	A	.27	8K	A-3329	A-3848
1S4	S.	A	.27	8K	A-3329	A-3848
1T5-GT	S.	A	.17	14K	A-3881	A-3848
1V5	S.	A	.05	25K	A-3327	
1W4	S.	A	.2	12K	A-3879	A-3822
2A3	S.	A	3.5	2.5K	A-3876	A-3825
	P.P.	AB1	15	3K	A-3301	A-3830
2A5	S.	A	4.8	7K	A-3878	A-3850
	P.P.	AB2	18.5	10K	A-3311	A-3830
2E24	S.	A	3.9	6K	A-3878	A-3848
2E26	S.	A	4.0	5.5K	A-3877	A-3849
2E30	S.	A	4.5	4.5K	A-3877	A-3849
3A4	S.	A	.7	8K	A-8114	A-3822
3B5-GT	S.	A	.2	5K	A-3878	A-3856
3B7/1291	P.P.	AB2	1.5	16K	A-2312	A-3880
3C5-GT	S.	A	.2	8K	A-3329	A-3848
	S.	A	.26	10K	A-3879	A-3848
3D6	S.	A	.6	14K	A-3881	A-3848
3E5	S.	A	.25	8K	A-3329	A-3848
3LE4	S.	A	.325	6K	A-3878	A-3848
3LF4	S.	A	.4	8K	A-3329	A-3848
3Q4	S.	A	.27	10K	A-3879	A-3822
3Q5-GT	S.	A	.4	8K	A-3329	A-3822
3S4	S.	A	.18	5K	A-3877	A-3856
	S.	A	.27	8K	A-3329	A-3848
3V4	S.	A	.27	10K	A-3879	A-3822
3W4	S.	A	0.25	11K	A-3879	A-3822
4B6-G	P.P.	B	1.0	8K		A-3856
5AQ5	S.	A	2.0	5.5K	A-3877	A-3849
	S.	A	4.5	5K	A-3877	A-3849
5CM6	S.	A	4.5	5K	A-3877	A-3856
	P.P.	AB1	10.	10K	A-3335	A-3823
5CZ5	S.	A	5.4	5K	A-3877	A-3849
	P.P.	AB1	21.5	7.5K		A-3830
5V6 (GT)	S.	A	5.5	5K	A-3877	A-3823
	P.P.	AB1	10.	10K	A-3311	A-3880
6A3	S.	A	3.2	2.5K	A-3876	A-3825
	P.P.	AB1	15	3K	A-3301	A-3830
6A4/LA	S.	A	1.4	8K	A-8114	A-3822
6A5-G	S.	A	3.75	2.5K	A-3876	A-3825
	P.P.	A	15	3K	A-3301	A-3830
6A8	P.P.	B	10	8K	A-3329	A-3822
6AB8	S.	A	1.4	11K	A-3879	
6AC5-GT	P.P.	B	8	10K	A-3335	A-3823
6AC6-GT	S.	A	3.6	3.5K	A-2203	A-3825
6AD7-G	S.	A	3.2	7K	A-2313	A-3822
6AE7-GT	P.P.		9.5	10K	A-2312	A-3880
6AG6-G	S.	A	3.8	8.4K	A-3329	A-3822
6AG7	S.	A	3	10K	A-3879	A-3822
6AH5-G	S.	A	10.8	4.2K	A-3337	A-3849
6AJ5	P.P.	AB1	1.0	28K	A-3857	
6AK6	S.	A	1.1	10K	A-3879	A-3822
6AK7	S.	A	3	10K	A-3879	A-3822
6AL6-G	S.	A	6.5	2.5K	A-3876	A-3825
6AL11	S.	A1	4	5K	A-3877	A-3856
6AM5	S.	A	1.4	16K	A-3881	A-3848
	P.P.	AB1	4.8	20K	A-3857	A-3856
6AN5	S.	A	1.3	2.5K	A-3332	A-3825
6AQ5A/W	S.	A	4.5	5K	A-3877	A-3849
6AQ5A/W	P.P.	AB1	10	10K	A-3335	A-3852
6AR5	S.	A	3.4	7.6K	A-8114	A-3822
6AS5	S.	A	2.2	4.5K	A-3877	A-3849
6B4-G	S.	A	3.2	2.5K	A-3876	A-3825
	P.P.	AB	15	3K	A-3301	A-3830
6B5	S.	A	4	7K	A-2313	A-3823
6BF5	S.	A	1.9	2.5K	A-3332	A-3825
6BF6	S.	A	0.3	10K	A-3879	A-3822
6BJ5	S.	A	4.0	7K	A-3878	A-3849
6BK5	S.	A	3.5	6.5K	A-3878	A-3849
6BM5	S.	A	3.5	7K	A-3878	A-3849
6BM8	S.	A	3.5	5.6K	A-3877	A-3822
6BQ5	S.	A	5.7	4.5K	A-8092	A-3849
	P.P.	AB1	11.0	8K	A-3335	A-3852
6BS5	S.	A	4.5	5K	A-3877	A-3849
6BU6	S.	A	0.3	10K	A-3879	A-3822
6BW6	S.	A	4.5	5K	A-3877	A-3823
	S.	A	5.5	8.5K	A-3879	A-3849
6CA5	S.	A1	1.5	4.5K	A-3877	A-3856
6CA7	S.	A	11.0	2K		A-3849
6CL6	S.	A	2.8	7.5K	A-3329	A-3822
6CM6	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.	10K	A-3335	A-3852
6CS5	S.	A	3.8	4K	A-3877	A-3856
6CU5	S.	A	2.3	2.5K	A-3332	A-3825
6CZ5	S.	A	5.4	5K	A-8092	A-3823
	P.P.	AB1	21.5	7.5K		A-3830
6D5G	S.	A	1.4	2.2K	A-3878	A-3856
6DB5	S.	A	3.8	4K	A-3877	A-3856
6DG6-GT	S.	A	3.8	4K	A-3877	A-3856
6D55	S.	A	3.6	8K	A-8114	A-3822
6DZ8	S.	A	2.0	2.5K	A-3822	A-3825
6E6	P.P.	A	1.6	14K	A-3496	A-3856
6EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	A	3.8	6K		A-3822
6F6(GT)	S.	A	4.8	7K	A-3878	A-3822
	P.P.	AB	18.5	10K	A-3311	A-3870
6FE5	S.	A1	4	1K	A-8070	
	P.P.	A1	8	1.6K		
6G6-G	S.	A	1.1	10K	A-3879	A-3822
6HC5	S.	A1	2	2K	A-3876	A-3856
	S.	A1	4	4K	A-2203	A-3856
6GK6	S.	A1	5.7	5.2K	A-3877	A-3823
	P.P.	AB1	17	8K		A-3852
6HG5	S.	A1	4.5	5K	A-8092	A-3823
6K6-GT	S.	A	4.5	9K	A-3879	A-3822
	P.P.	A	10.5	12K	A-2312	A-3880
6J10	S.	A1	4.2	5K	A-8092	A-3823
6L6(G)(GA)	S.	A	6.5	2.5K	A-3876	A-3825
	S.	A	10.8	4.2K	A-2203	A-3849
	P.P.	A	17.5	5K	A-3872	A-3830
	P.P.	AB1	26.5	6.6K	A-3801	A-3830
	P.P.	AB1	18	3.8K	A-3802	A-3830
	P.P.	AB2	31	6K	A-3307	
	P.P.	AB2	47	3.8K	A-3802	
6M5	S.	A	3.8	7K	A-3878	A-3824
	P.P.	AB1	9.4	7K	A-3801	A-3880
6N6-G	S.	A	4	7K	A-3878	A-3824
6N7	P.P.	B	10	8K		A-3880
6R8	S.	A	0.3	10K	A-3879	A-3856
6SR7	S.	A	0.3	10K	A-3879	A-3856
6U6-GT	S.	A	5.5	3K		A-3849
6V5-GT	S.	A	4.5	5K	A-3877	A-3824
	P.P.	AB1	10	10K	A-3311	A-3880
6V6(GT)	S.	A	5.5	5K	A-3877	A-3823
	P.P.	AB1	10	10K	A-3311	A-3880
6V7-G	S.	A	0.35	20K	A-3327	
6W6-GT	S.	A	3.8	5K	A-3877	A-3849
6Y6-G(GT)	S.	A	6.0	2.6K	A-3876	A-3825
6Y7-G	P.P.	B	8.0	14K	A-2312	A-3823
6Z7-G	P.P.	B	4.2	12K	A-3831	A-3823
7A5	S.	A	1.5	2.5K	A-3332	A-3849
7B5	S.	A	4.5	9K	A-3879	A-3822
	P.P.	AB2	19	10K	A-2312	A-3880
7C5	S.	A	5.5	8.5K	A-3879	A-3822
	P.P.	A	8	10K	A-3335	A-3823
8BQ5	S.	A	5.7	4.5K	A-8092	A-3849
	P.P.	AB1	11.0	8K	A-3335	A-3852
9DZ8	S.	A	2.0	2.5K	A-3332	A-3825
10AL11	S.	A1	4	5K	A-3877	A-3856
11C5	S.	A	1.5	2.5K	A-3332	A-3825
12A5	S.	A	3.4	3.3K	A-2203	A-3825
12A6(GT)	S.	A	3.4	7.5K	A-8114	A-3822
12A7	S.	A	.55	13.5K	A-3881	A-3848
12AB5	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-3335	A-3849
12AL8	S.	A	0.02	.8K	TA-9	
12AL11	S.	A1	4	5K	A-3877	A-3856
12AQ5	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-3335	A-3852
12BF6	S.	A	0.3	10K	A-3879	A-3856
12BK5	S.	A	3.5	6.5K	A-3878	A-3849
12BU6	S.	A	0.3	10K	A-3879	A-3856
12C5	S.	A	2.3	2.5K	A-3332	A-3825
12CA5	S.	A	1.5	4.5K	A-3877	A-3856
12CM6	S.	A1	2.0	5.5K	A-3877	A-3849
	S.	A1	5.5	8.5K		A-3849
12CS5	S.	A	3.8	4K	A-3877	A-3856
12CU5	S.	A	2.3	2.5K	A-3332	A-3825
12DB5	S.	A	3.8	4K	A-3877	A-3856
12DL8	S.	A	0.04	.8K	TA-9	
12DM5	S.	A	1.9	2.5K	A-3332	A-3825
12DU7	S.	A	0.025	2.7K	TA-29	
12DV8	S.	A	0.005	1.25K	TA-26	
12DZ8	S.	A	2.0	2.5K	A-3332	A-3825
12ED5	S.	A	1.5	4.5K	A-3328	A-3825
12EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	AB1	3.8	6K		A-3822
12EM6	S.	A	0.01	3.5K	TA-45	
12FX5	S.	A1	1.3	3K	A-3336	A-3856
12J8	S.	A	0.02	2.7K	TA-29	
12K5	S.	A	0.04	.8K	TA-25	
12L6-GT	S.	A	3.8	4K	A-3877	A-3856
12L8-GT	S.	A	1.0	10K	A-3879	A-3849
12V6-GT	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-8093	A-3880
12W6-GT	S.	A	3.8	4K	A-3877	A-3856
13J10	S.	A1	4.2	5K	A-8092	A-3823
14A5	S.	A	2.8	7.5K	A-8114	A-3822
14C5	S.	A	5.5	8.5K	A-2313	A-3849
	P.P.	AB	14	8K		A-3880
17C5	S.	A	2.3	2.5K	A-3332	A-3825
17CA5	S.	A	1.5	4.5K	A-3877	A-3856
17CU5	S.	A	2.3	2.5K	A-3332	A-3825
17L6-GT	S.	A	3.8	4K	A-3877	A-3856
19	P.P.	B	2.1	10K	A-3335	A-3880
19AQ5	S.	A	4.5	5K	A-3877	A-3849
25A6(GT)	S.	A	2.2	5K	A-3877	A-3849
25A7-GT	S.	A	.77	4.5K	A-3877	A-3825
25AC5-GT	P.P.	B	6	4.8K	A-3872	A-3823
	S.	A	2	2K	A-3332	A-3825
25B5	S.	A	3.8	4K	A-2203	A-3822
25B6-G	S.	A	7.1	2.5K	A-3876	A-3849
25BK5	S.	A	3.5	6.5K	A-3878	A-3849
25C5	S.	A1	2	2.5K	A-3332	A-3856
25C6-G	S.	A	6.0	2.6K	A-3876	A-3849
25CA5	S.	A	1.5	4.5K	A-3328	A-3825
25EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	AB1	3.8	6K		A-3822
25F5	S.	A	1.2	2.5K	A-3332	A-3825
	P.P.	A	2.9	4.5K	A-3872	A-3823
25L6(GT)	S.	A	2.1	2K	A-3876	A-3849
	S	A	4.3	3K		A-3823
	S.	A	3.8	4K	A-2203	A-3823
25N6-G	S.	A	3.8	4K	A-2203	A-3822
25W6	S.	A	3.8	4K	A-3877	A-3856
26A7-GT	S.	A	.18	1.5K	A-3332	A-3825
26E6-G	S.	A	6.0	2.6K		A-3825
28D7	S.	A	.1	4K	A-3328	A-3848
32ET5	S.	A	1.2	2.8K	A-3328	A-3825
32L7-GT	S.	A	1	2.6K	A-3332	A-3822
34GD5A	S.	A	1.4	2.5K	A-3332	A-3856
35A5	S.	A	1.5	2.5K	A-3332	A-3856
	S.	A	3	5K	A-3877	A-3849
35B5	S.	A	1.5	2.5K	A-3332	A-3856
35C5	S.	A	1.5	2.5K	A-3332	A-3849
35DZ8	S.	A	2.0	2.5K	A-3332	A-3825
35EH5	S.	A1	1.2	3K	A-3336	A-3856
35L6-GT	S.	A	1.5	2.5K	A-3332	A-3856
	S.	A	3	5K	A-3877	A-3849
42	S.	A	4.8	7K	A-3878	A-3849
	P.P.	A	18.5	10K	A-3311	A-3830
50A5	S.	A	2.1	2K	A-3876	A-3856
	S.	A	3.8	4K	A-2203	A-3825
50B5	S.	A	1.9	2.5K	A-3332	A-3825
50BK5	S.	A	3.5	6.5K	A-3878	A-3856
50C5	S.	A	1.9	2.5K	A-3332	A-3825
50C6-G	S.	A	3.6	2K	A-3876	A-3825
50CA5	S.	A	1.1	3.5K	A-3328	A-3825
50EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	A	3.8	6K		A-3822
50FE5	S.	A1	4	1K	A-8070	
	P.P.	A1	8	1.6K		
50FK5	S.	A1	1.2	3K	A-3336	A-3856
50L6-GT	S.	A	2.1	2K	A-3876	A-3856
	S.	A	3.8	4K	A-2203	A-3825
60FX5	S.	A1	1.3	3K	A-3336	A-3856
70A7-GT	S.	A	1.5	2.5K	A-3332	A-3825
70L7-GT	S.	A	1.8	2K	A-3332	A-3825
117L7/M7-GT	S.	A	.85	4K	A-2203	A-3825
117N7-GT	S.	A	1.2	3K	A-3332	A-3825
117P7-GT	S.	A	.85	4K	A-2203	A-3825
1631	P.P.	AB1	26.5	6.6K	A-3801	
1632	S.	A	2.1	2K	A-3332	A-3825
1644	P.P.	A	1.0	10K	A-3831	A-3856
5640	S.	A	1.25	3K	A-3332	A-3825
5670	P.P.	AB1	1.0	27K	A-3857	
5672	S.	A	.065	20K	A-3327	
5686	S.	A	2.7	9K	A-3879	A-3822
5812	S.	A	4.3	1.7K	A-3876	A-3825
5824	S.	A	4.3	1.7K	A-3876	A-3825
5871	S.	A	5.5	8.5K	A-3879	A-3822
5902	S.	A	1	3K	A-3328	A-3825
6005	S.	A	2.0	5.5K	A-4431	A-3856
6095	P.P.	AB1	10.0	10K	A-3335	A-3852
6216	S.	A	3.8	4.5K	A-3877	A-3856
6287	S.	A	4.5	6K	A-4431	A-3823
6360	P.P.	AB1	9.3	8K	A-3335	A-3852
6516	S.	A	1.4	16K	A-3881	A-3856
6526	S.	A	0.375	10K	A-3879	A-3856
6669	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-8093	A-3880
6677	S.	A	2.8	7.5K	A-8114	A-3822
6945	S.	A	0.8	3K	A-3328	A-3825
6973	P.P.	AB1	15	5.5K	A-3307	A-3880
	P.P.	AB1	20	7.5K	A-3885	A-3830
7061	S.	A	3.0	5K	A-3877	A-3856

High Fidelity Applications

Tube	Use	Class	Watts	Load Res. in Ohms	Stancor Part No.
807/W	P.P.	A	8.0	10K	A-8054
	P.P.	A	25.0	7.6K	A-8072
	P.P.	AB1	15.0	3K	A-8052
	P.P.	AB2	55.0	3.2K	A-8052
1614	P.P.	A	10.0	10K	BO-12
	P.P.	AB1	26.5	6.6K	A-8056
5881	P.P.	A	8.0	10K	BO-12
	P.P.	A	25.0	7.6K	A-8072
	P.P.	AB1	26.5	6.6K	A-8056
6146	P.P.	A	18.0	10K	BO-13
6550	P.P.	A	55.0	3.5K	A-8052
	P.P.	AB1	60.0	4.3K	BO-15
	P.P.	AB1	100.0	5K	BO-14
7027	P.P.	AB1	31.5	4.5K	A-8053
	P.P.	AB1	34.0	6.6K	A-8056
	P.P.	AB1	50.0	6K	A-8056
	P.P.	AB	24.0	8K	A-8072
7189	P.P.	AB1	24.0	8K	A-8072
	P.P.	AB1	16.5	11K	BO-13
7212	P.P.	TR1	22.0	8K	A-8072
	P.P.	AB1	37.0	6.6K	A-8056
7408	S.	A1	4.5	5K	A-8092
7868	S.	A1	11	3K	A-3830
	P.P.	AB1	30	6.6K	A-8056
EL-34	P.P.	AB1	37.0	6.6K	A-8056
(6CA7)	P.P.	AB1	60.0	4.3K	BO-15
EL-37	P.P.	AB1	69.0	3.25K	BO-15
EL-84	S.	A	5.7	5.2K	A-8053
(6BQ5)	P.P.	AB1	17.0	8K	A-8072
KT-66	P.P.	A	10.0	10K	A-8054
	P.P.	AB1	20.0	10K	BO-13
	P.P.	AB1	25.0	7.6K	A-8072
KT-88	P.P.	AB1	60.0	4.3K	BO-15
	P.P.	AB1	100.0	5K	BO-14

K is symbol for 1,000: 25K=25,000 2.5K=2,500 .25K=250

© United Technical Publications

OUTPUT TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

OUTPUT: SINGLE PLATE TO VOICE COIL AND/OR LINE

Section	Catalog No.	Style	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.	Styles
1	A-8070	A	1000	4.0	90	4	Leads	Leads	1½	2⅜	1⅜	2	—	0.4	
	A-3332	A	2000	3.2	50	3	Leads	Leads	1¼	2⅛	1¼	1¾	—	0.4	
	A-3330	A	2000 a	3.5	60	5	Leads	Leads	1½	2⅜	1⅜	2	—	0.4	
	A-3876	A	2000	4.0	60	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	
	A-3336	A	2500 b	3.5	50	5	Leads	Leads	1⅝	2⅜	1⅜	2	—	0.4	
	A-3328	A	4000	3.5	10	3	Leads	Leads	1⅛	2⅛	1¼	1¾	—	0.4	
	A-2203	A	4000	8.0	40	5	Leads	Leads	1½	2⅞	1⅝	2⅜	—	0.7	
	A-3877	A	5000	4.0	40	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	
	A-3309	A	5000	3-4	35	3	Leads	Leads	1⅜	2⅛	1¼	1¾	—	0.4	
	A-8092	A	5000	3-4	50	8	Leads	Leads	1½	2⅞	1⅝	2⅜	—	0.5	
	A-3337	S	5000	6-8	40	10	Leads	Leads	1¾	2⅞	2⅜	2⅜	—	1.0	
	A-3310	C	5000	500/15/8/4	55	20	Leads	Leads	2½	2¾	3⅛	2	1¾	2.5	
	COC-1	SC	5000	600/150/16/8/4	55	5	Leads	Leads	2½	3	3 1/16	1¾	2 11/16	2.25	
	COS-1	SC	5000	600/150/16/8/4	55	5	Lugs	Lugs	2½	3	3 1/16	1¾	2 11/16	2.25	
	A-4431	A2	6000	3-4	35	5	Leads	Leads	1½	—	1⅝	1¾	1/16	0.8	
2	A-3878	A	7000	4.0	30	5	Leads	Leads	1¼	2⅜	1⅜	2	—	0.4	
	A-2313	A	7000	8.0	40	10	Leads	Leads	2	3¼	2	2 13/16	—	1.0	
	A-3841	S	7000/6000/5000 4000/2500	500	60	10	Lugs	Lugs	2	3⅛	2¾	2 13/16	—	1.5	
	A-4770	S	7000/6000/5000 4000/2500	500	60	20	Leads	Lugs	2⅛	3⅝	3⅛	3⅛	—	2.4	
	A-8114	A	7600	3.2	32	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	
	A-3329	A	8000	3.5	10	3	Leads	Leads	1⅛	2⅛	1¼	1¾	—	0.4	
	COC-2	SC	8000	600/150/16/8/4	55	5	Leads	Leads	2½	3	3 1/16	1¾	2 11/16	2.25	
	COS-2	SC	8000	600/150/16/8/4	55	5	Lugs	Lugs	2½	3	3 1/16	1¾	2 11/16	2.25	
	A-3879	A	10000	4.0	30	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	
	A-3881	A	15000	4.0	10	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	
	A-3250	A	20000/10000 5000	500/333/200 125/50	15	5	Lugs	Lugs	1⅞	3¼	2	2 13/16	—	1.0	
	A-3315	C	20000/10000 5000	500/333/200 125/50	35	20	Lugs	Lugs	2½	2¾	3⅛	2	1¾	2.7	
	A-3327	A	25000	4.0	5	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	

OUTPUT: PUSH-PULL PLATES TO VOICE COIL AND/OR LINE

Section	Catalog No.	Style	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.	Styles
3	A-8098	C	2000 C.T.	32/16/8	140	15	Leads	Leads	2½	3¼	3⅛	2	2¼	3.3	
	A-3802	C	3800/3300 C.T.	500/250/8/4	125	75	Leads	Leads	3¾	4	4 11/16	3	2 13/16	7.9	
	A-8094	A	4000 C.T.	32/16/8	80	7.5	Leads	Leads	2¼	3¾	2⅜	3⅛	—	1.5	
	A-3851	C	4400 C.T. c	500/250/15/8/4	70	30	Leads	Leads	2 13/16	3¼	3½	2¼	2	3.6	
	A-3872	SC	5000 C.T.	15/8/4	75	18	Leads	Leads	2¼	2¾	2 11/16	1½	2⅜	1.7	
	A-3800	C	5000 C.T.	500/250/15/8/4	80	30	Leads	Leads	2 13/16	3¼	3½	2¼	2	3.7	
	A-3307	C	6000 C.T.	500/15/8/4	100	30	Leads	Leads	2 13/16	3¼	3½	2¼	2	3.5	
	PCO-200	SC	6000 C.T. c	600/150/16/8/4	250	30	Leads	Leads	4 5/16	5¼	5 5/16	2½	4¾	9.0	
	PSO-200	SC	6000 C.T. c	600/150/16/8/4	250	30	Lugs	Lugs	4 5/16	5¼	5 5/16	2½	4¾	9.0	
	A-3801	C	6600 C.T.	500/250/15/8/4	150	35	Leads	Leads	3⅛	3½	3⅞	2½	2 3/16	4.8	
	A-3885	C	9000 C.T.	500/250/15/8/4	150	35	Leads	Leads	3⅛	3⅜	3⅞	2½	2 3/16	4.8	
	A-4432	S2	10000 C.T.	4.0	50	10	Leads	Leads	1⅝	—	2⅜	1⅞	1/16	1.0	
	A-3304	C	10000/7000 C.T.	500/15/8/4	60	25	Leads	Leads	2½	2¾	3⅛	2	1¾	2.7	
	A-3311	C	10000 C.T.	500/15/8/4	70	25	Leads	Leads	2 13/16	3¼	3½	2¼	2	3.5	
	A-3831	A	10000 C.T.	8/4/2	40	5	Leads	Leads	1¾	2⅞	1⅝	2⅜	—	0.7	
4	A-8093	A	10000 C.T.	3-4	40	10	Leads	Leads	1½	2⅞	1⅝	2⅜	—	0.7	
	A-3335	S	10000 C.T.	6-8/3.2-4	40	10	Leads	Leads	2	2⅞	2⅜	2⅜	—	1.0	
	PCO-150	SC	10000 C.T. c	600/150/16/8/4	200	15	Leads	Leads	3¼	4	4¼	2¼	3½	5.0	
	PSO-150	SC	10000 C.T. c	600/150/16/8/4	200	15	Lugs	Lugs	3¼	4	4¼	2¼	3½	5.0	
	A-3839	SC	10000 C.T.	2000 and 15/8/4	30	10	Leads	Leads	2¼	2¾	2 11/16	1½	2⅜	1.3	
	PCO-150A	SC	12000 C.T.	600/150/16/8/4	200	15	Leads	Leads	3¼	4	4¼	2¼	3½	5.0	
	A-2312	A	14000 C.T.	4.0	40	10	Leads	Leads	1⅞	2⅞	1⅝	2⅜	—	1.0	
	A-3496	A	14000 C.T.	4.0	25	5	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.4	
	A-3303	C	14000 C.T.	500/15/8/4	55	20	Leads	Leads	2½	2⅝	3⅛	2	1 11/16	2.7	
	A-3842	S	14000/12000 10000/8000 C.T.	500	55	10	Lugs	Lugs	2	3⅛	2¾	2 13/16	—	1.7	
	A-3250	A	20000 C.T.	500/333/200 125/50	15	5	Lugs	Lugs	1⅞	3¼	2	2 13/16	—	1.0	
	A-3315	C	20000 C.T.	500/333/200 125/50	35	20	Lugs	Lugs	2½	2¾	3⅛	2	1 11/16	2.7	
	A-3857	A	25000 C.T.	4.0	10	5	Leads	Leads	1½	2⅜	1⅜	2	—	0.4	

Styles: A, A2, C, S, S2, SC

a Has 4.5% primary Tap. b Has 3% and 6% primary Taps. c Has Tertiary Winding to provide 10% inverse feedback.

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

OUTPUT TRANSFORMERS

UNIVERSAL OUTPUT

Section	Catalog No.	Style	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.	Styles
1	A-3856	A	S. or P.P. Plates 4000 to 14000	.05 to 122	35	4	Leads	Lugs	1½	2⅜	1⅜	2	—	0.4	A
	A-3822	A	S. Plate 7000 to 10000	.7 to 4	35	4	Leads	Lugs	1⅜	2⅜	1⅜	2	—	0.4	
	A-3848	A	S. Plate 7000 to 16000	.4 to 4	10	5	Leads	Lugs	1⅜	2⅜	1⅜	2	—	0.4	
	A-3326	A	S. or P.P. Plates 1500 to 7000	.48 to 28.7	50	6	Leads	Lugs	1⅝	2⅜	1⅜	3	—	0.4	
	A-3823	A	S. or P.P. Plates 4000 to 14000	.05 to 122	40	8	Leads	Lugs	1⅝	2⅞	1⅝	2⅜	—	0.7	
	A-3850	S	S. or P.P. Plates 4000 to 14000	.05 to 122	40	8	Leads	Lugs	1⅝	2⅜	2	2	—	0.7	
	A-3825	A	S. Plate 1500 to 4500	.3 to 4	75	8	Leads	Lugs	1¾	3¼	2	2 13/16	—	0.9	
	A-3824	A	S. or P.P. Plates 6000 to 10000	.6 to 4	75	8	Leads	Lugs	2	3¼	2	2 13/16	—	1.4	B
	A-3849	A	S. Plate 1500 to 10000	.02 to 21	55	10	Lugs	Lugs	1½	2⅞	1⅝	2⅜	—	0.7	
	A-3880	A	P.P. Plates 4000 to 14000	.05 to 122	40	15	Lugs	Lugs	2⅛	3¾	2⅜	3⅛	—	1.7	
	A-2855	L	P.P. Plates 4000 to 14000	.05 to 122	50	15	Lugs	Lugs	2⅜		2	1½	1 13/16	1.0	
	A-3890	SC	P.P. Plates 4000 to 14000	.05 to 122	50	15	Leads	Leads	2¼	2¾	2 11/16	1½	2⅜	1.5	
	A-3852	S	P.P. Plates 4000 to 14000	.05 to 122	40	18	Leads	Lugs	2	2⅞	2⅜	2⅜	—	1.3	
	A-3870	A	P.P. Plates 4000 to 14000	.05 to 122	50	18	Lugs	Lugs	2	3¼	2	2 13/16	—	1.3	
	A-3830	S	P.P. Plates 3000 to 10000	.04 to 122	60	20	Leads	Lugs	2⅛	3⅛	2¾	2 13/16	—	1.8	

OUTPUT: HIGH FIDELITY: FREQ. RESPONSE ±1 DB 20 to 20,000 CYCLES

2	A-8050	C	1500 C.T.	16/8	200	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	C
	A-8060	C	1500 C.T.	500	200	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8051	C	2500 C.T.	16/8	150	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8061	C	2500 C.T.	500	150	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8052	C	3000 C.T.	16/8	175	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8062	C	3000 C.T.	500	175	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8053	C	5000 C.T.	16/8	150	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8063	C	5000 C.T.	500	150	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8056	C	6600 C.T.	16/8	125	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8066	C	6600 C.T.	500	125	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8072	C	7600 C.T. a	16/8/4	100	25	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8054	C	9000 C.T.	16/8	100	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	
	A-8064	C	9000 C.T.	500	100	50	Leads	Leads	3 7/16	4¼	4¼	2¾	3 1/16	6.5	

OUTPUT: HIGH FIDELITY: FREQ. RESPONSE ±1½ DB 30 TO 20,000 CYCLES

3	BO-1	B	15,000 b	600/150	10	.032	Lugs	Lugs	2⅜	2½	3 1/16	1 11/16	1 13/16	2.25	L
	BO-2	B	20,000 C.T.	600/150	10	1.0	Lugs	Lugs	2 11/16	2⅞	3½	1⅞	2	3.0	
	BO-5	B	10,000 C.T.	600/150/16/8/4	45	5.0	Lugs	Lugs	3	3¼	3⅞	2⅛	2⅜	4.0	
	BO-6	B	7500 C.T.	20/8	80	20	Lugs	Lugs	3⅝	3 11/16	4⅝	2⅜	2⅝	5.75	
	BO-9	B	5000/3000 C.T.	600/150/16/8/4	75	15	Lugs	Lugs	3⅝	3 11/16	4⅝	2⅜	2⅝	6.0	

TONE CONTROL CHOKE: WRITE FOR BULLETIN 456R

4	C-2332-1		1.6 hy	For use in Pre-amplifiers for Separate Tone Control				h = 2½, w = 2, d = 2⅛	1.3

LINE TO VOICE COIL

Quotes on modifications of our STANDARDS in minimum quantities of 500

Section	STANCOR Part No.	Style	Impedance in Ohms Primary	Impedance in Ohms Sec.	Power Steps in Watts	Termination Pri	Termination Sec	Height Overall	Base Area	Mtg. Ctrs.	WT. Lbs.	Styles
5	A-8104	S	3000/2000/1500/1000/500	4/8/16	10	Lugs	Lugs	2⅜	2⅞ x 1¾	2⅜	1.5	S
	A-3882	C	500/333/250	4/8/15	25	Lugs	Lugs	3⅛	2¾ x 2½	2 x 1 11/16	2.4	
	A-3818	S	1500/1000/500	4/8/15	25	Lugs	Lugs	3⅛	3⅝ x 2⅛	3⅛	2.2	
	A-3883	S	500	4/6/8/15	25	Lugs	Lugs	2⅜	2⅞ x 1¾	2⅜	1.1	
	A-8101	A	500	3.2/6-8	5	Lugs	Leads	1⅜	2 7/16 x 1⅜	2	0.4	
	A-7947	A	2000/1500/1000/500	3.2/6-8	8	Lugs	Lugs	1⅝	2⅞ x 1⅝	2⅜	0.7	
	A-7949	S	2000/1500/1000/500	3.2/6-8	12	Lugs	Lugs	2⅜	2⅞ x 1¾	2⅜	1.1	
	A-3837	S	500	.06 to 48	15	Lugs	Lugs	2⅜	2⅞ x 2	2⅜	1.4	SC

a. Has Screen grid taps on primary. b. Has Tertiary Winding to provide 15% inverse feedback. c. Has cathode feedback Winding.
• New part number.

© United Technical Publications

OUTPUT TRANSFORMERS

ESSEX Stancor/RBM — STANCOR

These units are also available with separate "quick connect" lead assemblies for easy installation. Quotations submitted on request.

NOTE

25 VOLT LINE TO VOICE COIL

Quotes on modifications of our STANDARDS in minimum quantities of 500

Section	STANCOR Part No.	Style	Impedance in Ohms Primary	Impedance in Ohms Sec.	Power Steps in Watts	Termination Pri	Termination Sec	Height Overall	Base Area	Mtg. Ctrs.	WT. Lbs.
1	A-8096	S	78/156/312/625/1250	4/8/16	8/4/2/1/0.5	Lugs	Lugs	2	1⅝ x 2⅞	2	0.65
	A-8097	S	39/78/156/312/625/1250	4/8/16	16/8/4/2/1/0.5	Lugs	Lugs	2¾	2¼ x 3⅛	2 13/16	1.6
	A-8095	A	125/250/500/1000/2000	4/8	5/2.5/1.25/.62/.31	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	A-8099	A	312/625/1250	4/8	2/1/0.5	Lugs	Lugs	1¼	2⅛ x 1⅜	1¾	0.3
	A-8087	A	312/625/1250	8	2/1/0.5	Leads	Leads	1⅜	2⅜ x 1⅜	2	0.4
	• A-4790	A	500/1000/2000	8	1.25/.62/.31	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	• A-4791	A	125/250/500	8	5/2.5/1.25	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	• A-4793	S	78/156/312/625/1250	8	8/4/2/1/0.5	Lugs	Lugs	2	1⅝ x 2⅞	2	0.65
	• A-4795	S	39/78/156/312/625/1250	8	16/8/4/2/1/0.5	Lugs	Lugs	2¾	2¼ x 3⅛	2 13/16	1.6
	A-8088	A	156/312/625/1250/2500/5000	8	4/2/1/.5/.25/.12	Leads	Leads	1⅝	2⅞ x 1⅝	2⅜	0.7
	• A-4797	A	156/312/625/1250/2500	8	4/2/1/.5/.25	Lugs	Lugs	1⅝	2⅞ x 1⅝	2⅜	0.7
	• A-4798	A	62.5/125/250	8	10/5/2.5	Lugs	Lugs	1⅝	2¾ x 1⅜	2⅜	0.5
	• A-4792	A	125/250/500/1000/2000	4	5/2.5/1.25/.62/.31	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	• A-4794	S	78/156/312/625/1250	4	8/4/2/1/0.5	Lugs	Lugs	2	1⅝ x 2⅞	2	0.65
	• A-4796	S	39/78/156/312/625/1250	4	16/8/4/2/1/0.5	Lugs	Lugs	2¾	2¼ x 3⅛	2 13/16	1.6

LINE TO LINE

Section											
2	A-4350	A	50/125/200/333/500	50/125/200/333/500	10	Lugs	Lugs	2	1⅞ x 3¼	2 13/16	1.0
	A-4407	C	50/125/200/333/500	50/125/200/333/500	20	Lugs	Lugs	3⅛	2½ x 2¾	2x1¾	2.4
	A-3838	NV	500	84/100/125/166/250	30	Lugs	Lugs	3⅛	2½ x 2 11/16	2 x 2	2.3

70.7 VOLT LINE TO VOICE COIL

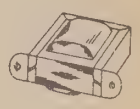
[illegible]

Section											
3	A-8102	S	625/1250/2500/5000/10,000	4/8/16	8/4/2/1/0.5	Lugs	Lugs	2	1⅝ x 2⅜	2	0.7
	A-8103	S	312/625/1250/2500/5000/10,000	4/8/16	16/8/4/2/1/0.5	Lugs	Lugs	2¾	2¼ x 3⅛	2 13/16	1.5
	A-8105	A	1000/2000/4000/8000/16,000	4/8	5/2.5/1.25/.62/.31	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	A-8109	A	2500/5000/10,000	4 8	2/1/0.5	Lugs	Lugs	1¼	2⅛ x 1⅜	1¾	0.3
	A-8080	A	1000/1250/1667/2500/5000	8/16	5/4/3/2/1	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	A-8082	S	333/357/384/417/455	8/16	15/14/13/12/11	Lugs	Lugs	2⅜	2⅞ x 1¾	2⅜	1.2
	A-8081	S	500/555/625/715/833	8/16	10/9/8/7/6	Lugs	Lugs	2	2⅞ x 1⅝	2	0.7
	A-8083	A	2500/5000/10,000	8	2/1/0.5	Leads	Leads	1⅜	2⅞ x 1⅜	2	0.4
	• A-4781	A	1000/1250/1667/2500/5000	8	5/4/3/2/1	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	• A-4782	S	333/357/384/417/455	8	15/14/13/12/11	Lugs	Lugs	2⅜	2⅞ x 1¾	2⅜	1.2
	A-8084	A	1250/2500/5000/10,000/20,000/40,000	8	4/2/1/.5/.25/.12	Leads	Leads	1⅝	2⅞ x 1⅝	2⅜	0.7
	• A-4783	A	1250/2500/5000/10,000/20,000	8	4/2/1/.5/.25	Lugs	Lugs	1⅝	2⅞ x 1⅝	2⅜	0.7
	• A-4784	S	500/625/833	8	10/8/6	Lugs	Lugs	2	2⅞ x 1⅝	2	0.7
	• A-4785	S	625/1250/2500/5000/10,000	8	8/4/2/1/0.5	Lugs	Lugs	2	1⅝ x 2⅜	2	0.7
	• A-4787	A	4000/8000/16,000	8	1.25/.62/.31	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	• A-4789	A	1000/2000/4000	8	5/2.5/1.25	Lugs	Lugs	1⅜	2⅞ x 1½	2	0 4
	• A-4799	A	500/1000/2000	8	10/5/2.5	Lugs	Lugs	1⅜	2¾ x 1⅜	2⅜	0.5
	• A-4786	S	625/1250/2500/5000/10,000	4	8/4/2/1/0.5	Lugs	Lugs	2	1⅝ x 2⅜	2	0.7
	• A-4788	A	1000/2000/4000/8000/16,000	4	5/2.5/1.25/.62/.31	Lugs	Lugs	1⅜	2⅞ x 1½	2	0.4
	• A-8076	S	250/500/1000/2000	4/8/16	20/10/5/2.5	Lugs	Lugs	2⅜	2⅞ x 1⅞	2⅜	1.0
	• A-8077	S	208/416/833/1666/3333	4/8/16	24/12/6/3/1.5	Lugs	Lugs	2¾	3⅛ x 2	2 13/16	1.5
	• A-8078	S	167/250/500/1000	4/8/16	30/20/10/5	Lugs	Lugs	2⅜	2⅞ x 1¾	2⅜	1.0
	• A-8079	S	100/125/200/333	4/8/16	50/40/25/15	Lugs	Lugs	2⅜	2⅞ x 2	2⅜	1.4

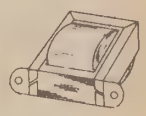
140 VOLT LINE TO VOICE COIL

Section											
4	A-8108	A	4000/8000/16,000/32,000	4/8	5/2.5/1.25/.62	Lugs	Lugs	1⅜	1½ x 2⅜	2	0.4
	A-8106	S	2500/5000/10,000/20,000	4/8/16	8/4/2/1	Lugs	Lugs	2	1⅝ x 2⅜	2	0.7
	A-8107	S	1250/2500/5000/10,000/20,000	4/8/16	16/8/4/2/1	Lugs	Lugs	2¾	2 x 3⅛	2 13/16	1.8

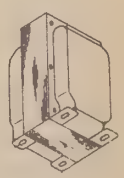
Styles



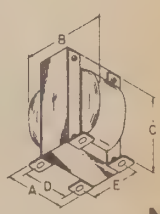
A



S



C



NV

• New Part Number.

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

OUTPUT TRANSFORMERS
TECHNICAL DATA

The Constant Voltage Line Sound Distribution Systems have become the most widely accepted systems in use today. They offer the Sound Engineer an easy means of establishing the volume level of each speaker in a system without the use of potentiometers or similar devices. The proven simplicity and versatility of these systems minimize the problem of speaker impedance mismatching thereby insuring high quality sound reproduction and minimum power losses. The use of higher power driving the constant voltage lines also helps to lower power losses over longer distances.

Most of the newer P.A. amplifiers have a designated 25 volt, 70.7 volt or 140 volt outlet on the output transformer, but almost any older amplifier has an impedance tap which may be used for the desired voltage output.

To insure a steady maintenance of the desired line voltage, it is recommended that the amplifier should be *capable* of producing 1½ times the total power of the various speakers connected. Hence, if the sum of the speakers equals 25 watts, the driving amplifier should be *capable* of producing 37½ watts. The power and impedance figures shown here with the formulas are based on the total power actually supplied to the speakers and *not* on the maximum *capability* of the amplifier.

The following table lists various amplifier power outputs with the corresponding impedance tap on the output transformer which will supply these three basic line voltages:

POWER OUTPUT	IMPEDANCE FOR 140 VOLT LINE	IMPEDANCE FOR 70.7 VOLT LINE	IMPEDANCE FOR 25 VOLT LINE
WATTS	OHMS	OHMS	OHMS
5	4,000	1,000	125
10	2,000	500	62.5
15	3,333	333	41.7
20	1,000	250	31.2
25	800	200	25
30	666	166	21
40	500	125	15.6
50	400	100	12.5
60	333	83	10.5
80	250	62.5	7.8
100	200	50	6.3

For power ratings not shown in this table, use the following formula:

$$Z = \frac{E^2}{W}$$

Z = Ohms
E = Volts
W = Watts Output

Impedance Tap for:

$$\text{140 volt line} = \frac{20{,}000}{W}$$

$$\text{70.7 volt line} = \frac{5{,}000}{W}$$

$$\text{25 volt line} = \frac{625}{W}$$

To establish the volume level of the various speakers in the system, it is necessary to know the power output of the amplifier and the power desired at each speaker. To choose the correct line transformers, match the power to be delivered to each speaker with the power tap on the line transformer. Then connect the primaries of the line transformers in parallel to the proper voltage tap on the output transformer of the amplifier. When the sum of the power ratings shown on each line transformer is equal to the power rating of the amplifier, and the speakers are connected to the appropriate secondary taps, the system is correctly matched.

To determine the proper tap on the primary of the line transformer for a given wattage input to the speaker, use the formula:

$$Z = \frac{E^2}{W}$$

EXAMPLE: In a 70.7 volt system, assume that the speaker requires 5 watts. What is the impedance of the tap required to produce this wattage?

$$Z = \frac{E^2}{W} = \frac{70.7 \times 70.7}{5} = \frac{5{,}000}{5} = 1{,}000 \text{ Ohms}$$

To determine the wattage input to the speaker when the tap is already connected, use the formula:

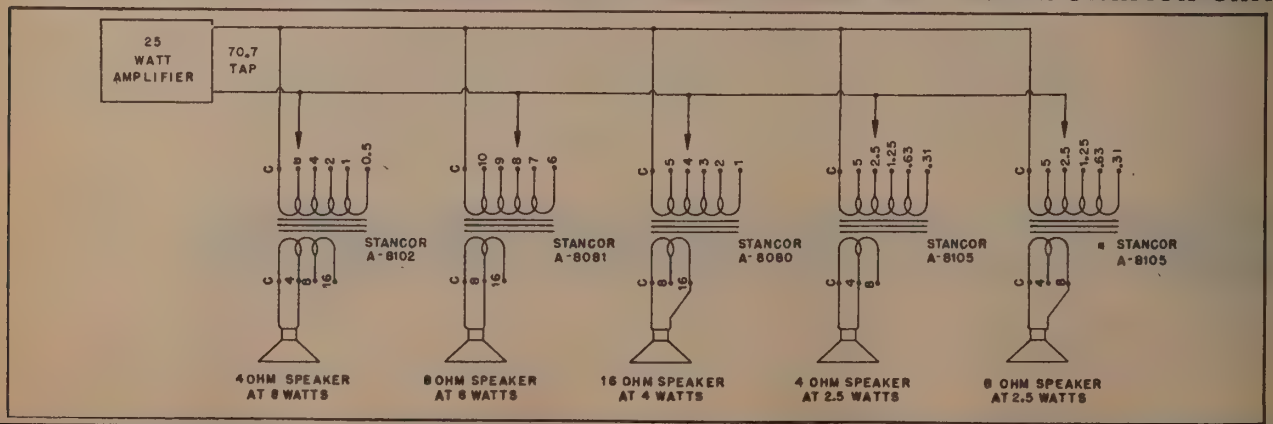
$$W = \frac{E^2}{Z}$$

EXAMPLE: In a 70.7 volt system, assume a speaker connected to the 500 Ohm tap of the primary of the line transformer. What wattage is produced by the use of this tap?

$$W = \frac{E^2}{Z} = \frac{70.7 \times 70.7}{500} = \frac{5{,}000}{500} = 10 \text{ Watts}$$

REMEMBER: Each speaker must have its own line-matching transformer and all of the line-matching transformers are connected in parallel to the proper voltage tap on the output transformer of the amplifier.

A TYPICAL 70.7 VOLT LINE DISTRIBUTION SYSTEM SHOWING THE PROPER STANCOR UNIT



© United Technical Publications

AUDIO TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

FOR INTERCOMS AND TRANSCEIVERS

Section	Catalog No.	Style	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Dimensions E	WT. Lbs.	Styles
1	A-4744	VE	Intercom Input	4	25,000	—	Leads	Leads	1½	2⅜	1⅜	2	—	0.5	A
	A-4748	A	Intercom Input	45 or 50	50,000	—	Leads	Leads	1⅜	2⅛	1¼	1¾	—	0.4	
	A-8090	A	Line to Voice Coil	45 or 50	6-8/3-4	3	Lugs	Lugs	1¼	2⅜	1⅜	2	—	0.5	
	A-8091	A	Line to Voice Coil	45 or 50	6-8/3-4	8	Lugs	Lugs	1½	2⅞	1⅝	2⅜	—	0.7	
	A-3817	S	Transceiver Modulation and Output	5000/6750 @ 50Madc	4	10	Leads	Leads	2	2⅜	2	2	—	0.7	
	A-3833	A	Transceiver Input Mic. or Plate to Grid	5000/200	60,000	5	Leads	Leads	1⅝	2⅞	1⅝	2⅜	—	0.7	
	A-3836	A	Transceiver Output	10,000	2000/50	5	Leads	Leads	1¹¹⁄₁₆	2⅞	1⅝	2⅜	—	0.7	
	A-4749	TD	Telephone patch Circuit	10,000	500	—	Leads	Leads	1½	2¼	1¹⁵⁄₁₆	—	1¹⁵⁄₁₆	1.0	

MICROPHONE, PICKUP OR LINE TO GRID

Section	Catalog No.	Style	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Dimensions E	WT. Lbs.	Styles
2	A-4705	A	S.B. Mic. to S. Grid	200/70	80,000	1:20	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.5	B
	A-4706	A	S.B. Mic. to S. Grid	100	60,000	1:24.5	Leads	Leads	1½	2⅜	1⅜	2	—	0.5	
	A-4708	S	D.B. Mic. to S. Grid	200 C.T.	57,000	1:17	Lugs	Lugs	1½	2⅜	2	2	—	0.7	
	A-4742	S	S.B. Mic. to P.P. Grids	100	400,000 C.T.	1:64	Leads	Leads	1⅞	2⅞	2⅜	2⅜	—	1.2	
	A-4747	VE	S.B. Mic. or Line to S. Grid	70	1,300,000	1:137	Leads	Leads	1¼	1¹³⁄₁₆	1⅞	1½	—	0.5	C1

MICROPHONE, PICKUP OR LINE TO GRID

Section	Catalog No.	Style	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Dimensions E	WT. Lbs.	Styles
3	A-4351	SC	Mic. or Line to S. Grid	500/333/200 125/50	89,000	1:13.3	Leads	Leads	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	1.4	S
	A-4352	A	Mic or Line to P.P. Grids	500/333/200 125/50	89,000 C.T.	1:13.3	Lugs	Lugs	1⅞	3¼	2	2¹³⁄₁₆	—	1.0	
	A-4709	SC	Dyn. mic or Pickup to S. Grid	30/15/8/4	106,000	1:60	Leads	Leads	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	1.7	
	A-4778	C1	Line to S. Grid	600/500 C.T.	240,000	1:20	Leads	Leads	1¹³⁄₁₆	2⅞	2¼	2⅜	—	1.0	
	A-4779	A	Line to S. or P.P. Grids	600/500 C.T.	60,000 C.T.	1:10	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.5	
	A-4780	VE	Line to P.P. Grids	600/500 C.T.	240,000 C.T.	1:20	Leads	Leads	1¹¹⁄₁₆	3¼	2	2¹³⁄₁₆	—	1.0	
	CIC-1	TD	Line to P.P. Grids	600/150	100,000 C.T.	1:13	Leads	Leads	1½	2¼	2⅛	—	1¹⁵⁄₁₆	0.75	SC
	CIS-1	TD	Line to P.P. Grids	600/150	100,000 C.T.	1:13	Lugs	Lugs	1½	2¼	2⅛	—	1¹⁵⁄₁₆	0.75	
	CIS-2	TD	S.B. or D.B. Mic. to P.P. Grids	125/50	125,000	1:32	Lugs	Lugs	1½	2¼	2⅛	—	1¹⁵⁄₁₆	0.75	

INPUT: HIGH FIDELITY-SHIELDED-FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

Section	Catalog No.	Style	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Dimensions E	WT. Lbs.	Styles
4	BI-1	B	Line to S. or P.P. Grids	600/150 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	2⅛	2¼	2¹¹⁄₁₆	1⅜	1⅝	1.5	TD
	BI-2 a	B	Line to S. or P.P. Grids	600/150 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	2⅛	2¼	2¹¹⁄₁₆	1⅜	1⅝	1.5	
	BI-3	B	Line Bridging to P.P. Grids	8000/6000 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	2⅛	2¼	2¹¹⁄₁₆	1⅜	1⅝	1.5	
	BI-4	B	Line to Line	600/150 C.T.	600/150 C.T.	+15 dbm	Lugs	Lugs	2⅛	2¼	2¹¹⁄₁₆	1⅜	1⅝	1.5	
	BI-5	B	Line to Line	600/150 C.T.	600/150 C.T.	+30 dbm	Lugs	Lugs	3	3¼	3⅞	2⅛	2⅜	3.25	
	BI-6	B	P.P. Plates to S. or P.P. Grids	20,000 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	2⅛	2¼	2¹¹⁄₁₆	1⅜	1⅝	1.5	
	BI-7	B	Mic., Pickup or Line to Grid	600/250/150 50	50,000 C.T.	+15 dbm	Lugs	Lugs	2⅛	2¼	2¹¹⁄₁₆	1⅜	1⅝	1.5	VE

INPUT: WF SERIES-SHIELDED-FREQ. RESPONSE ±2 DB 30 TO 20,000 CYCLES

Section	Catalog No.	Style	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Dimensions E	WT. Lbs.	Styles
5	WF-20	WF	Mic., pickup or Line to Grid	500-600/333 250/200 125-150/50	50,000 C.T.	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	WF
	WF-21 a	WF	Mic., pickup or Line to Grid	500/200/50	50,000 C.T.	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	
	WF-22	WF	Mic., pickup or Line to Grid	500-600/333 250/200/ 125-150/50	80,000 C.T.	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	
	WF-28	WF	S. or P.P. Plates to S. or P.P. Grids	15,000 C.T.	80,000 C.T.	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	
	WF-30	WF	Mixer, Mic., pickup, or Line to Line	500-600/333 250/200/ 125-150/50	500-600/333 250/200/ 125-150/50	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	
	WF-35	WF	S. Plate to Line	15,000	500-600/333 250/200/ 125-150/50	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	
	WF-36	WF	P.P. Plates to Line	30,000 C.T.	500-600/333 250/200/ 125-150/50	+7 db	Lugs	Lugs	1½	1½	2	1⁵⁄₃₂	1⅝₂	0.6	

Has Multiple Internal Magnetic Shields.

© United Technical Publications

INTERSTAGE: SINGLE PLATE (7,000 TO 20,000 OHM) TO SINGLE GRID

Section	Catalog No.	Style	Ratio	Max. Pri DCMA	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
1	A-53	A	1:3	10	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.5

INTERSTAGE: SINGLE PLATE (7,000 TO 15,000 OHM) TO PUSH-PULL GRIDS

Section	Catalog No.	Style	Ratio	Max. Pri DCMA	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
2	A-52C	A	1:2	10	Leads	Leads	1½	2⅜	1⅜	2	—	0.4
	A-62C	A	1:2	10	Leads	Leads	1⅝	2⅞	1⅝	2⅜	—	0.7
	A-4745†	SC	1:2	10	Leads	Leads	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	1.7
	A-53C	A	1:3	10	Leads	Leads	1⅜	2⅜	1⅜	2	—	0.5
	A-63C	A	1:3	10	Leads	Leads	1½	2⅞	1⅝	2⅜	—	0.7
	A-73C	A	1:3	10	Leads	Leads	1¾	3¼	2	2¹³⁄₁₆	—	1.0
	A-4719	SC	1:3	10	Leads	Leads	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	1.7
	A-64C	S	1:4	10	Leads	Leads	1⅝	2⅞	2	2	—	0.7

INTERSTAGE: PUSH-PULL PLATES (7,000 TO 15,000 OHMS) TO PUSH-PULL GRIDS

Section	Catalog No.	Style	Ratio	Max. Pri DCMA	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
3	A-4711	A	1:1	10	Leads	Leads	1⅝	2⅞	1⅝	2⅜	—	0.7
	A-4208	C	1:1.4	15	Leads	Leads	2½	2¾	3⅛	2	1¾	2.5

INTERSTAGE: MULTI-PURPOSE (7,000 TO 15,000 OHM PLATES)

Section	Catalog No.	Style	Ratio	Max. Pri DCMA	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
4	A-4774	S	1:3	10	Leads	Leads	1¾	2⅞	2⅜	2⅜	—	1.2
	A-4773	SC	1:3	10	Leads	Leads	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	1.7
			Proper Connections will provide Ratios of 1:1, 1:3, or 1:6 May be Used for Single or Push-Pull Plates to Single or Push-Pull Grids									

DRIVER: SINGLE PLATE TO PUSH-PULL GRIDS

Section	Catalog No.	Style	Pri. Impedance in Ohms	Max Pri DCMA	Ratio Pri: ½ Sec	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
5	A-4713	A	10,000	30	2:1	5	Leads	Leads	1⅝	2⅞	1⅝	2⅜	—	0.7
	A-4752	A	10,000	40	2/1.5/1:1	10	Leads	Leads	1¾	3¼	2	2¹³⁄₁₆	—	1.2
	A-4292	A	10,000	20	2.5:1	5	Leads	Leads	1½	2⅞	1⅝	2⅜	—	0.7
	A-4723	A	10,000	30	3:1	5	Leads	Leads	1⅝	2⅞	1⅝	2⅜	—	0.7
	A-4702	C	1500 to 5000	80	5:1	20	Leads	Leads	2½	2¾	3⅛	2	1¾	2.5

DRIVER: PUSH-PULL PLATES TO PUSH-PULL GRIDS

Section	Catalog No.	Style	Pri. Impedance in Ohms	Max Pri DCMA	Ratio Pri: ½ Sec	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
6	A-4208	C	10,000 to 30,000 C.T.	15	2.8:1	15	Leads	Leads	2½	2¾	3⅛	2	1¾	2.5
	A-4212	C	1500 to 5000 C.T.	50	3.2:1	20	Leads	Leads	2½	2¾	3⅛	2	1¾	2.5

DRIVER: "POLY-PEDANCE"-MULTIPLE TAPS OFFER A WIDE RANGE OF RATIO SELECTION

Section	Catalog No.	Style	Pri. Impedance in Ohms	Max Pri DCMA	Ratio Pri: ½ Sec	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
7	A-4761	C	5000 to 15,000 C.T.	100	(2.4/2.2/2.1/1.8/) (1.6/1.4/1.25:1	15	Leads	Leads Lugs	2½	3⅛	3⅛	2	2⅛	3.4
	A-4762	C	5000 to 15,000 C.T.	100	(5/4.5/4/3.4/3.2/) (3.1/2.6:1	15	Leads	Leads Lugs	2½	2¾	3⅛	2	1¾	2.7
	A-4765	C	500	—	(1.33/1.2/1/.8/.7/) (.5/.45/.4/.36/ .32:1	15	Leads	Leads Lugs	2½	2¾	3⅛	2	1¾	3.2

DRIVER: BROADCAST FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

Section	Catalog No.	Style	Pri. Impedance in Ohms	Max Pri DCMA	Ratio Pri: ½ Sec	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
8	BD-1	B	3000 C.T.	100	3.5:1	10	Terms	Terms	3¼	3⅝	4⅜	2⅜	2⅝	6.5

MODULATION

Section	Catalog No.	Style	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max. Sec DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
9	A-3812	A	10,000 C.T.	4000	50	5	Leads	Leads	1⅝	2⅞	1⅝	2⅜	—	0.7
	A-3871	SC	4500	8500	50	10	Leads	Leads	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	1.4
	A-3845	C	10,000 C.T.	8000/6500/5000/3000	100	25	Leads	Leads	2½	2⅞	3⅛	2	1⅞	2.8
	A-3808	C	3800/3300 C.T.	(10,000/7500/5000/ 4000)	170	60	Lugs	Lugs	3¾	4	4¹¹⁄₁₆	3	2¹³⁄₁₆	7.7
	A-3829	C	9000/6900 C.T.	6250/5000/4000/3300	300	175	Lugs	Lugs	3¾	5	4¹¹⁄₁₆	3	3¹³⁄₁₆	11.4

MODULATION: "POLYPEDANCE"—MULTIPLE TAPS OFFER A WIDE RANGE OF IMPEDANCE MATCH

Section	Catalog No.	Style	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max. Sec DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
10	A-3891	C	2000 to 20,000	2000 to 20,000	100	15	Lugs	Lugs	2½	2¾	3⅛	2	1¾	2.5
	A-3892	C	2000 to 20,000	2000 to 20,000	150	30	Lugs	Lugs	3⅛	3½	3⅞	2½	2¾	4.3
	A-3893	C	2000 to 20,000	2000 to 20,000	180	60	Lugs	Lugs	3⅛	4	3⅞	2½	2¹¹⁄₁₆	6.2
	A-3894	C	2000 to 20,000	2000 to 20,000	225	125	Lugs	Lugs	3¾	4½	4¹¹⁄₁₆	3	3⅝	9.4
	A-3898	FS	2000 to 20,000	2000 to 20,000	260	300	Terms	Terms	5¾	7⅝	8⅛	4⅝	4¾	3.8
	A-3899	FS	2000 to 20,000	2000 to 20,000	500	600	Terms	Terms	7¼	10¼	9⅛	6	5⅝	7.0

MODULATION: BROADCAST FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

Section	Catalog No.	Style	Pri. Impedance in Ohms	Sec Impedance in Ohms	Max. Sec DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
11	BM-1	SC	7500 C.T.	5000	0	125	Terms	Terms	6⅛	6½	7⅛	4¼	6	25

MODULATION REACTOR:

Section	Catalog No.	Style	Inductance in Henries	DCMA	Insul. Test RMS Volts	Termination		Dimensions A	B	C	D	E	WT. Lbs.
12	BR-1	SC	65	250	7500	Terms		7⅛	7⅞	8¼	5	7	41

SPLATTER CHOKES: FOR HIGH LEVEL "CLIPPER" FILTERS

Section	Catalog No.	Style	Inductance in Henries	DCMA	Insul. Test RMS Volts	Termination		Dimensions A	B	C	D	E	WT. Lbs.
13	C-2317	NH	.048 to 0.9	300	5000	Lugs		3	3	2⅝	2½	2	2.3
	SR-300	SC	.02 to 1.5	300	7500	Terms		4⅝	5¼	5¾	2½	4¾	10
	SR-500	SC	.02 to 1.5	500	10000	Terms		5¾	5⅞	6⅛	3½	5⅜	14.5

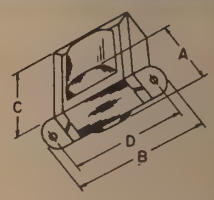
BAND PASS FILTER: 200 TO 3,000 CYCLES

Section	Catalog No.	Style	Pri. Impedance in Ohms	Sec Impedance in Ohms	Max. Sec DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
14	C-2340	SC	10,000	500 or 100,000	10 V. output		Lugs	Lugs	2¼	2¹¹⁄₁₆	2¹¹⁄₁₆	1½	2⅜	0.6

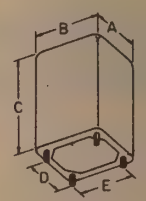
FOR TRANSISTOR MOBILE MODULATOR (WRITE FOR BULLETIN 545 FOR CIRCUIT)

Section	Catalog No.	Style	Application	Impedance in Ohms Pri	Impedance in Ohms Sec	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Dimensions A	B	C	D	E	WT. Lbs.
15	TA-15	A	Input	50 to 100	10	50	.005	Leads	Leads	1	1⅜	1⅜	1⅜	—	0.15
	TA-16	A	Driver	20	36 C.T.	400	1.0	Leads	Leads	1⅛	2⅛	1¼	1¾	—	0.20
	TA-17	C	Modulation	8 C.T.	(7500/5000 @ 120 Ma)	—	35.0	Leads	Leads	2½	3	3⅛	2	2	3.0

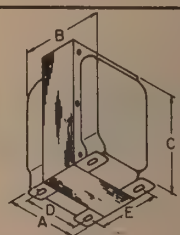
† Has Static Shield.



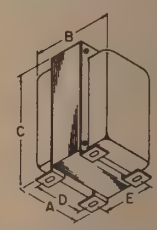
A



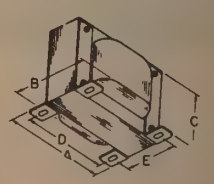
B



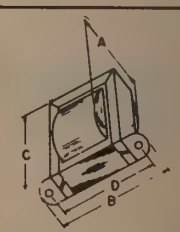
C



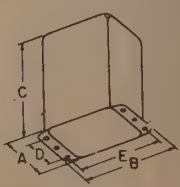
FS



NH



S



SC

© United Technical Publications

MINIATURE AUDIO TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

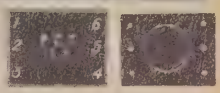
POLYCHROMATRANS With Multiples of 0.1" Grid Spacing for Printed Circuits.

COLOR CODING by application to assure immediate and positive transformer identification.

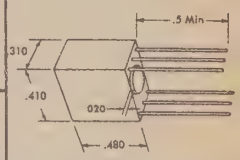
RECTANGULAR SHAPE allows the utmost utilization of space and stacking in limited area.

PROTECTIVE STAND-OFF prevents solder flow-back and maximum lead exit protection.

SPACED LEADS of fatigue resistant gold plated nickel-iron alloy are .020" in diameter, 5/16" long and have multiples of 0.1" grid spacing for printed circuit application.







PCT



UME

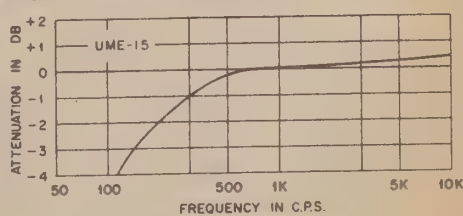
Section	Catalog No.	Power Level in M.W.	Application	Color Application Guide	Matching Impedance Primary	Matching Impedance Secondary	Max. MA. D.C. Unbal. in Pri.	D.C. Resistance Primary	D.C. Resistance Secondary	Overall Turns Ratio	RMS Test Volts
1	PCT-14	15	Input	Brown	200,000 CT	1,000 CT	0	6300	130	14.1:1	500
	PCT-15	35	Input	Brown	50,000 CT	1,000 CT	0	4600	90	7.1:1	500
	PCT-16	.5	Input	Brown	250,000	250,000	0	3500	4500	1:1	500
	PCT-17	15	Input	Brown	200,000	1,000	0	6300	130	14.1:1	500
	PCT-21	55	Interstage	Red	25,000	1,000	.5	2000	140	5:1	500
	PCT-23	55	Interstage	Red	25,000 CT	1,000 CT	.5	2000	140	5:1	500
	PCT-25	75	Interstage	Red	10,000 CT	1,500 CT	1	1250	360	2.57:1	500
	PCT-30	75	Driver	Orange	10,000 CT	1,200 CT	1	1000	250	2.88:1	500
	PCT-31	75	Driver	Orange	10,000 CT	2,000 CT	1	1000	400	2.24:1	500
	PCT-39	75	Driver	Orange	10,000 CT	500 CT	1	1000	85	4.47:1	500
	PCT-43	75	Output	Yellow	1,000	50	3	175	9.5	4.4:1	500
	PCT-54	75	Output	Yellow	600 CT	12	4.5	92	4	7.06:1	500
	PCT-60	75	Output	Yellow	500 CT	600	3	80	118	1.1:1	500
	PCT-61	75	Output	Yellow	900 CT	600	4	125	115	1.22:1	500
	PCT-62	75	Output	Yellow	1,500 CT	600	3	200	110	1.58:1	500
2	PCT-70	75	Output	Yellow	320 CT	3.2	6	52	.9	10:1	500
	PCT-71	75	Output	Yellow	600 CT	3.2	4.5	95	.07	13.6:1	500
	PCT-76	75	Output Isolation	Green	10,000 CT	10,000 CT	1	1100	1400	1:1	500
	PCT-77	75	Output Isolation	Green	600 CT	600 CT	3	85	110	1:1	500
	PCT-116	—	Choke	Blue	6 HYS.	—	2	1800	—	—	500
	PCT-117	—	Choke	Blue	1.25 HYS.	—	2	200	—	—	500
	PCT-118	—	Choke	Blue	3.5 HYS.	—	2	1200	—	—	500
	PCT-128	—	Choke	Blue	.3 HY.	—	4	50	—	—	500

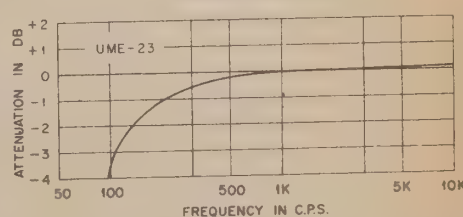
*SPCT-10 Magnetic Alloy Shield-fits all PCT Transformers.

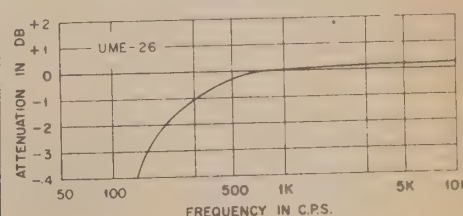
ULTRA MINIATURE ENCAPSULATED TRANSFORMERS

	Catalog No.	Application	Pri. Res.	Pri. Imp. in Ohms	D.C. MA in Pri.	Sec. Imp. in Ohms	Sec. Res.	Mw. Level
3	UME-11	interstage	1500	30,000	.5	1200	185	50
	UME-12	output	120	600	3	60	13	100
	UME-13	output	250	1200	3	60	17	100
	UME-14	output	70	600	3	3.2	.7	100
	UME-15	output	170	1200	2	3.2	.75	100
	UME-16	output	1200	10,000	1	3.2	.7	100
	UME-17	input	7500	200,000	0	1000	260	25
	UME-18	reactor	1000	3 hy @ 2 MADC	2	—	—	—
	UME-19	output or driver	1100	12,500 CT	1	600 CT	45	100
	UME-20	driver	1000	12,500	1	1500 CT	100	100
	UME-21	driver	1100	12,500	1	2500 CT	160	100
	UME-22	single or PP output	25	200 CT	10	16	3	500
	UME-23	single or PP output	35	400 CT	7	16	2.5	500
	UME-24	single or PP output	75	800 CT	5	16	2	500
	UME-25	single or PP output	85	1070 CT	4	16	2	500
	UME-26	single or PP output	120	1330 CT	3.5	16	2	500
4	UME-27	single or PP output	225	2000 CT	3	16	2.5	500
	UME-28	single or PP output	750	10,000 CT	1	16	2.5	500
	UME-29	output	35	300 CT	7	600	110	500
	UME-30	output	60	500 CT	5.5	600	110	500
	UME-31	output	105	900 CT	4	600	110	500
	UME-32	output	200	1500 CT	3	600	120	500
	UME-33	interstage	1500	30,000 CT	.5	1200 CT	175	100
	UME-34	input	6500	200,000 CT	0	1000 CT	250	25
	UME-35	interstage	1000	12,000 CT	1	1800 CT	115	100
	UME-36	reactor	2600	6 hy @ 2 MADC	2	—	—	—
	UME-37	reactor	190	1 hy @ 2 MADC	2	—	—	—
	UME-38	reactor	1800	12 hy @ 0 DC	0	—	—	—
	UME-39	reactor	2700	20 hy @ 0 DC	0	—	—	—

Typical Response Curves







© United Technical Publications

ESSEX Stancor/RBM | STANCOR

TRANSISTOR TRANSFORMERS

FOR AUDIO APPLICATIONS: ALL UNITS TERMINATE WITH LEADS

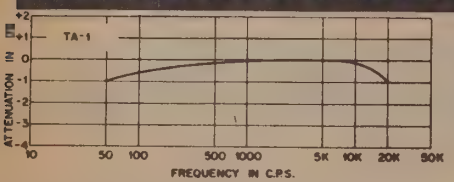
Section	Catalog No.	Style	Application	Impedance in Ohms Pri.	Sec.	Max. Pri. DCMA	Audio Watts	D.C. Res. in Ohms Pri	Sec	Dimensions A	B	C	D	E	WT. Lbs.	Styles
1	TA-1	A	Input	600 C.T.	10	20	.05	42	0.8	1	1 5/8	1 3/16	1 3/8	—	.07	A
	TA-2	A	Interstage	100 C.T.	10 C.T.	100	.25	4.3	0.8	1 1/2	2 1/8	1 1/4	1 3/4	—	.25	
	TA-3	A	Interstage	100	1000 C.T.	100	.25	5.8	45	1 1/2	2 3/8	1 3/8	2	—	.35	
	TA-4	A	Interstage	500 C.T.	5000 C.T.	12	.03	37	250	1 5/8	2 3/8	1 3/8	2	—	.35	
	TA-5	A	Driver	1000	200 C.T.	10	.05	400	115	5/8	1 5/16	1 1/16	1 1/16	—	.05	
	TA-6	A	Driver	2000	200 C.T.	5	.05	720	115	5/8	1 5/16	1 1/16	1 1/16	—	.05	
	TA-7	A	Driver	100	100 C.T.	100	.5	12	12	1 5/8	2 7/8	1 5/8	2 3/8	—	.60	A2
	TA-8	A	Output	9800	15	2	.05	640	2	5/8	1 5/16	1 1/16	1 1/16	—	.05	
	TA-9	A	Output	1000	16/8/4	10	.2	180	3.5	7/8	1 5/8	1 3/16	1 3/8	—	.07	
	TA-10	A	Output	2000 C.T.	16/8/4	—	.2	250	4	7/8	1 5/8	1 3/16	1 3/8	—	.08	
	TA-11	A	Output	48 C.T.	16/8	275	5	5	1.5	1 7/8	3 1/4	2	2 13/16	—	1.0	
	TA-12	A	Output	20 C.T.	8	500	10	.55	.35	1 5/8	2 3/8	1 3/8	2	—	.45	S
	TA-13	SC	Driver	200 C.T.	400 C.T.	10	.6	4	7	2 1/4	2 11/16	2 5/16	1 1/2	2 3/8	1.5	
	TA-14	SC	Output	24 C.T.	16/4	200	10	2	1.2	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	6.6	
	TA-56	S†	Output	48 C.T.	16/8/3.2	550	10	3.6	1.4	1 3/4	2 7/8	2 3/8	2 3/8	—	.90	
	TA-57	S	Output	100 C.T.	16/8/3.2	500	10	6.6	1.5	1 7/8	2 7/8	2 3/8	2 3/8	—	.95	
	TA-58	A	Driver	100	200 C.T.	200	.5	6.5	15.5	1 1/4	2 1/8	1 1/4	1 3/4	—	.20	S2
	TA-59	A	Driver	500 C.T.	200 C.T.	50	.5	36.5	15.5	1 3/8	2 1/8	1 1/4	1 3/4	—	.20	
	TA-60	TS	Output	125 C.T.	8	50	1.5	7.5	0.9	1 5/16	1 5/16	1 11/16	—	1 9/32	.30	
	TA-61	S	Driver	*	*	—	—	1.8	1.8	1 1/2	2 3/8	2	2	—	.60	
	TA-62	A	Output	25	4	400	4	1.5	0.4	1 5/8	2 7/8	1 5/8	2 3/8	—	.60	

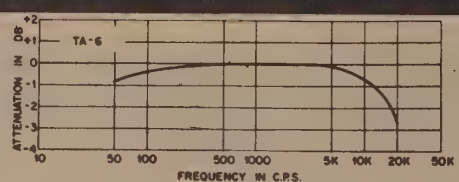
FOR TRANSISTORIZED AUTO RADIOS

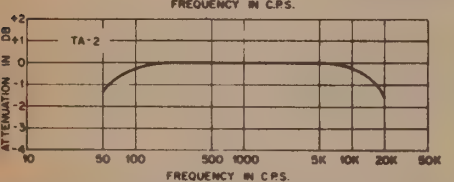
Section	Catalog No.	Style	Application	Impedance in Ohms Pri.	Sec.	Max. Pri. DCMA	Audio Watts	D.C. Res. in Ohms Pri	Sec	Dimensions A	B	C	D	E	WT. Lbs.	Styles
2	TA-48	S2	Interstage	1000	40	10	2	136	2.8	1 1/4	—	1 3/4	1 3/16	7/16	.35	S2
	TA-49	S	Output	30 C.T.	4	50	10	2.2	0.3	1 1/2	2 7/8	2 3/8	2 3/8	—	.80	
	TA-50	A2	Output	9	4	920	10	1.5	1.0	1 5/8	—	2	2	3/4	1.0	
	TA-51	S2	Interstage	1000	10	10	2	170	1.0	1 1/4	—	1 3/4	1 3/16	7/16	.35	

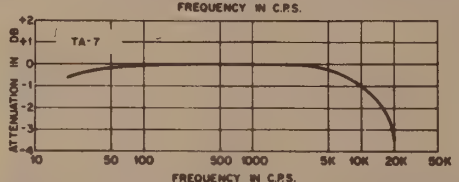
*Trifilar Wound-Ratio 1:1:1. †Has Lugs on Secondary.

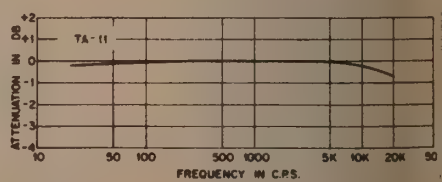
TYPICAL FREQUENCY RESPONSE CURVES

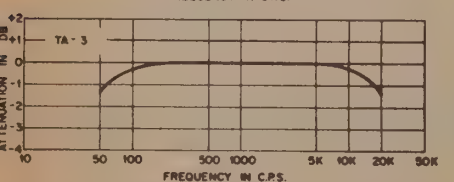


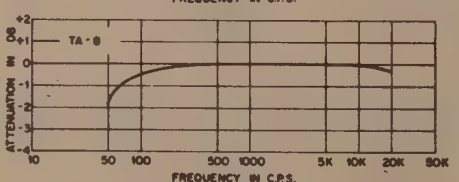


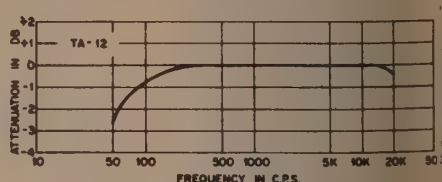


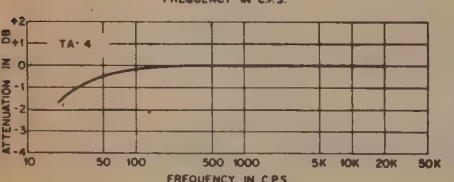


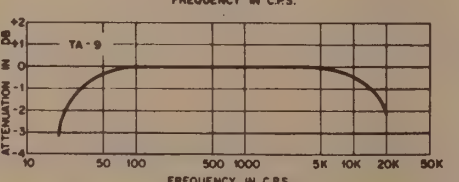


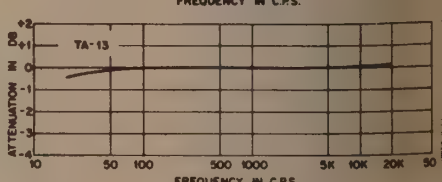


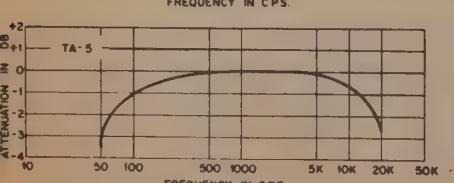


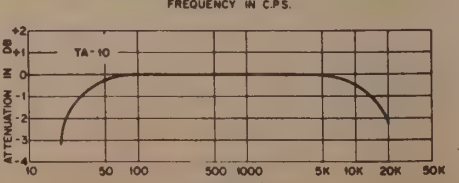


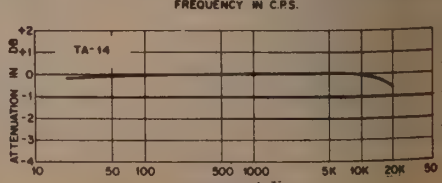


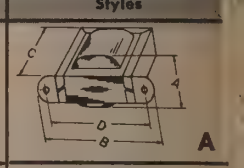




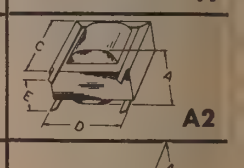




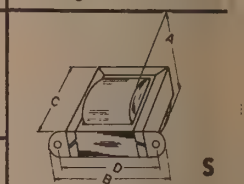




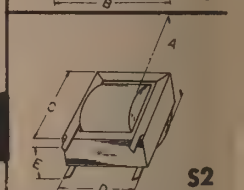
A



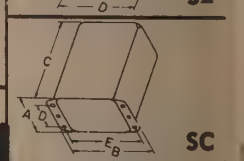
A2



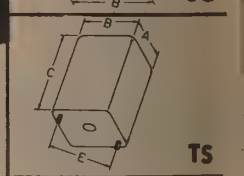
S



S2



SC



TS

5

© United Technical Publications

TRANSISTOR TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

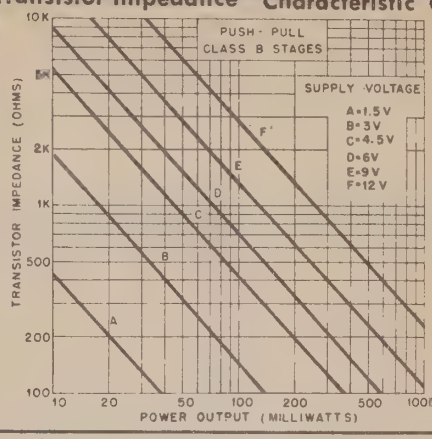
MINIATURE AUDIOS

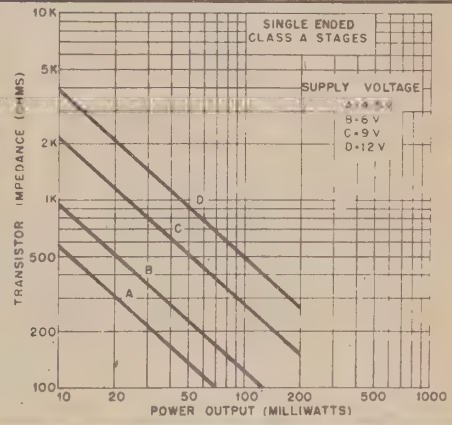
.150 WATT GROUP

Dimensions: HxWxD, 2 1/32" x 1 3/16" x 5/8", Mounting tabs 3/16" wide, 25/32" centers • Weight .65 oz. Mounting Type A

Section	Catalog No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.
1	TA-18	Input	1.00:45.5	30 CT	50,000	14.7	4060
	TA-19	Interstage	3.08:1	100 CT	10 CT	19	1.27
	TA-20	Output	5.22:1	350 CT	4, 12	38	1.45
	TA-21	Output	5.53:1	500 CT	4, 8, 16	75.3	3.55
	TA-22	Interstage	3.16:1	500 CT	50	59.7	7.9
	TA-23	Output	5.65:1	600 CT	4, 8, 16	73.2	3.2
	TA-24	Interstage	10.0:1	500 CT	50,000	76.8	5135
	TA-25	Output	6.75:1	825 CT	4, 8, 16	74	2.7
	TA-26	Output	9.80:1	1,250	4, 12	132.5	1.4
	TA-27	Interstage	1:4.08	1,200	20,000 CT	142	1860
	TA-28	Interstage	1.65:1	1,500	500 CT	104	46.5
	TA-29	Output	11.8:1	2,500	4, 16	370	2.3
	TA-30	Interstate	1.00:1.22	5,000 CT	7,500 CT	650	790
	TA-31	Interstage	1.00:1.41	5,000 CT	10,000 CT	635	825
	TA-53	Interstage	1:3	5,000 CT	45,000	310	1400
	TA-32	Interstage	1.00:4	5,000 CT	80,000 CT	500	5200
	TA-33	Output	24.6:1	10,000 CT	4, 8, 16	1174	2.6
	TA-34	Interstage	6.97:1	10,000	200 CT	1200	33.4
	TA-35	Interstage	2.24:1	10,000	2,000 CT	1200	257
	TA-36	Interstage	1.83:1	10,000	3,000 CT	1200	385
	TA-54	Interstage	5:1	20,000	800 CT	1350	95
	TA-37	Output	5.55:1	400 CT	11	71.5	1.5
	TA-38	Interstage	1.72:1	500 CT	150 CT	62	21.2

Transistor Impedance Characteristic Curves





.300 WATT GROUP

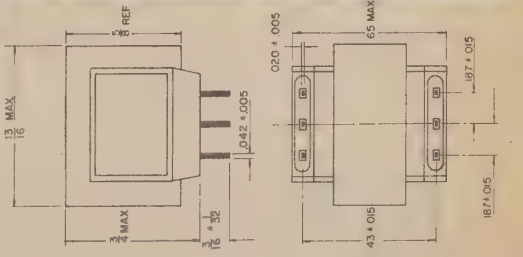
Dimensions: HxWxD, 1 3/16" x 1 1/16" x 1 1/16", Mounting Centers: 1 3/8" • Weight 1.2 oz. Mounting Type A

Section	Catalog No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.
2	TA-39	Output	2.5:1	100 CT	4, 8, 16	10.9	1.45
	TA-40	Output	3.27:1	160	4, 8, 16	18.7	1.4
	TA-41	Output	5.00:1	400 CT	4, 8, 16	34	1.5
	TA-42	Output	5.60:1	500 CT	4, 8, 16	47	.85
	TA-52	Interstage	1:1	500 CT	500 CT	40	55
	TA-43	Output	6.63:1	700 CT	4, 8, 16	77	1.15
	TA-44	Output	12.5:1	2,500	4, 8, 16	172	1.15
	TA-45	Output	13.7:1	3,000	4, 8, 16	192	1.2
	TA-46	Interstage	8.17:1	100,000	1,500 CT	3250	143
	TA-55	Input	50:1	500,000	200 CT	7000	8.5
	TA-47	Input	1.00:14.1	1,000 CT	200,000 CT	123	1815
	TA-63	Driver	3.17:1	20,000 CT	2,000 CT	2140	325

MINIATURE AUDIOS FOR PRINTED CIRCUITS

.150 WATT GROUP (Fig. A)

Section	Catalog No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.
3	TAPC-19	Interstage	3.08:1	100 CT	10 CT	19	1.27
	TAPC-26	Output	9.80:1	1,250	4, 12	132.5	1.4
	TAPC-27	Interstage	1:4.08	1,200	20,000 CT	142	1860
	TAPC-28	Interstage	1.65:1	1,500	500 CT	104	46.5
	TAPC-30	Interstage	1.00:1.22	5,000 CT	7,500 CT	650	790
	TAPC-31	Interstage	1.00:1.41	5,000 CT	10,000 CT	635	825
	TAPC-32	Interstage	1.00:4	5,000 CT	80,000 CT	500	5200
	TAPC-34	Interstage	6.97:1	10,000	200 CT	1200	25
	TAPC-35	Interstage	2.24:1	10,000	2,000 CT	1200	257
	TAPC-36	Interstage	1.83:1	10,000	3,000 CT	1200	385
	TAPC-38	Interstage	1.72:1	500 CT	150 CT	62	21.2



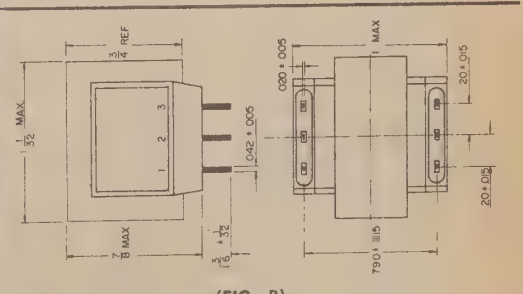
(FIG. A)

.050 WATT GROUP (FIG. B)

Section	Catalog No.	Application	Imp. in Ohms Pri.	Imp. in Ohms Sec.	Max Pri DCMA	Audio Watts	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.	WT Lbs.
4	TAPC-5	Driver	2000	200	5	.05	720	115	.05

.300 WATT GROUP (FIG. B)

Section	Catalog No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.
5	TAPC-47	Input	1:14.1	1,000 CT	200,000 CT	123	1815
	TAPC-52	Interstage	1:1	500 CT	500 CT	40	55
	TAPC-63	Driver	3.17:1	20,000 CT	2,000 CT	2140	325



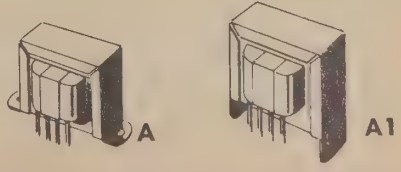
(FIG. B)

ULTRA MINIATURE

Here are the smallest iron core audio transformers ever built. They weigh less than 1/10 ounce and are no larger than the transistors they power.

These transformers are designed primarily for transistor audio applications but they can be used wherever low power is involved. Useful range, below 1 mw level. They are constructed of extremely fine wire, wound on molded nylon bobbins, with special nickel alloy steel laminations.

Section	Catalog No.	Application	Pri. Imp.	Sec. Imp.	Pri. DC Res.	Sec. DC Res.	Weight
6	UM-114	Output or matching	500	50/60	70	9.0	0.10

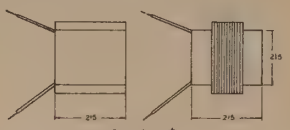


Dimensions: UM-110, 1/4" x 3/8" x 3/8"; UM-113, 114, 3/8" x 3/8" x 3/8". Dimensions ±.015"

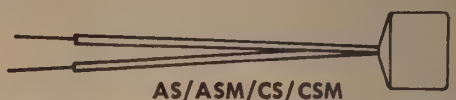
© United Transformer Corporation

ESSEX Stancor/RBM | STANCOR

PICO-MINIATURE TRANSISTOR TRANSFORMERS



A & C



AS/ASM/CS/CSM

Section	Catalog Numbers: Open	Steel Case	MU-Metal Case	Application	Turns Ratio: Pri. to Sec.	Impedance (Ohms): Pri.	Impedance (Ohms): Sec.	D.C. Res. (Ohms): Pri.	D.C. Res. (Ohms): Sec.	Power Level (MW)
1	A-1	AS-1	ASM-1	Driver	1:3.2	60 CT	600 CT	12	105	5
	A-2	AS-2	ASM-2	Output	4.0:1	1,000	50	255	16	5
	A-3	AS-3	ASM-3	Interstage	1:1.04	6,000 CT	6,000 CT	1,200	1,000	5
	A-4	AS-4	ASM-4	Driver	2.85:1	10,000	1,000	1,500	425	5
	A-5	AS-5	ASM-5	Interstage	1:1.02	10,000	10,000	1,620	2,040	5
	A-6	AS-6	ASM-6	Input or Output	14.1:1	90,000*	500*	3,500	205	1

Section	Catalog Numbers			Application	Inductance	D.C. Resistance (Ohms)	Power Level (MW)
2	C-1	CS-1	CSM-1	Reactor	0.22 HYS @ 4.0 MADC	515 OHMS	5
	C-2	CS-2	CSM-2	Reactor	2.10 HYS @ 0.0 MADC 0.60 HYS @ 2.0 MADC	515 OHMS 1350 OHMS	10 5
	C-3	CS-3	CSM-3	Reactor	5.60 HYS @ 0.0 MADC 3.0 HYS @ 1.0 MADC	1350 OHMS 3400 OHMS	10 5
	C-4	CS-4	CSM-4	Reactor	8.3 HYS @ 0.0 MADC 20.0 HYS @ 0.0 MADC	3400 OHMS 3400 OHMS	10 10

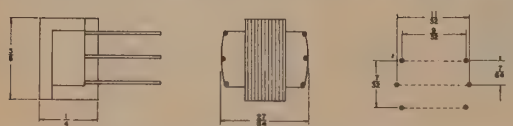


PMT-1 THRU 9



PMTS/PMTM-1 THRU 9

Section	Catalog Numbers: Open	Steel Case	MU-Metal Case	Application	Turns Ratio: Pri. to Sec.	Impedance (Ohms): Pri.	Impedance (Ohms): Sec.	D.C. Res. (Ohms): Pri.	D.C. Res. (Ohms): Sec.	Power Level (MW)
3	PMT-1	PMTS-1	PMTM-1	Output	3.77:1	1,000	50	260	40	10
	PMT-2	PMTS-2	PMTM-2	Driver	1.51:1	1,500	600	260	117	10
	PMT-3	PMTS-3	PMTM-3	Interstage	2.22:1	10,000	2,000	1,240	280	10
	PMT-4	PMTS-4	PMTM-4	Interstage	4.48:1	20,000	1,000	2,500	330	10
	PMT-5	PMTS-5	PMTM-5	Reactor		0.5 HYS. @ 1 MADC		155		
	PMT-6	PMTS-6	PMTM-6	Reactor		10.0 HYS. @ 0 MADC		1,950		
	PMT-7	PMTS-7	PMTM-7	Interstage	1:1	10,000 CT 12,000 CT	10,000 CT 12,000 CT	1300	1600	100
	PMT-8	PMTS-8	PMTM-8	Interstage	1:1:1	2,000 CT 2,500 CT	8,000 split 10,000 split	300	1600	100
	PMT-9	PMTS-9	PMTM-9	Interstage or Output		40,000 CT 50,000 CT	400 split 500 split	3500	100	50



PMT-10 TO PMT-41



PMTS-10 TO PMTS-41
PMTM-10 TO PMTM-41

Section	Catalog Numbers: Open	Steel Case	MU-Metal Case	Application	Turns Ratio: Pri. to Sec.	Impedance (Ohms): Pri.	Impedance (Ohms): Sec.	D.C. Res. (Ohms): Pri.	D.C. Res. (Ohms): Sec.	Power Level (MW)
4	PMT-10	PMTS-10	PMTM-10	Interstage	4.47:1	20,000	1,000	1,700	275	50
	PMT-11	PMTS-11	PMTM-11	Interstage	5.01:1	20,000	800	1,600	170	50
	PMT-12	PMTS-12	PMTM-12	Interstage	2.56:1	10,000 CT	1,500 CT	1,150	110	100
	PMT-13	PMTS-13	PMTM-13	Output	2.83:1	500	50	115	12	250
	PMT-14	PMTS-14	PMTM-14	Output	2.82:1	400	50	70	10	250
	PMT-15	PMTS-15	PMTM-15	Input	14.1:1	200,000	1,000	6,500	245	25
	PMT-16	PMTS-16	PMTM-16	Output	4.00:1	1,000	50	240	16	100
	PMT-17	PMTS-17	PMTM-17	Input	14.0:1	200,000 CT	1,000 CT	6,500	245	25
	PMT-18	PMTS-18	PMTM-18	Output	1.54:1	1,500 CT	600	210	120	250
	PMT-19	PMTS-19	PMTM-19	Reactor		3 HYS @ 2ma		1,100		
	PMT-20	PMTS-20	PMTM-20	Reactor		1 HY @ 2ma		200		
	PMT-21	PMTS-21	PMTM-21	Reactor		6 HYS @ 2ma		2,600		
	PMT-22	PMTS-22	PMTM-22	Output	13.5:1	600	3.2	90	0.8	250
	PMT-23	PMTS-23	PMTM-23	Output	18.0:1	1,200	3.2	190	0.8	100
	PMT-24	PMTS-24	PMTM-24	Output	53.2:1	10,000	3.2	1,500	0.8	100
	PMT-25	PMTS-25	PMTM-25	Driver	4.44:1	10,000 CT	500 CT	1,160	45	100
	PMT-26	PMTS-26	PMTM-26	Driver	3.03:1	10,000	1,200 CT	1,160	100	100
	PMT-27	PMTS-27	PMTM-27	Driver	2.22:1	10,000	2,000 CT	1,380	170	100
	PMT-28	PMTS-28	PMTM-28	Output	1.23:1	900 CT	600	105	110	250
	PMT-29	PMTS-29	PMTM-29	Output	1:1.10	500 CT	600	60	105	250
	PMT-30	PMTS-30	PMTM-30	Output	1:1.42	300 CT	600	40	110	250
	PMT-31	PMTS-31	PMTM-31	Output	3.30:1	150 CT	12	25	3	250
	PMT-32	PMTS-32	PMTM-32	Output	4.85:1	300 CT	12	40	2	250
	PMT-33	PMTS-33	PMTM-33	Output	6.98:1	600 CT	12	85	2	250
	PMT-34	PMTS-34	PMTM-34	Output	8.14:1	800 CT	12	100	2	250
	PMT-35	PMTS-35	PMTM-35	Output	9.07:1	1,000 CT	12	150	2	250
	PMT-36	PMTS-36	PMTM-36	Output	10.0:1	1,500 CT	12	230	2	250
	PMT-37	PMTS-37	PMTM-37	Output	25.0:1	7,500 CT	12	750	2	250
	PMT-38	PMTS-38	PMTM-38	Interstage	5.00:1	20,000 CT	800 CT	1,500	160	50
	PMT-39	PMTS-39	PMTM-39	Reactor		12 HYS @ 0ma		2,000		
	PMT-40	PMTS-40	PMTM-40	Reactor		20 HYS @ 0ma		2,800		
	PMT-41	PMTS-41	PMTM-41	Interstage	1:3.00	10,000	90,000	980	5,600	50

ALL UNITS HAVE 2" LEAD LENGTHS AND COLOR CODED

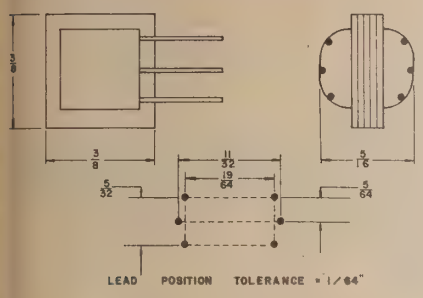
*90,000 ohms with 1000 ohms secondary load. *500 ohms with 100,000 ohms primary load.

STANCOR PAGE 19

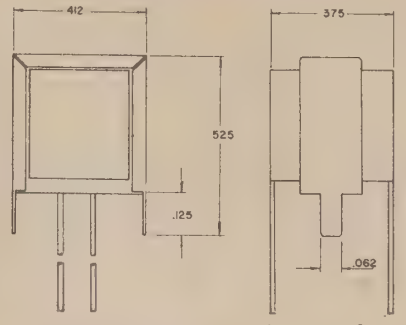
© United Technical Publications

PICO-MINIATURE TRANSISTOR TRANSFORMERS

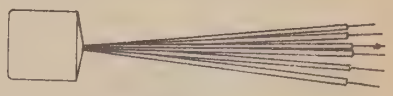
ESSEX Stancor/RBM | STANCOR



PMT-50 to 75

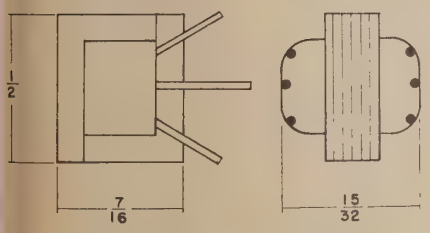


PMTF-50 to 75

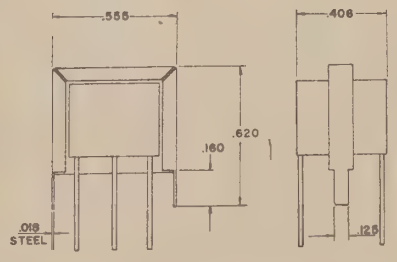


PMTS-50 to PMTS-75
PMTM-50 to PMTM-75

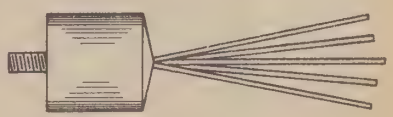
Section	Catalog Numbers: Open	Channel Frame	Steel Case	MU-Metal Case	Application	Turns Ratio Pri. to Sec.	Impedance (Ohms): Pri.	Sec.	D.C. Resistance (Ohms): Pri.	Sec.	Power Level (MW)
1	PMT-50	PMTF-50	PMTS-50	PMTM-50	Interstage	4.48:1	20,000	1,000	1150	175	150
	PMT-51	PMTF-51	PMTS-51	PMTM-51	Interstage	4.50:1	20,000	1,000 CT	930	95	150
	PMT-52	PMTF-52	PMTS-52	PMTM-52	Output	3.46:1	600	50	110	9	300
	PMT-53	PMTF-53	PMTS-53	PMTM-53	Output	3.26:1	600 CT	50	66	7.7	300
	PMT-54	PMTF-54	PMTS-54	PMTM-54	Output	2.71:1	400	50	70	9.3	350
	PMT-55	PMTF-55	PMTS-55	PMTM-55	Input	14.0:1	200,000	1,000	2600	135	35
	PMT-56	PMTF-56	PMTS-56	PMTM-56	Output	4.30:1	1,000	50/60	160	9	250
	PMT-57	PMTF-57	PMTS-57	PMTM-57	Output	7.06:1	10,000	200	890	27	200
	PMT-58	PMTF-58	PMTS-58	PMTM-58	Microphone	1.31:1	40	50,000	3.35	1440	75
	PMT-59	PMTF-59	PMTS-59	PMTM-59	Output	3.64:1	20,000	1,000 CT	939	119	150
	PMT-60	PMTF-60	PMTS-60	PMTM-60	Output	7.75:1	20,000	300	910	36	200
	PMT-61	PMTF-61	PMTS-61	PMTM-61	Output	10.8:1	20,000	150	910	16.1	200
	PMT-62	PMTF-62	PMTS-62	PMTM-62	Output	4.97:1	30,000	1,000	1450	137	150
	PMT-63	PMTF-63	PMTS-63	PMTM-63	Reactor		12 HY @ 0.0MADC		830		
	PMT-64	PMTF-64	PMTS-64	PMTM-64	Reactor		5 HY @ 0.8MADC		1100		
	PMT-65	PMTF-65	PMTS-65	PMTM-65	Reactor		1.5 HY @ 0.1MADC		175		
	PMT-66	PMTF-66	PMTS-66	PMTM-66	Reactor		.0015 HY @ 0.0MADC		3.00		
	PMT-67	PMTF-67	PMTS-67	PMTM-67	Interstage	4.50:1	20,000	1,000 CT	930	95	150
	PMT-68	PMTF-68	PMTS-68	PMTM-68	Input	9.71:1	100,000	1,000	1900	140	70
	PMT-69	PMTF-69	PMTS-69	PMTM-69	Output	5.60:1	400 CT	12	70	2	350
	PMT-70	PMTF-70	PMTS-70	PMTM-70	Interstage	2.83:1	10,000 CT	1,200 CT	900	122	200
	PMT-71	PMTF-71	PMTS-71	PMTM-71	Output	1.55:1	1,500 CT	600	400	65	250
	PMT-72	PMTF-72	PMTS-72	PMTM-72	Output	1.26:1	1,000 CT	600	160	65	250
	PMT-73	PMTF-73	PMTS-73	PMTM-73	Driver	4.00:1	10,000 CT	600 CT	900	50	200
	PMT-74	PMTF-74	PMTS-74	PMTM-74	Interstage	1.00:1	600 CT	600 CT	48	60	300
	PMT-75	PMTF-75	PMTS-75	PMTM-75	Isolation	1.00:1	15,000 CT	15,000 CT	925	1200	200



PMT-76 to PMT-92



PMTF-76 to PMTF-92



PMTS-76 to PMTS-92
PMTM-76 to PMTM-92

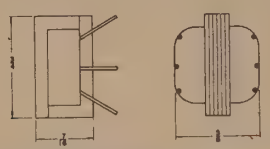
Section	Catalog Numbers: Open	Channel Frame	Steel Case	MU-Metal Case	Application	Turns Ratio Pri. to Sec.	Impedance (Ohms): Pri.	Sec.	D.C. Resistance (Ohms): Pri.	Sec.	Power Level (MW)
2	PMT-76	PMTF-76	PMTS-76	PMTM-76	Interstage	1:1	500	500	45	45	30
	PMT-77	PMTF-77	PMTS-77	PMTM-77	Output	3.4:1	600	50	57.5	5.4	30
	PMT-78	PMTF-78	PMTS-78	PMTM-78	Output	121:1	50,000	3.4	2270	0.9	30
	PMT-79	PMTF-79	PMTS-79	PMTM-79	Interstage	9:1	100,000	1,200 CT	2850	94	30
	PMT-80	PMTF-80	PMTS-80	PMTM-80	Interstage	4.6:1	25,000	1,200	1580	97	30
	PMT-81	PMTF-81	PMTS-81	PMTM-81	Input	1:1.4	600 CT	1,200 CT	55	109	30
	PMT-82	PMTF-82	PMTS-82	PMTM-82	Interstage	6.4:1	25,000	600	1620	36	30
	PMT-83	PMTF-83	PMTS-83	PMTM-83	Output	35:1	4,000 CT	3.2	488	0.5	30
	PMT-84	PMTF-84	PMTS-84	PMTM-84	Reactor	30 HYS @ 1 MADC			4000		30
	PMT-85	PMTF-85	PMTS-85	PMTM-85	Reactor	6 HYS @ 0.0 MADC			1400		30
	PMT-86	PMTF-86	PMTS-86	PMTM-86	Interstage	4.48:1	20,000	1,000	1200	63	30
	PMT-87	PMTF-87	PMTS-87	PMTM-87	Interstage	2.91:1	10,000 CT	1,000 CT	448	126	30
	PMT-88	PMTF-88	PMTS-88	PMTM-88	Input	1.35	50	62,500	7	1670	30
	PMT-89	PMTF-89	PMTS-89	PMTM-89	Interstage	6.31:1	20,000	1,000 CT	1250	54	30
	PMT-90	PMTF-90	PMTS-90	PMTM-90	Output	30.4:1	4,000 CT	3	410	0.85	30
	PMT-91	PMTF-91	PMTS-91	PMTM-91	Input	1:16	1,000	250,000	73	4300	30
	PMT-92	PMTF-92	PMTS-92	PMTM-92	Output	4.05:1	15,000	850	735	66	30

ALL UNITS HAVE 2" LEAD LENGTHS AND COLOR CODED

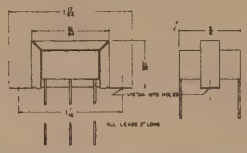
© United Technical Publications

ESSEX Stancor/RBM | STANCOR

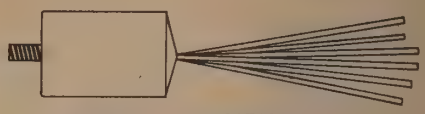
PICO-MINIATURE TRANSISTOR TRANSFORMERS



PMT-94 to PMT-117

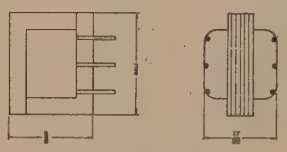


PMTF-94 to PMTF-117

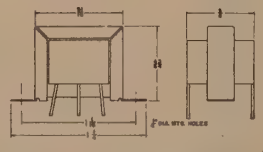


PMTM-94 to PMTM-117
PMTS-94 to PMTS-117

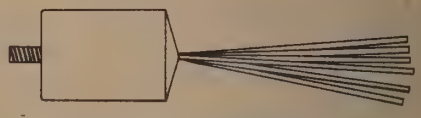
Section	Catalog Numbers: Open	Channel Frame	Steel Case	MU-Metal Case	Application	Turns Ratio Pri. to Sec.	Impedance (Ohms): Pri.	Sec.	D.C. Resistance (Ohms): Pri.	Sec.	Power Level (MW)
1	PMT-94	PMTF-94	PMTS-94	PMTM-94	Input	1:35	200	250,000	13.4	3580	50
	PMT-95	PMTF-95	PMTS-93	PMTM-95	Interstage	1:3	10,000	90,000	820	3500	50
	PMT-96	PMTF-96	PMTS-96	PMTM-96	Output	7:1	25,000	500	1750	30	100
	PMT-97	PMTF-97	PMTS-97	PMTM-97	Output	24:1	30,000	50	2600	4.75	100
	PMT-98	PMTF-98	PMTS-98	PMTM-98	Output	40:1	100,000	60	4800	3.5	100
	PMT-99	PMTF-99	PMTS-99	PMTM-99	Reactor		50 HYS @ 1 MADC		4500		
	PMT-100	PMTF-100	PMTS-100	PMTM-100	Input	15.8:1	250,000	1,000	2580	33	50
	PMT-101	PMTF-101	PMTS-101	PMTM-101	Input	28:1	78,000	100	1700	20	100
	PMT-102	PMTF-102	PMTS-102	PMTM-102	Input	27:1	100,000	120	5300	28	50
	PMT-103	PMTF-103	PMTS-103	PMTM-103	Input	18.85:1	250,000	700	1900	20	50
	PMT-104	PMTF-104	PMTS-104	PMTM-104	Interstage	4.35:1	20,000	1,000	1100	95	100
	PMT-105	PMTF-105	PMTS-105	PMTM-105	Interstage	2.92:1	20,000	2,000	1530	185	100
	PMT-106	PMTF-106	PMTS-106	PMTM-106	Output	19.2:1	50,000	120	2380	28	100
	PMT-107	PMTF-107	PMTS-107	PMTM-107	Output	18.7:1	20,000	50	1530	10	75
	PMT-108	PMTF-108	PMTS-108	PMTM-108	Output	8.84:1	2,500 CT	50	406	7	150
	PMT-109	PMTF-109	PMTS-109	PMTM-109	Output	4.44:1	1,250	50	160	6	150
	PMT-110	PMTF-110	PMTS-110	PMTM-110	Output	2.72:1	400	50	30	9	75
	PMT-111	PMTF-111	PMTS-111	PMTM-111	Output	3.64:1	30,000	4,000	1470	147	100
	PMT-112	PMTF-112	PMTS-112	PMTM-112	Output	7.87:1	10,000	125	1250	20	150
	PMT-113	PMTF-113	PMTS-113	PMTM-113	Output	1:3	10,000	90,000	685	2820	50
	PMT-114	PMTF-114	PMTS-114	PMTM-114	Interstage	2:1	20,000	4,000	1980	490	100
	PMT-115	PMTF-115	PMTS-115	PMTM-115	Output	22.8:1	4,000	6.4	472	0.8	150
	PMT-116	PMTF-116	PMTS-116	PMTM-116	Input	9.8:1	100,000	1,000	970	29	50
	PMT-117	PMTF-117	PMTS-117	PMTM-117	Reactor		6 HYS @ 0.0 MADC		1530		



PMT-118 to PMT-127

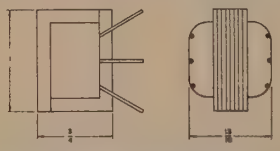


PMTF-118 to PMTF-127

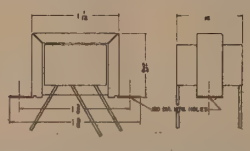


PMTM-118 to PMTM-127
PMTS-118 to PMTS-127

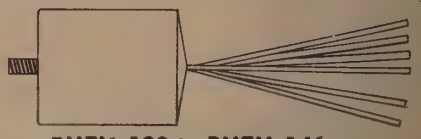
Section	Catalog Numbers: Open	Channel Frame	Steel Case	MU-Metal Case	Application	Turns Ratio Pri. to Sec.	Impedance (Ohms): Pri.	Sec.	D.C. Resistance (Ohms): Pri.	Sec.	Power Level (MW)
2	PMT-118	PMTF-118	PMTS-118	PMTM-118	Input	1:35	200	250,000	21.5	2650	150
	PMT-119	PMTF-119	PMTS-119	PMTM-119	Interstage	1:3	10,000	90,000	222	2800	150
	PMT-120	PMTF-120	PMTS-120	PMTM-120	Output	7:1	25,000	500	1750	29	150
	PMT-121	PMTF-121	PMTS-121	PMTM-121	Output	24:1	30,000	50	1900	3.9	150
	PMT-122	PMTF-122	PMTS-122	PMTM-122	Output	40:1	100,000	60	4000	4.38	150
	PMT-123	PMTF-123	PMTS-123	PMTM-123	Reactor		50 HYS @ 1 MADC		3200		150
	PMT-124	PMTF-124	PMTS-124	PMTM-124	Output	6.05:1	2,500	50	372	7.6	150
	PMT-125	PMTF-125	PMTS-125	PMTM-125	Output	1:1.56	1,250	2,500	107	269	150
	PMT-126	PMTF-126	PMTS-126	PMTM-126	Interstage	1:10	2,500	250,000	329	7200	150
	PMT-127	PMTF-127	PMTS-127	PMTM-127	Interstage	1:5	10,000	250,000	1000	7200	150



PMT-128 to PMT-146



PMTF-128 to PMTF-146



PMTM-128 to PMTM-146
PMTS-128 to PMTS-146

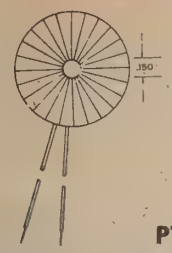
Section	Catalog Numbers: Open	Channel Frame	Steel Case	MU-Metal Case	Application	Turns Ratio Pri. to Sec.	Impedance (Ohms): Pri.	Sec.	D.C. Resistance (Ohms): Pri.	Sec.	Power Level (MW)
3	PMT-128	PMTF-128	PMTS-128	PMTM-128	Mike Input	1:9	50/250/600	50,000 CT	24.5	2480	200
	PMT-129	PMTF-129	PMTS-129	PMTM-129	Mike Input	1:8	4/8	50,000 CT	0.35	2600	200
	PMT-130	PMTF-130	PMTS-130	PMTM-130	Output	7:1	400 CT	4/8	37	1.0	200
	PMT-131	PMTF-131	PMTS-131	PMTM-131	Interstage	1:2	15,000	60,000	1250	3450	200
	PMT-132	PMTF-132	PMTS-132	PMTM-132	Interstage	1:2.5	15,000	90,000	1250	5900	200
	PMT-133	PMTF-133	PMTS-133	PMTM-133	Output	5:1	15,000	50/250/600	1250	32	200
	PMT-134	PMTF-134	PMTS-134	PMTM-134	Output	5:1	160	4/8	13.7	0.72	200
	PMT-135	PMTF-135	PMTS-135	PMTM-135	Mike To Line	9:1	50,000	50/250/600	2480	24.5	200
	PMT-136	PMTF-136	PMTS-136	PMTM-136	Mike To Line	1:1.5	50/250	50/250/600	17.5	33.5	200
	PMT-137	PMTF-137	PMTS-137	PMTM-137	Input	1:50	200	500,000	17.5	4800	200
	PMT-138	PMTF-138	PMTS-138	PMTM-138	Interstage	1:10	10,000	1 MEG	377	5400	200
	PMT-139	PMTF-139	PMTS-139	PMTM-139	Reactor		50 HYS @ 3 MADC		5000		200
	PMT-140	PMTF-140	PMTS-140	PMTM-140	Reactor		10 HYS @ 10 MADC		.720		200
	PMT-141	PMTF-141	PMTS-141	PMTM-141	Reactor		1.6 HYS @ 3 MADC		.165		200
	PMT-142	PMTF-142	PMTS-142	PMTM-142	Input	1:10	8,000	800,000	377	5400	200
	PMT-143	PMTF-143	PMTS-143	PMTM-143	Output	7.9:1	10,000	225	1000	42	200
	PMT-144	PMTF-144	PMTS-144	PMTM-144	Input	1:35	82	100,000	14	4500	200
	PMT-145	PMTF-145	PMTS-145	PMTM-145	Input	1:11	600	75,000 CT	48	1300	200
	PMT-146	PMTF-146	PMTS-146	PMTM-146	Microphone	1.25:4	1,000	500,000	242	3500	200

ALL UNITS HAVE 2" LEAD LENGTHS AND COLOR CODED.

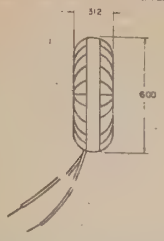
© United Technical Publications

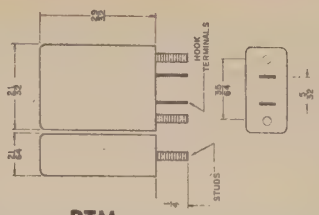
PICO TOROIDS OR INDUCTORS

ESSEX Stancor/RBM | STANCOR

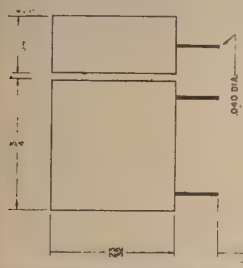


PT



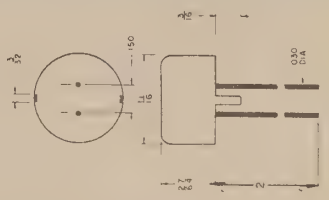


PTM



PTP





PTH

FOR FREQUENCIES UP TO 15 KC

Section	Open	Crystal Case Metal	Plastic Case	Hermitic Seal	Inductance	DCR (Ohms)	Dist. Cap (mmfd)
1	PT-1	PTM-1	PTP-1	PTH-1	5.0MH	2.3	30
	PT-2	PTM-2	PTP-2	PTH-2	6.0	3.1	31
	PT-3	PTM-3	PTP-3	PTH-3	7.2	3.5	32
	PT-4	PTM-4	PTP-4	PTH-4	8.6	4.2	33
	PT-5	PTM-5	PTP-5	PTH-5	10.0	4.9	33
	PT-6	PTM-6	PTP-6	PTH-6	12.0	5.4	34
	PT-7	PTM-7	PTP-7	PTH-7	15.0	7.3	34
	PT-8	PTM-8	PTP-8	PTH-8	17.5	8.5	35
	PT-9	PTM-9	PTP-9	PTH-9	20.0	11.2	36
	PT-10	PTM-10	PTP-10	PTH-10	24.0	13.1	37
	PT-11	PTM-11	PTP-11	PTH-11	30.0	14.3	37
	PT-12	PTM-12	PTP-12	PTH-12	36.0	18.0	38
	PT-13	PTM-13	PTP-13	PTH-13	43.0	22.0	39
	PT-14	PTM-14	PTP-14	PTH-14	50.0	25.0	40
	PT-15	PTM-15	PTP-15	PTH-15	60.0	33.0	40
	PT-16	PTM-16	PTP-16	PTH-16	72.0	35.0	41
	PT-17	PTM-17	PTP-17	PTH-17	86.0	39.0	42
	PT-18	PTM-18	PTP-18	PTH-18	100.0	49.0	42
	PT-19	PTM-19	PTP-19	PTH-19	120.0	59.0	43
	PT-20	PTM-20	PTP-20	PTH-20	150.0	78.0	44
	PT-21	PTM-21	PTP-21	PTH-21	175.0	85.0	44
	PT-22	PTM-22	PTP-22	PTH-22	200.0	115.0	45
	PT-23	PTM-23	PTP-23	PTH-23	240.0	130.0	46
	PT-24	PTM-24	PTP-24	PTH-24	300.0	150.0	46
	PT-25	PTM-25	PTP-25	PTH-25	360.0	190.0	47
	PT-26	PTM-26	PTP-26	PTH-26	430.0	210.0	48
	PT-27	PTM-27	PTP-27	PTH-27	500.0	290.0	48
	PT-28	PTM 28	PTP-28	PTH-28	600.0	320.0	49
	PT-29	PTM-29	PTP-29	PTH-29	720.0	350.0	50
	PT-30	PTM-30	PTP-30	PTH-30	860.0	380.0	50
	PT-31	PTM-31	PTP-31	PTH-31	1.0HY	520.0	51
	PT-32	PTM-32	PTP-32	PTH-32	1.2	580.0	52
	PT-33	PTM-33	PTP-33	PTH-33	1.5	780.0	53
	PT-34	PTM-34	PTP-34	PTH-34	1.7	880.0	53
	PT-35	PTM-35	PTP-35	PTH-35	2.0	1050.0	54
	PT-36	PTM-36	PTP-36	PTH-36	2.4	1230.0	54
	PT-37	PTM-37	PTP-37	PTH-37	3.0	1700.0	56

FOR FREQUENCIES UP TO 100 KC

Section	Open	Crystal Case Metal	Plastic Case	Hermitic Seal	Inductance	DCR (Ohms)	Dist. Cap (mmfd)
2	PT-38	PTM-38	PTP-38	PTH-38	1.0MH	1.2	22
	PT-39	PTM-39	PTP-39	PTH-39	1.2	1.3	23
	PT-40	PTM-40	PTP-40	PTH-40	1.5	1.8	24
	PT-41	PTM-41	PTP-41	PTH-41	1.7	2.0	25
	PT-42	PTM-42	PTP-42	PTH-42	2.0	2.1	25
	PT-43	PTM-43	PTP-43	PTH-43	2.4	2.9	26
	PT-44	PTM-44	PTP-44	PTH-44	3.0	3.2	26
	PT-45	PTM-45	PTP-45	PTH-45	3.6	4.6	27
	PT-46	PTM-46	PTP-46	PTH-46	4.3	4.8	28
	PT-47	PTM-47	PTP-47	PTH-47	5.0	5.3	28
	PT-48	PTM-48	PTP-48	PTH-48	6.0	7.2	29
	PT-49	PTM-49	PTP-49	PTH-49	7.2	8.1	30
	PT-50	PTM-50	PTP-50	PTH-50	8.6	8.7	30
	PT-51	PTM-51	PTP-51	PTH-51	10.0	12.0	31
	PT-52	PTM-52	PTP-52	PTH-52	12.0	12.5	31

FOR FREQUENCIES UP TO 100 KC

Section	Open	Crystal Case Metal	Plastic Case	Hermitic Seal	Inductance	DCR (Ohms)	Dist. Cap (mmfd)
3	PT-53	PTM-53	PTP-53	PTH-53	15.0MH	14.0	32
	PT-54	PTM-54	PTP-54	PTH-54	17.5	19.5	33
	PT-55	PTM-55	PTP-55	PTH-55	20.0	22.0	33
	PT-56	PTM-56	PTP-56	PTH-56	24.0	24.0	34
	PT-57	PTM-57	PTP-57	PTH-57	30.0	32.0	35
	PT-58	PTM-58	PTP-58	PTH-58	36.0	34.0	36
	PT-59	PTM-59	PTP-59	PTH-59	43.0	47.0	36
	PT-60	PTM-60	PTP-60	PTH-60	50.0	51.0	37
	PT-61	PTM-61	PTP-61	PTH-61	60.0	73.0	37
	PT-62	PTM-62	PTP-62	PTH-62	72.0	79.0	38
	PT-63	PTM-63	PTP-63	PTH-63	86.0	86.0	38
	PT-64	PTM-64	PTP-64	PTH-64	100.0	115.0	39
	PT-65	PTM-65	PTP-65	PTH-65	120.0	130.0	40
	PT-66	PTM-66	PTP-66	PTH-66	150.0	180.0	40
	PT-67	PTM-67	PTP-67	PTH-67	175.0	190.0	41
	PT-68	PTM-68	PTP-68	PTH-68	200.0	210.0	42
	PT-69	PTM-69	PTP-69	PTH-69	240.0	300.0	42
	PT-70	PTM-70	PTP-70	PTH-70	300.0	330.0	43
	PT-71	PTM-71	PTP-71	PTH-71	360.0	350.0	44
	PT-72	PTM-72	PTP-72	PTH-72	430.0	470.0	45
	PT-73	PTM-73	PTP-73	PTH-73	500.0	510.0	45

FOR FREQUENCIES UP TO 5 MC

Section	Open	Crystal Case Metal	Plastic Case	Hermitic Seal	Inductance	DCR (Ohms)	Dist. Cap (mmfd)
4	PT-74	PTM-74	PTP-74	PTH-74	.05MH	.8	10
	PT-75	PTM-75	PTP-75	PTH-75	.06	.9	10
	PT-76	PTM-76	PTP-76	PTH-76	.072	1.0	11
	PT-77	PTM-77	PTP-77	PTH-77	.086	1.05	11
	PT-78	PTM-78	PTP-78	PTH-78	.10	1.10	12
	PT-79	PTM-79	PTP-79	PTH-79	.12	1.125	13
	PT-80	PTM-80	PTP-80	PTH-80	.15	1.7	14
	PT-81	PTM-81	PTP-81	PTH-81	.175	2.0	14
	PT-82	PTM-82	PTP-82	PTH-82	.20	2.2	15
	PT-83	PTM-83	PTP-83	PTH-83	.24	2.4	15
	PT-84	PTM-84	PTP-84	PTH-84	.30	2.7	16
	PT-85	PTM-85	PTP-85	PTH-85	.36	2.9	16
	PT-86	PTM-86	PTP-86	PTH-86	.43	3.2	17
	PT-87	PTM-87	PTP-87	PTH-87	.50	3.9	17
	PT-88	PTM-88	PTP-88	PTH-88	.60	5.0	18
	PT-89	PTM-89	PTP-89	PTH-89	.72	5.4	18
	PT-90	PTM-90	PTP-90	PTH-90	.86	7.1	19
	PT-91	PTM-91	PTP-91	PTH-91	1.00	8.9	20
	PT-92	PTM-92	PTP-92	PTH-92	1.20	9.7	20
	PT-93	PTM-93	PTP-93	PTH-93	1.50	11.0	21
	PT-94	PTM-94	PTP-94	PTH-94	1.75	11.7	21
	PT-95	PTM-95	PTP-95	PTH-95	2.00	12.8	22
	PT-96	PTM-96	PTP-96	PTH-96	2.40	14.0	23
	PT-97	PTM-97	PTP-97	PTH-97	3.00	18.7	23
	PT-98	PTM-98	PTP-98	PTH-98	3.60	20.6	24
	PT-99	PTM-99	PTP-99	PTH-99	4.30	22.4	25
	PT-100	PTM-100	PTP-100	PTH-100	5.00	24.2	25
	PT-101	PTM-101	PTP-101	PTH-101	6.00	33.6	26
	PT-102	PTM-102	PTP-102	PTH-102	7.20	37.6	27
	PT-103	PTM-103	PTP-103	PTH-103	8.60	50.5	28
	PT-104	PTM-104	PTP-104	PTH-104	10.00	54.5	29

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

POWER TRANSFORMERS

Stancor's broad line of commercial grade power transformers offers a choice of standard mounting styles. Listings are in ascending order of plate-supply voltage for ease of selection.

All units are designed and built to meet the exacting requirements of EIA for electrical tolerances, dielectric strength, temperature rise and construction. All are insulated with class A materials; (105°C max. operating temperature).

Transformers designed for full-wave C.T. rectification with capacitor input filter may be used with choke input filter allowing an increase in D.C. current of 30%.

Transformers designed for full-wave C.T. rectification with choke input filter may be used with capacitor input filter requiring a decrease in D.C. current of 25%.

CONSULT FACTORY for detailed information concerning electrical rating and/or mechanical characteristics.

FOR CAPACITOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 60 CYCLES

Section	Catalog No.	Style	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps	Other Windings Volts	Other Windings Amps	Termination Pri.	Termination Sec.	Dimensions A	B	C	D	E	Wt. lbs.	Styles
1	P-8379	M†	115[a]	290			2.7 6.3	.45 8.0	Leads	Leads	2 13/16	3 7/16	4	2 7/16	3	5.7	
	P-8158	M†	117[a]	200			6.3 6.3 6.3	4.25 4.0 2.0	Leads	Leads	3 7/16	4 3/16	3 5/8	2 3/4	3 7/16	6.2	
	P-8336	M†	117[a]	280			6.3 6.3 6.3	9.5 1.2 .6	Leads	Leads	3 3/4	4 9/16	4 1/4	3 1/4	4 1/16	8.0	
	P-8386	C4†	117[a]	300			6.3	10.0	Leads	Leads	3 3/4	4	3 1/8	2 1/8	2 1/2	6.9	A
2	P-6146	C	120-0-120	250	5.0	3.0	-	-	Leads	Leads	3 1/8	3 1/4	3 7/8	2 1/2	1 15/16	4.2	
	PS-8415	S	125[b]	15			6.3	.6	Leads	Leads	1 3/8	2 3/8	1 7/16	2	—	.7	
	PS-8416	S	125-0-125	25			6.3	1.0	Leads	Leads	1 3/4	2 13/16	2 5/16	2 3/8	—	1.0	
	PA-8421	A	125[b]	50			6.3	2.0	Leads	Leads	2 1/8	3 11/16	2 1/4	3 1/8	—	1.5	
	P-8181	VE	150[b]	25			6.3 C.T.	.5	Leads	Leads	1 13/16	2 3/8	1 15/16	2	—	.8	
	P-8372	M	150[b]	250			6.3 6.3	8.0 1.2	Leads	Leads	3 3/4	4 1/2	4 1/8	3	3 3/4	8.7	
	P-9000C	C†	155[a]	450			6.3 6.3	2.0 13.5	Leads	Leads	3 1/2	4 7/8	4 3/16	3 1/16	3 13/16	12.0	
	P-8359	C	190-160-0-160-190	70			6.3 C.T. 6.3	3.0 .6	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 7/8	2.8	
	P-8383	C	200-0-200	110			6.3 6.3 C.T.	2.0 4.0	Leads	Leads	2 1/2	3 1/4	3 1/8	2	2 1/4	3.0	
	PC-8417	C	220-0-220	50			6.3 25.2	.6 .5	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 9/16	2.2	C
3	PCC-40	SC	225-0-225	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2 7/8	3 1/2	3 1/2	2	3 1/8	3.2	
	PSC-40	SC	225-0-225	40	5.0	2.0	6.3 C.T.	2.0	Lugs	Lugs	2 7/8	3 1/2	3 3/4	2	3 1/8	3.2	
	P-8155	M	225-0-225	90	5.0	2.0	6.3	5.15	Leads	Leads	2 13/16	3 3/8	3 3/4	2 1/4	2 13/16	4.5	
	PC-8418	C	230-0-230	50			6.3	2.5	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 9/16	2.2	
	PM-8418	M	230-0-230	50			6.3	2.5	Leads	Leads	2 1/2	3	2 5/8	2	2 1/2	2.2	
	PC-8401	C	235-0-235	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 9/16	2.2	
	PM-8401	M	235-0-235	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2 1/2	3	2 5/8	2	2 1/2	2.2	
	P-8374	M†	235-0-235	260	5.0	6.0	6.3 6.3 6.3	5.0 5.0 1.2	Leads	Leads	3 7/16	4 3/16	4 7/8	3	3 11/16	10.0	
	P-8382	M6	235[b] 35	20 1	5.0	2.0	6.3	2.85	Leads	Leads	2 3/16	2 5/8	3 1/8	2 13/16	—	2.5	C1
	PC-8402	C	240-0-240	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2 1/2	2 3/4	3 1/8	2	1 3/4	2.4	
	PM-8402	M	240-0-240	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2 1/2	3	2 3/4	2	2 1/2	2.4	
4	P-6348	M	240-0-240	60			6.3 C.T.	2.75	Leads	Leads	2 3/16	2 5/8	2 3/4	1 15/16	—	2.3	
	PC-8419	C	240-0-240	70			6.3	3.0	Leads	Leads	2 1/2	2 7/8	3 1/8	2	1 13/16	2.6	
	PM-8419	M	240-0-240	70			6.3	3.0	Leads	Leads	2 1/2	3	2 7/8	2	2 1/2	2.6	
	• PC-8431	C	245-0-245	40			6.3 C.T.	2.0	Leads	Leads	2 3/16	2 5/16	2 5/8	1 3/4	1 3/8	1.6	
	P-8173	C1	250-0-250	10			6.3 6.3	.6 1.2	Leads	Leads	2 7/8	2 1/8	2 1/4	2 3/8	—	1.0	
	P-8174	C1	250-0-250	20			6.3 6.3	.6 1.2	Leads	Leads	2 1/4	3 5/16	2 5/8	2 13/16	—	1.5	C3
	• PC-8432	C	250-0-250	55			6.3 C.T.	2.0	Leads	Leads	2 3/16	2 9/16	2 5/8	1 3/4	1 5/8	1.9	
	PC-8403	C	250-0-250	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	2 1/2	3 1/8	3 1/8	2	2 1/16	3.2	
	PM-8403	M	250-0-250	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	2 1/2	3	3 1/8	2	2 1/2	3.2	
	• PC-8433	C	255-0-255	70			6.3 C.T.	2.5	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 11/16	2.3	
	PC-8404	C	260-0-260	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	2 13/16	3 1/2	3 1/2	2 1/4	2 1/4	4.0	
	PM-8404	M	260-0-260	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	4.0	
	PC-8420	C	260-0-260	90			6.3	4.0	Leads	Leads	2 13/16	3 1/4	3 1/2	2 1/4	2	3.5	
	PM-8420	M	260-0-260	90			6.3	4.0	Leads	Leads	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	3.5	
	P-8354	M5†	260-0-260	325	5.0 C.T.	6.0	6.3	11.0	Leads	Leads ‡	3 3/4	4 1/2	5 1/4	3 5/16	4 1/16	11.0	
	P-8353	C3	265-0-265	300	5.0	6.0	12.6 C.T.	6.0	Leads	Leads ‡	3 3/4	4 3/4	5 7/8	3	4	12.5	
	• PC-8434	C	270-0-270	90			6.3 C.T.	2.5	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 11/16	2.3	C4
5	PCC-55	SC	270-0-270	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2 7/8	3 1/2	3 1/2	2	3 1/8	3.5	
	PSC-55	SC	270-0-270	55	5.0	2.0	6.3 C.T.	2.0	Lugs	Lugs	2 7/8	3 1/2	3 3/4	2	3 1/8	3.5	
	PC-8405	C	270-0-270	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	3 1/8	3 1/2	3 7/8	2 1/2	2 5/16	4.9	
	PM-8405	M	270-0-270	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	3 1/8	3 3/4	3 7/8	2 1/2	3 1/8	4.9	
	P-8172	M	270-0-270	200	5.0	3.0	6.3	8.5	Leads	Leads	3 1/8	3 3/4	4 7/16	2 11/16	3 5/16	7.0	
	P-8356	C†	270-0-270	260	5.0	3.0	6.3	8.8	Leads	Leads	3 1/8	3 3/8	3 7/8	2 1/2	2 1/4	6.5	
	P-8376	M†	270-0-270	320	5.0	4.0	6.3	10.0	Leads	Leads	3 7/16	4 1/4	4 1/8	3	3 11/16	8.5	
	P-8377	M†	270-0-270	280	5.0	3.0	6.3	10.0	Leads	Leads	3 1/8	3 15/16	3 5/8	2 11/16	3 5/16	6.7	
	P-8334	M†	275-0-275	305	5.0	5.0	6.3 6.3	8.5 1.2	Leads	Leads	3 3/4	4 9/16	5 1/8	3 1/4	4 1/16	13.0	
	P-8167	M†	280-0-280	400	5.0	6.0	6.3 6.3	4.5 8.5	Leads	Leads	3 3/4	4 9/16	5 1/2	3 1/4	4 1/16	13.0	
	P-8332	M†	280-0-280	260	5.0	5.0	6.3 6.3 6.3	7.1 1.2 .9	Leads	Leads	3 3/4	4 9/16	4 13/16	3 1/4	4 1/16	11.0	M

a. For use in Voltage Doubler Circuits. b. For use in Half-Wave Circuits. † With Copper shorting band to reduce external Magnetic Field.
‡ Plate wdg and rectifier filament wdg Connected to Tube Socket. • New Part Number.

ALL SECONDARY A.C. VOLTAGES ±3% **ALL PCC AND PSC NUMBERS MAY BE OPERATED AT 50 CYCLES**

© United Technical Publications

POWER TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

FOR CAPACITOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 60 CYCLES

Section	Catalog No.	Style	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps	Other Windings Volts	Other Windings Amps	Termination Pri.	Termination Sec.	Dimensions A	B	C	D	E	Wt. lbs.	Styles
1	P-8373	M	280-0-280	280	5.0	3.0	6.3 24.0	10.0 2.6	Leads	Leads	3⅛	3¾	4¼	2 1⁄16	3 5⁄16	8.0	M3
	P-8378	C†	280-0-280 250-0-250	300	5.0/3.0	4.5	6.3 24.0	10.0 1.2	Leads	Leads	3⅛	4⅝	3⅞	2½	3¼	7.9	
	P-8375	M3†	283-0-283	210	5.0 C.T.	3.0	6.3 6.3 6.3	7.5 1.5 1.2	Leads	Leads‡	3¾	4 9⁄16	4⅝	3	3¾	8.3	
	P-8355	C4†	285-0-285	250	5.0	3.0	6.3	9.5	Leads	Leads	3¾	3½	3 5⁄16	2½	2 3⁄16	6.5	
	P-8365	M†	285-0-285	325	5.0	6.0	12.6 C.T.	6.0	Leads	Leads	3¾	4 9⁄16	4⅝	3	3¾	10.2	
	P-8352	C	290-0-290	240	5.0	3.0	12.6 C.T.	5.25	Leads	Leads	3¾	3 15⁄16	4 13⁄16	3	3⅝	8.5	
	P-8367	M5†	290-0-290	270	5.0	6.0	6.3 6.3	8.5 1.2	Leads	Leads‡	3¾	4½	5⅛	3	3¾	12.5	
	P-8381	M†	290-0-290	290	5.0	3.0	6.3 6.3	5.0 5.0	Leads	Leads	3⅛	3 13⁄16	5	2 1⁄16	3 5⁄16	6.9	
	P-8333	M3†	295-0-295	225	5.0 C.T.	3.0	6.3 6.3	11.4 .9	Leads	Leads‡	3¾	4 9⁄16	4⅞	3¼	4 1⁄16	10.0	
2	PCC-60	SC	300-0-300	60	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	3¼	4	3⅞	2¼	3½	4.5	M5
	PSC-60	SC	300-0-300	60	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	3¼	4	4¼	2¼	3½	4.5	
	P-6358	C	300-0-300	65			6.3 C.T.	2.7	Leads	Leads	2½	2½	3⅛	2	1¾	3.0	
	P-8175	C	300-0-300	70	5.0	3.0	6.3 C.T.	3.0	Leads	Leads	2⅞	3⅛	3½	2¼	2¼	4.0	
	PM-8423	M	300-0-300	90	5.0	2.0	6.3 C.T.	3.5	Leads	Leads	2 13⁄16	3⅜	3	2¼	2 13⁄16	4.0	
	P-8177	C	300-0-300	120	5.0	3.0	6.3 C.T.	3.0	Leads	Leads	3 3⁄16	3⅝	3⅞	2¾	2 9⁄16	5.8	
	P-8164	M†	300-0-300	225	5.0	3.0	6.3	9.0	Leads	Leads	3 7⁄16	4 3⁄16	4⅛	2¾	3 7⁄16	7.5	
	P-8335	M†	300-0-300	325	5.0	6.0	6.3 6.3	8.8 1.5	Leads	Leads	3¾	4 9⁄16	5⅛	3¼	4 1⁄16	13.0	
	P-8331	M†	310-0-310	240	5.0	3.0	6.3 6.3	6.4 3.0	Leads	Leads	3¾	4 9⁄16	4½	3¼	4 1⁄16	9.0	
	P-8370	M5†	310-0-310	320	5.0 C.T.	6.0	6.3 6.3 6.3	11.0 1.2 1.2	Leads	Leads‡	3¾	4⅝	5⅜	3	3¾	14.0	
	P-8337	M3†	315-0-315	225	5.0	3.0	6.3	8.25	Leads	Leads‡	3¾	4½	4½	3¼	4 1⁄16	8.5	
3	P-8338	M†	315-0-315	310	5.0	6.0	6.7 6.4	10.0 1.6	Leads	Leads	3⅞	4¾	5⅜	3	3¾	12.5	M6
	P-8371	M3†	320-0-320 200-0-200	200 80	5.0 C.T.	3.0	6.3 6.3 6.3	4.0 4.0 3.0	Leads	Leads‡	3¾	4⅝	5⅜	3	3¾	11.3	
	P-6010	M	325-0-325	40	5.0 C.T.	2.0	6.3 C.T.	2.0	Leads	Leads	2½	3	2¾	2	2½	2.4	
	PC-8406	C	325-0-325	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2½	2¾	3⅛	2	1 11⁄16	2.4	
	PM-8406	M	325-0-325	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2½	3	2¾	2	2½	2.4	
	PC-8407	C	325-0-325	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2½	3⅛	3⅛	2	2⅛	3.2	
	PM-8407	M	325-0-325	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2½	3	3⅛	2	2½	3.2	
	• PC-8437	C	325-0-325	55			6.3 C.T.	2.0	Leads	Leads	2⅜	2⅜	2⅝	1¾	1⅝	1.9	
	PC-8422	C	325-0-325	150	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	3⅛	3⅞	3⅞	2½	2 9⁄16	5.8	
	PM-8422	M	325-0-325	150	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	3⅛	3¾	3⅝	2½	3⅛	5.8	
	P-8339	C	325-0-325	255	5.0	3.0	12.6 C.T.	5.25	Leads	Leads	3¾	4	4⅞	3	3¾	8.5	
	P-8369	M3†	325-0-325	240	5.0 C.T.	3.0	6.3 6.3 6.3	10.0 .9 1.2	Leads	Leads‡	3¾	4⅝	5⅜	3	3¾	11.5	S
4	• PC-8436	C	330-0-330	40			6.3 C.T.	2.0	Leads	Leads	2 3⁄16	2 9⁄16	2⅝	1¾	1⅝	1.9	
	PCC-85	SC	330-0-330	85	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	3 1⁄16	4 7⁄16	4 5⁄16	2¾	3⅞	6.0	
	PSC-85	SC	330-0-330	85	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	3 1⁄16	4 7⁄16	4 5⁄16	2¾	3⅞	6.0	
	PCC-70	SC	335-0-335	70	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	3¼	4	3⅞	2¼	3½	4.5	
	PSC-70	SC	335-0-335	70	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	3¼	4	4¼	2¼	3½	4.5	
	P-5059	C	337-0-337	200	5.0 C.T.	3.0	6.3 C.T.	5.0	Leads▲	Leads	3¾	4 5⁄16	4 11⁄16	3	3 3⁄16	9.6	
	PC-8408	C	340-0-340	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	2 13⁄16	3⅜	3½	2¼	2⅛	3.8	
	PM-8408	M	340-0-340	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	2 13⁄16	3⅜	3½	2¼	2 13⁄16	3.8	
	P-8166	M†	340-0-340	330	5.0	6.0	6.3 6.3 6.3	2.5 5.0 5.0	Leads	Leads	3¾	4 9⁄16	5⅜	3¼	4 1⁄16	13.0	SC
	• PC-8438	C	345-0-345	70			6.3 C.T.	2.5	Leads	Leads	2½	2¾	3⅛	2	1¾	2.5	
	PCC-105	SC	345-0-345	105	5.0	2.0	6.3 C.T.	3.5	Leads	Leads	3 1⁄16	4 7⁄16	4 5⁄16	2¾	3⅞	6.5	
	PSC-105	SC	345-0-345	105	5.0	2.0	6.3 C.T.	3.5	Lugs	Lugs	3 1⁄16	4 7⁄16	4 11⁄16	2¾	3⅞	6.5	
	P-6011	M	350-0-350	70	5.0 C.T.	3.0	6.3 C.T.	2.5	Leads	Leads	2½	3	3⅜	2	2½	3.5	
	• PC-8439	C	350-0-350	90			6.3 C.T.	3.0	Leads	Leads	2½	3⅛	3⅛	2	2⅜	3.1	
	P-6012	M	350-0-350	90	5.0 C.T.	3.0	6.3 C.T.	3.5	Leads	Leads	2 13⁄16	3⅜	3½	2¼	2 13⁄16	4.2	
	PC-8409	C	350-0-350	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	2 13⁄16	3⅝	3½	2¼	2⅜	4.5	
	PM-8409	M	350-0-350	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	2 13⁄16	3⅜	3½	2¼	2 13⁄16	4.5	
5	P-8176	C	350-0-350	110	5.0	2.0	6.3 C.T. 6.3 C.T.	3.0 3.0	Leads	Leads	3¼	3⅞	3 13⁄16	2¾	3	5.5	VE
	P-6013	M	350-0-350	120	5.0 C.T.	3.0	6.3 C.T.	4.7	Leads	Leads	3⅛	3¾	3⅜	2½	3⅛	5.2	
	P-8345	M†	350-0-350	215	5.0	3.0	6.3 6.3	9.0 1.2	Leads	Leads	3¾	4 9⁄16	5	3¼	4 1⁄16	11.5	
	P-8350	M†	350-0-350	270	5.0 5.0	6.0 2.0	6.3 6.6	1.5 7.8	Leads	Leads	3¾	4 9⁄16	5½	3¼	4 1⁄16	13.0	
	P-8340	M†	355-0-355	270	5.0	6.0	6.3 6.3 6.3	9.5 1.65 2.4	Leads	Leads	3¾	4 9⁄16	5⅜	3¼	4 1⁄16	12.0	
	PC-8410	C	360-0-360	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	3⅛	3¾	3⅞	2½	2 7⁄16	5.5	
	PM-8410	M	360-0-360	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	3⅛	3¾	3½	2½	3⅛	5.5	

† With Copper shorting band to reduce external Magnetic Field. ‡ Plate wdg and rectifier filament wdg Connected to Tube Socket.
▲ Primary for 117-107 volts. • New Part Number.

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

POWER TRANSFORMERS

FOR CAPACITOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 60 CYCLES

Section	Catalog No.	Style	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps	Other Windings Volts	Other Windings Amps	Termination Pri.	Termination Sec.	Dimensions A	B	C	D	E	Wt. lbs.	Styles
1	P-8341	C†	360-0-360 / 220-0-220	175 / 110	5.0 / 5.0	3.0 / 2.0	12.6 C.T.	5.45	Leads	Leads	3¾	4⅞	4¾	3	3½	11.0	C
	P-8349	M†	360-0-360	260	5.0	6.0	5.0 / 6.3	2.0 / 8.85	Leads	Leads	3¾	4⅝	5½	3¼	4⅛	13.0	
	P-8351	M	360-0-360	240	5.0	6.0	6.5	9.3	Leads	Leads	3¾	4⅝	4 15/16	3¼	4⅛	10.5	
	P-8343	C	360-0-360 / 220-0-220	220 / 110	5.0 / 5.0	3.0 / 2.0	12.8 C.T.	5.8	Leads	Leads	3¾	5¼	4¾	3	3⅞	11.5	
	P-8344	C†	365-0-365 / 200-0-200	170 / 84	5.0 / 5.0	3.0 / 2.0	12.6	4.25	Leads	Leads	3¾	4½	4¾	3	3⅛	9.0	
	P-8342	M†	365-0-365	260	5.0	6.0	6.3 / 6.3	8.85 / 1.2	Leads	Leads	3¾	4⅝	5⅜	3¼	4⅛	13.0	
2	P-8348	M†	365-0-365	270	5.0	6.0	6.7	4.5	Leads	Leads	3¾	4⅝	4⅞	3¼	4⅛	10.0	
	PCC-150	SC	370-0-370	150	5.0	3.0	6.3 C.T. / 6.3 C.T.	4.0 / 1.0	Leads	Leads	4⅛	5¼	5 5/16	2½	4¾	11.5	
	PSC-150	SC	370-0-370	150	5.0	3.0	6.3 C.T. / 6.3 C.T.	4.0 / 1.0	Lugs	Lugs	4⅛	5¼	5 5/16	2½	4¾	11.5	
	P-6315	M	370-0-370	275	5.0 C.T.	3.0	6.3 C.T.	7.0	Leads	Leads	3¾	4½	4¼	3	3¾	9.3	
	P-8366	M†	370-0-370	220	5.0	6.0	6.3 / 6.3 / 6.3	6.0 / 4.0 / 1.2	Leads	Leads	3¾	4⅝	5¼	3	3¾	11.0	
	PC-8441	C	375-0-375	150			6.3 C.T.	4.5	Leads	Leads	3⅛	3⅝	3⅞	2½	2⅜	4.9	
	PCC-120	SC	375-0-375	120	5.0	3.0	6.3 C.T.	4.0	Leads	Leads	4⅛	5¼	5 5/16	2½	4¾	9.5	
	PSC-120	SC	375-0-375	120	5.0	3.0	6.3 C.T.	4.0	Lugs	Lugs	4⅛	5¼	5 5/16	2½	4¾	9.5	
	P-6014	M	375-0-375	150	5.0 C.T.	3.0	6.3 C.T.	5.0	Leads	Leads	3⅛	3¾	3¾	2½	3⅛	6.0	
	PC-8411	C	375-0-375	150	5.0	3.0	6.3 C.T.	4.5	Leads	Leads	3 7/16	4	4¼	2¾	2 13/16	5.8	
	PM-8411	M	375-0-375	150	5.0	3.0	6.3 C.T.	4.5	Leads	Leads	3 7/16	4⅛	3⅞	2¾	3 7/16	5.8	
3	P-8171	M3†‡	375-0-375	225	5.0 C.T.	3.0	6.3 / 6.3	2.0 / 9.0	Leads	Leads	3¾	4½	4⅞	3	3¾	10.5	M
	P-8169	M†	380-0-380	220	5.0	3.0	6.3 / 6.3 / 6.3	1.2 / 5.0 / 7.0	Leads	Leads	3¾	4⅝	4¾	3	3¾	10.5	
	P-8170	C†	380-0-380	220	5.0	3.0	6.3 / 6.3 / 6.3	1.2 / 5.0 / 7.0	Leads	Leads	3¾	4¾	4¾	3	3 5/16	10.5	
	PCC-200	SC	385-0-385	200	5.0	3.0	6.3 C.T. / 6.3 C.T.	4.5 / 1.0	Leads	Leads	4⅛	5¼	5 5/16	2½	4¾	12.0	
	PSC-200	SC	385-0-385	200	5.0	3.0	6.3 C.T. / 6.3 C.T.	4.5 / 1.0	Lugs	Lugs	4⅛	5¼	5 5/16	2½	4¾	12.0	
4	P-8347	M†	385-0-385	230	5.0	3.0	5.0 / 6.45 / 6.3	2.0 / 7.4 / 1.6	Leads	Leads	3¾	4⅝	5 5/16	3¼	4⅛	13.0	M3
	• PC-8442	C	400-0-400	200			6.3 C.T.	5.0	Leads	Leads	3⅛	3⅞	3⅞	2½	2⅜	5.7	
	P-6007	M	400-0-400	110	5.0 C.T.	3.0	2.5 C.T. / 2.5 C.T.	15.0 / 3.5	Leads	Leads	3⅛	3¾	3½	2½	3⅛	5.4	
	P4004	C▲	400-0-400 80v. Bias	175	5.0 C.T.	3.0	2.5 / 6.3 C.T. / 6.3 C.T.	1.75 / 2.5 / 2.5	Leads	Leads	3¾	3⅞	4 11/16	3	2 13/16	8.3	
5	P-8346	C	400-0-400 / 330-0-330	180 / 180	5.0 / 5.0	3.0 / 3.0			Leads	Leads	3¾	4¾	4¾	3	3½	11.0	SC
	PC-8412	C	400-0-400	200	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	3¾	4	4 11/16	3	2 13/16	8.2	
	PM-8412	M	400-0-400	200	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	3¾	4½	3⅞	3	3¾	8.2	
	PC-8413	C	400-0-400	250	5.0	4.0	6.3 C.T.	5.0	Leads	Leads	3¾	4½	4 11/16	3	3 5/16	10.0	
	PCC-250	SC	400-80-0-80-400	250	5.0	6.0	5.0 / 6.3 C.T.	2.0 / 7.0	Leads	Leads	5 5/16	5⅞	6 1/16	3½	5⅜	15.0	
	PSC-250	SC	400-80-0-80-400	250	5.0	6.0	5.0 / 6.3 C.T.	2.0 / 7.0	Lugs	Lugs	5 5/16	5⅞	6 1/16	3½	5⅜	15.0	
	P-8350	C	437-0-437	185	5.0	3.0	6.3 / 6.3	3.0 / 4.0	Leads	Leads	3¾	4½	4 11/16	3	3⅜	9.5	
	P-6143	C	440-0-440	130	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	3 7/16	4 1/16	4¼	2¾	2 13/16	7.0	
	PC-8414	C	600-0-600	200	5.0	3.0	6.3 / 6.3	3.0 / 3.0	Leads	Leads	3¾	4¼	4 11/16	3	3 1/16	8.3	

SELECTING THE CORRECT POWER TRANSFORMER

STEP 1. Check rectifier tube and all other tube filament voltage and current requirements.
STEP 2. Add together total current drawn by:
A. Plates and screen grids
B. Resistor networks
Select a power transformer which will supply maximum required D.C. voltage at total current before filter.
STEP 3. Check type of rectifier, circuit, filter and load to obtain required secondary A.C. voltage from transformer.

EXAMPLE: Power transformer for typical 10 watt audio amplifier.

Quantity of Tubes	Type Number of Tubes	Filament Voltage	Filament Current
1	5Y3-GT	5.0 V	2.0 A
1	12AX7	6.3 V	0.3 A
2	12AU7	6.3 V	0.3 A (each)
2	6AQ5	6.3 V	0.45 A (each)

Total filament and heater requirements are: { 5.0 V @ 2.0 A / 6.3 V @ 1.8 A

Maximum D.C. voltage after filter: 285 volts.
At input capacitor of filter it will be approximately 325 volts D.C.

Current ratings for various amplifier stages (approximate):

12AX7	RC Coupled	2 ma. (total both sections)
12AU7	RC Coupled	10 ma. (total both sections)
6AQ5	(thru output transformer)	74 ma.*
		86 ma.

Tube characteristic data for the 5Y3-GT rectifier tube with capacitor input filter indicates an A.C. voltage requirement of approximately 335 volts R.M.S. per plate.

Selection based on total requirements: PC-8410 or PM-8410 depending on physical mounting style used.

* Includes screen grid current for each tube in the output stage.

† With Copper shorting band to reduce external Magnetic Field.
▲ Primary for 117-107 Volts.
‡ Plate wdg and rectifier filament wdg Connected to Tube Socket.
• New Part Number

ALL SECONDARY A.C. VOLTAGES +3% — ALL PCC AND PSC NUMBERS MAY BE OPERATED AT 50 CYCLES

© United Technical Publications

POWER TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

FOR REACTOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 50 60 CYCLES

Section	Catalog No.	Style	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps	Other Windings Volts	Other Windings Amps	Termination Pri.	Termination Sec.	Dimensions A	B	C	D	E	Wt. lbs.	Styles
1	PCR-55	SC	350-0-350	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	2⅞	3½	3½	2	3⅛	3¼	C
	PSR-55	SC	350-0-350	55	5.0	2.0	6.3 C.T.	2.0	Lugs	Lugs	2⅞	3½	3¾	2	3⅛	3¼	
	PCR-70	SC	425-0-425	70	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	3¼	4	3⅞	2¼	3½	4½	
	PSR-70	SC	425-0-425	70	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	3¼	4	4¼	2¼	3½	4½	
	PCR-85	SC	440-0-440	85	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	3 11/16	4⅞	4⅝	2¾	3⅞	6	
	PSR-85	SC	440-0-440	85	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	3 11/16	4⅞	4⅝	2¾	3⅞	6	
	PCR-105	SC	450-0-450	105	5.0	2.0	6.3 C.T.	3.5	Leads	Leads	3 11/16	4⅞	4⅝	2¾	3⅞	6½	
	PSR-105	SC	450-0-450	105	5.0	2.0	6.3 C.T.	3.5	Lugs	Lugs	3 11/16	4⅞	4 11/16	2¾	3⅞	6½	
	PCR-120	SC	500-0-500	120	5.0	3.0	6.3 C.T.	4.0	Leads	Leads	4⅜	5¼	5⅝	2½	4¾	9½	
	PSR-120	SC	500-0-500	120	3.0	3.0	6.3 C.T.	4.0	Lugs	Lugs	4⅜	5¼	5⅝	2½	4¾	9½	
	PCR-150	SC	510-0-510	150	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.0	Leads	Leads	4⅜	5¼	5⅝	2½	4¾	11½	
	PSR-150	SC	510-0-510	150	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.0	Lugs	Lugs	4⅜	5¼	5⅝	2½	4¾	11½	
	PCR-200	SC	520-0-520	200	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.5	Leads	Leads	4⅜	5¼	5⅝	2½	4¾	12¼	
	PSR-200	SC	520-0-520	200	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.5	Lugs	Lugs	4⅜	5¼	5⅝	2½	4¾	12¼	
	PCR-300	SC	550-370-75-0 -75-370-550	300	5.0	6.0	6.3 C.T. 6.3 C.T.	1.0 5.0	Leads	Leads	5⅞	5⅞	6⅛	3½	5⅜	17½	
	PSR-300	SC	550-370-75-0 -75-370-550	300	5.0	6.0	6.3 C.T. 6.3 C.T.	1.0 5.0	Lugs	Lugs	5⅝	5⅞	6⅛	3½	5⅜	17½	

FOR REGULATED POWER SUPPLIES — PRIMARIES 117 VOLTS 50 60 CYCLES

2	PSC-165	SC	440-0-440	165	5.0	3.0	6.3 6.4 6.3 6.3	0.6 3.0 3.0 7.5	Lugs	Lugs	4⅜	5¼	5⅝	2½	4¾	12	R
	PSC-205	SC	450-0-450	200	5.0	2.0	6.3 6.3 6.3	0.6 4.0 4.0	Lugs	Lugs	4⅜	5¼	5⅝	2½	4¾	12	

FOR BIAS SUPPLIES — PRIMARIES 117 VOLTS 50/60 CYCLES

3	1BC-150	SC	180-160-140-120-0-120-140-160-180	150	5.0	3.0			Leads	Leads	3¼	4	4¼	2¼	3½	5	S
	1BS-150	SC	180-160-140-120-0-120-140-160-180	150	5.0	3.0			Lugs	Lugs	3¼	4	4¼	2¼	3½	5	
	2BC-150	SC	180-160-140-120-0-120-140-160-180	150	5.0	3.0	(Pri.-230v.)		Leads	Leads	3¼	4	4¼	2¼	3½	5	
	2BS-150	SC	180-160-140-120-0-120-140-160-180	150	5.0	3.0	(Pri.-230v.)		Lugs	Lugs	3¼	4	4¼	2¼	3½	5	
	P-6317	C	200-170-130-90-0-90-130-170-200	200	5.0	3.0			Leads	Leads/ Lugs	3⅛	3⅞	3⅞	2½	2⅜	4.9	
	P-6318	C	450-400-350-250-0-250-350-400-450	200	5.0	3.0			Leads	Leads/ Lugs	3⅞	4¼	4⅝	2¾	2 13/16	7.0	

FOR CATHODE RAY TUBES — PRIMARIES 117 VOLTS 60 CYCLES

4	P-8150	SC	1550[b]	1.5	2.5	1.75			Leads	Leads	2½	3	3⅛	1¾	2 11/16	1.8	SC
	P-8179	M	1600[b]	3.0			6.3/5/2.5 6.3/5/2.5	1.0 3.0	Lugs	Lugs	2½	3	3½	2	2½	3.5	
	P-8178	C	1800[b]	2.0	2.5	1.8	2.5 6.3	2.2 0.6	Leads	Leads	3⅛	3¾	3⅞	2½	2½	5	
	P-8151	C	2400[b]	5.0	2.5	2.0	2.5	2.0	Leads	Leads	3⅞	3⅞	4¼	2¾	2 11/16	6.4	

FOR SOLAR CF-160 CONDENSER TESTER — PRIMARY 117 VOLTS 60 CYCLES

5	P-6459	R	550[b] 55	30 60			6.3 6.3	0.9 0.6	Leads	Leads	2¾	2⅝	2¼	1¾	2⅜	1.4	W

FOR 100 WS ELECTRONIC PHOTOFLASH — PRIMARY 105/115/125 VOLTS 60 CYCLES

6	P-6425	S	380[b] 20 Charges 1050 mfd. to 450 volts D.C.						Leads	Leads	2	2⅞	2⅝	2⅜	—	1.4	
	P-6426	W	Trigger Coil for use with P-6425 Ratio 1 to 35 Write for Bulletin #470R for Circuit Details						Leads	Leads	¾	9/16	—	—	—	.2	

b. For use in Half-Wave Circuits.

ALL SECONDARY A.C. VOLTAGES ±3%

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

FILAMENT TRANSFORMERS

WITH SINGLE SECONDARY: ALL PRIMARIES 50/60 CYCLES

Section	Catalog No.	Style	Secondary Volts	Secondary Amps.	Insulation Test RMS Volts	Primary Volts	Termination Pri.	Termination Sec.	A	B	C	D	E	WT Lbs.	Styles
1	P-4026	A	2.5	1.5	2500	117	Leads	Leads	1 5/8	2 7/8	1 5/8	2 3/8	—	0.7	A
	P-4082	SC	2.5 CT	2.5	2500	117/107	Leads	Leads	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	1.5	
	P-6133†	S	2.5 CT	5.0	7500	117	Leads	Leads	2 1/4	3 1/8	2 3/4	2 13/16	—	1.5	
	F-25	SC	2.5 CT	5.25	3500	115/230	Lugs	Lugs	2 1/2	3	3 1/16	1 3/4	2 11/16	2.0	
	P-4083†	C	2.5 CT	6.0	2500	117/107	Leads	Leads	2 1/2	2 1/2	3 1/8	2	1 1/2	2.2	
	P-3024†	C	2.5 CT	10.0	2500	117/107	Leads	Leads	2 1/2	2 3/4	3 1/8	2	1 3/4	2.5	
	P-6454	S	2.5 CT	10.0	7500	117/107	Leads	Leads	2 1/2	3 5/8	3 1/8	3 1/8	—	2.5	
	P-3060	NV	2.5 CT	10.0	10000	117	Lugs	Lugs	2 13/16	2 3/4	3 7/16	2 1/4	1 7/8	2.5	
	F-210	SC	2.5 CT	10.0	5000	115/230	Terms	Terms	2 7/8	3 1/2	3 3/4	2	3 1/8	3.0	
	F-210H	SC	2.5 CT	10.0	9000	115/230	Terms	Terms	3 1/4	4	4 1/4	2 1/4	3 1/2	4.0	
	F-215H	SC	2.5 CT	15.0	9000	115/230	Terms	Terms	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	6.0	
	P-3026†	C	5.0 CT	3.0	2500	117/107	Leads	Leads	2 1/2	2 5/8	3 1/8	2	1 5/8	2.4	
	P-4088†	NV	5.0 CT	3.0	2500	117	Lugs	Lugs	2 1/2	1 5/8	3 1/8	2	1 5/8	1.8	
	P6467	A	5.0 CT	3.0	2500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.4	
	F-54†	SC	5.0 CT	4.0	2500	115/230	Lugs	Lugs	2 1/2	3	3 5/16	1 3/4	2 11/16	2.2	
	P-6455	S	5.0 CT	6.0	2000	117/107	Leads	Leads	2 1/8	3 1/8	2 3/4	2 13/16	—	2.0	
	P-3062†	NV	5.0 CT	6.0	2500	117	Lugs	Lugs	2 1/2	2 1/4	3 1/8	2	2	2.3	
	P-5000†	C	5.0 CT	6.0	2500	117/107	Leads	Leads	2 1/2	3	3 1/8	2	2	3.1	
	P-6135	NV	5.0 CT	10.0	2500	117	Leads	Leads	2 1/2	2 3/4	3 1/8	2	2 3/8	3.0	
	F-58	SC	5.0 CT	10.0	2500	115/230	Terms	Terms	2 7/8	3 1/2	3 3/4	2	3 1/8	3.5	
2	F-510H†	SC	5.0 CT	10.0	10000	115/230	Terms	Terms	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	6.5	C
	P-4086†	FA	5.0 CT	14.0	10000	117/107	Terms	Terms	4 1/4	7	5 1/8	2 3/4	6	12.3	
	P-6433†	NV	5.0 CT	15.0	2500	117	Leads	Leads	2 1/2	2 3/4	3 1/8	2	2 1/4	3.0	
	F-516	SC	5.0 CT	20.0	2500	115/230	Terms	Lugs Terms	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	6.5	
	F-520HB	SC	5.0 CT	20.0	10000	115/230	Terms	Terms	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	13.0	
	P-6432†	NV	5.0 CT	21.0	2500	117	Leads	Leads	3 1/8	2 7/8	3 13/16	2 1/2	2 1/4	4.5	
	P-6302†	FA	5.0 CT	22.0	10000	117/107	Terms	Lugs Terms	4 1/4	5 1/2	5 1/8	2 3/4	6	13.5	
	P-6492	C	5.0 CT	30.0	2500	117	Leads	Leads	3 3/4	4	4 11/16	3	2 13/16	7.5	
	P-6468†	C	5.0 CT	30.0	2500	117/107	Lugs	Lugs	3 7/16	3 7/8	4 1/4	2 3/4	2 11/16	6.3	
	F-530	SC	5.0 CT	30.0	2500	115/230	Terms	Terms	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	10.5	
	P-6305†	FA	5.0 CT	30.0	10000	117/107	Terms	Terms	4 1/4	7	5	3 3/8	7 3/4	18.3	
	P-6137†	NV	5.25 CT	13.0	2500	117	Leads	Leads	3 1/8	2 7/8	3 13/16	2 1/2	2 1/2	5.2	
	P-8385	A	6.3 CT	0.3	1500	117	Leads	Leads	1 3/8	2 1/8	1 1/4	1 3/4	—	0.3	
	P-6465	A	6.3 CT	.6	1500	117	Leads	Leads	1 1/2	2 3/8	1 3/8	2	—	0.4	
	P-8389	A	6.3	1.0	1500	117	Leads	Leads	1 1/2	2 7/8	1 5/8	2 3/8	—	0.6	
	P-6134	A	6.3 CT	1.2	3000	117	Leads	Leads	1 7/8	2 7/8	1 5/8	2 3/8	—	0.8	
	P-8190	A	6.3	1.2	5000	117	Leads	Leads	1 7/8	3 1/4	2	2 13/16	—	1.0	
	P-8191	A	6.3	1.2	5000	6.3	Leads	Leads	2	3 1/4	2	2 13/16	—	1.0	
	F-615†	SC	6.3 CT	1.5	2500	115/230	Lugs	Lugs	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	1.0	
	F-63†	SC	6.3 CT	3.0	2500	115/230	Lugs	Lugs	2 1/2	3	3 1/16	1 3/4	2 11/16	2.0	
3	P-5014†	NV	6.3 CT	3.0	2500	117	Lugs	Lugs	2 1/2	2	3 1/8	2	1 3/4	2.0	FA
	P-6466	A	6.3 CT	3.0	2500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.4	
	P-6462	S	6.3	3.0	7000	117/107	Leads	Leads	2 3/8	3 5/8	3 1/8	3 1/8	—	2.0	
	P-4019†	C	6.3 CT	4.0	2500	117/107	Leads	Leads	2 1/2	2 3/4	3 1/8	2	1 3/4	2.7	
	F-65	SC	6.3 CT	5.5	2500	115/230	Lugs	Lugs	2 7/8	3 1/2	3 3/4	2	3 1/8	3.0	
	P-3064†	NV	6.3 CT	6.0	2500	117	Lugs	Lugs	2 1/2	2 3/8	3 1/8	2	2	2.4	
	P-4089	C	6.3 CT	6.0	2500	117/107	Leads	Leads	2 13/16	3 1/4	3 1/2	2 1/4	2	3.5	
	P-6456	A	6.3 CT	6.0	2000	117/107	Leads	Leads	2 3/8	3 3/4	2 3/8	3 1/8	—	2.0	
	P-6464	C	6.3 CT	10.0	2000	117	Leads	Leads	2 13/16	3 1/4	3 1/2	2 1/4	2	3.5	
	P-6308†	NV	6.3 CT	10.0	2500	117/107	Leads	Leads	2 13/16	2 5/8	3 7/16	2 1/4	2 1/8	3.4	
	F-610	SC	6.3 CT	10.0	2500	115/230	Terms	Terms	3 1/4	4	4 1/4	2 1/4	3 1/2	5.0	
	P-6309	NV	6.3 CT	20.0	2500	117/107	Leads	Leads	3 3/4	3 3/8	4 5/16	3	2 3/8	6.7	
	P-5015†	NV	7.5 CT	4.0	2500	117	Lugs	Lugs	2 1/2	2 1/4	3 1/8	2	2 1/8	2.7	
	P-4091†	C	7.5 CT	5.0	2500	117/107	Leads	Leads	2 13/16	3 1/8	3 1/2	2 1/4	1 7/8	3.4	
	P-6138†	NV	7.5 CT	8.0	2500	117	Leads	Leads	3 1/8	2 3/4	3 13/16	2 1/2	2 3/8	4.7	
	F-712	SC	7.5 CT	12.0	2500	115/230	Terms	Terms	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	6.5	
	P-6457	C	7.5 CT	21.0	2000	117/107	Leads	Leads	3 3/4	4	4 5/16	3	2 3/4	8.0	
	F-725	SC	7.5 CT	25.0	2500	115/230	Terms	Terms	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	12.0	
	F-751	SC	7.75 CT	51.0	2500	115/230	Terms	Terms	6 1/8	6 1/2	7 1/16	4 1/4	6	29.0	
	P-8380	A	10.0 CT	3.0	1500	117	Leads	Leads	2 1/4	3 3/4	2 3/8	3 1/8	—	1.6	
	F-104	SC	10.0 CT	4.0	2500	115/230	Lugs	Lugs	2 7/8	3 1/2	3 3/4	2	3 1/8	3.2	
4	P-5016†	NV	10.0 CT	4.0	2500	117	Lugs	Lugs	2 13/16	2 1/2	3 7/16	2 1/4	2	3.3	NV
	P-6458	NV	10.0 CT	5.0	2000	117/107	Leads	Leads	2 1/2	2 1/2	3 1/16	2 1/8	1 15/16	3.0	
	P-4096†	C	10.0 CT	5.0	2500	117/107	Leads	Leads	3 1/8	3 1/4	3 1/8	2 1/2	1 15/16	4.0	
	F-106	SC	10.0 CT	6.5	2500	115/230	Terms	Terms	3 1/4	4	4 1/4	2 1/4	3 1/2	5.0	
	P-6139†	NV	10.0 CT	8.0	2500	117	Leads	Leads	3 1/8	3	3 13/16	2 1/2	2 3/8	4.9	
	P-4097†	C	10.0 CT	8.0	2500	117/107	Leads	Leads	3 1/8	3 3/4	3 7/8	2 1/2	2 1/2	5.2	
	P-6461	C	10.0 CT	10.0	2000	117	Leads	Leads	3 1/4	3 5/16	3 7/8	2 3/4	2 11/16	5.0	
	F-1010	SC	10.0 CT	10.0	2500	115/230	Terms	Terms	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	6.5	
	P-5002†	FA	10.0 CT	12.0	7500	117/107	Terms	Terms	4 1/4	5 1/2	5 1/8	2 3/4	6	14.7	
	P-3020†	C	11.0 CT	10.0	2500	117/107	Leads	Leads	3 3/4	3 5/8	4 11/16	3	2 7/16	7.7	
	P-8384	A	12.6 CT	1.0	1500	117	Leads	Leads	1 3/4	3 1/4	2	2 13/16	—	0.9	S
	P-8130	A	12.6 CT	2.0	1500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.4	
	P-8358	A	12.6 CT	3.0	1500	117	Leads	Leads	2 1/4	3 3/4	2 3/8	3 1/8	—	1.6	
	P-6469	A	25.2	1.0	1500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.4	
	P-8180	A	25.2 CT	1.0	1500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.4	
	P-8357	A	25.2 CT	2.0	1500	117	Leads	Leads	2 1/4	4	2 5/8	3 5/16	—	2.2	
	P-8388	A	25.2 CT	2.8	1500	117	Leads	Leads	2 1/4	4	2 5/8	3 5/16	—	2.2	
	P-8608	A	26.5 CT	.6	2500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.3	
	P-8609	A	26.8 CT	1.0	1500	117	Leads	Leads	2 1/8	3 1/4	2	2 13/16	—	1.3	
	P-8606	A	26 V CT Nominal	.040	2500	117*	Leads	Leads	1 3/8	2 1/8	1 1/4	1 3/4	—	.25	SC
			* Primary tapped to provide secondary voltages of 24.5 CT or 27.5 CT or 29 CT.												
	P-8607	A	26 V CT Nominal	.25	2500	117*	Leads	Leads	1 3/4	2 7/8	1 5/8	2 3/8	—	.70	
			* Primary tapped to provide secondary voltages of 24.5 CT or 27.5 CT or 29 CT.												
	P-8605	A	48 V CT Nominal	1.0	2500	117*	Leads	Leads	2 3/4	4	2 5/8	3 5/16	—	2.3	
			* Primary tapped to provide secondary voltages of 45 CT or 51 CT or 54 CT.												

† Has Electrostatic shield.

Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.

ALL SECONDARY VOLTAGES ±3%

© United Technical Publications

FILAMENT TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

WITH MULTIPLE SECONDARIES: ALL PRIMARIES 50/60 CYCLES

Section	Catalog No.	Style	Secondary Volts	Secondary Amps.	Insulation Test RMS Volts	Primary Volts	Termination Pri.	Termination Sec.	Dimensions A	B	C	D	E	WT Lbs.
1	P-6144†	C	2.5 CT 5.0 CT 6.3 CT	3.5 3.0 3.0	2500	117	Leads	Leads	2 13/16	3 1/4	3 1/2	2 1/4	2	3.7
	P-6338	NH	2.5 5.0 5.0 CT 6.3 CT	3.0 3.0 2.0 3.0	2500	117	Leads	Leads	3 3/8	2 3/4	2 7/8	2 13/16	2 1/8	3.4
2	P-5009†	C	5.0 CT 6.3 CT	3.0 6.0	2500	117/107	Leads	Leads	3 1/8	3 3/8	3 7/8	2 1/2	2 1/16	4.5
	P-5008†	C	5.0 CT 6.3 CT	4.0 3.6	2500	117/107	Leads	Leads	2 13/16	3 1/4	3 1/2	2 1/4	2	3.8
	P-4022†	C	5.0 CT 6.3 CT	6.0 6.0	2500	117/107	Leads	Leads	3 1/8	3 1/2	3 7/8	2 1/2	2 1/16	4.8
3	P-6333	NH	5.0 5.0 6.3 CT 7.5/6.3 CT	3.0 3.0 4.0 3.0	2500	117	Lugs	Lugs	3 3/8	3 1/4	2 7/8	2 13/16	2 3/4	4.7
	P-6463	NV	6.0 CT or 6.5 CT or 7.0 CT	13	2000	117	Lugs	Lugs	2 13/16	2 7/8	3 7/16	2 1/4	2 11/16	4.5
4	P-6428†	C	6.3 6.3 6.3 6.3 CT	1.75 1.75 1.75 1.75	2500	117	Leads	Leads	2 1/2	3 1/8	3 1/8	2	2	3.0
	P-6430†	C	6.3 CT 6.3 CT	3.0 3.0	2500	117	Leads	Leads	2 1/2	2 7/8	3 1/8	2	1 7/8	2.8
5	P-6429†	C	6.3 6.3 6.3 6.3 CT	3.5 3.5 3.5 3.5	2500	117	Leads	Leads	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	4.8
	P-6431†	C	6.3 CT 6.3 CT	6.0 6.0	2500	117	Leads	Leads	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	4.8
6	•P-6434‡	C	12.6 12.6 CT	2.5 2.5	1500	117	Leads	Leads	2 13/16	3 1/4	3 1/2	2 1/4	2	3.5

MULTI-TAPPED FOR TUBE CHECKERS: PRIMARY 50/60 CYCLES

Section	Catalog No.	Style	Secondary Rating (RMS)		Primary Volts	Termination Pri.	Termination Sec.	Dimensions A	B	C	D	E	WT Lbs.
7	P-1834-3	A	117/110/85	@ .20A	105/115/125	Leads	Leads/ Lugs	2 7/8	4	2 5/8	3 5/16	—	2.4
			70	@ .30A									
			50	@ .50A									
			35	@ .60A									
			30/25/20/12	@ .80A									
			7.5/7/6.3/5 4/3.3/2.5/2 1.5/1.4/1.1	@ 3.0A									

AUTO RADIO VIBRATOR TRANSFORMERS Exact Duplicate for 6 Volt D. C. Primary

Section	Part No.	Style	Original Part No.	Trade Name	D.C. Volts at Filter Input	D.C. MA.	Recommended Buffer Cap. (mfd.)	Height Overall	Base Area	Shpg. Wt. In Lbs.
8	P-6471	TA	258472533 D71014	Motorola (408, 508, etc.) Colonial-Detrola No. 8072	235	70	0.006	3	2 3/8 x 2 3/16	2.0
	P-6476	TA	D70267 C70267	Colonial-Detrola No. 7070 Col.-Mot.-Det. No. 8030	220	53.5	0.008	2 5/8	2 27/32 x 2 5/32	2.0
	P-6477	M2	25C500189	Motorola	150	50	0.03	2	1 7/8 x 2 1/4	1.0
	P-6478	R	25C501644	Motorola	225	70	0.02	2 1/8	2 5/16 x 2 5/8	1.5
	P-6480	R	65-0347	Philco	225	70	0.0033	2 5/16	2 1/4 x 2 5/8	1.5
	P-6481	M4	32-8313-1	Philco	250	60	0.0068	2 1/4	2 5/16 x 2 5/8	1.5
	P-6490	R	C291787-1	Bendix (Ford Model 5B8F)	265	52	0.006	2 1/8	2 3/16 x 2 5/8	1.5
	P-6499	TA	1220163[1]	United Motors (Delco)	250	60	0.006	3 7/32	2 5/8 x 2 1/2	2.3
Exact Duplicate For 12 Volt D.C. Primary										
9	P-6482	TA	6084	United Motors (Delco)	250	60	.004	3 1/4	2 11/16 x 2 11/16	2.5
	P-6489	R	6067	United Motors (Delco)	250	60	.004	2 5/16	2 3/16 x 2 5/8	2.0
	P-6493	S1	*25C535794	Motorola	275	75	(See Footnote)	2 3/4	2 3/8 x 2	1.7
	P-6494	R	32-8592-1	Philco	245	70	0.0047	2 3/16	2 5/8 x 2 1/8	1.5
	P-6495	S1	*25K535795	Motorola	275	75	(See Footnote)	2 3/4	2 3/8 x 2 1/8	1.7
	P-6497	S2	7265604[2]	United Motors (Delco)	250	55	.007[3]	2 5/16	2 1/4 x 2	1.8

*2 buffer capacitors used 0.5 mfd. and 0.04 mfd. as in original circuit.

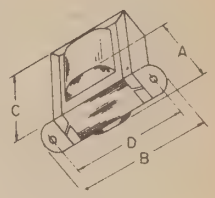
[1]17261386 and 7262956 replaced by P-6499
[2]7269118 replaced by P-6497
[3]+15K–1W. Res.

UNIVERSAL VIBRATOR TRANSFORMERS With a Built-In D.C. Primary

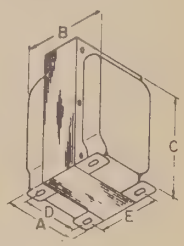
Section	Part No.	Style	Secondary A.C. Volts	D.C. Volts At Filter Input	D.C. M.A.	Recommended Buffer Cap.	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. In Lbs.
10	P-6491	S	188-0-188	200	40	0.003 mfd.	2 1/4	3 1/8 x 2 1/8	2 13/16	1.5
	P-4062	NV	300-0-300	260	65	0.006 mfd.	3 1/8	2 1/2 x 2 5/8	2 x 2	2.3
	P-4063	NV	320-0-320	285	75	0.006 mfd.	3 1/8	2 1/2 x 2 3/4	2 x 2 1/4	2.8
	P-6131	NV	370-0-370	330	100	0.007 mfd.	3 1/2	2 5/8 x 2 5/8	2 1/4 x 2 1/4	3.5

• New Part Number.
†Has Electrostatic Shield.
Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.
‡Windings May Be Connected in Series or Parallel if Properly Phased.
ALL SECONDARY VOLTAGES ±3%

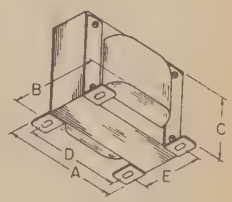
Styles



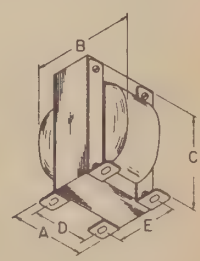
A



C

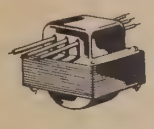


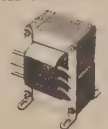
NH

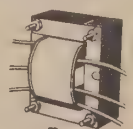


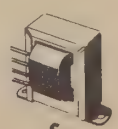
NV

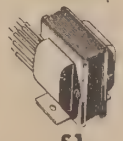

M2


M4


NV


R


S


S1


S2


TA

© United Technical Publications

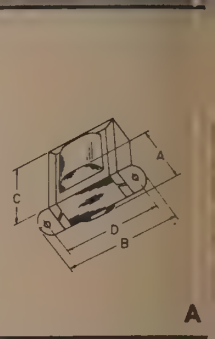
ESSEX Stancor/RBM | STANCOR

FILTER CHOKES

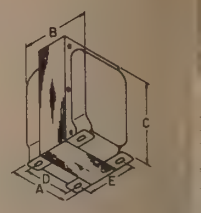
SMOOTHING CHOKES: INDUCTANCE TOLERANCE-MINUS 15% PLUS 50% AT 10 VOLTS 60 CYCLES

Section	Catalog No.	Style	Inductance Henries	DCMA	DC. Res. ohms	Insul. Test RMS Volts	Termination	Dimensions A	B	C	D	E	WT Lbs
1	C-2345	A	350	5	5600	2500	Leads	1¾	3¼	2	2 13/16	—	1.0
	C-2344	A	1.5	10	85	2500	Leads	1⅛	2⅛	1¼	1¾	—	0.4
	C-2707	A	2.0	15	70	1500	Leads	1⅛	2⅛	1¼	1¾	—	0.4
	C-1515	A	20.0	15	900	1500	Leads	1⅜	2⅞	1⅜	2⅜	—	0.7
	C-2346	A	35	15	1800	1500	Leads	1⅜	2⅜	1⅜	2	—	0.5
	C-2318	A	12.0	30	400	2000	Leads	1⅜	2⅜	1⅜	2	—	0.5
	RC-1540	SC	15.0	40	475	2500	Leads	2¼	2 11/16	2 11/16	1½	2⅜	1.5
	RS-1540	SC	15.0	40	475	2500	Lugs	2¼	2 11/16	2 11/16	1½	2⅜	1.5
	C-1080	A	3.5	50	200	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
	C-1706	A	4.5	50	300	1500	Leads	1¼	2⅜	1⅜	2	—	0.5
	C-1723	A	4.5	50	325	1500	Leads	1⅜	2⅜	1¾	2	—	0.5
	C-1325	A	5.0	50	250	1500	Leads	1¼	2⅞	1⅝	2⅜	—	0.7
	C-1277	A	7.0	50	300	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
	C-1227	A	7.0	50	350	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
	C-1707	A	7.0	50	550	1500	Leads	1¼	2⅜	1⅜	2	—	0.5
	C-1333	A	8.0	50	450	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
	C-1279	A	8.5	50	400	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
	C-1215	A	9.0	50	500	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
2	C-1003	A	16.0	50	580	1500	Leads	1⅝	3¼	2	2 13/16	—	1.0
	RC-1055	SC	10.0	55	230	2500	Leads	2¼	2 11/16	2 11/16	1½	2⅜	1.7
	RS-1055	SC	10.0	55	230	2500	Lugs	2¼	2 11/16	2 11/16	1½	2⅜	1.7
	RC-1555	SC	15.0	55	380	2500	Leads	2¼	2 11/16	2 11/16	1½	2⅜	2.0
	RS-1555	SC	15.0	55	380	2500	Lugs	2¼	2 11/16	2 11/16	1½	2⅜	2.0
	C-1708	A	13.0	65	500	1500	Leads	1¾	3¼	2	2 13/16	—	1.0
	C-1355	L	8.0	75	290	1500	Lugs	2⅜	—	2	1½	1 13/16	1.0
	C-1002	A	15.0	75	400	1500	Leads	1⅞	3¾	2⅜	3⅛	—	1.7
	C-1420	C	16.0	80	360	1500	Leads	2½	2¾	3⅛	2	1¾	2.5
	C-1709	A	8.0	85	250	1500	Leads	1⅞	3¼	2	2 13/16	—	1.4
	RC-1085	SC	10.0	85	175	2500	Leads	2½	3	3 1/16	1¾	2 11/16	2.5
	RS-1085	SC	10.0	85	175	2500	Lugs	2½	3	3 5/16	1¾	2 11/16	2.5
	RC-1585	SC	15.0	85	285	2500	Leads	2½	3	3 1/16	1¾	2 11/16	2.7
	RS-1585	SC	15.0	85	285	2500	Lugs	2½	3	3 5/16	1¾	2 11/16	2.7
	C-2305	SC	5.0	100	300	1500	Leads	2¼	2 11/16	2 11/16	1½	2⅜	1.5
	RC-8105	SC	8.0	105	100	2500	Leads	2⅞	3½	3½	2	3⅛	3.7
	RS-8105	SC	8.0	105	100	2500	Lugs	2⅞	3½	3¾	2	3⅛	3.7
	RC-12105	SC	12.0	105	170	2500	Leads	2⅞	3½	3½	2	3⅛	4.0
3	RS-12105	SC	12.0	105	170	2500	Lugs	2⅞	3½	3¾	2	3⅛	4.0
	C-1001	A	10.5	110	225	3000	Leads	2⅛	4	2⅝	3 9/16	—	2.3
	C-2704	A	9.0	125	250	1500	Leads	1⅞	3¾	2⅜	3⅛	—	1.8
	C-2303	A	2.5	130	100	2000	Leads	1⅝	3¼	2	2 13/16	—	1.0
	C-1421	C	7.0	140	165	3000	Leads	2½	2¾	3⅛	2	1¾	2.5
	C-2304	A	2.3	150	60	1500	Leads	1¾	3¼	2	2 13/16	—	1.0
	C-2309	A	3.0	150	90	2000	Leads	1⅞	3¾	2⅜	3⅛	—	1.7
	C-2335	SC	7.0	150	170	1500	Leads	2½	3	3 1/16	1¾	2 11/16	2.3
	C-1710	A	7.0	150	200	1500	Leads	2	4	2⅝	3 9/16	—	2.2
	RC-8150	SC	8.0	150	100	2500	Leads	3¼	4	3⅞	2¼	3½	5.2
	RS-8150	SC	8.0	150	100	2500	Lugs	3¼	4	4¼	2¼	3½	5.2
	RC-12150	SC	12.0	150	150	2500	Leads	3¼	4	3⅞	2¼	3½	5.5
	RS-12150	SC	12.0	150	150	2500	Lugs	3¼	4	4¼	2¼	3½	5.5
	C-1410	C	4.0	175	100	3000	Leads	2½	2¾	3⅛	2	1¾	2.4
	C-2327	A	1.5	200	85	1500	Leads	1½	2⅞	1⅝	2⅜	—	0.7
	C-2325	A	2.0	200	60	1500	Leads	1⅞	3¾	2⅜	3⅛	—	1.8
	C-1411	C	4.5	200	80	3000	Leads	2 13/16	4¼	3½	2¼	2	3.5
	C-1646	C	5.0	200	90	5000	Leads	3⅛	3½	3⅞	2½	2 5/16	4.5
4	RC-8200	SC	8.0	200	85	2500	Leads	3 11/16	4⅞	4 5/16	2¾	3⅞	7.0
	RS-8200	SC	8.0	200	85	2500	Lugs	3 11/16	4⅞	4 11/16	2¾	3⅞	7.0
	C-1721	NV	8.5	200	120	3000	Leads	2 13/16	2⅝	3⅞	2¼	2½	4.4
	C-2705	C	10.0	200	150	2500	Leads	2 13/16	3 9/16	3½	2¼	2 5/16	4.5
	RC-12200	SC	12.0	200	140	2500	Leads	3 11/16	4⅞	4 5/16	2¾	3⅞	7.0
	RS-12200	SC	12.0	200	140	2500	Lugs	3 11/16	4⅞	4 11/16	2¾	3⅞	7.0
	• C-2717	A	4.0	250	100	2500	Leads	2⅛	4	2⅝	3 9/16	—	2.4
	C-1703	NV	4.0	250	60	3000	Lugs	2 13/16	2⅝	3⅞	2¼	2½	4.2
	C-1412	C	4.0	250	60	3000	Leads	2 13/16	3⅝	3½	2¼	2⅜	4.3
	RC-8250	SC	8.0	250	90	2500	Leads	4 5/16	5¼	5 5/16	2½	4¾	10.5
	RS-8250	SC	8.0	250	90	2500	Lugs	4 5/16	5¼	5 5/16	2½	4¾	10.5
	C-2343	A	0.75	300	32	1500	Leads	1⅜	2⅞	1⅝	2⅜	—	0.7
	C-2326	A	1.0	300	43	1500	Leads	2	3¾	2⅜	3⅛	—	1.7
	C-2334	A	2.8	300	60	1500	Leads	2⅛	4	2⅝	3 9/16	—	2.5
	R-63	SC	6.0	300	35	7500	Terms	5 5/16	5⅞	6 1/16	3½	5 3/16	16.5
	RC-8300	SC	8.0	300	60	3500	Leads	4 5/16	5¼	5 5/16	2½	4¾	12.5
	RS-8300	SC	8.0	300	60	3500	Lugs	4 5/16	5¼	5 5/16	2½	4¾	12.5
	C-1722	NV	8.0	300	80	3000	Leads	3¾	3	4 5/16	3	2½	7.3
	C-2308	C	8.0	300	80	3000	Leads	3¾	4	4 11/16	3	2 13/16	7.8

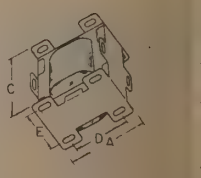
Styles



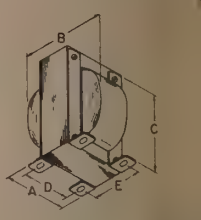
A



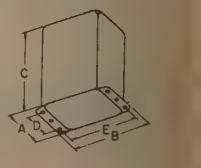
C



L



NV



SC

• New Part Number.

Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.

© United Technical Publications

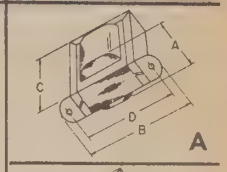
FILTER CHOKES

ESSEX Stancor/RBM | STANCOR

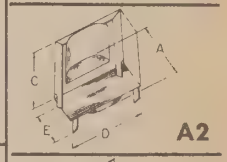
SMOOTHING CHOKES: INDUCTANCE TOLERANCE-MINUS 15% PLUS 50% AT 10 VOLTS 60 CYCLES

Section	Catalog No.	Style	Inductance Henries	DCMA	DC. Res. ohms	Insul. Test RMS Volts	Termination	Dimensions A	B	C	D	E	WT Lbs
1	C-1413	C	8.0	300	80	3000	Lugs	3¾	4	4 11/16	3	2 13/16	7.8
	R-103	SC	10.0	300	40	2500	Terms	6⅛	6½	7 1/16	4¼	6	22.0
	C-2706	C	2.6	310	50	1500	Leads	2½	3⅜	3⅛	2	2⅜	4.0
	C-2347	A	1.0	350	40	1500	Leads	1¾	3¼	2	2 13/16	—	1.0
	C-2328	A	0.8	375	25	1500	Leads	1⅞	3¾	2⅜	3⅛	—	1.5
	C-2709	A	2.0	400	40	2500	Leads	2⅛	4	2⅝	3 5/16	—	2.3
	C-1414	C	7.5	400	60	5000	Lugs	3¾	5	4 11/16	3	3 13/16	11.8
	R-65	FS1	6.0	500	35	9000	Terms	7½	3¼	7	4¾	5¼	35.0
	C-1415	FS	6.0	500	75	7500	Terms	5⅝	5+	7⅛	4⅝	3⅝	23.7
	R-105	FS1	10.0	500	40	9000	Terms	7½	4	7	4¾	6	35.0
	C-2708	A	0.32	600	10	1500	Leads	1⅜	3¼	2	2 13/16	—	1.3

Style



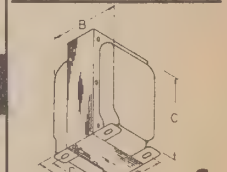
A



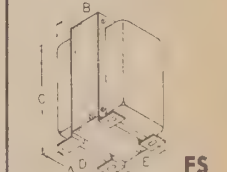
A2

SWINGING CHOKES: INDUCTANCE MEASURED AT 50 VOLTS 60 CYCLES

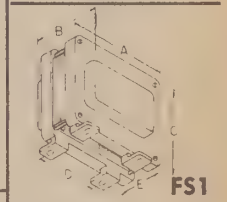
Section	Catalog No.	Style	Inductance Henries	DCMA	DC. Res. ohms	Insul. Test RMS Volts	Termination	Dimensions A	B	C	D	E	WT Lbs
2	C-1718	C	13.5 / 3.5	15 / 150	130	2000	Leads	2½	2⅝	3⅛	2	1⅝	2.3
	C-1400	C	12.0 / 2.0	17.5 / 175	100	3000	Leads	2½	2¾	3⅛	2	1¾	2.4
	C-1401	C	12.0 / 2.0	20 / 200	80	3000	Leads	2 13/16	3¼	3½	2¼	2	3.5
	C-1645	C	12.0 / 2.0	20 / 200	90	5000	Leads	3⅛	3½	3⅞	2½	2 5/16	4.5
	C-1702	NV	12.0 / 2.0	25 / 250	60	3000	Lugs	2 13/16	2¾	3 7/16	2¼	2½	4.3
	C-1402	C	12.0 / 2.0	25 / 250	60	3000	Leads	2 13/16	3⅝	3½	2¼	2⅜	4.3
	C-1720	NV	20.0 / 4.0	30 / 300	80	3000	Leads	3¾	3⅛	4 5/16	3	2½	7.2
	C-2307	C	20.0 / 4.0	30 / 300	80	3000	Leads	3¾	4	4 11/16	3	2 13/16	7.9
	C-1403	C	20.0 / 4.0	30 / 300	80	5000	Lugs	3¾	4	4 11/16	3	2 13/16	7.7
	C-1404	C	17.0 / 3.0	40 / 400	60	5000	Lugs	3¾	5	4 11/16	3	3 13/16	11.7
	C-1405	FS	16.0 / 4.0	50 / 500	75	7500	Terms	5⅝	5¼	7⅛	4⅝	3⅝	24.3



C



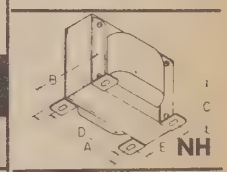
FS



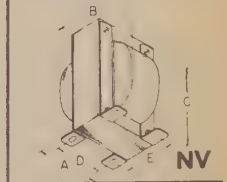
FS1

HIGH CURRENT CHOKES: INDUCTANCE MEASURED AT 1 VOLT 60 CYCLES

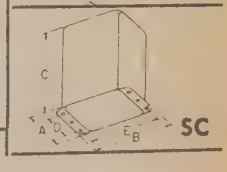
Section	Catalog No.	Style	Inductance Millihenries	DC Amps	DC. Res. ohms	Insul. Test RMS Volts	Termination	Dimensions A	B	C	D	E	WT Lbs
3	TC-1	A2	3.0	1.0	.25	1000	Leads	1⅛	—	1 3/16	1 3/16	7/16	0.6
	TC-2	A2	11.0	1.0	.75	1000	Leads	1⅛	—	1 3/16	1 3/16	7/16	0.6
	C-2690	NV	300 or 75	1.0 / 2.0	3.0 / .75	1500	Leads	2 13/16	3	3 7/16	2¼	2⅝	5.0
	C-2685	NH	35	2.0	.75	1500	Leads	2⅝	2⅛	2 5/16	2 3/16	2	1.9
	C-2691	NV	80 or 20	2.5 / 5.0	.60 / .15	1500	Leads	3⅛	3½	3 13/16	2½	3	7.0
	C-2686	NH	25	4.0	.425	1500	Leads	3⅜	2⅝	2⅞	2 13/16	2⅛	3.4
	C-2687	NH	10	8.0	.15	1500	Leads	3¾	3	3 5/16	3⅛	2½	5.3
	C-2688	NH	10	12.5	.11	1500	Leads	4⅛	2⅞	3½	3 5/16	2⅜	5.9
	C-2689	NH	5	22.5	.03	1500	Leads	4½	4⅜	3 13/16	3¾	3½	11.9
	C-2692	NV	24 / 6	20 / 40	.12 / .029	1500	Self Leads	4 7/16	5¼	5¼	3½	4¼	21.2



NH

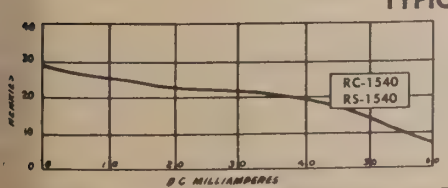


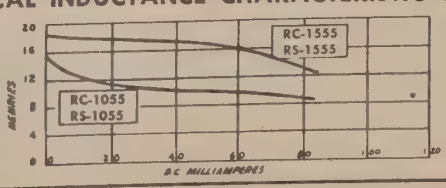
NV

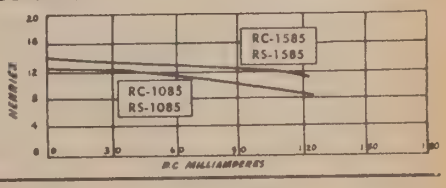


SC

TYPICAL INDUCTANCE CHARACTERISTIC CURVES







Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts. *Available until stock is depleted.

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

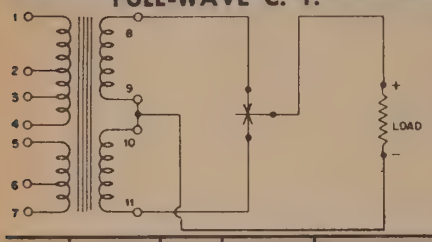
RECTIFIER & INVERTER TRANSFORMERS

NOTE The RT series has been extended to include voltages up to 40 Volts in the lower amperage range and are now available from Stancor. For more information please contact Stancor.

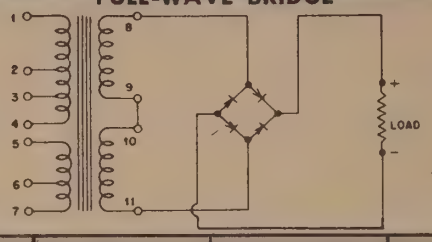
SILICON OR SELENIUM RECTIFIER TRANSFORMERS:

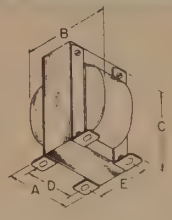
Primary—117 Volts 50, 60 Cycles. Solder Lug Termination

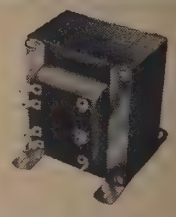
FULL-WAVE C. T.



FULL-WAVE BRIDGE







Section	Catalog No.	Style	Rectifier Circuit	Range of Applied A.C. Volts Under Load (Approx.)	Output Resistive or Inductive Load Max. D.C. Volts	Output Resistive or Inductive Load Max. D.C. Amps.	Output Capacitive Load* Max. D.C. Volts	Output Capacitive Load* Max. D.C. Amps.	Dimensions A	B	C	D	E	WT. Lbs.
1	RT-201	NV	C. T.	11.7 to 29.4	11.2	2.0	13.8[1]	2.0	2½	2⅜	3⅛	2	2⅛	2.5
			Bridge	11.1 to 28.5	23.0	1.25	30.0[2]	1.25						
	RT-202	NV	C. T.	12.0 to 29.8	11.1	4.0	14.7[3]	4.0	2 13/16	2¾	3 7/16	2¼	2⅜	3.8
			Bridge	12.0 to 29.8	24.3	2.0	33.0[1]	2.0						
	RT-204	NV	C. T.	11.7 to 29.2	12.0	8.0	14.5[4]	8.0	3⅛	3½	3 13/16	2½	2⅞	6.1
			Bridge	11.6 to 29.2	24.0	4.0	32.4[3]	4.0						
	RT-206	NV	C. T.	12.0 to 29.7	11.5	12.0	14.4[5]	12.0	3 7/16	4	4 3/16	2¾	3¼	9.1
			Bridge	12.0 to 29.7	24.0	6.0	32.0[6]	6.0						
	RT-208	NV	C. T.	12.1 to 29.2	11.4	15.0	14.8[7]	15.0	3¾	5	4 9/16	2 13/16	3¾	12.6
			Bridge	12.1 to 29.2	23.7	8.0	32.5[4]	8.0						
	RT-2012	NV	C. T.	12.2 to 29.0	11.4	22.5	14.3[8]	22.5	4⅜	5 7/8	5 5/16	3½	4¼	20.5
			Bridge	12.2 to 29.0	23.5	12.0	33.0[5]	12.0						
	RT-408	NV	Bridge	25.0 to 53.5	44.0	8.0	63.0[4]	8.0	4⅜	6¾	5 5/16	3½	5¼	26.5
	RT-4012	NV	Bridge	25.0 to 53.0	43.5	12.0	60.0[5]	12.0	5⅜	6	7⅛	4⅝	5½	34

*MFD Filter Capacitor 1-1000, 2-5000, 3-2000, 4-4000, 5-6000, 6-3000, 7-7500, 8-12000.

Each transformer has the winding arrangement and terminal numbering shown in the schematic diagrams above. The primary winding is connected to terminals 1, 2, 3 & 4. A separate winding is connected to terminals 5, 6 & 7 that may be used in series with the primary to raise or lower the secondary voltage output. A variety of combinations is possible using the taps on both windings, plus the "Aiding" or "Bucking" action of the extra winding.

Designed for 117 V. 50/60 cycle operation; may also be satisfactorily operated at 400 cycles.

The secondary winding of each transformer consists of two identical windings connected to terminals 8 & 9 and to 10 & 11 respectively. Use the tables showing the various output voltages for specific terminal connections as your guide. Many combinations are possible other than those listed in the tables.

All ratings shown are for normal convection air cooled applications. Select only rectifiers capable of handling the output voltages and currents described

RT-202		Full-Wave C. T.				Full-Wave Bridge			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-11				D-17			
		Output 4.0 A. D.C.				Output 2.0 A. D.C.			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load**	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	29.7	11.1	29.3	14.7	29.7	24.3	24.3	33.0
1-7	2-6	26.2	9.8	26.0	12.6	26.2	21.5	26.0	29.0
1-6	2-5	24.4	8.8	24.0	11.3	24.3	19.5	23.9	26.0
1-7	2-5	21.9	7.8	21.7	9.9	21.8	17.6	21.5	23.1
1-3	—	20.9	7.4	20.7	9.3	20.9	16.6	20.6	21.7
1-7	3-6	19.2	6.6	18.9	8.2	19.1	15.1	18.9	19.6
1-6	3-5	18.0	6.1	17.8	7.5	18.0	14.2	17.8	18.2
1-7	3-5	16.6	5.5	16.4	6.6	16.6	12.8	16.4	16.3
1-4	—	14.4	4.4	14.2	5.3	14.4	19.8	14.2	13.7
1-7	4-6	13.5	4.1	13.4	4.9	13.5	10.1	13.4	12.6
1-6	4-5	12.9	3.9	12.7	4.4	12.9	9.5	12.7	11.7
1-7	4-5	12.2	3.7	12.0	4.0	12.2	8.9	12.0	10.8

*2000 MFD. **1000 MFD.

RT-201		Full-Wave C. T.				Full-Wave Bridge			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-10				D-52			
		Output 2.0 A. D.C.				Output 1.25 A. D.C.			
		Resistive Load		Capacitive Load		Resistive Load		Capacitive Load	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	29.4	11.2	28.8	13.8	28.5	23.0	27.9	30.0
1-7	2-6	26.0	9.8	25.7	11.7	25.4	20.0	25.1	26.4
1-6	2-5	23.0	8.4	22.7	9.9	22.3	17.3	21.8	22.2
1-7	2-5	20.9	7.4	20.8	8.6	20.2	15.4	19.8	19.7
1-3	—	19.4	6.7	19.1	7.6	18.6	13.9	18.2	17.6
1-7	3-6	17.8	6.1	17.6	6.7	17.2	12.8	16.8	15.7
1-6	3-5	16.3	5.3	16.1	6.0	15.7	11.2	15.2	13.8
1-7	3-5	14.9	4.7	14.8	5.3	14.3	10.3	14.1	12.4
1-4	—	14.2	4.4	14.2	5.0	13.7	9.7	13.5	11.6
1-7	4-6	13.4	4.0	13.3	4.4	12.7	8.8	12.5	10.4
1-6	4-5	12.4	3.6	12.4	3.9	11.7	7.9	11.7	9.5
1-7	4-5	11.7	3.3	11.7	3.5	11.1	7.4	11.1	8.7

*1000 MFD **500 MFD.

RT-204		Full-Wave C. T.				Full-Wave Bridge			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-13				D-18			
		Output 8.0 A. D.C.				Output 4.0 A. D.C.			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load**	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	29.2	12.0	28.8	14.5	29.2	24.0	29.0	32.4
1-7	2-6	25.7	10.5	25.7	12.6	25.7	21.1	25.4	29.2
1-6	2-5	22.8	9.2	22.8	10.9	22.8	18.7	22.7	25.7
1-7	2-5	20.6	8.3	20.6	9.6	20.7	16.6	20.6	22.8
1-3	—	19.3	7.7	19.3	8.7	19.4	15.4	19.0	21.0
1-7	3-6	17.6	7.0	17.6	7.8	17.8	14.0	17.6	19.0
1-6	3-5	16.2	6.3	16.2	6.9	16.3	12.7	16.1	17.2
1-7	3-5	15.0	5.8	15.0	6.3	15.1	11.6	14.9	15.6
1-4	—	14.2	5.4	14.2	5.8	14.4	11.0	14.2	14.8
1-7	4-6	13.3	5.0	13.3	5.3	13.4	10.2	15.3	13.5
1-6	4-5	12.5	4.6	12.5	4.9	12.6	9.4	12.5	12.4
1-7	4-5	11.7	4.3	11.7	4.5	11.8	8.8	11.6	11.4

*4000 MFD. **2000 MFD.

© United Technical Publications

RECTIFIER & INVERTER TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

The RT series has been extended to include voltages up to 40 Volts in the lower amperage range and are now available from Stancor. For more information please contact Stancor. NOTE

RT-206		Full-Wave C. T.				Full-Wave Bridge			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-14				D-19			
		Output 12.0 A. D.C.				Output 6.0 A. D.C.			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load*	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	29.8	11.5	29.6	14.4	29.6	24.0	29.2	32.0
1-7	2-6	26.0	9.9	25.8	12.0	25.8	20.6	25.4	27.3
1-6	2-5	23.8	8.8	23.6	10.7	23.8	18.6	23.6	24.6
1-7	2-5	21.2	7.6	21.0	9.0	21.2	16.4	21.0	21.4
1-3	—	19.7	7.0	19.7	8.4	19.7	15.2	19.4	19.2
1-7	3-6	17.9	6.2	17.8	7.2	17.9	13.5	17.8	17.3
1-6	3-5	16.7	5.7	16.6	6.6	16.8	12.5	16.6	15.8
1-7	3-5	15.4	5.1	15.4	5.9	15.4	11.4	15.2	14.0
1-4	—	14.6	4.7	14.5	5.2	14.6	10.6	14.5	13.4
1-7	4-6	13.5	4.2	13.4	4.7	13.5	9.8	13.4	12.0
1-6	4-5	12.9	3.9	12.8	4.3	12.9	9.2	12.8	11.0
1-7	4-5	12.0	8.4	12.0	3.9	12.0	8.4	12.0	10.0

*6000 MFD. **3000 MFD.

RT-2012		Full-Wave C. T.				Full-Wave Bridge			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-16				D-21			
		Output 22.5 A. D.C.				Output 12.0 A. D.C.			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load**	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	29.1	11.4	28.8	14.3	29.0	23.5	28.7	33.0
1-7	2-6	25.2	9.7	25.1	12.0	25.3	20.4	25.1	28.0
1-6	2-5	23.6	8.9	23.6	10.9	23.5	18.8	23.5	25.7
1-7	2-5	21.1	7.7	21.0	9.4	21.0	16.3	20.9	22.3
1-3	—	19.3	7.2	19.3	8.3	19.2	14.8	19.2	20.2
1-7	3-6	17.7	6.3	17.7	7.2	17.5	13.4	17.5	17.7
1-6	3-5	16.9	6.0	16.9	6.7	16.8	12.5	16.8	16.7
1-7	3-5	15.6	5.4	15.7	5.9	15.5	11.5	15.5	15.1
1-4	—	14.6	4.9	14.6	5.4	14.5	10.7	14.5	13.7
1-7	4-6	13.5	4.4	13.5	4.7	13.5	9.7	13.4	12.6
1-6	4-5	13.0	4.3	13.0	4.5	13.0	9.3	13.0	11.9
1-7	4-5	12.2	3.9	12.1	4.0	12.2	8.6	12.0	10.8

*11,250 MFD. **6000 MFD.

RT-208		Full-Wave C. T.				Full-Wave Bridge			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-15				D-20			
		Output 15.0 A. D.C.				Output 8.0 A. D.C.			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load**	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	29.2	11.4	29.2	14.8	29.2	23.7	29.0	32.5
1-7	2-6	25.4	9.9	25.4	12.5	25.3	21.0	25.2	27.0
1-6	2-5	24.1	9.3	24.0	11.6	24.0	19.4	23.9	25.5
1-7	2-5	21.5	8.2	21.5	10.0	21.3	17.0	21.3	22.0
1-3	—	19.3	7.1	19.3	8.7	19.1	14.9	19.1	21.2
1-7	3-6	17.6	6.4	17.5	7.7	17.4	13.4	17.4	17.0
1-6	3-5	16.8	6.0	16.8	7.2	16.8	12.9	16.7	16.1
1-7	3-5	15.6	5.5	15.5	6.5	15.4	11.7	15.4	14.5
1-4	—	14.4	5.0	14.4	5.7	14.2	10.7	14.2	13.1
1-7	4-6	13.4	4.5	13.4	5.1	13.3	9.8	13.3	11.9
1-6	4-5	13.0	4.3	12.9	4.8	12.9	9.5	12.8	11.4
1-7	4-5	12.2	3.9	12.1	4.4	12.1	8.7	12.1	10.4

*7500 MFD. **4000 MFD.

RT-408 FULL-WAVE BRIDGE						RT-4012 FULL-WAVE BRIDGE			
Stancor Power Supply		Use with Sarkes-Tarzian Selenium Rectifier Part Nos. D-27				D-28			
		Output 8.0 A. D.C.				Output 12.0 A. D.C.			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load**	
Input 117 vac Term. No.	Connect Term. No.	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC	Secondary Volts AC	Output Volts DC
1-2	—	53.5	44.0	53.0	63.0	53.0	43.5	53.0	60.0
1-7	2-6	50.0	40.5	50.0	59.0	49.5	40.0	49.0	55.0
1-6	2-5	45.3	37.0	45.0	52.0	43.5	34.0	43.0	48.0
1-7	2-5	42.5	34.5	42.0	48.0	41.5	32.0	41.0	45.5
1-3	—	37.5	30.5	37.5	40.0	37.5	29.0	37.0	40.0
1-7	3-6	35.5	27.5	35.5	39.0	35.5	27.0	35.0	37.5
1-6	3-5	32.5	25.0	33.0	35.5	32.8	24.0	32.7	34.0
1-7	3-5	31.5	24.0	31.5	31.5	31.0	23.0	30.8	31.0
1-4	—	29.0	21.5	29.0	29.5	29.0	21.2	29.0	29.0
1-7	4-6	27.5	20.5	27.5	28.0	27.8	20.0	28.0	28.0
1-6	4-5	26.0	19.5	26.0	26.0	26.0	19.0	26.0	25.0
1-7	4-5	25.0	18.0	25.0	25.0	25.0	18.0	25.0	24.0

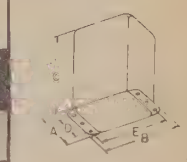
*4000 MFD. **6000 MFD.

TRANSISTOR INVERTER TRANSFORMERS:

Write for Bulletin CT-43 for Circuit Diagram. Lead Wire Termination.

Section	Catalog No.	Style	Input	Output Volts	MADC	Dimensions A	B	C	D	E	WT. Lbs.
1	DCT-1	TD	12 Volts D.C.	275 D.C.	125	1 7/8	2 7/16	2 1/4	—	2 1/8	0.9
	DCT-2	SC	12 Volts D.C.	250 D.C. or 500 D.C.	275 / 165	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	1.5

Styles



SC

TRANSISTOR INVERTER TRANSFORMER:

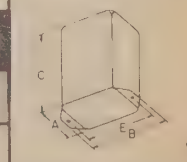
With 12 Volts D.C. and 117 Volts 60 Cycle Primary. Write for Bulletin 248 for Circuit Diagram.

Section	Catalog No.	Style	D.C. Output Volts	D.C. Output DCMA	Filament Winding	Dimensions A	B	C	D	E	WT. Lbs.
2	P-8195	C	280	150 CCS 250 ICAS	12.6 V. @ 3 Amps. (with 117 V. Pri.)	3 1/8	3 15/16	3 3/8	2 1/2	2 5/8	6.0

SPECIAL VIBRATOR TRANSFORMERS:

With D.C. and 117 Volts 60 Cycle Primary. Lead Wire Termination.

Section	Catalog No.	Style	D.C. Pri.	Plate Winding A.C. Volts	Plate Winding DCMA	Buffer Cap.	Filament Winding Volts	Filament Winding Amps.	Dimensions A	B	C	D	E	WT. Lbs.
3	P-6166	C	6 V.	350-0-350	135	.01 mfd	6.3	2.25	3 3/4	3 3/4	4 11/16	3	2 9/16	6.9
	P-6496	C	12 V.	350-0-350	100	.005 mfd	12.6 C.T.	2.0	3 3/4	4	4 11/16	3	2 13/16	7.9



TD

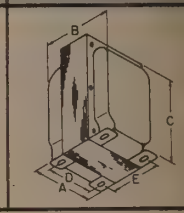
© United Technical Publications

ESSEX Stancor/RBM | STANCOR

RECTIFIER & TRANSISTOR POWER TRANSFORMERS

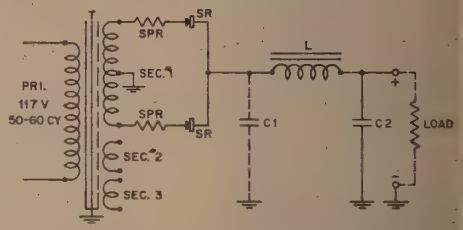
SILICON RECTIFIER POWER TRANSFORMERS: Primaries—117 Volts 50/60 Cycle-Lead Wire Termination.

Section	Catalog No.	Style	Secondary #1 Volts	Secondary #1 DCMA†	Secondary #2 Volts	Secondary #2 Amps.	Secondary #3 Volts	Secondary #3 Amps.	Dimensions A	B	C	D	E	WT. Lbs.	Style
1	RP-400	C	400 C.T.	400	6.3	3.0	6.3	3.0	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	7.1	C
	RP-600	C	300 C.T.	600	6.3	2.5	6.3	2.5	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	7.1	
	RP-800	C	200 C.T.	800	6.3	2.0	6.3	2.0	3 7/16	4 1/8	4 1/4	2 3/4	2 15/16	6.9	
	RP-1600	C	100 C.T.	1600	6.3	1.5	6.3	1.5	3 7/16	3 7/8	4 1/4	2 3/4	2 11/16	6.0	
	RP-2000	C	80 C.T.	2000	6.3	1.5	6.3	1.5	3 7/16	4	4 1/4	2 3/4	2 13/16	6.5	
	RP-2500	C	60 C.T.	2500	6.3	1.5	6.3	1.5	3 7/16	3 7/8	4 1/4	2 3/4	2 11/16	6.0	



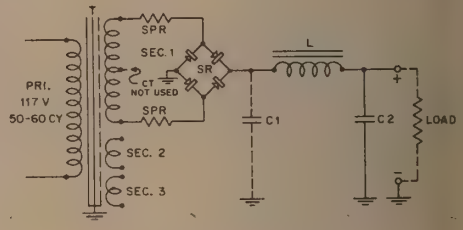
†Refer to operating. Conditions as shown below.

Section	T Stancor No.	SR★	L Stancor No.	C1 (in MFD)	C2 (in MFD)	SPR*	D.C. Output Volts	D.C. Output MA.	Rectifier Load
	RP-400	Four #F-4	C-2709	10	10	Yes	192	400	Capacitive
	RP-400	Four #F-4	C-2690	—	200	No	173	540	Inductive
	RP-600	Four #F-6	C-2690	80	80	Yes	190	600	Capacitive
	RP-600	Four #F-6	C-2690	—	125	No	126	1090	Inductive
	RP-800	Two #40-L	C-2690	40	150	Yes	105	800	Capacitive
	RP-800	Two #40-L	C-2690	—	350	No	86	1340	Inductive
	RP-1600	Two #40-L	C-2690	200	200	Yes	53	1600	Capacitive
	RP-1600	Two #40-L	C-2691	—	300	No	41	2600	Inductive
	RP-2000	Two #40-L	C-2690	500	500	Yes	47	2000	Capacitive
	RP-2000	Two #40-L	C-2686	—	1000	No	33	2950	Inductive
	RP-2500	Two #40-LF	C-2691	500	500	Yes	31	2500	Capacitive
	RP-2500	Two #40-LF	C-2686	—	1000	No	23	3950	Inductive



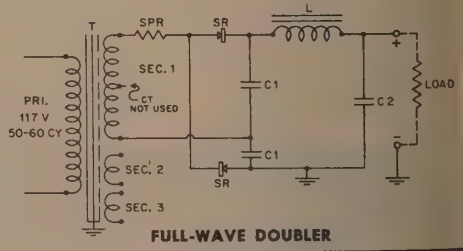
FULL-WAVE C.T.

Section	T Stancor No.	SR★	L Stancor No.	C1 (in MFD)	C2 (in MFD)	SPR*	D.C. Output Volts	D.C. Output MA.	Rectifier Load
	RP-400	Four #F-4	C-1710	8	10	Yes	502	150	Capacitive
	RP-400	Four #F-4	C-1722	—	20	No	330	302	Inductive
	RP-600	Four #F-6	C-2334	8	20	Yes	322	305	Capacitive
	RP-600	Four #F-6	C-2690	—	125	No	285	425	Inductive
	RP-800	Four #F-6	C-2709	30	40	Yes	247	377	Capacitive
	RP-800	Four #F-6	C-2708	—	250	No	172	625	Inductive
	RP-1600	Four #F-4	C-2690	40	80	Yes	100	880	Capacitive
	RP-1600	Four #F-4	C-2690	—	300	No	88	1160	Inductive
	RP-2000	Four #F-4	C-2690	100	100	Yes	93	810	Capacitive
	RP-2000	Four #40-L	C-2690	—	250	No	71	1450	Inductive
	RP-2500	Four #40-L	C-2690	200	200	Yes	70	1060	Capacitive
	RP-2500	Four #40-L	C-2690	—	500	No	50	1950	Inductive



FULL-WAVE BRIDGE

Section	T Stancor No.	SR★	L Stancor No.	C1 (in MFD)	C2 (in MFD)	SPR*	D.C. Output Volts	D.C. Output MA.	Rectifier Load
	RP-400	Four #F-6	C-1420	8	0.5	Yes	1040	75	Capacitive
	RP-600	Four #F-6	—	60	—	Yes	802	142	Capacitive
	RP-800	Two #F-6	—	80	—	Yes	536	188	Capacitive
	RP-1600	Two #F-6	C-2326	80	16	Yes	240	325	Capacitive
	RP-2000	Two #F-6	—	150	—	Yes	212	390	Capacitive
	RP-2500	Two #40-L	—	500	—	Yes	150	553	Capacitive



FULL-WAVE DOUBLER

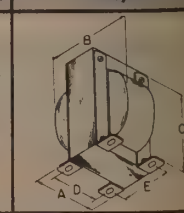
Note: Filtering shown permits maximum output ripple voltage of 3% or less.

★Quantity Shown is Total Number used in a given circuit. Rectifiers should be equivalent to Sarkes Tarzian numbers shown.

*Surge protection resistors are recommended when capacitor input filters are used. Allow 3.3 ohms per 70 volts R.M.S. applied voltage. Transformer secondary winding D.C. resistance may be used as part or all of the amount required.

FOR TRANSISTOR POWER SUPPLIES: Primary 117 Volts 60 Cycles—Lead Wire Termination.

Section	Catalog No.	Style	Secondary #1 Volts	Secondary #1 Amperes	Secondary #2 Volts	Secondary #2 Amperes	Dimensions A	B	C	D	E	WT. Lbs.	Style
5	P-8197	C	50 C.T.	1.0 Amp. RMS	—	—	2 1/2	2 11/16	3 1/8	2	1 3/4	2.3	NV
	P-8198	C	54 C.T.	.5 Amp. RMS	6.3	.5 Amps. RMS	2 3/16	2 5/16	2 5/8	1 3/4	1 5/8	1.7	
	P-8193▲	NV	17/18	6 Amps. RMS	—	—	3 1/8	3 1/8	3 13/16	2 1/2	2 5/8	6.0	
	P-8194▲	NV	36	3 Amps. RMS	36	3 Amps. RMS	3 3/4	3 3/4	4 5/16	3	3	10	
	P-8196	C	80 C.T.	1.2 Amps. DC	—	—	2 13/16	3 5/8	3 1/2	2 1/4	2 3/8	4.5	



▲Write for Bulletin #587 for Rectifier Circuits showing D.C. Voltages and allowable D.C. Current.

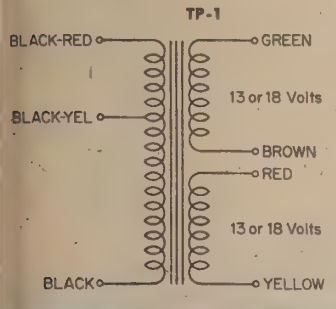
© United Technical Publications

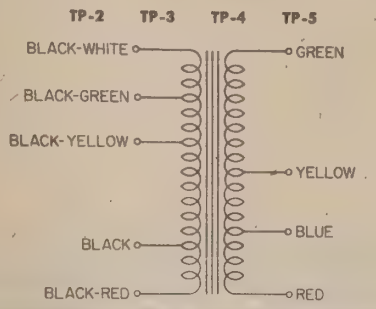
RECTIFIER & CONTROL TRANSFORMERS

ESSEX Stancor/RBM | STANCOR

RECTIFIER TRANSFORMERS: Primary 117 Volts 60 Cycles—Lead Wire Termination

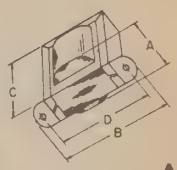
Multiple Primary and Secondary Taps offer a wide selection of output Voltages. All D.C. current ratings are based on capacitor input Filtering. Max. D.C. Ma For TP-1 is for each Secondary.





Typical Secondary AC Voltages

6.5	21 C.T.
7.5	22
8	24
9	26.5 C.T.
9.5	27
10	28
13.5 C.T.	29 C.T.
14.5 C.T.	31.5
16 C.T.	32 C.T.
18 C.T.	35.5 C.T.
19 C.T.	37 C.T.
20	42 C.T.

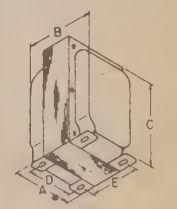


A

Section	Catalog No.	Style	MAX. D.C. MA. Full-Wave CT	Bridge	Half-Wave	Dimensions A	B	C	D	E	Wt. Lbs.
1	TP-1	C	1500	900	450	2½	3	3⅛	2	2	2.7
	TP-2	A	150	100	50	1⅞	2⅞	1⅝	2⅜	—	0.7
	TP-3	A	400	300	150	2⅛	3¾	2⅜	3⅛	—	1.5
	TP-4	C	1500	1000	500	2½	3⅛	3⅛	2	2⅛	3.2
	• TP-5	A	1100	750	375	2⅜	4	2⅜	3⅜₁₆	—	2.3

MINIATURIZED CONTROL TRANSFORMERS:

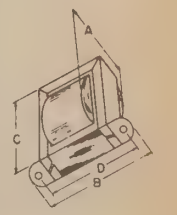
Section	Catalog No.	Style	Secondary Amperes RMS	Bridge	Half-Wave	Dimensions A	B	C	D	E	Wt. Lbs.
Primary 117 Volts 60 Cycles			Secondary 12 Volts—Lead Wire Termination								
2	P-8390	A	.150	.100 DC	.050 DC	1¼	2⅛	1¼	1¾	—	.25
	P-8391	A	.350	.225 DC	.110 DC	1⅜	2⅜	1⅜	2	—	.35
	P-8392	A	.700	.450 DC	.225 DC	1½	2⅞	1⅝	2⅜	—	.60
	P-8393	A	1.200	.750 DC	.375 DC	1⅝	3¼	2	2¹³⁄₁₆	—	.85



C

MINIATURIZED CONTROL TRANSFORMERS

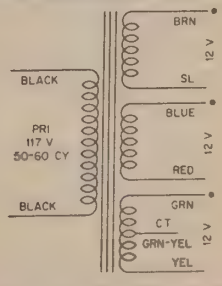
Section	Catalog No.	Style	Secondary Amperes RMS	Full-Wave CT	Bridge	Dimensions A	B	C	D	E	Wt. Lbs.
Primary 117 Volts 60 Cycles			Secondary 24 Volts C.T.—Lead Wire Termination								
3	P-8394	A	.085	.135 DC	.065 DC	1¼	2⅛	1¼	1¾	—	.25
	P-8395	A	.200	.275 DC	.135 DC	1⅜	2⅜	1⅜	2	—	.35
	P-8396	A	.400	.550 DC	.270 DC	1½	2⅞	1⅝	2⅜	—	.60
	P-8397	A	.700	.925 DC	.450 DC	1⅝	3¼	2	2¹³⁄₁₆	—	.85
Primary 117 Volts 60 Cycles			Secondary 28 Volts C.T.—Lead Wire Termination								
4	• P-8600	A	.085	.110 DC	.065 DC	1¼	2⅛	1¼	1¾	—	.25
	• P-8601	A	.175	.225 DC	.125 DC	1⅜	2⅜	1⅜	2	—	.35
	• P-8602	A	.300	.350 DC	.200 DC	1½	2⅞	1⅝	2⅜	—	.60
	• P-8603	A	.800	1.000 DC	.500 DC	1⅝	3¼	2	2¹³⁄₁₆	—	1.0
Primary 117 Volts 60 Cycles			Secondary 36 Volts C.T.—Lead Wire Termination								
5	• P-8610	A	.065	.075 DC	.045 DC	1¼	2⅛	1¼	1¾	—	.25
	• P-8611	A	.135	.175 DC	.100 DC	1⅜	2⅜	1⅜	2	—	.35
	• P-8612	A	.300	.350 DC	.200 DC	1½	2⅞	1⅝	2⅜	—	.60
	• P-8613	A	.550	.650 DC	.350 DC	1⅝	3¼	2	2¹³⁄₁₆	—	1.0



S

VERSATILE LOW CURRENT CONTROL TRANSFORMERS: Primary 117 Volts 50/60 Cycles Lead Wire Termination

Three isolated 12 Volt Secondaries (one with a center tap) provide many combinations of output voltages and current by series or parallel combinations.



Section	Catalog No.	Style	Amperes Each Sec.	Dimensions A	B	C	D	E	Wt. Lbs.
6	P-8361	S	.10	1½	2	1¾	1¾	—	.36
	P-8362	S	.15	1¾	2⅜	2	2	—	.60
	P-8363	S	.25	1¾	2⅞	2⅜	2⅜	—	.85
	P-8364	S	.50	2⅛	2⅞	2⅜	2⅜	—	1.25

• New Part Number

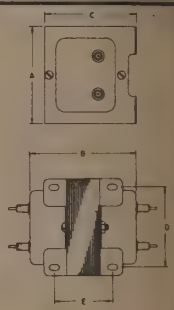
© United Technical Publications

ESSEX Stancor/RBM | STANCOR

CONTROL TRANSFORMERS

NORMAL REACTANCE TYPE: Primary 115 Volts 50/60 Cycles—Lead Wire Termination.

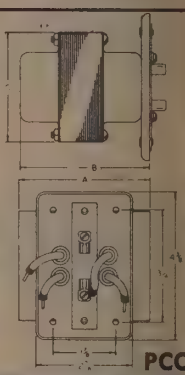
Section	Catalog Number	Secondary Volts	Secondary Amps.	Secondary V-A Cap.	Dimensions in Inches A	B	C	D	E	Approx. Weight Lbs.
1	NCF-1650	16	3.15	50	3	3¼	2¾	2⅜	1¾	3½
	NCF-2425	24	1.05	25	2⅜	2½	2½	2⅛	1½	2¼
	NCF-2450	24	2.1	50	3	3¼	2¾	2⅜	1¾	3½
	NCF-2475	24	3.15	75	3½	3⅝	3⅜	3	2¼	4½
	NCF-24100	24	4.15	100	3 15/16	3 15/16	3½	3⅜	2 15/16	5¼
	NCF-24150	24	6.25	150	4½	4⅛	4	3¾	3	8½
	NCF-3250	32	1.55	50	3	3¼	2¾	2⅜	1¾	3½
	NCF-3275	32	2.35	75	3½	3⅝	3⅜	3	2¼	4½
	NCF-32150	32	4.7	150	4½	4⅛	4	3¾	3	8½
	NCF-1550	550	(NL)	50	2⅞	2⅞	3½	2¼	2⅛	3½



NCF & PCF

POWER CIRCUIT TRANSFORMERS: Primary 50/60 Cycles. Lead Wire Termination.

Section	Catalog Number	Primary Volts	Secondary Volts	Secondary Amps.	Secondary V-A Cap.	Dimensions in Inches A	B	C	D	E	Weight Lbs.
2	PCF-2025	230	115	.25	25	3	3	2 13/16	2⅜	1½	2
	PCF-2050	230	115	.45	50	3	3½	2 13/16	2⅜	2	2¾
	PCF-24075	230/460	115	.65	75	3½	3⅝	3⅜	3	2¼	4¼
	PCF-24250	230/560	115	2.2	250	5¼	4 5/16	4 5/16	4¼	3	12



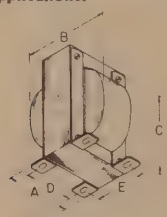
PCC

POWER CIRCUIT TRANSFORMERS: Conduit Box Mounting

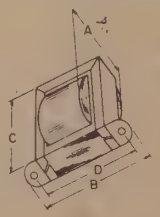
Section	Catalog Number	Primary Volts	Primary Cycles	Secondary Volts	Secondary Amps.	Secondary V-A Cap.	Dimensions in Inches A	B	C	Weight Lbs.
3	PCC-24250	230/460	50-60	115	2.2	250	5¼	4⅞	4 5/16	11½

CONTROL TRANSFORMERS: Primary—115 230 Volts 50/60 Cycles—Solder Lug Termination.

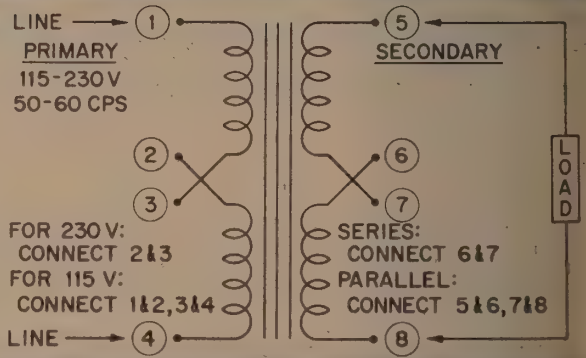
Typical Applications: Automatic Assembly equipment. Relays, Solenoids, Small Motors, Speed Changers, Recording Device, Pumps, Electronic Tubes, Heating Elements, Elevators, Door Openers, Automatic Musical Instruments, Low Voltage Lighting Signal Lamps, Spark Plug Testers, Control Valves for Fluids and Gases, Fans and Blowers, Mechanical and Electrical Signs and similar applications.



NV



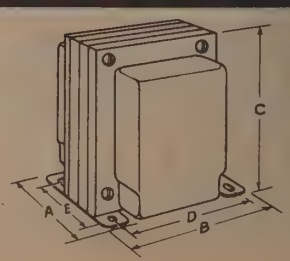
S



Section	Catalog No.	Style	VA Cap.	Secondary Parallel	Secondary Series	Dimensions A	B	C	D	E	WT. Lbs.
4	P-6375	S	12	6V @ 2A	12V @ 1A	1⅝	2⅞	2⅜	2⅜	—	1.0
	P-6376	S	24	6V @ 4A	12V @ 2A	1⅞	3⅛	2¾	2 13/16	—	1.5
	P-6377	S	48	12V @ 4A	24V @ 2A	2¼	3⅝	3⅛	3⅛	—	2.5
	P-6378	NV	96	12V @ 8A	24V @ 4A	2 13/16	2⅞	3 7/16	2¼	2¼	4.2
	P-6379	NV	192	12V @ 16A	24V @ 8A	3 7/16	3⅜	4 3/16	2¾	3	8.0

AUTO TRANSFORMERS — GSD SERIES — STEP-DOWN TYPE

Section	Catalog No.	Style	Watts	DIMENSIONS (IN INCHES) A	B	C	D	E	Wt. Lbs.
5	GSD-75	C	75	2¾	3 3/16	3⅞	2½	1½	3.0
	GSD-100	C	100	3	3 3/16	3⅞	2½	1¾	3.7
	GSD-150	C	150	3¼	3 3/16	3⅞	2½	2	4.4
	GSD-250	C	250	3¾	3 13/16	4⅝	3	2⅝	7.6
	GSD-350	C	350	3¾	3 13/16	4⅝	3	2⅝	7.4
	GSD-500	C	500	4 3/16	3 13/16	4⅝	3	3 1/16	9.6
	GSD-750	C	750	4 3/16	4⅝	5½	3½	2⅞	12.1
	GSD-1000	C	1000	5⅜	4⅝	5½	3½	3¾	16.5
	GSD-1500	C	1500	5⅞	4⅝	5½	3½	4½	20.1
	GSD-2000	C	2000	7⅛	4⅝	5½	3½	5½	27.5



© United Technical Publications

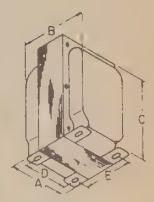
ISOLATION/AUTO TRANSFORMERS

ESSEX Stancor/RBM — STANCOR

NOTE A new step down series has been included which will have 3 prong plug and receptacle. For more information contact Stancor.

STEP-DOWN AUTO-TRANSFORMERS:
Primary—230 Volts 50/60 Cycles—Line Cord and Plug.
Secondary—115 Volts—Standard Female Receptacle.

Section	Catalog No.	Style	Watts	Dimensions A	B	C	D	E	WT. Lbs.
1	P-6287	C	40	2 5/8	2 1/2	3 1/2	2	1 1/2	2.2
	P-5062	C	80	2 13/16	3 3/8	3 1/2	2 1/4	2 1/8	3.8
	P-5063	C	100	3 1/8	3 5/8	3 7/8	2 1/2	2 1/16	4.5
	P-5064	C	150	3 7/16	3 5/8	4 1/4	2 3/4	2 7/16	5.2
	P-5065	C	300	3 3/4	4 1/4	4 11/16	3	3 1/16	8.8
	P-6141	C	500	3 3/4	5 1/4	4 11/16	3	4 1/16	13.7
	P-6124	FS	1000	5 5/8	6 3/4	7 1/8	4 5/8	4	24.7
2	SD-50	SC	50	2 7/8	3 1/2	3 1/2	2	3 1/8	2.8
	SD-100	SC	100	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	4.3
	SD-150	SC	150	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	7.0
	SD-250	SC	250	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	8.8
	SD-500	SC	500	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	14.5
	SD-1000	SC	1000	6 1/8	6 1/2	7 1/16	4 1/4	6	22.5



C

LINE ADJUSTING AUTO-TRANSFORMERS:
Primary—50/60 Cycle, Line Cord and Selector Switch.
Secondary—Female Receptacle with Voltmeter.

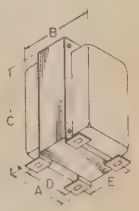
Section	Catalog No.	Style	Watts	Input Voltage	Output Voltage	Dimensions A	B	C	D	E	WT. Lbs.
3	PV-6441	C	150	65/75/90/100/115/130/145	115	3 3/4	5 3/8	5 1/2	3	4 5/16	6.4
	PV-6442	C	350	65/75/90/100/115/130/145	115	3 3/4	6 1/8	5 1/2	3	5 1/16	10.5
	PV-6443	C	500	65/75/90/100/115/130/145	115	3 3/4	6 7/8	5 1/2	3	5 13/16	15
	PV-6444	C	750	65/75/90/100/115/130/145	115	4 5/8	8 1/8	6 5/16	3 1/2	6 5/8	19

LINE ADJUSTING ISOLATION TRANSFORMERS:
Primary—50/60 Cycles, Line Cord and Selector Switch.
Secondary Standard Female Receptacle.

Section	Catalog No.	Style	Watts	Input Voltage	Output Voltage	A	B	C	D	E	WT. Lbs.
4	IS-50	SC	50	105/115/125	††125/115/105	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	5
	IS-100	SC	100	105/115/125	††125/115/105	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	8.5
	IS-150	SC	150	105/115/125	††125/115/105	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	12.5
	IS-250	SC	250	105/115/125	††125/115/105	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	18.3

STRAIGHT ISOLATION: ELECTROSTATIC SHIELDS GRNDED. TO CORE:
Primary—50/60 Cycles, Line Cord.
Secondary—Female Receptacle except P-6411 and P-6412 lead termination.

Section	Catalog No.	Style	Watts	Input Voltage	Output Voltage	A	B	C	D	E	WT. Lbs.
5	P-6411	A	15	115	115	1 7/8	3 1/4	2	2 13/16	—	1.0
	P-6412	A	35	115	115	2	2	3	—	—	1.7
	P-6410	C	50	115	115	2 13/16	3 1/8	3 1/2	2 1/4	1 7/8	3.7
	P-6160†	C	100	105/115/125	115	3 3/4	3 3/4	4 11/16	3	2 5/16	7.0
	P-6371	SC	175	117	117	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	9.0
	P-6161†	C	250	105/115/125	115	3 3/4	5 1/2	4 11/16	3	4 5/16	14.2
	P-6298†	FS	500	105/115/125	115	5 5/8	7 1/8	7 5/8	4 5/8	4 1/4	28
	P-6125▲	FS	1000	105/115/125	115	5 5/8	7 3/4	7 1/8	4 5/8	5	35
	P-6123▲	FS	1500	105/115/125	115	5 5/8	9	7 1/8	4 5/8	6 1/4	50



FS

STEP-DOWN ISOLATION: ELECTROSTATIC SHIELDS GRNDED. TO CORE
Primary—50/60 Cycles, Line Cord.
Secondary—Female Receptacle.

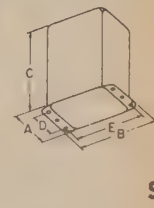
Section	Catalog No.	Style	Watts	Input Voltage	Output Voltage	A	B	C	D	E	WT. Lbs.
6	P-6383†	C	100	210/230/250	115	3 3/4	3 3/4	4 11/16	3	2 5/16	7.3
	P-6385†	C	250	210/230/250	115	3 3/4	5 1/2	4 11/16	3	4 5/16	14.2
	P-6387†	FS	500	210/230/250	115	5 5/8	7 1/8	7 3/4	4 5/8	4 1/4	29.5
	P-6389▲	FS	1000	210/230/250	115	5 5/8	7 7/8	7 1/8	4 5/8	5	34
	P-6390▲	FS	1500	210/230/250	115	5 5/8	9 3/8	7 1/8	4 5/8	6 1/2	50

ISOLATION TESTING TRANSFORMERS: ELECTROSTATIC SHIELD GROUNDED TO CORE:
Primary—50/60 Cycles, Line Cord.
Secondary—Three Female Receptacles.

Section	Catalog No.	Style	Watts	Input Voltage	Output Voltage	A	B	C	D	E	WT. Lbs.
7	P-6415	C	350	117	105/115/125	4 5/8	5 11/16	5 3/8	3 1/2	4 11/16	17

AUTO-TRANSFORMERS FOR TESTING:
Primary 50/60 Cycles—Line Cord and Selector Switch.
Secondary—Female Receptacle.

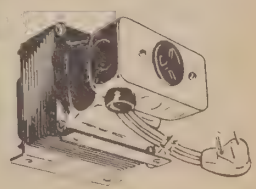
Section	Catalog No.	Style	Watts	Input Voltage	Output Voltage	A	B	C	D	E	WT. Lbs.
8	P-6299	C	150	115	{90/100/110/120 / 130/140/150}	3 1/8	3 7/8	3 7/8	2 1/2	2 5/16	6



SC

STEP UP—STEP-DOWN AUTO-TRANSFORMERS:
(Three wire Line Cord and Receptacle)
208 V./230 V., or 230 V./208 V. 60 Cy. by means of Connection. Change inside outlet Box.

Section	Catalog No.	Style	Application	Height	Base Area	Mtg Ctrs	WT. Lbs.
9	PSU-2000	PSU	2.3 KVA for 1/2 to 1 hp Motors	3 1/2	3 3/4 x 6 1/2	2 7/8 x 3 1/4	9
	PSU-3000	PSU	3 KVA for 1 to 2 hp Motors	4	4 1/2 x 6	2 1/2 x 3 3/4	10


PSU

†Has Primary Switch. ▲Has Primary Terminals. ††With 115 volt input. • New part number

ESSEX Stancor/RBM | STANCOR

PLATE TRANSFORMERS

FOR REACTOR INPUT SYSTEMS: All Primaries—50/60 Cycles.

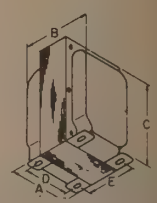
Section	Catalog No.	Style	Plate Winding AC Volts	DC Volts	DCMA CCS	DCMA ICAS	Primary Volts	Dimensions A	B	C	D	E	WT. Lbs.	Styles
1	P-8040▲	C	500-40-0-500	400, 40	300	375	115	3¾	4⅝	4 11/16	3	3⅞	9.8	
	P-8041▲	C	615-520-40-0, 520-615	500, 400, 40	250	310	115	3¾	5¼	4 11/16	3	4⅛	13.6	
	P-45††	SC	675-575-0, 575-675	500, 400	250	325	115/230	4⅜	5¼	5 5/16	2½	4¾	12.0	
	P-8042▲	C	770-510-40-0, 510-770	600, 400, 40	300	375	115	3¾	6½	4 11/16	3	5¾	18.0	
	P-67††	SC	900-735-0, 735-900	750, 600	250	325	115/230	4⅜	5¼	5 5/16	2½	4¾	13.5	
	P-8043▲	FS	950-750-40-0, 750-950	750, 600, 40	300	375	115	5⅜	6¾	7⅛	4⅝	4	29.0	
2	P-8044▲	FS	1200-0-1200†, 535-0-535	1000, 400	150, 150	190, 190	115	6⅛	8¼	7⅝	4¾	4	29.8	
	P-8025▲	FS	1230-940-0, 940-1230	1000, 750	400	500	115	5⅜	7½	7⅛	4⅝	4¾	35.0	
	P-1240††	SC	1425-0-1425†, 600-0-600	1250, 400	150, 200	200, 260	115/230	5 5/16	5⅞	6 1/16	3½	5⅜	26.0	
	P-8026▲	FS	1475-1175-0, 1175-1475	1250, 1000	300	375	115	5⅜	7½	7⅛	4⅝	4¾	36.5	
	P-8027▲	FS	1510-1210-0, 1210-1510	1250, 1000	500	625	115	5⅜	8¼	7⅛	4⅝	5½	45.2	
	P-1512††	FS-1	1710-1430-0, 1430-1710	1500, 1250	300	425	115/230	7½	7	7	4¾	6	43.0	
	P-8028▲	FS	1740-1460-0, 1460-1740	1500, 1250	300	375	115	5⅜	7¾	7⅛	4⅝	5	38.7	
	P-8029▲	FS	1775-1500-0, 1500-1775	1500, 1250	500	625	115/230	7¼	8⅛	9	6	5⅜	65.0	
	P-8031▲	FS	2075-1775-0, 1775-2075	1750, 1500	500	625	115/230	7¼	8⅛	9	6	5⅜	65.0	
3	P-8030▲	FS	2100-1800-0, 1800-2100	1750, 1500	300	375	115	5⅜	7¼	7⅛	4⅝	5½	45.8	
	P-8033▲	FS	2375-2065-0, 2065-2375	2000, 1750	500	625	115/230	7¼	8⅜	9	6	5⅞	77.0	
	P-8032▲	FS	2400-2100-0, 2100-2400	2000, 1750	300	375	115	5⅜	8	7⅛	4⅝	6¼	46.0	
	P-2520††	FS-1	2820-2260-0, 2260-2820	2500, 2000	300	425	115/230	8⅜	7½	8½	5½	6⅝	71.0	
	P-8034▲	FS	2900-2385-0, 2385-2900	2500, 2000	300	375	115/230	7¼	8⅛	9	6	5⅜	62.8	
	P-2126††	FS	2900-2320-0, 2320-2900	2600, 2100	500	700	115/230	7¼	10½	9	6	7¾	95.0	
	P-8035▲	FS	2950-2375-0, 2375-2950	2500, 2000	500	575	115/230	7¼	9⅝	9	6	7 1/16	80.0	

WITH PLATE LEADS OUT OF TOP: For Reactor Input Systems. All Primaries—50/60 Cycles.

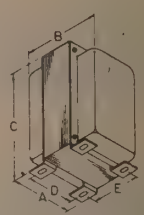
4	PT-8311††	C	1200-0-1200	1000	225	280	117	3¾	5¼	4 11/16	3	4⅛	13.0	
	PT-8312††	C	1200-0-1200	1000	325	405	117	4⅝	6¾	5⅜	3½	5⅛	22.5	
	PT-8313††	C	1475-0-1475	1250	250	310	117	4⅝	6⅝	5⅜	3½	5	22.0	
	PT-8314††	C	1790-0-1790	1500	225	280	117	4⅝	6½	5⅜	3½	4⅞	21.5	
	PT-8315††	C	2065-0-2065	1750	200	250	117	4⅝	6⅝	5⅜	3½	5	22.0	

CCS RATING FOR REACTOR INPUT-ICAS RATING FOR CAPACITOR INPUT: All Primaries—50/60 Cycles.

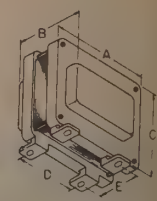
5	PC-8301††	C	415-0-415	300, 425	200	160	117	3⅛	3½	3⅞	2½	2⅜	4.8	
	PC-8302††	C	515-0-515	385, 500	235	200	117	3 7/16	4⅛	4¼	2¾	2 15/16	6.8	
	PC-8303††	C	665-0-665	500, 750	250	200	117	3¾	4⅜	4 11/16	3	3⅜	9.6	
	PC-8304††	C	750-0-750	600, 850	265	200	117	3¾	4⅞	4 11/16	3	3 11/16	11.5	
	PC-8305††	C	920-0-920	750, 1000	250	200	117	3¾	5	4 11/16	3	3 13/16	11.9	
	PC-8306††	C	920-0-920, 500-0-500†	750, 1100 / 380, 550	150 / 150	125, 125	117	3¾	5	4 11/16	3	3 13/16	11.9	



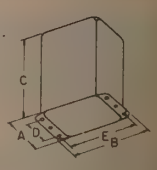
C



FS



FS1



SC

All "C" style have Leads; "SC" style have lugs; "FS" and "FS1" have Terminals.
†Both Secondaries may be Loaded Simultaneously.

††Secondary C.T. must be grounded.
▲May be used with Secondary C.T. ungrounded.

All Secondary A.C. Voltages ±3%.

© United Technical Publications

ESSEX Stancor/RBM | STANCOR

STANCOR BULK TRANSFORMER PROGRAM AT OEM PRICES THROUGH DISTRIBUTORS

Need transformers in a hurry for that rush job — (what other kind is there)? The probability is that STANCOR has the type you need — in stock and available for IMMEDIATE DELIVERY through your STANCOR distributor. Here is the best, fastest and most economical way to solve your problem:

- Make your selections from STANCOR's catalog or the complete listings in Radio Electronic Master. Chances are you will find just the ratings you need.
- Order samples from the STANCOR distributor of your choice. He has them in stock or, if momentarily out of stock, can get them for you quickly from one of our six conveniently located warehouses.
- Try the samples in your prototype.
- If satisfactory in all respects, your distributor can get production quantities, bulk-packed, from STANCOR's inventory — AT OEM PRICES.
- Quantities of 100 to 499 will be quoted and invoiced by your STANCOR distributor but with drop-shipment to you from STANCOR. One shipment (no scheduling).
- Prices are F.O.B. CHICAGO **under $500** and F.O.B. DESTINATION **over $500.**
- Requirements of 500 pieces or more per item will be quoted via your STANCOR distributor but shipped and invoiced by STANCOR. Therefore your purchase order should be issued in the STANCOR NAME care of your STANCOR distributor who will relay it to us. This seemingly devious routing has been carefully planned to result in the fastest delivery and lowest cost to you.
- Quantities of 500-999 — one shipment.
- Quantities of 1,000 and over per type may be released in up to four increments of 25% each over a maximum of one year. Each release **prepaid if over $500,** otherwise **f.o.b. Chicago.**

*Orders for standard catalog items with modifications (as shown below) will be accepted in minimum quantities of 500 pieces for shipment at one time to one destination. The modifications are:

A. Variation of lead length of standard lead wire.

B. Omission of end bells and/or magnetic shielding—or addition of same if practical.

C. Variation of standard bracket locations; that is, horizontal versus vertical mounting.

D. Non-hermetic-sealed enclosure within standard catalog parts structure. (Omission of/or added to open transformers, where practical.)

E. Where customer part numbers and/or special marking are required or special gray painting is involved.

F. Center tap secondary converted to four isolated leads or terminals.

G. Omission of one or more taps in multi-tap winding. Additional taps cannot be added.

*TERMS ARE NET 30 DAYS.

GSD SERIES STEP-DOWN AUTO-TRANSFORMERS DESIGNED FOR SAFETY!



Featuring 3-Wire NEMA Standard Line Cords and Receptacles . . .

Available in 10 sizes to handle continuous duty power requirements from 75 VA. to 2 KVA., 230 volts 50/60 Hz. to 115 volts, single phase.

All units built in type "C" mounting style semi-shielded construction. Case and core are connected internally to third wire in line cord and output receptacle, to comply with modern safety standards.



AUTO-TRANSFORMERS — 50/60 CYCLE

100-2000 VA — 230/115V



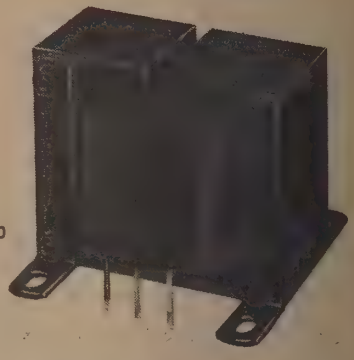
ENCLOSED
STYLE "EB"

VA	Cat. No.	Width	Depth	Height	Mtg. Centers	Lbs.
120	112	2⅞	2⅞	3½	2¼ x 1¾	2.5
150	115	2⅞	3⅛	3½	2¼ x 2	3.2
200	120	2⅞	3¼	3½	2¼ x 2⅛	3.5
250	125	2⅞	3⅝	3½	2¼ x 2½	4.2
300	130	3¼	3⅝	3⅞	2½ x 2⁵⁄₁₆	5
500	150	3¼	4⅝	3⅞	2½ x 3⁵⁄₁₆	8
750	175	3¼	5⅝	3⅞	2½ x 4⁵⁄₁₆	11
1000	1100	4½	5	5⅜	3½ x 3½	13
1500	1150	4½	6	5⅜	3½ x 4½	20
2000	1200	4½	7	5⅜	3½ x 5½	25

UL APPROVED 2 PRONG LINE CORD RECEPTACLE
LOW REGULATION. BLACK ENAMEL FINISH.

VA	Cat. No.	Width	Depth	Height	Mtg. Centers	Lbs.
120	OF-112	3⅜	2⅜	2⅞	2¹³⁄₁₆x 1⅞	2.5
150	OF-115	3⅜	2⅝	2⅞	2¹³⁄₁₆x 2⅛	3.2
200	OF-120	3⅜	2¾	2⅞	2¹³⁄₁₆x 2¼	3.5
250	OF-125	3⅜	3⅛	2⅞	2¹³⁄₁₆x 2⅝	4.2
300	OF-130	3¾	3¼	3⅛	3⅛ x 2½	5
500	OF-150	3¾	4¼	3⅛	3⅛ x 3½	8
750	OF-175	3¾	5¼	3⅛	3⅛ x 4½	11
1000	OF-1100	5¼	4½	4⅜	4⅜ x 3⅛	13
1500	OF-1150	5¼	5½	4⅜	4⅜ x 4⅛	20
2000	OF-1200	5¼	6½	4⅜	4⅜ x 5⅛	25

OPEN FRAME
STYLE "OF"
(May be used step-up or step-down)



BLACK ENAMEL FINISH. 8" LEADS
INEXPENSIVE VERSION FOR USE IN EQUIPMENT.

HEAVY DUTY — 3 to 6 KVA 230/115V or 115/230V MAY BE USED STEP-UP OR STEP-DOWN



STYLE "JB"

"JB". VERY LOW REGULATION. GRAY ENAMEL ENCLOSURES
PANEL MOUNTED. KNOCKOUTS ON ALL SIDES OF JUNCTION BOX.

KVA	Cat. No.	Width	Depth	Height	Mtg. Centers	Lbs.
3	1300	9⅛	9	6½	8⅛ x 4¼	35
4	1400	9⅛	9½	6½	8⅛ x 4¾	41
5	1500	9⅛	10	6½	8⅛ x 5¼	47
6	1600	9⅛	11¼	6½	8⅛ x 6½	60



STYLE "OF"

"OF". BLACK ENAMEL FINISH. OPEN FRAME. 8" LEADS.
INEXPENSIVE VERSION FOR USE IN EQUIPMENT

KVA	Cat. No.	Width	Depth	Height	Mtg. Centers	Lbs.
3	OF-1300	7⅛	5½	6⅛	5¹³⁄₁₆x 3¾	30
4	OF-1400	7⅛	6	6⅛	5¹³⁄₁₆x 4¼	36
5	OF-1500	7⅛	6½	6⅛	5¹³⁄₁₆x 4¾	41
6	OF-1600	7⅛	7¾	6⅛	5¹³⁄₁₆x 6	54

FLEISHMAN ELECTRIC

DIVISION OF
SIGNAL TRANSFORMER CO., INC.

© United Technical Publications

VOLTAGE REGULATORS (manually controlled)

LINE VOLTAGE ADJUSTMENT 65 to 145V, or 145 to 245V. OUTPUTS 115V or 230V.



STYLE "EB"

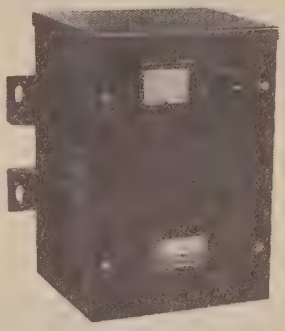
Easy Line Voltage Adjustment: Switch provided for 65 to 145V or 145 to 245V inputs, 50/60 cycle.

Built-In Meter: Output continuously monitored with Red Line at 115V or 230V output, as required.

Simple Installation:

Up to 2KVA (Style EB): Receptacle and Line Cord with Plug.

Over 2KVA (Style JB): Enclosed Junction Box, Panel Mounted with Leads. Knock-outs provided on all sides.



STYLE "JB"

	VA	Cat. No.	Style	Width	Depth	Height	Mtg. Centers	Lbs.
"300" SERIES INPUT RANGE: 65-75-90-100-115-130-145V. OUTPUT: 115V. — 50/60 CYCLE	150	315	EB	3⅞	6¼	4⅝	3 x 5 3/16	5
	350	335	EB	4½	7	5⅜	3½ x 5½	8
	500	350	EB	4½	7½	5⅜	3½ x 6	10
	750	375	EB	4½	8¼	5⅜	3½ x 6¾	15
	1000	3100	EB	4½	9½	5⅜	3½ x 8	20
	1500	3150	EB	4½	11	5⅜	3½ x 9½	29
	2000	3200	JB	9⅛	9	6½	8⅛ x 4¼	38
	3000	3300	JB	9⅛	9¾	6½	8⅛ x 5	46
	5000	3500	JB	9⅛	12¼	6½	8⅛ x 7½	74
"400" SERIES INPUT RANGE: 65-75-90-100-115-130-145V. OUTPUT: 230V. — 50/60 CYCLE	150	415	EB	3⅞	6¼	4⅝	3 x 5 3/16	5
	350	435	EB	4½	7	5⅜	3½ x 5½	8
	500	450	EB	4½	8	5⅜	3½ x 6½	14
	750	475	EB	4½	8½	5⅜	3½ x 7	17
	1000	4100	EB	4½	9¼	5⅜	3½ x 7¾	19
"500" SERIES INPUT RANGE: 145-160-175-190-210-225-245V. OUTPUT: 115V. — 50/60 CYCLE	150	515	EB	3⅞	6¼	4⅝	3 x 5 3/16	5
	350	535	EB	4½	7	5⅜	3½ x 5½	8
	500	550	EB	4½	7½	5⅜	3½ x 6	10
	750	575	EB	4½	8½	5⅜	3½ x 7	17
	1000	5100	EB	4½	9½	5⅜	3½ x 8	20
	1500	5150	EB	4½	11	5⅜	3½ x 9½	29
	2000	5200	JB	9⅛	9	6½	8⅛ x 4¼	38
	3000	5300	JB	9⅛	9¾	6½	8⅛ x 5	46
	5000	5500	JB	9⅛	12¼	6½	8⅛ x 7½	74
"600" SERIES INPUT RANGE: 145-160-175-190-210-225-245V. OUTPUT: 230V. — 50/60 CYCLE	150	615	EB	3⅞	6¼	4⅝	3 x 5 3/16	5
	350	635	EB	4½	7	5⅜	3½ x 5½	8
	500	650	EB	4½	7½	5⅜	3½ x 6	10
	750	675	EB	4½	8½	5⅜	3½ x 7	17
	1000	6100	EB	4½	9½	5⅜	3½ x 8	20

REFRIGERATOR TRANSFORMERS

for hermetically sealed motors of 115V.



Cat No.	Motor Size	VA	Width	Depth	Height	Mtg. Centers	Wt.
235	to ⅓ HP	350	4½	4¼	5 5/16	3½ x 2¾	9
255	to ⅓ HP	550	4½	4¾	5 5/16	3½ x 3¼	11
275	to ½ HP	750	4½	5	5 5/16	3½ x 3½	13

Used where power line has an odd voltage. Self-contained Receptacle & Line Cord with Plug. Built-In Switch (High-Medium-Low) for EASY INSTALLATION and ADJUSTMENT for correct line voltage without danger or need for any tools.

Switch Position	Line Voltage 50 cy.	60 cy.
High	240-260	250-270
Medium	220-240	230-250
Low	200-220	210-230

FLEISHMAN ELECTRIC

DIVISION OF
SIGNAL TRANSFORMER CO., INC.

© United Technical Publications

AUTO-TRANSFORMERS — 50/60 CYCLE

208/230V or 230/208V — IDEAL FOR AIR CONDITIONERS



STYLE "JB"

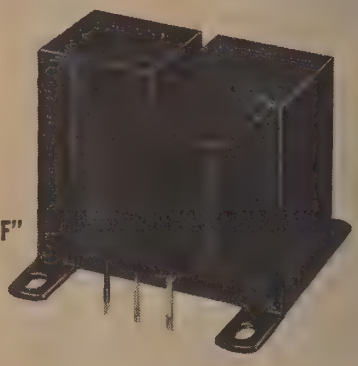
— SINGLE PHASE —

KVA	Cat No.	Motor HP	Width	Depth	Height	Mtg. Centers	Wt.
1	1P-1K-JB	⅓	3¾	5¼	3½	3¼ x 4½	5
2	1P-2K-JB	1	3¾	6¼	3½	3¼ x 5½	8
3	1P-3K-JB	2	4½	6½	4⅛	3¾ x 5½	10
5	1P-5K-JB	3	4½	7¾	4⅛	3¾ x 6¾	15
7.5	1P-7.5K-JB	5	5¼	8⅜	4⅞	4⅜ x 7¼	23
10	1P-10K-JB	7½	5¼	9⅜	4⅞	4⅜ x 8¼	29
15	1P-15K-JB	10	9⅛	8¾	6½	8⅛ x 4	35
25	1P-25K-JB	15	9⅛	10	6½	8⅛ x 5¼	48

— SINGLE PHASE —

KVA	Cat No.	Motor HP	Width	Depth	Height	Mtg. Centers	Wt.
1	1P-1K-OF	⅓	3¾	2¾	3⅛	3⅛ x 2	4
2	1P-2K-OF	1	3¾	3¾	3⅛	3⅛ x 3	6
3	1P-3K-OF	2	4½	4	3¾	3¾ x 2¾	9
5	1P-5K-OF	3	4½	5¼	3¾	3¾ x 4	14
7.5	1P-7.5K-OF	5	5¼	5¼	4⅜	4⅜ x 4⅛	20
10	1P-10K-OF	7½	5¼	6½	4⅜	4⅜ x 5⅛	26
15	1P-15K-OF	10	7⅛	5½	6⅛	5 13/16 x 3½	29
25	1P-25K-OF	15	7⅛	6¾	6⅛	5 13/16 x 4¾	43

STYLE "OF"





STYLE "JB" ONLY

— THREE PHASE —

KVA	Cat No.	Motor HP	Width	Depth	Height	Mtg. Centers	Wt.
1	3P-1K-JB	⅓	4½	8¾	4⅛	3¾ x 7¾	7
2	3P-2K-JB	1	4½	9¾	4⅛	3¾ x 8¾	12
3	3P-3K-JB	2	4½	10¼	4⅛	3¾ x 9¼	13
5	3P-5K-JB	3	4½	11¼	4⅛	3¾ x 10¼	18
7.5	3P-7.5K-JB	5	4½	12¾	4⅛	3¾ x 11¾	25
10	3P-10K-JB	7½	5¼	12⅜	4⅞	4⅜ x 11¼	28
15	3P-15K-JB	10	5¼	13⅞	4⅞	4⅜ x 12¾	38
25	3P-25K-JB	15	9⅛	14¾	6½	8⅛ x 10	59

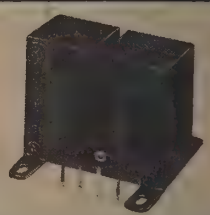
LINE ISOLATION

ELECTRO-STATIC SHIELD GROUNDED TO CORE
115V OUTPUT — 50/60 CYCLES
2500V RMS TEST



STYLE "EB"
UL LINE CORD
& RECEPTACLE

STYLE "OF"
OPEN FRAME
8" LEADS



	Cat. No.	VA	Width	Depth	Height	Mtg. Ctrs.	Lbs.	Cat. No.	VA	Width	Depth	Height	Mtg. Ctrs.	Lbs.
115 to 115V	I-50-EB	50	2⅞	2⅞	3½	2¼ x 1¾	2.5	I-50-OF	50	3⅜	2⅜	2⅞	2 13/16 x 1⅞	2.5
	I-100-EB	100	2⅞	3¼	3½	2¼ x 2⅛	3.5	I-100-OF	100	3⅜	2¾	2⅞	2 13/16 x 2¼	3.5
	I-250-EB	250	3 3/16	4⅝	3⅞	2½ x 3 3/16	8	I-250-OF	250	3¾	4¼	3⅛	3⅛ x 3½	8
	I-500-EB	500	4½	5	5⅜	3½ x 3½	13	I-500-OF	500	5¼	4½	4⅜	4⅜ x 3⅛	13
	I-750-EB	750	4½	6	5⅜	3½ x 4½	20	I-750-OF	750	5¼	5½	4⅜	4⅜ x 4⅛	20
	I-1000-EB	1000	4½	7	5⅜	3½ x 5½	25	I-1000-OF	1000	5¼	6½	4⅜	4⅜ x 5⅛	25
230 to 115V	IH-100-EB	100	2⅞	3¼	3½	2¼ x 2⅛	3.5	IH-100-OF	100	3⅜	2¾	2⅞	2 13/16 x 2¼	3.5
	IH-250-EB	250	3 3/16	4⅝	3⅞	2½ x 3 3/16	8	IH-250-OF	250	3¾	4¼	3⅛	3⅛ x 3½	8
	IH-500-EB	500	4½	5	5⅜	3½ x 3½	13	IH-500-OF	500	5¼	4½	4⅜	4⅜ x 3⅛	13
	IH-1000-EB	1000	4½	7	5⅜	3½ x 5½	25	IH-1000-OF	1000	5¼	6½	4⅜	4⅜ x 5⅛	25

FLEISHMAN ELECTRIC

DIVISION OF
SIGNAL TRANSFORMER CO., INC.

© United Technical Publications

DRY TYPE POWER TRANSFORMERS—50/60 CYCLE



STYLE "JB"

- Enclosed with Junction Box (Style JB) Knockouts provided on all sides of Junction Box.

ISOLATION TWO WINDING — SINGLE PHASE
AVAILABLE IN 2 STYLES



STYLE "OF"

- Open Frame with 8" leads (Style OF) Inexpensive version for use in equipment.

STYLE "JB"

	Cat. No.	Width	Depth	Height	Mtg. Centers	Lbs.	KVA
A SERIES PRIMARY 240/480V SECONDARY 240 x 120V	A-050-JB	3¾	5	3½	3¼ x 4¼	4	.050
	A-100-JB	3¾	5½	3½	3¼ x 4¾	5.5	.100
	A-250-JB	3¾	6¾	3½	3¼ x 6	9.2	.250
	A-500-JB	5¼	7⅝	4⅞	4⅜ x 6½	18	.500
	A-750-JB	5¼	8⅝	4⅞	4⅜ x 7½	24	.750
	A-1K-JB	5¼	9⅞	4⅞	4⅜ x 8¾	31	1.0
	A-2K-JB	9⅛	10	6½	8⅛ x 5¼	46	2.0
	A-3K-JB	9⅛	11¾	6½	8⅛ x 7	66	3.0
	A-5K-JB	9⅛	12¾	6½	8⅛ x 8	78	5.0
	A-7.5K-JB	9⅛	15¼	6½	8⅛ x 10½	106	7.5
B SERIES PRIMARY 554/277V SECONDARY 120 x 240V	B-050-JB	3¾	5	3½	3¼ x 4¼	4	.050
	B-100-JB	3¾	5½	3½	3¼ x 4¾	5.5	.100
	B-250-JB	3¾	6¾	3½	3¼ x 6	9.2	.250
	B-500-JB	5¼	7⅝	4⅞	4⅜ x 6½	18	.500
	B-750-JB	5¼	8⅝	4⅞	4⅜ x 7½	24	.750
	B-1K-JB	5¼	9⅞	4⅞	4⅜ x 8¾	31	1.0
	B-2K-JB	9⅛	10	6½	8⅛ x 5¼	46	2.0
	B-3K-JB	9⅛	11¾	6½	8⅛ x 7	66	3.0
	B-5K-JB	9⅛	12¾	6½	8⅛ x 8	78	5.0
	B-7.5K-JB	9⅛	15¼	6½	8⅛ x 10½	106	7.5
C SERIES PRIMARY 120/240V SECONDARY 32 x 16V ISOLATION OR BUCK-BOOST	C-050-JB	3¾	5	3½	3¼ x 4¼	4	.050
	C-100-JB	3¾	5½	3½	3¼ x 4¾	5.5	.100
	C-250-JB	4½	6½	4⅛	3¾ x 5½	10	.250
	C-500-JB	4½	7¾	4⅛	3¾ x 6¾	15	.500
	C-750-JB	5¼	8⅛	4⅞	4⅜ x 7	19	.750
	C-1K-JB	5¼	8⅞	4⅞	4⅜ x 7¾	26	1.0
	C-2K-JB	9⅛	9¾	6½	8⅛ x 5	46	2.0
D SERIES PRIMARY 120/240V SECONDARY 24 x 12V ISOLATION OR BUCK-BOOST	D-050-JB	3¾	5	3½	3¼ x 4¼	4	.050
	D-100-JB	3¾	5½	3½	3¼ x 4¾	5.5	.100
	D-250-JB	4½	6¼	4⅛	3¾ x 5¼	9	.250
	D-500-JB	4½	7¾	4⅛	3¾ x 6¾	15	.500
	D-750-JB	5¼	8⅛	4⅞	4⅜ x 7	19	.750
	D-1K-JB	5¼	8⅞	4⅞	4⅜ x 7¾	26	1.0
	D-2K-JB	9⅛	9¾	6½	8⅛ x 5	46	2.0

STYLE "OF"

Cat. No.	Width	Depth	Height	Mtg. Centers	Lbs.
A-050-OF	3¾	2½	3⅛	3⅛ x 1¾	2.8
A-100-OF	3¾	3	3⅛	3⅛ x 2¼	4.3
A-250-OF	3¾	4¼	3⅛	3⅛ x 3½	8
A-500-OF	5¼	4½	4⅜	4⅜ x 3⅜	15
A-750-OF	5¼	5½	4⅜	4⅜ x 4⅜	21
A-1K-OF	5¼	7	4⅜	4⅜ x 5⅝	28
A-2K-OF	7⅛	6¾	6⅛	6⅛ x 4¾	41
A-3K-OF	7⅛	8½	6⅛	6⅛ x 6½	61
A-5K-OF	7⅛	9½	6⅛	6⅛ x 7½	73
A-7.5K-OF	7⅛	12	6⅛	6⅛ x 10	101
B-050-OF	3¾	2½	3⅛	3⅛ x 1¾	2.8
B-100-OF	3¾	3	3⅛	3⅛ x 2¼	4.3
B-250-OF	3¾	4¼	3⅛	3⅛ x 3½	8
B-500-OF	5¼	4½	4⅜	4⅜ x 3⅜	15
B-750-OF	5¼	5½	4⅜	4⅜ x 4⅜	21
B-1K-OF	5¼	7	4⅜	4⅜ x 5⅝	28
B-2K-OF	7⅛	6¾	6⅛	6⅛ x 4¾	41
B-3K-OF	7⅛	8½	6⅛	6⅛ x 6½	61
B-5K-OF	7⅛	9½	6⅛	6⅛ x 7½	73
B-7.5K-OF	7⅛	12	6⅛	6⅛ x 10	101
C-050-OF	3¾	2½	3⅛	3⅛ x 1¾	2.7
C-100-OF	3¾	3	3⅛	3⅛ x 2¼	4.2
C-250-OF	4½	4	3¾	3¾ x 2¾	8.5
C-500-OF	4½	5¼	3¾	3¾ x 4	14
C-750-OF	5¼	5	4⅜	4⅜ x 3⅞	16
C-1K-OF	5¼	6	4⅜	4⅜ x 4⅝	23
C-2K-OF	7⅛	6½	6⅛	5 13/16 x 4½	39
D-050-OF	3¾	2½	3⅛	3⅛ x 1¾	2.7
D-100-OF	3¾	3	3⅛	3⅛ x 2¼	4.2
D-250-OF	4½	3¾	3¾	3¾ x 2½	7.2
D-500-OF	4½	5¼	3¾	3¾ x 4	14
D-750-OF	5¼	5	4⅜	4⅜ x 3⅞	16
D-1K-OF	5¼	6	4⅜	4⅜ x 4⅝	23
D-2K-OF	7⅛	6½	6⅛	5 13/16 x 4½	39

AUTO TRANSFORMERS 480/240 or 240/480 V

SINGLE PHASE	E-1K-JB	5¼	7⅜	4⅞	4⅜ x 6¼	16	1	E-1K-OF	5¼	4¼	4⅜	4⅜ x 3⅛	14
	E-2K-JB	5¼	9⅛	4⅞	4⅜ x 8	26	2	E-2K-OF	5¼	6¼	4⅜	4⅜ x 4⅞	24
	E-3K-JB	9⅛	9	6½	8⅛ x 4¼	36	3	E-3K-OF	7⅛	5¾	6⅛	5 13/16 x 3¾	30
	E-5K-JB	9⅛	10½	6½	8⅛ x 5¾	43	5	E-5K-OF	7⅛	7¼	6⅛	5 13/16 x 5¼	37
	E-10K-JB	9⅛	12¼	6½	8⅛ x 7½	72	10	E-10K-OF	7⅛	9	6⅛	5 13/16 x 7	66
3 PHASE	G-1K-JB	4½	11¼	4⅛	3¾ x 10¼	19	1	AVAILABLE IN STYLE JB ONLY					
	G-2K-JB	5¼	12⅜	4⅞	4⅜ x 11¼	30	2						
	G-3K-JB	5¼	13⅝	4⅞	4⅜ x 12½	45	3						
	G-5K-JB	9⅛	15¼	6½	8⅛ x 10½	65	5						
	G-10K-JB	9⅛	18¾	6½	8⅛ x 14	103	10						

PRICE LIST

Cat. No.	User Net
112	6.60
115	7.15
120	7.40
125	8.15
130	9.10
150	11.30
175	15.40
1100	19.80
1150	27.50
1200	33.00
1300	53.00
1400	66.00
1500	70.00
1600	83.00
112-OF	5.20
115-OF	5.80
120-OF	6.10
125-OF	6.75
130-OF	7.75
150-OF	10.00
175-OF	14.00
1100-OF	18.40
1150-OF	26.00
1200-OF	30.00

Cat. No.	User Net
1300-OF	47.50
1400-OF	61.00
1500-OF	65.00
1600-OF	77.00
235	18.00
255	19.00
275	27.00
315	21.00
335	25.00
350	27.00
375	31.00
3100	35.00
3150	40.00
3200	56.00
3300	68.00
3500	93.00
415	21.00
435	25.00
450	27.00
475	31.00
4100	35.00
515	21.00
535	25.00
550	27.00

Cat. No.	User Net
575	31.00
5100	35.00
5150	40.00
5200	56.00
5300	68.00
5500	93.00
615	21.00
635	25.00
650	27.00
675	31.00
6100	35.00
1P-1K-JB	16.00
1P-2K-JB	20.00
1P-3K-JB	24.00
1P-5K-JB	32.00
1P-7.5K-JB	41.00
1P-10K-JB	49.00
1P-15K-JB	60.00
1P-25K-JB	85.00
1P-1K-OF	12.00
1P-2K-OF	16.00
1P-3K-OF	20.00
1P-5K-OF	28.00
1P-7.5K-OF	35.00

Cat. No.	User Net
1P-10K-OF	42.00
1P-15K-OF	52.00
1P-25K-OF	77.00
3P-1K-JB	38.00
3P-2K-JB	48.00
3P-3K-JB	57.00
3P-5K-JB	70.00
3P-7.5K-JB	80.00
3P-10K-JB	93.00
3P-15K-JB	115.00
3P-25K-JB	160.00
I-50-EB	7.70
I-100-EB	8.50
I-250-EB	12.50
I-500-EB	21.00
I-750-EB	29.00
I-1000-EB	35.00
I-50-OF	6.30
I-100-OF	7.20
I-250-OF	11.20
I-500-OF	19.80
I-750-OF	27.50

Cat. No.	User Net
I-1000-OF	32.00
IH-100-EB	9.00
IH-250-EB	13.00
IH-500-EB	21.80
IH-1000-EB	36.00
IH-100-OF	7.70
IH-250-OF	11.70
IH-500-OF	20.60
IH-1000-OF	33.00
A-050-JB	12.80
A-100-JB	15.00
A-250-JB	19.50
A-500-JB	31.00
A-750-JB	41.00
A-1K-JB	51.00
A-2K-JB	72.00
A-3K-JB	94.00
A-5K-JB	138.00
A-7.5-JB	188.00
A-050-OF	8.50
A-100-OF	10.40
A-250-OF	15.00

Cat. No.	User Net
A-500-OF	23.00
A-750-OF	33.00
A-1K-OF	43.00
A-2K-OF	63.00
A-3K-OF	84.00
A-5K-OF	131.00
A-7.5K-OF	178.00
B-050-JB	14.00
B-100-JB	16.00
B-250-JB	21.00
B-500-JB	32.00
B-750-JB	43.00
B-1K-JB	53.00
B-2K-JB	75.00
B-3K-JB	97.50
B-5K-JB	142.00
B-7.5K-JB	194.00
B-050-OF	9.50
B-100-OF	11.50
B-250-OF	16.00
B-500-OF	25.00
B-750-OF	35.00
B-1K-OF	46.00

Cat. No.	User Net
B-2K-OF	66.00
B-3K-OF	87.00
B-5K-OF	135.00
B-7.5K-OF	184.00
C-050-JB	14.00
C-100-JB	17.00
C-250-JB	22.00
C-500-JB	33.00
C-750-JB	44.00
C-1K-JB	55.00
C-2K-JB	77.00
C-050-OF	11.00
C-100-OF	13.00
C-250-OF	17.00
C-500-OF	26.00
C-750-OF	36.00
C-1K-OF	48.00
C-2K-OF	68.00
D-050-JB	15.00
D-100-JB	18.00
D-250-JB	23.00
D-500-JB	34.00
D-750-JB	45.00

Cat. No.	User Net
D-1K-JB	56.00
D-2K-JB	79.00
D-050-OF	12.00
D-100-OF	14.00
D-250-OF	18.00
D-500-OF	26.00
D-750-OF	37.00
D-1K-OF	49.00
D-2K-OF	70.00
E-1K-JB	29.00
E-2K-JB	49.00
E-3K-JB	60.00
E-5K-JB	84.00
E-10K-JB	136.00
E-1K-OF	21.50
E-2K-OF	41.00
E-3K-OF	55.00
E-5K-OF	79.00
E-10K-OF	131.00
G-1K-JB	60.00
G-2K-JB	80.00
G-3K-JB	98.00
G-5K-JB	130.00
G-10K-JB	195.00

FLEISHMAN ELECTRIC

DIVISION OF
SIGNAL TRANSFORMER CO., INC.

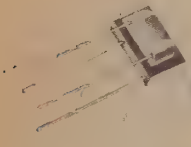
FREED TRANSFORMER CO., INC.

SUB–MINIATURE TRANSISTOR AUDIO TRANSFORMERS

These high quality miniature transformers are high efficiency audio components featuring hermetic sealing for maximum protection against electrolysis and subsequent corrosion of fine wires caused by moisture penetration. The units are constructed in accordance with MIL-T-27 Specifications. Transistor transformers can also be supplied in an open or encapsulated type of construction.

TYPE	TSA	TNA	TPA	TTA
MAX. POWER	300 MW	1 W	3 W	5 W
FREQ. RESPONSE	.3-15 KHz ±2 DB	.2 — 15 KHz ±2 DB	.15-15 KHz ±2 DB	.15-15 KHz ±2 DB
SIZE UNCASED	—	—	3/16 x 15/32 x 3/4	1 3/16 x 1 3/16 x 1 3/16
SIZE CASED MIL-T-27 -4RX	3/4 D., 1 5/32 H.	3/4 D. x 2 5/32 H.	1 5/16 D. x 1 3/16 H.	1 5/16 D. x 1 3/16 H.
SIZE MOLDED MIL-T-27 -5RX	1/2 D x 1/2 H.	1 5/32 x 1 5/32 x 1 5/32	7/8 x 2 5/32 x 1 7/32	1 5/32 x 1 x 2 5/32

MATCHING IMP. Pri.	MATCHING IMP. Sec.	Cat. No.	Max. I (MA) Total Pri.	Max I dc (MA) Unbal. ½ Pri.	Cat. No.	Max. I (MA) Total Pri.	Max I dc (MA) Unbal. ½ Pri.	Cat. No.	Max. I (MA) Total Pri.	Max I dc (MA) Unbal. ½ Pri.	Cat. No.	Max. I (MA) Total Pri.	Max I dc (MA) Unbal. ½ Pri.
150 (CT)	3.2	28	44	12	28	81	16	30	140	20	15	180	50
150 (CT)	12	29	44	12	29	81	16	31	140	20	17	180	50
150 (CT)	50	30	44	12	30	81	16	32	140	20	18	180	50
300 (CT)	3.2	31	32	8	31	58	14	33	100	16	20	130	35
300 (CT)	12	32	32	8	32	58	14	34	100	16	21	130	35
300 (CT)	50	33	32	8	33	58	14	35	100	16	22	130	35
500 (CT)	500	34	25	6	34	45	10	36	78	12	1	130	25
600 (SP)	3.2	1	23	6	1	41	8	1	71	10	23	100	25
600 (SP)	12	2	23	6	2	41	8	2	71	10	24	91	25
600 (SP)	50	35	23	6	35	41	8	3	71	10	25	91	25
600 (SP)	600 (SP)	3	23	6	3	41	8	4	71	10	26	91	25
600 (SP)	1.2K (CT)	22	23	6	22	41	8	37	71	10	7	91	25
1K (CT)	3.2	36	17	4	36	32	6	38	55	8	19	91	20
1K (CT)	12	37	17	4	37	32	6	39	55	8	27	71	20
1K (CT)	50	26	17	4	26	32	6	40	55	8	13	71	20
1.2K (SP)	3.2	4	16	4	4	29	6	5	50	8	28	65	15
1.2K (SP)	12	5	16	4	5	29	6	6	50	8	29	65	15
1.2K (SP)	50	38	16	4	38	29	6	7	50	8	30	65	15
1.2K (SP)	600 (SP)	6	16	4	6	29	6	8	50	8	31	65	15
2K (SP)	3.2	7	12	3	7	22	5	9	39	6	10	50	12
2K (SP)	12	8	12	3	8	22	5	10	39	6	32	50	12
2K (SP)	600 (SP)	9	12	3	9	22	5	11	39	6	33	50	12
4K (SP)	3.2	10	9	2	10	16	3	12	27	4	11	35	10
4K (SP)	12	11	9	2	11	16	3	13	27	4	34	35	10
4K (SP)	600 (SP)	12	9	2	12	16	3	14	27	4	9	35	10
10K (SP)	3.2	13	5	1	13	10	2	15	17	3	35	22	9
10K (SP)	12	14	5	1	14	10	2	16	17	3	36	22	9
10K (CT)	50	39	5	1	39	10	2	17	17	3	37	22	9
10K (SP)	600 (SP)	15	5	1	15	10	2	18	17	3	38	22	9
10K	1K	40	5	1	40	10	1.5	19	17	1.8	39	22	5
10K	10K (SP)	16	5	1	16	10	1.5	20	17	1.8	40	22	5
20K (CT)	50	25	4	.8	25	7	1	21	12	2	12	16	6
20K (CT)	600 (CT)	41	4	.8	41	7	1	22	12	2	16	16	6
25K (CT)	600 (CT)	23	3	.8	23	7	1	23	11	2	8	14	4
25K (CT)	1.2K (CT)	21	3	.8	21	7	1	24	11	2	5	14	4
50K (CT)	6 (CT)	18	2	.6	18	4	1	25	8	1	3	10	3
50K (CT)	500 (CT)	17	2	.6	17	4	1	26	8	1	2	10	3
50K (CT)	1.2K (CT)	20	2	.6	20	4	1	27	8	1	6	10	3
100K (CT)	1K (CT)	27	2	.4	27	3	.8	28	5	1	14	7	2
100K (CT)	1.2K (CT)	19	2	.4	19	3	.8	29	5	1	4	7	2



TTA, TPA UNCASED



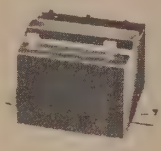
TPA MOLDED



TTA, TPA CASED



TNA MOLDED



TTA MOLDED



TUA, TSA, TNA CASED TSA MOLDED

TYPE	TUA	SIZE	UNCASED	
MAX. POWER	100 MW		CASED MIL-T-27 -4RX	1 5/32 D. x ½ H.
FREQ. RESPONSE	.4-15 KHz ±2 DB		MOLDED	—

MATCHING IMP. Pri.	MATCHING IMP. Sec.	Cat. No.	Max. I (MA) Total Pri.	Max. I dc (MA) Unbal. ½ Pri.	MATCHING IMP. Pri.	MATCHING IMP. Sec.	Cat. No.	Max. I (MA) Total Pri.	Max I dc (MA) Unbal. ½ Pri.
150 (CT)	3.2	16	26	10	2K (CT)	3.2	28	7	2.5
150 (CT)	12	17	26	10	2K (CT)	12	29	7	2.5
150 (CT)	50	21	26	10	2K (CT)	600	30	7	2.5
300 (CT)	3.2	20	18	7	4K (CT)	3.2	8	5	1.5
300 (CT)	12	19	18	7	4K (CT)	12	9	5	1.5
300 (CT)	50	22	18	7	4K (CT)	600	10	5	1.5
500 (CT)	500	23	13	5	10K (CT)	3.2	7	3	1
600 (CT)	3.2	1	13	5	10K (CT)	12	11	3	1
600 (CT)	12	2	13	5	10K (CT)	50	12	3	1
600 (CT)	50	13	13	5	10K (CT)	600	15	3	1
600 (CT)	600	3	13	5	10K (CT)	1K	18	3	1
600 (CT)	1.2K	24	13	5	10K	10K (CT)	31	3	1
1K (CT)	3.2	4	10	3.5	20K (CT)	50	32	2	.8
1K (CT)	12	25	10	3.5	20K (CT)	600 (CT)	33	2	.8
1K (CT)	50	14	10	3.5	25K (CT)	600 (CT)	34	2	.8
1.2K (CT)	3.2	26	9	3.5	25K (CT)	1.2K (CT)	35	2	.8
1.2K (CT)	12	5	9	3.5	50K (CT)	6 (CT)	36	1	.6
1.2K (CT)	50	27	9	3.5	50K (CT)	500 (CT)	37	1	.5
1.2K (CT)	600	6	9	3.5	50K (CT)	1.2K (CT)	38	1	.5

CT = Center Tap. SP = Split Winding.

MINIATURE AUDIO TRANSFORMERS

These high quality, miniature transformers feature hermetically sealed for maximum protection from moisture penetration with subsequent electrolysis and corrosion of fine wires. While primarily intended for non-military equipment, these units are constructed in accordance with MIL-T-27 Specifications.

Frequency response:
±2DB 30-20,000 Hz
* ±2DB 200-10,000 Hz
All units supplied in DM-20 cases

Catalog No.	Application	MIL Type	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Max. Power Level DBM	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Catalog No.
PMA 1	Line or microphone to single or push-pull grids	TF4RX10YY	50 200 500	60,000 C.T.	- 8	1.11		0	0	PMA 1
PMA 2	Dynamic microphone or speaker voice coil to single or P P grid	TF4RX10YY	4/8	60,000 C.T.	- 8	1:86.6		0	0	PMA 2
PMA 3	Line or microphone to single or push-pull grids. Magnetically shielded.	TF4RX10YY	50/200/500	60,000 C.T.	- 8	1:11	30	0	0	PMA 3
PMA 4	Single triode plate to single or push-pull grids.	TF4RX10YY	15,000	60,000 C.T.	- 8	1·2		0	0	PMA 4
PMA 5*	Single triode plate to push-pull grids.	TF4RX12YY	15,000	60,000 C.T	- 8	1·2		2	2	PMA 5*
PMA 6	Single triode plate to multiple line.	TF4RX16YY	15,000	50 200 500	8	5.48.1		0	0	PMA 6
PMA 7*	Single triode plate to multiple line	TF4RX12YY	15,000	50 200 500	8	5.48:1		2	2	PMA 7*
PMA 8	Push-pull triode plates to multiple line.	TF4RX12YY	30,000 C.T.	50 200 500	- 8	7.75:1		2	0 25	PMA 8
PMA 9	Crystal mike or pickup to multiple line.	TF4RX16YY	60,000 C.T.	50 200 500	- 8	11:1		0	0	PMA 9
PMA 10	Mixing or matching	TF4RX16YY	50 200	50 200 500	- 8	1·1.50		0	0	PMA 10
PMA 11	Parallel Feed Reactor	TF4RX20YY	40 hy, 3 ma dc, 3500 ohms d c. resistance							PMA 11
PMA 12	Microphone or line to grid.	TF4RX10YY	50 200/500 C.T.	60,000 C.T.	- 5	1.11		0	0	PMA 12
PMA 13	Mixing and matching.	TF4RX16YY	150/600	600 C.T.	- 8	1.1		0	0	PMA 13
PMA 14	Single triode plate to push-pull grids	TF4RX15YY	15,000	95,000 Split	- 5	1:2.5		0	0	PMA 14
PMA 15*	Single triode plate to push-pull grids.	TF4RX15YY	15,000	95,000 Split	15	1:2 5		4	4	PMA 15*

CASE DIMENSIONS



DM-20 CASE

Height: 1 9/16"
Dia.: 15/16"
Mtg. Cen.: 1 1/8" to 1 7/32"
Mtg. 2 holes: 166 x .120
Flange Lgth.: 1 13/32"
Flange D.: .975"

MINIATURE TRANSISTOR TRANSFORMERS

Catalog No.	MIL Type	Impedance Ohms Pri	Ct.	Sec.	Ct.	DB	Frequency Response Hz	Unbalance Primary Current MA DC	DC Resistance Ohms Pri	DC Resistance Ohms Sec	Max Power Output MW	Catalog No
TMA 1*	TF4RX16YY	500		500		1	200 to 15,000	0	18	24	250	TMA 1*
TMA 2*	TF4RX12YY	50K		500		2	300 to 15,000	3	2 200	49	250	TMA 2*
TMA 3*	TF4RX13YY	50K		6		2	300 to 15,000	3	2 200	55	250	TMA 3*
TMA 4*	TF4RX12YY	100K		1 2K	✓	3	300 to 15 000	1	2 790	95	100	TMA 4*
TMA 5*	TF4RX12YY	25K		1 2K	✓	2	200 to 15 000	3	1.740	110	250	TMA 5*
TMA 6*	TF4RX12YY	50K		1 2K	✓	2	300 to 15,000	3	2 200	106	250	TMA 6*
TMA 7*	TF4RX17YY	600/150		1 2K	✓	1	200 to 15 000	4	30	95	250	TMA 7*
TMA 8*	TF4RX12YY	25K		600		2	200 to 15 000	3	1.740	61	250	TMA 8*
TMA 9*	TF4RX12YY	4K	✓	600/150	✓	1	200 to 15,000	1	274	43	250	TMA 9*
TMA 10*	TF4RX13YY	2K		3 2		2	200 to 15 000	10	160	28	250	TMA 10*
TMA 11*	TF4RX13YY	4K	✓	3 2		1	200 to 15 000	1	274	26	250	TMA 11*
TMA 12*	TF4RX11YY	20K		50		2	100 to 15 000	4	1 340	29	250	TMA 12*
TMA 13*	TF4RX13YY	1K		50		2	300 to 15,000	8	42 6	2 5	250	TMA 13*
TMA 14*	TF4RX16YY	100K		1K		2	300 to 15,000	0	1 550	16 8	100	TMA 14*

*When ordering open units specify TMO — when ordering encapsulated units specify TMC

© United Technical Publications

FREED TRANSFORMER CO., INC.

MIL-T-27 COMPONENTS

TRANSISTOR SUPPLY TRANSFORMERS
TST SERIES

Manufactured and Guaranteed to Specifications MIL-T-27

TST-6 — Frequency 57 Hz to 63 Hz — Primary 115 volts units with * primary 115 and/or 230 volts

TST-4 — Frequency 380 Hz to 1000 Hz — Primary 115 volts

TST units can be supplied in commercial type construction (channel or shell type with leads).

**When ordering specify (6) for 57 to 63 Hz and (4) for 380 to 1000 Hz

D.C. to RMS Conversion Chart

Resistive or Inductive Loads		Capacitive Loads	
Full Wave Center Tapped	Full Wave Bridge	Full Wave Center Tapped	Full Wave Bridge
E_{RMS} = 2.22 Edc	E_{RMS} = 1.11 Edc	E_{RMS} = 1.6 Edc	E_{RMS} = .8 Edc
I_{RMS} = .75 Idc	I_{RMS} = 1.05 Idc	I_{RMS} = 1.1 Idc	I_{RMS} = 1.55 Idc

Edc – should include voltage drop across reactor and voltage drop across one diode for F.W.C.T. and voltage drop across two diodes for F.W. Bridge

	R.M.S. Output		Case	
Part No.	Volt	Amp	–4	–6
TST(**)-1	6.3 CT	.30	AH	AH
TST(**)-2	6.3 CT	.60	AH	AJ
TST(**)-3	12.6 Split	.80	AJ	EB
TST(**)-4	12.6 Split	1.5	AJ	FA
TST(**)-5	12.6 Split	2.0	AJ	GB*
TST(**)-6	25.2 Split	1.5	EB	GA*
TST(**)-7	25.2 Split	4.0	GB	JA*
TST(**)-8	30 Split	.50	AJ	FA
TST(**)-9	30 Split	1.0	AJ	GB*
TST(**)-10	30 Split	1.5	EB	GA*
TST(**)-11	30 Split	2.0	FA	HA*
TST(**)-12	40 Split	.50	AJ	FA
TST(**)-13	40 Split	1.0	EB	GA*
TST(**)-14	40 Split	1.5	FA	HA*
TST(**)-15	40 Split	2.0	FA	JB*
TST(**)-16	50 Split	.50	AJ	GB*
TST(**)-17	50 Split	1.0	FA	GA*
TST(**)-18	50 Split	1.5	FA	JB*
TST(**)-19	50 Split	2.0	GB	JA*
TST(**)-20	60 Split	.50	AJ	GB*
TST(**)-21	60 Split	1.0	FA	HA*
TST(**)-22	60 Split	1.5	FA	JA*
TST(**)-23	70 Split	.50	EB	GA*
TST(**)-24	70 Split	1.0	FA	JB*
TST(**)-25	70 Split	1.5	GB	JA*
TST(**)-26	80 Split	.25	AJ	FA
TST(**)-27	80 Split	.50	EB	GA*
TST(**)-28	80 Split	1.0	FA	JB*
TST(**)-29	90 Split	.25	AJ	GB*
TST(**)-30	90 Split	.50	EB	GA*
TST(**)-31	90 Split	1.0	FA	JA*
TST(**)-32	100 Split	.25	AJ	GB*
TST(**)-33	100 Split	.50	FA	GA*
TST(**)-34	100 Split	1.20	GA	KB*

STANDARD MILITARY AUDIO TRANSFORMERS
Frequency Response 300-10,000 Hz ±2 DB

Catalog No.	Application	Type Designation	Impedance Level in Ohms Primary	Secondary	Ratio	Max. Power Level DBM	Pri. D.C. Per Side in Ma	Max. D.C. unbalance	Case
MGA 1	Transformer; interstage, single or P.P. plates to single or P.P. grid	TF4RX15AJ	10,000 C.T.	90,000 split and C.T.	1.3 overall	+15	10	10	AJ
MGA 2	Transformer; matching 600 ohm line to voice coil.	TF4RX16AJ	600 split	4, 8, 16	6.12:1 overall	+33	0	0	AJ
MGA 3	Transformer; input, 600 ohm line to single or P.P. grids.	TF4RX10AJ	600 split	135,000 C.T.	1:15	+15	0	0	AJ
MGA 4	Transformer; matching, 600 ohm line to 600 ohm line.	TF4RX16AJ	600 split	600 split	1:1	+15	0	0	AJ
MGA 5	Transformer; output, single plate 7,600 ohm, 4,800 ohm to 600 ohm line.	TF4RX13AJ	7,600 tap @ 4,800	600 split	3.56:1	+33	40	40	AJ
MGA 6	Transformer; output, single plate 7,600 ohm, 4,800 ohm to voice coil.	TF4RX13AJ	7,600 tap @ 4,800	4, 8, 16	21.8:1	+33	40	40	AJ
MGA 7	Transformer; output, single or P.P. plates to 600 ohm line.	TF4RX13AJ	15,000 C.T.	600 split	5:1	+33	10	10	AJ
MGA 8	Transformer; output, P.P. plates to 600 ohm line.	TF4RX13AJ	24,000 C.T.	600 split	6.32:1	+30	10	1	AJ
MGA 9	Transformer; output, P.P. plates to 600 ohm line.	TF4RX13AJ	60,000 C.T.	600 split	10:1	+27	10	1	AJ

STANDARD MILITARY POWER AND FILAMENT TRANSFORMERS
Primary 105/115/125V 60~

SINGLE PHASE 400 Hz, AND THREE PHASE 60 AND 400 Hz TRANSFORMERS CAN BE SUPPLIED ON SPECIAL ORDER.

Catalog No.	MIL-T-27 Type Designation	Hi Volt	D.C. Volts	D.C. Amps	Fil. No. 1	Fil. No. 2	Case
MGP 1	TF4RX03HA001	200/100/0/100/200	185	070	5 6.3V @ 2A	6.3V @ 3A	HA
MGP 2	TF4RX03JB002	650 C.T.	260	.070	5 6.3V @ 2A	6.3V @ 4A	JB
MGP 3	TF4RX03KB006	650 C.T.	245	.150	6.3V @ 5A	5V @ 3A	KB
MGP 4	TF4RX03LB003	800 C.T.	318	.175	5V @ 3A	6.3V @ 8A	LB
MGP 5	TF4RX03MB004	900 C.T.	345	.250	5V @ 3A	6.3V @ 8A	MB
MGP 6	TF4RX02KB001	700 C.T.	255	.250			KB
MGP 7	TF4RX02LB002	1100 C.T.	419	.250			LB
MGP 8	TF4RX02NB003	1600 C.T.	640	.250			NB

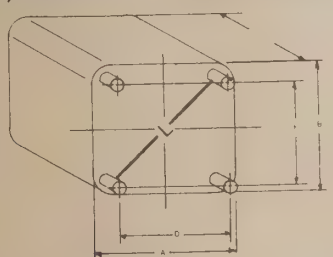
Catalog No.	MIL-T-27 Type Designation	Secondary Volts	Secondary Current Amps	Secondary Test Volts RMS	Case
MGF 1	TF4RX01EB002	2.5	3.0	2,500	EB
MGF 2	TF4RX01GB003	2.5	10.0	2,500	GB
MGF 3	TF4RX01FB004	5.0	3.0	2,500	FB
MGF 4	TF4RX01HB005	5.0	10.0	2,500	HB
MGF 5	TF4RX01FB006	6.3	2.0	2,500	FB
MGF 6	TF4RX01GB007	6.3	5.0	2,500	GB
MGF 7	TF4RX01JB008	6.3	10.0	2,500	JB
MGF 8	TF4RX01KB009	6.3	20.0	2,500	KB
MGF 9	TF4RX01JB012	2.5	10.0	10,000	JB
MGF 10	TF4RX01KB013	5.0	10.0	10,000	KB

MIL-FILTER REACTORS

Catalog No.	MIL Type	Inductance Henry	Rat. Current DC Ma.	DC Res. Ohms	Test Volt Kilovolts	Case No.
MGC 1	TF4RX04AJ	100	10	3,500	1.	AJ
MGC 2	TF4RX04AJ	4	50	230	1.	AJ
MGC 3	TF4RX04EB	10	50	325	1.	EB
MGC 4	TF4RX04FA	20	50	475	1.5	FA
MGC 5	TF4RX04FA	30	50	650	1.5	FA
MGC 6	TF4RX04AJ	3	75	175	1.	AJ
MGC 7	TF4RX04EB	6	75	235	1.5	EB
MGC 8	TF4RX04FA	12	75	265	1.5	FA
MGC 9	TF4RX04EB	3.5	100	145	1.	EB
MGC 10	TF4RX04FA	8	100	180	1.5	FA
MGC 11	TF4RX04GA	12	100	190	2.	GA
MGC 12	TF4RX04EB	2	150	92	1.5	EB
MGC 13	TF4RX04FA	4	150	115	1.5	FA
MGC 14	TF4RX04GA	8	150	125	2.	GA
MGC 15	TF4RX04JB	11	150	120	2.5	JB
MGC 16	TF4RX04FA	2.5	200	70	1.5	FA
MGC 17	TF4RX04GA	4	200	80	2.	GA
MGC 18	TF4RX04HB	7	200	135	2.	HB
MGC 19	TF4RX04JA	10	200	125	2.5	JA
MGC 20	TF4RX04GA	2.5	300	50	2.	GA
MGC 21*	TF4RX04HB	4	300	62	2.5	HB
MGC 22	TF4RX04JB	6	300	85	2.5	JB
MGC 23*	TF4RX04KB	8	300	65	2.5	KB
MGC 24	TF4RX04LA	10	300	100	2.5	LA
MGC 25*	TF4RX04HB	2	400	37	2.5	HB
MGC 26	TF4RX04KB	6	400	60	2.5	KB
MGC 27*	TF4RX04JA	2	500	35	2.5	JA
MGC 28	TF4RX04KB	4	500	45	2.5	KB
MGC 29*	TF4RX04MB	7	500	50	2.5	MB
MGC 30*	TF4RX04LB	2	700	20	2.5	LB
MGC 31*	TF4RX04MB	1.75	1,000	12.5	2.5	MB

*Not stocked, available on short delivery. Above units available in Grade 4. Class S-T-U, grade 4 or 5, can be supplied on special order

MIL CASES, NOMINAL DIMENSIONS, INCHES



Mil Case	A	B	C	D	L	E	Mtg. Studs	Wt. Lbs.
AH	1 5/16	1 5/16	1 3/4		1 1/4		6-32 x 3/8	3/4
AJ	1 3/8	1 3/8	2 3/8	1 3/16		1 3/16	6-32 x 3/8	1
EA	1 15/16	1 13/16	2 3/4	1 3/8		1 1/4	6-32 x 3/8	1
EB	1 15/16	1 13/16	2 7/16	1 1/8		1 1/4	6-32 x 3/8	1/8
FA	2 5/16	2 1/16	3 1/8	1 11/16		1 7/16	6-32 x 3/8	1 3/4
FB	2 5/16	2 1/16	2 1/2	1 11/16		1 7/16	6-32 x 3/8	1 1/2
GA	2 3/4	2 3/8	3 13/16	2 1/8		1 3/4	6-23 x 3/8	3 1/2
GB	2 3/4	2 3/8	2 13/16	2 1/8		1 3/4	6-32 x 3/8	2 1/2
HA	3 1/16	2 5/8	4 1/4	2 19/64		1 55/64	8-32 x 3/8	4 1/2
HB	3 1/16	2 5/8	3 1/16	2 19/64		1 55/64	8-32 x 3/8	3 1/2
JA	3 9/16	3 1/16	4 7/8	2 7/8		2 1/8	8-32 x 3/8	6
JB	3 9/16	3 1/16	3 7/8	2 7/8		2 1/8	8-32 x 3/8	5
KA	3 15/16	3 3/8	5 1/4	3		2 7/16	10-32 x 1/2	8 1/2
KB	3 15/16	3 3/8	4 5/16	3		2 7/16	10-32 x 1/2	7

© United Technical Publications

FREED TRANSFORMER CO., INC.

HERMETICALLY SEALED PULSE TRANSFORMERS

Hermetically sealed Pulse Transformers for use in blocking oscillator, low level interstage coupling, and modulator output circuits. These components meet MIL-T-27 specifications. The pulse transformers are designed for maximum power, efficiency, and optimum pulse performance. Balanced coil structures permit series or parallel connection of windings for turn ratios other than unity. Pulse characteristics, voltages and impedance levels will depend upon the interconnections made.

CASE DIMENSIONS



DM-8 CASE
Height: 1½"
Width: 1 3/32"
Flange D.: 1¼"



DM-01 CASE
Height: 2"
Width: 1½"
Depth: 1½"
Mtg. Cen.: 1⅛"x1 1/16"
Studs: 4 6-32
Knockout: 1¼ dia.



DM-20 CASE
Height: 1⅝
Diameter: 11/16"
Flange L: 1 3/32"
Flange D: 0.975"
Mtg. Cen.: 1⅛"x1 3/32"
2 Holes: .147 wide
Knockout: .875



DM-18 CASE
Height: 1"
Width: 2¼"
Depth: 1⅛"
Mtg. Cen.: 9/16"
Studs: 2 6-32

MM-1
Length: ¾"
Diameter: ½"

MM-2
Length: 23/32"
Width: 23/32"
Height: ½"

MM-3
Length: 1¼"
Width: 1¼"
Height: ½"
Mtg. Cen.: 1½"
Mtg. Flange: 1 1/16"

MM-4
Length: 1 13/16"
Depth: 1¼"
Height: ½"
Mtg. Cen.: 2⅛"
Mtg. Flange: 2½"

MOLDED DIMENSIONS

MMO-1
Diameter: 11/16"
Thickness: 29/64"

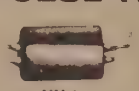
MMO-2
Diameter: 13/16"
Thickness: 19/32"

PULSE TRANSFORMERS

Catalog No.	MIL Type	Blocking Osc.	Inter-Stage Coupling	Low Power Output	Pulse Voltage Kilovolts	Pulse Duration Microseconds	Duty Date	No. of Windings	Test Voltage KV., RMS	Characteristic Impedance Ohms	Case No.
MPT-1	TF4RX35YY	✓	✓		0.25/0.25/0.25	0.2-1.0	.004	3	0.7	250	DM-20
MPT-2	TF4RX35YY	✓	✓		0.25/0.25	0.2-1.0	.004	2	0.7	250	DM-20
MPT-3	TF4RX35YY	✓	✓		0.5/0.5/0.5	0.2-1.5	.002	3	1.0	250	DM-18
MPT-4	TF4RX35YY	✓	✓		0.5/0.5	0.2-1.5	.002	2	1.0	250	DM-18
MPT-5	TF4RX35YY	✓	✓		0.5/0.5/0.5	0.5-2.0	.002	3	1.0	500	DM-20
MPT-6	TF4RX35YY	✓	✓		0.5/0.5	0.5-2.0	.002	2	1.0	500	DM-20
MPT-7	TF4RX35YY	✓	✓	✓	0.7/0.7/0.7	0.5-1.5	.002	3	1.5	200	DM-18
MPT-8	TF4RX35YY	✓	✓	✓	0.7/0.7	0.5-1.5	.002	2	1.5	200	DM-18
MPT-9	TF4RX35YY	✓	✓	✓	1.0/1.0/1.0	0.7-3.5	.002	3	2.0	200	DM-18
MPT-10	TF4RX35YY	✓	✓	✓	1.0/1.0	0.7-3.5	.002	2	2.0	200	DM-18
MPT-11	TF4RX35YY	✓	✓	✓	1.0/1.0/1.0	1.0-5.0	.002	3	2.0	500	DM-01
MPT-12	TF4RX35YY	✓	✓	✓	0.15/0.15/0.3/0.3	0.2-1.0	.004	4	0.7	700	DM-8

MINIATURE PULSE TRANSFORMERS

- Meet all requirements of MIL-T-27
- Negligible weight.
- Exceedingly small size.
- Encapsulated or hermetically sealed.


MM-1


MM-2

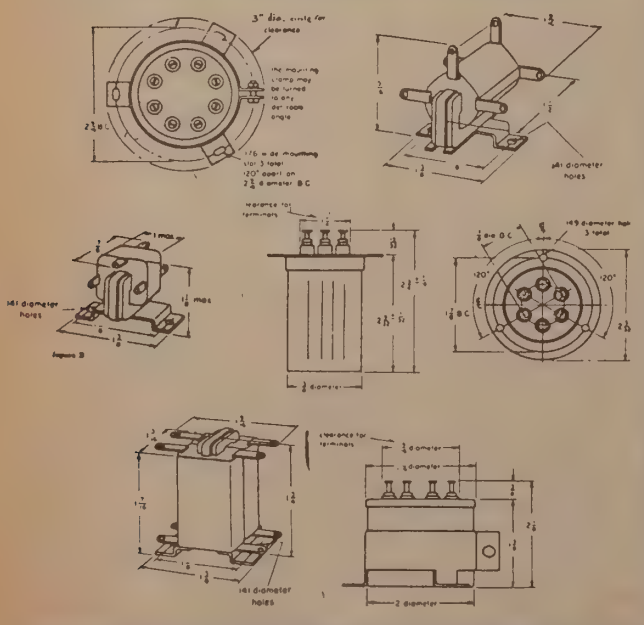

MM-3
MM-4


MMO-1
MMO-2

Catalog No.	MIL Type	Application	Pulse Volts	Pulse Width usec	Rise time usec	Inductance Prin. uhy	Inductance Leakage uhy	PPS. Mcs	Turns Ratio	Zo ohms	Case Des.
EPT-1	TF4RX31YY	Impedance matching & Interstage coupling	20	.07	.03	125	12	2	1:1	200	MM-1
EPT-2	TF4RX31YY		20	.07	.03	150	15	2	2:1	200	MM-1
EPT-3	TF4RX31YY		20	.07	.03	160	15	2	3:1	100	MM-1
EPT-4	TF4RX31YY		20	.07	.03	200	20	2	4:1	100	MM-1
EPT-5	TF4RX31YY		17	.10	.04	200	6	2	4:1	100	MM-1
EPT-6	TF4RX31YY		15	.10	.04	200	5	2	5:1	100	MM-1
EPT-7	TF4RX31YY		25	.50	.05	1,200	20	1	7:1:1		MM-1
EPT-8	TF4RX31YY		10	10	.04	12,000	70	.01	5:1		MM-2
EPT-9	TF4RX31YY		10	5	.04	7,500	22	.01	3:1	100	MM-2
EPT-11	TF4RX35YY	Blocking oscillator	100	.25	.02	200	2	.012	1:1		MM-1
EPT-12	TF4RX35YY		50	.33	.07	240	2	.002	1:1		MM-1
EPT-13	TF4RX35YY		40	.5	.07	6,000	15		2:1		MM-2
EPT-14	TF4RX35YY		15	6	.1	16,000	15	.0004	1:1.4		MM-2
EPT-15	TF4RX36YY	Memory core &	5	1.5	.25	4,000	300		5:5:1PP	10	MM-4
EPT-16	TF4RX36YY	* Current driver	2.5	2.4	.2	2,800	200		3.3:3.3:1PP	6	MM-4
EPT-17	TF4RX32YY	Current driver	21	1.4	.22	18,000	800	.250	6:1	200	MM-3
EPT-18	TF4RX32YY	Current transformer	10	6	.2	90,000	200	.05	11:1	75	MM-3
EPT-19	TF4RX36YY	Pulse inversion	22	1.7	.25	55,000	300	.05	6:1.1	400	MM-3

When ordering encapsulated units add "M" to the catalog number.

PULSE TRANSFORMERS



Freed No.	Radiation Laboratory No.	Westinghouse No.	Dimension Figure	GUIDANCE VALUES Pulse Voltage (KV)	Pulse Duration (Microseconds)	Maximum Duty Ratio	Load Impedance (Ohms)	Test Voltage (60 Cycle RMS)
BLOCKING OSCILLATOR, REGENERATIVE DRIVER OR COUPLING TRANSFORMERS								
MPT-13C MPT-13M MPT-13H	132AW2 132AW2F 132AW2P	1P1 7P1 4P101	1 1 4	1.0/1.0/1.0	0.3 to 1.5	0.002	250	1000
MPT-14C MPT-14M MPT-14H	132BW2 132BW2F 132BW2P	1P2 7P2 4P102	1 1 5	0.5/0.5/0.5/0.15	0.3 to 1.5	0.002	200	1000
MPT-15C MPT-15M MPT-15H	132DW2 132DW2F 132DW2P	1P3 7P3 4P103	1 1 4	0.5/0.5/0.5	0.1 to 0.5	0.002	300	1000
MPT-16C MPT-16M MPT-16H	134BW2 134BW2F 134BW2P	1P4 7P4 4P104	3 3 5	2.5/2.5: 2.5/1.25 1.5/1.5. 1.5.0.75	1 to 2.5 1 to 5	0.002 0.002	1500 1500	1500
MPT-17C MPT-17M MPT-17H	134CW2 134CW2F 134CW2P	1P5 7P5 4P105	1 1 4	2.0 2.0.1.0 1.5/1.5 0.75	1 to 2.5 1 to 5	0.002 0.002	1200 1200	1000
MPT-18C MPT-18M	134EW2 134EW2F	1P6 7P6	2 2	2.0 2.0 1.0 1.5 1.4/0.75	0.3 to 1 0.3 to 1.5	0.002 0.002	800 800	750
MPT-19C MPT-19M MPT 19H	145CW2 145CW2F 145CW2P	1P7 7P7 4P107	1 1 4	0.5/0.5/0.5	1.0 to 5	0.002	500	1000
MPT-20C MPT-20M MPT-20H	145EW2 145EW2F 145EW2P	1P8 7P8 4P108	1 1 4	1.0/1.0/1.0	1.0 to 5	0.002	800	1000
MPT-21C MPT-21M MPT-21H	166AW2 166AW2F 166AW2P	1P9 7P9 4P109	1 1 4	1.0/0.67/0.67	1.0 to 5	0.002	800	1000
MPT-22C MPT-22M MPT-22H	176AW2 176AW2F 176AW2P	1P10 7P10 4P110	1 1 4	2.0/1.0/1.0 1.5.0.75/0.75	1 to 2.5	0.002 0.002	1000 1000	1000
MPT-23C MPT-23M MPT-23H	187AW2 187AW2F 187AW2P	1P11 7P11 4P111	1 1 4	1.0/0.5/0.5	0.5 to 2	0.002	400	1000
MPT-24C MPT-24M	224AW2 224AW2F	1P12 7P12	2 2	1.0/1.0/1.0/0.3	0.1 to 0.5	0.002	1000	750
PULSE TRIGGERING OR CURRENT TRANSFORMERS								
MPT-25C MPT-25M MPT 25H	139DW2 139DW2F 139DW2P	1P13 7P13 4P113	1 1 4		0.25 to 5	0.002		1000
PULSE OUTPUT TRANSFORMERS								
MPT-26C MPT-26M MPT-26H	148CW2 148CW2F 148CW2P	1P14 7P14 4P114	3 3 5	0 2.2 0 0 4 2 0 0 4-2 0	0.6 to 3 0.25 to 1.25 0.5 to 2.5	0.002 0.002 0.002	1600 1000 2000	1500
MPT-27C MPT-27M MPT-27H	148DW2 148DW2F 148DW2P	1P15 7P15 4P115	3 3 5	0.29 2 0 0 57-2 0 0 57/2.0	0.5 to 2.5 0 2 to 1 0 0 4 to 2.0	0.002 0.002 0.002	1200 800 1500	1500

C Indicates—varnish impregnated commercial construction.
M Indicates—encapsulated or molded construction to MIL-T-27, Grade 5 Class R.
H Indicates—hermetically sealed to MIL-T-27, Grade 4 Class R.

© United Technical Publications

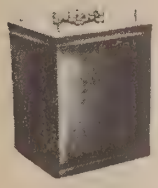
FREED TRANSFORMER CO., INC.

TRANSISTORIZED CONVERTERS—TDC LINE

For DC/DC conversion from low voltage DC sources to high voltage DC output. Stock units are available in power capabilities to 45 watts, with input voltages of 6, 12, 24, 28, and 48 volts.

All TDC converters are hermetically sealed and oil filled. Outputs are filtered with ripple less than .1%. Operating temperatures from −55°C to +70°C. They are ruggedly built to withstand shock and vibration.





CAT. #	NOM. VDC INPUT	VDC OUT	MAX 1 OUT MA	CASE SIZE
TDC 6-15-05	6	150	50	
TDC 12-30-15	12	300	150	2⅝ x 2½ x 3½
TDC 12-25-12	12	250	120	2⅝ x 2¼ x 3½
TDC 12-30-05	12	300	50	2 x 2¼ x 3½
TDC 12-20-05	12	200	50	2 x 2¼ x 3⅛
TDC 12-12-12	12	120	120	2 x 2¼ x 3
TDC 12-2.4-100	12	24	1000	2¼ x 2⅝ x 3½
TDC 28-30-15	28	300	150	2⅝ x 2¼ x 3½
TDC 28-25-12	28	250	120	2⅝ x 2¼ x 3½
TDC 28-30-05	28	300	50	2 x 2¼ x 3⅛
TDC 28-30-05	28	200	50	2 x 2¼ x 3⅛
TDC 48-20-15	48	200	150	2⅝ x 2¼ x 3½
TDC 48-30-15	48	300	150	2⅝ x 2¼ x 3½

DC TO AC TRANSISTOR INVERTERS—TAC LINE



115 volt outputs at 60 Hz at powers ranging from 50 VA to 350 VA.

Output wave form-square wave; Output frequency – 60 Hz ±1 Hz;

Hermetically sealed-oil filled; Maximum operating temperature – 70°C.

AVAILABLE TYPES:

CAT. #	NOM. VDC IN	OUTPUT VA	SIZE
TAC 6-50	6	50	4⅛ x 3½ x 4½
TAC 12-50	12	50	4⅛ x 3½ x 4½
TAC 12-90	12	90	4⅛ x 3½ x 4⅞
TAC 12-175	12	175	5 x 4⅛ x 6
TAC 28-50	28	50	4⅛ x 3½ x 4½
TAC 28-100	28	100	4⅛ x 3½ x 4⅞
TAC 28-175	28	175	5 x 4⅛ x 6
TAC 28-250	28	250	5½ x 5 x 6¾
TAC 28-350	28	350	5½ x 5 x 6¾
TAC converters are also available with 400 Hz outputs in three models:			
TAC 12-100-4	12	100	4½ x 3½ x 4½
TAC 28-150-4	28	150	4⅛ x 3½ x 4½
TAC 28-250-4	28	250	5 x 4⅛ x 6

DC TO AC TRANSISTOR INVERTERS—PTC LINE

A new line of DC/AC inverters for operation from a 12 volt D.C. source. Output is square wave, 115 volts RMS at 60 Hz. Regulated to ±2 Hz over an input voltage range of 10.5 to 13.5 VDC.

Efficiency on all units is 80% min. at full load. Ambient temperature to 55°C.

Available models listed below:

CAT. #	VA OUT	SIZE	MTG.
PTC 12-15	15	3 x 2½ x 4	1⁹⁄₁₆ x 1¹³⁄₁₆
PTC 12-50	50	3½ x 3 x 4¹³⁄₁₆	2 x 2¾
PTC 12-100	100	5⅞ x 4 x 5¼ HI	3¼ x 3⅛
PTC 12-175	175	7⅝ x 4¹³⁄₁₆ x 5¼ HI	6 x 3½

PTC 12-15 and PTC 12-50 are supplied with 4-terminal headers for input and output connections.

PTC 12-100 and PTC 12-175 use barrier strip terminals and in addition have an auxiliary output receptacle.

DC TO AC TRANSISTOR INVERTERS — VC LINE

A low priced efficient transistor inverter for applications not requiring frequency regulation closer than ±5 Hz is available in 15 VA and 100 VA output capabilities. Input nominal 12 V.D.C. Output square wave 115 volt.

Cat. #	Power	Freq.	Size
VC 12-15	15 watt	55-65 Hz	3 x 3⅛ x 3¾ Hi.
VC 12-100	100 watt	55-65 Hz	4½ x 3½ x 4½ Hi.

MCV – CONSTANT VOLTAGE TRANSFORMERS – MCV

The MCV line of constant voltage transformers provides accurate regulation against line and/or load variations, without the use of tubes or moving parts.

Input Voltage Range 95 to 130

Rated output within ± 2% of nominal value. Regulation automatically maintained within ± 1% Regulation from 25% to full load ± 2%

- MILITARY SPECIFICATIONS
- NO TUBES
- COMMERCIAL
- NO MOVING PARTS
- ACCURATE REGULATIONS
- FAST RESPONSE
- FULLY AUTOMATIC
- SUPPLIED WITH CONDENSERS

Reg. Output in R.M.S. Volts	Output in V.A. P.F-1	CATALOG NUMBERS 60 Cycles Comm.	60 Cycles Military*	400 Cycles Comm.*	400 Cycles Military*
115	5	MCV65LC	MCV65LM	MCV45LC	MCV45LM
115	25	MCV625LC	MCV625LM	MCV425LC	MCV425LM
115	75	MCV675LC	MCV675LM	MCV475LC	MCV475LM
115	125	MCV6125LC	MCV6125LM	MCV4125LC	MCV4125LM
115	175	MCV6175LC	MCV6175LM	MCV4175LC	MCV4175LM
115	250	MCV6250LC	MCV6250LM	MCV4250LC	MCV4250LM
115	375	MCV6375LC	MCV6375LM	MCV4375LC	MCV4375LM
115	500	MCV6500LC	MCV6500LM	MCV4500LC	MCV4500LM
115	750	MCV6750LC	MCV6750LM	MCV4750LC	MCV4750LM
115	1000	MCV61000LC	MCV61000LM	MCV41000LC	MCV41000LM
26	5	MCV654FC	MCV654FM	MCV454FC	MCV454FM
26	25	MCV6254FC	MCV6254FM	MCV4254FC	MCV4254FM
26	75	MCV6754FC	MCV6754FM	MCV4754FC	MCV4754FM
26	125	MCV61254FC	MCV61254FM	MCV41254FC	MCV41254FM
6.4	5	MCV65FC	MCV65FM	MCV45FC	MCV45FM
6.4	25	MCV625FC	MCV625FM	MCV425FC	MCV425FM
6.4	75	MCV675FC	MCV675FM	MCV475FC	MCV475FM
6.4	125	MCV6125FC	MCV6125FM	MCV4125FC	MCV4125FM

*Condensers are not provided with units. Where condensers are provided they are external to units.

AVAILABLE UPON REQUEST

MAGNETIC AMPLIFIERS AND SATURABLE TRANSFORMERS

© United Technical Publications

FREED TRANSFORMER CO., INC.

HERMETICALLY SEALED MINIATURE AND SUB-MINIATURE FILTERS TO MIL-F-18327

Freed Standard Filters are **Hermetically Sealed Miniature and Sub-Miniature** high performance components designed for both production and laboratory applications in the Communications and Electronic industry. In order to achieve attenuation requirements not obtainable with one single filter, one can combine several standard filters of different transmission characteristics. Wide Band Pass characteristics are obtainable by combining low and high Pass Units. The astatic construction of inductive components together with special shielding reduces the hum pick-up of the standard filters.

Low Pass Filters: The attenuation characteristics of Low Pass Filters are 6db or less at cut-off frequency • **ILP-ILM Interstage Low Pass Filter.** Characteristic impedance 10,000 ohms, in and out • **LLP-LLM Line Low Pass Filter.** Characteristic Impedance 500 to 600 ohms, in and out • **High Pass Filters:** The attenuation characteristics of High Pass Filters are 6db or less at cut-off frequency • **IHP-IHM Interstage High Pass Filter.** Characteristic Impedance 10,000 ohms, in and out. • **LHP-LHM Line High Pass Filter.** Characteristic Impedance 500 to 600 ohms, in and out • **Band Pass Filters:** The attenuation characteristics of Band Pass Filters are 2db or less at plus or minus 3% of center frequency • **IBP-IBM Interstage Band Pass Filter.** Normal input impedance — 10,000 ohms. Output impedance .5 megohms. Effective voltage step-up 2:1. (Output voltage to source voltage.) • **LBP-LBM Line Band Pass Filter.** Nominal input impedance 500 to 600 ohms. Output impedance .5 megohms. Effective voltage step-up 5:1. (Output voltage to source voltage.)

Special filters in all six types are available upon request.

MINIATURE

Catalog No.	Cut-off Frequency Hz
ILP- 100	100
ILP- 200	200
ILP- 300	300
ILP- 500	500
ILP- 750	750
ILP- 1,000	1,000
ILP- 1,500	1,500
ILP- 2,000	2,000
ILP- 2,500	2,500
ILP- 3,000	3,000
ILP- 5,000	5,000
ILP- 7,000	7,000
ILP- 10,000	10,000
ILP- 15,000	15,000
ILP- 20,000	20,000
ILP- 23,000	23,000
ILP- 25,000	25,000
ILP- 32,000	32,000
ILP-130,000	130,000
ILP-150,000	150,000
LLP- 500	500
LLP- 1,000	1,000
LLP- 1,500	1,500
LLP- 1,600	1,600
LLP- 2,000	2,000
LLP- 2,500	2,500
LLP- 3,000	3,000
LLP-16,000	16,000
LLP-20,000	20,000
LLP-70,000	70,000
LLP-80,000	80,000

Low Pass Filters attenuation ≧35 Db at 1.5 x Fc ≧40 Db at 2 x Fc

IHP- 200	200
IHP- 250	250
IHP- 300	300
IHP- 400	400
IHP- 500	500
IHP- 1,000	1,000
IHP- 2,000	2,000
IHP- 3,000	3,000
IHP-10,000	10,000
IHP-15,000	15,000
LHP- 200	200
LHP- 300	300
LHP- 400	400
LHP- 500	500
LHP- 800	800
LHP- 1,000	1,000
LHP- 2,000	2,000
LHP- 6,000	6,000
LHP-10,000	10,000

High Pass Filters attenuation ≧35 Db at .67 x Fc ≧40 Db at .5 Fc

IBP- 100	100
IBP- 200	200
IBP- 250	250
IBP- 400	400
IBP- 500	500
IBP- 700	700
IBP- 800	800
IBP- 900	900
IBP- 1,000	1,000
IBP- 1,500	1,500
IBP- 2,000	2,000
IBP- 3,000	3,000
IBP- 5,000	5,000
IBP- 7,200	7,200
IBP-10,000	10,000
IBP-12,000	12,000
IBP-15,000	15,000
IBP-30,000	30,000
IBP-57,600	57,600
LBP- 100	100
LBP- 300	300
LBP- 400	400
LBP- 600	600
LBP- 800	800
LBP- 1,000	1,000
LBP- 1,500	1,500
LBP- 2,000	2,000
LBP- 3,000	3,000
LBP- 7,200	7,200
LBP-10,000	10,000
LBP-14,400	14,400
LBP-20,000	20,000
LBP-28,800	28,800

Band Pass Filters attenuation ≧40 Db at 0.5 x Fc and 2 x Fc

SUB-MINIATURE

Catalog No.	Cut off Freq. Hz	Case No.
ILM- 300	300	DF-01
ILM- 500	500	DF-01
ILM- 750	750	DF-01
ILM- 1,000	1,000	DF-01
ILM- 1,500	1,500	DF-01
ILM- 2,000	2,000	DF-01
ILM- 2,500	2,500	DF-01
ILM- 3,000	3,000	DF-01
ILM- 5,000	5,000	DF-01
ILM- 7,000	7,000	DF-01
ILM- 10,000	10,000	DF-01
ILM- 15,000	15,000	DF-01
ILM- 20,000	20,000	DF-01
ILM- 23,000	23,000	DF-01
ILM- 25,000	25,000	DF-01
ILM- 32,000	32,000	DF-01
ILM-130,000	130,000	DF-01
ILM-150,000	150,000	DF-01
LLM- 500	500	DF-03
LLM- 1,000	1,000	DF-03
LLM- 1,500	1,500	DF-02
LLM- 1,600	1,600	DF-02
LLM- 2,000	2,000	DF-02
LLM- 2,500	2,500	DF-02
LLM- 3,000	3,000	DF-02
LLM-16,000	16,000	DF-02
LLM-20,000	20,000	DF-02
LLM-70,000	70,000	DF-02
LLM-80,000	80,000	DF-02

Low Pass Filters attenuation ≧30 Db at 1.5 x Fc ≧40 Db at 2 x Fc

IHM- 300	300	DF-01
IHM- 400	400	DF-01
IHM- 500	500	DF-01
IHM- 1,000	1,000	DF-01
IHM- 2,000	2,000	DF-01
IHM- 3,000	3,000	DF-01
IHM-10,000	10,000	DF-01
IHM-15,000	15,000	DF-01
LHM- 300	300	DF-03
LHM- 400	400	DF-03
LHM- 500	500	DF-03
LHM- 800	800	DF-03
LHM- 1,000	1,000	DF-02
LHM- 2,000	2,000	DF-02
LHM- 6,000	6,000	DF-02
LHM-10,000	10,000	DF-02

High Pass Filters attenuation ≧30 Db at .67 x Fc ≧40 Db at .5 Fc

IBM- 400	400	DF-02
IBM- 500	500	DF-02
IBM- 700	700	DF-02
IBM- 800	800	DF-02
IBM- 900	900	DF-02
IBM- 1,000	1,000	DF-02
IBM- 1,500	1,500	DF-02
IBM- 2,000	2,000	DF-01
IBM- 3,000	3,000	DF-01
IBM- 5,000	5,000	DF-01
IBM- 7,200	7,200	DF-01
IBM-10,000	10,000	DF-01
IBM-12,000	12,000	DF-01
IBM-15,000	15,000	DF-01
IBM-30,000	30,000	DF-01
IBM-57,600	57,600	DF-01
LBM- 300	300	DF-02
LBM- 400	400	DF-02
LBM- 600	600	DF-02
LBM- 800	800	DF-02
LBM- 1,000	1,000	DF-01
LBM- 1,500	1,500	DF-01
LBM- 2,000	2,000	DF-01
LBM- 3,000	3,000	DF-01
LBM- 7,200	7,200	DF-01
LBM-10,000	10,000	DF-01
LBM-14,400	14,400	DF-01
LBM-20,000	20,000	DF-01
LBM-28,800	28,800	DF-01

Band Pass Filters attenuation ≧35 Db at 0.5 x Fc and 2 x Fc

ALL MINIATURE FILTERS ARE SUPPLIED IN DF-1 CASE



DF-1 CASE
Height: 2½"
Width: 1 11/16"
Depth: 1¾"
Mtg. Cen.: 1¼"x¾"
Studs: 4 6-32x⅜"
Knockout: ⅞" dia.



DF CASE STYLE DF-01
Height: 1⅜"
Width: ¾"
Depth.: ¾"
Mtg. Cen.: 9/16" Diag.
Studs: 2 ÷ 4-40

DF-02
Height: 1⅜"
Width: 1"
Depth.: 1"
Mtg. Cen.: ¾" Diag.
Studs: 2 ÷ 4-40

DF-03
Height: 1¾"
Width: 1"
Depth.: 1"
Mtg. Cen.: ¾"
Studs: 2 ÷ 4-40

SUBMINIATURE TELEMETERING BAND PASS FILTERS

Type No.	Center Frequency Fo - in Hz	Band Width <3DB	Stop Band Attenuation
MTN-.4	.4	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-.56	.56	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-.73	.73	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-.96	.96	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-1.3	1.3	±7½%	≧38 DB @ 1.75 & .58 Fo
MTN-1.7	1.7	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-2.3	2.3	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-3.0	3.0	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTH-3.9	3.9	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-5.4	5.4	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-7.35	7.35	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTH-10.5	10.5	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-14.5	14.5	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-22	22	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-30	30	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-40	40	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-52.5	52.5	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-70	70	±7½%	≧ 38 DB @ 1.75 & .58 Fo
MTN-22	22	±15%	≧ 40 DB @ 2.5 & .4 Fo
MTW-30	30	±15%	≧ 40 DB @ 2.5 & .4 Fo
MTW-40	40	±15%	≧ 40 DB @ 2.5 & .4 Fo
MTW-52.5	52.5	±15%	≧ 40 DB @ 2.5 & .4 Fo
MTW-70	70	±15%	≧ 40 DB @ 2.5 & .4 Fo

DF-01 CASE SIZES DF-02
¾ x ¾ x 1⅜ 1 x 1 x 1⅜
MTN-2.3 Thru MTW-70 MTN-4 Thru MTN 1.7

NULL "T" FILTERS SERIES 1950

Standard models are available for 30, 60 and 120 cycles in a wide range of impedances. Each network will give a minimum of 50 db attenuation at the null frequency.

The null frequency is adjusted to a tolerance of ±2%.

All Null T Filters are hermetically sealed. Prices on request.

Catalog No.	Frequency
NTF- 30	30 Hz
NTF- 60	60 Hz
NTF-120	120 Hz

FREED TRANSFORMER COMPANY, INC.

© United Technical Publications

FREED TRANSFORMER CO., INC.

TOROIDAL INDUCTORS

Using the latest developments in the field of magnetic materials and new impregnation and molding techniques the Freed Transformer Co. makes available to the industry the most extensive line of toroidal inductors.

Freed toroids are available in three types of constructions. Open units coated with a special high temperature extremely low loss compound, hermetically sealed in metal cases or molded in special **Freed Epoxy Resin.** Both hermetically sealed and molded units meet the latest military specification MIL-T-27A(graded 1 or 4 and 2 or 5 respectively.)Freed toroidal inductors are supplied with either molypermalloy or carbonyl iron powder cores

1. Temperature Stabilization:

The molypermalloy and carbonyl iron powder cores have a temperature coefficient of inductance. Depending on the degree of temperature stabilization the cores have different temperature coefficients. The degree of stabilization is denoted by a two-letter code.

- SF Non-stabilized cores, ±2½% inductance variations from —55°C to +85°C.
- SN Non-stabilized cores, +2% inductance variations from —55°C to +85°C.
- SE Temperature stabilized cores, +0.1% to —0.4% inductance variations from —1.5°C to +54°C.
- SB Temperature stabilized cores, ±0.1% inductance variations from +13°C to +35°C.
- SD Temperature stabilized cores, ±0.1% inductance variations from —1.5°C to +54°C.
- SW Temperature stabilized cores, ±0.25% inductance variations from —54°C to +85°C.
- SM Temperature stabilized cores, ±.25% —65°C to +125°C.
- SP Temperature stable carbonyl iron cores, ±0.3% inductance variations from —55°C to +85°C.

The temperature (stabilization) coefficient of an inductor will depend upon the nominal inductance value, operating frequency and A.C. voltage across the coil. Under some unfavorable working conditions the temperature coefficient of inductance corresponding to a given stability characteristic may be exceeded.

Toroids with special requirements such as tapped toroids, toroidal transformers, molded and cased units with dimensions other than standard sizes and high temperature toroids can be supplied on request. Our engineering and laboratory facilities are available for consultation, research and development.

TOROIDAL INDUCTORS

Type	Ω/H	Max. Norm. Idc	Max. Norm. Iac	Max. Norm. Vac	Uncased	Mold	Case	Frequency
TI- 1	70	55	73.5	0.46	OS-8	MR-6	Dt 3, DT-5	1–15 KHz
TI- 1A	68	75	90.5	0.57	OS-9	MR-7	DT-4	1–15 KHz
TI- 2	160	90	135	0.85	OS-6	MR-5	DT-3, DT-5	10–50 KHz
TI- 3	600	100	67	0.42	OS-6	MR-5	DT-3, DT-5	50–200 KHz
TI- 3A	310	150	240	1.5	OS-10	MR-8	DT-4	50–200 KHz
TI- 4	110	55	67	0.42	OS-5	MR-4	DT-2, DM-11	1–15 KHz
TI- 5	260	28	35	0.22	OS-3	MR-3	DT-1, DM-2	1–15 KHz
TI- 6	230	75	125	0.80	OS-10	MR-8	DT-4	10–50 KHz
TI- 7	480	40	53	0.33	OS-3	MR-3	DT-1, DM-2	10–50 KHz
TI- 8	1,500	50	80	0.5	OS-3	MR-3	DT-1, DM-2	30–75 KHz
TI- 9	150	200	240	1.5	OS-10	MR-3	DT-4	30–75 KHz
TI-10	430	125	270	1.7	OS-7	MR-5	DT-3, DT-5	30–75 KHz
TI-11	30	120	190	1.2	OS-11	MR-10	DT-4	1–15 KHz
TI-12	45	100	160	1	OS-9	MR-8	DT-4	1–15 KHz
TI-13	55	140	175	1.1	OS-9	MR-8	DT-4	10–50 KHz
TI-14	580	150	—	—	OS-5	MR-4	DT-2, DM-11	10–100 KHz
TI-15	900	100	—	—	OS-3	MR-3	DT-1, DM 2	10–100 KHz
TI-16	600	16	21	0.13	OS-1	MR-1, MS-1	DST-1	1–15 KHz
TI-17	1,200	20	29	0.18	OS-1	MR-1, MS-1	DST-1	10–50 KHz
TI-18	2,600	30	40	0.25	OS-1	MR-1, MS-1	DST-1	30–75 KHz

Type	Ω/H	Max. Norm. Idc	Max. Norm. Iac	Max. Norm. Vac	Uncased	Mold	Case	Frequency
TI-19	4,500	25	29	0.18	OS-1	MR-1, MS-1	DST-1	50–200 KHz
TI-20	2,750	100	*	*	OS-4	MR-3A	DT-2	20KHz–2MHz
TI-21	1,200	350	*	*	OS-1	MR-1, MS-1	DT-1	100KHz–10MHz
TI-22	5,600	210	*	*	OS-2	MR-2	DT-1	50KHz–5MHz
TI-23	7,000	250	*	*	OS-2	MR-2	DT-1	50KHz–5MHz
TI-24	330	15	18	0.11	OS-1	MR-1, MS-1	DST-1	200Hz–12KHz
TI-25	200	20	24	0.15	OS-12	MR-2	DT-1	200Hz–12KHz
TI-26	150	25	32	0 20	OS-3	MR-3	DT-1, DM-3	200Hz–12KHz
TI-27	76.5	50	62	0.39	OS-5	MR-4	DT-2, DM-11	200Hz–12KHz
TI-28	48.5	50	64	0.40	OS-8	MR-6	DT-3, DT-5	200Hz–12KHz
TI-29	33.5	70	88	0.55	OS-9	MR-7	DT-4	200Hz–12KHz
TI-30	28	100	135	0.84	OS-9	MR-8	DT-4	200Hz–12KHz
TI-31	19.5	100	136	0.85	OS-11	MR-10	DT-4	200Hz–12KHz
TI-32	48.5	6	14.5	0.09	OS-3	MR-3	DT-1, DM-2	100Hz–10KHz
TI-33	2,150	8	13	0.08	OS-13	MR-11	DT-6	1–15 KHz
TI-34	1,700	8	9.5	0.06	OS-14	MR-11	DT-6	1–15 KHz
TI-35	4,100	10	18	0.11	OS-13	MR-11	DT-6	10–50 KHz
TI-36	3,950	10	11	0.07	OS-14	MR-11	DT-6	10–50 KHz
TI-37	23.5	10	32	0.20	OS-5	MR-14	DT-2, DM-11	100Hz–10KHz
TI-38	100	4	9.5	0.06	OS-1	MR-1, MS-1	DST-1	100Hz–10KHz

*TI-20 through TI-23 have a very low voltage coefficient and inductance will change very little with voltage. Because of high frequency application, the maximum voltage is limited rather by breakdown than by saturation.

Normalized $V_{AC} = \frac{V}{F} \frac{1}{\sqrt{L_H}}$

Normalized $I_{AC} = I_{AC} \sqrt{L_H}$

Normalized $I_{DC} = I_{DC} \sqrt{L_H}$

where F —operating frequency in Hz
L_H —inductance in henries
Iac—A.C. current in MA
Idc—D.C. current in MA
V —A.C. voltage across the core

CASED, UNCASED AND MOLDED UNITS



UNCASED		
Type	O.D.	Hi.
OS-1	5/8"	5/16"
OS-2	7/8"	3/8"
OS-3	1"	3/8"
OS-4	1"	9/16"
OS-5	1 3/16"	5/8"
OS-6	1 5/8"	7/8"
OS-7	1 11/16"	5/8"
OS-8	1 7/8"	11/16"
OS-9	2 1/4"	1 1/8"
OS-10	2 3/8"	1 1/4"
OS-11	2 5/8"	1 1/8"
OS-12	13/16"	3/8"
OS-13	3/8"	1/8"
OS-14	7/16"	7/32"

MOLDED			
Type	O.D.	Hi.	Clearance Hole Mounting
MR-1	7/8"	13/32"	Pig Tails
MR-2	1 1/16"	1/2"	No. 4
MR-3	1 3/16"	1/2"	No. 6
MR-3A	1 3/16"	11/16"	No. 6
MR-4	1 1/2"	3/4"	No. 8
MR-5	1 7/8"	1"	No. 8
MR-6	2 1/8"	7/8"	No. 8
MR-7	2 3/8"	1 5/16"	No. 10
MR-8	2 1/2"	1 3/8"	No. 10
MR-9	2 5/8"	1 7/16"	No. 10
MR-10	2 7/8"	1 3/8"	No. 10
MR-11	7/16"	1/4"	Pig Tails
MS-1	25/32" x 25/32"	13/32"	Pig Tails

CASED							
Type	Hi.	Dia.	Length	Width	Mtg.	Mtg. Cen.	Cutout
DT-1	1 27/32"		1 1/16"	1/2"	2 4-40 inserts	3/4"	3/16" x 1/2"
DT-2	1 3/4"		1 7/16"	13/16"	2 6-32 studs	7/8" x 9/32"	3/8" x 1 1/16"
DT-3	2"		1 25/32"	7/8"	2 6-32 studs	1 1/4" x 3/8"	3/8" x 3/4"
DT-4	3 1/8"		2 3/4"	1 5/16"	4 8-32 studs	2 1/16" x 1 1/16"	3/4" x 3/8"
DT-5	1 3/16"	1 13/16"	—	—	2 6-32 inserts	1 1/8"	1/8" x 1"
DT-6	5/8"	1/2"	—	—	Pig Tails		
DM-2	1"	1 1/8"	—	—	2 4-40 inserts	5/8"	3/4" x 7/8"
DM-11	1 1/2"	1 3/8"	—	—	2 6-32 inserts	5/8"	3/4" x 7/8"
DST-1	25/32"		3/4"	11/32"	1/4" long pins	To fit 1/2" crystal socket	

© United Technical Publications

FREED TRANSFORMER CO., INC.

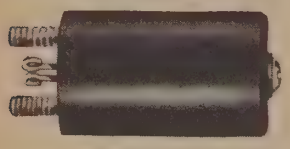
HIGH "Q" REACTORS

MINIATURE VARIABLE HIGH FREQUENCY INDUCTORS

- Continuous variation of inductance
- Q practically constant over whole range of variation
- Hermetically sealed
- Inductances other than those listed can be supplied to special order

Catalog No.	Test Freq. (MC)	Inductance Min.	Inductance Max.	Variations of Q @ L Min.	Variations of Q @ L Max.	RDC (Ω) Nominal	Self Res. Freq. MHZ @ L Max.	Max. Non Gestruct Current (MA)	Case Size
VHI-1	.1	1.1 MH	1.75 MH	93.5	100.5	.75	2.2	250	VI-1
VHI-2	.1	1.7 MH	2.5 MH	94.5	96.5	1.1	1.9	200	VI-1
VHI-3	.1	2.3 MH	3.7 MH	94.5	97.2	1.4	1.6	200	VI-1
VHI-4	.1	3. MH	4.5 MH	100.7	101.7	1.9	1.4	160	VI-1
VHI-5	.1	4. MH	5.7 MH	107.	108.	2.2	1.3	160	VI-1
VHI-6	.1	5.5 MH	7.5 MH	112.	119.	3.1	1.	130	VI-1
VHI-7	.1	7. MH	10.5 MH	116.	120.5	4.5	.9	100	VI-1
VHI-8	.1	10. MH	15. MH	106.	109.	6.6	.85	80	VI-1
VHI-9	.1	14.5 MH	20.5 MH	101.	101.5	9.2	.6	60	VI-1
VHI-10	.1	20. MH	30. MH	105.	115.	13.7	.55	50	VI-1
VHI-11	1.	9.50 μH	11.0 μH	104.	114.	.24	>10	150	VI-1
VHI-12	1.	14.0 μH	15.6 μH	113.	127.	.29	>10	150	VI-1
VHI-13	1.	24.5 μH	28.0 μH	145.	156.	.37	>10	150	VI-1
VHI-14	1.	47.0 μH	52.0 μH	178.	195.	.46	>10	150	VI-1
VHI-15	.5	71.0 μH	79.5 μH	152.	168.	.56	>10	150	VI-1
VHI-16	.5	94.0 μH	105.0 μH	165.	173.	.64	>10	150	VI-1
VHI-17	.5	145.0 μH	165.0 μH	200.	222.	.75	9.7	150	VI-1
VHI-18	.5	191.0 μH	218.0 μH	204.	229.	.9	9.4	150	VI-1
VHI-19	.5	234.0 μH	265.0 μH	216.	238.	1.0	8.3	150	VI-1
VHI-20	.5	279.0 μH	318.0 μH	219.	236.	1.1	7.	150	VI-1
VHI-21	.5	380.0 μH	416.0 μH	216.	230.	1.3	6.5	150	VI-1
VHI-22	.5	480.0 μH	545.0 μH	220.	237.	1.5	7.	150	VI-1

CASE DIMENSIONS



VI-1
Height: 1"
Diameter: ¾"
2 Studs: 4-40
Mtg. Cen.: ⅜"

PQC– HIGH Q REACTORS

PQC-Reactors are low-priced High Q components designed for use in selective circuits such as wave filters, wave traps, and noise suppressors.



CASE DIMENSIONS

DM-02 CASE
Height: 1 21/32"
Width: 1 21/32"
Depth: 1 13/32"
Flange L: 2 3/8"
Mtg. Cen.: 2"

Catalog No.	Application	Rated Ind. in Henries	Q	Tuning Capacitor (MF)	Case Size
PQC 1	60 cps resonant trap	14.00	10	.5	DM-02
PQC 2	400 cps resonant trap	1.58	15	.1	DM-02
PQC 3	1000 cps resonant trap	1.00	20	.025	DM-02
PQC 4	Dynamic noise suppression inductor	2.40	20 @ 4 KC		DM-02
PQC 5	Dynamic noise suppression inductor	2.00	15 @ 4 KC		DM-02
PQC 6	Dynamic noise suppression inductor	1.30	15 @ 4 KC		DM-02
PQC 7	Dynamic noise suppression inductor	.80	15 @ 4 KC		DM-02
PQC 8	Dynamic noise suppression inductor	.60	15 @ 4 KC		DM-02
PQC 9	Dynamic noise suppression inductor	.40	15 @ 4 KC		DM-02

QGC–HIGH "Q" REACTORS

QGC—are hermetically sealed, MIL-T-27, Grade 4, Class R, High Q Reactors for low audio frequency application with an excellent inductance stability with variations of A.C. and D.C. currents, frequencies and temperatures.

SPECIAL REACTORS:
(1) with a center tap
(2) with a split winding
(3) with inductances other than those listed can be supplied.



DC-2A CASE
Height: 3"
Width: 2 5/8"
Depth: 2 1/4"
Mtg. Cen.: 2" x 1 3/4"
Studs: 4 8-32
Knockout: 1 1/4" x 1 3/16"



AJ CASE
Height: 2 3/8"
Width: 1 5/8"
Depth: 1 5/8"
Mtg. Cen: 1 3/16" x 1 3/16"
Studs: 4 6-32



AH CASE
Height: 1 3/4"
Width: 1 5/16"
Depth: 1 5/16"
Mtg. Cen.: 1 1/4"
Studs: 2 6-32



DM-20 CASE
Height: 1 3/4"
Diameter: 1 5/16"
Flange L: 1 13/32"
Flange D: 0.975"
Mtg. Cen.: 1 1/16" x 1 1/2"
2 Slots: .166" x .120"
Knockouts: .875"



DM-30 CASE
Height: 2 9/32"
Diameter: 1 5/16"
Flange L: 1 13/32"
Flange D: 0.975"
Mtg. Cen.: 1 1/16" to 1 1/32"
2 Slots: .166" x .120"
Knockouts: .875"



DM-40 CASE
Height: 2 1/32"
Diameter: 9/16"
Pig Tails:

Catalog No.	Ind. H (±2%)	Ω/H Max.	Max. Norm DC*	Max. Norm AC**	Self Res. Freq. ±25%	Case	"Q" Max.	@ Freq.
QGC-1	100						40	250
QGC-2	75						48	280
QGC-3	50						51	300
QGC-4	25	20	85	0.58	$F_O = 22/\sqrt{L_H}$	DC-2A	53	320
QGC-5	10						58	350
QGC-6	5						59	400
QGC-7	1						60	400
QGC-8	75						32	600
QGC-9	50						37	600
QGC-10	25						39	700
QGC-11	10	55	60	0.5	$F_O = 7.2/\sqrt{L_H}$	AJ	43	700
QGC-12	5						46	700
QGC-13	1						53	800
QGC-14	50						29.5	500
QGC-15	25						31.5	500
QGC-16	10	70	40	0.25	$F_O = 35/\sqrt{L_H}$	AH	32	600
QGC-17	5						33	600
QGC-18	1						36	700
QGC-19	10						23	700
QGC-20	7.5						23	730
QGC-21	5	110	15	0.15	$F_O = 34/\sqrt{L_H}$	DM-20	24	730
QGC-22	2.5						24	750
QGC-23	1						25	750
QGC-24	.5						25	750
QGC-25	5						23	1500
QGC-26	2.5						23	1550
QGC-27	1						24	1600
QGC-28	.75	220	13	0.11	$F_O = 35/\sqrt{L_H}$	DM-30	24	1650
QGC-29	.5						24	1700
QGC-30	.2						25	1750
QGC-31	.1						25	1800
QGC-32	2						15	1500
QGC-33	1.5						15	1500
QGC-34	1						15	1800
QGC-35	.75						15	1800
QGC-36	.5						16	2000
QGC-37	.25	500	10	0.04	$F_O = 45/\sqrt{L_H}$	DM-40	16	2000
QGC-38	.1						16	2000
QGC-39	.075						17	2200
QGC-40	.05						17	2200
QGC-41	.025						17	2500
QGC-42	.01						17	2500

*Max. Norm. D.C. = I D.C. (MA) $\sqrt{L_H}$
**Max. Norm. A.C. = V/F ~ $\sqrt{L_H}$
} at which the inductance will decrease by 20%.

© United Technical Publications

FREED TRANSFORMER CO., INC.



HIGH "Q" INDUCTORS



FREQUENCY RANGE: 1 KHz to 30 KHz

MIL-T-27: TF4(OR 5)RX

TYPE		PFL 1	PFL 2	PFL 3	PFL 4	PFL 5	PFL 6	PFL 7	PFL 8
Size	Dia.	21/32	27/32	1"	1-1/4	1-3/8	1-1/2	1-3/4	2"
	H'ght	15/32	9/16	5/8	1-1/8	1-1/4	1-5/16	1-7/16	1-1/2
Typi-	Ind.	1.5 MH	2.7 MH	3.9 MH	10 MH	22 MH	39 MH	68 MH	180 MH
cal	Freq.	250KHz	200KHz	180KHz	50KHz	35KHz	15KHz	10KHz	5KHz
"Q"	"Q"	300	350	300	400	400	450	380	300
Inductance		Catalog Number							
1.0	MH	F5000	F5050	F5100	F5150	F5200	F5250	F5300	F5400
1.2	MH	F5001	F5051	F5101	F5151	F5201	F5251	F5301	F5401
1.5	MH	F5002	F5052	F5102	F5152	F5202	F5252	F5302	F5402
1.8	MH	F5003	F5053	F5103	F5153	F5203	F5253	F5303	F5403
2.2	MH	F5004	F5054	F5104	F5154	F5204	F5254	F5304	F5404
2.7	MH	F5005	F5055	F5105	F5155	F5205	F5255	F5305	F5405
3.3	MH	F5006	F5056	F5106	F5156	F5206	F5256	F5306	F5406
3.9	MH	F5007	F5057	F5107	F5157	F5207	F5257	F5307	F5407
4.7	MH	F5008	F5058	F5108	F5158	F5208	F5258	F3308	F5408
5.6	MH	F5009	F5059	F5109	F5159	F5209	F5259	F5309	F5409
6.8	MH	F5010	F5060	F5110	F5160	F5210	F5260	F5310	F5410
8.2	MH	F5011	F5061	F5111	F5161	F5211	F5261	F5311	F5411
10	MH	F5012	F5062	F5112	F5162	F5212	F5262	F5312	F5412
12	MH	F5013	F5063	F5113	F5163	F5213	F5263	F5313	F5413
15	MH	F5014	F5064	F5114	F5164	F5214	F5264	F5314	F5414
18	MH	F5015	F5065	F5115	F5165	F5215	F5265	F5315	F5415
22	MH	F5016	F5066	F5116	F5166	F5216	F5266	F5316	F5416
27	MH	F5017	F5067	F5117	F5167	F5217	F5267	F5317	F5417
33	MH	F5018	F5068	F5118	F5168	F5218	F5268	F5318	F5418
39	MH		F5069	F5119	F5169	F5219	F5269	F5319	F5419
47	MH		F5070	F5120	F5170	F5220	F5270	F5320	F5420
56	MH		F5071	F5121	F5171	F5221	F5271	F5321	F5421
68	MH		F5072	F5122	F5172	F5222	F5272	F5322	F5422
82	MH		F5073	F5123	F5173	F5223	F5273	F5323	F5423
100	MH		F5074	F5124	F5174	F5224	F5274	F5324	F5424
120	MH		F5075	F5125	F5175	F5225	F5275	F5325	F5425
150	MH		F5076	F5126	F5176	F5226	F5276	F5326	F5426
180	MH		F5077	F5127	F5177	F5227	F5277	F5327	F5427
220	MH		F5078	F5128	F5178	F5228	F5278	F5328	F5428
270	MH		F5079	F5129	F5179	F5229	F5279	F5329	F5429
330	MH			F5130	F5180	F5230	F5280	F5330	F5430
390	MH			F5131	F5181	F5231	F5281	F5331	F5431
470	MH			F5132	F5182	F5232	F5282	F5332	F5432
560	MH			F5133	F5183	F5233	F5283	F5333	F5433
680	MH				F5184	F5234	F5284	F5334	F5434
820	MH				F5185	F5235	F5285	F5335	F5435
1.0	H				F5186	F5236	F5286	F5336	F5436
1.2	H				F5187	F5237	F5287	F5337	F5437
1.5	H				F5188	F5238	F5288	F5338	F5438
1.8	H				F5189	F5239	F5289	F5339	F5439
2.2	H				F5190	F5240	F5290	F5340	F5440
2.7	H					F5241	F5291	F5341	F5441
3.3	H					F5242	F5292	F5342	F5442
3.9	H					F5243	F5293	F5343	F5443
4.7	H					F5244	F5294	F5344	F5444
5.6	H					F5245	F5295	F5345	F5445
6.8	H						F5296	F5346	F5446
8.2	H						F5297	F5347	F5447
10	H						F5298	F5348	F5448
12	H							F5349	F5449
15	H							F5350	F5450
18	H							F5351	F5451
22	H							F5352	F5452
27	H								F5453
33	H								F5454

FREQUENCY RANGE: 200 KHz to 2,500 KHz

MIL-T-27: TF4(OR 5)RX

TYPE		PFM 1	PFM 2	PFM 3	PFM 4	PFM 5	PFM 6	PFM 7	PFM 8
Size	Dia.	21/32	27/32	1"	1-1/4	1-3/8	1-1/2	1-3/4	
	H'ght	15/32	9/16	5/8	1-1/8	1-1/4	1-5/16	1-7/16	
Typi-	Ind.	56 μH	68 μH	100 μH	150 μH	270 μH	680 μH	2.2 MH	
cal	Freq.	1 MHz	400KHz	400KHz	250KHz	200KHz	150KHz	100KHz	
"Q"	"Q"	300	300	400	550	700	650	750	
Inductance		Catalog Number							
15	μH	F5500	F5550	F5600	F5650	F5700	F5750	F5800	
18	μH	F5501	F5551	F5601	F5651	F5701	F5751	F5801	
22	μH	F5502	F5552	F5602	F5652	F5702	F5752	F5802	
27	μH	F5503	F5553	F5603	F5653	F5703	F5753	F5803	
33	μH	F5504	F5554	F5604	F5654	F5704	F5754	F5804	
39	μH	F5505	F5555	F5605	F5655	F5705	F5755	F5805	
47	μH	F5506	F5556	F5606	F5656	F5706	F5756	F5806	
56	μH	F5507	F5557	F5607	F5657	F5707	F5757	F5807	
68	μH	F5508	F5558	F5608	F5658	F5708	F5758	F5808	
82	μH	F5509	F5559	F5609	F5659	F5709	F5759	F5809	
100	μH	F5510	F5560	F5610	F5660	F5710	F5760	F5810	
120	μH	F5511	F5561	F5611	F5661	F5711	F5761	F5811	
150	μH	F5512	F5562	F5612	F5662	F5712	F5762	F5812	
180	μH	F5513	F5563	F5613	F5663	F5713	F5763	F5713	
220	μH	F5514	F5564	F5614	F5664	F5714	F5764	F5814	
270	μH	F5515	F5565	F5615	F5665	F5715	F5765	F5815	
330	μH	F5516	F5566	F5616	F5666	F5716	F5766	F5816	
390	μH	F5517	F5567	F5617	F5667	F5717	F5767	F5817	
470	μH	F5518	F5568	F5618	F5668	F5718	F5768	F5818	
560	μH	F5519	F5569	F5619	F5669	F5719	F5769	F5819	
680	μH	F5520	F5570	F5620	F5670	F5720	F5770	F5820	
820	μH	F5521	F5571	F5621	F5671	F5721	F5771	F5821	
1.0	MH	F5522	F5572	F5622	F5672	F5722	F5772	F5822	
1.2	MH	F5523	F5573	F5623	F5673	F5723	F5773	F5823	
1.5	MH	F5524	F5574	F5624	F5674	F5724	F5774	F5824	
1.8	MH	F5525	F5575	F5625	F5675	F5725	F5775	F5825	
2.2	MH	F5526	F5576	F5626	F5676	F5726	F5776	F5826	
2.7	MH	F5527	F5577	F5627	F5677	F5727	F5777	F5827	
3.3	MH	F5528	F5578	F5628	F5678	F5728	F5778	F5828	
3.9	MH	F5529	F5579	F5629	F5679	F5729	F5779	F5829	
4.7	MH	F5530	F5580	F5630	F5680	F5730	F5780	F5830	
5.6	MH	F5531	F5581	F5631	F5681	F5731	F5781	F5831	
6.8	MH	F5532	F5582	F5632	F5682	F5732	F5782	F5832	
8.2	MH	F5533	F5583	F5633	F5683	F5733	F5783	F5733	
10.0	MH	F5534	F5584	F5634	F5684	F5734	F5784	F5834	
12.0	MH	F5535	F5585	F5635	F5685	F5735	F5785	F5835	
15.0	MH	F5536	F5586	F5636	F5686	F5736	F5786	F5836	
18.0	MH	F5537	F5587	F5637	F5687	F5737	F5787	F5837	
22.0	MH		F5588	F5638	F5688	F5738	F5788	F5838	
27.0	MH		F5589	F5639	F5689	F5739	F5789	F5839	
33.0	MH		F5590	F5640	F5690	F5740	F5790	F5840	
39.0	MH		F5591	F5641	F5691	F5741	F5791	F5841	
47.0	MH		F5592	F5642	F5692	F5742	F5792	F5842	
56.0	MH			F5643	F5693	F5743	F5793	F5843	
68.0	MH			F5644	F5694	F5744	F5794	F5844	
82.0	MH				F5695	F5745	F5795	F5845	
100.0	MH						F5796	F5846	

© United Technical Publications

FREED TRANSFORMER CO., INC.

COMMERCIAL GRADE COMPONENTS

These components are designed to meet the demand for low-cost replacement parts for commercial electronic equipment.

The best commercially available materials have been utilized in the design of these units, to insure reliability and excellent performance characteristics. Vacuum impregnation with a non-hygroscopic varnish to prevent penetration of humidity are employed to give these units long life and trouble-free performance.

230-115 V, 50-60 C.P.S. Stepdown Transformers rated from 25 V A up to 5,000 V A Rating and line booster transformers are included in this series.

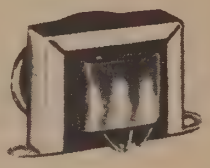
All units, with only a few exceptions, are uncased or of shell-type construction.

Isolation transformers and Stepdown transformers are equipped with line cord and receptacle.

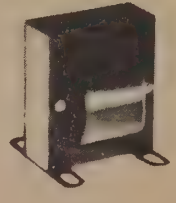


DC

Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Studs
DC2B	3½	2⅝	2¼	2x1¾	(4)8-32
DC4A	3¾	3⅛	3	2½x2½	(4)8-32
DC5C	4⅞	4⅛	3½	3⅛x2⅝	(4)10-32
DC6A	4⅞	5	4⅛	3¾x3	(4)10-32
CH40	1 7/16	2⅜	1⅜	2	(2)⅜6
CH50	1 11/16	2 13/16	1¾	2⅜	(2)⅜6
CH60	2	3¼	1¾	2 13/16	(2)⅜6
CH62	2	3¼	2⅛	2 13/16	(2)⅜6
CH70	2 5/16	3 11/16	2¼	3⅛	(2)⅜6
CH80	2⅝	4	2⅝	3 9/16	(2)⅜6
FV10	3 1/16	2½	2 9/16	2x2	(4)13/64x21/64
FV12	3 1/16	2½	2 11/16	2x2⅛	(4)13/64x21/64
FV22	3 7/16	2 13/16	2⅞	2¼x2¼	(4)⅜6x⅜
FV30	4 1/32	3⅛	3	2½x2¼	(4)13/64x21/64
HB718	6¼	6½	8½	4¾x4½	(4)9/32x21/32
HB728	6¼	6½	9¾	4¾x5¾	(4)9/32x21/32
HB828	6⅝	7 5/16	9⅞	5⅝x5¾	(4)9/32x21/32
HB920	6⅝	7⅞	10¼	6½x7⅝	(4)9/32x21/32
HS300	2⅝	3	2½	2½x2	(4)⅜6x⅜
HS303	2⅞	3	2½	2½x2	(4)⅜6x⅜
HS306	3¼	3	2½	2½x2	(4)⅜6x⅜
HS307	3⅜	3	2½	2½x2	(4)⅜6x⅜
HS503	3½	3¾	3⅛	3⅛x2½	(4)⅜6x⅜
HS505	3¾	3¾	3⅛	3⅛x2½	(4)⅜6x⅜
HS603	3¾	4½	3¾	3¾x3	(4)⅜6x⅜
HS605	4	4½	3¾	3¾x3	(4)⅜6x⅜
HS606	4 5/16	4½	3¾	3¾x3	(4)⅜6x⅜
HS610	4⅝	4½	3¾	3¾x3	(4)⅜6x⅜
HS612	4⅞	4½	3¾	3¾x3	(4)⅜6x⅜
HS708	5⅞	5¼	4⅜	4⅜x3½	(4)9/32x21/32
HS709	6	5¼	4¾	4⅜x3½	(4)9/32x21/32
VS100	2 11/32	1⅞	2¼	1½x1 7/16	(4)⅜6x⅜
VS300	3 5/32	2⅝	2¾	2x1 11/16	(4)⅜6x⅜
VS303	3 5/32	2⅝	3	2x1 15/16	(4)⅜6x⅜
VS304	3 29/32	4¼	3¼	2½x3	(4)⅜6x⅜
VS306	3 5/32	2⅝	3⅜	2x2 1/16	(4)⅜6x⅜
VS307	3 5/32	2⅝	3½	2x2 7/16	(4)⅜6x⅜
VS401	3 9/16	2 15/16	3¼	2¼x1 15/16	(4)⅜6x⅜
VS501	3 29/32	3¼	3⅜	2½x2 1/16	(4)⅜6x⅜
VS503	3 29/32	3¼	3⅝	2½x2⅝	(4)⅜6x⅜
VS505	3 29/32	3¼	3⅞	2½x2⅝	(4)⅜6x⅜
VS506	3 29/32	3¼	4¼	2¼x3	(4)⅜6x⅜
VS508	3⅝	2⅝	3⅛	2x2⅛	(4)⅜6x⅜
VS601	4 21/32	3⅞	3⅝	3x2 7/16	(4)⅜6x⅜
VS603	4 21/32	3⅞	3⅞	3x2 11/16	(4)⅜6x⅜
VS604	4 21/32	3⅞	4	3x2⅞	(4)⅜6x⅜
VS605	4 21/32	3⅞	4⅛	3x2 15/16	(4)⅜6x⅜
VS606	4 21/32	3⅞	4¼	3x3⅛	(4)⅜6x⅜
VS610	4 21/32	3⅞	4¾	3x3⅜	(4)⅜6x⅜
VS611	4 21/32	3⅞	4⅞	3x3 11/16	(4)⅜6x⅜
VS612	4 21/32	3⅞	5	3x3 15/16	(4)⅜6x⅜
VS700	5 7/16	3⅞	5	3½x3¼	(4)⅜6x⅜
VS706	5 7/16	4 9/16	5½	3½x3¾	(4)⅜6x⅜
VS708	5 7/16	4 9/16	5¾	3½x4	(4)9/32x21/32
VS709	5 7/16	4 9/16	5⅞	3½x4⅛	(4)9/32x21/32
VS714	5 7/16	4 9/16	6½	3½x4¾	(4)⅜6x⅜
VS718	5 7/16	4 9/16	7	3½x5¼	(4)9/32x21/32
VS728	5 7/16	4 9/16	8¼	3½x6½	(4)⅜6x⅜



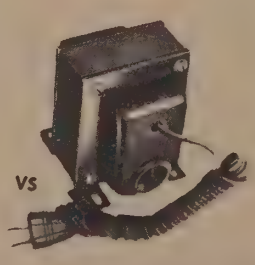
CH



FV



HB



VS

COMMERCIAL GRADE CHOKES

Catalog No	Inductance in Henries	Rated Current D C Ma	D C Resistance	Dielectric Test Voltage	Case Number
RGC 17	40	35	2000	1000	CH 40
RGC 1	4	40	200	1000	CH 40
RGC 2	9	40	400	1000	CH 40
RGC 3	6	50	400	1000	CH 40
RGC 18	20	50	425	1500	CH 60
RGC 4	10	55	400	1500	CH 50
RGC 19	3	75	200	1500	CH 40
RGC 5	10	75	250	1500	CH 60
RGC 6	10	75	250	1500	VS 100
RGC 7	6	100	150	1500	CH 60
RGC 8	6	100	150	1500	VS 100
RGC 9	35	150	100	1500	CH 60
RGC 10	35	150	100	1500	VS 100
RGC 20	12	160	180	2500	VS 306
RGC 11	2	200	60	1500	CH 60
RGC 12	2	200	60	1500	VS 100
RGC 13	3.7	200	65	1500	CH 80
RGC 21	7	200	100	2500	VS 303
RGC 14	3.7	200	65	1500	VS 300
RGC 15	2.8	300	65	1500	CH 80
RGC 16	2.8	300	65	1500	VS 300
RGC 22	5	300	65	2500	VS 308

FILAMENT TRANSFORMERS

All primaries are for 115V, 50/60 c.p.s.

Catalog No.	Secondary Voltage	Secondary Current Amps	Secondary Test Voltage RMS	Case Size
TF 1	2.5 (C.T.)	7.5	1500	CH60
TF 2	2.5 (C.T.)	10	1500	CH70
TF 3	2.5 (C.T.)	5	7500	DC2B
TF 4	2.5 (C.T.)	10	7500	DC4A
TF 5	5.0 (C.T.)	4	1500	CH60
TF 6	5.0 (C.T.)	6	1500	CH70
TF 7	5.0 (C.T.)	10	1500	CH80
TF 8	5.0 (C.T.)	10	1500	FV10
TF 9	5.0 (C.T.)	20	2500	FV30
TF 10	5.0 (C.T.)	20	10,000	DC6A
TF 11	6.3 (C.T.)	1.35	1500	CH50
TF 12	6.3 (C.T.)	3	1500	CH60
TF 13	6.3 (C.T.)	5	1500	CH70
TF 14	6.3 (C.T.)	7	1500	FV12
TF 15	6.3 (C.T.)	10	1500	FV22
TF 16	10 (C.T.)	5	2500	CH80
TF 17	10 (C.T.)	5	2500	FV10
TF 18	10 (C.T.) or 11 (C.T.) (tapped primary)	12 or 11	7500	DC-5C
TF 19	12.6 (C.T.)	2	1500	CH62

TF 3, 4, 10 & 18 supplied with terminals. All others with leads.

AUTO TRANSFORMERS

To be used as step-down transformer. Equipped with standard receptacle and line cord.

Catalog No.	Transformation	VA Rating	Weight (lbs.)	Case Size
SDT 1*	230/115 V. 50/60 c.p.s.	25	1	CH-60
SDT 2*	230/115 V. 50/60 c.p.s.	50	1¼	CH-62
SDT 3	230/115 V. 50/60 c.p.s.	50	2½	VS-300
SDT 4	230/115 V. 50/60 c.p.s.	100	3	VS-401
SDT 5	230/115 V. 50/60 c.p.s.	200	5	VS-501
SDT 6	230/115 V. 50/60 c.p.s.	300	6½	VS-601
SDT 7	230/115 V. 50/60 c.p.s.	400	8	VS-604
SDT 8	230/115 V. 50/60 c.p.s.	500	11	VS-611
SDT 9	230/115 V. 50/60 c.p.s.	750	15	VS-706
SDT 10	230/115 V. 50/60 c.p.s.	1000	23	VS-718
SDT 11	230/115 V. 50/60 c.p.s.	1500	29½	VS-728
SDT 12*	230/115 V. 50/60 c.p.s.	2000	37	HB-718
SDT 13*	230/115 V. 50/60 c.p.s.	2500	47	HB-728
SDT 14*	230/115 V. 50/60 c.p.s.	3000	58	HB-828
SDT 15*	230/115 V. 50/60 c.p.s.	5000	72	HB-920

*Supplied with leads without line cord and receptacle.

ISOLATION TRANSFORMERS

Electrostatic shield between primary and secondary. Equipped with standard receptacle and line cord.

Catalog Number	Primary Voltage 50/60 c.p.s.	Secondary Voltage	VA Rating	Case Size
IT 1	115	115	50	VS-401
IT 2	115	115	100	VS-503
IT 3	115	115	300	VS-700
IT 4	115	115	500	VS-714
IT 5*	220/440	110/220	250	VS-612
IT 6*	220/440	110/220	500	VS-714

*Supplied with leads without line cords and receptacle.

© United Technical Publications

FREED TRANSFORMER CO., INC.

PRICE LIST

Catalog No.	Page No	Net Price
EPT 1	1164	10 05
EPT-2		10.05
EPT-3		10 05
EPT-4		10 05
EPT-5		10.05
EPT-6		10 05
EPT-7		10 05
EPT-8		12.65
EPT-9		12 65
EPT-11		10.05
EPT-12		10.05
EPT-13		12 65
EPT 14		12 65
EPT-15		16 10
EPT-16		16 10
EPT-17		15.50
EPT-18		15 50
EPT-19		15 50

Note — Molded Units $1.00 additional.

IT-1	1170	8.35
IT-2		13 10
IT-3		30 35
IT-4		36 75
IT-5		30.35
IT-6		40.20
MCV 4-5LC		16.10
MCV 4-25LC		23 00
MCV 4-75LC		34 50
MCV 4-125LC		43 70
MCV 4-175LC		51.75
MCV 4-250LC		62 10
MCV 4-375LC		79.35
MCV 4-500LC		97 75
MCV 4-750LC		132 25
MCV 4 1000LC		164 45
MCV-4-5-4FC		16 10
MCV 4-25-4FC		23 00
MCV 4-75-4FC		34.50
MCV 4-125-4FC		43.70
MCV-4-5FC		17.25
MCV 4-25FC		24 15
MCV 4-75FC		35.65
MCV 4-125FC		44.85
MCV-4-5LM		25 30
MCV-4-25LM		32 20
MCV-4-75LM		44.85
MCV 4-125LM		55.20
MCV 4-175LM		63.25
MCV 4 250LM		75 90
MCV-4-375LM		93 15
MCV-4-500LM		115.00
MCV-4-750LM		150.65
MCV 4-1000LM		184 00
MCV-4-5-4FM		25 30
MCV 4-25-4FM		32.20
MCV 4-75-4FM		44.85
MCV 4-125 4FM		55.20
MCV-4-5FM		26 45
MCV 4-25FM		33 35
MCV-4-75FM		46.00
MCV 4-125FM		56.35
MCV-6-5LC		11.00
MCV-6-25LC		17 00
MCV-6-75LC		27.00
MCV 6-125LC		34 00
MCV 6-175LC		41 00
MCV-6-250LC		50 00
MCV-6-375LC		64.00
MCV 6-500LC		76.00
MCV 6 750LC		104 00
MCV-6-1000LC		128.00
MCV-6-5-4FC		11 00
MCV-6-25-4FC		17 00
MCV-6-75-4FC		27 00
MCV-6-125-4FC		34 00
MCV-6 5FC		12.00
MCV-6-25FC		18 00
MCV-6 75FC		28 00
MCV-6-125FC		35 00
MCV-6-5LM		20.00
MCV-6-25LM		26 00
MCV-6-75LM		37 00
MCV-6 125LM		45.00
MCV-6-175LM		53.00
MCV 6-250LM		62.00
MCV-6-375LM		76 00
MCV-6-500LM		90 00
MCV-6-750LM		123.00
MCV-6 1000LM		150 00
MCV 6-5-4FM		20 00
MCV-6-25-4FM		26.00
MCV-6 75-4FM		37 00
MCV 6-125-4FM		45 00
MCV 6-5FM		21 00
MCV-6-25FM		27 00
MCV-6-75FM		38 00
MCV-6-125FM		46 00
MGA-1	1163	15 80
MGA-2		15.25
MGA 3		14 65
MGA-4		14 65
MGA-5		13 40
MGA 6		13 80
MGA-7		13 40
MGA-8		13 80
MGA-9		13 40
MGC 1		9 95
MGC-2		8 20
MGC 3		8 60
MGC-4		9 60
MGC 5		9.95
MGC 6		8 20
MGC-7		8 60
MGC-8		9 80
MGC 9		8.60
MGC-10		9 25
MGC 11		11.50
MGC 12		8 60
MGC 13		9 25
MGC-14		11 50
MGC 15		12 60
MGC 16		9 25
MGC-17		11 50
MGC 18	1163	13 25
MGC-19		16 55
MGC 20		11 50
MGC-21		
MGC 22		25.90
MGC 23		
MGC 24		23 80
MGC-25		
MGC 26		21 15
MGC 27		
MGC-28		21 15
MGC 29		
MGC-30		
MGC 31		
MGC 32		9 00
MGC-33		9 00
MGC-34		9 00
MGC 35		9 00
MGC 36		9 00
MGC-37		9 00

*Not stocked, available on short delivery. Prices on request.

MGF-1	1163	15 55
MGF-2		17 25
MGF 3		15 55
MGF 4		20 70
MGF 5		15.55
MGF-6		17 25
MGF 7		22 40
MGF-8		27 60
MGF 9		22 40
MGF-10		25.90
MGP-1		25 50
MGP-2		27 60
MGP-3		30 35
MGP-4		37.95
MGP-5		44 85
MGP 6		24 15
MGP-7		32 80
MGP-8		43 10
MPT-1	1164	20 20
MPT-2		17 25
MPT 3		25.90
MPT-4		23.00
MPT-5		20.20
MPT 6		17.25
MPT-7		20 20
MPT 8		17 25
MPT-9		25 90
MPT-10		23 00
MPT 11		20.20
MPT-12		31 60
MPT-13C		13 40
MPT 13M		17 70
MPT 13H		22.10
MPT 14C		19 45
MPT-14M		24 00
MPT 14H		29 00
MPT-15C		17 95
MPT 15M		22 40
MPT 15H		30 50
MPT 16C		21 70
MPT-16M		26.30
MPT 16H		32 30
MPT 17C		22 40
MPT-17M		26 00
MPT 17H		30 60
MPT-18C		14 70
MPT 18M		19 10
MPT-19C		22 40
MPT-19M		26 00
MPT-19H		26 00
MPT 20C		17 00
MPT 20M		21 40
MPT 20H		27 60
MPT-21C		24 00
MPT 21M		27 00
MPT 21H		27 60
MPT-22C		22 40
MPT-22M		26.00
MPT-22H		30.60
MPT-23C		24.00
MPT 23M		27 10
MPT-23H		29.40
MPT-24C		15 75
MPT 24M		19.30
MPT-25C		16 10
MPT 25M		20 80
MPT-25H		26 60
MPT-26C		24 00
MPT-26M*		25.30
MPT-26H		34.50
MPT-27C		23.40
MPT-27M		25 30
MPT 27H		34 50
PMA-1	1162	10.90
PMA-2		8.93
PMA-3		12.58
PMA-4		8 93
PMA-5		8.93
PMA-6		10 90
PMA 7		10.90
PMA-8		10 90
PMA-9		10.90
PMA-10		10 23
PMA-11		7.92
PMA-12		10.90
PMA-13		9.90
PMA-14		11 10
PMA-15		10.90
POC 1	1168	9 40
POC-2		9.40
POC-3		9 40
POC-4		9 40
POC-5		9.40
POC-6		9 40
POC-7		9.40
POC 8		9 40
POC-9		9 40
PTC-12-15	1165	39 50
PTC-12-50		52.50
PTC-12 100		58 50
PTC 12-175		71 50
QGC 1	1168	25 85
QGC-2		25.85
QGC-3		25.85
QGC-4		25.85
QGC-5		25 85
QGC 6		25.85
QGC-7		25.85
QGC-8		15.00
QGC-9		15.00
QGC-10		15.00
QGC-11		15 00
QGC 12		15 00
QGC-13		15 00
QGC-14		13.50
QGC-15		13.50
QGC-16		13.50
QGC 17		13 50
QGC 18		13.50
QGC 19		11.50
QGC-20		11 50
QGC 21		11 50
QGC-22		11 50
QGC-23		11 50
QGC-24		11 50
QGC 25		10 50
QGC 26		10 50
QGC 27		10 50
QGC-28		10 50
QGC 29		10.50
QGC-30		10 50
QGC-31		10 50
QGC 32		10 50
QGC-33		10 50
QGC 34		10 50
QGC 35		10 50
QGC-36		10.50
QGC 37		10 50
QGC 38		10.80
QGC-39		10 50
QGC-40		10.50
QGC-41		10 50
QGC 42		10 50
RGC-1	1170	1.95
RGC-2		1 95
RGC 3		1 95
RGC-4		2.20
RGC-5		2.60
RGC 6		3 90
RGC-7		2.60
RGC-8		3 90
RGC 9		2.60
RGC-10		3 90
RGC 11		2 60
RGC 12		3 90
RGC-13		4 15
RGC 14		5.95
RGC 15		4 15
RGC 16		5 95
RGC 17		2 38
RGC 18		3 00
RGC-19		1 95
RGC 20		6.75
RGC 21		6.75
RGC 22		8 75
RGP-1		7 94
RGP-2		7 94
RGP 3		8 45
RGP 4		8 45
RGP 5		8 45
RGP 6		8 45
RGP-7		9 30
RGP-8		9.30
RGP-9		11 40
RGP 10		11 40
RGP-11		9.30
RGP-12		9 30
RGP 13		11 40
RGP-14		11 40
RGP 15		12 00
RGP 16		12 00
RGP 17		14 09
RGP-18		14.09
RGP-19		14.88
RGP-20		14.88
RGP-21		19 44
RGP-22		19 44
RGP 23		26 16
RGP-24		26 16
RGP-25		31 20
RGP 26		31 20
RGP 27		11 58
RGP-28		11 58
RGP-29		14.09
RGP-30		14.09
RGP-31		20.76
RGP 32		20.76
RGP-33		26 16
RGP-34		26 16
RGP 35		31 20
RGP-36		31 20
SDT 1	1165	2.90
SDT 2		3.35
SDT-3		5 95
SDT-4		7 90
SDT 5		9 90
SDT 6		13.25
SDT-7		14 05
SDT-8		14 85
SDT-9		20.15
SDT-10		25.65
SDT 11		39.70
SDT 12		46 20
SDT 13		60 30
SDT-14		79 20
SDT 15		123.75
TAC-6-50		55.75
TAC 12 50		65 55
TAC 12-90		73 00
TAC 12 175		88 50
TAC 28-50		73 50
TAC 28 100		81 50
TAC 28 175		95 50
TAC 28-250		105 50
TAC 12-100-4		77 50
TAC 28 150-4		81 50
TAC 28 250-4	1165	125 00
TDC 6 15 05		39 50
TDC-12 30 15		51 70
TDC-12 25 12		50.55
TDC 12-30 05		42.50
TDC 12-20-05		39 50
TDC 28-30 15		56.45
TDC-28-25-12		54.80
TDC-28-30-05		45.30
TDC-28-20-05		42.90
TDC-48-20-15		78.50
TDC-48-30-15		82 50
TF 1	1170	3 95
TF 2		5.25
TF-3		13.10
TF-4		16.10
TF-5		3.95
TF 6		5 25
TF 7		5 75
TF 8		6 10
TF-9		10 05
TF-10		20 95
TF 11		2 60
TF 12		3 95
TF 13		5.25
TF 14		6.35
TF 15		7 75
TF 16		5 75
TF 17		8 20
TF-18		20.95
TF 19		4.35
TMA 1		8 25
TMA-2		10 56
TMA 3		8 60
TMA-4		10 90
TMA 5		10 90
TMA 6		10 90
TMA-7		8 90
TMA-8		10 56
TMA 9		8 60
TMA 10		8 25
TMA-11		8 60
TMA 12		10 90
TMA 13		8 25
TMA-14		10 90
TMO 15		4 30
TMO-16		4.30
TMO-17		3.64
TMO-18		4 30
TMA 19		8 25
TNA 1		6 95
TNA 2		6 95
TNA 3		7 38
TNA-4		6 60
TNA 5		6 60
TNA 6		7 38
TNA 7		6 95
TNA 8		6 95
TNA 9		8 15
TNA-10		7 50
TNA-11		7 50
TNA 12		8 15
TNA 13		8 15
TNA 14		8 15
TNA-15		8 25
TNA-16		7 38
TNA 17		7 38
TNA 18		7 38
TNA 19		7 93
TNA-20		7 38
TNA 21		6 60
TNA 22		7 25
TNA 23		6 95
TNA 25		6 95
TNA 26		6 50
TNA 27		7 93
TNA 28		6 38
TNA 29		6 38
TNA-30		6 60
TNA 31		6 38
TNA 32		6 38
TNA 33		6 60
TNA 34		6 95
TNA-35		6 95
TNA-36		6 50
TNA 37		6 50
TNA 38		6 95
TNA-39		7 50
TNA-40		6 95
TNA-41		7 15
TPA 1	1162	8 36
TPA 2		8 36
TPA 3		8 36
TPA-4		8 85
TPA-5		8 36
TPA-6		8 36
TPA-7		8 36
TPA 8		8 85
TPA 9		8 36
TPA 10		8 36
TPA 11		8 85
TPA 12		8 36
TPA-13		8 36
TPA 14		8 85
TPA 15		9 13
TPA 16		9 13
TPA 17		8 60
TPA 18		9 35
TPA 19		8 25
TPA-20		9.13
TPA-21		8.58
TPA-22		9.13
TPA 23		9 13
TPA 24		9 13
TPA 25		9 13
TPA 26		9 13
TPA 27		9 68
TPA-28		9 68
TPA-29		9 68
TPA 30		8 03
TPA 31		8 03
TPA-32		8 03
TPA 33		8 03
TPA-34		8 03
TPA-35		8 03
TPA-36		8 03
TPA 37	1162	8 75
TPA 38		8 03
TPA 39		8 03
TPA-40		8 03
TSA 1		7 15
TSA 2		7 15
TSA 3		7 70
TSA-4		6.93
TSA-5		6.93
TSA-6		7.70
TSA-7		7.15
TSA-8		7 15
TSA 9		7 15
TSA 10		7 70
TSA-11		7.70
TSA-12		8.25
TSA-13		8.25
TSA 14		8.25
TSA 15		8 80
TSA 16		7 70
TSA 17		7 70
TSA 18		7 70
TSA 19		8 25
TSA 20		7 70
TSA 21		7 15
TSA 22		7 42
TSA 23		7 15
TSA 25		7 15
TSA-26		6 60
TSA 27		8 25
TSA-28		6 60
TSA-29		6 60
TSA-30		6 93
TSA-31		6 60
TSA-32		6 60
TSA-33		6.93
TSA-34		7 15
TSA-35		7 15
TSA-36		6 60
TSA-37		6 60
TSA-38		7 15
TSA-39		7 70
TSA-40		7 15
TSA-41		7 42
60 Hz		
TST 1	1163	9 00
TST 2		11 25
TST 3		12 50
TST-4		15 00
TST 5		16 25
TST 6		17 50
TST-7		22 50
TST-8		15 00
TST-9		16 25
TST 10		17 50
TST 11		21 25
TST-12		15 00
TST 13		17 50
TST 14		21 25
TST 15		21 88
TST 16		16.25
TST-17		17.50
TST-18		21 88
TST 19		22 50
TST-20		16 25
TST-21		21 25
TST 22		22 50
TST 23		17 50
TST-24		21 88
TST 25		22 50
TST 26		15 00
TST-27		17 50
TST 28		21 88
TST 29		16 25
TST 30		17 50
TST 31		22 50
TST 32		16 25
TST-33		17 50
TST 34		25 00
400 Hz		
TST-1	1163	9 00
TST-2		10.00
TST-3		11.25
TST-4		12 50
TST 5		13 75
TST-6		15.00
TST 7		18 75
TST 8		12 50
TST 9		14 38
TST 10		15 00
TST 11		16 25
TST-12		12 50
TST-13		15.00
TST-14		16.25
TST 15		17 50
TST-16		14 38
TST 17		16.25
TST 18		17 50
TST 19		18 75
TST 20		14 38
TST 21		16 25
TST-22		18 75
TST 23		15 00
TST 24		17 50
TST 25		18 75
TST 26		15 00
TST 27		17.50
TST-28		13 75
TST 29		15.63
TST-31		18 75
TST 32		14 38
TST 33		16 25
TST 34		20 00
TTA 1	1162	8 00
TTA 2		7 26
TTA 3		9 46
TTA 4		10 00
TTA 5		9 46
TTA 6		7 26
TTA 7		9 63
TTA 8		9 46
TTA-9		9 76
TTA 10	1162	9 30
TTA-11		9 30
TTA 12		9 35
TTA 13		8 90
TTA 14		10 00
TTA 15		8 90
TTA-16		9 40
TTA-17		8 90
TTA-18		8 90
TTA-19		8 90
TTA-20		8 90
TTA-21		8 90
TTA 22		8 90
TTA 23		9 30
TTA-24		9.30
TTA-25		9.30
TTA-26		9.79
TTA 27		8 90
TTA-28		9 30
TTA 29		9 30
TTA 30		9 30
TTA 31		9 79
TTA 32		9 30
TTA-33		9 79
TTA 34		9 30
TTA 35		9 46
TTA 36		9 46
TTA 37		9 35
TTA-38		10 00
TTA 39		9 70
TTA 40		9 46
TUA-1		6 60
TUA 2		6 60
TUA-3		6 60
TUA-4		6 60
TUA 5		6 60
TUA 6		6 60
TUA 7		6 93
TUA 8		6 93
TUA 9		6 93
TUA 10		7 26
TUA 11		6 93
TUA 12		7 15
TUA 13		5 94
TUA 14		6 93
TUA 15		7 26
TUA 16		6 27
TUA 17		6 27
TUA 18		7 26
TUA 19		6 27
TUA 20		6 27
TUA 21		6 32
TUA 22		6 32
TUA 23		6 60
TUA 24		6 71
TUA 25		6 60
TUA 26		6 60
TUA 27		5 94
TUA 28		6 60
TUA 29		6 60
TUA 30		7 26
TUA 31		8 25
TUA 32		7 26
TUA 33		7 59
TUA 34		7 59
TUA 35		7 59
TUA 36		7 59
TUA 37		7 59
TUA 38		7 59
VCI 12 15	1165	27 50
VCI 12 100		38 50
VHI 1		10 95
VHI 2		10 95
VHI 3		10 95
VHI 4		10 95
VHI 5		10 95
VHI 6		10 95
VHI-7		10 95
VHI 8		10 95
VHI-9		10 95
VHI 10	1168	10 95
VHI 11		10 95
VHI 12		10 95
VHI-13		10.95
VHI-14		10.95
VHI-15		10.95
VHI 16		10 95
VHI 17		10 95
VHI 18		10 95
VHI 19		10 95
VHI 20		10 95
VHI 21		10 95
VHI 22		10 95

Filters & Discriminators

IBM	1166	25 00
IBP		25 00
IHM		25.00
IHP		25 00
ILM		25 00
ILP		25 00
LBM		25 00
LBP		25 00
LHM		25 00
LHP		25 00
LLM		25 00
LLP		25 00

Special Frequencies are $40.00 Net

MTN 4 to 7.35	1169	35 00
MTN 10.5 to MTW 70		40 00
F5000 5079		11 75
F5100 5157		13 90
F5158 5190		15 80
F5200 5207		13 90
F5208 5274		15 80
F5275 5298		17 80
F5300 5352		21 50
F5400 5454		27 90
F5500 5617		11 75
F5618 5669		13 90
F5670 5695		15 80
F5700 5722		13 90
F5723 5796		15 80
F5800 5846		21 50

© United Technical Publications

Net

volt-pac® VARIABLE TRANSFORMERS



Manual uncased unit—exposed terminals



Manual cased unit—exposed terminals



Manual cased unit—enclosed terminals

MANUAL — SINGLE-PHASE, 50/60 HERTZ

Line Voltage Connection		No. of Cores &	UNCASED MODELS		CASED MODELS Exposed Terminals (See below For Terminal Enclosure Kit)	
Rated Amp[1]	Max. Amp	Frame Size	Model Number	Suggested Net Price[2]	Model Number	Suggested Net Price[2]
120-VOLT INPUT: OUTPUT—0-120 VOLT (LINE VOLTAGE CONN.) 0-140 VOLT (OVERVOLTAGE CONN.)						
2.5[3]	3.2	1-30	9T92A1	$13.00	.....	.....
4.5	5.8	1-40	9T92A5	19.00	.....	.....
6.5[3][5]	8.0	1-50	9T92A7	22.00	9T92A7G2	$28.00
10.0	11.5	1-60	9T92A9	25.00	9T92A9G2	31.00
12.0[4][6]	14.5	1-60	9T92A10	27.00	9T92A10G2	33.00
15.0[5]	19.0	1-75	9T92Y27	45.00	9T92Y27G2	51.00
18.0[5]	21.7	1-75	9T92Y28	56.00	9T92Y28G2	62.00
30.0[5]	34.0	1-85	9T92Y37	111.00	9T92Y37G2	118.00
37.0[5]	37.0	1-85	9T92Y38	130.00	9T92Y38G2	137.00
50.0[5]	55.0	1-95	9T92Y49	162.00	9T92Y49G2	170.00
60.0	60.0	1-95	9T92Y50	245.00	9T92Y50G2	253.00
74.0[5]	74.0	2-85	9T92Y41	241.20	9T92Y41G2	253.80
100.0	110.0	2-95	9T92Y53	328.50	9T92Y53G2	342.90
120.0	120.0	2-95	9T92Y54	496.80	9T92Y54G2	511.20
150.0	165.0	3-95	9T92Y55	575.10	9T92Y55G2	596.70
180.0	180.0	3-95	9T92Y56	761.40	9T92Y56G2	783.00
240.0	240.0	4-95	9T92Y57	1042.20	9T92Y57G2	1071.00
300.0	300.0	5-95	9T92Y58	1226.70	9T92Y58G2	1262.70
360.0	360.0	6-95	9T92Y59	1536.30	9T92Y59G2	1579.50
240-VOLT INPUT: OUTPUT 0-240 VOLT (LINE VOLTAGE CONN.) 0-280 VOLT (OVERVOLTAGE CONN.) OR 120-VOLT INPUT[7], OUTPUT 0-280 VOLTS						
4.0	5.0	1-60	9T92A13	$30.00	9T92A13G2	$36.00
5.0[4]	6.8	1-60	9T92A14[8]	32.00	9T92A14G2[8]	38.00
7.0[5]	10.1	1-75	9T92Y29	45.00	9T92Y29G2	51.00
8.5[5]	11.0	1-75	9T92Y30	56.00	9T92Y30G2	62.00
12.0[4]	14.5	2-60	9T92A23	72.00	9T92A23G2[8]	82.80
14.0[5]	14.0	1-85	9T92Y39	107.00	9T92Y39G2	114.00
16.0[5]	16.0	1-85	9T92Y40	122.00	9T92Y40G2	129.00
30.0	33.0	1-95	9T92Y51	164.00	9T92Y51G2	172.00
35.0	35.0	1-95	9T92Y52	245.00	9T92Y52G2	253.00
60.0	66.0	2-95	9T92Y60	328.50	9T92Y60G2	342.90
70.0	70.0	2-95	9T92Y61	495.00	9T92Y61G2	509.40
90.0	99.0	3-95	9T92Y62	575.10	9T92Y62G2	596.70
105.0	105.0	3-95	9T92Y63	760.50	9T92Y63G2	782.10
120.0	132.0	4-95	9T92Y5021	830.70	9T92Y5021G2	859.50
140.0	140.0	4-95	9T92Y64	1044.00	9T92Y64G2	1072.80
175.0	175.0	5-95	9T92Y65	1226.70	9T92Y65G2	1262.70
210.0	210.0	6-95	9T92Y66	1536.30	9T92Y66G2	1579.50
480-VOLT INPUT: OUTPUT 0-480 VOLT (LINE VOLTAGE CONN.) 0-560 VOLT (OVERVOLTAGE CONN.) OR 240-VOLT INPUT[7], OUTPUT 0-560 VOLTS						
4.0[5]	5.0	2-60	9T92A17	$67.50	9T92A17G2	$78.30
5.0[4]	6.8	2-60	9T92A18[9]	71.10	9T92A18G2[9]	81.90
7.0[5]	10.1	2-75	9T92Y31	92.70	9T92Y31G2	103.50
8.5[5]	11.0	2-75	9T92Y32	112.50	9T92Y32G2	123.30
14.0[5]	14.0	2-85	9T92Y42	207.00	9T92Y42G2	219.60
16.0[5]	16.0	2-85	9T92Y43	238.50	9T92Y43G2	251.10
30.0	33.0	2-95	9T92Y67	313.20	9T92Y67G2	327.60
35.0	35.0	2-95	9T92Y68	486.00	9T92Y68G2	500.40
60.0	66.0	4-95	9T92Y69	819.00	9T92Y69G2	847.80
70.0	70.0	4-95	9T92Y70	1030.50	9T92Y70G2	1059.30
90.0	99.0	6-95	9T92Y71	1207.80	9T92Y71G2	1251.00
105.0	105.0	6-95	9T92Y72	1525.50	9T92Y72G2	1568.70

TERMINAL ENCLOSURE KITS

Economical modification kits convert exposed-terminal models to enclosed ones. To order determine frame size and number of cores of selected transformer, determine appropriate Terminal Kit Model Number based on frame size from table at right, and order for each transformer the same quantity of Terminal Kits as there are cores.

For Frame Size	Model No.	Sugg'd Net Price[2]
30	None Available	.....
40	None Available	.....
50	9T92A903	$1.00
60	9T92A903G2	1.00
75	9T92Y903G3	2.00
85	9T92Y903G4	4.00
95	9T92Y903G5	7.00

MANUAL — THREE-PHASE, 50/60 HERTZ

Line Voltage Connection		No. of Cores &	UNCASED MODELS		CASED MODELS Exposed Terminals (See below For Terminal Enclosure Kit)	
Rated Amp[1]	Max. Amp	Frame Size	Model Number	Suggested Net Price[2]	Model Number	Suggested Net Price[2]
240-VOLT LINE TO LINE INPUT: OUTPUT—0-240 VOLT (LINE VOLTAGE CONN.), 0-280 VOLT (OVERVOLTAGE CONN.) (THREE CORE, WYE CONN.)						
2.5[3][5]	3.2	3-30	9T92A3	$53.10	.....	.....
4.5[5]	5.8	3-40	9T92A6	76.50	.....	.....
6.5[3][6]	8.0	3-50	9T92A19	78.30	9T92A19G2	$94.50
10.0[5]	11.5	3-60	9T92A21	84.60	9T92A21G2	100.80
12.0[6]	14.5	3-60	9T92A22	89.10	9T92A22G2	105.30
15.0[5]	19.0	3-75	9T92Y33	144.00	9T92Y33G2	160.20
18.0[5]	21.7	3-75	9T92Y34	175.50	9T92Y34G2	191.70
30.0[5]	34.0	3-85	9T92Y44	324.00	9T92Y44G2	342.90
37.0[5]	37.0	3-85	9T92Y45	405.00	9T92Y45G2	423.90
50.0[5]	55.0	3-95	9T92Y74	549.00	9T92Y74G2	570.60
60.0[5]	60.0	3-95	9T92Y75	738.00	9T92Y75G2	759.60
74.0[5]	74.0	6-85	9T92Y48	882.00	9T92Y48G2	919.80
100.0[5]	110.0	6-95	9T92Y78	1170.00	9T92Y78G2	1213.20
120.0[5]	120.0	6-95	9T92Y79	1514.70	9T92Y79G2	1557.90
480-VOLT LINE TO LINE INPUT: OUTPUT—0-480 VOLT (LINE VOLTAGE CONN.), 0-560 VOLT (OVERVOLTAGE CONN.) (THREE CORE, WYE CONN.) OR 240-VOLT INPUT[7], OUTPUT 0-560 VOLTS						
4.0[5]	5.0	3-60	9T92A25	$90.00	9T92A25G2	$106.20
5.0[4]	6.8	3-60	9T92A26[9]	93.60	9T92A26G2[9]	109.80
7.0[5]	10.1	3-75	9T92Y35	141.30	9T92Y35G2	157.50
8.5[5]	11.0	3-75	9T92Y36	171.00	9T92Y36G2	187.20
14.0[5]	14.0	3-85	9T92Y46	322.20	9T92Y46G2	341.10
16.0[5]	16.0	3-85	9T92Y47	382.50	9T92Y47G2	401.40
30.0[5]	33.0	3-95	9T92Y76	553.50	9T92Y76G2	575.10
35.0[5]	35.0	3-95	9T92Y77	741.60	9T92Y77G2	763.20
60.0[5]	66.0	6-95	9T92Y80	1197.00	9T92Y80G2	1240.20
70.0[5]	70.0	6-95	9T92Y81	1514.70	9T92Y81G2	1557.90
120-VOLT LINE TO LINE INPUT: OUTPUT—0-120 VOLT (LINE VOLTAGE CONN.), 0-140 VOLT (OVERVOLTAGE CONN.) (TWO CORE, OPEN DELTA CONN.)						
2.5[3]	3.2	2-30	9T92A2	$32.40	.....	.....
4.5	5.8	2-40	9T92A4	48.60	.....	.....
6.5[3][5]	8.0	2-50	9T92A11	53.10	9T92A11G2	$63.90
10.0	11.5	2-60	9T92A15	59.40	9T92A15G2	70.20
12.0[4]	14.5	2-60	9T92A23	72.00	9T92A23G2	82.80
240-VOLT LINE TO LINE INPUT: OUTPUT—0-240 VOLT (LINE VOLTAGE CONN.), 0-280 VOLT (OVERVOLTAGE CONN.) (TWO CORE, OPEN DELTA CONN).						
4.0	5.0	2-60	9T92A17	$67.50	9T92A17G2	$78.30
5.0[4]	6.8	2-60	9T92A18	71.10	9T92A18G2	81.90

[1] Also overvoltage connection amp. When overvoltage connection is used, rated current should not be exceeded. Output kva for overvoltage connection is maximum output voltage times rated current.

[2] OEM quantity prices are available on request.

[3] Output at overvoltage connection is 0.264 volts or 0-132 volts.

[4] No overvoltage protection provided.

[5] When using extended tap connections, operation is for 60 hertz only.

[6] 60 hertz only.

[7] When operated with this input voltage, rated current must be reduced when output voltage exceeds 140 percent of input voltage.

[8] For 240-volt input, 0-240-volt output, application only.

[9] For 480-volt input, 0-480-volt output application only.

Net

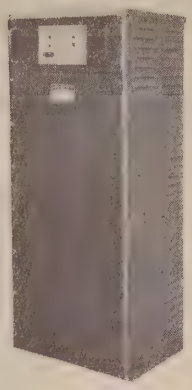
© United Technical Publications

volt-pac® VARIABLE TRANSFORMERS



Motor uncased unit exposed terminals

Motor cased unit enclosed terminals



MOTOR-OPERATED — SINGLE-PHASE, 50/60 HERTZ

Line Voltage Connection Rated Amp[1]	Max. Amp	No. of Cores & Frame Size	UNCASED MODELS Model Number	Suggested Net Price[2]	CASED MODELS Enclosed Terminals Model Number	Suggested Net Price[2]
120-VOLT INPUT: OUTPUT 0-120 VOLT (LINE VOLTAGE CONN.) 0-140 VOLT (OVERVOLTAGE CONN.)						
2.5[3]	3.2	1-30	9T92A1G51	$115.20	.....	.....
4.5	5.8	1-40	9T92A5G51	120.60	.....	.....
6.5[3][5]	8.0	1-50	9T92A7G51	127.80	9T92A7G54	$135.00
10.0	11.5	1-60	9T92A9G51	130.50	9T92A9G54	137.70
12.0[4][6]	14.5	1-60	9T92A10G51	132.30	9T92A10G54	139.50
15.0[5]	19.0	1-75	9T92Y27G51	184.50	9T92Y27G54	191.70
18.0[5]	21.7	1-75	9T92Y28G51	194.40	9T92Y28G54	201.60
30.0[5]	34.0	1-85	9T92Y37G51	243.90	9T92Y37G54	253.80
37.0[5]	37.0	1-85	9T92Y38G51	261.00	9T92Y38G54	270.90
50.0	55.0	1-95	9T92Y49G51	289.80	9T92Y49G54	302.40
60.0	60.0	1-95	9T92Y50G51	364.50	9T92Y50G54	377.10
74.0[5]	74.0	2-85	9T92Y41G51	385.20	9T92Y41G54	405.00
100.0	110.0	2-95	9T92Y53G51	472.50	9T92Y53G54	497.70
120.0	120.0	2-95	9T92Y54G51	640.80	9T92Y54G54	666.00
150.0	165.0	3-95	9T92Y55G51	719.10	9T92Y55G54	756.90
180.0	180.0	3-95	9T92Y56G51	905.40	9T92Y56G54	934.20
240.0	240.0	4-95	9T92Y57G51	1186.20	9T92Y57G54	1238.40
300.0	300.0	5-95	9T92Y58G51	1370.70	9T92Y58G54	1435.50
360.0	360.0	6-95	9T92Y59G51	1680.30	9T92Y59G54	1757.70
240-VOLT INPUT: OUTPUT 0-240 VOLT (LINE VOLTAGE CONN.) 0-280 VOLT (OVERVOLTAGE CONN.) OR 120-VOLT INPUT[7], OUTPUT 0-280 VOLTS						
4.0	5.0	1-60	9T92A13G51	$135.00	9T92A13G54	$142.20
5.0[4]	6.8	1-60	9T92A14G51[8]	136.80	9T92A14G54[8]	144.00
7.0	10.1	1-75	9T92Y29G51	184.50	9T92Y29G54	191.70
8.5[5]	11.0	1-75	9T92Y30G51	194.40	9T92Y30G54	201.60
12.0[4][6]	14.5	2-60	9T92A23G51[8]	180.00	9T92A23G54[8]	194.40
14.0[5]	14.0	1-85	9T92Y39G51	240.30	9T92Y39G54	250.20
16.0[5]	16.0	1-85	9T92Y40G51	253.80	9T92Y40G54	263.70
30.0	33.0	1-95	9T92Y51G51	291.60	9T92Y51G54	304.20
35.0	35.0	1-95	9T92Y52G51	364.50	9T92Y52G54	377.10
60.0	66.0	2-95	9T92Y60G51	472.50	9T92Y60G54	497.70
70.0	70.0	2-95	9T92Y61G51	639.00	9T92Y61G54	664.20
90.0	99.0	3-95	9T92Y62G51	719.10	9T92Y62G54	756.90
105.0	105.0	3-95	9T92Y63G51	904.50	9T92Y63G54	942.30
120.0	132.0	4-95	9T92Y5021G51	974.70	9T92Y5021G54	1026.90
140.0	140.0	4-95	9T92Y64G51	1188.00	9T92Y64G54	1240.20
175.0	175.0	5-95	9T92Y65G51	1370.70	9T92Y65G54	1435.50
210.0	210.0	6-95	9T92Y66G51	1680.30	9T92Y66G54	1757.70
480-VOLT INPUT: OUTPUT 0-480 VOLT (LINE VOLTAGE CONN.) 0-560 VOLT (OVERVOLTAGE CONN.) OR 240-VOLT INPUT[7], OUTPUT 0-560 VOLTS						
4.0	5.0	2-60	9T92A17G51	$175.50	9T92A17G54	$189.90
5.0[4]	6.8	2-60	9T92A18G51[9]	179.10	9T92A18G54[9]	193.50
7.0[5]	10.1	2-75	9T92Y31G51	236.70	9T92Y31G54	251.10
8.5[5]	11.0	2-75	9T92Y32G51	256.50	9T92Y32G54	270.90
14.0[5]	14.0	2-85	9T92Y42G51	351.00	9T92Y42G54	370.80
16.0[5]	16.0	2-85	9T92Y43G51	382.50	9T92Y43G54	402.30
30.0	33.0	2-95	9T92Y67G51	457.20	9T92Y67G54	482.40
35.0	35.0	2-95	9T92Y68G51	630.00	9T92Y68G54	655.20
60.0	66.0	4-95	9T92Y69G51	963.00	9T92Y69G54	1015.20
70.0	70.0	4-95	9T92Y70G51	1174.50	9T92Y70G54	1226.70
90.0	99.0	6-95	9T92Y71G51	1351.80	9T92Y71G54	1429.20
105.0	105.0	6-95	9T92Y72G51	1669.50	9T92Y72G54	1746.90
140.0	140.0	8-95	9T92Y73G51	2297.70	9T92Y73G54	2401.20

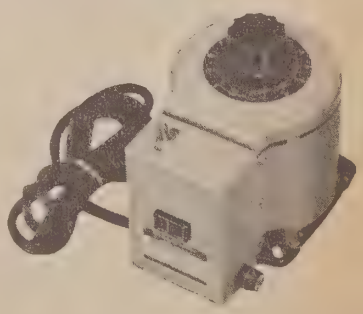
NOTE: See opposite page for footnotes.

MOTOR-OPERATED — THREE-PHASE, 50/60 HERTZ

Line Voltage Connection Rated Amp[1]	Max. Amp	No. of Cores & Frame Size	UNCASED MODELS Model Number	Suggested Net Price[2]	CASED MODELS Enclosed Terminals Model Number	Suggested Net Price[2]
240-VOLT LINE TO LINE INPUT: OUTPUT 0-240 VOLT (LINE VOLTAGE CONN.) 0-280 VOLT (OVERVOLTAGE CONN.) (THREE CORE, WYE CONN.)						
2.5[3][5]	3.2	3-30	9T92A3G51	$156.60	.....	.....
4.5[5]	5.8	3-40	9T92A6G51	180.00	.....	.....
6.5[3][6]	8.0	3-50	9T92A19G51	186.30	9T92A19G54	$207.90
10.0	11.5	3-60	9T92A21G51	192.60	9T92A21G54	214.20
12.0[4][6]	14.5	3-60	9T92A22G51	197.10	9T92A22G54	218.70
15.0[5]	19.5	3-75	9T92Y33G51	288.00	9T92Y33G54	309.60
18.0[5]	21.7	3-75	9T92Y34G51	319.50	9T92Y34G54	341.10
30.0[5]	34.0	3-85	9T92Y44G51	468.00	9T92Y44G54	497.70
37.0[5]	37.0	3-85	9T92Y45G51	549.00	9T92Y45G54	578.70
50.0[5]	55.0	3-95	9T92Y74G51	693.00	9T92Y74G54	730.80
60.0[5]	60.0	3-95	9T92Y75G51	882.00	9T92Y75G54	919.80
74.0[5]	74.0	6-85	9T92Y48G51	1026.00	9T92Y48G54	1085.40
100.0[5]	110.0	6-95	9T92Y78G51	1314.00	9T92Y78G54	1391.40
120.0[5]	120.0	6-95	9T92Y79G51	1658.70	9T92Y79G54	1736.10
150.0[5]	165.0	9-95	9T92Y82G51	2071.80	9T92Y82G54	2188.80
180.0[5]	180.0	9-95	9T92Y83G51	2519.10	9T92Y83G54	2636.10
480-VOLT LINE TO LINE INPUT: OUTPUT 0-480 VOLT (LINE VOLTAGE CONN.) 0-560 VOLT (OVERVOLTAGE CONN.) (THREE CORE, WYE CONN.) OR 240-VOLT INPUT[7], OUTPUT 0-560 VOLTS						
4.0[5]	5.0	3-60	9T92A25G51	$198.00	9T92A25G54	$219.60
5.0[4][6]	6.8	3-60	9T92A26G51	201.60	9T92A26G54	223.20
7.0[5]	10.1	3-75	9T92Y35G51	285.30	9T92Y35G54	306.90
8.5[5]	11.0	3-75	9T92Y36G51	315.00	9T92Y36G54	336.60
14.0[5]	14.0	3-85	9T92Y46G51	466.20	9T92Y46G54	495.90
16.0[5]	16.0	3-85	9T92Y47G51	526.50	9T92Y47G54	556.20
30.0[5]	33.0	3-95	9T92Y76G51	697.50	9T92Y76G54	735.30
35.0[5]	35.0	3-95	9T92Y77G51	885.60	9T92Y77G54	923.40
60.0[5]	66.0	6-95	9T92Y80G51	1341.00	9T92Y80G54	1418.40
70.0[5]	70.0	6-95	9T92Y81G51	1658.70	9T92Y81G54	1736.10
90.0[5]	99.0	9-95	9T92Y84G51	2071.80	9T92Y84G54	2188.80
105.0[5]	105.0	9-95	9T92Y85G51	2519.10	9T92Y85G54	2636.10
120-VOLT LINE TO LINE INPUT: OUTPUT 0-120 VOLT (LINE VOLTAGE CONN.), 0-140 VOLT (OVERVOLTAGE CONN.) (TWO CORE, OPEN DELTA CONN).						
2.5[3]	3.2	2-30	9T92A2G51	$135.90	.....	.....
4.5	5.8	2-40	9T92A4G51	152.10	.....	.....
6.5[3][5]	8.0	2-50	9T92A11G51	161.10	9T92A11G54	$175.50
10.0	11.5	2-60	9T92A15G51	167.40	9T92A15G54	181.80
12.0[4][6]	14.5	2-60	9T92A23G51	180.00	9T92A23G54	194.40
240-VOLT LINE TO LINE INPUT: OUTPUT 0-240 VOLT (LINE VOLTAGE CONN.), 0-280 VOLT (OVERVOLTAGE CONN.) (TWO CORE, OPEN DELTA CONN).						
4.0	5.0	2-60	9T92A17G51	$175.50	9T92A17G54	$189.90
5.0[4]	6.8	2-60	9T92A18G51	179.10	9T92A18G54	193.50

PLUG-IN SETS

Bench or wall-mounted single-phase units for laboratory or shop source of adjustable a-c voltage. Provides output voltage of 0-117% of input voltage, but is easily reconnectible for 0-100%.



Rated Amp	Fuse Rating, Amp	Frame Size (All have 1 Core)	Model Number	Sugg'd Net Price[2]	Receptacle Configuration
50/60 HZ, 120-VOLT INPUT, 0-140 VOLT OUTPUT					
2.5[10]	3	30	9T92A90	$25.00	Fig. 1
4.5	5	40	9T92A91	31.00	Fig. 1
6.5[10][11]	6	50	9T92A86	35.00	Fig. 1
10.0	10	60	9T92A87	39.00	Fig. 1
15.0[11]	15	75	9T92Y88	64.00	Fig. 1
18.0[11]	20	75	9T92Y89	78.00	Fig. 2
50/60 HZ, 240-VOLT INPUT[12], 0-280 VOLT OUTPUT					
4.0	4	60	9T92A95	$45.00	Fig. 4
7.0[11]	8	75	9T92A96	64.00	Fig. 4
8.5[11]	10	75	9T92A97	78.00	Fig. 4



Fig. 1



Fig. 2

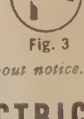


Fig. 3

[10] Output range 0-132 volts.
[11] 60 Hz only when connected for 0-117% line voltage output.
[12] Reconnectible for 120-volt input, with derating required.

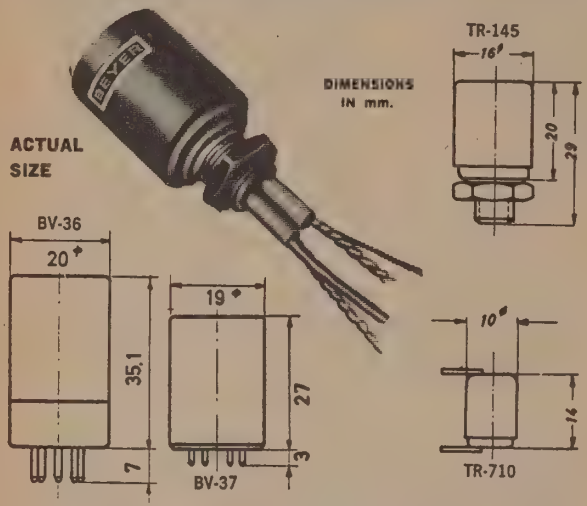
Prices subject to change without notice.

GENERAL ELECTRIC

© United Technical Publications

GOTHAM

BEYER TRANSFORMERS
MINIATURE AUDIO



The BEYER line of miniature audio transformers distributed by GOTHAM represents over 30 years of experience in the field on the part of one of Europe's largest quality microphone manufacturers. It is for this reason that we make only one type of transformer in two sizes: A low level audio transformer suitable for microphones, tape playback heads, etc.

A special winding process permits these transformers to be made in this miniature size while maintaining studio quality frequency response, distortion, and level capability. The coil is wound on a continuous laminated core which means the elimination of the split core with its inherent losses. Result is a semi-toroidal construction with its superior resistance to hum induction.

BEYER transformers are used in professional audio equipment by such outstanding manufacturers as Ampex, Bauer, Collins, Precision Instrument, Rust, and many others. All transformers are made to special order to O.E.M. users' specifications. Samples can be supplied within 2 weeks, production usually within 4 weeks.

FOUR PHYSICAL MOUNTINGS ARE AVAILABLE:

Threaded Stud: The Model TR-45 Commercial Quality and TR-145 Studio Quality units are offered in mu-metal housing with threaded stud supplied with two nuts.

Solder Lug: The Model TR-45L and TR-145L are same as above but have radial lugs each end of housing to permit terminal board or Vector socket mounting. Also available in sub-miniature TR-710 Model (see fig.). Primary and secondary windings brought out opposite ends of mu-metal can.

Plug-in: The Model BV-36 is encapsulation of TR-45 and TR-145 Models shown above in molded plastic housing with 7-pin miniature plug base. Same mu-metal shielding.

Printed Circuit: The Model BV-37 is encapsulation of TR-45 and TR-145 Models shown above in molded plastic housing only 1.09" high with special 7-pin, 8-pin, or 9-pin printed circuit base.

ELECTRICAL CHARACTERISTICS:

Transformers are supplied with any turns ratio from 1:1 to 1:150, tapped and split windings, static shielding, high voltage test, vacuum impregnating or other requirements.

TYPICAL TRANSFORMER SPECIFICATIONS:
Model TR-145/BV35570 (This Model stocked)

Turns ratio	1:15 ±10%
Impedance ratio	200/45,000 Ohms nominal
Frequency response	±0.2 dB 20 - 20,000 cps.
Maximum input level at 1% THD	370 mV at 30 cps.
Primary open circuit inductance (50 cps)	6.0 H
Primary open circuit impedance (50 cps)	1000 Ohms
Primary DC resistance	70 Ohms
Secondary DC resistance	10,000 Ohms
Hum shielding (EIA std.)	>70 dB.

A NEW GENERATION OF FLUTTER METERS AND ANALYZERS

ME 102B FLUTTER METER



PRICE: $480.00 from stock in N.Y.

- ±0.01 to 1% flutter range
- ±2% deviation (drift) range
- Measures either 3kHz or 3.15 kHz
- Level threshold relay prevents indication error
- Self contained oscillator
- Self calibrating ● Solid state
- Freq. deviation meter (drift)
- Weighted & unweighted measurements
- International standard (CCIR/DIN)
- Oscilloscope outputs
- No level adjustment needed

ME 104 FLUTTER METER



PRICE: $375.00 from stock in N.Y.

- ±0.02 to 3% flutter range
- ±4% deviation (drift) range
- Measures at 3.15 kHz only
- Self contained oscillator
- Self calibrating ● Solid state
- Freq. deviation meter (drift)
- Weighted & unweighted measurements
- International standard (CCIR/DIN)
- Oscilloscope outputs
- No level adjustment needed

ME 301 WAVE ANALYZER



PRICE: $795.00 from stock in N.Y.

- Continuous sweep notch filter
- 1 Hz to 330 Hz in 5 ranges
- 40 dB/octave filter slope
- 10% (3 dB points) band width
- Zero loss ● Solid state
- Interconnects to ME-102b and ME-104

GOTHAM AUDIO CORPORATION

Net

© United Technical Publications

DIRECTRON

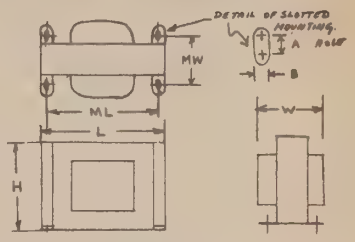


Industrial Transformers, Selenium and Silicon Rectifiers, Chokes and Power Supplies

RECTIFIER TRANSFORMERS

Transformers are with 2 — 18 volt center-tapped windings. Connected in series delivers 36 volts as rated. Connected in parallel — delivers 18 volts at twice rated current. (Taps 9, 18, 27, 36 V.)

Primary taps at 100, 105, 110 and 115 volts available on 12 amp, 24 amp, 30 amp and 50 amp transformers. No extra charge.



2-18 CENTER TAP WINDINGS

Connected in Series: Delivers 9v, 18v, 27v, 36v at rated current
IE: 18T1 — 9v @ 1a, 18v @ 1a, 27v @ 1a, 36v @ 1a

Connected in Parallel: Delivers 2 times rated current
IE: 18T1 — 9v @ 2a, 18v @ 2a

Part No.	Amp.	Users Net Price	L (MAX)	W (MAX)	H (MAX)	ML ±1/16	MW ±1/8	A ±1/64	B ±1/64	Weight
18 T 1	1	$ 6.20	2 31/32	3	2 3/4	2 1/2	2 1/4	1/8	1 3/64	2.5
18 T 2	2	8.55	3 13/16	3	2 3/8	3 1/8	2	↓	↓	3.4
18 T 4	4	11.70	4 3/16	3	3 3/4	3 7/16	2 3/8	↓	↓	5.5
18 T 8	8	17.85	4 9/16	3 5/8	4	3 3/4	3	↓	↓	9.5
18 T 12	12	23.90	5 5/16	4 1/4	4 1/2	4 3/8	3 3/8	↓	5/32	14.5
18 T 24	24	42.25	6 1/2	4 5/8	5 1/2	5 5/16	3 3/8	5/32	↓	22
18 T 30	30	52.00	6 1/2	5	5 1/2	5 5/16	3 5/8	↓	↓	25
18 T 50	50	61.20	6 1/2	5 3/4	5 1/2	5 5/16	4 3/8	↓	↓	33

2-28 CENTER TAP WINDINGS

Connected in Series: Delivers 14v, 28v, 42v, 56v at rated current
IE: 28T2 — 14v @ 2a, 28v @ 2a, 42v @ 2a, 56v @ 2a

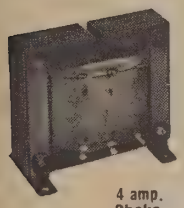
Connected in Parallel: Delivers 2 times rated current
IE: 28T2 — 14v @ 4a, 28v @ 4a

Part No.	Amp.	Users Net Price	L (MAX)	W (MAX)	H (MAX)	ML ±1/16	MW ±1/8	A ±1/64	B ±1/64	Weight
28 T 2	2	$10.15	3 7/8	3 1/4	3 1/8	2 1/2	2 3/8	1/8	1 3/16	5
28 T 4	4	14.85	4 1/4	3 3/4	3 7/16	3	3	↓	↓	8
28 T 6	6	27.50	5 5/16	4 1/4	4 1/2	4 3/8	3 5/8	3/8	5/32	14
28 T 12	12	36.30	6 1/2	5	5 1/2	5 5/16	3 3/8	↓	↓	21
28 T 24	24	74.00	6 1/2	6 1/2	5 1/2	5 3/8	3 1/2	↓	↓	24.5

STEP UP TRANSFORMERS

PRIMARY WINDINGS — 100-105-110-115 VOLT			SECONDARY WINDINGS — 130-135-140 VOLT		
Part No.	Amps.	Users Net Price	Part No.	Amps.	Users Net Price
SU 10	10	$ 70.00	SU 25	25	$128.00
SU 15	15	85.00	SU 30	30	160.00
SU 20	20	112.50	SU 35	35	185.00

HIGH CURRENT CHOKES



4 amp. Choke CK4

Part No.	Amps.	Hy.	Ohms	Users Net Price	L (MAX)	W (MAX)	H (MAX)	ML ±1/16	MW ±1/8	A ±1/64	B ±1/64	Weight
CK 1	1	.1	1.5	$ 5.90	31/32	2 3/4	2 3/4	2 1/2	2	1/8	1 3/64	2
CK 2	2	.04	.9	7.20	3 7/16	3 3/4	3 1/8	2 13/16	2 1/8	↓	↓	3.1
CK 4	4	.07	.6	9.25	3 13/16	3 1/8	3 3/8	3 1/8	2 1/2	↓	↓	5
CK 8	8	.03	.3	14.60	4 3/16	3 5/8	3 3/4	3 7/16	3	↓	↓	8
CK 12	12	.01	.1	18.00	5 5/16	3 3/4	4 1/2	4 3/8	2 7/8	↓	5/32	11.5
CK 20	20	.004	.05	21.00	5 1/4	5	4 1/2	4 1/2	4	1/2	↓	14
CK 24	24	.004	.025	31.25	5 5/16	4 3/4	4 1/2	4 3/8	3 7/8	↓	↓	17.5
CK 30	30	.003	.01	41.75	6 1/2	4 5/8	5 1/2	5 5/16	3 3/8	↓	↓	22
CK 50	50	.001	.001	53.85	6 1/2	4 7/8	5 1/2	5 1/16	3 3/8	↓	↓	23
CK 100	100	.0005	.005	62.35	6 1/2	6	5 1/2	5 5/16	4 1/8	↓	↓	30

CUSTOM BUILT TRANSFORMERS AND CHOKES — 48 HOUR SERVICE

POWER SUPPLIES TO **YOUR** SPECIFICATIONS, QUOTATIONS ON REQUEST

SEE OUR AD UNDER "RECTIFIERS" IN SECTION 4800 FOR SELENIUM AND SILICON STACKS



Mfd. by SANFORD MILLER CORP.

© United Technical Publications

Net

NET PRICE LIST

MICROTRAN

MICROTRAN maintains a warehouse stock of all catalog transformers, providing immediate availability for design or production requirements. MICROTRAN transformers are your assurance of quality, performance and on-time production schedules. Full listings, showing mechanical and electrical specifications, are listed in EEM pages 2877 to 2880. Available from Stocking Distributors at factory prices.

PRICES, MECHANICAL CONSTRUCTION OR ELECTRICAL CHARACTERISTICS SUBJECT TO MODIFICATION WITHOUT NOTICE—EFFECTIVE 5-1-70

Part Number	Net □ Price 1-9 Pcs.
200-1 Thru 200-4†	*1.35
200-5 Thru 200-8†	*1.50
200-K†	*1.50
500-K	△37.95
4000-K	△37.95
6000-K	△65.00
DCM1-PC	4.95
DCM2-PC	5.10
DCM3-PC	4.80
DCM4-PC	4.95
DCM5-PC	4.95
DCM6-PC	4.65
DCM7-PC	5.25
DCM8-PC	4.50
DCM9-PC	4.35
DCM10-PC	4.80
DCM11-PC	4.50
DCM12-PC	4.80
DCM13-PC	4.35
DCM14-PC	4.20
DCM18-PC	4.65
DCM19-PC	4.80
DCM20-PC	4.05
DCM21-PC	4.05
DCM22-PC	4.05
DCM51-PC	3.60
DCM52-PC	3.30
DCM53-PC	3.15
HD-11-AD	△ 3.15
HD-11M	△31.00
HD-15	△12.95
HD-40M	△ 7.49
HM-90	△10.95
HP-61	△ 6.15
HP-70	△ 6.95
HP-71	△ 7.50
M1-A	9.90
M1-AG	10.80
M1-CM†	*15.45
M1-FB	5.85
M1-H	10.50
M1-M	10.80
M1-P	9.90
M1-S	12.90
M2-A	10.20
M2-AG	11.10
M2-CM†	*15.90
M2-FB	6.30
M2-H	10.80
M2-M	11.10
M2-P	10.20
M3-A	9.60
M3-AG	10.80
M3-CM†	*15.15
M3-FB	5.70
M3-H	10.50
M3-M	10.65
M3-P	9.75
M3-PC	5.70
M4-A	8.40
M4-AG	9.45
M4-CM†	*13.35
M4-FB	5.10
M4-H	9.15
M4-M	9.45
M4-P	8.85
M4-PC	5.10
M5-A	8.55
M5-AG	9.30
M5-CM†	*13.35
M5-FB	4.95
M5-H	9.00
M5-M	9.30
M5-P	8.85
M5-PC	4.95
M6-A	9.60
M6-AG	10.35
M6-CM†	*13.20
M6-FB	5.25
M6-H	10.05
M6-M	10.35
M6-P	9.60
M6-PC	5.25
M7-A	9.60
M7-AG	10.20
M7-CM†	*15.15
M7-FB	5.10
M7-H	9.90
M7-M	10.65
M7-P	9.60
M7-PC	5.10
M8-A	9.90
M8-AG	10.65
M8-CM†	*16.20
M8-FB	6.00
M8-H	10.35
M8-M	11.25
M8-P	10.20
M9-A	9.90
M9-AG	10.80
M9-CM†	*16.20
M9-FB	5.85
M9-H	10.50
M9-M	11.25
M9-P	10.20
M10-A	10.35
M10-AG	11.10
M10-CM†	*16.35
M10-FB	6.30
M10-H	10.80
M10-M	11.85
M10-P	10.35
M11-A	9.90
M11-AG	10.80
M11-CM†	*16.35
M11-FB	5.85
M11-H	10.50
M11-M	10.80
M11-P	10.20
M12-A	9.90
M12-AG	10.80
M12-CM†	*16.35
M12-FB	5.85
M12-H	10.50
M12-M	10.80
M12-P	10.20
M13-A	8.10
M13-AG	9.00
M13-CM†	*12.75
M13-FB	4.20
M13-H	8.70
M13-M	8.85
M13-P	8.55
M13-PC	4.20
M14-A	9.45
M14-AG	10.80
M14-CM†	*15.90
M14-FB	5.25
M-14H	10.50
M14-M	11.10
M14-P	10.20
M14-PC	5.25
M15-A	9.45
M15-AG	10.20
M15-CM†	*14.55
M15-FB	5.40
M15-H	9.90
M15-M	10.50
M15-P	10.20
M15-PC	5.40
M90	1.50
M1550	48.00
M1551	28.50
M1552	8.85
M1553	14.40
M1554	42.00
M1555	17.40
M1556	13.95
M1557	36.00
M1558	22.80
M1559	19.50
M8002	12.75
M8003	13.05
M8004	14.85
M8005	14.85
M8008	12.30
M8009	12.75
M8010	12.60
M8011	14.55
M8012	12.75
M8013	14.55
M8015	12.90
M8016	9.30
M8018	18.00
M8019	23.55
M8020	28.50
M8021	27.75
M8022	28.05
M8023	30.00
M8024	26.85
M8025	13.80
M8026	13.80
M8027	9.00
M8030	17.55
M8031	18.45
M8032	16.65
M8033	16.65
M8034	34.20
M8035	34.20
M8036	32.10
M8038	18.60
M8039	19.65
M8041	11.10
M8042	14.70
M8043	17.40
M8044	25.65
M8045	21.15
M8046	33.00
M8050	7.35
M8051	13.50
M8052	15.60
M8053	14.10
M8054††	14.55
M8055	27.60
M8056	22.20
M8057††	31.50
M8058	10.20
M8059	17.10
M8060	28.50
M8061	48.00
M8062	55.50
M8063	10.50
M8064	11.55
M8065	23.25
M8066	31.50
M8067	24.15
M8068	15.15
M8069	9.75
M8070	14.85
M8071	24.15
M8072	8.40
M8073	5.25
M8074	6.30
M8075	9.75
M8076	11.70
M8077	27.75
M8078	35.10
M8079	31.50
M8080	14.85
M8081	9.75
M8082	10.50
M8083	18.60
M8084	16.50
M8085	34.20
M8086	21.60
M8087	21.60
M8088	24.15
M8089	13.80
M8090	19.80
M8091	21.15
M8094	14.10
M8095	28.50
M8096	22.20
M8098	9.90
M8099	12.90
M8100	14.70
M8101	16.65
M8102	21.60
M8103	24.00
M8104	22.80
M8105	25.65
M8106	17.55
M8107	17.10
M8108	17.10
M8109	17.55
M8110	18.60
M8111	16.80
M8112	15.00
M8113	28.50
M8114	27.75
M8115	21.30
M8116	28.50
M8117	21.30
M8118	27.75
M8120	7.80
M8132	18.90
M8133	18.45
M8151	23.40
M8152	15.30
M8198	3.60
M8199	3.75
M8200	5.85
M8201	6.60
M8202	10.05
M8203	12.90
M8204	12.60
M8205	17.25
M8222	11.70
M8223	16.35
M8224	12.45
M8242	7.65
M8243	9.00
M8244	12.00
M8245	9.60
M8246	19.65
M8247	17.40
M8251	13.20
M8255	12.90
M8256	12.45
M8278	17.55
M8286	8.85
M8287	8.85
M8288	12.15
M8289	7.80
M8290	8.70
M8291	9.45
M8294	5.55
M8295	11.40
M8296	12.15
M8302	4.20
M8303	4.35
M8304	3.90
M8305	4.05
M8308	3.90
M8309	4.05
M8310	4.20
M8311	4.20
M8312	4.20
M8313	3.75
M8315	4.05
M8316	3.60
M8325	16.65
M8526	16.65
M8552	17.10
M8553	16.50
MM1-CM†	*11.10
MM1-FB	5.25
MM1-H	7.35
MM1-M	8.55
MM2-CM†	*11.25
MM2-FB	5.40
MM2-H	7.50
MM2-M	8.70
MM3-CM†	*10.95
MM3-FB	4.95
MM3-H	7.20
MM3-M	8.40
MM4-CM†	*10.80
MM4-FB	4.65
MM4-H	7.05
MM4-M	8.25
MM5-CM†	*10.50
MM5-FB	4.65
MM5-H	6.90
MM5-M	8.10
MM6-CM†	*10.95
MM6-FB	4.95
MM6-H	7.20
MM6-M	8.40
MM7-CM†	*9.90
MM7-FB	3.90
MM7-H	6.45
MM7-M	7.65
MMT1-CM†	*11.10
MMT1-FB	3.90
MMT1-H	7.35
MMT1-M	8.55
MMT3-CM†	*11.25
MMT3-FB	4.05
MMT3-H	7.50
MMT3-M	8.70
MMT4-CM†	*12.75
MMT4-FB	4.95
MMT4-H	8.55
MMT4-M	9.75
MMT5-CM†	*11.85
MMT5-FB	4.35
MMT5-H	7.95
MMT5-M	9.15
MMT7-CM†	*12.45
MMT7-FB	4.50
MMT7-H	8.40
MMT7-M	9.60
MMT8-CM†	*12.75
MMT8-FB	4.95
MMT8-H	8.55
MMT8-M	9.75
MMT9-CM†	*11.55
MMT9-FB	4.50
MMT9-H	7.65
MMT9-M	8.85
MMT10-CM†	*10.95
MMT10-FB	4.35
MMT10-H	7.20
MMT10-M	8.40
MMT11-CM†	*11.70
MMT11-FB	4.50
MMT11-H	7.80
MMT11-M	9.00
MMT12-CM†	*11.10
MMT12-FB	3.90
MMT12-H	7.35
MMT12-M	8.55
MMT13-CM†	*11.25
MMT13-FB	4.05
MMT13-H	7.50
MMT13-M	8.70
MMT16-CM†	*12.45
MMT16-FB	4.50
MMT16-H	8.40
MMT16-M	9.60
MMT17-CM†	*12.15
MMT17-FB	4.50
MMT17-H	8.10
MMT17-M	9.30
MMT18-CM†	*12.75
MMT18-FB	4.65
MMT18-H	8.55
MMT18-M	9.75
MMT19-CM†	*11.25
MMT19-FB	4.35
MMT19-H	7.50
MMT19-M	8.70
MMT21-CM†	*12.75
MMT21-FB	4.65
MMT21-H	8.55
MMT21-M	9.75
MMT25-CM†	*11.70
MMT25-FB	4.50
MMT25-H	7.80
MMT25-M	9.00
MMT26-CM†	*11.55
MMT26-FB	4.20
MMT26-H	7.65
MMT26-M	8.85
MMT27-CM†	*11.55
MMT27-FB	4.50
MMT27-H	8.40
MMT27-M	9.60
MMT28-CM†	*12.75
MMT28-FB	4.65
MMT28-H	8.55
MMT28-M	9.75
MMT29-CM†	*12.75
MMT29-FB	4.65
MMT29-H	8.55
MMT29-M	9.75
MMT30-CM†	*12.45
MMT30-FB	4.50
MMT30-H	8.40
MMT30-M	9.60
MMT31-CM†	*12.30
MMT31-FB	4.35
MMT31-H	8.25
MMT31-M	9.45
MMT32-CM†	*12.75
MMT32-FB	4.80
MMT32-H	8.85
MMT32-M	9.75
MMT33-CM†	*12.75
MMT33-FB	4.80
MMT33-H	8.85
MMT33-M	9.75
MMT35-CM†	*12.90
MMT35-FB	4.80
MMT35-H	8.70
MMT35-M	9.90
MT1-A	8.10
MT1-AG	8.70
MT1-CM†	*14.10
MT1-FB	3.75
MT1-H	7.80
MT1-M	9.00
MT1-P	7.35
MT1-PC	4.05
MT2-A	9.00
MT2-AG	9.60
MT2-CM†	*15.45
MT2-FB	4.20
MT2-H	8.70
MT2-M	9.90
MT2-P	8.25
MT3-A	8.70
MT3-AG	9.30
MT3-CM†	*15.00
MT3-FB	4.50
MT3-H	8.40
MT3-M	9.60
MT3-P	7.95
MT3-PC	4.50
MT5-A	8.70
MT5-AG	9.30
MT5-CM†	*15.00
MT5-FB	4.50
MT5-H	8.40
MT5-M	9.60
MT5-P	7.95
MT5-PC	4.50
MT6-A	8.85
MT6-AG	9.45
MT6-CM†	*15.15
MT6-FB	4.80
MT6-H	8.55
MT6-M	9.75

*Not stocked. Available on short order. In 1-49 quantity, add $12.50 lot set-up charge. △Quantity discount not applicable. †Not stocked. Available on short order. ††Discontinued item, available until stock is depleted. □Quantity pricing schedule is as follows: 10-49 less 10%, 50-99 less 16⅔%, 100-249 less 33⅓%. Contact factory for prices over 249.

MICROTRAN COMPANY INC.

Net

© United Technical Publications

MICROTRAN

Part Number	Net □ Price 1-9 Pcs.
MT6-P	8.10
MT6-PC	4.80
MT7-A	8.85
MT7-AG	9.45
MT7-CM†	*15.15
MT7-FB	4.65
MT7-H	8.55
MT7-M	9.75
MT7-P	8.10
MT8-A	9.00
MT8-AG	9.60
MT8-CM†	*15.45
MT8-FB	4.80
MT8-H	8.70
MT8-M	9.90
MT8-P	8.25
MT8-PC	4.80
MT9-A	9.00
MT9-AG	9.60
MT9-CM†	*15.45
MT9-FB	4.65
MT9-H	8.70
MT9-M	9.90
MT9-P	7.80
MT9-PC	4.65
MT10-A	8.70
MT10-AG	9.30
MT10-CM†	*15.00
MT10-FB	4.05
MT10-H	8.40
MT10-M	9.60
MT10-P	7.95
MT11-A	9.00
MT11-AG	9.60
MT11-CM†	*15.45
MT11-FB	4.50
MT11-H	8.70
MT11-M	9.90
MT11-P	8.25
MT11-PC	4.50
MT12-A	8.70
MT12-AG	9.30
MT12-CM†	*15.00
MT12-FB	4.05
MT12-H	8.40
MT12-M	9.60
MT12-P	7.95
MT12-PC	4.05
MT13-A	8.85
MT13-AG	9.45
MT13-CM†	*15.15
MT13-FB	4.20
MT13-H	8.55
MT13-M	9.75
MT13-P	8.10
MT14-A	8.10
MT14-AG	8.70
MT14-CM†	*13.95
MT14-FB	3.75
MT14-H	7.80
MT14-M	9.00
MT14-P	7.35
MT15-PC	3.75
MT15-A	8.70
MT15-AG	9.30
MT15-CM†	*15.00
MT15-FB	4.05
MT15-H	8.40
MT15-M	9.60
MT15-P	7.95
MT18-A	9.0[illegible]
MT18-AG	9.6[illegible]
MT18-CM†	*15.45
MT18-FB	4.80
MT18-H	8.70
MT18-M	9.90
MT18-P	8.25
MT20-A	9.30
MT20-AG	9.90
MT20-CM†	*15.90
MT20-FB	4.80
MT20-H	9.00
MT20-M	10.20
MT20-P	8.55
MT21-A	9.15
MT21-AG	9.75
MT21-CM†	*15.75
MT21-FB	5.25
MT21-H	8.85
MT21-M	10.05
MT21-P	8.40
MT22-A	9.15
MT22-AG	9.75
MT22-CM†	*15.75
MT22-FB	5.25
MT22-H	8.85
MT22-M	10.05
MT22-P	8.40
MT23-A	8.70
MT23-AG	9.30
MT23-CM†	*15.00
MT23-FB	4.05
MT23-H	8.40
MT23-M	9.60
MT23-P	7.95
MT23-PC	4.05
MT24-A	8.70
MT24-AG	9.30
MT24-CM†	*15.00
MT24-FB	4.05
MT24-H	8.40
MT24-M	9.60
MT24-P	7.95
MT25-A	9.00
MT25-AG	9.60
MT25-CM†	*15.45
MT25-FB	4.50
MT25-H	8.70
MT25-M	9.90
MT25-P	8.25
MT25-PC	4.50
MT26-A	8.85
MT26-AG	9.45
MT26-CM†	*15.15
MT26-FB	4.50
MT26-H	8.55
MT26-M	10.65
MT26-P	8.10
MT26-PC	4.50
MT29-A	8.70
MT29-AG	9.30
MT29-CM†	*15.00
MT29-FB	4.05
MT29-H	8.40
MT29-M	9.60
MT29-P	7.95
MT29-PC	4.05
MT30-A	8.70
MT30-AG	9.30
MT30-CM†	*15.00
MT30-FB	4.05
MT30-H	8.40
MT30-M	9.60
MT30-P	7.95
MT30-PC	4.05
MT33-A	9.30
MT33-AG	9.90
MT33-CM†	*15.90
MT33-FB	5.25
MT33-H	9.00
MT33-M	10.20
MT33-P	8.55
MT34-A	9.45
MT34-AG	10.05
MT34-CM†	*16.05
MT34-FB	5.40
MT34-H	9.15
MT34-M	10.35
MT34-P	8.70
MT35-A	9.90
MT35-AG	10.50
MT35-CM†	*16.50
MT35-FB	5.85
MT35-H	9.60
MT35-M	10.95
MT35-P	9.15
PC4304	4.35
PC4312	4.50
PC4316	4.50
PC4320	4.65
PC4408	4.50
PC4412	4.50
PC4416	4.65
PC4424	4.65
PC4428	4.80
PC4432	4.95
PP6506	5.10
PC6512	5.40
PC6524	5.25
PC6528	5.25
PC6608	5.10
PC6616	5.25
PC6624	5.40
PC6628	5.40
PC6632	5.70
PC6708	5.25
PC6712	5.25
PC6716	5.25
PC6724	5.40
PC6728	5.40
PC6732	5.70
PM3-M	12.30
PM5-M	11.40
PM7-M	12.00
PM9-M	12.00
PM11-M	11.40
PM13-M	11.40
PM15-F	5.10
PM15-M	10.50
PM17-M	10.95
PM19-M	11.25
PM21-M	11.70
PM23-M	11.25
PM25-M	11.55
PM27-F	4.80
PM27-M	10.20
PM29-M	11.10
PM31-F	6.60
PM31-M	10.65
PM33-F	4.95
PM33-M	10.50
PM34-M	10.80
PM35-F	4.35
PM35-M	10.05
PM36-M	11.10
PM37-F	4.65
PM37-M	10.35
PM38-F	4.80
PM38-M	10.95
PM39-F	4.20
PM39-M	9.00
PM40-F	4.05
PM40-M	8.55
PM41-F	3.90
PM41-M	8.10
PM90	1.05
QEL1-M	7.95
QEL2-M	7.95
QEL5-M	8.40
QEL10-M	8.55
QEL15-M	8.70
QEL25-M	9.00
QEL50-M	9.15
QEL100-M	9.60
QEM05-M	8.40
QEM1-M	8.40
QEM2-M	8.40
QEM5-M	8.85
QEM10-M	9.00
QEM15-M	9.15
QEM25-M	9.45
QEM50-M	9.75
QGL5-F	4.35
QGL5-H†	*7.50
QGL5-HC†	*7.50
QGL5-M	6.90
QGL10-F	4.35
QGL10-H†	*7.50
QGL10-HC†	*7.50
QGL10-M	6.90
QGL15-F	4.50
QGL15-H†	*7.65
QGL15-HC†	*7.65
QGL15-M	7.05
QGL30-F	4.65
QGL30-H†	*7.80
QGL30-HC†	*7.80
QGL30-M	7.20
QGL50-F	4.80
QGL50-H†	*7.95
QGL50-HC†	*7.95
QGL50-M	7.35
QGL100-F	4.95
QGL100-H†	*8.40
QGL100-HC†	*8.40
QGL100-M	7.50
QGL250-F	5.10
QGL250-H†	*8.40
QGL250-HC†	*8.40
QGL250-M	7.65
QGL500-F	5.85
QGL500-H†	*9.15
QGL500-HC†	*9.15
QGL500-M	9.30
QGL1000-F	6.75
QGL1000-H†	*9.60
QGL1000-HC†	*9.60
QGL1000-M	9.90
QGL1500-F	6.90
QGL1500-H†	*10.20
QGL1500-HC†	*10.20
QGL1500-M	10.35
QGM1-F	4.80
QGM1-H†	*8.10
QGM1-HC†	*8.10
QGM1-M	7.35
QGM2-F	4.80
QGM2-H†	*8.10
QGM2-HC†	*8.10
QGM2-M	7.35
QGM5-F	5.10
QGM5-H†	*8.25
QGM5-HC†	*8.25
QGM5-M	7.50
QGM10-F	5.25
QGM10-H†	*8.25
QGM10-HC†	*8.25
QGM10-M	7.65
QGM15-F	5.40
QGM15-H†	*8.40
QGM15HC†	*8.40
QGM15-M	7.80
QGM25-F	5.70
QGM25-H†	*8.55
QGM25-HC†	*8.55
QGM25-M	7.95
QGM50-F	6.30
QGM50-H†	*9.60
QGM50-HC†	*9.60
QGM50-M	8.10
QGM100-F	6.45
QGM100-H†	*9.90
QGM100-HC†	*9.90
QGM100-M	8.85
QIL3-F	4.20
QIL3-H	7.35
QIL3-M	7.05
QIL5-F	4.20
QIL5-H	7.35
QIL5-M	7.05
QIL10-F	4.20
QIL10-H	7.35
QIL10-M	7.05
QIL15-F	4.20
QIL15-H	7.35
QIL15-M	7.20
QIL25-F	4.35
QIL25-H	7.80
QIL25-M	7.20
QIL50-F	4.35
QIL50-H	7.80
QIL50-M	7.35
QIL100-F	4.50
QIL100-H	8.25
QIL100-M	7.65
QIL150-F	4.65
QIL150-H	8.40
QIL150-M	7.80
QIL250-F	4.80
QIL250-H	8.85
QIL250-M	7.95
QIL500-F	5.10
QIL500-H	9.15
QIL500-M	8.10
QIL1000-F	5.40
QIL1000-H	9.75
QIL1000-M	8.55
QIL1500-F	6.15
QIL1500-H	10.20
QIL1500-M	9.60
QIL2500-F	7.05
QIL2500-H	11.55
QIL2500-M	11.10
QKL5-H	7.65
QKL5-H	.765
QKL5-M	6.90
QKL10-F	4.50
QKL10-H	7.80
QKL10-M	6.90
QKL15-F	4.80
QKL15-H	7.95
QKL15-M	6.90
QKL25-F	4.95
QKL25-H	8.10
QKL25-M	7.05
QKL50-F	4.95
QKL50-H	8.40
QKL50-M	7.05
QKL100-F	5.10
QKL100-H	9.00
QKL100-M	7.50
QKL150-F	5.45
QKL150-H	9.15
QKL150-M	7.65
QKL250-F	5.25
QKL250-H	9.45
QKL250-M	7.80
QKL500-F	5.40
QKL500-H	9.75
QKL500-M	7.95
QKL1000-F	5.55
QKL1000-H	10.20
QKL1000-M	8.40
QKL1500-F	5.70
QKL1500-H	10.65
QKL1500-M	8.55
QKL2500-F	6.30
QKL2500-H	10.95
QKL2500-M	8.70
QKL5000-F	7.05
QKL5000-H	12.00
QKL5000-M	9.60
QKL10000-F	7.80
QKL10000-H	13.35
QKL10000-M	10.95
QKM2-F	5.10
QKM2-H	8.70
QKM2-M	7.50
QKM5-F	5.25
QKM5-H	8.85
QKM5-M	7.50
QKM10-F	5.25
QKM10-H	9.00
QKM10-M	7.65
QKM25-F	5.40
QKM25-H	9.30
QKM25-M	7.80
QKM50-F	5.55
QKM50-H	9.45
QKM50-M	7.95
QKM100-F	5.70
QKM100-H	9.45
QKM100-M	8.10
QKM250-F	5.85
QKM250-H	9.75
QKM250-M	8.40
QKM500-F	6.15
QKM500-H	10.05
QKM500-M	8.70
QKM1000-F	6.45
QKM1000-H	11.10
QKM1000-M	9.90
QPL25-F	6.90
QPL25-H	12.75
QPL25-M	9.90
QPL50-F	7.05
QPL50-H	12.90
QPL50-M	10.05
QPL100-F	7.20
QPL100-H	13.20
QPL100-M	10.20
QPL250-F	7.35
QPL250-H	13.35
QPL250-M	10.50
QPL500-F	7.50
QPL500-H	13.50
QPL500-M	10.80
QPL1000-F	7.80
QPL1000-H	13.95
QPL1000-M	11.25
QPL1500-F	8.10
QPL1500-H	14.55
QPL1500-M	11.55
QPL2500-F	8.70
QPL2500-H	15.30
QPL2500-M	12.15
QPL-5000-F	9.45
QPL5000-H	16.20
QPL5000-M	12.90
QPL7500-F	10.05
QPL7500-H	17.55
QPL7500-M	13.65
QPL10000-F	11.10
QPL10000-H	18.45
QPL10000-M	14.85
QPL15000-F	12.00
QPL15000-H	19.80
QPL15000-M	15.60
QPL25000-F	13.05
QPL25000-H	21.60
QPL25000-M	17.40
QTL25-F	11.85
QTL25-H	13.50
QTL25-M	14.55
QTL50-F	12.00
QTL50-H	13.65
QTL50-M	14.70
QTL100-F	12.45
QTL100-H	13.95
QTL100-M	15.00
QTL150-F	12.90
QTL150-H	14.25
QTL150-M	15.75
QTL250-F	13.20
QTL250-H	14.55
QTL250-M	16.05
QTL500-F	13.50
QTL500-H	14.85
QTL500-M	16.05
QTL1000-F	13.50
QTL1000-H	15.15
QTL1000-M	13,95
QTL1500-F	13.65
QTL1500-H	15.45
QTL1500-M	16.35
QTL2500-F	14.40
QTL2500-H	16.05
QTL2500M	17.10
QTL5000-F	14.40
QTL5000-H	16.65
QTL5000-M	17.25
QTL10000-F	15.75
QTL10000-H	17.25
QTL10000-M	18.60
QTL15000-F	16.80
QTL15000-H	18.30
QTL15000-M	19.80
QTL25000-F	18.00
QTL25000-H	19.50
QTL25000-M	21.15
QTL50000-F	25.20
QTL50000-H	26.40
QTL50000-M	27.75
SM1-AF	9.00
SM1-CM†	*11.70
SM1-FB	5.25
SM1-H	8.25
SM1-M	9.90
SM2-AF	8.70
SM2-CM†	*11.70
SM2-FB	4.95
SM2-H	7.95
SM2-M	9.90
SM3-AF	8.70
SM3-CM†	*11.70
SM3-FB	4.95
SM3-H	7.95
SM3-M	9.90
SM4-AF	8.70
SM4-CM†	*11.70
SM4-FB	4.95
SM4-H	7.95
SM4-M	9.90
SM5-AF	7.20
SM5-CM†	*10.95
SM5-FB	4.20
SM5-H	7.20
SM5-M	9.30
SM6-AF	8.70
SM6-CM†	*11.70
SM6-FB	5.25
SM6-H	8.10
SM6-M	9.90
SMT1-AF	6.75
SMT1-CM†	*9.30
SMT1-FB	4.50
SMT1-H	7.20
SMT1-M	8.40
SMT3-AF	7.35
SMT3-CM†	*10.20
SMT3-FB	5.10
SMT3-H	7.95
SMT3-M	9.00
SMT4-CM†	*10.65
SMT4-FB	5.70
SMT4-H	8.40
SMT4-M	9.60
SMT5-AF	7.20
SMT5-CM†	*9.90
SMT5-FB	4.95
SMT5-H	7.80
SMT5-M	8.85
SMT7-AF	7.50
SMT7-CM†	*10.35
SMT7-FB	5.40
SMT7-H	8.10
SMT7-M	9.30
SMT8-CM†	*10.65
SMT8-FB	5.70
SMT8-H	8.40
SMT8-M	9.60
SMT9-CM†	*9.75
SMT9-FB	4.95
SMT9-H	7.65
SMT9-M	8.70
SMT10-AF	7.05
SMT10-CM†	*9.75
SMT10-FB	4.95
SMT10-H	7.65
SMT10-M	8.70
SMT12-AF	6.75
SMT12-CM†	*9.30
SMT12-FB	4.50
SMT12-H	7.20
SMT12-M	8.40
SMT13-AF	6.90
SMT13-CM†	*9.60
SMT13-FB	4.65
SMT13-H	7.35
SMT13-M	8.55
SMT16-AF	7.50
SMT16-CM†	*10.35
SMT16-FB	5.40
SMT16-H	8.10
SMT16-M	9.30
SMT17-CM†	*10.50
SMT17-FB	5.55
SMT17-H	8.25
SMT17-M	9.45
SMT18-CM†	*10.65
SMT18-FB	5.70
SMT18-H	8.40
SMT18-M	9.60
SMT19-AF	7.50
SMT19-CM†	*10.35
SMT19-FB	5.25
SMT19-H	8.10
SMT19-M	9.30
SMT26-CM†	*10.20
SMT26-FB	5.10
SMT26-H	7.95
SMT26-M	9.00
SMT36-CM†	*10.80
SMT36-FB	5.85
SMT36-H	8.55
SMT36-M	9.75
UM21-F	6.00
UM21-M	8.40
UH22-F	4.35
UM22-M	7.95
UM23-F	4.65
UM23-M	8.10
UM24-F	3.90
UM24-M	6.90
UM25-F	3.90
UM25-M	6.90
UM26-F	3.90
UM26-M	6.90
UM27-F	4.20
UM27-M	7.05
UM28-F	3.75
UM28-M	6.00
UM29-F	4.65
UM29-M	8.25
UM30-F	3.60
UM30-M	5.40
UM31-F	4.80
UM31-M	9.60
UM32-F	4.35
UM32-M	7.65
UM33-F	4.35
UM33-M	6.90
UM34-F	4.50
UM34-M	9.45
UM35-F	4.95
UM35-M	10.05
UM36-F	4.80
UM36-M	9.90
UM37-F	4.50
UM37-M	7.80
UM39-F	4.50
UM39-M	7.65
UM90	1.35
VM1-FPB	4.20
VM1-M	6.45
VM2-FPB	5.70
VM2-M	8.10
VM3-FPB	4.50
VM3-M	7.20
VM4-FPB	5.70
VM4-M	8.10
VM5-FPB	4.65
VM5-M	7.50
VM6-FPB	5.85
VM6-M	8.40
VM7-FPB	4.20
VM7-M	6.45
VM8-FPB	4.35
VM8-M	6.60
VM9-FPB	4.35
VM9-M	6.60
VM10-FPB	4.65
VM10-M	7.95
VM11-FPB	4.05
VM11-M	5.85
VM12-FPB	4.50
VM12-M	7.20
VM13-FPB	4.65
VM13-M	7.80
VM14-FPB	4.50
VM14-M	7.65
VM15-FPB	6.00
VM15-M	9.75
VM16-FPB	4.50
VM16-M	7.65
VM17-FPB	5.85
VM17-M	8.10
VM90	1.95

*Not stocked. Available on short order. In 1-49 quantity, add $12.50 lot set-up charge. △Quantity discount not applicable. †Not stocked. Available on short order. ††Discontinued item, available until stock is depleted. □Quantity pricing schedule is as follows: 10-49 less 10%, 50-99 less 16⅔%, 100-249 less 33⅓%. Contact factory for prices over 249.

© United Technical Publications

OHMITE variable transformers

OHMITRAN v.t.® VARIABLE TRANSFORMER

Unique for the design innovations they incorporate, Ohmite "OHMITRAN" v.t.® variable transformers include exclusive field-proven features. They offer long, low maintenance operation with excellent regulation at any voltage setting within the rated load plus an output free of waveform distortion. Six frame sizes offer a wide range of electrical ratings to meet most industrial applications. These include three new, compact, low-power models (VT1, VT02, VT3,) which permit a fine choice of six ratings from 1 to 3 amperes.

The VT1, rated 1 ampere, is the smallest commercial variable transformer available.

UL LISTING: A number of VT4, VT8 and VT20 transformers used for 120 volt line operation are underwriters' laboratories listed. See tables, page 26 for details.

POSITIVE CURRENT TRANSFER . . . achieved with specially designed brushes connected through high conductivity contact arms or pigtails to a large slip ring which contacts a wide area of the collector ring. The brush contact assembly on the VT1, VT02, and VT3 is instantly replaceable, when necessary, as a result of a slide-on, snap-in design. Brushes of the other models are easily replaced also.

ADJUSTABLE SHAFT: On all Ohmite transformers, except the VT2LN, the shaft may be extended out from either the brush or opposite side as desired. On the VT1, VT02 and VT3, both single and tandem assemblies, this is an **exclusive** Ohmite feature which affords greater versatility of mounting and application. For example, substitution of a longer shaft or extension of the standard shaft allows actuation of other devices, such as switches or potentiometers without special construction. The shaft is freed simply by loosening set screw in the hub assembly. A double flat on the shaft permits two knob positions.

On the VT4, VT8, and VT20 types, the adjustable shaft feature permits **table or panel use.** "Ganged" or tandem VT4, VT8 and VT20 units employ a thru-shaft offering the same flexibility. On VT4 and VT8 units, shafts are fixed in the desired position by means of socket head screws located in the hub of each "brush-radiator" plate. The VT20 employs a unique collet-type shaft lock.

INTERCHANGEABLE WITH OTHER POPULAR TYPES: Basic "v.t." units have mounting provisions which match those of virtually all popular transformers of comparable current rating. Models VT4, VT8 and VT20 mount by means of bolts. Normally 3-hole mounting, single VT4 units can be "4-hole mounted" by means of adapter plate, see page 35. Individual Model VT1, VT02, VT2LN, or VT3 units mount by means of a standard ⅜-32 threaded bushing. All tandem assemblies mount by means of bolts or nuts. Knob, dial and mounting hardware are included with each transformer.

DIRECT READING, TWO SCALE DIAL . . . calibrated on one side for overvoltage connection; on the reverse side for line voltage connection. Dials normally included with transformer read clockwise for increasing voltage; counter-clockwise calibration available—see page 35.

WIRING AND CONNECTIONS: Wiring instructions to arrange various modes of operation are enclosed with all OHMITE variable transformers. Terminal panels or adjacent nameplate carry convenient wiring diagram, coded terminals and input and output data. Three way terminals on VT1, VT2LN, VT02, VT3 will accept ¼" push-on connectors, screws and nuts, or conventional soldering.

ROTATION OPTION: On VT4, VT8 and VT20 transformers connected for overvoltage, either clockwise or counter-clockwise increase of voltage can be arranged easily by the user. Increasing voltage in either direction can be arranged on all units connected for no-overvoltage output. Dials for counter-clockwise operation are stocked. See "Accessories."

OVERVOLTAGE OPTION: On all transformers with overvoltage feature, no-overvoltage operation can be arranged on the terminal panel.

NO-OVERVOLTAGE TRANSFORMERS ("N" suffix): Provide considerably more current due to heavier gage winding.

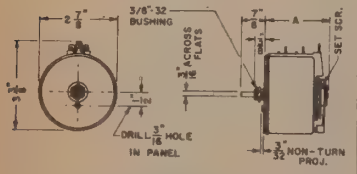
240-VOLT INPUT ("H" suffix): On units which are wound for 240-volt input, a 120 volt input tap is also provided. With the use of this input, the maximum current rating applies up to 120 volts output but beyond this reduces proportionately to approximately 50% at maximum voltage output.

LOW VOLTAGE INPUT ("L" feature): Designed for a maximum input of approximately 40 volts, with high current output.

GROUNDED INPUT & OUTPUT ("C" feature): Units in type F or G cases can be provided with a three-conductor cord and outlet. One conductor is grounded to the case. This feature standard on all cased VT20 units and on all metered units.

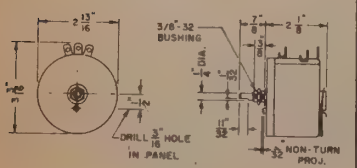


VT1, VT02, VT2LN, VT3; SINGLE, UNCASED
Angle of rotation 320° ±5°

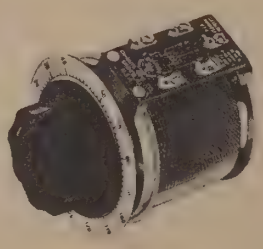


"A" DIMENSION

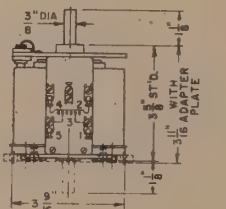
VT1, VT1N	1 13/16"
VT02, VT02N	2 5/16"
VT3, VT3N	2 13/16"

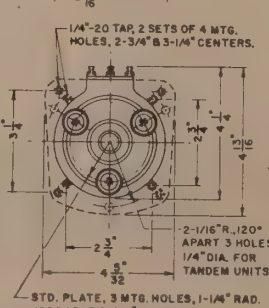


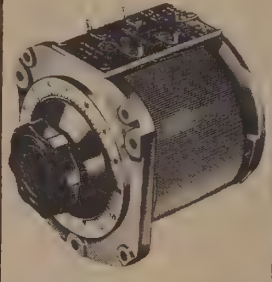
VT2LN
U.S. Patent Nos. 2,790,882 2,985,857



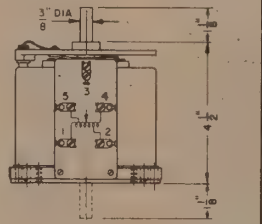
VT4 TYPES, SINGLE, UNCASED
Angle of rotation: 324° ±5°

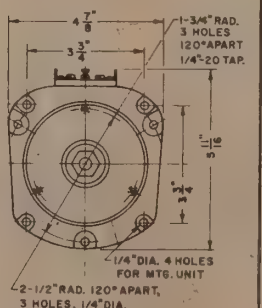


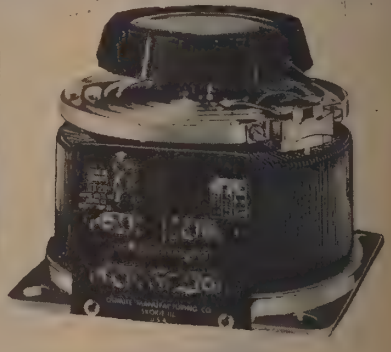




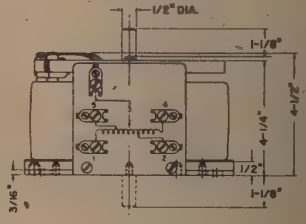
VT8 TYPES, SINGLE, UNCASED
Angle of rotation: 324° ±5°

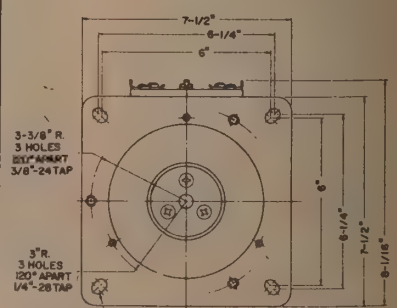






VT20 TYPES, UNCASED
Angle of rotation: 317° ±5°





© United Technical Publications

OHMITE variable transformers

ENCLOSED OR CASED UNITS: In gray hammer tone finish. "Basic protective enclosures" (Type B) expose the transformer's terminal panel and mounting base and are supplied presently on VT20 models only. (See tandems in "B" enclosures below.) "Fixed mounting enclosures" (Type E) are intended for permanent mounting on table, panel or inconduit-line. Standard portable units (Type F) carry a line cord, outlet socket, and fuse except for VT20F which has a circuit breaker. Deluxe portable units (Type G) utilize a circuit breaker, can be switched to overvoltage or no-overvoltage as desired, have a handle which also serves as an easel.

METERED ENCLOSURES: VT8NFC, VT8GC, VT20NFC and VT20GC transformers are available with voltmeter (V), voltmeter and ammeter (A) or voltmeter and wattmeter (W). The metered transformer enclosures are larger than the non-metered types of comparable designation, (see dimensions below). All stock metered units have the three-conductor grounded cord and outlet and all, except the VT8NF group, are equipped with carrying handles.

SINGLE UNIT CASE DIMENSIONS

Series	Case◆	W	D	H
VT1 or VT02	E	3 3/4	2 1/2 *	4 1/4
	F	3 3/8	2 1/2 *	4 1/4
VT4	E	4 1/2	4 1/2 *	6 3/16
	F	4 7/8	4 1/2 *	6 1/4
VT8	E	5 3/16	5 1/4 *	7 3/16
	F	5 17/32	5 1/4 *	7 3/8
	FV, FVA, FVW	7 3/8	5 1/4 *	10 1/2
	G	5 3/16 †	5 1/4 *	7 3/8 ‡
	GV, GVA, GVW	7	5 1/4 *	10 1/2 ‡
	3E	5 3/16	15 3/4 *	7 3/16
VT20	B	7 5/8	8 1/8	4 7/8 *
	E	7 3/4	5 1/2 *	10 15/16
	F	8 1/4	5 1/2 *	11 1/4
	FV, FVA, FVW	8 1/4	5 1/2 ‡	14 ‡
	G	7 3/4 §	5 1/2 *	11 1/4 ‡
	GV, GVA, GVW	8 1/4	5 1/2 ‡	14 ‡

* Add 1" for knob thickness for VT8 types; 7/8" for VT1, 02 and VT4 types, 1 1/4" for VT20 types.

† 5 3/4" including handle fittings.

‡ Case height only.

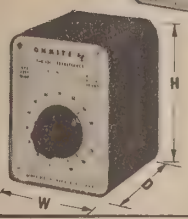
§ 9" including handle fittings.

◆ V, A and W = voltmeter, ammeter and wattmeter respectively.

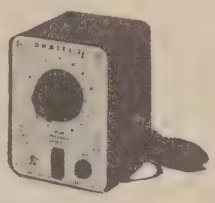

VT20B


VT02E

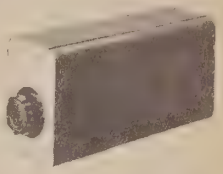

VT02F

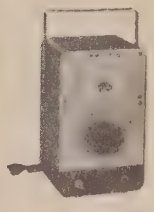


VT4E


VT4F


VT4FC


VT8-3E

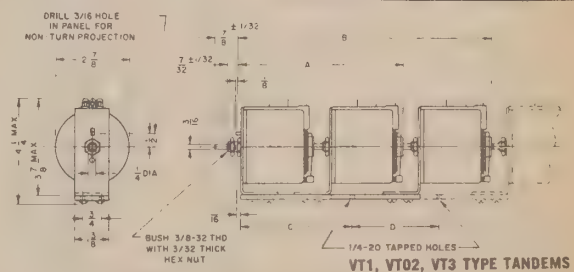

VT8GCV (with voltmeter)


VT8G

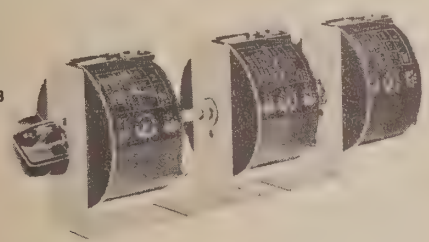
TANDEM OR GANGED UNITS: Two or 3-in-tandem assemblies are standard. Larger tandem assemblies available made to order. All tandem assemblies are normally furnished with inter-connections between the units. A few cased tandems are stocked. Tandems in "B" type enclosures have individual cases on each transformer.

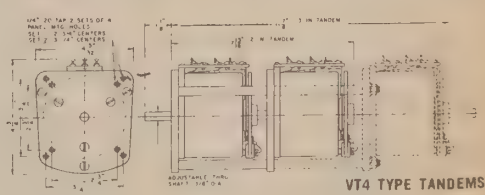
TANDEM VT1, VT02, VT3 DIMENSIONS

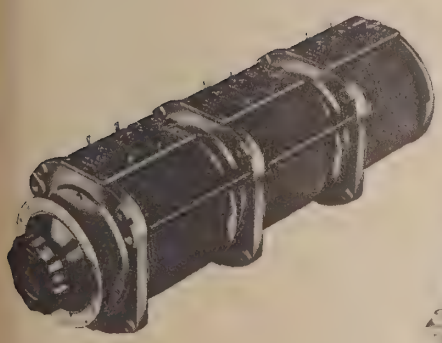
	A	B	C
VT1	4 7/32	6 17/32	4 1/4
VT02	5 7/32	8 1/32	4 1/2
VT3	6 17/32	9 27/32	4 1/2

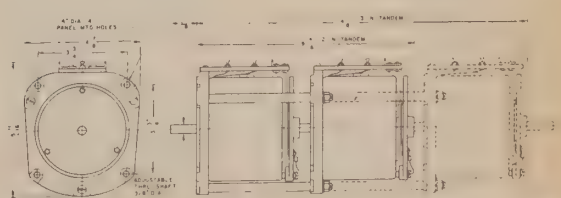


VT1, VT02, VT3 TYPE TANDEMS

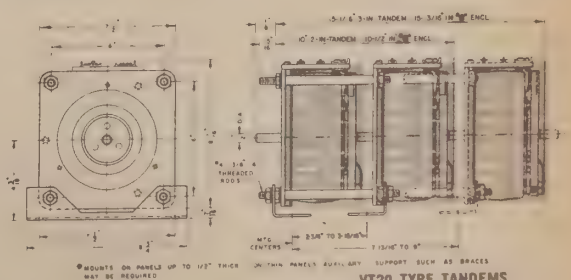

VT02N-3


VT4 TYPE TANDEMS


VT8-3


VT8 TYPE TANDEMS


VT20-2


VT20 TYPE TANDEMS

See page 34 for ratings and ordering information.

© United Technical Publications

OHMITE variable transformers

STOCK VARIABLE TRANSFORMERS

SINGLE PHASE

SINGLE TRANSFORMERS — UNCASED (Dimensions p. 32)

Input Volts	Freq.[1] Hz from	Feature or Connection	U.L. see footnotes below	Maximum Output Volts	Amps	Catalog No.[13]	Wt. Lbs.[7]
40	60	Hi-amps, low volts		0-40	5.0	VT2LN	2.4
40	50	Hi-amps, low volts		0-40	12.0	(VT4LN)	5.25
40	50	Hi-amps, low volts		0-40	22.0	**VT8LN**	10.25
120	60[8]	Basic 1.0A Model		0-120/132	1.3	**VT1**	1.5
120	60	No overvoltage		0-120	1.5	**VT1N**	1.5
120	60[8]	Basic 1.75A Model		0-120/132	2.0	**VT02**	2.25
120	60	No overvoltage		0-120	2.5	**VT02N**	2.25
120	60[8]	Basic 2.6A Model		0-120/132	3.0	**VT3**	3.0
120	60	No overvoltage		0-120	3.0	**VT3N**	3.0
120	50	Basic 3.5A Model	11	0-120/140	3.5	**VT4**	5.25
120	50	No overvoltage	11	0-120	4.75	**VT4N**	5.25
120	50	Basic 7.5A Model	11	0-120/140	7.5	**VT8**	10.25
120	50	No overvoltage	11	0-120	10.0	**VT8N**	10.25
120	50	Basic 20A Model	11	0-120/140	20.0	**VT20**	22.0
120	50	No overvoltage	11	0-120	25.0	**VT20N**	22.0
240[2]	50	240V Input[2]		0-240/280	3.0	**VT8H**	10.25
240[2]	50	240V In. No ovrvlt.[2]		0-240	4.0	**VT8HN**	10.25
240[2]	50	240V Input[2]		0-240/280	9.0	(VT20H)	22.0
240[2]	50	240V In. No ovrvlt.[2]		0-240	11.0	(VT20HN)	22.0

SINGLE TRANSFORMERS — CASED (Dimensions p. 33)

120	60[8]	Fixed Mtg.		0-120/132[4]	.8	(VT1E)	1.9
120	60[8]	Portable		0-132[3]	1.0	VT1F	2.3
120	60	Fixed Mtg.		0-120	1.0	(VT1NE)	1.9
120	60	Portable		0-120	1.2	(VT1NF)	2.3
120	60[8]	Fixed Mtg.		0-120/132[4]	1.4	(VT02E)	2.8
120	60[8]	Portable		0-132[3]	1.75	**VT02F**	3.2
120	60	Fixed Mtg.		0-120	1.6	(VT02NE)	2.8
120	60	Portable		0-120	2.0	VT02NF	3.2
120	50	Fixed Mtg.	12	0-120/140[4]	2.8	(VT4E)	7.4
120	50	Portable	12	0-140[3]	3.5	VT4F	7.8
120	50	VT4F w/gnd. in. & out.	12	0-140[3]	3.5	**VT4FC**	7.8
120	50	Fixed Mtg.		0-120	3.8	(VT4NE)	7.4
120	50	Portable		0-120	4.75	(VT4NF)	7.8
120	50	VT4NF w/gnd. in. & out.		0-120	4.75	VT4NFC	7.8
120	50	Fixed Mtg.	12	0-120/140[4]	6.0	(VT8E)	13.5
120	50	Portable	12	0-140[3]	7.5	**VT8F**	13.8
120	50	VT8F w/gnd. in. & out.	12	0-140[3]	7.5	**VT8FC**	13.8
120	50	Deluxe Portable	12	0-120/140[3]	6.0	VT8G	14.2
120	50	VT8G w/gnd. in. & out.	12	0-120/140[3]	6.0	VT8GC	14.2
120	50	Fixed Mtg.		0-120	8.0	VT8NE	13.5
120	50	Portable		0-120	10.0	(VT8NF)	13.8
120	50	VT8NF w/gnd. in. & out.		0-120	10.0	VT8NFC	13.8
120	50	Basic Case		0-120/140	20.0	**VT20B**	22.5
120	50	Basic Case		0-120	25.0	(VT20NB)	22.5
120	50	Fixed Mtg.	12	0-120/140[4]	20.0	(VT20E)	29.0
120	50	Portable		0-140	20.0	(VT20FG)	31.0
120	50	Portable	12	0-120/140[3]	20.0	(VT20GC)	31.0
120	50	Fixed Mtg.	12	0-120	25.0	(VT20NE)	29.0
120	50	Portable		0-120	25.0	(VT20NFC)	31.0
240[2]	50	Basic Case		0-240/280	9.0	(VT20HB)	21.5
240[2]	50	Basic Case		0-240	11.0	(VT20HNB)	21.5
240[2]	50	Fixed Mtg.		0-240/280[4]	9.0	(VT20HE)	28.0
240[2]	50	Fixed Mtg.		0-240	11.0	(VT20HNE)	28.0
240[2]	50	Portable		0-240/280	9.0	(VT20HFC)	30.0
240[2]	50	Portable		0-240	11.0	(VT20HNFC)	30.0

SINGLE TRANSFORMERS — CASED WITH METERS (Dimensions p. 33)

120	50	w/voltmeter, gnd. conn.	0-120/140[3]	6.0	(VT8GCV)	15.2
120	50	w/volt. & ammtr., gnd. conn.	0-120/140[3]	6.0	(VT8GCVA)	15.5
120	50	w/volt. & wattmtr., gnd. conn.	0-120/140[3]	6.0	(VT8GCVW)	15.5
120	50	w/voltmeter, gnd. conn.	0-120	10.0	(VT8NFCV)	14.8

SINGLE PHASE (contd.)

SINGLE TRANSFORMERS — CASED WITH METERS (Dimensions p. 33) (contd.)

Input Volts	Freq.[1] Hz from	Feature or Connection	Maximum Output Volts	Amps	Catalog No.	Wt. Lbs.[7]
120	50	w/volt. & ammtr., gnd. conn.	0-120	10.0	(VT8NFCVA)	15.2
120	50	w/volt. & wattmtr., gnd. conn.	0-120	10.0	(VT8NFCVW)	15.2
120	50	w/voltmeter, gnd. conn.	0-120/140[3]	20.0	(VT20GCV)	32.0
120	50	w/volt. & ammtr., gnd. conn.	0-120/140[3]	20.0	(VT20GCVA)	32.2
120	50	w/volt. & wattmtr., gnd. conn.	0-120/140[3]	20.0	(VT20GCVW)	32.2
120	50	w/voltmeter, gnd. conn.	0-120	25.0	(VT20NFCV)	32.0
120	50	w/volt. & ammtr., gnd. conn.	0-120	25.0	(VT20NFCVA)	32.2
120	50	w/volt. & wattmtr., gnd. conn.	0-120	25.0	(VT20NFCVW)	32.2

TWO-IN-TANDEM ASSEMBLIES[5] [10] (Dimensions p. 33)

240	60[8]	Series Conn.[6]	0-240/264	1.0	(VT1-2)	3.5
240	60	Series Conn.[6]	0-240	1.2	(VT1N-2)	3.5
240	60[8]	Series Conn.[6]	0-240/264	1.75	(VT02-2)	5.25
240	60	Series Conn.[6]	0-240	2.0	(VT02N-2)	5.25
240	60[8]	Series Conn.[6]	0-240/264	2.6	VT3-2	6.5
240	60	Series Conn.[6]	0-240	3.0	(VT3N-2)	6.5
240	50	Series Conn.[6]	0-240/280	3.5	(VT4-2)	11.3
240	50	Series Conn.[6]	0-240	4.75	(VT4N-2)	11.3
240	50	Series Conn.[6]	0-240/280	7.5	(VT8-2)	20.6
240	50	Series Conn.[6]	0-240	10.0	VT8N-2	20.6
240	50	Series Conn.[6]	0-240/280	20.0	(VT20-2)	45.0
240	50	Above unit, B case	0-240/280	20.0	(VT20-2B)	46.0
240	50	Series Conn.[6]	0-240	25.0	VT20N-2	45.0
240	50	Above unit, B case	0-240	25.0	(VT20N-2B)	46.0
480[2]	50	Series Conn.[6]	0-480/560	3.0	(VT8H-2)	20.6
480[2]	50	Series Conn.[6]	0-480	4.0	(VT8HN-2)	20.6
480[2]	50	Series Conn.[6]	0-480/560	9.0	(VT20H-2)	43
480[2]	50	Series Conn.[6]	0-480	11.0	(VT20HN-2)	43

THREE PHASE

120	60[8]	Open Delta Conn.	0-120/132	1.0	(VT1-2)	3.5
120	60	Open Delta Conn.	0-120	1.2	(VT1N-2)	3.5
120	60[8]	Open Delta Conn.	0-120/132	1.75	(VT02-2)	5.25
120	60	Open Delta Conn.	0-120	2.0	(VT02N-2)	5.25
120	60[8]	Open Delta Conn.	0-120/132	2.6	(VT3-2)	6.5
120	60	Open Delta Conn.	0-120	3.0	(VT3N-2)	6.5
120	50	Open Delta Conn.	0-120/140	3.5	(VT4-2)	11.3
120	50	Open Delta Conn.	0-120	4.75	(VT4N-2)	11.3
120	50	Open Delta Conn.	0-120/140	7.5	(VT8-2)	20.6
120	50	Open Delta Conn.	0-120	10.0	VT8N-2	20.6
120	50	Open Delta Conn.	0-120/140	20.0	(VT20-2)	45.0
120	50	Above unit, B case	0-120/140	20.0	(VT20-2B)	46.0
120	50	Open Delta Conn.	0-120	25.0	VT20N-2	45.0
120	50	Above unit, B case	0-120	25.0	(VT20N-2B)	46.0
240[2]	50	Open Delta Conn.	0-240/280	3.0	(VT8H-2)	20.6
240[2]	50	Open Delta Conn.	0-240	4.0	(VT8HN-2)	20.6
240[2]	50	Open Delta Conn.	0-240/280	9.0	(VT20H-2)	43
240[2]	50	Open Delta Conn.	0-240	11.0	(VT20HN-2)	43

THREE-IN-TANDEM ASSEMBLIES[5] [10] (Dimensions p. 33)

240	60	"Y" Conn.	0-240[9]	1.0	(VT1-3)	5.3
240	60	"Y" Conn.	0-240[9]	1.75	VT02-3	8.0
240	60	"Y" Conn.	0-240[9]	2.6	(VT3-3)	9.8
240	60[8]	"Y" Conn.	0-240/280	3.5	VT4-3	17.0
240	60[8]	"Y" Conn.	0-240/280	7.5	(VT8-3)	31.0
240	60[8]	Above unit, E case	0-240/280	6.0	(VT8-3E)	40.0
240	60[8]	"Y" Conn.	0-240/280	20.0	VT20-3	68.0
240	60[8]	Above unit, B case	0-240/280	20.0	**VT20-3B**	69.5
240	60	"Y" Conn.	0-240	25.0	(VT20N-3)	68.0
240	60	Above unit, B case	0-240	25.0	(VT20N-3B)	69.5
480[2]	60[8]	"Y" Conn.	0-480/560	3.0	**VT8H-3**	31.0
480[2]	60[8]	"Y" Conn.	0-480/560	9.0	(VT20H-3)	65.0
480[2]	60	"Y" Conn.	0-480	11.0	(VT20HN-3)	65.0

Footnotes for Stock Table

[1] Frequency shown is a minimum — units may be used up to 1000 cps.

[2] VT8H and VT20H and 240V output for VT8HN and VT20HN. With use of 120V input VT8H, VT8HN, VT20H, VT20HN also have taps for 120V input with 280V output for the max. current rating applies up to 120V output but reduces to approx. 50% at max. output voltage. In the case of tandem units, use of the low voltage inputs would correspondingly derate the current at the higher output voltages.

[3] Connected at factory for overvoltage output — easily reconnected by user for no-overvoltage output. On VT8G and VT20G, switch selects overvoltage or no-overvoltage.

[4] User wires for desired output. Dial normally calibrated for overvoltage.

[5] 2-in-tandem normally wired for series connection; 3-in-tandem for Y connection.

[6] When transformers are series connected, load cannot be grounded.

[7] Includes knob, dial and mounting hardware.

[8] May be used at 50 Hz if connected for no-overvoltage output.

[9] Overvoltage connection must not be used.

[10] 240/280 volt cw dial standard except on VT1, VT02 and VT3 tandems where 240/264 volt dial is standard or on VT8H-2, VT8HN-2, VT8H-3, VT20H-2, VT20HN-2, VT20H-3 and VT20HN-3 where 480/560 volt dial is standard. Request other dials if desired — see "Dials" above.

[11] Underwriters' Laboratories listed under components program (File Number E10946).

[12] Underwriters' Laboratories listed under apparatus program (File Number E10946).

[1] Popular items appear in BOLD print and are usually in stock at authorized Ohmite stocking distributors. Items appearing in LIGHT FACE print are available from stocking distributors but are not normally stocked in depth. Parentheses indicate non-stock standard items subject to a $15.00 per line item minimum charge.

© United Technical Publications

SOLA ELECTRIC SB

DIVISION OF SOLA BASIC INDUSTRIES

CV Transformers

Constant-voltage Sola transformers provide a stabilized output voltage even though the input voltage varies over a considerable range. Their applications are numerous and varied. CV's are especially ideal for high-accuracy requirements such as in computers and data-processing equipment.

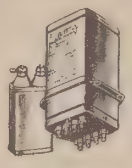
Another advantage in CV transformers is their ability to prolong the life of electronic components by eliminating injurious over- and under-voltages. The Sola transformer's current-limiting factor protects semi-conductors and other components from excessive inrush and fault currents.

Write for catalog CV-100 for complete listings including 50 and 400 Hz models.

AUTOMATIC, INSTANTANEOUS VOLTAGE REGULATION FOR A WIDE VARIETY OF ELECTRIC AND ELECTRONIC DEVICES



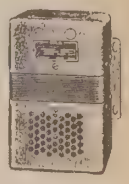
D — Drawn case; integral capacitor unit; flex leads.



S — Hermetically-sealed case; separate capacitor; solder lugs.



E—Exposed core; end bells; separate capacitor; flex leads.



W—Exposed core; end housings; screw-type terminals in outlet box.

Sola Sinusoidal Type (CVS)

LESS THAN 3% HARMONIC CONTENT
SPECIFICATIONS • 60 CYCLE SINGLE PHASE

Voltage Rating Regulated Output	Voltage Rating Input Range	VA	Catalog Number	Price Ind'l & Govt. Users	Approx. Ship. Wt. Lbs	Structure Code
	95-130	30	23-13-030-2	$ 32.45	[illegible]	W
	95-130	60	23-13-060-2	38.50	10	W
	190-260X 380-520	60	23-23-060-2	42.10	10	W
118	95-130X 190-260	120	23-22-112-2	49.30	14	W
	190-260X 380-520	120	23-23-112-2	52.90	14	W
	95-130X 190-260	250	23-22-125	67.30	28	W
	190-260X 380-520	250	23-23-125	72.10	29	W
	95-130X 190-260	500	23-22-150	104.60	45	W
	190-260X 380-520	500	23-26-150	111.80	46	W
	95-130X 175-235X	750	23-25-175	144.25	54	W
	190-260	1000	23-25-210	175.50	72	W
	190-260X 380-520	1000	23-26-210	175.50	72	W
	95-130X 175-235X	1500	23-25-215	234.40	128	W
	190-260	2000	23-25-220	307.75	140	W
	190-260X 380-520	2000	23-26-220	307.75	148	W
	95-130X 175-235X					
118x236	190-260	3000	23-25-230-3	427.95	194	W
	190-260X 380-520	3000	23-26-230	427.95	192	W
	95-130X 175-235X 190-260	5000	23-25-250	668.35	335	Y*
	190-260X 380-520	5000	23-26-250	668.35	342	Y*
	190-260X 380-520	7500	23-28-275	992.90	502	7**

*Same as W, but duplex. **Same as W, but triplex.

Normal Harmonic Type (CVN)

SPECIFICATIONS • 60 CYCLE SINGLE PHASE

Voltage Rating Output Regulated	Voltage Rating Input Range	VA	Catalog Number	Price 1-4 pcs.	Ship. Wt. (Lbs.)	Structure Code
		15	20-10-015	$ 19.25	4	D
			20-11-015	27.95	4	S
			20-14-015	18.05	3	E
118	95-130	30	20-14-030	20.45	5	E
			20-13-030-2	26.45	7	W
		60	20-13-060-2	32.45	10	W
			20-14-060	27.65	8	E
118	95-130	120	20-14-112	37.50	11	E
			20-13-112-2	43.35	12	W
236	190-260	120	20-21-112-2	43.35	13	W
	95-130	150	20-13-115	51.70	22	W
	95-130X 190-260	250	20-22-125	63.70	25	W
118	190-260X 380-520	250	20-23-125	63.70	25	W
	95-130X 190-260	500	20-22-150	99.75	36	W
	190-260	1000	20-20-210	165.90	48	W
118x236	190-260X 380-520	500	20-26-150	106.95	37	W
118	95-130X 190-260	1000	20-22-210	165.90	48	W
	95-130X 175-235X	2000	20-25-220	272.55	128	W
118x236	190-260	3000	20-25-230	408.70	170	W
	190-260X	5000	20-27-250	635.90	290	W

Electronic-Power Types ±1% REGULATION FOR FILAMENT TYPE, ±3% FOR PLATE-FILAMENT TYPE

The electronic-power type of Sola transformer is designed as a component for simple assembly into many kinds of electronic equipment. The filament type (CVF) provides 6.0 or 6.3 volts of output regulated within ± 1% over line variations of ± 15%; the combination plate-and-filament type (CVE) regulates within ± 3%.



D — Drawn case; integral capacitor unit; flex leads.



E — Exposed core; end bells; separate capacitor; flex leads.

for filament service (Type CVF)

SPECIFICATIONS • 60 CYCLE SINGLE PHASE

Voltage Rating Regulated ±1% Output	Voltage Rating Input Range	Output Capacity in Amps.	Catalog Number	Approx. Net Price Each to Industrial Users	Approx. Ship. Wt. in Lbs.	* Structure Code
6.0	95-130	2.50	20-01-015	$19.25	4	D
			20-06-015	18.05	3	E
	95-130	2.38	20-02-015	19.25	4	D
			20-03-015	26.45	4	S
			20-04-015	18.05	[illegible]	E
6.3	95-130X 190-260	10.0	20-04-065	26.45	[illegible]	E
		15.0	20-04-095	31.25	11	E
		25.0	20-04-116	45.65	23	E

for plate filament service (Type CVE)

SPECIFICATIONS • 60 CYCLE SINGLE PHASE
Input range, 100-130 volts

Typical Rectifier Tube	Average D.C. Input Volts to Filter*	Filament Windings 6.3 Volts	Filament Windings 5.0 Volts	Catalog Number	Approx. Net Price Each to Industrial Users	Approx. Ship. Wt. in Lbs.	* Structure Code
5Y3	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	7104	$16.05	6	E
5Y3	385v D.C. @ 110 M.A.	3.0 amps C.T.	2.0 amps	7106	19.80	8	E
5U4	380v D.C. @ 250 M.A.	No. 1: 4.0 amps No. 2: 8.0 amps unregulated	3.0 amps	7107	37.10	19	E

*Voltage values are taken at output of 5Y3GT rectifier for No. 7104 and No. 7106 transformers and at output of 5U4GA-GB for No. 7107. Guaranteed regulation of ±3% on plate voltage output is contingent on the use of Sola-regulated 5.0μ filament supply winding for the rectifier tube.

© United Technical Publications

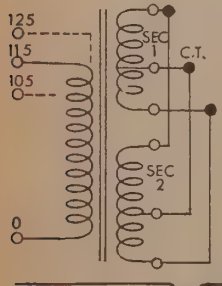
Net

SHIPPED FROM STOCK IMMEDIATELY

HIGH & LOW CURRENT TRANSFORMERS

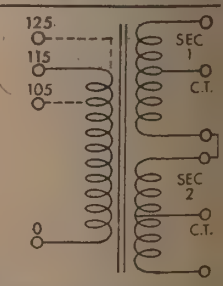
OPEN FRAME • EPOXY ENCAPSULATED (GRADE 5) • HERMETICALLY SEALED (GRADE 4)

SECONDARY VOLTS	Part No.	Primary Volts 50-500CPS	SECONDARY AMPS Series	SECONDARY AMPS Parallel	OPEN FRAME OR EPOXY ENCAPSULATED* Mtg. Style	L	W	H	ML	MW	Mtg. Screw	Appr. Lbs.	HERMETICALLY SEALED IN STEEL CASE‡ L	W	H	ML	MW	Mtg. Stud
10 or 5 V C.T. Series 0 - 2.5 - 5 - 7.5 - 10 V Parallel 0 - 2.5 - 5 V @ 2 x Current	10-0.1	115	0.1	0.2	C	2	1½	1¾	1 23/32	—	#8	0.3	1 5/8	1 5/8	2 3/16	1 3/16	1 3/16	6-32 x 3/8
	10-0.25	115	0.25	0.5	C	2 3/8	1½	2	2	—	#8	0.5	1 15/16	1 13/16	2 1/16	1 3/8	1¼	6-32 x 3/8
	10-0.5	115	0.5	1.0	C	2 3/8	1¾	2	2	—	#8	0.8	1 15/16	1 13/16	2 1/16	1 3/8	1¼	6-32 x 3/8
	10-1	115	1	2	C	2 7/8	1¾	2 5/16	2 3/8	—	#8	1.0	2 1/16	2 1/16	2½	1 7/16	1 7/16	6-32 x 3/8
	10-2	115	2	4	C	3 1/8	2 1/8	2¾	2 13/16	—	#8	1.5	2¾	2 3/8	2 7/8	2 1/8	1¾	6-32 x 3/8
	10-4	115	4	8	C	3 5/16	2 3/8	3 1/16	3 1/8	—	#8	2.3	3 1/4	2¾	2 7/8	2½	2	8-32 x 3/8
	10-6	115	6	12	B	3 3/8	2¾	2 13/16	2 13/16	2 1/8	#8	3.3	3 5/8	3	3¼	2 13/16	2 1/8	8-32 x 3/8
	10-8	115	8	16	B	3 3/8	3 1/8	2 13/16	2 13/16	2 1/2	#8	4.0	3 5/8	3 3/8	3¼	2 13/16	2 3/8	8-32 x 3/8
	10-12	115	12	24	B	3¾	3¼	3 1/8	3 1/8	2 1/2	#8	5.0	4 1/8	3¾	3½	3 1/8	2 1/2	10-32 x 1/2
	10-25	115	25	50	B	4½	3¾	3¾	3¾	2¾	#10	8.7	4¾	5¼	4¼	3¾	4¼	10-32 x 1/2
	10-50	105, 115, 125	50	100	B	5¼	5½	4 3/8	4 3/8	3 5/8	¼	17.0	5½	7	5½	4 3/8	5 7/8	¼-20 x 5/8
	10-100	105, 115, 125	100	200	B	6 3/8	7¼	5 5/16	5 5/16	4 3/8	¼	34.5	6¾	8¾	6½	5 5/16	6¼	¼-20 x 5/8
12.8 or 6.4 C. T. Series 0 - 3.2 - 6.4 - 9.6 - 12.8 V Parallel 0 - 3.2 - 6.4 V @ 2 x Current	12.8-0.1	115	0.1	0.2	C	2	1½	1¾	1 23/32	—	#8	0.3	1 5/8	1 5/8	2 3/16	1 3/16	1 3/16	6-32 x 3/8
	12.8-0.25	115	0.25	0.5	C	2 3/8	1½	2	2	—	#8	0.5	1 15/16	1 13/16	2 1/16	1 3/8	1¼	6-32 x 3/8
	12.8-0.5	115	0.5	1	C	2 7/8	1 5/8	2 5/16	2 3/8	—	#8	0.8	2 1/16	2 1/16	2½	1 7/16	1 7/16	6-32 x 3/8
	12.8-1	115	1	2	C	2 7/8	2	2 5/16	2 3/8	—	#8	1.2	2 5/16	2 1/16	2½	1 11/16	1 7/16	6-32 x 3/8
	12.8-2A	115	2	4	C	3 1/8	2 1/8	2¾	2 13/16	—	#8	1.5	2¾	2 5/8	2 7/8	2 1/8	1¾	6-32 x 3/8
	12.8-2	115	2	4	B	3	2½	2½	2½	2	#8	2.3	3¼	2¾	2 7/8	2½	2	8-32 x 3/8
	12.8-4	115	4	8	B	3	2 7/8	2½	2½	2 3/8	#8	2.8	3¼	3 1/8	2 7/8	2½	2 3/8	8-32 x 3/8
	12.8-6	115	6	12	B	3 3/8	3 1/16	2 13/16	2 13/16	2½	#8	4.0	3 5/8	3 3/8	3¼	2 13/16	2 3/8	8-32 x 3/8
	12.8-8	115	8	16	B	3¾	3 1/8	3 1/8	3 1/8	2¼	#8	4.5	4 1/8	3½	3½	3 1/8	2¼	10-32 x 1/2
	12.8-12	115	12	24	B	4 1/8	3¼	3 5/16	3 5/16	2 3/8	#10	6.0	4½	3¾	3 7/8	3 5/16	2 3/8	10-32 x 1/2
	12.8-25	115	25	50	B	5¼	4¼	4 3/8	4 3/8	2 7/8	#10	12.5	5½	5¾	5¼	4 3/8	4 5/8	¼-20 x 5/8
	12.8-50	105, 115, 125	50	100	B	5¼	6	4 3/8	4 3/8	4 1/8	¼	20.7	5½	7½	5½	4 3/8	6 3/8	¼-20 x 5/8
	12.8-100	105, 115, 125	100	200	B	6 3/8	7¼	5 5/16	5 5/16	4 3/8	¼	34.5	6¾	8¾	6½	5 5/16	6¼	¼-20 x 5/8
16 or 8 V C.T. Series 0 - 4 - 8 - 12 - 16 V Parallel 0 - 4 - 8 @ 2 x Current	16-0.1	115	0.1	0.2	C	2	1 5/8	1¾	1 23/32	—	#8	0.4	1 5/8	1 5/8	2 3/16	1 3/16	1 3/16	6-32 x 3/8
	16-0.25	115	0.25	0.5	C	2 3/8	1¾	2	2	—	#8	0.7	1 15/16	1 13/16	2 1/16	1 3/8	1 1/4	6-32 x 3/8
	16-0.5	115	0.5	1	C	2 7/8	1 5/8	2 5/16	2 3/8	—	#8	0.8	2 1/16	2 1/16	2½	1 7/16	1 7/16	6-32 x 3/8
	16-1	115	1	2	C	2 7/8	2	2 5/16	2 3/8	—	#8	1.2	2 5/16	2 1/16	2½	1 11/16	1 7/16	6-32 x 3/8
	16-2	115	2	4	C	3 1/8	2 1/4	2¾	2 13/16	—	#8	1.7	2¾	2 3/8	2 7/8	2 1/8	1¾	6-32 x 3/8
	16-4	115	4	8	B	3 3/8	2¾	2 13/16	2 13/16	2 1/8	#8	3.3	3 5/8	3	3¼	2 13/16	2 1/8	8-32 x 3/8
	16-6	115	6	12	B	3¾	3 1/8	3 1/8	3 1/8	2 1/4	#10	4.5	4 1/8	3 1/2	3½	3 1/8	2 1/4	10-32 x 1/2
	16-8	115	8	16	B	3¾	3 1/2	3 1/8	3 1/8	2 5/8	#10	5.4	4 1/8	3¾	3½	3 1/8	2 1/2	10-32 x 1/2
	16-12	115	12	24	B	4 1/8	3 7/8	3 5/8	3 7/16	3	#10	7.9	4 1/2	4 1/2	3 7/8	3 7/16	3	10-32 x 1/2
	16-25	115	25	50	B	4 1/2	5 3/8	4	3¾	4	#10	14.5	4¾	6 1/2	4¼	3¾	5 1/2	10-32 x 1/2
	16-50	105, 115, 125	50	100	B	6 3/8	5¾	5 5/16	5 5/16	3¾	¼	26.5	6¾	6 5/8	6	5 5/16	5 1/8	¼-20 x 5/8
	16-100	105, 115, 125	100	200	B	7 1/2	7 1/2	6 3/8	6¾	4 5/8	¼	50.0	8	8 1/2	7	6¾	7¼	¼-20 x 5/8
24 or 12 C.T. Series 0 - 6 - 12 - 18 - 24 V Parallel 0 - 6 - 12 V @ 2 x Current	24-0.1	115	0.1	0.2	C	2 3/8	1½	2	2	—	#8	0.5	1 15/16	1 13/16	2 1/16	1 3/8	1 1/4	6-32 x 3/8
	24-0.25	115	0.25	0.5	C	2 7/8	1¾	2 5/16	2 3/8	—	#8	1.0	2 1/16	2 1/16	2½	1 7/16	1 7/16	6-32 x 3/8
	24-0.5	115	0.5	1	C	2 7/8	2	2 5/16	2 3/8	—	#8	1.2	2 5/16	2 1/16	2½	1 11/16	1 7/16	6-32 x 3/8
	24-1A	115	1	2	C	3 1/8	2 1/8	2¾	2 13/16	—	#8	1.5	2¾	2 3/8	2 7/8	2 1/8	1¾	6-32 x 3/8
	24-1	115	1	2	B	3	2 1/2	2 1/2	2 1/2	2	#8	2.3	3 1/4	2¾	2 7/8	2 1/2	2	8-32 x 3/8
	24-2	115	2	4	B	3	2 7/8	2 1/2	2 1/2	2 3/8	#8	2.9	3 1/4	3 1/8	2 7/8	2 1/2	2 3/8	8-32 x 3/8
	24-4	115	4	8	B	3¾	3 1/8	3 1/8	3 1/8	2 1/4	#8	4.5	4 1/8	3 1/2	3 1/2	3 1/8	2 1/4	10-32 x 1/2
	24-6	115	6	12	B	4 1/8	3¼	3 5/16	3 5/16	2 3/8	#10	5.8	4 1/2	3¾	3 7/8	3 5/16	2 3/8	10-32 x 1/2
	24-8	115	8	16	B	4 1/8	3 7/8	3 5/8	3 5/16	3	#10	7.9	4 1/2	4 1/2	3 7/8	3 5/16	3	10-32 x 1/2
	24-12	105, 115, 125	12	24	B	4 1/2	4 1/2	3¾	3¾	3 3/8	#10	11.0	4¾	5 3/8	4 1/4	3¾	4 3/8	10-32 x 1/2
	24-20	105, 115, 125	20	40	B	5¼	4¾	4 3/8	4 3/8	3 3/8	¼	15.3	5½	5½	5¼	4 3/8	3 1/2	¼-20 x 5/8
	24-25	105, 115, 125	25	50	B	5¼	5 5/8	4 3/8	4 3/8	4 1/8	¼	19.5	5½	6 1/2	5¼	4 3/8	5 3/8	¼-20 x 5/8
	24-50	105, 115, 125	50	100	B	6 3/8	6¼	5 5/16	5 5/16	4 3/8	¼	31.3	6¾	7½	6	5 5/16	6	¼-20 x 5/8
	24-100	115/230	100	200	B	7 1/2	7	6 3/8	6¾	4 1/8	¼	43	8	8	7	6¾	6¾	¼-20 x 5/8
36 or 18 V C.T. Series 0 - 9 - 18 - 27 - 36 V Parallel 0 - 9 - 18 V @ 2 x Current	36-0.1	115	0.1	0.2	C	2 3/8	1 5/8	2	2	—	#8	0.5	1 15/16	1 13/16	2 1/16	1 3/8	1 1/4	6-32 x 3/8
	36-0.25	115	0.25	0.5	C	2 7/8	1 5/8	2 5/16	2 3/8	—	#8	0.8	2 1/16	2 1/16	2½	1 7/16	1 7/16	6-32 x 3/8
	36-0.5	115	0.5	1	C	3 1/8	2	2¾	2 13/16	—	#8	1.3	2¾	2 3/8	2 7/8	2 1/8	1¾	6-32 x 3/8
	36-1A	115	1	2	C	3 5/16	2 3/8	3 1/16	3 1/8	—	#8	2.3	3 1/4	2¾	2 7/8	2½	2	8-32 x 3/8
	36-1	115	1	2	B	3	2¾	2½	2½	2¼	#8	2.6	3 1/4	3 1/8	2 7/8	2½	2 3/8	8-32 x 3/8
	36-2	115	2	4	B	3 3/8	2 15/16	2 13/16	2 13/16	2 3/8	#8	3.8	3 5/8	3 3/8	3¼	2 13/16	2 3/8	8-32 x 3/8
	36-4	115	4	8	B	4 1/8	3 3/8	3 7/16	3 7/16	2 5/8	#10	6.8	4 1/2	3¾	3 7/8	3 7/16	2 3/8	10-32 x 1/2
	36-6	115	6	12	B	4 1/2	3¾	3¾	3¾	2¾	#10	8.7	4¾	4¼	4¼	3¾	2 7/8	10-32 x 1/2
	36-8	105, 115, 125	8	16	B	4 1/2	4 1/2	4 1/8	3¾	3 3/8	#10	11.0	4¾	5	4 3/8	3¾	3 3/8	10-32 x 1/2
	36-12	105, 115, 125	12	24	B	5¼	5	4 3/8	4 3/8	3 3/8	¼	15.0	5½	5½	5¼	4 3/8	3 1/2	¼-20 x 5/8
	36-20	105, 115, 125	20	40	B	6 3/8	5 3/8	5 5/16	5 5/16	3 3/8	¼	22.8	6¾	5¾	5¾	5 5/16	4¼	¼-20 x 5/8
	36-25	105, 115, 125	25	50	B	6 3/8	5¾	5 5/16	5 5/16	3¾	¼	26.5	6¾	6 5/8	6	5 5/16	5 1/8	¼-20 x 5/8
	36-30	105, 115, 125	30	60	B	6 3/8	6	5 5/16	5 5/16	4 3/8	¼	31.5	6¾	7½	6	5 5/16	6	¼-20 x 5/8
	36-50	115/230	50	100	B	6 3/8	7¼	5 5/16	5 5/16	5 1/8	¼	40.0	6¾	8	6	5 5/16	6 1/2	¼-20 x 5/8
	36-100	115/230	100	200	B	7 1/2	9	6¼	6¾	5 7/16	¼	63.5	8	10	7	6¾	8¾	¼-20 x 5/8
56 or 28 V C.T. Series 0 - 14 - 28 - 42 - 56 V Parallel 0 - 14 - 28 V @ 2 x Current	56-0.1	115	0.1	0.2	C	2 3/8	1¾	2	2	—	#8	.8	1 15/16	1 13/16	2 1/16	1 3/8	1 1/4	6-32 x 3/8
	56-0.25	115	0.25	0.5	C	2 7/8	2	2 5/16	2 3/8	—	#8	1.2	2 5/16	2 1/16	2½	1 11/16	1 7/16	6-32 x 3/8
	56-0.5	115	0.5	1	C	3 1/8	2 1/4	2¾	2 13/16	—	#8	1.7	2¾	2 3/8	2 7/8	2 1/8	1¾	6-32 x 3/8
	56-1	115	1	2	B	3 3/8	2 7/8	2 13/16	2 13/16	2 1/4	#8	3.5	3 5/8	3 3/8	3¼	2 13/16	2 3/8	8-32 x 3/8
	56-2	115	2	4	B	3¾	3¼	3 1/8	3 1/8	2 1/2	#8	5.0	4 1/8	3¾	3½	3 1/8	2 1/2	10-32 x 1/2
	56-4	115	4	8	B	4 1/8	3¾	3 7/16	3 7/16	3	#10	7.7	4 1/2	4 1/2	3 7/8	3 7/16	3	10-32 x 1/2
	56-6	115	6	12	B	5¼	4¼	4 3/8	4 3/8	2 7/8	#10	12.0	5 1/2	4¾	5	4 3/8	3	¼-20 x 5/8
	56-8	105, 115, 125	8	16	B	5¼	5	4 3/8	4 3/8	3 5/8	¼	17.0	5½	5½	5¼	4 3/8	3 1/2	¼-20 x 5/8
	56-12	105, 115, 125	12	24	B	6 3/8	5¼	5 5/16	5 5/16	3 3/8	¼	22.0	6¾	5¾	5¾	5 5/16	4¼	¼-20 x 5/8
	56-25	105, 115, 125	25	50	B	6 3/8	7 1/8	5 5/16	5 5/16	5 1/16	¼	38.0	6¾	8	6	5 5/16	6 1/2	¼-20 x 5/8
	56-50	115/230	50	100	B	7 1/2	7 1/2	6¼	6¾	4 7/8	¼	56.3	8	8 1/2	7	6¾	7¼	¼-20 x 5/8
	56-100	115/230	100	200	B	7 1/2	11¼	6¼	6¾	8¼	¼	95.0	8	13	7	6¾	11 3/4	¼-20 x 5/8



PARALLEL CONNECTED SECONDARIES

SERIES CONNECTED SECONDARIES



All transformers are designed conservatively for a max of 45°C rise above ambient, for use on 115V power line from 50-500 cps. Only prime raw materials are used. Units are thoroughly impregnated and baked with Signal's own high gloss black baking varnish. The transformers and chokes are rugged in construction, well-insulated, and have a consistently uniform appearance. All ratings are at full load current continuous operation.

Electrical ratings have been chosen to cover a wide range of applications. All transformers have two center-tapped secondary windings.

SIGNAL TRANSFORMER CO., INC

ENGINEERS • DESIGNERS • MANUFACTURERS

© United Technical Publications

HIGH & LOW CURRENT TRANSFORMERS

OPEN FRAME • EPOXY ENCAPSULATED (GRADE 5) • HERMETICALLY SEALED (GRADE 4)

0.1 to 200 Amps
2.5 to 300 Volts

IDEAL FOR USE IN SINGLE OR DUAL DC POWER SUPPLIES

SECONDARY VOLTS	Part No.	Primary Volts 50-500CPS	SECONDARY AMPS Series	SECONDARY AMPS Parallel	OPEN FRAME OR EPOXY ENCAPSULATED* Mtg. Style	L	W	H	ML	MW	Mtg. Screw	Appr. Lbs.
68 or 34 C.T. Series 0 - 17 - 34 - 51 - 68 V Parallel 0 - 17 - 34 V @ 2 x Current	68-0.1	115	0.1	0.2	C	2 7/8	1 5/8	2 5/16	2 3/8	—	#8	0.8
	68-0.25	115	0.25	0.5	C	2 7/8	2	2 5/16	2 3/8	—	#8	1.2
	68-0.5A	115	0.5	1	C	3 1/16	2 1/4	2 3/4	2 13/16	—	#8	1.7
	68-0.5	115	0.5	1	B	3	2 3/4	2 1/2	2 1/2	2 1/4	#8	2.7
	68-1	115	1	2	B	3 3/8	2 15/16	2 13/16	2 13/16	2 3/8	#8	3.8
	68-2	115	2	4	B	4 1/8	3 3/8	3 1/16	3 1/16	2 5/8	#10	6.8
	68-4	115	4	8	B	4 1/2	4 1/2	4 1/8	3 3/4	3 3/8	#10	11.5
	68-6	105, 115, 125	6	12	B	5 1/4	5	4 3/8	4 3/8	3 3/8	1/4	15.0
	68-8	105, 115, 125	8	16	B	5 1/4	5 1/2	4 3/8	4 3/8	3 7/8	1/4	19.0
	68-12	105, 115, 125	12	24	B	6 3/8	5 3/4	5 5/16	5 5/16	3 3/4	1/4	26.5
	68-25	115/230	25	50	B	6 3/8	7 1/4	5 5/16	5 5/16	5 1/8	1/4	39.7
	68-50	115/230	50	100	B	7 1/2	9	6 1/4	6 3/4	5 7/16	1/4	58.5
80 or 40 C.T. Series 0 - 20 - 40 - 60 - 80 V Parallel 0 - 20 - 40 V @ 2 x Current	80-0.1	115	0.1	0.2	C	2 7/8	1 5/8	2 5/16	2 3/8	—	#8	0.8
	80-0.25	115	0.25	0.5	C	3 1/8	2	2 3/4	2 13/16	—	#8	1.3
	80-0.5A	115	0.5	1	C	3 7/16	2 3/8	3 1/16	3 1/8	—	#8	2.2
	80-0.5	115	0.5	1	B	3	2 3/4	2 1/2	2 1/2	2 1/4	#8	2.8
	80-1	115	1	2	B	3 3/8	3 1/16	2 13/16	2 13/16	2 1/2	#8	4.0
	80-2	115	2	4	B	4 1/8	3 3/8	3 7/16	3 7/16	2 5/8	#10	6.8
	80-4	115	4	8	B	5 1/4	4 1/4	4 3/8	4 3/8	2 7/8	1/4	12.3
	80-6	105, 115, 125	6	12	B	5 1/4	5 1/2	4 5/8	4 3/8	3 7/8	1/4	19.0
	80-8	105, 115, 125	8	16	B	6 3/8	5 1/4	5 5/16	5 5/16	3 1/4	1/4	20.5
	80-12	105, 115, 125	12	24	B	6 3/8	6	5 5/16	5 5/16	4 1/8	1/4	29.0
	80-25	115/230	25	50	B	7 1/2	6 1/2	6 1/4	6 3/4	3 7/8	1/4	40.3
	80-50	115/230	50	100	B	7 1/2	9	6 1/4	6 3/4	6 1/2	1/4	78.0
88 or 44 C.T. Series 0 - 22 - 44 - 66 - 88 V Parallel 0 - 22 - 44 V @ 2 x Current	88-0.1	115	0.1	0.2	C	2 7/8	1 3/4	2 5/16	2 3/8	—	#8	1.0
	88-0.25	115	0.25	0.5	C	3 1/8	2 1/8	2 3/4	2 13/16	—	#8	1.5
	88-0.5	115	0.5	1	C	3 7/16	2 3/8	3 1/16	3 1/8	—	#8	2.2
	88-1	115	1	2	B	3 3/4	3	3 1/8	3 1/8	2 1/4	#8	4.5
	88-2	115	2	4	B	4 1/8	3 3/8	3 7/16	3 7/16	2 5/8	#10	6.8
	88-4	115	4	8	B	5 1/4	4 1/2	4 3/8	4 3/8	3 1/8	1/4	13.4
	88-6	105, 115, 125	6	12	B	5 1/4	5 1/2	4 3/8	4 3/8	3 7/8	1/4	19.0
	88-8	105, 115, 125	8	16	B	6 3/8	5 3/8	5 5/16	5 5/16	3 3/8	1/4	22.8
	88-12	105, 115, 125	12	24	B	6 3/8	6 1/2	5 5/16	5 5/16	4 5/8	1/4	35.0
	88-25	115/230	25	50	B	7 1/2	8	6 1/4	6 3/4	5 5/8	1/4	62.0
	88-50	115/230	50	100	B	7 1/2	11	6 1/4	6 3/4	8 5/8	1/4	100.0
120 or 60 C.T. Series 0 - 30 - 60 - 90 - 120 V Parallel 0 - 30 - 60 V @ 2 x Current	120-0.5	115	0.5	1.0	B	3 3/8	2 7/8	2 13/16	2 13/16	2 1/4	#8	3.2
	120-1	115	1	2	B	3 3/4	3 3/8	3 1/8	3 1/8	2 3/4	#8	5.8
	120-2	115	2	4	B	4 1/2	3 3/4	3 3/4	3 3/4	2 3/4	#10	8.5
	120-4	115	4	8	B	5 1/4	5 1/2	4 3/8	4 3/8	3 7/8	1/4	17.0
	120-6	105, 115, 125	6	12	B	6 3/8	6	5 5/16	5 5/16	3 7/8	1/4	27.0
	120-8	105, 115, 125	8	16	B	6 3/8	6 1/2	5 5/16	5 5/16	4 5/8	1/4	34.0
	120-12	105, 115, 125	12	24	B	6 3/8	7 1/4	5 5/16	5 5/16	5 3/8	1/4	42.0
	120-20	105, 115, 125	20	40	B	7 1/2	8	6 1/4	6 3/4	5 3/8	1/4	57.0
160 or 80 C.T. Series 0 - 40 - 80 - 120 - 160 V Parallel 0 - 40 - 80 V @ 2 x Current	160-0.5	115	0.5	1	B	3 3/8	3 1/16	2 13/16	2 13/16	2 1/2	#8	4.0
	160-1	115	1	2	B	4 1/8	3 5/8	3 7/16	3 7/16	2 5/8	#10	6.5
	160-2	115	4	8	B	4 1/2	4 3/8	3 3/4	3 3/4	3 3/8	#10	11.0
	160-4	105, 115, 125	4	8	B	6 3/8	5 1/4	5 5/16	5 5/16	3 1/4	1/4	21.0
	160-8	105, 115, 125	8	16	B	6 3/8	6 3/4	5 5/16	5 5/16	4 7/8	1/4	36.0
	160-12	115/230	12	24	B	7 1/2	6 1/2	6 1/4	6 3/4	3 7/8	1/4	39.8
180 or 90 C.T. Series 0 - 45 - 90 - 135 - 180 V Parallel 0 - 45 - 90 @ 2 x Current	180-0.5	115	0.5	1	B	3 3/4	3 3/8	3 1/8	3 1/8	2 3/4	#8	5.8
	180-1	115	1	2	B	4 1/8	3 7/8	3 5/8	3 7/16	3	#10	8.2
	180-2	115	2	4	B	5 1/4	5	4 3/8	4 3/8	3 5/8	1/4	15.8
	180-4	115	4	8	B	6 3/8	5 3/4	5 5/16	5 5/16	3 3/4	1/4	27.0
	180-6	105, 115, 125	6	12	B	6 3/8	7 1/4	5 5/16	5 5/16	5 1/8	1/4	37.0
	180-8	105, 115, 125	8	16	B	6 3/8	7 3/4	5 5/16	5 5/16	5 5/8	1/4	42.0
	180-12	105, 115, 125	12	24	B	7 1/2	8 1/4	6 1/4	6 3/4	5 5/8	1/4	62.0
230 or 115 C.T. Series 0-57½-115-172½-230 V Parallel 57½ - 115 V @ 2 x Current	230-0.5	115	0.5	1	B	3 3/4	3 5/8	3 1/8	3 1/8	3	#8	6.5
	230-1	115	1	2	B	4 1/2	3 3/4	3 3/4	3 3/4	3	#10	9.4
	230-2	115	2	4	B	5 1/4	4 3/4	4 3/8	4 3/8	3 3/8	1/4	14.5
	230-4	105, 115, 125	4	8	B	6 3/8	6	5 5/16	5 5/16	4 1/8	1/4	28.4
	230-6	105, 115, 125	6	12	B	6 3/8	7 1/4	5 5/16	5 5/16	5 1/8	1/4	38.0
300 or 150 C.T. Series 0-75-150-225-300 V Parallel 0 - 75 - 150 V @ 2 x Current	300-0.5	115	0.5	1	B	4 1/2	3 1/2	3 3/4	3 3/4	2 1/2	#10	7.0
	300-1	115	1	2	B	5 1/4	4 1/8	4 3/8	4 3/8	3	1/4	12.8
	300-2	115	2	4	B	5 1/4	5 3/4	4 3/8	4 3/8	4 1/2	1/4	21.0
	300-4	105. 115. 125	4	8	B	6 3/8	5 1/4	5 5/16	5 5/16	3 7/8	1/4	27.5

HERMETICALLY SEALED IN STEEL CASE‡

L	W	H	ML	MW	Mtg. Stud
2 1/16	2 1/16	2 1/2	1 7/16	1 7/16	6-32 x 3/8
2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32 x 3/8
2 3/4	2 3/8	2 7/8	2 1/8	1 3/4	6-32 x 3/8
3 1/4	3 1/8	2 7/8	2 1/2	2 3/8	8-32 x 3/8
3 5/8	3 3/8	3 1/4	2 13/16	2 3/8	8-32 x 3/8
4 1/2	3 3/4	3 7/8	3 7/16	2 3/8	10-32 x 1/2
4 3/4	5	4 3/8	3 3/4	3 3/8	10-32 x 1/2
5 1/2	5 1/2	5 1/4	4 3/8	3 1/2	1/4-20 x 5/8
5 1/2	6	5	4 3/8	3 7/8	1/4-20 x 5/8
6 3/4	6 5/8	6	5 5/16	5 1/8	1/4-20 x 5/8
6 3/4	8	6	5 5/16	6 1/2	1/4-20 x 5/8
8	10	7	6 3/4	8 3/4	1/4-20 x 5/8
2 1/16	2 1/16	2 1/2	1 7/16	1 7/16	6-32 x 3/8
2 3/4	2 3/8	2 7/8	2 1/8	1 3/4	6-32 x 3/8
3 1/4	2 3/4	2 7/8	2 1/2	2	8-32 x 3/8
3 1/4	3 1/8	2 7/8	2 1/2	2 3/8	8-32 x 3/8
3 5/8	3 3/8	3 1/4	2 13/16	2 3/8	8-32 x 3/8
4 1/2	3 3/4	3 7/8	3 7/16	2 3/8	10-32 x 1/2
5 1/2	4 3/4	5	4 3/8	3	1/4-20 x 5/8
5 1/2	6	5	4 3/8	3 7/8	1/4-20 x 5/8
6 3/4	5 3/4	5 3/4	5 5/16	4 1/4	1/4-20 x 5/8
6 3/4	6 5/8	6	6 5/16	5 1/8	1/4-20 x 5/8
8	7	7	6 3/4	6 3/4	1/4-20 x 5/8
8	10	7	6 3/4	8 3/4	1/4-20 x 5/8
2 1/16	2 1/16	2 1/2	1 7/16	1 7/16	6-32 x 3/8
2 3/4	2 3/8	2 7/8	2 1/8	1 3/4	6-32 x 3/8
3 1/4	2 3/4	2 7/8	2 1/2	2	8-32 x 3/8
4 1/8	3 1/2	3 1/2	3 1/8	2 1/4	10-32 x 1/2
4 1/2	3 3/4	3 7/8	3 7/16	2 3/8	10-32 x 1/2
5 1/2	4 3/4	5	4 3/8	3	1/4-20 x 5/8
5 1/2	6	5	4 3/8	3 7/8	1/4-20 x 5/8
6 3/4	5 3/4	5 3/4	5 5/16	4 1/4	1/4-20 x 5/8
6 3/4	7	5 3/4	5 5/16	5 1/2	1/4-20 x 5/8
8	10	7	6 3/4	8 3/4	1/4-20 x 5/8
8	13	7	6 3/4	11 3/4	1/4-20 x 5/8
3 5/8	3 3/8	3 1/4	2 13/16	2 3/8	8-32 x 3/8
4 1/8	4	3 1/2	3 1/8	2 7/8	10-32 x 1/2
4 3/4	4 1/4	4 1/4	3 3/4	2 7/8	10-32 x 1/2
5 1/2	6	5	4 3/8	3 7/8	1/4-20 x 5/8
6 3/4	6 5/8	6	5 5/16	5 1/8	1/4-20 x 5/8
6 3/4	7	5 3/4	5 5/16	5 1/2	1/4-20 x 5/8
6 3/4	8	6	5 5/16	6 1/2	1/4-20 x 5/8
8	9	7	6 3/4	7 3/4	1/4-20 x 5/8
3 5/8	3 3/8	3 1/4	2 13/16	2 3/8	8-32 x 3/8
4 1/2	3 3/4	3 7/8	3 7/16	2 3/8	10-32 x 1/2
4 3/4	5	4 3/8	3 3/4	3 3/8	10-32 x 1/2
6 3/4	5 3/4	5 3/4	5 5/16	4 1/4	1/4-20 x 5/8
6 3/4	7 1/2	6	5 5/16	6	1/4-20 x 5/8
8	8	7	6 3/4	6 3/4	1/4-20 x 5/8
4 1/8	4	3 1/2	3 1/8	2 3/8	10-32 x 1/2
4 1/2	4 1/2	3 7/8	3 7/16	3	10-32 x 1/2
5 1/2	5 1/2	5 1/4	4 3/8	3 1/2	1/4-20 x 5/8
6 3/4	6 5/8	6	5 5/16	5 1/8	1/4-20 x 5/8
6 3/4	8	6	5 5/16	6 1/2	1/4-20 x 5/8
4 3/4	4 1/4	4 1/4	3 3/4	2 7/8	10-32 x 1/2
5 1/2	4 3/4	5	4 3/8	3	1/4-20 x 5/8
5 1/2	6 1/4	5	4 3/8	5 1/8	1/4-20 x 5/8
6 3/4	6 3/8	6	5 5/16	5 1/8	1/4-20 x 5/8

AVAILABLE IN 3 STYLES

FOR OPEN FRAME USE PART NUMBERS SHOWN

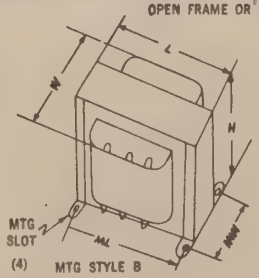
* For epoxy encapsulation add prefix "E-" to Part No., e.g., E-36-1 add 3/16 to L, W, H Dim. Grade 5.
‡ For hermetically sealed units add prefix "H-" to Part No., e.g., H-36-1. Grade 4.

AVAILABLE IN 3 STYLES

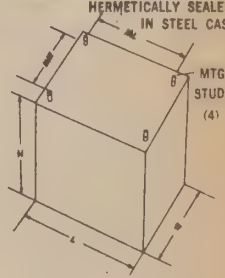
METHOD OF DETERMINING SECONDARY CURRENT RATINGS

RECTIFIER TYPE	FILTER TYPE	RMS SECONDARY CURRENT
Full Wave Center-Tap	Choke Input	.7 × DC amps
Full Wave Center-Tap	Capacitor Input	1.2 × DC amps
Full Wave Bridge	Choke Input	= to DC amps
Full Wave Bridge	Capacitor Input	1.8 × DC Amps

OPEN FRAME OR EPOXY ENCAPSULATED*



HERMETICALLY SEALED IN STEEL CASE



*FOR EPOXY ENCAPSULATION, PART NO'S "E" — ADD 3/16" TO L, W, H

PART NO'S WITH PREFIX "H"

SIGNAL TRANSFORMER CO., INC

ENGINEERS • DESIGNERS • MANUFACTURERS

© United Technical Publications

HIGH & LOW CURRENT CHOKES 0.1 to 1000 AMPS

OPEN FRAME • EPOXY ENCAPSULATED (GRADE 5) • HERMETICALLY SEALED (GRADE 4)

Signal's line of High and Low Current Chokes is the most extensive available. It is designed to complement the selection of High and Low Current Transformers so that a set may be specified for power supplies using inductive filters.

The inductance ratings given are minimum values guaranteed at full DC current. All resistance ratings are maximum values.

Special variations or intermediate values of inductance, current, or resistance can be supplied promptly and accurately.

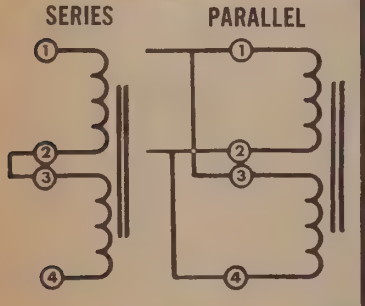
FOR MECHANICAL DIMENSIONS REFER TO TRANSFORMER OUTLINES ON PREVIOUS PAGE

PART No.	IND. (MHY)	CURR. (Amps)	RES. (Ohms)	OPEN FRAME OR EPOXY ENCAPSULATED* MTG. STYLE	L	W	H	ML	MW	MTG. SCREW	APPR. LBS.	HERMETICALLY SEALED IN STEEL CASE‡ L	W	H	ML	MW	MTG. STUD
CH-0.1	1000	0.1	25	C	2	1½	1¾	1 23/32	—	#8	0.3	1⅝	1⅝	2 5/16	1 3/16	1 3/16	6-32 x ⅜
CH-0.2	800	0.2	15	C	2⅜	1⅝	2	2	—	#8	0.7	1 5/16	1 3/16	2 1/16	1⅜	1¼	6-32 x ⅜
CH-0.25	800	0.25	10.0	C	2⅞	1¾	2 5/16	2⅜	—	#8	1.0	2 1/16	2 1/16	2½	1 7/16	1 7/16	6-32 x ⅜
CH-0.5	400	0.5	4.0	C	3⅛	2⅛	2¾	2 13/16	—	#8	1.5	2¾	2⅜	2⅞	2⅛	1¾	6-32 x ⅜
CH-1	100	1	1.5	B	3	2½	2½	2½	2	#8	2.3	3¼	2¾	2⅞	2½	2	8-32 x ⅜
CH-2	70	2	0.9	B	3⅜	2¾	2⅞	2 13/16	2⅛	#8	3.2	3⅝	3	3¼	2 13/16	2⅛	8-32 x ⅜
CH-4	70	4	0.5	B	3¾	3⅛	3¼	3⅛	2½	#8	5.3	4⅛	3½	3½	3⅛	2½	8-32 x ⅜
CH-6	40	6	0.4	B	3¾	3⅝	3¼	3⅛	3	#8	6.5	4⅛	4	3½	3⅛	2⅞	8-32 x ⅜
CH-8	30	8	0.3	B	4⅛	3⅝	3½	3 7/16	3	#10	8	4½	4	3⅞	3 1/16	3	10-32 x ½
CH-12	15	12	0.1	B	5¼	4	4 7/16	4⅜	3⅛	#10	13.7	5½	4½	5	4⅜	3⅛	10-32 x ½
CH-16	15	16	.08	B	5¼	4⅝	4 7/16	4⅜	3⅝	#10	17.5	5½	5⅛	5	4⅜	3⅝	10-32 x ½
CH-20	7	20	.05	B	5¼	4	4 7/16	4⅜	3⅛	#10	13.3	5½	4¾	5	4⅜	3⅛	10-32 x ½
CH-25	5	25	.025	B	5¼	4¾	4 7/16	4⅜	3⅞	#10	17.8	5½	5⅜	5	4⅜	3⅞	¼-20 x ⅝
CH-30	4	30	.01	B	6⅜	5	5⅜	5 5/16	3⅜	¼	24.4	6¾	5¼	5⅞	5 5/16	3⅜	¼-20 x ⅝
CH-50	1.4	50	0.01	B	6⅜	5¼	5⅜	5 5/16	3¾	¼	26.7	6¾	5¼	5⅞	5 5/16	3¾	¼-20 x ⅝
CH-100	0.5	100	0.005	B	6⅜	6¼	5⅜	5 5/16	4⅛	¼	31.4	6¾	6⅝	5⅞	5 5/16	4⅛	¼-20 x ⅝
CH-200	0.3	200	0.001	B	7½	7	6⅜	6¾	4⅛	¼	48.0	NOT AVAILABLE					
CH-250	0.3	250	0.00115	B	7½	8	6¼	6¾	5⅛	¼	56.0	NOT AVAILABLE					
CH-500	0.055	500	0.00027	B	7½	6½	6⅜	6¾	4⅛	¼	50.0	NOT AVAILABLE					
CH-1000	0.015	1,000	0.000065	B	7½	6½	6¾	6¾	4⅜	¼	70.0	NOT AVAILABLE					

AVAILABLE IN 3 STYLES — FOR OPEN FRAME USE PART NUMBERS SHOWN ABOVE

* For epoxy encapsulation add prefix "E-" to Part No., e.g., E-CH-1 add 3/16 to L, W, H W, H Dim. Grade 5.
‡ For hermetically sealed units add prefix "H" to Part No., e.g., H-CH-1, Grade 4.

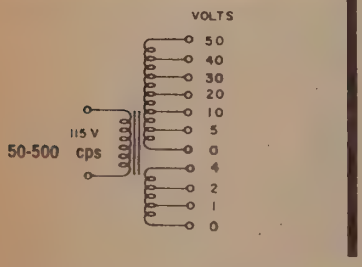
DUAL CHOKES FOR LOWER INDUCTANCE APPLICATIONS



Part No	Series Connected Ind. (MHY)	Curr. (Amps)	Res. (Ohms)	Parallel Connected Ind. (MHY)	Curr. (Amps)	Res. (Ohms)	Mtg. Style	Dimensions L	W	H	ML	MW	Mtg. Screw	Appr. Lbs.
CL-1-2	72	1	1.4	18	2	0.35	C	2⅞	1¾	2 5/16	2⅜	—	#8	0.9
CL-2-4	40	2	0.7	10	4	0.18	C	3⅛	2⅛	2¾	2 13/16	—	#8	1.5
CL-4-8	20	4	0.3	5	8	0.075	B	3	2⅞	2½	2½	2¼	#8	3.0
CL-6-12	12	6	0.15	3	12	0.038	B	3⅜	3 1/16	2 13/16	2 13/16	2½	#8	4.0
CL-12-24	4.8	12	0.052	1.2	24	0.013	B	3⅜	3 1/16	2 13/16	2 13/16	3	#8	5.3
CL-25-50	1.2	25	0.012	0.3	50	0.003	B	3¾	3⅜	3⅛	3⅛	2¾	#8	6.0
CL-50-100	0.5	50	0.0043	0.12	100	0.0011	B	4½	3¾	3¾	3¾	2½	#8	8.0

Signal's Dual Chokes are supplied with 2 windings which may be series or parallel connected with rating shown on chart. This line is basically designed for applications requiring lower inductance values at high currents, such as low voltage DC supplies or SCR filters.

MULTI-VOLT 1 to 54 VOLTS in 1 VOLT STEPS



"MV" LINE

MV (multi-voltage) secondaries may be series connected for any output from 1 to 54 volts, in 1 volt steps, at rated current. This is accomplished by using the small buck-boost secondary.

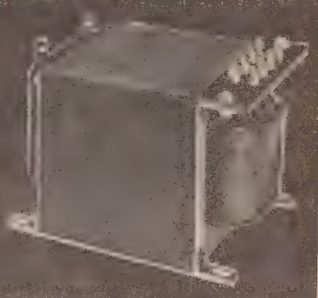
Part No.	Secondary Amps.	DIMENSIONS L	W	H	ML	MW	Appr. Wt.
MV-1	1	3⅜	2¾	2 13/16	2 13/16	2⅛	3.2
MV-2	2	3¾	3⅛	3⅛	3⅛	2⅜	5.0
MV-4	4	4½	3⅝	3¾	3¾	2½	7.5
MV-6	6	5¼	4	4⅜	4⅜	2⅞	12
M-12	12	5¼	6	4⅜	4⅜	4⅝	23

SIGNAL TRANSFORMER CO., INC
ENGINEERS • DESIGNERS • MANUFACTURERS

© United Technical Publications

VERY HIGH CURRENT
TRANSFORMERS & CHOKES
250 to 1400 AMPERES
NEVER AVAILABLE BEFORE

STOCKED FOR SAME DAY SHIPMENT

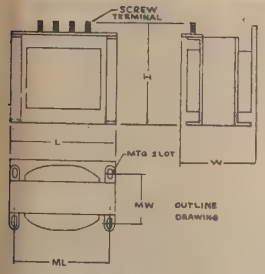


TRANSFORMERS

Part No.	Secondary Volts	Secondary Amps. Nominal (45°C rise)	Secondary Amps. Max. (100°C rise)	Dimensions L	W	H	ML	MW	Mtg. Screw	Appr. Lbs.
6-250	6	250	350	7½	5	7¼	6¾	3⅜	¼	32
9-250	9	250	350	7½	5¾	7¼	6¾	4⅝	¼	40
12-250	12	250	350	7½	6¼	7¼	6¾	4 13/16	¼	48
6-500	6	500	700	7½	6	7¼	6¾	4⅜	¼	40
9-500	9	500	700	7½	8½	7¼	6¾	6⅛	¼	60
12-500	12	500	700	7½	9	7¼	6¾	7⅜	¼	80
3-1000	3	1000	1400	7½	6	7¼	6¾	4⅜	¼	40
6-1000	6	1000	1400	7½	9	7¼	6¾	7⅜	¼	80

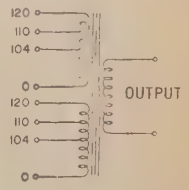
CHOKES

Part No.	Inductance (Milli-hy)	Current (Amperes)	Resis. (Ohms)	L	W	H	ML	MW	Mtg. Screw	Appr. Lbs.
CH-250	.3	250	.00115	7½	8	6¼	6¾	5⅛	¼	56
CH-500	.055	500	.00027	7½	6½	6¼	6¾	4⅛	¼	50
CH-1000	.015	1000	.000065	7½	7½	6¼	6¾	5⅛	¼	70

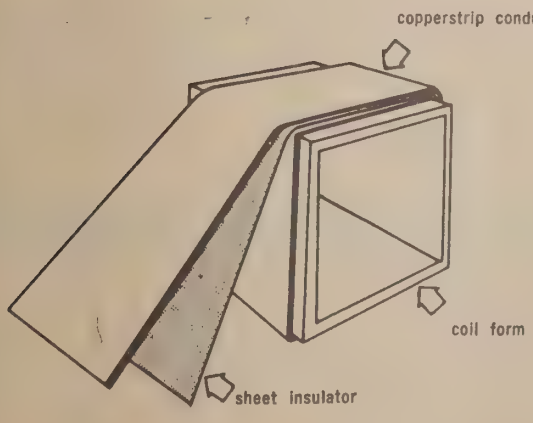


As shown on the schematic diagram dual primaries are provided. This permits parallel connection for 104, 110, or 120 volts or series connection for 208, 214, 220, 230, and 240 volts. Frequency range is 50 to 500 cps.

It is important to note that primary taps may be used to adjust the secondary voltages. Line voltages up to 125V (parallel) or 250V (series) may be used on the lowest primary tap. Nickel plated screw terminals are provided on a heavy phenolic board for easy primary connections.



WINDINGS OF HEAVY COPPER STRIP



STRIP-WOUND SECONDARIES

At the heavy current used in this line it becomes practical and desirable to use wide copper strip (as wide as the coil itself) for windings. Besides the obvious advantages of excellent winding space factor, the heat dissipation of the coil is improved. This improvement is due to the fact that the heat generated in the windings has a pure copper path to the coil ends, where it can be dissipated. In conventional windings of many turns per layer this heat flow is impeded by wire insulation and air spaces between turns. Therefore, the use of copper strip windings yields a dramatic reduction in size and weight.

GRAIN-ORIENTED STEEL CORE

These cores permit the use of higher peak flux densities for the same core loss. This results in a lower number of turns required and therefore, a smaller, more compact transformer.

CLASS F INSULATION USED THROUGHOUT

Class F insulation is rated for unlimited life at a total temperature of 155°C (ambient plus temperature rise).

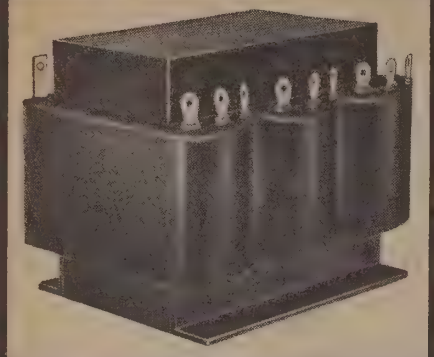
Class A insulation has a maximum temperature rating of 105°C. The "nominal" current ratings given to this series are for a temperature rise of 45°C above 55°C ambient (Class A). Since Class F insulation is used it is permissible to increase these ratings by 40% (700 and 1400 amperes) without reducing the reliability of the transformer. The temperature rise will be 100°C over a 55°C ambient. The only limitation is not the transformer, but the temperature rating of surrounding components which may be affected by the additional heat radiated by the transformer

SIGNAL TRANSFORMER CO., INC

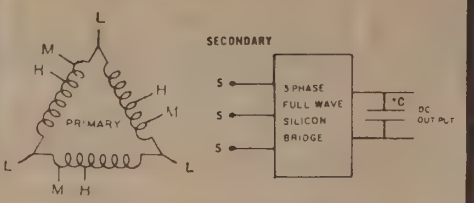
ENGINEERS • DESIGNERS • MANUFACTURERS

© United Technical Publications

3 PHASE HIGH CURRENT RECTIFIER TRANSFORMERS

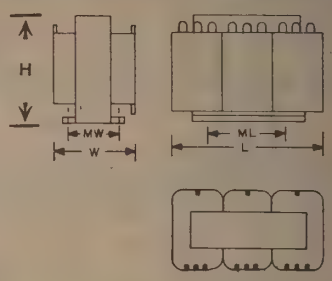


SCHEMATIC DIAGRAM



*C — Optional, no capacitor will give DC output shown at approx. 5% ripple.

MECHANICAL DIMENSIONS



DC OUTPUT VOLTAGE

PART NO.	PRI TAP "L" SUPPLY VOLTAGE 208	PRI TAP "L" SUPPLY VOLTAGE 220	PRI TAP "M" SUPPLY VOLTAGE 208	PRI TAP "M" SUPPLY VOLTAGE 220	PRI TAP "H" SUPPLY VOLTAGE 208	PRI TAP "H" SUPPLY VOLTAGE 220	DC RATED AMPS	APPROX. DIMENSIONS L	W	H	ML	MW	APX. LBS.
3PH 24-50	24	25	26	27.5	28	30	50	7¾	6	5½	4.8	4⅞	35
3PH 24-100	24	25	26	27.5	28	30	100	11½	5	8¼	7.2	4	42
3PH 24-200	24	25	26	27.5	28	30	200	11½	8⅝	8¼	7.2	6¼	90
3PH 48-30	42	44	47	50	52	55	30	7¾	6	5½	4.8	4⅞	35
3PH 48-60	42	44	47	50	52	55	60	11½	5	8¼	7.2	4	42
3PH 48-120	42	44	47	50	52	55	120	11½	8⅝	8¼	7.2	6¼	90

At higher power loads (above 2·3 KVA) it becomes inefficient to use single phase 115 or 230 volt standard lines. With this in mind, our engineering staff has developed a line of 3 phase transformers for use off 208 or 220V 3 phase power lines These offer the significantly higher conversion efficiency and lighter power line drain of 3 phase systems.

Since the principal application of these items is in high power dc power supplies, output ratings are given in dc voltage and current assuming the use of a 3 phase full wave rectifier.

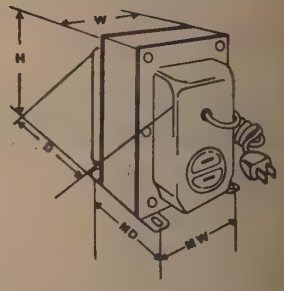
AUTO TRANSFORMERS

STEP-DOWN 230 TO 115 V
"SD" SERIES — LINE CORD & RECEPTACLE

VA Rating	Part No.	W	D	H	MW	MD	Mtg. Screw	Appr. Lbs.
100	SD-100	2⅝	2⅞	3⅛	2	1 13/16	#8	2.3
150	SD-150	2⅝	3½	3⅛	2	2 1/16	#8	3.6
250	SD-250	3⅞	3½	4⅝	3	2⅜	#8	6.2
350	SD-350	3⅞	4¼	4⅝	3	3 1/16	#8	8.3
500	SD-500	3⅞	4¾	4⅝	3	3 1/16	#8	10.5
750	SD-750	4⅝	5⅜	5⅜	3½	3¾	¼	14.5
1000	SD-1000	4⅝	5⅞	5⅜	3½	4¼	¼	18
1500	SD-1500	4⅝	6⅝	5⅜	3½	5	¼	22
2000	SD-2000	4⅝	7⅛	5⅜	3½	5½	¼	26

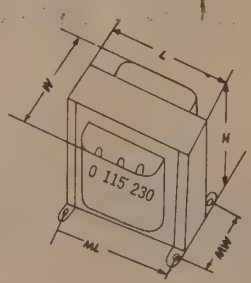
(100-2000 VA)
TYPE SD

Low Regulation • Fully encased — Black Finish • 45°C Temperature Rise • U/L Approved 2 prong line cord and receptacle.



STEP-UP OR DOWN 115/230 OR 230/115 V
"SDO" SERIES — OPEN FRAME • SOLDER LUGS

VA Rating	Part No.	L	W	H	ML	MW	Mtg. Screw	Appr. Lbs.
100	SDO-100	3	2½	2½	2½	2⅛	#8	2.3
150	SDO-150	3	3¼	2½	2½	2¾	#8	3.6
250	SDO-250	4½	2¾	3¾	3¾	2	#10	6.2
350	SDO-350	4½	3¾	3¾	3¾	2¾	#10	8.3
500	SDO-500	4½	4¼	3¾	3¾	3¼	#10	10.5
750	SDO-750	5¼	4½	4⅜	4⅜	3⅜	¼	14.5
1000	SDO-1000	5¼	5	4⅜	4⅜	3⅞	¼	18
1500	SDO-1500	5¼	5¾	4⅜	4⅜	4⅝	¼	22
2000	SDO-2000	5¼	6¼	4⅜	4⅜	5⅛	¼	26



TYPE SDO

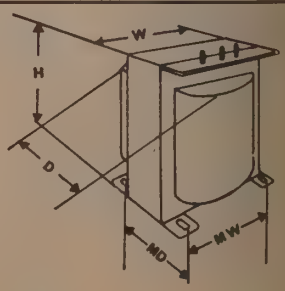
Same Electrically as Type SD. Open Frame • Black Enamel Finish • Solder Lugs • Inexpensive Version for Use in Equipment.

STEP-UP OR DOWN 115/230 OR 230/115
"HSD" SERIES
RUGGED • HEAVY DUTY • PHENOLIC TERMINAL BOARDS

VA Rating	Part No.	W	D	H	MW	MD	Mtg. Screw	Appr. Lbs.
3000	HSD-3000	7½	6	6¾	6¾	4⅛	¼	40
4000	HSD-4000	7½	6½	6¾	6¾	4⅝	¼	46
5000	HSD-5000	7½	7	6¾	6¾	5⅛	¼	52
6000	HSD-6000	7½	8	6¾	6¾	6⅛	¼	65

(3000-6000 VA)
TYPE HSD

Very low Regulation • 45°C Temperature Rise • Black High Gloss Enamel Fnish • Screw type terminals on phenolic board.

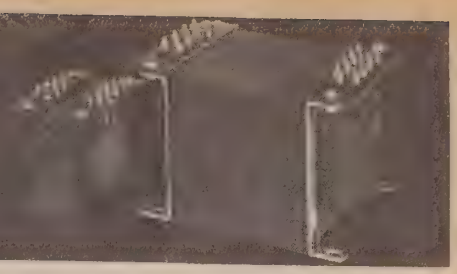


SIGNAL TRANSFORMER CO., INC

ENGINEERS • DESIGNERS • MANUFACTURERS

© United Technical Publications

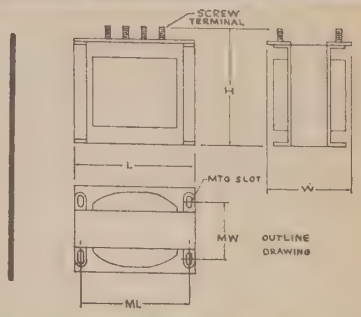
INDUSTRIAL GRADE
STEP-UP OR STEP-DOWN
POWER ISOLATION OR AUTO-TRANSFORMERS
HIGH DEGREE OF VERSATILITY OFFERS MANY POSSIBLE VOLTAGE RATINGS



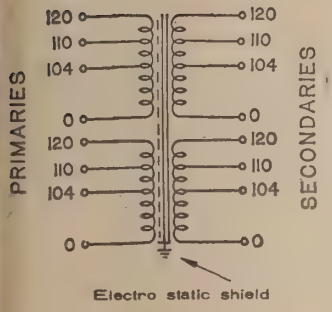
AVAILABLE FROM STOCK FOR IMMEDIATE SHIPMENT

The "DU", "SU", and "UP" lines are designed for a maximum of 55°C rise above ambient for use on standard power lines from 50 to 500 Cps. Only prime raw materials are used. Units are thoroughly impregnated and baked with Signal's own high gloss black baking varnish. The transformers are rugged in construction, well-insulated and have a consistently uniform appearance. All ratings are at full load current, continuous operation.

Heavy ¼ inch phenolic terminal boards are provided with plated brass screws and flat washers (10-32 on ¼ and ½ KVA, ¼-20 on larger sizes). Connections can be easily made with a nut driver. It is also simple to alter the inter-connections to change transformer ratings. **Electro static shields are provided grounded to the core.** The connection is made with a lug to ground and may be opened if an ungrounded shield is desired.



"DU SERIES" 110/220 Dual Primary To 110/220 Dual Sec. (Primary & Secondary may be reversed)

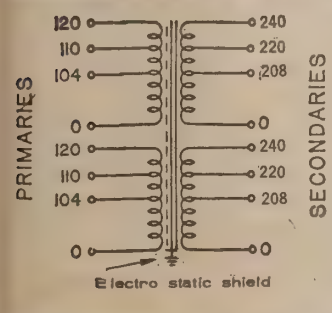


As shown on the schematic diagram the "DU" line is designed with dual primaries and secondaries. All four windings are identically rated at 0/104/110/120 volts. This permits series or parallel connections on either primary or secondary. Therefore, a nominal 110 to 110 volt, 220 to 220 volt, 110 to 220 volt, or 220 to 110 volt transformer can be set up. The winding taps permit intermediate series ratings such as 208, 214, or 230 volts.

It is also possible to make auto-transformer connections by connecting a primary group in series with a secondary group. Such nominal ratings as 440 to 220 volts or 220 to 440 volts can be set-up, in addition to the standard ratings described above. A further advantage to auto-transformer connection is the fact that the KVA rating of a particular type is **doubled.**

Part No.	KVA	Series Secondaries Volts	Series Secondaries Max. Amps	Parallel Secondaries Volts	Parallel Secondaries Max. Amps	Mechanical Dimensions L (Max.)	W (Max.)	H (Max.)	ML ± 1/32	MW ± 1/16	Mtg. Screw	Appr. Lbs.
DU-¼	¼	0/208/220/240	1.1	0/104/110/120	2.2	5 5/16	4¼	5¼	4⅜	2½	#10	12
DU-½	½	0/208/220/240	2.3	0/104/110/120	4.6	5 5/16	5 5/16	5¼	4⅜	3⅝	#10	18
DU-1	1	0/208/220/240	4.5	0/104/110/120	9	7 9/16	6¼	7¼	6¾	4⅛	¼	33
DU-2	2	0/208/220/240	9	0/104/110/120	18	7 9/16	8¼	7¼	6¾	6	¼	56
DU-3	3	0/208/220/240	14	0/104/110/120	28	7 9/16	9¼	7¼	6¾	7	¼	70
DU-5	5	0/208/220/240	23	0/104/110/120	46	7 9/16	10¾	7¼	6¾	8½	¼	89
DU-7.5	7.5	0/208/220/240	31	0/104/110/120	62	9	9	8	7½	6½	¼	105
DU-10	10	0/208/220/240	41	0/104/110/120	83	9	12	8	7½	9	¼	150

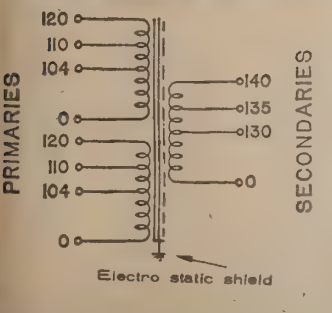
"SU SERIES" 110/220 Dual Primary to 220/440 V. Dual Sec. (Primary & Secondary may be reversed)



"SU" transformers are similar to "DU" types except that a 220/440 V secondary is provided.

Part No.	KVA	Series Secondaries Volts	Series Secondaries Max. Amps	Parallel Secondaries Volts	Parallel Secondaries Max. Amps	Mechanical Dimensions L (Max.)	W (Max.)	H (Max.)	ML ±1/32	MW ±1/16	Mtg. Screw	Appr. Lbs.
SU-¼	¼	0/416/440/480	0.55	0/208/220/240	1.1	5 5/16	4¼	5¼	4⅜	2½	#10	12
SU-½	½	0/416/440/480	1.15	0/208/220/240	2.3	5 5/16	5 5/16	5¼	4⅜	3⅝	#10	18
SU-1	1	0/416/440/480	2.25	0/208/220/240	4.5	7 9/16	6¼	7¼	6¾	4⅛	¼	33
SU-2	2	0/416/440/480	4.5	0/208/220/240	9	7 9/16	8¼	7¼	6¾	6	¼	56
SU-3	3	0/416/440/480	7	0/208/220/240	14	7 9/16	9¼	7¼	6¾	7	¼	70
SU-5	5	0/416/440/480	11.5	0/208/220/240	23	7 9/16	10¾	7¼	6¾	8½	¼	89
SU-7.5	7.5	0/416/440/480	15.5	0/208/220/240	31	9	9	8	7½	6½	¼	105
SU-10	10	0/416/440/480	20.5	0/208/220/240	41	9	12	8	7½	9	¼	150

"UP SERIES" 110/220 Dual Primary To 0/130/135/140 V. Sec. (Primary & Secondary may be reversed)



The "UP" line utilizes the same dual primary as the "DU" line. It has, however, a single secondary rated at 0/130/135/140 volts.

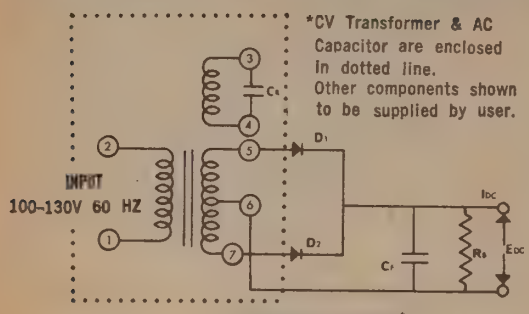
This type is quite useful to boost low line voltages or raise line voltages to compensate for drops in series elements. It also finds application in bridge rectifiers for DC voltage outputs of approximately 115 to 130 volts.

Part No.	KVA	Secondary Volts	Max. Secondary Amps	L (Max.)	W (Max.)	H (Max.)	ML ± 1/32	MW ± 1/16	Mtg. Screw	Appr. Lbs.
UP-2	¼	0/130/135/140	2	5 5/16	4¼	5¼	4⅜	2½	#10	12
UP-4	½	0/130/135/140	4	5 5/16	5 5/16	5¼	4⅜	3⅝	#10	18
UP-8	1	0/130/135/140	8	7 9/16	6¼	7¼	6¾	4⅛	¼	33
UP-15	2	0/130/135/140	15	7 9/16	8¼	7¼	6¾	6	¼	56
UP-25	3	0/130/135/140	25	7 9/16	9¼	7¼	6¾	7	¼	70
UP-40	5	0/130/135/140	40	7 9/16	10¾	7¼	6¾	8½	¼	89

© United Technical Publications

CONSTANT VOLTAGE TRANSFORMERS

FOR USE IN DC POWER SUPPLIES (TYPE CDC)



SCHEMATIC DIAGRAM *

CDC CONSTANT VOLTAGE TRANSFORMERS

Signal's CDC Regulating Transformers are specifically manufactured fo use in DC Power Supplies. They are designed and rated for use with a ful wave center-tapped silicon rectifier. CDC transformers are operated i ferro-resonance and are used in conjunction with an AC **tuning capacito** (Cr in schematic diagram), which is supplied with the transformer.

In order to construct a regulated power supply the only other part necessary are two diodes (D_1 and D_2), an electrolytic computer grade capaci tor (C_f) and a bleeder resistor (R_b). These are standard shelf items.

The specification chart lists specific outputs available and the recom mended auxiliary components. Part numbers are coded in terms of DC outputs, e.g., CDC-15-2 will give an output of 15V DC at 2 amps DC.

Electrical performance is completely specified. The DC voltage is constan to ±1% over the line voltage range of 100 to 130V at 60 HZ. The nomina output is held to ±2%. Closer tolerance on nominal output (±1%) can b obtained on special order at slightly higher cost.

Load regulation is specified as the rise in dc voltage output (increase in E_{dc}) from full load to the no load, ¼ load, and ½ load points. The filter capacitor (C_f) specified should be used and will yield the values of ripple voltage shown.

A significant protection feature is the fact that the DC short circuit current is limited to a maximum of 2 times rated current (3 times in size "C-6" units). This protects the entire circuit against shorts.

OUTPUT D.C. VOLTS	DC Amps I_{dc}	Part Number	Load Regulation (Rise in DCV from FL) NL-FL	¼-FL	½-FL	Ripple Volts (RMS)	Recommended Diodes (D_1 & D_2) P.I.V.	I/Cell	Filter† Cap. (C_f) MFD.	DCWV	Bleeder‡ Resistor (R_b) Ohms	Watts	Style* & Size
5 vdc	1	CDC-5-1	2.0	1.5	0.8	0.3	50	1	4K	10	50	2	C-6
	5	CDC-5-5	1.0	0.7	0.5	0.4	50	6	20K	10	10	5	B-25
	10	CDC-5-10	1.0	0.7	0.5	0.4	50	16	30K	10	5	10	B-50
	18	CDC-5-18	1.0	0.7	0.4	0.4	50	60	80K	10	4	10	B-120
	50	CDC-5-50	0.7	0.4	0.2	0.4	50	100	200K	10	3	20	B-250
6 vdc	0.8	CDC-6-0.8	2.0	1.5	0.8	0.3	50	1	3K	10	50	2	C-6
	4.5	CDC-6-4.5	1.0	0.7	0.5	0.4	50	6	15K	10	10	5	B-25
	9.0	CDC-6-9	1.0	0.7	0.5	0.4	50	16	25K	10	6	10	B-50
	16	CDC-6-16	1.0	0.7	0.4	0.4	50	16	75K	10	5	10	B-120
	40	CDC-6-40	0.7	0.4	0.2	0.4	50	60	150K	10	3	20	B-250
	75	CDC-6-75	0.8	0.6	0.4	0.4	50	100	200K	10	1	40	B-500
12 vdc	0.4	CDC-12-0.4	3.0	2.2	1.1	0.3	100	1	2K	15	150	2	C-6
	2.2	CDC-12-2.2	1.5	1.0	0.6	0.4	100	3	8K	15	25	10	B-25
	4.5	CDC-12-4.5	1.2	0.7	0.5	0.4	100	6	15K	15	25	10	B-50
	9.0	CDC-12-9	1.0	0.7	0.4	0.4	100	16	40K	15	10	20	B-120
	20	CDC-12-20	0.8	0.5	0.3	0.3	100	40	75K	15	5	40	B-250
	38	CDC-12-38	0.9	0.7	0.4	0.4	100	60	120K	15	4	50	B-500
15 vdc	0.35	CDC-15-0.35	3.5	2.3	1.3	0.3	100	1	1.5K	20	200	2	C-6
	2.0	CDC-15-2	1.6	1.0	0.6	0.4	100	2	7K	20	50	5	B-25
	3.5	CDC-15-3.5	1.3	0.8	0.6	0.3	100	6	15K	20	25	10	B-50
	8	CDC-15-8	1.5	0.9	0.6	0.4	100	16	30K	20	15	20	B-120
	16	CDC-15-16	1.0	0.8	0.5	0.3	100	16	75K	20	10	30	B-250
	30	CDC-15-30	1.0	0.6	0.4	0.3	100	40	120K	20	5	50	B-500
18 vdc	0.32	CDC-18-0.32	3.7	2.3	1.3	0.4	100	1	1K	20	300	2	C-6
	1.8	CDC-18-1.8	2.0	1.2	0.7	0.4	100	2	7K	20	100	5	B-25
	3	CDC-18-3	1.7	1.2	0.7	0.3	100	3	12K	20	50	10	B-50
	6	CDC-18-6	1.7	0.9	0.6	0.3	100	6	30K	20	25	20	B-120
	13	CDC-18-13	1.3	1.0	0.7	0.3	100	16	50K	20	15	30	B-250
	26	CDC-18-26	1.5	0.6	0.5	0.3	100	40	120K	20	10	50	B-500
24 vdc	0.25	CDC-24-0.25	4.0	3.4	1.5	0.3	200	1	1K	25	350	2	C-6
	1.2	CDC-24-1.2	2.0	1.2	0.7	0.4	200	2	5K	25	100	10	B-25
	2.1	CDC-24-2.1	1.8	1.5	1.0	0.3	200	3	10K	25	50	20	B-50
	4.5	CDC-24-4.5	2.0	1.0	0.7	0.3	200	6	25K	25	50	20	B-120
	11	CDC-24-11	1.3	1.0	0.5	0.3	200	16	50K	25	25	30	B-250
	20	CDC-24-20	1.5	0.7	0.3	0.3	200	40	75K	25	15	50	B-500
28 vdc	0.22	CDC-28-0.22	5.6	4.0	2.3	0.3	200	1	1K	35	500	2	C-6
	1.0	CDC-28-1	2	1.5	0.6	0.3	200	1	5K	35	100	10	B-25
	2.0	CDC-28-2	2.5	1.5	1.0	0.3	200	2	10K	35	100	10	B-50
	4.0	CDC-28-4	2.0	1.2	0.8	0.3	200	6	25K	35	50	20	B-120
	9.0	CDC-28-9	1.3	1.0	0.5	0.3	200	16	50K	35	25	40	B-250
	16	CDC-28-16	1.7	0.8	0.3	0.3	200	16	75K	35	15	60	B-500
36 vdc	0.18	CDC-36-0.18	7.0	5.5	3.5	0.3	200	1	1K	50	1K	2	C-6
	0.9	CDC-36-0.9	2.0	1.4	0.8	0.3	200	1	5K	50	150	10	B-25
	1.8	CDC-36-1.8	3.0	2.0	1.3	0.3	200	2	8K	50	100	20	B-50
	3.2	CDC-36-3.2	2.5	1.4	0.7	0.3	200	3	20K	50	100	20	B-120
	6	CDC-36-6	2.0	1.5	1.0	0.3	200	16	25K	50	25	60	B-250
	12	CDC-36-12	1.8	1.0	0.7	0.3	200	16	50K	50	25	60	B-500
48 vdc	0.12	CDC-48-0.12	8.0	6.0	4.0	0.2	200	1	1K	50	1.5K	2	C-6
	0.6	CDC-48-0.6	2.5	2.0	1.0	0.3	200	1	3K	50	300	10	B-25
	1.5	CDC-48-1.5	3.0	1.5	1.0	0.3	200	2	6K	50	250	10	B-50
	2.5	CDC-48-2.5	3.0	1.5	1.0	0.2	200	2	15K	50	200	20	B-120
	5.0	CDC-48-5	2.0	1.0	0.6	0.3	200	6	15K	50	50	50	B-250
	10	CDC-48-10	2.0	1.0	0.5	0.4	200	16	25K	50	50	50	B-500
60 vdc	0.1	CDC-60-0.1	8.0	6.0	4.0	0.2	400	1	1K	75	2.5K	2	C-6
	0.5	CDC-60-0.5	3.0	2.0	1.2	0.4	400	1	2K	75	500	10	B-25
	1.2	CDC-60-1.2	4.2	3.0	2.0	0.3	400	2	5K	75	400	10	B-50
	2.0	CDC-60-2	3.5	2.0	1.0	0.3	400	2	10K	75	300	20	B-120
	4	CDC-60-4	1.5	1.2	1.0	0.4	400	6	12K	75	75	50	B-250
	8	CDC-60-8	3.0	2.0	0.6	0.4	400	16	20K	75	75	50	B-500
120 vdc	0.05	CDC-120-0.05	9.0	8.0	5.0	0.2	400	1	0.5K	150	10K	2	C-6
	0.3	CDC-120-0.3	6.0	4.0	2.5	0.3	400	1	2K	150	2K	10	B-25
	0.6	CDC-120-0.6	5.5	3.5	2.5	0.3	400	1	3K	150	1.5K	10	B-50
	1.0	CDC-120-1	5.5	3.2	2.0	0.4	400	1	4K	150	1K	20	B-120
	2	CDC-120-2	4.0	3.0	2.0	0.3	400	2	9K	150	250	60	B-250
	4	CDC-120-4	4.0	2.0	0.8	0.4	400	6	15K	150	150	100	B-500

* See mechanical dimensions on opposite page.

‡ Bleeder resistor may be eliminated if load current does not fall to zero. DC amp rating may be increased accordingly.

† May be reduced if ripple requirements are less severe.

© United Technical Publications

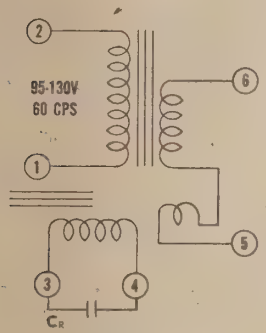
CONSTANT VOLTAGE TRANSFORMERS
FOR USE IN AC APPLICATIONS (TYPE ACV)

Signal ACV transformers are manufactured for use with AC loads. They are simple and rugged designs and will regulate to within plus or minus 1% for input variations from 95-130V at 60 cps. If regulation of plus or minus ½% or better is desired, special units can be made to your order. Nominal output at full load is held to a tolerance of ±2%.

Full regulation is maintained at any load from about 20% to 100%. Overload current is limited to a maximum of 200% of rated current at short circuit. The 6.4 and 12.8V ratings are ideal for use with tube or lamp loads since the short circuit current rating limits the inrush current to cold filaments. Stabilization of the voltage results in longer filament life.

ACV transformers are "normal" harmonic type with approximately a square wave output.

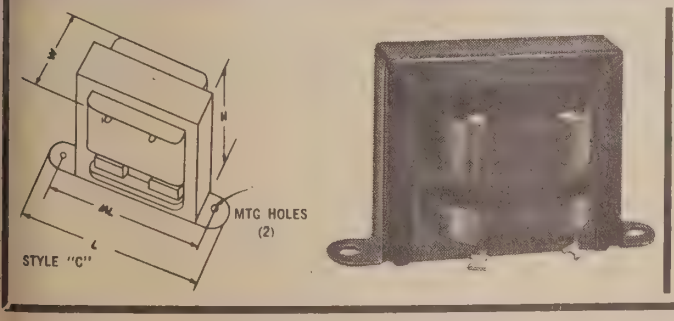
PART NO.	VOLTS AC	AMPS AC	STYLE & SIZE
25 ACV-6.4	6.4	4	B-25
25 ACV-12.8	12.8	2	B-25
25 ACV-26	26	1	B-25
25 ACV-118	118	0.25	B-25
50 ACV-6.4	6.4	8	B-50
50 ACV-12.8	12.8	4	B-50
50 ACV-26	26	2	B-50
50 ACV-118	118	0.43	B-50
120 ACV-6.4	6.4	20	B-120
120 ACV-12.8	12.8	10	B-120
120 ACV-26	26	5	B-120
120 ACV-118	118	1	B-120
250 ACV-12.8	12.8	20	B-250
250 ACV-26	26	10	B-250
250 ACV-118	118	2.2	B-250
500 ACV-118	118	4.5	B-500

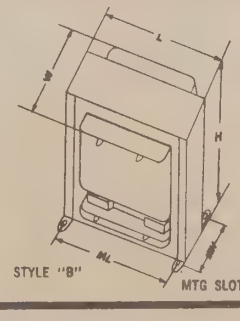


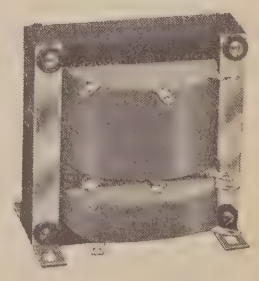
CAPACITOR WINDING SCHEMATIC DIAGRAM

MECHANICAL DIMENSIONS

STYLE & SIZE	L	W	H	ML	MW	MTG. SCREW
C-6	3¼	1⅞	1 15/16	2 13/16	—	#8
B-25	3	2⅝	3⅛	2⅝	1 15/16	#8
B-50	3	3⅝	3⅛	2⅝	2 1/16	#8
B-120	4	3⅞	4 1/16	3½	2⅜	#10
B-250	4	5¾	4 1/16	3½	3 15/16	#10
B-500	5	5¾	5 1/16	4⅜	3 15/16	#10







ADVANTAGES OF CONSTANT VOLTAGE TRANSFORMERS

REGULATION — output regulated to plus or minus 1% for line voltage variations of 95 to 130V at 60 cps.

SELF-PROTECTION — against output short circuit. Current limited to a maximum of 2 times rated current.

MECHANICALLY RUGGED — as resistant to mechanical shock as conventional power transformers.

NO MOVING PARTS — no adjustment or maintenance necessary.

SQUARE WAVE OUTPUT — ideal for use in rectifier circuits — little filtering needed.

HIGH DEGREE OF ISOLATION — between input and output circuits — both physical and electrical isolation, electro-static shields not necessary.

RESONATING CAPACITOR — supplied with transformers.

EPOXY IMPREGNATION — minimizes acoustic noise.

SIGNAL TRANSFORMER CO., INC
ENGINEERS • DESIGNERS • MANUFACTURERS

© United Technical Publications

MINIATURE PLUG-IN POWER TRANSFORMERS

SHIPPED FROM STOCK IMMEDIATELY

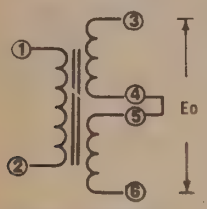
FOR PRINTED CIRCUIT APPLICATIONS

low profile • low regulation • 50-500 Hz

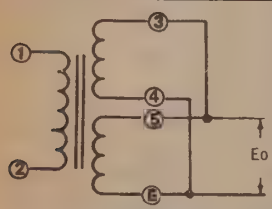




BASIC SCHEMATIC



SERIES CONNECTED



PARALLEL CONNECTED

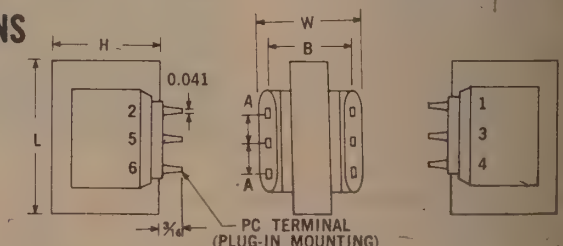
IDEAL FOR — SINGLE OR DUAL OUTPUT DC SUPPLIES — ISOLATED CONTROL CIRCUIT AND REFERENCE SUPPLIES

SECONDARY VOLTS	Part No.	Secondary Milliamps Series	Secondary Milliamps Parallel	Size*	SECONDARY VOLTS	Part No.	Secondary Milliamps Series	Secondary Milliamps Para
10 V.C.T. or 5 V.	PC-10-120	120	240	37	40 V.C.T. or 20 V.	PC-40-30	30	6
SERIES 10 V.C.T.	PC-10-440	440	880	50	SERIES 40 V.C.T.	PC-40-110	110	22
PARALLEL 5 V @ 2 x CURRENT	PC-10-1000	1000	2000	62	PARALLEL 20 V @ 2 x CURRENT	PC-40-250	250	50
12.6 V.C.T. or 6.3 V.	PC-12-100	100	200	37	56 V.C.T. or 28 V.	PC-56-20	20	4
SERIES 12.6 V.C.T.	PC-12-350	350	700	50	SERIES 56 V.C.T.	PC-56-80	80	16
PARALLEL 6.3 V @ 2 x CURRENT	PC-12-800	800	1600	62	PARALLEL 28 V @ 2 x CURRENT	PC-56-180	180	36
16 V.C.T. or 8 V.	PC-16-75	75	150	37	88 V.C.T. or 44 V.	PC-88-15	15	3
SERIES 16 V.C.T.	PC-16-260	260	520	50	SERIES 88 V.C.T.	PC-88-50	50	10
PARALLEL 8 V @ 2 x CURRENT	PC-16-640	640	1280	62	PARALLEL 44 V @ 2 x CURRENT	PC-88-120	120	24
20 V.C.T. or 10 V.	PC-20-60	60	120	37	120 V.C.T. or 60 V.	PC-120-10	10	2
SERIES 20 V.C.T.	PC-20-220	220	440	50	SERIES 120 V.C.T.	PC-120-35	35	7
PARALLEL 10 V @ 2 x CURRENT	PC-20-500	500	1000	62	PARALLEL 60 V @ 2 x CURRENT	PC-120-85	85	17
24 V.C.T. or 12 V.	PC-24-50	50	100	37	180 V.C.T. or 90 V.	PC-180-6	6	1
SERIES 24 V.C.T.	PC-24-180	180	360	50	SERIES 180 V.C.T.	PC-180-24	24	4
PARALLEL 12 V @ 2 x CURRENT	PC-24-450	450	900	62	PARALLEL 90 V @ 2 x CURRENT	PC-180-55	55	11
34 V.C.T. or 17 V.	PC-34-35	35	70	37	230 V.C.T. or 115 V.	PC-230-5	5	1
SERIES 34 V.C.T.	PC-34-125	125	250	50	SERIES 230 V.C.T.	PC-230-20	20	4
PARALLEL 17 V @ 2 x CURRENT	PC-34-300	300	600	62	PARALLEL 115 V @ 2 x CURRENT	PC-230-40	40	8

*Size shown applies to both right and left hand units which are on same horizontal line.

DIMENSIONS

Size	VA	L	W	H	A	B	Oz.
37	1.2	1⅜	1⅛	1 3/16	0.312	1.00	3
50	4.4	1⅝	1¼	1⅜	0.400	1.10	5
62	10	1⅞	1 7/16	1⅝	0.400	1.30	9



MECHANICAL OUTLINE

METHOD OF DETERMINING SECONDARY CURRENT RATINGS

RECTIFIER TYPE	FILTER TYPE	RMS SECONDARY CURRENT
Full Wave Center-Tap	Choke Input	.7 X DC amps
Full Wave Center-Tap	Capacitor Input	1.2 X DC amps
Full Wave Bridge	Choke Input	= to DC amps
Full Wave Bridge	Capacitor Input	1.8 X DC amps

Signal's PC Transformers are constructed of prime raw materials using Class insulation and nylon bobbins with PC pins molded directly in the bobbin wall. They ar black varnish impregnated and 100% tested for all parameters before shipment.

Primaries are rated at 115 V. 50 to 500 Hz. Dual secondaries provide two outputs or secondaries may be series or parallel connected. This results in a wide variety o output combinations. Load regulation is limited to a maximum of 20%.

SPECIAL PC TRANSFORMERS OR CHOKES — PROMPT QUOTATIONS

SIGNAL TRANSFORMER CO., INC

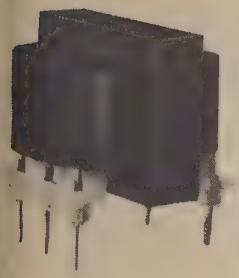
© United Technical Publication

MINIATURE PLUG-IN POWER TRANSFORMERS

FOR PRINTED CIRCUIT APPLICATIONS

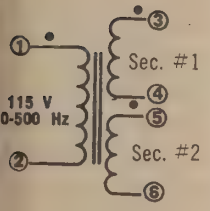
low profile • low regulation • 50-500 Hz

SHIPPED FROM STOCK IMMEDIATELY



FOR INDICATOR TUBE & I.C. APPLICATIONS

"PCN" transformers provide ideal outputs for use in indicator tube and I.C. applications. 175 or 130 V. can be used for DC supplies for "Nixies" and 6.3 or 12.6 V. can supply power for associated I.C. circuitry or supplies.



SECONDARY VOLTS	Part No.	Secondary Milliamps Sec. #1 (3-4)	Secondary Milliamps Sec. #2 (5-6)	Size *	SECONDARY VOLTS	Part No.	Secondary Milliamps Sec. #1 (3-4)	Secondary Milliamps Sec. #2 (5-6)
175 V. & 6.3 V. SEC. #1 (3-4) 175 V. SEC. #2 (5-6) 6.3 V.	PCN-37-1	4	80	37	**130 V. & 6.3 V.** SEC. #1 (3-4) 130 V. SEC. #2 (5-6) 6.3 V.	PCN-37-3	5.5	80
	PCN-50-1	12	350	50		PCN-50-3	16	350
	PCN-62-1	20	1000	62		PCN-62-3	27	1000
175 V. & 12.6 V. SEC. #1 (3-4) 175 V. SEC. #2 (5-6) 12.6 V.	PCN-37-2	4	40	37	**130 V. & 12.6 V.** SEC. #1 (3-4) 130 V. SEC. #2 (5-6) 12.6 V.	PCN-37-4	5.5	40
	PCN-50-2	12	175	50		PCN-50-4	16	175
	PCN-62-2	20	500	62		PCN-62-4	27	500

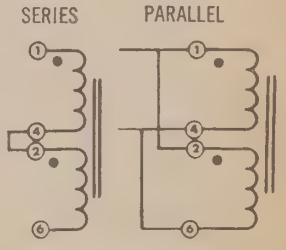
*Size shown applies to both right and left hand units which are on same horizontal line.

DUAL INDUCTORS FOR SMOOTHING & SCR SURGE LIMITING

"PCC" dual filter chokes find use in DC supply filters or as inductive elements in switching circuits. Another application is to limit current surge (di/dt) in SCR circuits. These chokes may also be used as AC reactors.

Part No.	Series Connected Ind. (MHY)	Series Connected Curr. (Amps)	Series Connected Resis. (Ohms)	Parallel Connected Ind. (MHY)	Parallel Connected Curr. (Amps)	Parallel Connected Resis (Ohms)	E-T* (Volt-Millisec)	Size
PCC-1-37	120	0.375	6.0	30	0.75	1.5	25	37
PCC-2-37	80	0.5	3.8	20	1.0	0.95	20	37
PCC-1-50	88	0.75	3.2	22	1.5	0.80	30	50
PCC-2-50	40	1.0	2.0	10	2.0	0.5	25	50
PCC-1-62	32	1.5	1.0	8	3.0	0.25	25	62
PCC-2-62	20	2.0	0.64	5	4.0	0.16	20	62

*Based on maximum flux density of 5,000 gauss. (approx. value series connection)



Note Pins 3 & 5 are Dummy Terminals

SPECIAL "PC" COMPONENTS

Signal maintains a unique department which specializes in the design and production of "PC" type transformers and chokes. It is equipped with the most modern automated coil winding and lamination stacking machinery. Specialized production test equipment assures uniform, high quality transformers at the most economical price. This facility is being constantly improved and expanded to meet the growing demand for our designs.

The "PC" items shown here are stocked in depth at our factory for immediate delivery. However, they represent only a small fraction of our total shipments. The major portion consists of custom designs or variations for our customer's special requirements.

Please contact us for prompt quotations on any of your special requirements for "PC" or other bobbin wound components.

SPECIAL PC TRANSFORMERS OR CHOKES — PROMPT QUOTATIONS

SIGNAL TRANSFORMER CO., INC

© United Technical Publications

PRICE LIST

Part No.	User Net
10-0.1	3.74
10-0.25	3.98
10-0.5	4.13
10-1	4.57
10-2	5.72
10-4	7.15
10-6	9.24
10-8	9.90
10-12	11.55
10-25	20.02
10-50	29.15
10-100	47.30
12.8-0.1	3.74
12.8-0.25	4.02
12.8-0.5	4.40
12.8-1	4.90
12.8-2A	5.67
12.8-2	5.33
12.8-4	8.47
18.8-6	9.90
12.8-8	10.56
12.8-12	12.10
12.8-25	24.64
12.8-50	33.55
12.8-100	48.40
16-0.1	3.85
16-0.25	4.07
16-0.5	4.35
16-1	4.73
16-2	5.89
16-4	8.91
16-6	10.45
16-8	11.33
16-12	14.03
16-25	26.40
16-50	41.80
16-100	70.40
24-0.1	3.85
24-0.25	4.51
24-0.5	4.95
24-1A	5.39
24-1	6.99
24-2	8.03
24-4	10.07
24-6	12.10
24-8	16.72
24-12	19.58
24-20	24.64
24-25	33.00
24-50	48.40
24-100	77.00
36-0.1	3.96
36-0.25	4.40
36-0.5	5.01
36-1A	6.22
36-1	7.26
36-2	8.58
36-4	11.99
36-6	17.16
36-8	18.37
36-12	22.00
36-20	37.07
36-25	43.56
36-30	48.40
36-50	60.50
36-100	118.80
56-0.1	4.18
56-0.25	4.90
56-0.5	5.50
56-1	8.80
56-2	9.79
56-4	16.39
56-6	23.65
56-8	29.15
56-12	38.50
56-25	62.70
56-50	112.20
56-100	166.10
68-01	4.29
68-025	4.84
68-0.5A	5.61
68-0.5	7.43
68-1	8.69
68-2	11.00
68-4	20.68
68-6	23.65
68-8	28.38
68-12	41.80
68-25	62.70
68-50	113.30
80-01	4.40
80-0.25	5.06
80-0.5A	6.16
80-0.5	7.43
80-1	9.35
80-2	13.97
80-4	23.10
80-6	29.70
80-8	35.75
80-12	45.10
80-25	76.45
80-50	136.40
88-0.1	4.51
88-0.25	5.28
88-0.5	6.27
88-1	9.68
88-2	14.19
88-4	24.20
88-6	30.25
88-8	36.85
88-12	46.20
88-25	79.20
88-50	140.80
120-0.5	9.02
120-1	11.44
120-2	16.17
120-4	30.80
120-6	37.40
120-8	46.75
120-12	57.75
120-20	84.15
160-0.5	9.57
160-1	14.19
160-2	19.80
160-4	34.10
160-8	53.35
160-12	71.50
180-0.5	10.01
180-1	15.62
180-2	22.00
180-4	39.60
180-6	46.75
180-8	57.20
180-12	85.80
230-0.5	11.55
230-1	16.50
230-2	23.65
230-4	46.20
230-6	55.00
300-0.5	12.10
300-1	21.67
300-2	34.10
300-4	53.35
CH-0.1	2.48
CH-0.2	2.86
CH-0.25	3.30
CH-0.5	4.18
CH-1	6.27
CH-2	7.26
CH-4	9.68
CH-6	12.10
CH-8	15.40
CH-12	19.80
CH-16	22.00
CH-20	21.45
CH-25	30.25
CH-30	36.30
CH-50	41.80
CH-100	47.30
CH-200	74.80
CH-250	84.00
CH-500	101.20
CH-1000	112.20
CL-1-2	3.45
CL-2-4	4.35
CL-4-8	7.35
CL-6-12	8.40
CL-12-24	12.50
CL-25-50	14.00
CL-50-100	18.00
E-10-0.1	5.61
E-10-0.25	5.97
E-10-0.5	6.38
E-10-1	6.99
E-10-2	8.80
E-10-4	12.21
E-10-6	14.30
E-10-8	15.40
E-10-12	18.21
E-10-25	29.48
E-10-50	46.42
E-10-100	75.90
E-12.8-0.1	5.61
E-12.8-0.25	6.06
E-12.8-0.5	6.66
E-12.8-1	7.43
E-12.8-2A	8.64
E-12.8-2	10.73
E-12.8-4	13.04
E-12.8-6	15.29
E-12.8-8	16.39
E-12.8-12	18.92
E-12.8-25	38.94
E-12.8-50	53.46
E-12.8-100	77.55
E-16-0.1	5.78
E-16.025	6.13
E-16-0.5	6.56
E-16-1	7.17
E-16-2	8.98
E-16-4	13.70
E-16-6	16.17
E-16-8	17.66
E-16-12	22.00
E-16-25	41.80
E-16-50	67.10
E-16-100	112.20
E-24-0.1	5.78
E-24-0.25	6.82
E-24-0.5	7.54
E-24-1A	8.25
E-24-1	10.75
E-24-2	12.34
E-24-4	16.28
E-24-6	18.76
E-24-8	25.96
E-24-12	30.58
E-24-20	38.50
E-24-25	51.81
E-24-50	76.45
E-24-100	122.10
E-36-0.1	5.94
E-36-0.25	6.63
E-36-0.5	7.57
E-36-1A	9.41
E-36-1	11.06
E-36-2	13.09
E-36-4	18.48
E-36-6	26.62
E-36.8	28.60
E-36-12	34.32
E-36-20	58.08
E-36-25	68.42
E-36-30	76.45
E-36-50	96.25
E-36-100	190.30
E-56-0.1	6.27
E-56-0.25	7.37
E-56-0.5	8.31
E-56-1	13.31
E-56-2	14.85
E-56-4	25.08
E-56-6	36.41
E-56-8	45.21
E-56-12	59.95
E-56-25	98.45
E-56-50	177.10
E-56-100	264.00
E-68-0.1	6.44
E-68-0.25	7.28
E-68-0.5A	8.47
E-68-0.5	11.24
E-68-1	13.20
E-68-2	16.83
E-68-4	31.68
E-68-6	36.41
E-68-8	44.00
E-68-12	65.45
E-68-25	99.00
E-68-50	181.50
E-80-0.1	6.60
E-80-0.25	7.65
E-80-0.5A	9.35
E-80-0.5	11.33
E-80-1	14.41
E-80-2	21.56
E-80-4	35.86
E-80-6	46.20
E-80-8	56.10
E-80-12	71.17
E-80-25	121.00
E-80-50	217.80
E-88-0.1	6.77
E-88-0.25	7.95
E-88-0.5	9.52
E-88-1	14.80
E-88-2	21.89
E-88-4	37.51
E-88-6	47.08
E-88-8	57.75
E-88-12	72.93
E-88-25	125.40
E-88-50	224.40
E-120-0.5	13.53
E-120-1	17.27
E-120-2	24.64
E-120-4	47.41
E-120-6	57.86
E-120-8	72.38
E-120-12	91.30
E-120-20	134.20
E-160-0.5	14.36
E-160-1	21.45
E-160-2	30.14
E-160-4	52.47
E-160-8	83.16
E-160-12	113.30
E-180-0.5	15.02
E-180-1	23.54
E-180-2	33.44
E-180-4	61.05
E-180-6	72.38
E-180-8	89.10
E-180-12	135.30
E-230-0.5	17.33
E-230-1	25.08
E-230-2	36.30
E-230-4	71.50
E-230-6	85.25
E-300-0.5	18.15
E-300-1	33.00
E-300-2	52.80
E-300-4	83.16
E-CH-0.1	3.19
E-CH-0.2	3.74
E-CH-0.25	4.35
E-CH-0.5	5.50
E-CH-1	8.36
E-CH-2	9.68
E-CH-4	12.98
E-CH-6	16.28
E-CH-8	20.79
E-CH-12	26.95
E-CH-16	30.14
E-CH-20	29.48
E-CH-25	41.80
E-CH-30	50.27
E-CH-50	57.97
E-CH-100	66.00
E-CH-200	105.60
E-CH-500	145.20
E-CH-1000	162.80
H-10-0.1	10.84
H-10-0.25	11.55
H-10-0.5	12.05
H-10-1	13.31
H-10-2	16.78
H-10-4	21.23
H-10-6	27.72
H-10-8	29.81
H-10-12	34.87
H-10-25	60.72
H-10-50	85.58
H-10-100	146.30
H-12.8-0.1	10.84
H-12.8-0.25	11.66
H-12.8-0.5	12.82
H-12.8-1	14.30
H-12.8-2A	16.61
H-12.8-2	20.63
H-12.8-4	25.08
H-12.8-6	29.37
H-12.8-8	31.68
H-12.8-12	36.52
H-12.8-25	75.13
H-12.8-50	103.07
H-12.8-100	150.70
H-16-0.1	11.22
H-16-0.25	11.83
H-16-0.5	12.65
H-16-1	13.86
H-16-2	17.27
H-16-4	26.18
H-16-6	30.80
H-16-8	33.55
H-16-12	41.80
H-16-25	79.20
H-16-50	125.40
H-16-100	211.20
H-24-0.1	11.22
H-24-0.25	13.09
H-24-0.5	14.41
H-24-1A	15.79
H-24-1	20.57
H-24-2	23.65
H-24-4	29.92
H-24-6	36.08
H-24-8	50.27
H-24-12	58.85
H-24-20	74.14
H-24-25	99.55
H-24-50	147.40
H-24-100	235.40
H-36-0.1	11.50
H-36-0.25	12.75
H-36-0.5	14.58
H-36-1A	18.15
H-36-1	21.29
H-36-2	25.19
H-36-4	35.31
H-36-6	50.60
H-36-8	54.45
H-36-12	65.34
H-36-20	110.00
H-36-25	129.80
H-36-30	144.10
H-36-50	181.50
H-36-100	358.60
H-56-0.1	12.10
H-56-0.25	14.19
H-56-0.5	16.01
H-56-1	25.63
H-56-2	28.60
H-56-4	47.96
H-56-6	69.41
H-56-8	86.24
H-56-12	114.40
H-56-25	187.00
H-56-50	335.50
H-56-100	500.50
H-68-0.1	12.43
H-68-0.25	14.06
H-68-0.5A	16.39
H-68-0.5	21.67
H-68-1	25.30
H-68-2	32.23
H-68-4	61.05
H-68-6	70.18
H-68-8	84.70
H-68-12	124.85
H-68-25	191.40
H-68-50	347.60
H-80-0.1	12.76
H-80-0.25	14.69
H-80-0.5A	18.10
H-80-0.5	22.00
H-80-1	27.61
H-80-2	41.47
H-80-4	68.75
H-80-6	89.10
H-80-8	107.58
H-80-12	136.40
H-80-25	233.20
H-80-50	418.00
H-88-0.1	13.09
H-88-0.25	15.35
H-88-0.5	18.43
H-88-1	28.60
H-88-2	42.13
H-88-4	72.05
H-88-6	90.75
H-88-8	111.10
H-88-12	139.70
H-88-25	240.90
H-88-50	431.20
H-120-0.5	26.18
H-120-1	33.44
H-120-2	47.52
H-120-4	91.30
H-120-6	110.00
H-120-8	139.70
H-120-12	172.70
H-120-20	255.20
H-160-0.5	27.72
H-160-1	41.47
H-160-2	58.08
H-160-4	101.20
H-160-8	159.50
H-160-12	214.50
H-180-0.5	29.04
H-180-1	45.65
H-180-2	64.57
H-180-4	116.60
H-180-6	138.60
H-180-8	170.50
H-180-12	257.40
H-230-0.5	33.55
H-230-1	48.18
H-230-2	69.41
H-230-4	136.40
H-230-6	163.90
H-300-0.5	35.09
H-300-1	63.25
H-300-2	100.10
H-300-4	157.30
H-CH-0.1	7.15
H-CH-0.2	8.31
H-CH-0.25	9.63
H-CH-0.5	12.21
H-CH-1	18.37
H-CH-2	21.45
H-CH-4	28.82
H-CH-6	36.30
H-CH-8	46.42
H-CH-12	59.95
H-CH-16	66.88
H-CH-20	65.23
H-CH-25	92.18
H-CH-30	111.10
H-CH-50	128.70
H-CH-100	146.30
6-250	78.00
9-250	100.00
12-250	110.00
6-500	107.80
9-500	139.70
12-500	173.80
3-1000	114.40
6-1000	184.80
MV-1	14.85
MV-2	17.60
MV-4	23.10
MV-6	31.90
MV-12	44.00
3PH-24-50	99.00
3PH-24-100	139.70
3PH-24-200	227.70
3PH-48-30	99.00
3PH-48-60	139.70
3PH-48-120	227.70
SD-100	8.03
SD-150	9.46
SD-250	11.00
SD-350	14.30
SD-500	16.61
SD-750	21.18
SD-1000	25.30
SD-1500	29.70
SD-2000	38.50
SDO-100	5.50
SDO-150	6.60
SDO-250	8.14
SDO-350	11.55
SDO-500	13.64
SDO-750	18.15
SDO-1000	22.22
SDO-1500	25.85
SDO-2000	34.98
HSD-3000	60.50
HSD-4000	66.00
HSD-5000	75.90
HSD-6000	83.60
DU-¼	30.58
DU-½	37.95
DU-1	60.50
DU-2	82.50
DU-3	117.70
DU-5	158.40
DU-7½	203.50
DU-10	258.50
SU-¼	31.50
SU-½	39.00
SU-1	62.00
SU-2	84.00
SU-3	120.00
SU-5	160.00
SU-7.5	205.00
SU-10	260.00
UP-2	30.80
UP-4	35.75
UP-8	58.30
UP-15	84.70
UP-25	108.90
UP-40	151.80
CDC-5-1	15.60
CDC-5-5	22.10
CDC-5-10	26.10
CDC-5-18	32.70
CDC-5-50	50.00
CDC-6-0.8	15.40
CDC-6-4.5	21.89
CDC-6-9	25.85
CDC-6-16	32.45
CDC-6-40	48.84
CDC-6-75	74.80
CDC-12-0.4	15.35
CDC-12-2.2	21.78
CDC-12-4.5	25.74
CDC-12-9	32.34
CDC-12-20	48.51
CDC-12-38	74.58
CDC-15-0.35	15.29
CDC-15-2	21.67
CDC-15-3.5	25.63
CDC-15-8	32.12
CDC-15-16	48.29
CDC-15-30	74.36
CDC-18-0.32	15.24
CDC-18-1.8	21.56
CDC-18-3	25.52
CDC-18-6	32.01
CDC-18-13	48.29
CDC-18-26	74.25
CDC-24-0.25	15.18
CDC-24-1.2	21.45
CDC-24-2.1	25.41
CDC-24-4.5	31.90
CDC-24-11	48.18
CDC-24-20	74.03
CDC-28-0.22	15.13
CDC-28-1	21.34
CDC-28-2	25.30
CDC-28-4	31.79
CDC-28-9	48.07
CDC-28-16	73.92
CDC-36-0.18	15.02
CDC-36-0.9	21.23
CDC-36-1.8	25.19
CDC-36-3.2	31.68
CDC-36-6	47.85
CDC-36-12	73.70
CDC-48-0.12	14.96
CDC-48-0.6	21.12
CDC-48-1.5	25.08
CDC-48-2.5	31.57
CDC-48-5	47.74
CDC-48-10	73.48
CDC-60-0.1	14.74
CDC-60-0.5	21.34
CDC-60-1.2	24.97
CDC-60-2	31.35
CDC-60-4	47.63
CDC-60-8	73.37
CDC-120-0.5	14.74
CDC-120-0.3	20.90
CDC-120-0.6	24.86
CDC-120-1	31.24
CDC-120-2	47.52
CDC-120-4	73.15
25-ACV-6.4	22.00
25-ACV-12.8	21.78
25-ACV-26	21.45
25-ACV-118	20.90
50-ACV-6.4	25.96
50-ACV-12.8	25.52
50-ACV-26	24.97
50-ACV-118	24.42
120-ACV-6.4	32.01
120-ACV-12.8	31.79
120-ACV-26	31.46
120-ACV-118	31.02
250-ACV-12.8	48.40
250-ACV-26	47.30
250-ACV-118	46.09
500-ACV-118	74.80
PC-10-120	3.92
PC-10-440	4.11
PC-10-1000	4.34
PC-12-100	3.96
PC-12-350	4.14
PC-12-800	4.36
PC-16-75	4.00
PC-16-260	4.16
PC-16-640	4.38
PC-20-60	4.02
PC-20-220	4.18
PC-20-500	4.40
PC-24-50	4.13
PC-24-180	4.29
PC-24-450	4.51
PC-34-35	4.24
PC-34-125	4.40
PC-34-300	4.62
PC-40-30	4.29
PC-40-110	4.46
PC-40-250	4.68
PC-56-20	4.32
PC-56-80	4.48
PC-56-180	4.70
PC-88-15	4.35
PC-88-50	4.51
PC-88-120	4.73
PC-120-10	4.40
PC-120-35	4.57
PC-120-85	4.79
PC-180-6	4.46
PC-180-24	4.60
PC-180-55	4.82
PC-230-5	4.50
PC-230-20	4.62
PC-230-40	4.84
PCN-37-1	4.70
PCN-50-1	4.80
PCN-62-1	5.00
PCN-37-2	4.70
PCN-50-2	4.80
PCN-62-2	5.00
PCN-37-3	4.70
PCN-50-3	4.80
PCN-62-3	5.00
PCN-37-4	4.70
PCN-50-4	4.80
PCN-62-4	5.00
PCC-1-37	3.86
PCC-2-37	3.90
PCC-1-50	4.06
PCC-2-50	4.10
PCC-1-62	4.26
PCC-2-62	4.30

OEM DISCOUNT SCHEDULE

QTY.	DISCOUNT	QTY.	DISCOUNT
1-9	NET	50-99	33⅓%
10-24	15%	100-199	40%
25-49	25%	200 Over	QUOTE

TERMS: NET 30 DAYS ON APPROVED CREDIT
F.O.B. FACTORY, N. Y.

SIGNAL TRANSFORMER CO., INC
ENGINEERS • DESIGNERS • MANUFACTURERS

Net

© United Technical Publications

SPRAGUE PULSE TRANSFORMERS

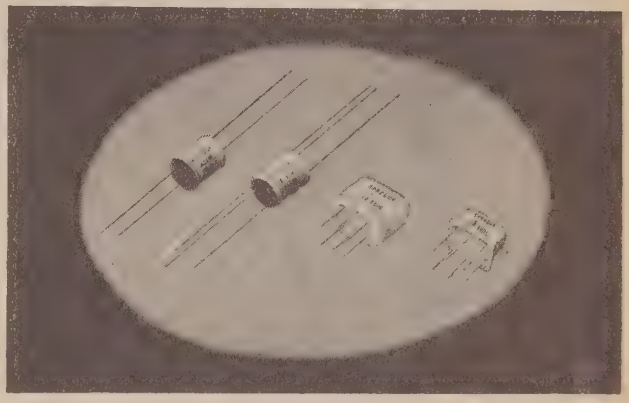
Type 11Z

TRIGATE® PULSE TRANSFORMERS

FLEXIBLE LEAD AND PRINTED WIRING BOARD DESIGNS FOR LOW-COST SCR CIRCUIT APPLICATIONS

- Specifically Designed For Commercial and Industrial SCR Triggering Applications Where Low Cost and Excellent Performance Are Required
- Single-ended Pulse Transformers Are Designed With Leads Especially Intended For Mounting On Printed Wiring Boards; These Units are Self Supporting
- Balanced Pulse Characteristics and Energy Transfer Between Windings
- Minimum Saturation Effect To Allow Operation Where Increased Pulse Widths Are Required
- Fast Pulse Rise Time and Increased Current Capability To Prevent SCR di/dt Failure
- Operating Temperature Range of −10 C to +70 C
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 40003

Call Your Sprague Industrial Distributor For Current Quantity Prices



DIMENSIONS

FLEXIBLE LEAD	HORIZONTAL PLUG-IN
D. x L.	L. x W. x H.
.593 x .828	.968 .775 .800

FLEXIBLE LEAD DESIGN

Turns Ratio	Catalog Number	Min. Lp (μH)	Max. L_L (μH)	Max. C_C (pF)	Max. DCR (Ω)	60 Cycle Dielectric Test (Volts RMS)	Max. 60 Cy A-C Line Voltage (Volts RMS)
1:1	11Z12	200	3	800	1.5-1.5	1600	240
1:1:1	11Z13	200	3	800	2-2-2	1600	240
2:1	11Z14	1000	10	1300	10-2	1600	240
2:1:1	11Z15	1000	15	1300	10-2-2	1600	240
5:1	11Z16	5000	1500	400	19-3	1600	240

HORIZONTAL PLUG-IN DESIGN

Turns Ratio	Catalog Number	Min. Lp (μH)	Max. L_L (μH)	Max. C_C (pF)	Max. DCR (Ω)	60 Cycle Dielectric Test (Volts RMS)	Max. 60 Cy A-C Line Voltage (Volts RMS)
1:1	11Z2000	200	3.0	800	1.5-1.5	1600	240
1:1	11Z2001	1000	12.0	2000	8-8	1600	240
2:1	11Z2003	1000	10.0	1300	10-2	1600	240
5:1	11Z2004	5000	1500	400	19-3	1600	240
1:1:1	11Z2100	200	3.0	800	2-2-2	1600	240
1:1:1	11Z2101	1000	12.0	1400	10-10-10	1600	240
2:1:1	11Z2103	1000	15.0	1300	10-2-2	1600	240
5:1:1	11Z2104	5000	1500	400	20-4-4	1600	240

Copyright 1968, Sprague Products Company

IND-REM-66-6908

All sizes subject to change without notice.

© United Technical Publications

STERLING TRANSFORMER

ENCAPSULATED 400 cps transformers

CLIPPER SERIES

Fig.	Cat. No.	Sec. Volts	Sec. Amp	Insul. Volts (RMS)	Pri. Volts	Mold Size	Net Price
19	4C1	6.3 CT	0.8	1500	115	SM3	13.80
19	4C2	6.3 CT	1.2	1500	115	SM2	13.80
19	4C3	6.3 CT	6.8	1500	110/115/120	2	22.15
20	4C4	6.3 6.3	4.9 2.7	1500	115	3	19.80
19	4C5	6.3 CT	7.2	1500	115	35	23.00
21	4C6	6.3 6.3 6.3	7 7 1.5	1500 1500 1500	120	35	22.40
22	4C7	6.3 CT 6.3 CT	7 7	1500 1500	120	4	26.65
21	4C8	6.3 6.3 6.3	13.7 2.9 0.3	1500 1500 1500	115	4	26.65
19	4C9	6.3 CT	12.3	1500	115	5	24.65
21	4C11	6.3 6.3 6.3	2.4 2.5 2.7	1500	115	3	24.65
19	4C26	6.3 CT	2	1500	115	SM1	17.55
19	4C27	6.3 CT	3	1500	115	1A	18.25
19	4C28	6.3 CT	5	1500	115	2	18.90
19	4C29	5 CT	3	2500	115	SM1	17.55
19	4C30	5 CT	6	2500	115	2	18.90
19	4C31	8.5 CT	12	1500	115	5	24.63
19	4C32	8.5 CT	23	1500	115	7	27.30
19	4C33	8.5 CT	35	1500	115	8	29.75
19	4C34	8.5 CT	45	1500	115	9	35.90
18	4C12	14.1	3	1500	115	3	18.79
19	4C35	21 CT	4.5	1500	115	5	24.63
19	4C13	21 CT	9	1500	115	7	21.30
19	4C36	21 CT	18	1500	115	9	35.90
19	4C10	20 CT	0.6	1500	115	SM1	17.55

FREQUENCY
380-1000 cps.



FOR MINIMUM SIZE & MINIMUM WEIGHT
- CONTOUR MOLDED
- HIPERSIL CORES

MIL-T27C Specifications

MIL Type TF5SX01ZZ

85°C Max. Ambient
130°C Max. Oper. Temp.

HIGH SHOCK
EXTREME ENVIRONMENT CONDITIONS
LIGHT WEIGHT FOR AIRBORNE USE
10,000 HOUR PLUS-LIFE
SERVO APPLICATIONS
ISOLATION
POWER SUPPLIES
AIRBORNE CONTROL CIRCUITS
MISSILE CIRCUITS



FIG. 18

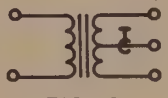


FIG. 19

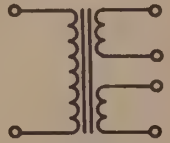


FIG. 20

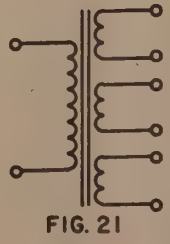


FIG. 21

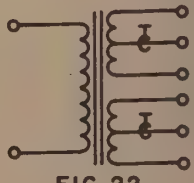


FIG. 22

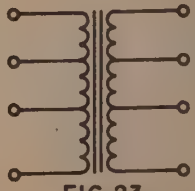


FIG. 23

STERLING TRANSFORMER CORPORATION

Net

© United Technical Publications

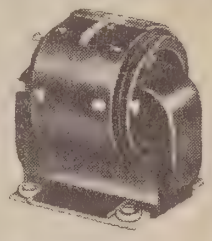
STERLING TRANSFORMER

ENCAPSULATED 400 cps transformers

CLIPPER SERIES

Fig.	Cat. No.	Sec. Volts	Sec. Amp.	Insul. Volts (RMS)	Pri. Volts	Mold Size	Net Price
19	4C37	21 CT	24	1500	115	10	43.10
19	4C38	24 CT	4	1500	115	5	24.63
19	4C39	24 CT	8	1500	115	7	27.30
19	4C40	24 CT	16	1500	115	9	35.90
19	4C41	24 CT	21	1500	115	10	43.10
18	4C14	26	0.5	1500	115	SM1	17.12
19	4C15	26 CT	1.5	1500	115	3	18.79
19	4C23	26 CT	3	1500	115	4	21.30
19	4C24	26 CT	5	1500	115	6	24.85
22	4C16	28 CT 6.3 CT	0.8 7	1500	115	3	26.62
19	4C42	41 CT	2.3	1500	115	5	24.63
19	4C43	41 CT	4.5	1500	115	7	27.30
19	4C44	41 CT	9	1500	115	9	35.90
19	4C45	41 CT	12	1500	115	10	43.10
19	4C46	48 CT	2	1500	115	5	24.63
19	4C47	48 CT	4	1500	115	7	27.30
19	4C48	48 CT	8	1500	115	9	35.90
19	4C49	48 CT	10	1500	115	10	43.10
19	4C25	52 CT	2	1500	115	5	24.63
19	4C17	52 CT	0.2	1500	115	SM1	18.99
19	4C18	90 CT	4.5	1500	115	9	35.90
18	4C19	115	.05	1500	115	SM2	14.10
18	4C21	115	2.8	1500	115	8	29.23
23	4C20	105/115/125	0.4	1500	105/115/125	2	20.30
23	4C50	105/115/125	1	1500	105/115/125	6	25.75
23	4C51	105/115/125	2.4	1500	105/115/125	8	30.20
23	4C52	105/115/125	3.2	1500	105/115/125	9	36.40
23	4C53	105/115/125	4	1500	105/115/125	10	43.70
18	4C22	334	.025	1500	115	SM1	16.12

FREQUENCY
380-1000 cps.



FOR MINIMUM SIZE & MINIMUM WEIGHT
- CONTOUR MOLDED
- HIPERSIL CORES

MIL-T27C
Specifications

MIL Type
TF5SX01ZZ
85°C Max. Ambient
130°C Max.
Oper. Temp.

HIGH SHOCK EXTREME ENVIRONMENT CONDITIONS
LIGHT WEIGHT FOR AIRBORNE USE
10,000 HOUR PLUS-LIFE
SERVO APPLICATIONS
ISOLATION
POWER SUPPLIES
AIRBORNE CONTROL CIRCUITS
MISSILE CIRCUITS

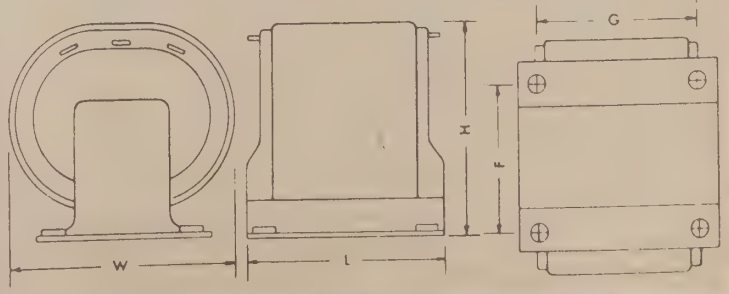
MOLD NO.	OVERALL DIMENSIONS L	W	H	MTG. DIMENSIONS F	G	APP. WT. (LBS.)	MTG. METH.
SM3	1	1-1/4	1-3/16	1	Note 1	0.06	Note 1
SM2	1-1/2	1-1/4	1-11/16	1	Note 1	0.10	Note 1
SM1	1-1/2	1-1/2	1-11/16	1-1/8	Note 1	0.16	Note 1
1	1-13/16	1-7/8	1-13/16	1-1/4	1-7/16	0.25	Note 2
1A	1-11/16	1-17/32	1-13/16	1-5/32	1-1/8	0.25	Note 2
2	2	1-15/16	2-1/8	1-9/32	1-1/4	0.40	Note 2
3	2-5/16	1-13/16	2-1/8	1-9/32	1-7/16	0.45	Note 2
35	2-1/16	2-3/8	2-3/16	1-17/32	1-11/16	0.70	Note 2
4	2-5/16	2-3/8	2-9/16	1-17/32	1-11/16	0.90	Note 2
5	2-3/4	2-3/8	2-7/8	1-17/32	2-3/16	1.20	Note 2
6	2-3/4	2-5/8	3-1/8	1-17/32	2-3/16	1.50	Note 2
7	3	2-7/8	3-3/8	1-25/32	2-1/2	2.00	Note 2
8	3-3/8	2-7/8	3-3/8	1-25/32	2-1/2	2.50	Note 2
83	3-3/4	3-1/4	3-3/8	2-1/4	3	3.25	Note 3
86	3-3/4	3-3/4	3-3/8	2-3/4	3-1/8	4.25	Note 3
9	4-1/16	3-3/8	3-7/8	2-3/16	3-1/2	5.00	Note 3
10	4-1/2	3-15/16	3-15/16	2-3/4	3-1/8	6.00	Note 3

Note 1—SM series are two hole mounting with holes on center line. #4-40 Pem nuts are fastened to the bracket.

Note 2—#6-32 Pem nuts on bracket are standard.

Note 3—#8-32 Pem nuts on bracket are standard.

- All primaries 380-1000 cps
- Dielectric test voltages:
  PRIMARIES 1500 Volts RMS
  SECONDARIES 1500 Volts RMS
- Epoxy resin used as encapsulant
- Prices subject to change without notice



STERLING TRANSFORMER CORPORATION

© United Technical Publications

transistor transformers

STERLING TRANSFORMER

UNIVERSAL DC POWER MODULE TRANSFORMERS

High reliability transformers having a tapped primary and single or dual secondary windings which may be connected F.W. bridge or F.W. center tap so as to obtain a wide range of DC voltages and current ratings.

INPUT PRIMARY 115 volts 50-500 cps

TYPE	FIG.		F.W. BRIDGE								F.W. CT			MIL STD'D* HERM SEAL TF 45x02		INDUST. OPEN FRAME	
		AC VOLT	40 5	32 25	28.5	24	20.25	16 5	12	8.25	40.5	24	16.5	Style	Net Pr.	Style	Net Pr.
		DC VOLT	53.0	41.0	34	25	24	18	12	6	24	12	6.6				
7K1	1	DC AMP	.025	.035	.040	.042	.055	.042	.070	.085	.042	.055	.068	H	12.90	F	7.90
		INPUT CAP	(.1)	(.1)	(.1)	(.1)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)				
7K2	1	DC AMP	.085	.12	.13	.14	.18	.14	.23	.23	.14	.17	.21	H	14.20	L	9.20
		INPUT CAP	(.1)	(.1)	(.1)	(.1)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)	(.2)				
7K3	1	DC AMP	.48	.60	.60	.64	1.0	.8	1.2	1.52	.8	.883	.92	H	15.85	F	8.15
		INPUT CAP	(.5)	(.5)	(.5)	(.5)	(1.0)	(1.0)	(2.0)	(2.0)	(1.0)	(1.0)	(2.0)				
7K4	1	DC AMP	1.2	1.5	1.5	1.6	2.5	2.0	3.0	3.8	2.0	2.2	2.8	H	21.80	L	13.40
		INPUT CAP	(.5)	(.5)	(.5)	(.5)	(1.0)	(1.0)	(2.0)	(2.0)	(1.0)	(1.0)	(2.0)				
7K5	1	DC AMP	3.0	3.5	3.8	4.0	6.0	4.5	7.5	9.0	4.5	5.5	6.7	H	31.70	L	22.65
		INPUT CAP	(1.0)	(1.0)	(1.0)	(1.0)	(2.0)	(2.0)	(4)	(4)	(2.0)	(2.0)	(2.0)				
7K6	1	DC AMP	7.5	8.5	9.5	10	15	11	19	23	11	13.5	17	H	52.80	L	39.80
		INPUT CAP	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(6.0)	(12)	(12)	(6)	(6)	(12)				
TYPE	FIG.	AC VOLTS	81	64.5	57.0	48	40.5	33	24	16 5	81	48	33				
		DC VOLT	106	82	68	50	48	36	24	12	48	24	13				
7K7	2	DC AMP	0.6	0.75	0.75	0.8	1.25	1.0	1.5	1.9	1.0	1.1	1.4	H	22.44	L	14.05
		INPUT CAP	(.125)	(.125)	(.125)	(.125)	(.25)	(.25)	(.5)	(0.5)	(.25)	(.25)	(.5)				

TYPE	FIG.	PRI TAP	F.W. BRIDGE SEC. AC Volt	SEC. AC Amp	CHOKE INPUT DC Volt	CHOKE INPUT DC Amp	CAP INPUT DC Volt	CAP INPUT DC Amp	CAP INPUT Cap	F.W. CT CHOKE INPUT DC Volt	CHOKE INPUT DC Amp	CAP INPUT DC Volt	CAP INPUT DC Amp	CAP INPUT Cap	MIL STD * HERM SEAL Style	MIL STD * HERM SEAL Net Pr.	INDUST. OPEN FRAME Style	INDUST. OPEN FRAME Net Pr.
7K8	3	—	20CT	0.3	16.5	0.3	26	0.2	(.2)	8	0.43	12	0.3	(.5)	H	11.25	F	5.70
7K9	3	—	20CT	0.6	16.5	0.6	26	0.4	(.4)	9	0.85	13	0.6	(1.0)	H	14.20	F	8.65

			F.W. BRIDGE SEC. in PARALLEL CONN.							F.W. BRIDGE SEC. in SERIES CONN.								
7K10	4	L	17	1.5	14	3.0	18.5	2.0	(1.0)	28	1.5	45	1	(.5)	H	20.50	L	13.40
		H	21.5	1.5	17.5	3.0	25	2.0	(1.0)	35	1.5	36	1	(.5)				
7K11	4	L	17	4	14	8.0	18.5	5.0	(2.0)	28	4.0	45	2.5	(1.0)	H	33.00	L	23.60
		H	21.5	4	17.5	8.0	25	5.0	(2.0)	35	4.0	36	2.5	(1.0)				
7K12	4	L	17	9	14	18.0	18.5	12.0	(6.0)	28	9.0	45	6	(4.0)	H	50.50	L	37.10
		H	21.5	9	17.5	18.0	25	12.0	(6.0)	35	9.0	36	6	(4.0)				
7K13	4	L	34	4.5	28	9.0	43	6.0	(4.0)	56	4.5	85	3 0	(1.0)	H	50.50	L	37.10
		H	43	4.5	35	9.0	56	6.0	(4.0)	70	4.5	110	3.0	(1.0)				
7K14	4	L H	10	20	8.2	20	10	13	(12)	—	—	—	—	—	H	29.70	L	22.95

*FOR MILITARY USE REDUCE DC AMP 20%. Note Input Cap = (K) 1000 MFD. In Rectifier Circuit.

HIGH CURRENT TRANSFORMERS AND CHOKES

115V. 50-500 CPS

TRANSFORMERS

TYPE	FIG.	SEC. IN PARALLEL AC Volt	SEC. IN PARALLEL AC Amp	SEC. IN SERIES AC Volt	SEC. IN SERIES AC Amp	Net Price
7K15	5	3.2/6.4	16	3.2/6.4/9.6/12.8	8	7.55
7K16	5	3.2/6.4	24	3.2/6.4/9.6/12.8	12	8.95
7K17	5	3.2/6.4	50	3.2/6.4/9.6/12.8	25	18.90
7K18	5	3.2/6.4	100	3.2/6.4/9.6/12.8	50	26.20
7K19	5	6/12	16	6/12/18/24	8	12.55
7K20	5	6/12	24	6/12/18/24	12	15.70

TYPE	FIG.	SEC. IN PARALLEL AC Volt	SEC. IN PARALLEL AC Amp	SEC. IN SERIES AC Volt	SEC. IN SERIES AC Amp	Net Price
7K21	5	6/12	50	6/12/18/24	25	25.10
7K22	5	6/12	100	6/12/18/24	50	37.65
7K23	5	9/18	16	9/18/27/36	8	16.55
7K24	5	9/18	24	9/18/27/36	12	19.95
7K25	5	9/18	50	9/18/27/36	25	31.10
7K26	5	9/18	100	9/18/27/36	50	45.00

CHOKES

TYPE	FIG.	INDUCTANCE (Millihenries)	D.C. Amps	DCR (Ω)	Net Price
7K27	9	30	8	0.3	11.35
7K28	9	15	12	0.1	14.65

TYPE	FIG.	INDUCTANCE (Millihenries)	D.C. Amps	DCR (Ω)	Net Price
7K29	9	5	25	0.025	23.00
7K30	9	1.4	50	0.01	31.35

STERLING TRANSFORMER CORP

Net

© United Technical Publications

STERLING TRANSFORMER

transistor transformers

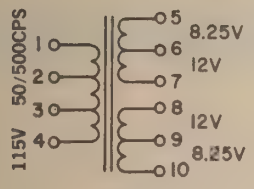


FIG. 1

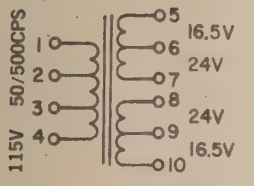


FIG. 2

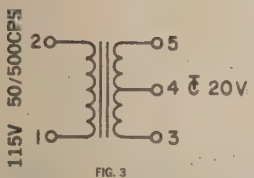


FIG. 3

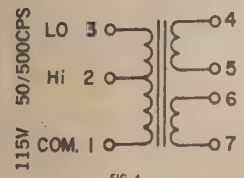


FIG. 4

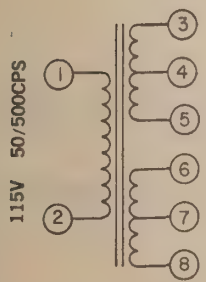


FIG. 5

TYPE	STYLE	FIG.	L	W	H	M1	M2	MTG. HOLES	STUDS
7K1	H	8	1 5/16	1 5/16	1 3/4	1 1/4	—	—	(2) 6-32
	F	6	2 1/8	1 1/4	1 1/4	1 3/4	—	(2) 3/16	—
7K2	H	8	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	—	(4) 6-32
	L	7	1 3/8	1 5/8	2 1/8	1 1/16	1 3/8	(4) 5/32	—
7K3	H	8	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	—	(4) 6-32
	F	6	3 3/4	2	2 5/16	3 1/8	—	(2) 3/16	—
7K4	H	8	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	—	(4) 8-32
	L	7	2 7/8	2 5/8	3 7/16	2 1/4	2 1/8	(4) 13/64	—
7K5	H	8	3 15/16	3 3/8	5 1/4	3	2 7/16	—	(4) 10-32
	L	7	3 7/8	3 1/2	4 5/8	3	2 1/2	(4) 13/64	—
7K6	H	8	5 1/2	4 1/2	6 3/4	3 3/4	3	—	(4) 1/4-20
	L	7	4 7/16	4 1/2	5 3/8	3 1/2	3 3/8	(4) 9/32	—
7K7	H	8	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	—	(4) 8-32
	L	7	2 7/8	2 5/8	3 7/16	2 1/4	2 1/8	(4) 13/64	—
7K8	H	8	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	(4) 6-32
	F	6	2 7/8	1 1/2	1 11/16	2 3/8	—	(2) 3/16	—
7K9	H	8	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	—	(4) 6-32
	F	6	3 5/16	2 1/4	2	2 13/16	—	(2) 3/16	—
7K10	H	8	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	—	(4) 8-32
	L	7	2 7/8	2 1/2	3 7/16	2 1/4	2	(4) 13/64	—
7K11	H	8	4 5/16	3 11/16	5 9/16	3 5/16	2 11/16	—	(4) 10-32
	L	7	3 7/8	3 5/8	4 5/8	3 5/16	2 3/4	(4) 13/64	—
7K12	H	8	5 7/8	4 3/4	6 11/16	4 1/8	3 1/2	—	(4) 1/4-20
	L	7	4 1/2	5 1/4	5 3/8	3 1/2	4 1/8	(4) 9/32	—
7K13	H	8	5 7/8	4 3/4	6 11/16	4 1/8	3 1/2	—	(4) 1/4-20
	L	7	4 1/2	5 1/4	5 3/8	3 1/2	4 1/8	(4) 9/32	—
7K14	H	8	3 15/16	3 3/8	5 1/4	3	2 7/16	—	(4) 10-32
	L	7	3 7/8	3 1/2	4 5/8	3	2 1/2	(4) 13/64	—
7K15	L	9	3 13/16	3	3 3/16	3 1/8	2 1/4	(4) 13/64	—
7K16	L	9	4 3/16	3 1/4	3 1/2	3 7/16	2 3/8	(4) 13/64	—
7K17	L	9	5 3/8	4 1/4	4 5/8	4 3/8	2 7/8	(4) 9/32	—
7K18	L	9	5 3/8	5 3/4	4 5/8	4 3/8	4 1/8	(4) 9/32	—
7K19	L	9	4 3/16	3 7/8	3 1/2	3 7/16	3	(4) 13/64	—
7K20	L	9	4 9/16	4 1/2	3 7/8	3 3/4	3 3/8	(4) 13/64	—
7K21	L	9	5 3/8	5 3/4	4 5/8	4 3/8	4 1/8	(4) 9/32	—
7K22	L	9	6 1/2	6 3/8	5 5/8	5 5/16	4 3/8	(4) 9/32	—
7K23	L	9	4 9/16	4 3/8	3 7/8	3 3/4	3 3/8	(4) 13/64	—
7K24	L	9	5 3/8	4 7/8	4 5/8	4 3/8	3 3/8	(4) 9/32	—
K725	L	9	6 1/2	6	5 5/8	5 5/16	3 3/4	(4) 9/32	—
7K26	L	9	6 1/2	7 3/4	5 5/8	5 5/16	5 1/8	(4) 9/32	—
7K27	L	9	4 3/16	3 5/8	3 1/2	3 7/16	3	(4) 13/64	—
7K28	L	9	5 3/8	4 1/4	4 5/8	4 3/8	3 1/8	(4) 9/32	—
7K29	L	9	5 3/8	4 3/4	4 5/8	4 3/8	3 7/8	(4) 9/32	—
7K30	L	9	6 1/2	5 3/4	5 5/8	5 5/16	4 1/8	(4) 9/32	—

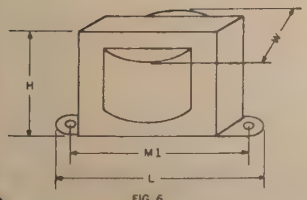


FIG. 6

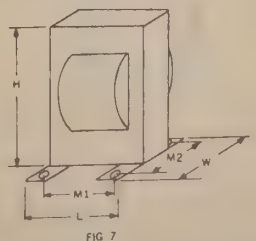


FIG 7

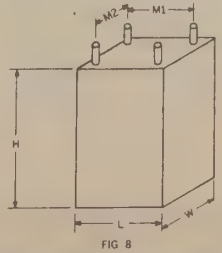


FIG 8

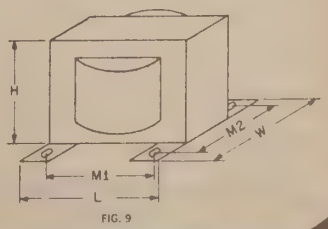


FIG. 9

STERLING TRANSFORMER CORP.

© United Technical Publications

transistor transformers

STERLING TRANSFORMER

MINISPEC TRANSISTOR TRANSFORMERS – 300 SERIES

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response ±2 db.	Net Price 1–9 pcs. F	H
300	Line to Base	600	600	10	23	200–15,000	$4.00	$8.60
301	Coll. to P.P. Base	100	10 C.T./40 C.T.	100	27	200–20,000	4.65	9.60
302	Coll. to Base or line	50,000	600	3	20	300–15,000	4.30	9.25
303	Collector to speaker	50,000	6	3	20	300–15,000	4.30	9.25
304	Coll. to P.P. Base	100,000	1,200 C.T.	1.4	17	200–15,000	4.50	9.45
305	Coll. to P.P. Base	25,000	1,200 C.T.	3	22	200–15,000	4.50	9.45
306	P.P. Coll. to P.P. Base	50,000 C.T.	1,200 C.T.	3	20	300–15,000	4.65	9.60
307	Line to P.P. Base	600 C.T.	1,200 C.T.	4	23	200–15,000	4.65	9.60
308	Collector to Base	25,000	600	3	22	200–15,000	4.30	9.25
309	P.P. Coll. to P.P. Base	4,000 C.T.	600 C.T.	3	32	200–15,000	4.65	9.60
310	Output Coll. to speaker	2,000	3.4	10	32	200–15,000	4.30	9.25
311	P.P. Coll. to speaker	4,000 C.T.	3.4	3	32	200–15,000	4.50	9.45
312	Coll. to Speaker	400	10	50	25	200–20,000	4.00	8.60
313	P.P. Servo Output	500 C.T.	210	30	27	300–20,000	4.30	9.25
314	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	6	22	200–15,000	4.65	9.60
315	P.P. Coll. to P.P. Base	50,000 C.T.	1200/300 Split	3	20	300–15,000	4.95	9.90
316	P.P. Coll. to P.P. Base	4,000 C.T.	600/150 Split	3	32	200–15,000	4.80	9.75
317	Line to P.P. Base	600/150 Split	1,200 C.T.	4	23	200–15,000	4.80	9.75
318	P.P. Coll. to Servo	250 C.T.	1,000	10	30	200–15,000	4.30	9.25
319	Coll. to P.P. Base	2,500	600 C.T.	10	32	200–15,000	4.30	9.25
320	P.P. Coll. to P.P. Base	7,500 C.T.	600 C.T.	8	32	200–15,000	4.65	9.60
321	Line to P.P. Base	600 C.T.	600 C.T.	20	23	200–15,000	4.50	9.45
322	P.P. Coll. to Servo	1,600 C.T.	450	15	30	200–15,000	4.30	9.25
323	P.P. Coll. to Servo	250 C.T.	500	10	30	200–15,000	4.30	9.25

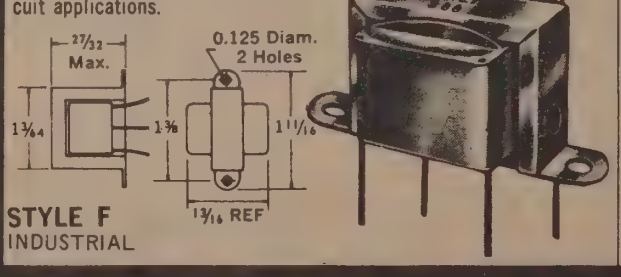
MINISPEC AUDIO TRANSFORMERS – 300 SERIES

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response ±2 db.	Net Price 1–9 pcs. F	H
375	Mike or line to 1 grid	50/250/600 C.T.	50,000	0	5	20–20,000	$4.50	$9.90
376	Mike or line to 2 grids	50/250/600 C.T.	50,000 C.T.	0	5	20–20,000	4.65	10.40
377	Dynamic mike to 1 grid	7.5/30	50,000	0	5	20–20,000	4.30	9.90
378	Single plate to 1 grid	15,000	60,000	0	6	20–15,000	3.80	8.45
379	Single plate to 1 grid	15,000	60,000	4	14	200–20,000	3.80	8.45
380	Single plate to 2 grids	15,000	95,000 C.T.	0	5	20–15,000	4.00	9.45
381	Single plate to 2 grids	15,000	95,000 C.T.	4	11	200–20,000	4.15	9.75
382	Single plate to line	15,000	50/250/600 C.T.	0	8	20–20,000	4.15	10.60
383	Single plate to line	15,000	50/250/600 C.T.	4	21	150–20,000	4.15	10.60
384	Push pull plates to line	30,000 C.T.	50/250/600 C.T.	0	8	30–50,000	4.30	10.60
385	Crystal mike to line	50,000	50/250/600 C.T.	0	5	20–20,000	4.15	10.25
386	Mixing and matching	50/250 C.T.	50/250/600 C.T.	0	8	20–20,000	4.15	10.25
387	Reactor	300 hy. 0 d.c.	50 hy. @ 3 ma.			DCR 6,000	3.65	8.10
388	50:1 mike to grid	200	½ Megohm	0	9	80–3,000	4.30	9.90
389	10:1 plate to grid	10,000	1 Megohm	0	11	100–2,500	4.00	9.25

MINISPEC 300 SERIES

Highest efficiency miniature transformer for transistor and audio circuit applications.

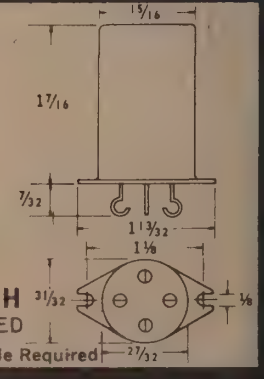
MILITARY STYLE ENCAPSULATED VERSIONS ARE AVAILABLE



STYLE F
INDUSTRIAL



STYLE H
HERMETICALLY SEALED



STERLING TRANSFORMER CORP

© United Technical Publications

STERLING TRANSFORMER

transistor transformers

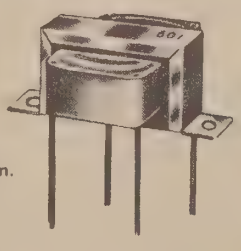
MICROSPEC TRANSISTOR TRANSFORMERS— 600 SERIES

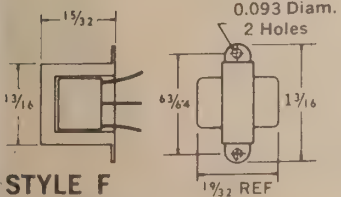
Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response ±2 db.	Net Price 1–9 pcs. F	H
601	Line to Base	600	600	8	22	200–15,000	$4.30	$8.10
602	Coll. to Base or line	50,000	600	0.7	20	200–15,000	4.50	8.25
603	P.P. coll. to P.P. Base	50,000 C.T.	600 C.T.	1.4	20	200–15,000	5.30	9.45
604	Collector to speaker	50,000	6	1	20	200–15,000	4.80	8.75
605	Coll. to P.P. Base	25,000	1,200 C.T.	1	20	200–15,000	4.95	9.25
606	P.P. coll. to P.P. Base	50,000 C.T.	1,200 C.T.	1.4	20	200–15,000	5.15	9.45
607	Line to P.P. Base	600 C.T.	1,200 C.T.	16	22	200–15,000	4.65	8.45
608	Collector to Base	25,000	600	1	20	200–15,000	3.80	7.95
609	P.P. coll. to P.P. Base or line	4,000 C.T.	600 C.T.	5	28	200–15,000	4.80	8.60
610	Coll. to Spkr.	2,000	3.4	5	28	200–15,000	4.30	8.10
611	Output P.P. coll. to spkr.	4,000 C.T.	3.4	5	28	200–15,000	4.50	8.25
612	Coll. to P.P. Base	10,000	1,500 C.T.	1	20	200–15,000	4.95	9.25
613	P.P. Coll. to P.P. Base	10,000 C.T.	200 C.T.	6	20	200–15,000	4.95	8.95
614	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	2	20	200–15,000	5.15	9.45
615	Coll. to P.P. Base	2,500	2,500 C.T.	2	23	200–15,000	4.50	8.25
616	P.P. Coll. to P.P. Base	4,000 C.T.	600/150 split	5	28	200–15,000	5.15	9.45
617	P.P. Coll. to P.P. Base	7,500 C.T.	600 C.T.	4	22.	200–15,000	4.80	8.60
618	Line to Base	600 C.T.	600 C.T.	16	22	200–15,000	4.65	8.45
619	P.P. Coll. to P.P. Base	25,000 C.T.	600 C.T.	2	20	200–15,000	4.95	9.25
620	P.P. Coll. to P.P. Base	10,000 C.T.	1,500 C.T.	2	20	200–15,000	5.15	9.45
621	Driver/Isolation	10,000 C.T.	10,000 C.T.	2	20	200–15,000	5.15	9.45
622	P.P. Coll. to P.P. Base	7,500 C.T.	1,200 C.T.	4	22	200–15,000	4.95	9.25
623	P.P. Coll. to P.P. Base	2,000 C.T.	500 C.T.	10	28	200–15,000	4.80	9.10
624	Line to P.P. Base	600 C.T.	1200/300 split	16	22	200–15,000	5.15	9.45

MICROSPEC AUDIO TRANSFORMERS— 600 SERIES

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response ±2 db.	Net Price 1–9 pcs. F	H
675	Input	200/50	250,000/62,500	0	4	200–10,000	$4.95	$8.10
676	Interstage 3:1	10,000	90,000	0	4	150–10,000	5.30	8.25
677	Plate to line	10,000	200	3	20	150–10,000	4.65	7.95
678	Output	30,000	50	1	20	150–10,000	4.50	7.80
679	Reactor 50 HY at 1 madc				4700	ohms DCR	4.50	7.60
680	Output	100,000	60	0.5	20	250–10,000	4.65	7.95
681	Output	30,000	1,200	0.5	20	200–10,000	3.65	7.10

MICROSPEC 600 SERIES
Subminiature transformers for high efficiency circuits.

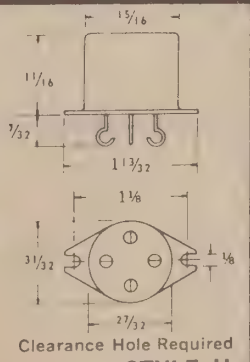




STYLE F
INDUSTRIAL



MILITARY STYLE ENCAPSULATED VERSIONS ARE AVAILABLE



Clearance Hole Required

STYLE H
HERMETICALLY SEALED

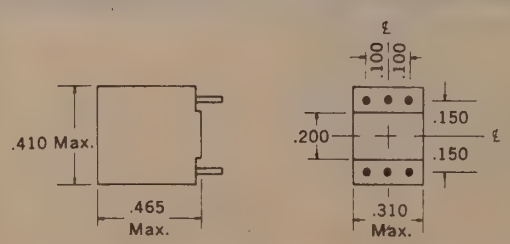
STERLING TRANSFORMER CORP.

STERLING TRANSFORMER

transistor transformers

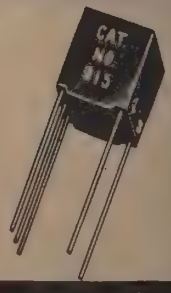
NANOSPEC TRANSISTOR TRANSFORMERS — 900 SERIES
Frequency Response ± 2 db 300 Cycles to 90 KC

Part No.	Application	Color Application Guide	Primary Impedance	Secondary Impedance	Unbal. Pri. DC Ma.	Power Level MW.	DC Resistance		Net Price
							Primary	Secondary	1-9 Pcs.
903	Interstage	Red	50,000 CT	1,000 CT	0	10	3300	75	8.25
904	Interstage	Red	50,000	1000/250 Split	0	10	3300	75	8.95
905	Interstage	Red	25,000 CT	1,000 CT	0.5	40	1700	115	7.80
906	Interstage	Red	25,000	1000/250 Split	0.25	40	1700	115	8.45
907	Interstage	Red	25,000	1,000	0.25	40	1700	115	7.15
908	Isolation	Green	10,000 CT	10,000 CT	1	50	1200	1300	8.45
909	Driver	Orange	10,000 CT	2,000 CT	1	50	1050	300	7.45
910	Driver	Orange	10,000	2000/500 Split	0.5	50	1050	300	8.10
911	Driver	Orange	10,000 CT	1,200 CT	1	50	1050	280	7.45
912	Driver	Orange	10,000	1200/300 Split	0.5	50	1050	280	7.95
913	Driver	Orange	10,000	1,200	0.5	50	1050	280	6.60
914	Driver	Orange	10,000 CT	500 CT	1	50	1050	80	7.45
915	Isolation	Green	2,500	2,500 CT	1	50	250	325	6.95
916	Output	Yellow	1,500 CT	600	3	50	170	135	6.80
917	Output	Yellow	500	50	3	50	60	8	5.95
918	Output	Yellow	120 CT	3.2	10.	50	17	.75	6.30
919	Audio Choke	Blue	6 HY.	DCR 1800 OHMS	2				5.95
920	Audio Choke	Blue	.3 HY.	DCR 45 OHMS	4				5.15
921	Audio Choke	Blue	1.25 H	DCR 180 OHMS	2				5.30
922	Audio Choke	Blue	3.5 H	DCR 1040 OHMS	2				5.30
923	Audio Choke	Blue	.9 H	DCR 110 OHMS	2				5.30
924	Audio Choke	Blue	.1 H	DCR 15 OHMS	5				5.30
925	Interstage	Red	10,000 CT	1,500 CT	1	50	1050	300	7.95
926	Isolation	Green	600 CT	600 CT	3	50	72	92	7.95
927	Output	Yellow	1,000	50	3	50	145	8	6.45
928	Output	Yellow	300 CT	600	7	50	41	98	6.60
929	Output	Yellow	500 CT	600	3	50	67	98	6.60
930	Output	Yellow	900 CT	600	4	50	104	96	6.80
931	Output	Yellow	150 CT	12	10	50	18	3.5	6.45
932	Output	Yellow	300 CT	12	7	50	42	3.4	6.45
933	Output	Yellow	600 CT	12	4.5	50	77	3	6.60
934	Output	Yellow	1,000 CT	12	3.5	50	120	3	6.80
935	Output	Yellow	1,500 CT	12	3	50	179	2.9	6.95
936	Output	Yellow	7,500 CT	12	1	50	796	2.9	7.45
937	Output	Yellow	320 CT	3.2	6	50	44	.77	6.45
938	Output	Yellow	600	3.2	3	50	70	.76	6.15
939	Output	Yellow	600 CT	3.2	4.5	50	70	.85	6.60
940	Output	Yellow	800 CT	3.2	4	50	107	.86	6.80
941	Output	Yellow	1,200	3.2	2	50	131	.76	6.15
942	Output	Yellow	1,200 CT	3.2	3	50	131	.87	6.80
943	Output	Yellow	1,600 CT	3.2	2.5	50	186	.8	6.95
944	Output	Yellow	10,000	3.2	1	50	1160	.81	6.80
945	Output	Yellow	8,000 CT	3.2	1	50	790	.76	7.45



NANOSPEC 900 SERIES

Designed for printed circuit transistor use in high component density applications.
Epoxy resin encapsulated.



STERLING TRANSFORMER CORP.

Net
© United Technical Publications

STERLING TRANSFORMER

step-up/step-down ISOLATION – AUTO transformers

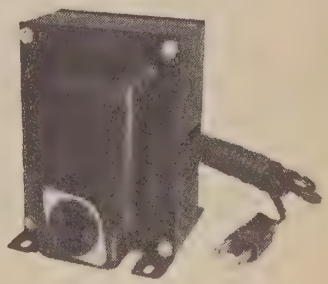
STEP-DOWN ISOLATION TRANSFORMERS

PRIMARY: 240 Volts • 50/60 HZ • Line Cord and Plug*
SECONDARY: 120 Volts • Standard Female Receptacle • Electrostatic Shield • UL Approved Cord and Plug.

Cat No.	VA Watts	Style	DIMENSIONS L	W	H	Mounting Centers M1	M2	Appr. Wt.	Net Price
S2-50	50	A	2 29/32	3 1/16	3 1/2	2 1/4	1 13/16	3	9.20
S2-100	100	A	3 3/32	3 7/8	3 7/8	2 1/2	2 3/16	5	11.90
S2-150	150	A	3 17/32	4 3/8	4 1/4	2 3/4	2 13/16	7	13.50
S2-220	220	A	3 27/32	4 5/8	4 5/8	3	3 1/16	9.5	15.00
S2-330	330	A	4 17/32	5 1/4	5 7/16	3 1/2	3 1/4	14.5	22.00
S2-500	500	A	4 17/32	6 1/4	5 7/16	3 1/2	4 1/4	21	24.00
S2-700	700	A	5 1/2	5 15/16	6 9/16	4 1/4	3 1/2	25	25.50
S2-1000	1000	A	5 1/2	6 15/16	6 9/16	4 1/4	4 1/2	35	45.00
S2-1500	1500	B	9	7 3/4	6 5/16	8 1/4	4 3/8	42	57.00
S2-2200	2200	B	9	9 3/8	6 5/16	8 1/4	6	65	70.00
S2-3300	3300	B	9	11 5/8	6 5/16	8 1/4	8 1/4	95	110.00

Style A Only; Style B — Knockouts for Conduit Connectors.





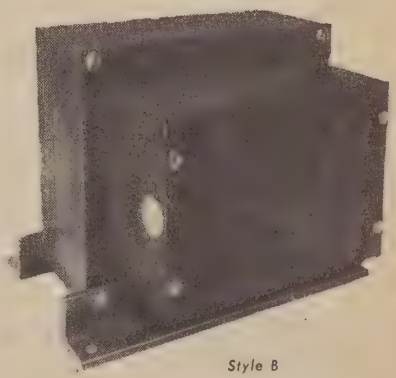
Style A

ISOLATION TRANSFORMERS

PRIMARY: 120 Volts • 50/60 HZ • Line Cord and Plug*
SECONDARY: 120 Volts • Standard Female Receptacle • Electrostatic Shield • UL Approved Cord and Plug.

Cat No.	VA Watts	Style	DIMENSIONS L	W	H	Mounting Centers M1	M2	Appr. Wt.	Net Price
S1-50	50	A	2 29/32	3 1/16	3 1/2	2 1/4	1 13/16	3	9.20
S1-100	100	A	3 3/32	3 7/8	3 7/8	2 1/2	2 3/16	5	11.90
S1-150	150	A	3 17/32	4 3/8	4 1/4	2 3/4	2 13/16	7	13.50
S1-220	220	A	3 27/32	4 5/8	4 5/8	3	3 1/16	9.5	15.00
S1-330	330	A	4 17/32	5 1/4	5 7/16	3 1/2	3 1/4	14.5	22.00
S1-500	500	A	4 17/32	6 1/4	5 7/16	3 1/2	4 1/4	21	24.00
S1-700	700	A	5 1/2	5 15/16	6 9/16	4 1/4	3 1/2	25	25.50
S1-1000	1000	A	5 1/2	6 15/16	6 9/16	4 1/4	4 1/2	35	45.00
S1-1500	1500	B	9	7 3/4	6 5/16	8 1/4	4 3/8	42	57.00
S1-2200	2200	B	9	9 3/8	6 5/16	8 1/4	6	65	70.00
S1-3300	3300	B	9	11 5/8	6 5/16	8 1/4	8 1/4	95	110.00

Style A Only; Style B — Knockouts for Conduit Connectors.



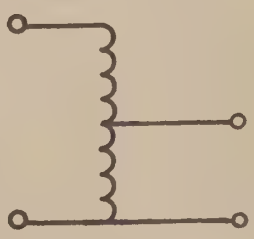
Style B

STEP-DOWN AUTO TRANSFORMERS

PRIMARY: 240 Volts • 50/60 HZ • Line Cord and Plug*
SECONDARY: 120 Volts • Standard Female Receptacle • UL Approved Cord and Plug.

Cat No.	VA Watts	Style	DIMENSIONS L	W	H	Mounting Centers M1	M2	Appr. Wt.	Net Price
SA-100	100	A	2 29/32	3 1/16	3 1/2	2 1/4	1 13/16	3	8.20
SA-150	150	A	2 29/32	3 3/4	3 1/2	2 1/4	2 1/8	4	9.40
SA-200	200	A	3 3/32	3 7/8	3 7/8	2 1/4	2 3/16	5	12.00
SA-300	300	A	3 17/32	4 3/8	4 1/4	2 3/4	2 13/16	7	15.30
SA-450	450	A	3 27/32	4 5/8	4 5/8	3	3 1/8	9 1/2	17.10
SA-650	650	A	4 17/32	5 1/4	5 7/16	3 1/2	3 1/4	14 1/2	20.20
SA-1000	1000	A	4 17/32	6 1/4	5 7/16	3 1/2	4 1/4	21	23.50
SA-1500	1500	A	5 1/2	5 15/16	6 9/16	4 1/4	3 1/2	25	34.00
SA-2000	2000	A	5 1/2	6 15/16	6 9/16	4 1/4	4 1/2	35	39.40
SA-3000	3000	B	9	7 3/4	6 5/16	8 1/4	4 3/8	42	58.00
SA-4500	4500	B	9	9 3/8	6 5/16	8 1/4	6	65	75.00
SA-6500	6500	B	9	11 5/8	6 5/16	8 1/4	8 1/4	95	105.00
SA-8000**	8000	B	10 5/8	9 5/8	8 1/4	9 5/8	6 1/8	90	120.00
SAB-5300†	5300	A	5 3/4	8 5/16	4	3 3/4	6 1/2	17.5	54.00

*Style A Only **60 HZ Only Style B — Knockouts for Conduit Connector
†Step-up/down Auto Transformer. Connections for 208/230 V or 230/208 V, 23 Amp 50/60 HZ



STERLING TRANSFORMER CORP

STERLING TRANSFORMER

hi-Q toroidal inductors

MANUFACTURED TO MIL-T-27A. ALL HERMETICALLY SEALED UNITS (STYLE H) ARE MIL TYPE TF4RX20YY

- ALL MOLDED UNITS STYLE M ARE MIL TYPE TF5RX20ZZ
- ALSO TOROIDAL INDUCTORS IN OTHER SIZES AND VALUES AVAILABLE ON SPECIAL ORDER.
- MOLYBDENUM PERMALLOY POWDER CORES USED IN ALL UNITS.

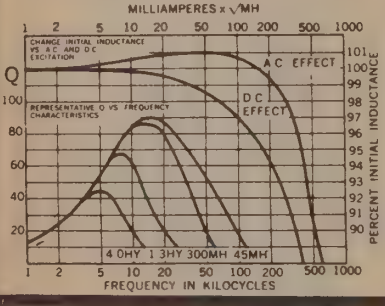


STYLE F
• ALL INDUCTORS SHOWN AVAILABLE IN OPEN STYLE F.

QA SERIES

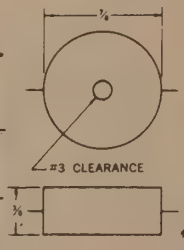
FREQUENCY TO 20KC•ACCURACY ± 2%

The QA series is designed to optimize small size and high "Q" for miniaturized applications. These units are available on special order with stabilized cores and inductance from 1MH to 4.0H.



AVAILABLE ON SPECIAL ORDER
HERMETICALLY SEALED

Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1–9 pcs. Style F	Style M
QA-1	5MH	2.5	30	4 80	6 30
QA-2	10	5	33	4 80	6.30
QA-3	15	8	34	4 95	6 45
QA-4	20	11.2	36	5.10	6.60
QA-5	30	17	37	5.15	6 80
QA-6	50	28	40	5 30	6.95
QA-7	100	50	42	5 45	7.10
QA-8	150	80	44	5 65	7.30
QA-9	200	120	45	5.75	7.40
QA-10	300	150	46	5 85	7 65
QA-11	500	290	48	5.95	7.95
QA-12	1.00H	530	51	6 80	8.75
QA-13	1.50	825	53	6.95	9.60





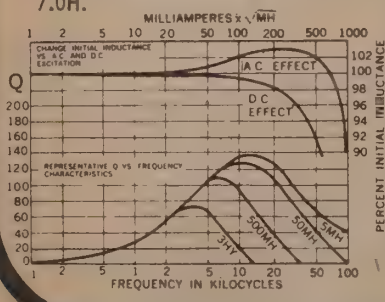
MOLDED STYLE M

Encapsulated in Epoxy Resin. Pigtail leads for printed circuit applications.

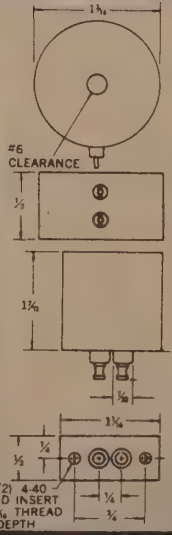
QB SERIES

FREQUENCY TO 20KC•ACCURACY ± 2%

The QB series is designed for airborne applications where stable high "Q" is needed with minimized size and weight. Available on special order with stabilized cores and inductance to 7.0H.



Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1–9 pcs. Style F	Style H	Style M
QB-1	5MH	1.1	38	4.30	7.45	5.80
QB-2	10	2.1	40	4.30	7.45	5.80
QB-3	15	3.3	42	4.30	7.45	5.95
QB-4	20	3.7	43	4.35	7.55	6.05
QB-5	30	5.8	45	4.40	7.70	6.15
QB-6	50	11	47	4.50	7.95	6.25
QB-7	100	22	49	4.65	8.45	6.30
QB-8	150	34	50	4.80	8.60	6.45
QB-9	200	47	52	5.05	9 00	6 70
QB-10	300	60	53	5.15	9.25	6.80
QB-11	500	95	55	5.30	9.45	6.95
QB-12	1.00H	213	57	5.65	9 90	7.45
QB-13	1.50	335	59	6.45	10.40	8.10





MOLDED STYLE M

Encapsulated in Epoxy Resin. Silver plated turret lugs.



HERMETIC STYLE H

Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.

STERLING TRANSFORMER CORP.

Net

© United Technical Publications

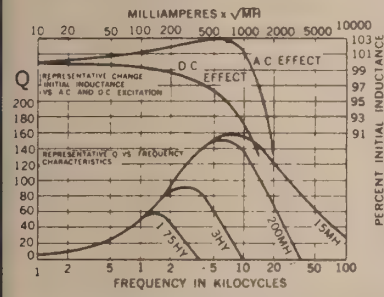
hi-Q toroidal inductors

STERLING TRANSFORMER

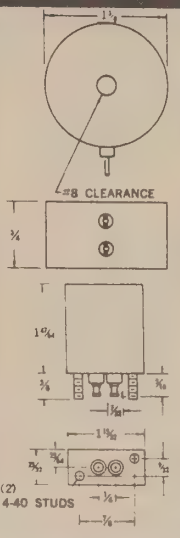
QC SERIES

FREQUENCY TO 10KC
ACCURACY ± 2%

The QC series is designed for high "Q", increased power level & stability. Available on spe- order with stabilized cores and inductance to 20H.



Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1–9 pcs. Style F	Style H	Style M
QC-1	5MH	0.62	60	4.80	7.80	6 80
QC-2	10	1.1	66	4.95	7.95	6.80
QC-3	15	1.7	68	4.95	8.10	6.80
QC-4	20	1.9	70	5.05	8.25	6.80
QC-5	30	3	72	5.10	8.45	6.80
QC-6	50	6	76	5 15	8 60	6 80
QC-7	100	11	81	5.30	9.25	7 30
QC-8	150	17	83	5.45	9.45	7 30
QC-9	200	24	85	5 50	9 65	7 40
QC-10	300	37	88	5.60	9.80	7.50
QC-11	500	63	91	5.65	10.10	7.60
QC-12	1.00H	110	96	5.80	10.60	7.95
QC-13	1.50	185	98	5.95	10.75	8.10
QC-14	2.00	250	100	6.50	11.20	8.40
QC-15	3.00	380	103	7.05	11.65	8.80
QC-16	5.00	645	106	7.45	12.25	9.25
QC-17	7.50	950	109	8.00	13.00	10.05
QC-18	10.00	1175	112	8.25	13.70	10.60





MOLDED STYLE M
Encapsulated in Epoxy Resin. Silver plated turret lugs.

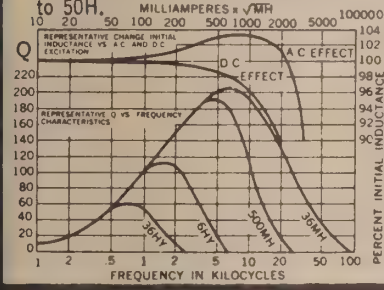


HERMETIC STYLE H
Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.

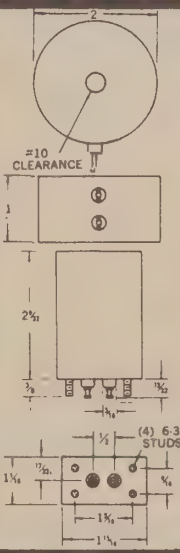
QD SERIES

FREQUENCY TO 10KC•ACCURACY ± 2%

The QD series is designed for very high "Q" in the audio band allowing for application in sharp frequency filters with high power levels and low losses. They are excellent for tuned transformers and oscillators. Available on special order with- stabilized cores and inductance to 50H.



Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1–9 pcs. Style F	Style H	Style M
QD-1	20MH	1.0	97	7.80	11.60	9.60
QD-2	30	1.5	100	7.80	11.60	9.60
QD-3	50	2.5	105	7.80	11.60	9.60
QD-4	100	6	110	7 95	11.75	9.75
QD-5	150	7	113	8.10	11.85	10.35
QD-6	200	10	115	8 10	11 85	10 35
QD-7	300	15	117	8.25	12.05	10.60
QD-8	500	25	121	8.25	12.05	10.60
QD-9	1.00H	60	126	8 60	12.55	10.90
QD-10	1.50	90	130	8.95	12.90	11.25
QD-11	2.00	100	131	9.85	13.90	11.70
QD-12	3.00	155	134	10.20	14 30	12 00
QD-13	5.00	275	138	10.40	14.55	12 25
QD-14	7.50	400	140	11.10	15.55	13.20
QD-15	10.00	600	142	12 25	16.50	14.20
QD-16	15.00	900	146	13 20	17.35	15 20
QD-17	20.00	1100	148	14.15	19 10	16.80
QD-18	25.00	1500	150	14.40	19.35	17.00





MOLDED STYLE M
Encapsulated in Epoxy Resin. Silver plated turret lugs.

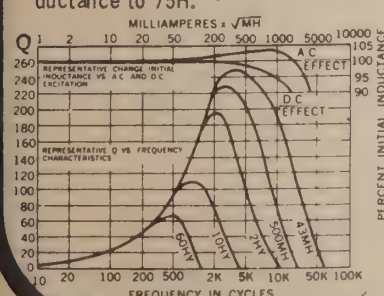


HERMETIC STYLE H
Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.

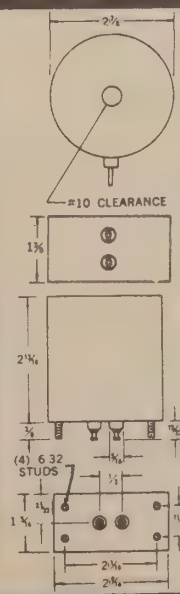
QE SERIES

FREQUENCY TO 15KC
ACCURACY ± 2%

The QE series is most widely used in low audio frequency applications where high "Q" is essential. They are used where inductance stability over a wide voltage range is required. Available on special order with inductance to 75H.



Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1–9 pcs. Style F	Style H	Style M
QE-1	25MH	0.85	127	11.90	14.85	13.90
QE-2	50	1.6	136	12.05	15.05	14.05
QE-3	100	3	144	15.35	15.35	14 40
QE-4	150	3.9	149	15 70	15 70	15.05
QE-5	200	5.9	153	16.25	16.25	15.25
QE-6	300	8.5	158	16 30	16 30	15 30
QE-7	500	15	164	16 35	16.35	15.35
QE-8	1.00H	30	173	16.70	16 70	15.35
QE-9	1.50	40	177	17 00	17.00	15.70
QE-10	2.00	60	181	17.95	17.95	16.10
QE-11	3.00	85	185	18 05	18.05	16 30
QE-12	5.00	142	192	18.35	18.35	16 50
QE-13	7.50	215	196	18.70	18.70	17 55
QE-14	10.00	300	200	19.00	19.00	17.85
QE-15	15.00	430	205	20.15	20.15	19.00
QE-16	20.00	550	209	21.20	21 20	20.00
QE-17	25.00	800	212	21.45	21.45	20.30
QE-18	30.00	850	214	25.30	25 30	24 15
QE-19	50.00	1500	221	27.75	27.75	26.60





MOLDED STYLE M
Encapsulated in Epoxy Resin. Silver plated turret lugs.



HERMETIC STYLE H
Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.

STERLING TRANSFORMER CORP.

STERLING TRANSFORMER

STANDARD INTERSTAGE AND LINE TRANSISTOR AND TUBE APPLICATIONS *filters*

Hermetically Sealed — Manufactured to MIL-F-18327B Available in Other Frequencies

LOW PASS

INTERSTAGE

LI units have a loss of approximately 3 db at cutoff frequency, and an attenuation of 35 db at 1.5 cutoff frequency. Input and output 10,000 ohms. LI units are MIL type FR4RX11YY.

Part No.	Frequency	Case Size	Net Price
LI-60	60 cps	A	34.65
LI-100	100 cps	A	34.65
LI-200	200 cps	B	34.65
LI-400	400 cps	B	34.65
LI-500	500 cps	B	34.65
LI-800	800 cps	B	34.65
LI-1,000	1,000 cps	B	34.65
LI-1,500	1,500 cps	B	34.65
LI-2,000	2,000 cps	B	34.65
LI-2,500	2,500 cps	B	34.65
LI-3,000	3,000 cps	B	34.65
LI-4,000	4,000 cps	B	34.65
LI-5,000	5,000 cps	B	34.65
LI-10,000	10,000 cps	B	34.65

LINE

LL units have a loss of approximately 3 db at cutoff frequency, and an attenuation of 35 db at 1.5 cutoff frequency. Input and output 500/600 ohms. LL units are MIL type FR4RX11YY.

Part No.	Frequency	Case Size	Net Price
LL-600	600 cps	A	34.65
LL-1,000	1,000 cps	A	34.65
LL-1,500	1,500 cps	A	34.65
LL-2,000	2,000 cps	A	34.65
LL-2,500	2,500 cps	A	34.65
LL-4,000	4,000 cps	A	34.65
LL-8,000	8,000 cps	A	34.65
LL-10,000	10,000 cps	A	34.65
LL-12,000	12,000 cps	A	34.65

HIGH PASS

INTERSTAGE

HI units have a loss of less than 6 db at cutoff frequency, and an attenuation of 35 db at .67 cutoff frequency. Input and output 10,000 ohms. HI units are MIL type FR4RX33YY.

Part No.	Frequency	Case Size	Net Price
HI-100	100 cps	A	34.65
HI-200	200 cps	A	34.65
HI-300	300 cps	A	34.65
HI-400	400 cps	A	34.65
HI-500	500 cps	A	34.65
HI-800	800 cps	A	34.65
HI-1,000	1,000 cps	A	34.65
HI-2,000	2,000 cps	A	34.65
HI-3,000	3,000 cps	A	34.65

LINE

HL units have a loss of less than 6 db at cutoff frequency, and an attenuation of 35 db at .67 cutoff frequency. Input and output 500/600 ohms. HL units are MIL type FR4RX33YY.

Part No.	Frequency	Case Size	Net Price
HL-200	200 cps	A	42.90
HL-300	300 cps	A	42.90
HL-500	500 cps	A	42.90
HL-1,000	1,000 cps	A	42.90

FOR WIDE BAND PASS FILTERS THE LI & HI OR LL & HL MAY BE CONNECTED IN SERIES.

BAND PASS

INTERSTAGE

BI units have 2:1 voltage gain. They are sharply peaked, having approximately 2 db attenuation at plus or minus 3% from center frequency and attenuation greater than 40 db at 1/2 and twice center frequency. Input 10,000 ohms, output to grid. BI units are MIL type FR4RX22YY.

Part No.	Frequency	Case Size	Net Price
BI-50	50 cps	A	33.00
BI-60	60 cps	A	33.00
BI-100	100 cps	A	33.00
BI-120	120 cps	B	33.00
BI-200	200 cps	B	33.00
BI-240	240 cps	B	33.00
BI-400	400 cps	B	33.00
BI-500	500 cps	B	33.00
BI-750	750 cps	B	33.00
BI-800	800 cps	B	33.00
BI-1,000	1,000 cps	B	33.00
BI-1,500	1,500 cps	B	33.00
BI-2,000	2,000 cps	B	33.00
BI-3,000	3,000 cps	B	33.00
BI-4,000	4,000 cps	B	33.00
BI-5,000	5,000 cps	B	33.00
BI-10,000	10,000 cps	B	33.00

LINE

BL units have 9:1 voltage gain. They are sharply peaked, having approximately 2 db attenuation at plus or minus 3% from center frequency and attenuation greater than 40 db at 1/2 and twice center frequency. Input 500/600 ohms, output to grid. BL units are MIL type FR4RX22YY.

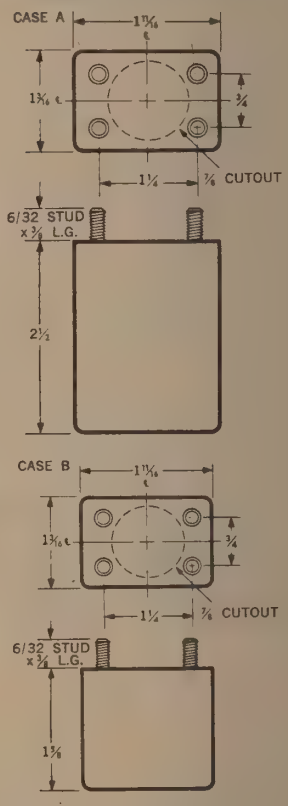
Part No.	Frequency	Case Size	Net Price
BL-400	400 cps	B	33.00
BL-1,000	1,000 cps	B	33.00

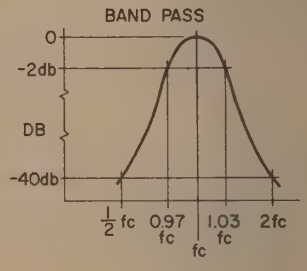
TRANSISTOR INTERSTAGE

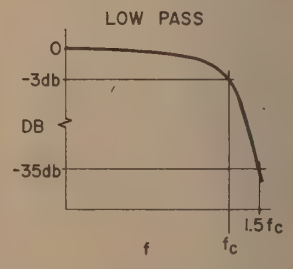
They are sharply peaked, having approximately 2 db attenuation at plus or minus 3% from center frequency and attenuation greater than 40 db at 1/2 and twice center frequency. Input 10,000 ohms, output 10,000 ohms. BIT units are MIL type FR4RX22YY.

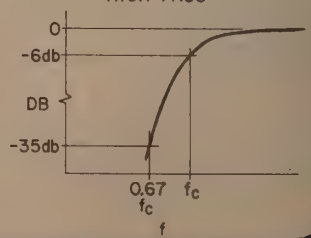
Part No.	Frequency	Case Size	Net Price
BIT-60	60 cps	A	39.60
BIT-100	100 cps	A	39.60
BIT-120	120 cps	B	39.60

CASE DETAIL









STERLING TRANSFORMER CORP.

© United Technical Publications

120 VOLT SINGLE PHASE PANEL MOUNTING

Cased and uncased units designed for mounting on panels 1/4" thick to 5/8" thick. Most panel mounting units can also be bench mounted.

Mfr's Type No.	Volts	Output Amps	KVA	Size	Weight (Lbs.)	Price
171	*0-132	1.75	.23	$2\frac{13}{16} \times 2\frac{3}{32}$	3	12.00
251	*0-132	2.5	.33	$2\frac{13}{16} \times 2\frac{9}{16}$	3.5	13.00
371	*0-120/140	3.75	.53	$3\frac{3}{4} \times 3\frac{3}{4} \times 3\frac{1}{4}$	5	18.00
501	0-120/140	5.0	.70	$3\frac{3}{4} \times 3\frac{3}{4} \times 3\frac{5}{16}$	6	19.00
1010	0-120/140	10.0	1.4	$5\frac{5}{16} \times 5 \times 4\frac{3}{16}$	12	25.00
1010CT	0-120/140	*10.0	1.4	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12	33.00
1210	**0-120	12.5	1.4	$5\frac{5}{16} \times 5 \times 4\frac{3}{16}$	12	27.00
1210CT	**0-120	12.5	1.4	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12	35.00
1510	0-120/140	15.0	2.1	$6\frac{1}{8} \times 6\frac{5}{8} \times 4\frac{3}{8}$	20	48.00
2510	0-120/140	25.00	3.5	$8\frac{1}{16} \times 7\frac{5}{8} \times 4\frac{1}{8}$	23	65.00
2510CT	0-120/140	25.0	3.5	$9\frac{5}{8} \times 7\frac{5}{8} \times 4\frac{1}{8}$	23	78.00
5010	0-140	50.0	7.0	$12\frac{1}{2} \times 12\frac{1}{2} \times 6\frac{1}{2}$	60	162.00
5010CT	0-140	50.0	7.0	$15\frac{5}{8} \times 14 \times 6\frac{1}{2}$	60	182.00

*60 cycle operation only at overvoltage.
**60 cycle operation only.

120 VOLT SINGLE PHASE MODELS WITH CORD & RECEPTACLE

All models housed in rugged cases include pilot light, switch fuse, line cord, plug and matching receptacle.
2 PF models are equipped with 2-wire cords, plugs and receptacles.
3PN models are equipped with 3-wire grounded cords, plugs, and receptacles.

Mfr's Type No.	Volts	Output Amps	KVA	Size	Weight (Lbs.)	Price
2PF171	**0-132	1.75	.23	$3\frac{7}{8} \times 3\frac{7}{8} \times 3\frac{1}{2}$	3.5	23.00
3PN171	**0-132	1.75	.23	$3\frac{7}{8} \times 3\frac{7}{8} \times 3\frac{1}{2}$	3.5	25.00
2PF371	*0-120/140	3.75	.53	$6\frac{1}{2} \times 6\frac{1}{8} \times 6\frac{1}{2}$	7.0	26.00
3PN371	*0-120/140	3.75	.53	$6\frac{1}{2} \times 6\frac{1}{8} \times 6\frac{1}{2}$	7.0	28.00
2PF501	0-120/140	5.0	.70	$6\frac{1}{2} \times 6\frac{1}{8} \times 6\frac{1}{2}$	9.0	28.00
3PN501	0-120/140	5.0	.70	$6\frac{1}{2} \times 6\frac{1}{8} \times 6\frac{1}{2}$	9.0	30.00
2PF1010	0-120/140	10.0	1.4	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	34.00
3PN1010	0-120/140	10.0	1.4	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	40.00
2PF1210	**0-120	12.5	1.4	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	40.00
3PN1210	**0-120	12.5	1.4	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	44.00
3PN2210	0-140	22.0	2.4	$10\frac{3}{4} \times 7\frac{5}{8} \times 4\frac{1}{8}$	23.0	94.00

*60 cycle operation only on overvoltage **60 cycle operation only

240 VOLT SINGLE PHASE PANEL MOUNTING

Cased and uncased units designed for mounting on panels 1/4" thick to 5/8" thick. Most panel mounting units can also be benched mounted.

Mfr's Type No.	Volts	Output Amps	KVA	Size	Weight (Lbs.)	Price
1020	0-240/280	3.5	.98	$5\frac{5}{16} \times 5 \times 4\frac{3}{16}$	12.0	30.00
1020CT	0-240/280	3.5	.98	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	37.00
1220	0-240	5.0	1.2	$5\frac{5}{16} \times 5 \times 4\frac{3}{16}$	12.0	32.00
1220CT	0-240	5.0	1.2	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	40.00
1520	0-240/280	9.5	2.7	$6\frac{1}{8} \times 6\frac{1}{8} \times 4\frac{13}{16}$	20.0	48.00
2520	0-240/280	10.0	2.8	$8\frac{3}{8} \times 7\frac{5}{8} \times 4\frac{1}{8}$	23.0	65.00
2520CT	0-240/280	10.0	2.8	$9\frac{5}{8} \times 7\frac{5}{8} \times 4\frac{1}{8}$	23.0	78.00
5020	0-240/280	28.0	7.8	$12\frac{1}{2} \times 12\frac{1}{2} \times 6\frac{1}{2}$	60.0	162.00
5020CT	0-240/280	28.0	7.8	$15\frac{5}{8} \times 14 \times 6\frac{1}{2}$	60.0	182.00

240 VOLT SINGLE PHASE MODELS WITH CORD & RECEPTACLE

All models housed in rugged cases include pilot light, switch, fuse, line cord, plug and matching receptacle.
2 PF models are equipped with 2-wire cords, plugs and receptacles.
3 PN models are equipped with 3-wire grounded cords, plugs, and receptacles.

Mfr's Type No.	Volts	Output Amps	KVA	Size	Weight (Lbs.)	Price
2PF1020	0-280	3.5	.98	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	39.00
3PN1020	0-280	3.5	.98	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	46.00
2PF1220	**0-240	5.0	1.2	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	45.00
3PN1220	**0-240	5.0	1.2	$6\frac{7}{8} \times 5 \times 4\frac{7}{16}$	12.0	47.00
3PN2520	0-240	10.0	2.8	$9\frac{5}{8} \times 7\frac{5}{8} \times 4\frac{1}{8}$	23.0	94.00

**60 cycle operation only.

120 VOLT VARIABLE ISOLATION TRANSFORMERS

STACO isolated variable autotransformers provide a means for smooth control of an electrically isolated AC voltage output. Uncased models offer isolated, non-isolated voltage doubler, and series connections with proper external hook-up. Cased models feature circuit breaker, switch pilot light, output voltmeter 3 wire grounded cord, plug, and matching receptacles. Cased models available in isolated connection only. Ratings shown are for isolated connections.

Mfr's Type No.	Volts	Output Amps	KVA	Size	Weight (Lbs.)	Price
J401	0-140	4.0	.56	$6\frac{1}{8} \times 6\frac{5}{8} \times 4\frac{7}{8}$	13.0	82.00
J901	0-140	9.0	1.26	$8\frac{9}{32} \times 7\frac{3}{4} \times 5\frac{1}{8}$	25.0	110.00
EJ401V	0-140	4.0	.56	$9\frac{1}{2} \times 12\frac{15}{16} \times 6\frac{3}{8}$	26.0	110.00
EJ901V	0-140	9.0	1.26	$11\frac{1}{4} \times 14\frac{9}{16} \times 6\frac{5}{8}$	36.0	155.00

EJ201V, EJ401V, EJ901V have a 0 140 VAC and 0 120 VDC at full rated current available at isolated banana receptacles

DELUXE VARIABLE AUTOTRANSFORMERS

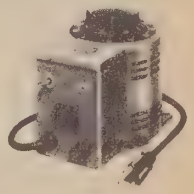
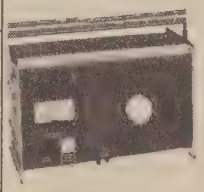
STACO offers a selected group of variable autotransformers with new style, broad applications, and a unique combination of practical features. Suitable for use in any industrial application, classroom or laboratory. All units provide continuous voltage control over a wide range, and all are protected against short circuit. Convenient controls provide error-free operation and distortionless adjustment of AC voltage.

Mfr's Type No.	Input Volts	Output Volts	Output Amps	KVA	Size	Weight (Lbs.)	Price
E171	120	0-132	1.75	.23	$5\frac{7}{8} \times 9\frac{9}{16} \times 3\frac{5}{8}$	8.0	29.00
E371	120	0-140	3.75	.52	$7\frac{3}{8} \times 11\frac{3}{16} \times 4\frac{7}{8}$	11.0	30.00
E501	120	0-140	5.0	.7	$7\frac{3}{8} \times 11\frac{3}{16} \times 4\frac{7}{8}$	12.0	36.00
E501V	120	0-140	5.0	.7	$7\frac{3}{8} \times 15\frac{7}{16} \times 5\frac{7}{8}$	13.0	65.00
E501VA	120	0-140	5.0	.7	$11\frac{1}{4} \times 12\frac{9}{16} \times 5\frac{7}{8}$	17.0	105.00
E501VAW	120	0-140	5.0	.7	$11\frac{1}{4} \times 14\frac{9}{16} \times 5\frac{7}{8}$	18.0	165.00
E1010	120	0-140	10.0	1.4	$7\frac{3}{8} \times 11\frac{15}{16} \times 5\frac{7}{8}$	18.0	65.00
E1010V	120	0-140	10.0	1.4	$7\frac{3}{8} \times 15\frac{7}{16} \times 5\frac{7}{8}$	19.0	85.00
E1010VA	120	0-140	10.0	1.4	$11\frac{1}{4} \times 12\frac{9}{16} \times 5\frac{7}{8}$	23.0	125.00
E1010VAW	120	0-140	10.0	1.4	$11\frac{1}{4} \times 14\frac{9}{16} \times 5\frac{7}{8}$	23.0	200.00
E1210	120	0-120	12.0	1.44	$7\frac{3}{8} \times 11\frac{15}{16} \times 5\frac{7}{8}$	18.0	63.00
E1020	240	0-280	3.5	.98	$7\frac{3}{8} \times 11\frac{15}{16} \times 5\frac{7}{8}$	18.0	63.00
E1710	120	0-140	17.0	2.38	$11\frac{1}{4} \times 14\frac{9}{16} \times 5\frac{7}{8}$	31.0	100.00
E1720	240	0-280	10.0	2.8	$11\frac{1}{4} \times 14\frac{9}{16} \times 5\frac{7}{8}$	30.0	100.00

E501V, E501VA, E501VAW, E1010V, E1010VA, E1010VAW have isolated AC and DC outputs of 10% of the output current rating of the unit. Outputs are available at isolated banana receptacles
V = Voltmeter A = Ammeter W = Wattmeter

STACO Variable Autotransformers




STACO Variable Autotransformers are precision built to exacting tolerances from the finest materials available.

Staco's new improved design provides long life with negligible maintenance, high efficiency and regulation, greater power to size ratio. Staco designs permit replacement of competitive equipment or previous Staco models without modification.

Models are available in various configurations from 1.75 to 300 amperes output. Choose from panel mounted units, cord and plug types or deluxe fully enclosed portable models, with or without metering. Staco products represent 25 years experience in providing safe and dependable control of power.

Contact your local representative for full details or write the factory for our new Product Guide.

STACO INCORPORATED

POWERSTAT® Variable Transformers now

New epoxy-coated POWERKOTE Coils make the POWERSTAT line the most outstanding value in variable transformers today. *Without increase in price, size or weight,* only POWERSTAT Variable Transformers give an average of 20% higher current ratings, 10:1 greater overload capability, longer life, greater resistance to fungus, salt spray and other contaminating atmospheres. POWERKOTE Coil commutator bars are embedded in place preventing steady-state operating temperature and severe overloads from distorting the commutator.

POWERSTAT Variable Transformers are designed to deliver continuously adjustable voltage from a-c power lines. They introduce no waveform distortion and feature rugged construction, precious metal plated commutators, excellent regulation, high efficiency and conservative ratings. All manually operated types listed in the charts except the 10B-12, EN116B-EN216B and EN117B-EN217B Series are available with motor drives if desired. Motor-driven speeds are 5, 15, 30 or 60 seconds for full range travel on all except types having -4, -5, or -6 suffixes which do not offer the 5-second speed. Single types in the 116B-216B, 117B-217B, 126-226 and 136B-236B Series are also offered with 2- or 3-wire cord-plug sets. 1156D-1256D Series types are available in ratings to 244 kva.



ADJUSTABLE SPEED DRIVES

All motor-driven units in the 116B-216B, 117B-217B, 126-226, 136B-236B and 146-246 Series are available with adjustable speed drives which permit the output voltage of the transformer to be controlled over the full range of zero to maximum output voltage at speeds ranging from 5 seconds to 200 seconds. All control circuitry is solid-state and adaptable for present speed systems. The Adjustable Speed Control Potentiometer BHP65455-G1 can be remotely located from the variable transformer.

RATINGS AND SPECIFICATIONS

INPUT		OUTPUT						
			Const. Current Lead		Const. Impedance Lead			
Volts	Cycles	Volts	Max. Amp.	Max. KVA	Max. Amp.	Max. KVA	TYPE	Ship. Wt. Lbs.
10B-12 SERIES								
Single Phase								
120	60	0-132	1	0 13	—	—	2PF10	3½
120	50/60	0 120	2.25*	0 27	3‡	0 36	10B	2½
120	60	0-132	2 25*	0 30	—	—		
240	50/60	0 240	0.7*	0 17	0 9‡	0 22	12	2½
240	50/60	0-264	0 5**	0 13	—	—		
240	50/60	0-240	2 25*	0.54	3‡	0.72	10B-2	6
240	60	0-264	2.25*	0.59	—	—		
480	50/60	0-480	0 7*	0 34	0.9‡	0 43	12-2	6
480	50/60	0-528	0 5**	0 26	—	—		
Three Phase								
120	50/60	0-120	2.25*	0 47	3‡	0 62	10B-2	6
120	60	0-132	2 25*	0 51	—	—		
240	50/60	0-240	0.7*	0 29	0 9‡	0.37	12-2	6
240	50/60	0-264	0 5**	0 23	—	—		
240	60	0 240	2 25*	0 94	3*	1 2	10B-3	8½
480	50/60	0-480	0.7*	0 58	0.9‡	0 75	12-3	8½
480	60	0-528	0 5**	0 46	—	—		
21-22 SERIES								
Single Phase								
120	50/60	0-120	4.5	0 54	6.5	0 78	21	6
120	50/60	0-140	4 5	0.63	—	—		
240	50/60	0-240	2.25	0 54	3 25	0 78	22	6
240	50/60	0 280	2 25	0 63	—	—		
240	50/60	0-240	4 5	1 1	6 5	1.6	21-2	13½
240	50/60	0-280	4 5	1 3	—	—		
480	50/60	0-480	2 25	1 1	3.25	1 6	22-2	13½
480	50/60	0-560	2.25	1 3	—	—		
Three Phase								
120	50/60	0-120	4.5	0 94	6.5	1.4	21-2	13½
120	50/60	0-140	4 5	1.1	—	—		
240	50/60	0-240	2 25	0.94	3·25	1.4	22-2	13½
240	50/60	0-280	2 25	1.1	—	—		
240	50/60	0-240	4.5	1 9	6.5	2.7	21-3	19
240	60	0-280	4 5	2 2	—	—		
480	50/60	0 480	2 25	1 9	3 25	2 7	22-3	19
480	60	0-560	2 25	2 2	—	—		

*Rating when mounted on metal panel. On bracket or nonmetallic panel, derate 10B Series to 1.75 amp., 12 Series to 0.5 amp.
‡Rating when mounted on metal panel. On bracket or nonmetallic panel, derate 10B Series to 2.5 amp., 12 Series to 0.75 amp.
**0.7 amp. maximum in range from 0 to line voltage when mounted on metal panel.

INPUT		OUTPUT						
			Const. Current Lead		Const. Impedance Lead			
Volts	Cycles	Volts	Max. Amp.	Max. KVA	Max. Amp.	Max. KVA	TYPE	Ship. Wt. Lbs.
116B-216B and 117B-217B SERIES†								
Single Phase								
120	50/60	0-120	10	1 2	13	1.6	116B	12
120	50/60	0-140	10	1.4	—	—		
120	60	0-120	12	1 4	15	1.8	117BT	12
240	50/60	0-240	3.5	0.84	5	1.2	216B	12
240	50/60	0-280	3 5	0.98	—	—		
240	60	0-240	5	1 2	7	1 7	217BT	12
240	50/60	0-240	10	2 4	13	3 1	116BT-2	24
240	50/60	0-280	10	2.8	—	—		
240	60	0-240	12	2 9	15	3.6	117BT-2	24
480	50/60	0-480	3 5	1 7	5	2.4	216BT-2	24
480	50/60	0-560	3 5	2 0	—	—		
480	60	0-480	5	2 4	7	3.4	217BT-2	24
Three Phase								
120	50/60	0-120	10	2 1	13	2.7	116BT-2	24
120	50/60	0-140	10	2 4	—	—		
120	60	0-120	12	2 5	15	3.1	117BT 2	24
240	50/60	0-240	3.5	1 5	5	2.1	216BT-2	24
240	50/60	0-280	3 5	1 7	—	—		
240	60	0-240	5	2 1	7	2.9	217BT-2	24
240	50/60	0-240	10	4.2	13	5.4	116BT-3	36
240	60	0-280	10	4 8	—	—		
240	60	0-240	12	5.0	15	6 2	117BT-3	36
480	50/60	0-480	3.5	2 9	5	4.2	216BT-3	36
480	60	0-560	3.5	3.4	—	—		
480	60	0-480	5	4 2	7	5.8	217BT-3	36
EN116B-EN216B and EN117B-EN217B SERIES								
Single Phase								
120	50/60	0-120	8	0.96	13	1.6	EN116B	15
120	50/60	0-140	8	1.1	—	—		
120	60	0-120	10	1 2	14.5	1.7	EN117B	15
240	50/60	0-240	3	0.72	4.5	1.1	EN216B	15
240	50/60	0-280	3	0 84	—	—		
240	60	0-240	4 4	1 1	5 8	1.4	EN217B	15
240	50/60	0-240	8	1.9	13	3.1	EN116B-2	28
240	50/60	0-280	8	2.2	—	—		
240	60	0-240	10	2.4	14.5	3 5	EN117B-2	28
480	50/60	0-480	3	1.4	4.5	2.2	EN216B-2	28
480	50/60	0-560	3	1.7	—	—		
480	60	0-480	4 4	2 1	5 8	2 8	EN217B-2	28
Three Phase								
120	50/60	0-120	8	1 7	13	2.7	EN116B-2	28
120	50/60	0-140	8	1.9	—	—		
120	60	0-120	10	2 1	14.5	3.0	EN117B-2	28
240	50/60	0-240	3	1.2	4.5	1.9	EN216B-2	28
240	50/60	0-280	3	1 5	—	—		
240	60	0-240	4 4	1 8	5 8	2 4	EN217B-2	28
240	50/60	0-240	8	3.3	13	5.4	EN116B-3	39
240	60	0-280	8	3.9	—	—		
240	60	0-240	10	4.2	14 5	6.0	EN117B-3	39
480	50/60	0-480	3	2.5	4.5	3.7	EN216B-3	39
480	60	0-560	3	2 9	—	—		
480	60	0-480	4 4	3 7	5.8	4 8	EN217B-3	39

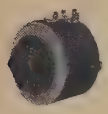
†Also available with open construction. Suffix U when ordering.

THE SUPERIOR ELECTRIC COMPANY

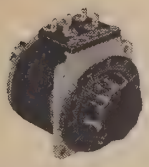
SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES

© United Technical Publications

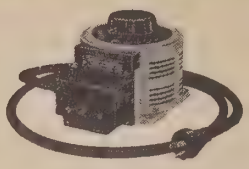
with POWERKOTE® COILS



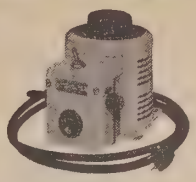
TYPE 10B



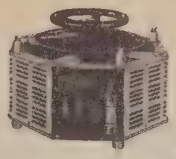
TYPE 21



TYPE 3PN126



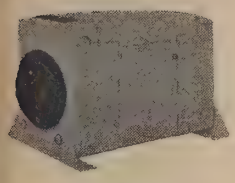
TYPE 116B



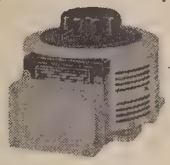
TYPE 1156D

TYPE 15MD136BT-2





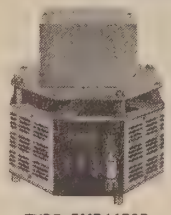
TYPE EN216B-2



TYPE 136BT



TYPE 146



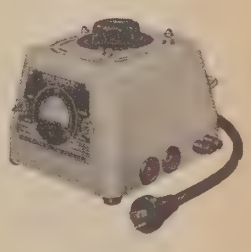
TYPE 5MB1156D

INPUT		OUTPUT					TYPE	Ship. Wt. Lbs.
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amp.	Max. KVA	Max. Amp.	Max. KVA		
126-226 SERIES†								
Single Phase								
120	50/60	0-120	15	1.8	20	2.4	126	17
120	50/60	0-140	15	2.1	—	—		
240	50/60	0-240	7.5	1.8	10	2.4	226	17
240	50/60	0-280	7.5	2.1	—	—		
240	50/60	0-240	15	3.6	20	4.8	126-2	32
240	50/60	0-280	15	4.2	—	—		
480	50/60	0-480	7.5	3.6	10	4.8	226-2	32
480	50/60	0-560	7.5	4.2	—	—		
Three Phase								
120	50/60	0-120	15	3.1	20	4.2	126-2	32
120	50/60	0-140	15	3.6	—	—		
240	50/60	0-240	7.5	3.1	10	4.2	226-2	32
240	50/60	0-280	7.5	3.6	—	—		
240	50/60	0-240	15	6.2	20	8.3	126-3	49
240	60	0-280	15	7.3	—	—		
480	50/60	0-480	7.5	6.2	10	8.3	226-3	49
480	60	0-560	7.5	7.3	—	—		
136B-236B SERIES†								
Single Phase								
120	50/60	0-120	22	2.6	28	3.4	136B	25
120	50/60	0-140	22	3.1	—	—		
120	50/60	0-120	44	5.3	56	6.7	136B-2‡	52
120	50/60	0-140	44	6.2	—	—		
240	50/60	0-240	10	2.4	13	3.1	236B	25
240	50/60	0-280	10	2.8	—	—		
240	50/60	0-240	22	5.3	28	6.7	136B-2	52
240	50/60	0-280	22	6.2	—	—		
480	50/60	0-480	10	4.8	26	6.2	236B-2	52
480	50/60	0-560	10	5.6	—	—		
Three Phase								
120	50/60	0-120	22	4.6	28	5.8	136B-2	52
120	50/60	0-140	22	5.3	—	—		
240	50/60	0-240	10	4.2	13	5.4	236B-2	52
240	50/60	0-280	10	4.8	—	—		
240	50/60	0-240	22	9.1	28	11.6	136B-3	76
240	60	0-280	22	10.7	—	—		
480	50/60	0-480	10	8.3	13	10.8	236B-3	76
480	60	0-560	10	9.7	—	—		
146-246 SERIES†								
Single Phase								
120	50/60	0-120	30	3.6	35	4.2	146	38
120	50/60	0-140	30	4.2	—	—		
120	50/60	0-120	60	7.2	70	8.4	146-2‡‡	83
120	50/60	0-140	60	8.4	—	—		
240	50/60	0-240	15	3.6	19	4.6	246	38
240	50/60	0-280	15	4.2	—	—		
240	50/60	0 240	30	7.2	35	8.4	146-2	83
240	50/60	0-280	30	8.4	—	—		
480	50/60	0-480	15	7.2	19	9.1	246-2	83
480	50/60	0-560	15	8.4	—	—		

†Also available with open construction. Suffix U when ordering.
‡Requires also one paralleling choke type T5000B.
‡‡Requires also one paralleling choke type T6053.

INPUT		OUTPUT					TYPE	Ship. Wt. Lbs.
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA		
146-246 SERIES† (contd.)								
Three Phase								
120	50/60	0-120	30	6.2	35	7.3	146-2	83
120	50/60	0-140	30	7.3	—	—		
240	50/60	0-240	15	6.2	19	7.9	246-2	83
240	50/60	0-280	15	7.3	—	—		
240	50/60	0-240	30	12.5	35	14.5	146-3	125
240	60	0-280	30	14.5	—	—		
480	50/60	0-480	15	12.5	19	15.8	246-3	125
480	60	0-560	15	14.5	—	—		
1156D-1256D SERIES†								
Single Phase								
120	50/60	0-120	50	6.0	55	6.6	1156D	82
120	50/60	0-140	50	7.0	—	—		
120	50/60	0-120	100	12.0	110	13.2	1156D-2P	169
120	50/60	0-140	100	14.0	—	—		
120	50/60	0-120	150	18.0	165	19.8	1156D-3P	272
120	50/60	0-140	150	21.0	—	—		
240	50/60	0-240	28	6.7	28	6.7	1256D	81
240	50/60	0-280	28	7.8	—	—		
240	50/60	0-240	50	12.0	55	13.2	1156D-2S	156
240	50/60	0-280	50	14.0	—	—		
240	50/60	0-240	56	13.4	56	13.4	1256D-2P	169
240	50/60	0-280	56	15.7	—	—		
240	50/60	0-240	84	20.2	84	20.2	1256D-3P	272
240	50/60	0-280	84	23.5	—	—		
240	50/60	0-240	100	24.0	110	26.4	1156D-4PS	361
240	50/60	0-280	100	28.0	—	—		
480	50/60	0-480	28	13.4	28	13.4	1256D-2S	156
480	50/60	0-560	28	15.7	—	—		
480	50/60	0-480	56	26.9	56	26.9	1256D-4PS	361
480	50/60	0-560	56	31.4	—	—		
Three Phase								
120	50/60	0-120	50	10.4	55	11.4	1156D-2D	155
120	50/60	0-140	50	12.1	—	—		
240	50/60	0-240	28	11.6	28	11.6	1256D-2D	155
240	50/60	0-280	28	13.6	—	—		
240	50/60	0-240	50	20.8	55	22.9	1156D-3Y	230
240	60	0-280	50	24.2	—	—		
240	50/60	0-240	100	41.6	110	45.7	1156D-6Y	507
240	50/60	0-280	100	48.5	—	—		
480	50/60	0-480	28	23.3	28	23.3	1256D-3Y	235
480	60	0-560	28	27.2	—	—		
480	50/60	0-480	56	46.6	56	46.6	1256D-6Y	507
480	60	0-560	56	54.3	—	—		

VOLTBOX® A-C POWER SUPPLY



Contains POWERSTAT Variable Transformer, voltmeter, three output receptacles, two 5-WAY Binding Posts, "on-off" switch, line-load meter switch, fuse and six-foot cord-plug. Type UC1MB ratings are 120 volt, single phase 50/60 hertz input and 0-140 volt 10 ampere, 1.4 kva output.

IN SECTIONS 2100, 3500, AND 4000

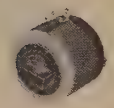
© United Technical Publications

POWERSTAT® Variable Transformers

NOW WITH POWERKOTE® COILS

40-VOLT SERIES

Meet high current, low voltage requirements of low voltage power supplies and a wide range of transistor circuit applications. Manually-operated and motor-driven single, 2- and 3-gang single phase types available.



TYPE 10B-40



TYPE 21-40

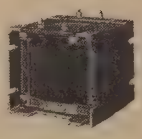
40-VOLT SERIES

INPUT		OUTPUT						
			Const. Current Lead		Const. Impedance Load			
Volts	Hertz	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
40	60	0-40	7	0 28	9	0 36	10B 40	3½
			18	0 72	22	0 88	21-40	6
			25	1 0	30	1 2	116BU-40	11

LINE CORRECTORS

Used to correct line voltage variations to maintain a constant output voltage or to supply a limited range of output voltage from a stable a-c source. Manually operated and motor-driven types available.





TYPE LC2106D



TYPE 5MBLC2115E

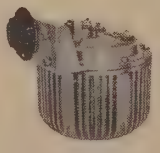
LINE CORRECTOR SERIES

INPUT		OUTPUT				Ship. Wt. Lbs.
Volts	Hertz	Volts	Max. Amps.	Max. KVA	TYPE	
Used as Line Corectors — SINGLE PHASE						
95 135	50/60	115	52	6 0	LC2106D	80
95 135	50/60	115	130	15 0	LC2115E	200
195 255	50/60	230	32 5	7.5	LC2207D	85
205 250	50/60	230	120	27 5	LC2228E	205
400 520	50/60	460	40	18 4	LC2418E	205
Used as Line Correctors — THREE PHASE						
195 255	50/60	230	50	20 0	LC3220YD	241
195 255	50/60	230	113	45 0	LC3245YE	615
195 255	50/60	230	175	70 0	LC3270DE	795
400 520	50/60	460	33	26 3	LC3425YD	230
400 520	50/60	460	100	79 7	LC3475YE	630
420 500	50/60	460	131	104	LC34100YE	630

When units of the LC series are used as limited range adjustable transformers the input voltage is the output voltage shown in the above chart and the output voltage is the input voltage shown in the above chart.

OIL-COOLED AND EXPLOSION-PROOF

Oil-cooled units substantially increase ratings above equivalent air-cooled types and provide a measure of safety. Explosion-proof models are Underwriters' Laboratories listed for Class 1, Group D service. Both are manually operated only.



OIL-COOLED
TYPE 0-116B



EXPLOSION-PROOF
TYPE X-116

OIL-COOLED

INPUT		OUTPUT				
Volts	Hertz	Volts	Max. Amps.	Max. KVA	TYPE††	Ship. Wt. Lbs.
120	50/60	0 120	15	1 8	0-116B	32
120	50/60	0 140	15	2 1		
120	50/60	0 140	30	4 2	0-1126	100
240	50/60	0 240	6	1 4	0 216B	32
240	50/60	0 280	6	1 7		
240	50/60	0 280	18	5 0	0 1226	105

†† Other types available on special order

EXPLOSION-PROOF

120	50/60	0 120	7 5	0 90	X-116	47
120	50/60	0 140	7 5	1 0		
120	50/60	0 140	12	1 7	X 1126	142
240	50/60	0 240	3	0 72	X-216	47
240	50/60	0 280	3	0 84		
240	50/60	0 280	6	1 7	X 1226	142

LW136B SERIES

Have three windings. Connections can be made for operation as a source of adjustable low output voltage, a line voltage corrector or a limited range variable transformer. Manually operated and motor-driven, open and enclosed construction types available. Full connections and ratings on request.



TYPE LW136B-3



TYPE LW136BU

LW136B SERIES

INPUT		OUTPUT†‡				
Volts	Hertz	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase						
120/240	50/60	15 0 15	35	0 52	LW136B	25
120/240/480	50/60	30 0 30	35	1 0	LW136B 2	52
120/240	50/60	45 0 45	35	1 6	LW136B 3	76
120/240	50/60	0 30	25	0 75	LW136B	25
120/240/480	50/60	0 60	25	1 5	LW136B 2	52
120/240	50/60	0 90	25	2 2	LW136B 3	76
Three Phase						
120/240	50/60	0 30	25	1 3	LW136B 2	52
120/240	50/60	0 30	43 3	2 2	LW136B 3	76
120 240	50/60	0 52	25	2 2	LW136B 3	76
240/480	60	0 35	43 3	2 6	LW136B 3	76
240 480	60	0 60	25	2 6	LW136B 3	76

†‡ LW136B Series ratings are for use as low voltage isolated output transformer

THE SUPERIOR ELECTRIC COMPANY

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES

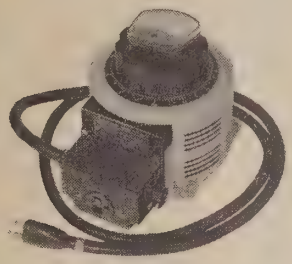
© United Technical Publications

STATIONARY METERED KNOB POWERSTAT® Variable Transformers

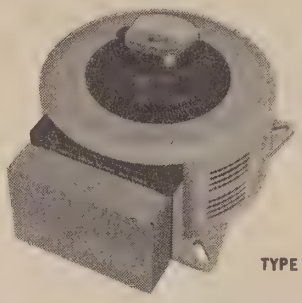
- FOR BACK-OF-PANEL OR GENERAL UTILITY MOUNTING
- ACCURATE VOLTMETER REMAINS STATIONARY INSIDE KNOB RIM. . . DOES NOT TURN WITH THE KNOB
- AVAILABLE IN TYPES TO 4 KVA
- MAXIMUM APPLICATION FLEXIBILITY
- SAVES PANEL SPACE, WIRING AND INSTALLATION COSTS



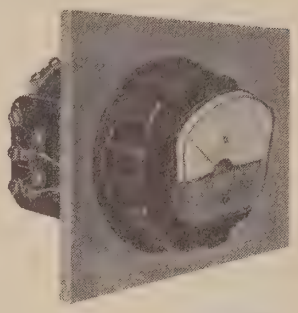
TYPE VS116B



TYPE VS3PN126



TYPE VS146T



TYPE VS150

GENERAL UTILITY MOUNTING – Single units (those listed in charts without -2 or -3 suffixes) in the 116B-216B, 117B-217B, 126-226, 136B-236B and 146-246 series are also available with knobs incorporating direct-reading voltmeters. Voltmeters remain stationary as the knob rim is turned, have an accuracy of ±3% of full scale and are insensitive to stray magnetic fields. When ordering, add VS prefix to the type number given in the charts.

BACK-OF-PANEL MOUNTING – Standard cataloged POWERSTAT Variable Transformers in the 21-22 through the 146-246 series designed or adaptable for back-of-panel mounting can be combined with Metered Knob Assemblies. Models for 120 volt service require Metered Knob Assembly VS150 having a 0-150 volt scale and units for 240 volt use require Metered Knob Assembly VS300 having a 0-300 volt scale. Existing models can be retrofitted also.

ENCLOSED LABORATORY POWERSTAT® Variable Transformers

Portable, single phase units having grounded NEMA cord-plug assembly, on-off switch, output receptacle, pilot light and fuse. The handle is integrally designed and the panel controls are recessed. A slot is provided at the rear of each unit to accept wall hanger brackets supplied with the assembly. Types N21, N116B, N116BK, N116BL and N116BLK have POWERKOTE Coils.

METERED KNOB types N116BK and N116BLK have metered knobs to conveniently measure load voltage without the necessity of providing a separate voltmeter. The knob is designed so that the voltmeter remains stationary as the knob is turned to vary the voltage, assuring accurate readings and maximum meter visibility.



TYPE N10B



TYPE N21



TYPE N116B



TYPE N116BK

INPUT		OUTPUT					
			CONSTANT CURRENT LOAD		CONSTANT IMPEDANCE LOAD		
VOLTS	HERTZ	VOLTS	MAX. AMP.	MAX. KVA	MAX. AMP.	MAX. KVA	TYPE
120	60	0-132	17.5	0.23	—	—	N10B
120	50/60	0-140	4.5	0.63	—	—	N21
120	50/60	0-140	10	1.4	—	—	N116B N116BK
120	50/60	0-120	10	1.2	13	1.6	N116BL N116BLK

IN SECTIONS 2100, 3500 AND 4000

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

MINIATURES

AUDIO PRINTED CIRCUIT TRANSFORMERS

Operating level: 100 mw.
Dimensions: 5/8 x 13/16 x 19/32 — 3/16 x .042 pins.

Cat. No.	Fig.	Primary Impedance	Secondary Impedance	Pri. DC Unbalance
TY-141P	C	10,000 CT.	10,000 CT.	4 ma.
TY-142P	C	10,000 CT.	2,000 CT.	4 ma.
TY-143P	C	10,000 CT.	1,500 CT.	4 ma.
TY-144P	C	15,000 CT.	15,000 CT.	4 ma.
TY-145P	C	600 CT.	600 CT.	15 ma.

C

LOW-VOLTAGE, LOW-CURRENT PRINTED CIRCUIT TRANSFORMERS

115 volts, 50/60 Hz Primary, 1½ watts
Dimensions: 1 1/8 x 1 25/64 x 1 5/32 — 3/16 x .041 pins.

Cat. No.	Fig.	SECONDARY Series Conn.	Parallel Conn.
F-131P	B	8V CT. @ .188A	4V @ .376A
F-132P	B	15V CT. @ .100A	7.5V @ .200A
F-133P	B	30V CT. @ .050A	15V @ .100A
F-134P	B	54V CT. @ .028A	27V @ .056A
F-135P	B	76V CT. @ .020A	38V @ .040A

B

115 volts, 50/60 Hz Primary, 4½ watts
Dimensions: 1 25/64 x 1 45/64 x 1 1/4 — 3/16 x .041 pins.

F-141XP	A	8V CT. @ .562A	4.0V @ 1.124A
F-142XP	A	15V CT. @ .300A	7.5V @ .600A
F-143XP	A	30V CT. @ .150A	15V @ .300A
F-144XP	A	54V CT. @ .084A	27V @ .168A
F-145XP	A	76V CT. @ .060A	38V @ .120A

A

115 volts, 50/60 Hz Primary, 7 watts
Dimensions: 1 41/64 x 1 61/64 x 1 15/32 — 3/16 x .041 pins.

F-151XP	A	8V CT. @ .940A	4.0V @ 1.880A
F-152XP	A	15V CT. @ .940A	7.5V @ 1.000A
F-153XP	A	30V CT. @ .250A	15V @ .500A
F-154XP	A	54V CT. @ .140A	27V @ .280A
F-155XP	A	76V CT. @ .100A	38V @ .200A

TZ

†† JAF SERIES — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.	** MTG.
JAF-1‡	600/250/50	50000	0	60-15000	AF
JAF-2‡	600/250/50	250000	0	100-15000	AF
JAF-5‡	30/12/4	50000	0	50-15000	AF
JAF-12	15000	60000 CT.	10	60-15000	AF
JAF-13	15000 (3 Ma.)	95000 CT.	10	350-7000	AF
JAF-15	15000	1 megohm	10	350-5000	AF
JAF-22	15000 (3 Ma.)	600/250/50	10	350-7000	AF
JAF-23	20000 CT.	600/250/50	10	60-15000	AF
JAF-31‡	600/250/50	600/250/50	10	60-15000	AF
JAF-33‡	5000 CT.	5000 CT.	10	60-15000	AF

AF
AJ

SUB-MINIATURE AUDIO — Open Frame

Type No.	Primary Impedance	Secondary Impedance	DC Res. Ohms (Approx.) Pri.	Sec.
TZ-1	600/250/50	60000	350	4100
TZ-7	30/12/4	1000	5	480
TZ-13	15000 (1 Ma.)	135000 CT.	985	4400
TZ-15	20000 (.5 Ma.)	1200/600/100	2700	350
TZ-103XT	4 Hy. or 1 Hy.	—	400	—
T-41X	1000 (10 Ma.)	200 CT.	430	130
T-42X	9800 (2 Ma.)	16	855	1.7
TY-44X	1000 (10 Ma.)	16/8/4	180	3.8
TY-47X	2000 CT.(10 Ma.)	16/8/4	260	4

AG
AH

TRANSFORMERS FOR TRANSISTOR POWER SUPPLIES

Type No.	D.C. Volts Out of Rect.	D.C. Ma. Max.	Dimensions—Inches H	W	D	MW
TY-68S	250	65	1¾	1¾	1 11/32	1½
TY-69S	300	100	1⅞	2⅜	1⅞	1½
TY-70S	325	150	2	2⅜	2 1/16	1½
TY-71S	375	200	2	2⅜	2 1/16	1½
TY-74S	600	200	2	4⅛	3	3¾

TY-S

EPOXY MOLDED TOROIDAL TYPE

Type No.	D.C. Source Volts	D.C. Volts Out Of Rectifier	D.C. Ma Max.	Dimension—Inches Dia.	Ht.	Wt. Lbs.
TY-78	12.6	250/125	100	1¾	1 1/16	.35
TY-79	12.6	300/150	200	1¾	1	.35
TY-80	12.6	325/162.5	150	1¾	1	.35
TY-81	12.6	375/187.5	200	2	1	.50
TY-82	12.6	450/225	150	2	1	.50
TY-83	12.6	500/250	250	2¾	1⅜	.85
TY-84	12.6	600/300	200	2¾	1⅜	1.00
TY-85	12.6	600/300	350	2⅞	1⅞	2.00
TY-86	12.6	425/212.5	350	2¾	1⅜	1.00
TY-87§	12.6	600/300	200	2¾	1⅜	1.00
TY-88	28	250/125	80	1 5/16	5/16	.25
TY-89	28	300/150	100	1¾	1 1/16	.35
TY-90	28	325/162.5	200	1¾	1	.35
TY-91	28	375/187.5	200	2	1	.50
TY-92	28	450/225	200	2	1	.50
TY-93	28	500/250	250	2¾	1⅜	.85
TY-94	28	600/300	200	2¾	1⅜	1.00
TY-99	6.3	300/150	100	1¾	1	.35
TY-100	6.3	325/162.5	150	2	1	.50
TY-101	6.3	375/187.5	200	2¾	1⅜	1.00
TY-102	6.3	450/225	150	2¾	1⅜	1.00

TY-MOLDED

‡Static Shield •New item

§ Additional winding 125 V. @ 10 ma. for SSB.

†† MINIATURE AUDIO — "Trijets"

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.
T-1X‡	600/250/50	50000	0	60-15000
T-2X‡	600/250/50	250000	0	100-15000
T-3X	600/250/50	60000 CT.	0	60-15000
T-5X‡	30/12/4	50000	0	50-15000
T-11X	15000	50000	10	60-15000
T-12X	15000	60000 CT.	10	60-15000
T-13X	15000 (3 Ma.)	950000 CT.	10	350-7000
T-14X‡	200	500000	10	300-3000
T-15X	15000	1 Megohm	10	150-15000
T-20X	15000	600/250/50	10	60-15000
T-21X	3000	50	10	100-15000
T-22X	15000 (3 Ma.)	600/250/50	10	350-7000
T-23X	20000 CT.	600/250/50	10	60-15000
T-24X	10000 CT.	20000 CT.(2Ma.)	10	50-20000
T-25X	12000 CT.(2 Ma.)	600 CT. 150	10	50-16000
T-26X	50000 CT.(.5 Ma.)	600 CT./150	13	100-15000
T-31X‡	600/250/50	600/250/50	10	50-15000
T-32X	1500 CT. (2 Ma.)	600 CT./150	13	50-20000
T-33X‡	5000 CT.	5000 CT.	10	60-15000
T-34X	500 CT.	500 CT./125	13	50-20000
T-35X	600 CT.	2000 CT./500	10	50-20000
T-101X	50 henries @ .75 Ma.			
T-102X	6 Hy.-3 Ma. or 4 Hy.-6 Ma.			

††Low frequency loss will result from DC in windings other than where specified.

****See Case Chart on Triad Page 15**

MINIATURES

TRANSISTOR TRANSFORMERS

Type No.	Primary Matching Impedance	Primary Current MA	Secondary Matching Impedance	Maximum Level
TY-23X	50000	.5	500 CT.	100 MW
TY-24X	50000	.5	3000 CT.	200 MW
TY-25X	100000	.5	200 CT.	200 MW
TY-26X	100000	.5	3000 CT.	200 MW
TY-27XT	500 CT.	2	500 CT.	10 MW
TY-28XT	500 CT.	2	200 CT.	10 MW
TY-29X	24 CT.	500	8/4	8W
*TY-20X	100 CT.	500	16/8/4	10W
TY-30X	100 CT.	100	8/4	2W
TY-31X	200 CT.	50	8/4	2W
TY-32X	200 CT.	2	2000 CT.	200 MW
TY-33X	400 CT.	5	16/8/4	200 MW
TY-34X	400 CT.	5	2000 CT.	200 MW
*TY-35X	500 CT.	2	150 CT.	100 MW
TY-36X	2000	2	1500 CT.	200 MW
*TY-37X	2000 CT.	4	8000 CT.	200 MW
*TY-38X	3000 CT.	4	1000 CT.	200 MW
TY-39X	4000 CT.	4	16/8/4	200 MW
TY-40X	5000	1	200 CT.	100 MW
TY-41X	16000	1	4000	100 MW
TY-42X	20000	.5	8/4	100 MW
TY-43X	20000	.5	800 CT.	100 MW
TY-44X	1000	10	16/8/4	200 MW

Continued on TRIAD Page 2

* Available in XT mounting for printed circuit board use as TY-35XT, TY-37XT and TY-38XT.

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

MINIATURES (Continued)

Type No.	Primary Matching Impedance	Primary Current MA	Secondary Matching Impedance	Maximum Level
*TY-45X	500 CT.	5	16/8/4	200 MW
TY-46X	100	100	1000 CT.	250 MW
TY-47X	2000 CT.	10	16/8/4	200 MW
TY-48X	100 CT.	40	16/8/4	.5 W
TY-49X	500 CT.	12	5000 CT.	300 MW
TY-50X	125000	0	2000 CT.	40 MW
*TY-51X	2000 CT.	10	200 CT.	50 MW
TY-52X	20000 CT.	1	2000 CT.	100 MW
TY-53X	200 CT.	10	400 CT.	600 MW
TY-54X	15000	1.5	200 CT.	100 MW
TY-55X	2000 CT.	2	500 CT.	200 MW
TY-56X	10000	1	2000 CT.	50 MW
TY-57X	250 CT.	10	16/8/4	200 MW
TY-58X	125 CT.	15	8/4	200 MW
TY-59X	5000 CT.	1	50000 CT.	200 MW
TY-60X	200000	0	1000	100 MW
TY-61X	100	100	100 CT.	500 MW
TY-62X	10000	2	4	100 MW
TY-63X	48 CT.	275	16/8	5 W
TY-64X	32 CT.	575	16/8/4	10 W
TY-65Z	32 CT.	575	6K/4K/3K	10 W
TY-66A	6 CT.	5A	6K/4K/3K	40 W
TY-67A	6 CT.	5A	16/8/4	40 W

* Available in XT mounting for printed circuit board use as TY-45XT and TY-51XT.

†† JO SERIES — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.	Case
JO-1	600/250/50	50000	0	60-15000	JOA
JO-2	600/250/50	250000	0	100-8000	JOA
JO-3	600/250/50	60000 CT.	0	60-15000	JOA
JO-11	15000	60000	10	50-15000	JOB
JO-12	15000	60000 CT.	10	50-15000	JOB
JO-13	15000-3 Ma.	95000 CT.	10	300-7000	JOB
JO-21	15000	600/250/50	10	50-15000	JOB
JO-22	15000-3 Ma.	600/250/50	10	300-7000	JOB
JO-23	20000 CT.	600/250/50	10	50-15000	JOB
JO-31	600/250/50	600/250/50	10	50-15000	JOB
JO-101	50 h.-2 Ma.				JOB

DC TO AC TRANSISTOR TRANSFORMERS

Type	Primary	Secondary		
TY-75A	12v	115v	60cps	115 watts
TY-76A	12v	115v	60cps	60 watts
TY-468	28v	115v	400cps	60 watts
TY-462	12v	115v	400cps	60 watts

DC TO DC CONVERTER TRANSFORMERS
For use in blocking oscillator type power supplies

No. Type	L.	W.	H.	Mtg. Centers	*Typical Operation Input	Output
TY-200X	1⅝	⅞	13/16	1⅜	3VDC @ 20 Ma.	1050VDC @ 25 μa
TY-201TZ	½	7/16	7/16	—	4VDC @ 15 Ma.	500VDC @ 50 μa
TY202X	1⅝	⅞	13/16	1⅜	4VDC @ 45 Ma.	550VDC @ 80 μa

POWER COMPONENTS
HERMETICALLY SEALED

Combined PLATE and FILAMENT Transformers
Primary 115V — 50/60 cycle

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments	F Dim. (Min.) Inches	Case
HSM-200	120	100	6.3 CT.-1.6A.	⅞	FA
HSM-201	500 CT.	20	6.3 CT.-2A.	1⅜	GA
HSM-202	120	20	6.3 CT.-.6A.	⅞	EA
HSM-203	600 CT.	50	6.3 CT.-2.5A. 5 -2A.	1⅜	JB
HSM-205	700 CT.	70	6.3 CT.-3A. 5 -3A.	1⅜	JA
HSM-207	700 CT.	120	6.3 CT.-5A. 5 -3A.	1⅜	KA
HSM-208	626 CT.	200	6.3/5.0-3A. 6.3 CT. 5	1⅜	KA
HSM-241	700 CT.- 70V. bias.tap.	150	6.3 CT.-6A. 6.3-V. -2A. 5 -3A.	1⅜	LA
HSM-212	1000/ 800 CT.	150 (ch. in.) 117 (cd. in.)	6.3/5-4A. 6.3 CT.-4A. 6.3 V-4A.	1⅜	LA
HSM-245	800/ 700 CT. 70 V. bias tap.	200	6.3 CT.-6A. 6.3-V. -4A. 5 -6A.	1⅜	MA
HSM-216	1000/ 800 CT.	200 (ch. in.) 157 (cd. in.)	6.3/5-4A. 6.3 CT.-5A. 6.3-5A.	1⅜	MA
HS-247	800/ 700 CT. 70 V. bias tap.	300	6.3 CT.-8A. 6.3-V. -4A. 5 -6A.	1⅜	GP-15
HSM-218	1000/ 800 CT.	300 (ch. in.) 235 (cd. in.)	6.3/5-6A. 6.3 CT.-6A. 6.3-6A.	1⅜	GP-15
HSM-219	760 1600 CT. (115/ 230 pri.)	40/230 (ch.input)		Spcl.	GP-15

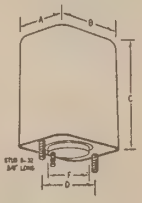
All types electrostatically shielded
GP-15 dimens. 4¾" x 5⅞" x 6⅝" high. Wt. approx. 22 lbs.
Mtg. centers 3¾" x 4⅞".



HS Series

Combined PLATE and FILAMENT Transformers
Primary 115V—400 cycle to operate 380 to 1500 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments	Insur. Test Volt.	F Dim. (Min.) Inches	Case
HS-401	500 CT.	40	6.3 CT.-1A. 6.3-1A	1500	⅞	EB
HS-400	125	25	6.3 CT.-8A.	1500	23/32	AH
HS-404	500 CT.	120	6.3 CT.-3A. 6.3/5.0-3A.	1500	⅞	FA
HS-405	600 CT.	70	6.3 CT.-2A. 6.3-2A. *6.3-2A.	1500	1⅜	GA
HS-407	600 CT.	120	6.3 CT.-3.5A. 6.3-3.5A. *6.3/5-3A.	1500	1⅜	JB
HS-409	700 CT.	150	6.3 CT.-4A. *6.3/5-3A.	1500	1⅜	HA
HS-413	450 CT.	200	6.3 CT.-6A. 6.3 -6A. *6.3/5-4A.	1500	1⅜	JA
HS-415	800/ 600 CT.	200	63. CT.-6A. 6.3-6A. *6.3/5-6A.	2500	1⅜	KB
HS-417	800/ 600 CT.	300	6.3 CT.-6A. 6.3-6A. *6.3/5-6A.	2500	1⅜	LA



* Tapped for 5 volt rectifier use. All types electrostatically shielded.


JO Series

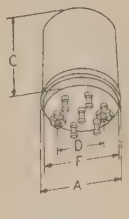
SOLID STATE LOW-VOLTAGE TRANSFORMER
Primary 10/115/125 volts — 50/60 cycles

Type No.	Secondary AC Volts	Secondary RMS Amps	Rectifier Circuit CT. Full Wave	Rectifier Circuit Bridge FW	Case
•HSM-248	35 CT.	3	14.5v	29v	KA

AUDIO INTERSTAGE Transformers

Type No.	Primary Imped.	Turn Ratio	Freq. Resp.	Power Output	Shld'g	Case
HS-25	15000	1:2.72 overall	20-20000	75 MW	P-1	GP-4
HS-35	15000	1:2.72 overall	20-20000	26 MW	P-1	GP-2
HS-27	20000/ 5000	1:1.72 overall	20-20000	130 MW	P-1	GP-4
HS-28	20000/ 5000	1:2 overall	20-20000	20 MW	P-5	GP-4
HSM-31	20000/ 5000	1:1 or 2:1	20-20000	3 W		FA
HS-32	15000 (6 Ma.)	1:2 overall	20-15000	200 MW	P-1	GP-5

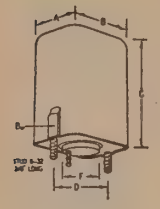
•New Item



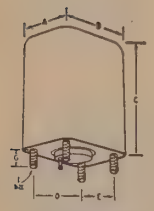
© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

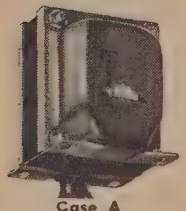
A DIVISION OF LITTON INDUSTRIES



GP 1, 2, 3



MIL-T-27A CASE



Case A



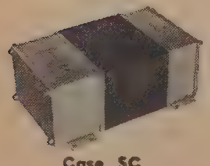
PL-4 PL-5



PL-6



Case X



Case SC

POWER OUTPUT to Line and VC. Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-Watts	Freq. Resp.	** Case
HS-71	10000 (10 Ma.)	600/150	2	150-15000	AH-2
HS-73	5000 (40 Ma.)	500/250/16/8/4	5	70-15000	AJ-2
HS-75	1000 CT. (50 Ma. bal.)	500/250/16/8/4	10	100-25000	EB
HS-77	9000 CT. (120 Ma. bal.)	500/250/16/8/4	25	70-20000	GA

LOW LEVEL AUDIO

AUDIO INPUT TRANSFORMERS Hermetically Sealed

Type No.	Primary Imped.	Turn Ratio	Freq. Resp.	Power Output MW	Shld'g	** Case
HS-1	600*/250*/150/62.5	1:11.3	20-20000	10	P-5	GP-4
HS-11	Same as above				P-1	GP-2
HS-3	600*/250*/150/62.5	1:14 overall	20-20000	10	P-5	GP-5
HS-4	Same as above				P-3	GP-4
HS-14	Same as above				P-1	GP-3
HS-15	600*/250*/150/62.5 (10 Ma.)	1:8 overall	30-20000	100	P-3	GP-5
HS-5	30	1:65.2	40-12000	1	P-5	GP-4

*Balanced center tap.

OUTPUT, MIXING, MATCHING, BRIDGING

Type No.	Primary Imped.	Secondary Impedance	Freq. Resp.	Power Output MW	Shld'g	** Case
HS-50	15000	600*/250*/150/62.5	20-20000	400	P-3	GP-4
HS-60	15000	600*/250*/150/62.5	20-20000	20	P-1	GP-2
HS-61	15000 (5 Ma.)	600*/250*/150/62.5	40-15000	200	P-1	GP-5
HS-52	20000 CT./5000	600*/250*/150/62.5	20-20000	400	P-1	GP-4
HS-54	20000 CT./5000	600*/250*/150/62.5	20-20000	10	P-5	GP-4
HS-56V	600*/250*/150*62.5	600*/250*/150/62.5	10-30000	100	P-3	GP-4
HS-66	600*/250*/150*62.5	600*/250*/150/62.5	10-30000	100	P-1	GP-3
HS-58	600*/250*/150*62.5	600*/250*/150/62.5	20-20000	50	P-3H	GP-5

* Balanced center tap.

POWER COMPONENTS

Type No.	Primary Volts	Second-ary Volts	Second-ary Amperes	Insula-tion Test Voltage	** Case
HSM-223	115	6.3	0.6	1500	AJ-2
HSM-225	105-115-125	6.3 CT.	2	1500	EA
HSM-226	105-115-125	6.3 CT.	3.6	1500	FA
HSM-224	105-115-125	6.3 CT.	5.5	2500	HB
HSM-234	105-115-125	†6.3 CT. 6.3	10 10	2500	KA
HSM-227	105-115-125	†6.3 CT. 6.3	3 3	2500	GA
HSM-229	105-115-125	6.3 CT.	8	2500	JB
HSM-233	105-115-125	12.6 CT.	.8	1500	EA
HSM-237	105-115-125	12.6 CT.	2	2500	FA
HSM-230	105-115-125	24 CT.	0.8	1500	FA
HSM-239	105-115-125	24 CT.	1.5	2500	GA
HSM-240	115/230	†12.6 CT. †12.6	1.5 1.5	2500	GA
HSM-236	105-115-125	†12.6 CT. 12.6	2 2	2500	JB
HSM-228	105-115-125	†6.3 CT. 6.3	6 6	2500	JA
HSM-231	105-115-125	6.3 CT. 5 CT.	5 3	2500	JB
HSM-235	105-115-125	2.5 CT. 10 CT.	10 10	7500 2500	MA
HSM-238	105-115-125	†26 CT. †26	2 2	2500	JA

† Series or parallel connections.
** See case chart Triad Page 15.

FILAMENT Transformers, 380/1500 cycle

Type No.	Primary Volts	Second-ary Volts	Second-ary Amperes	Insula-tion Test Voltage	** Case
HS-436	115	6.3 CT.	1	1500	AH
HS-425	105-115-125	6.3 CT.	2	1500	AJ-2
HS-427	105-115-125	6.3 CT.	5	2500	EA
HS-445	105-115-125	12.6 CT.	3	2500	FA
HS-438	105-115-125	24 CT.	1.5	1500	EA
HS-433	105-115-125	*6.3 CT. *6.3	5 5	2500	FA
HS-435	105-115-125	*6.3 CT. *6.3 †6.3/5	3.5 3.5 3	2000	FA
HS-441	105-115-125	*5 CT. *5 2.5 CT.	10 10 10	2000 7500	HA
HS-443	105-115-125	*12.6 CT. *12.6	0.8 0.8	1500	AJ-2
HS-442△	57.5-99.7-115-120 Single phase.	*12.6 CT. *12.6	2 2	1500	EA
HS-444△	57.5-99.7-115-120	*26 CT. *26 CT.	2 2	2000	FA

△ Two Units can be used, 115 volt 3 phase to 26 volt 2 phase, Scott-connected. * Series or parallel connection. † 5 volt tap for filament type rectifiers.

UNIVERSAL RECTIFIER POWER SUPPLY TRANSFORMERS Primaries 115 Volts, 50/60 Cycles

Type No.	DC Range	MIL Case
HSM-249	6V.-.065A. to 53V.-.02A.	AH
HSM-250	6V.-.22A. to 53V.-.07A.	AJ
HMS-251	6V.-1.2A. to 53V.-.4A.	FA
HSM-252	6V.-3A. to 53V.-1A.	HA
HSM-253	6V.-7.5A. to 53V.-2.5A.	KA
HSM-254	6V.-18A. to 53V.-6A.	OA

HIGH FIDELITY OUTPUT

HIGH LEVEL OUTPUT — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Freq. Resp.	Max. Level Watts	F Dl. Min. In.	** Case
HSM-79	20000 CT. (20 Ma.) or 5000 (40 Ma.)	16/8/4	40-20000	5	1⅜	FA
HSM-80	20000 CT. (20 Ma.) or 5000 (40 Ma.)	600 CT./250CT./150/62.5	40-20000	5	1⅜	FA
HSM-81	8000 CT. Split primary.	16/8/4	7-50000	15	1⅜	JB
HSM-82	8000 CT. Split primary.	600/250/125	7-50000	15	1⅜	JB
*HSM-182	8000/2000 CT. Split primary.	600/250/125	7-50000	15	1⅜	JB
HSM-84	5000 CT. Split primary.	16/8/4	15-30000	20	1⅜	JB
†HSM-184	8000 CT. Split primary.	16/8/4	10-50000	25	1⅜	KB
†HSM-189	10000 CT. 2500 CT. Split primary.	16/8/4	7-50000	25	1⅜	KB
†HSM-190	10000 CT. 2500 CT. Split primary.	500/250/125	7-50000	25	1⅜	KB
†HSM 187	6600 CT. or 1650 CT. Split primary.	500/250/125	7-50000	25	1⅜	KB

† Tapped for Williamson circuit.

(Continued on next page.)

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

HIGH FIDELITY OUTPUT (cont.)

HSM-94	4500 CT. (Split Wind'g)	16/8/4	7-50000	55	1⅜	LA

HIGH LEVEL OUTPUT

Type No.	Primary Impedance	Secondary Impedance	Output Watts
S-34X	4000 CT.	32/16/8	7.5
S-31A	8000 CT.	16/8/4	15
S-32A	8000 CT.	500/250/125	15
†S-142A	8000 CT.	16/8/4	15
S-35A	5000 CT.	16/8/4	20
S-36A	5000 CT.	500/250/125	20
†S-146A	6600 CT.	16/8/4	25
S-149A	3300 CT.	16/8/4	50
SR-45Z*	4000/2000/1000/500	16/8/4	10
S-46A	2000/1000/500/250	16/8/4	20
†SX-201	3300 ohms CT.	4-8-16 ohms	10-15
†SX-202	4500 ohms CT.	4-8-16 ohms	10-15
SX-203	5000 ohms	4-8-16 ohms	5-7
SX-204	5000 ohms CT.	4-8-16 ohms	10-15
SX-205	6600 ohms CT.	4-8-16 ohms	10-15
†SX-206	6600 ohms CT.	4-8-16 ohms	10-15
†SX-207	8000 ohms CT.	4-8-16 ohms	10-15
SX-208	8000 ohms CT.	4-8-16 ohms	10-15

† Williamson type circuit. Proper taps on primary for screen operation, leads out both end bells.
* Replaces S-45Z.

LINE POWER

ISOLATION Transformers, 50/60 cycles

(See Triad page 6 for 380/1500 cycle isolation transformers)

Type No.	V. A. Output	Input Volts	Output Volts
N-48X	15	115	115
N-49X	35	115	57.5/115§
N-51X	35	115	115
N-68X	50	230/115	115
N-53M	85	115	115
N-54M	150	115	115
N-73A	150	115	115/230
N-74A	150	115	57.5/115
N-67A	150	230/115	115
*N-55M	250	115	115
N-66A	250	230/115	115
*N-57M	500	115	115
*N-59M	1000	115	115
†N-52M	350	95 to 130 (in 5V steps)	115
†N-56M	150	95 to 130 (in 5V. steps)	115

†With switch and meter for primary voltage control. Detachable cord. § Split Winding.
*Available with 3-wire cord, plug and socket as N-55MG, N-57MG and N-59MG.

N-469A	50	440/220	115
N-470A	150	440/220	115
N-471A	300	440/220	115

CONSTANT VOLTAGE TRANSFORMERS

Type No.	Rating V. A.	Input Volts	Output Volts
K-48U	24 24	95-130 95-130	24 CT. 24 CT.
K-100	30	95-130	118
K-101	60	95-130	118
K-102	120	95-130	118
K-103	250	95-130	118
K-104	500	95-130	118
K-105	750	95-130	118
K-106	1000	95-130	118

PULSE TRANSFORMERS BLOCKING OSCILLATOR TYPE

Type No.	Pulse Voltage per Winding	Pulse Duration—us	Load Impedance —Ohms
PL-4	100-100	.54 to .66	500*
*PL-5	100-100-100	.36 to .54	2000*
PL-8	100-100-100	.36 to .54	2000*

* As blocking oscillator in Triad circuit. Can be used with lower impedances and higher peak power at lower duty cycle.

Note: Last letter of Type No. denotes case style.

FILTER REACTORS

Type No.	Current DC Ma.	Inductance *Henries	Resistance Ohms	Insulation Test Voltage
HSM-301	20	30	1000	1500
HSM-302	20	14	560	1500
HS-331	40	4	375	1500
HS-303	50	12	385	1500
HS-333	70	3	225	1500
HSM-305	70	15	300	2500
HS-335	120	3	150	1500
HSM-307	120	15	185	2500
HSM-309	150	9	115	2500
HS-339	200	3	105	2000
HSM-315	200	10	100	2500
HS-341	300	2	48	2000
HSM-319	300	10	85	2500

Minimum Inductance—20%



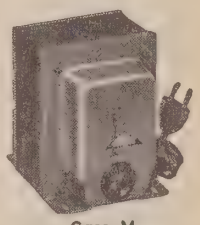
Case B

STEPDOWN Autoformers, 50/60 cycles

Type No.	V. A. Output	Input Volts	Output Volts
N-1X	50	230	115
N-3M	85	230	115
N-4M	150	230	115
N-5M	250	230	115
*N-7M	600	230	115
*N-9M	1250	230	115
*N-11M	2000	230	115
N-34X	150	95/105/115/125/135	115
†N-35M	250	95 to 130 (in 5V. steps)	115
†N-50M	500	95 to 130 (in 5V. steps)	115

With switch and meter.

† M case with switch for primary voltage control and detachable cord.
* Available with 3-wire cord, plug and socket as N-7MG, N-9MG and N-11MG.



Case M

TRIGGER—PHOTOFLASH transformers

Type No.	Application	Turns Ratio	Primary Inductance	Leakage Inductance	Output Volts or Volt—μSec Rating
PL-10	Photoflash	1:30	15 μH	1.5 μH	6-8 KV
PL-11	Photoflash	1:30	2 μH	1 μH	10-12 Kv
PL-20	SCR Trigger	1:1	200 μH	8 μH	2000 VμSec
PL-21	SCR Trigger	1:1:1	200 μH	8 μH	2000 VμSec
VR-30Z	For photoflash applications from 115V-60 cycle line or 4 volt-180 cy. vibrator to 350V RMS @ 14 ma.				

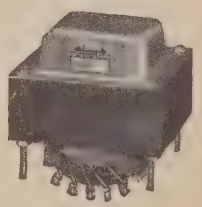


Case M with Meter

HIGH SPEED FERRITE TOROIDAL CORE LOW POWER

Type No.	Turns Ratio	Pulse Width μ Sec.	Rise Time μ Sec.	Repetition Rate	Suggested Load Ohms	Volts
PL-80E	1-1	.07	.03	1-2 Mc	200	15
PL-81E	2-1	.07	.03	1-2 Mc	200	20
PL-82H	3-1	.08	.03	1-2 Mc	100	15
PL-83H PL-83P	4-1	.08	.03	1-2 Mc	100	15
PL-84E PL-84H	5-1	.08	.03	1-2 Mc	100	15

The letter "H" indicates Hermetically Sealed, the letter "P" indicates Miniature Plug-In and the letter "E" indicates Epoxy Molded.



Case C

LOW SPEED SILICON CORE LOW POWER

Type No.	Pulse Voltage per Winding	Pulse Duration—μ Sec.	Load Impedance —Ohms
PL-124H	300-300-300	.6 to 5	150
PL-140H PL-140M	100-400-100	.6 to 5	175
PL-139E PL-139H PL-139M	100-100	.3 to 1.5	250
PL-146E PL-146H PL-146M	300-300	.6 to 5	250

Letter "M" indicates MIL type case. For pulse types only.



Case AC

© United Technical Publications

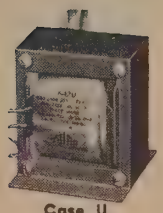
TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

Instrument POWER SUPPLY Transformers

For PREAMPLIFIERS, VTVM, etc.
Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes
R-68A	800 CT.	30	5V.-2A, 6.3V-1.2A, 6.3V-1.2A.
R-2C	135	15	6.3V-.9A.
R-23B	250 CT.	22	6.3-.8A. 15.5/12.6V-.6A.
R-3A	500 CT.	20	6.3V CT.-2A.
•R-53Z	500 CT.	25	6.3V-1A.
R-29A	230 CT.	40	6.3V.CT.-1.5A.
R-30X	135	50	6.3V.-1.5A.
R-54X	115	15	6.3V.-.6A.
R-56A	130	20	0/15/22.5/30V-.6A.
R-73B	135	200	6.3V CT.-5.5A.



Case U

For CATHODE RAY Tubes
Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	
R-41C	440-0-440-1250.	125/5	*6.3V.-.6A. †2.5V.-1.75A.	†2.5V.-1.75A. 5V.-3A.
R-45C	400-0-400-800.	30/5	*6.3V.-.6A. 6.3 CT.-3A. †5V.-2A	6.3V.-1A. 5V.-2A.
R-43C	1600	3	*6.3/5/2.5V.-1A. †6.3/5/2.5V.-3A.	

* Static shielded and insulated for full plate voltage.
† Insulated for full plate voltage.



Case Z

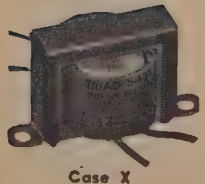
UNIVERSAL RECTIFIER Transformers
Primary 60 cycles
These transformers are for use with solid-state rectifiers. Rectifiers NOT included.

Type No.	Primary Volts	Secondary AC Volts	Secondary Amperes RMS	Half Wave Volts DC	Full Wave Volts DC
F-47U	115	17-18	3	6-7	13-14
F-48U	115	17-18	6	6-7	13-14
F-49U	115	36 36	3 3	13	26
F-60U	115	6.5-13-19.5-26	3	9	18
F-61U	115	24-27-30-33-36	3	13	26
F-67U	110-120	24-27-30-33-36	8	13	26
F-63U	115	8-9 8-9	2 2		6-7
F-64U	115	7-8-9	7		6-7
F-62U	105-115-125	9-9-9-9	10 ea. wdg.		6-7 ea. wdg.
F-68U	115	9 CT. 9 9 9	3.5 3.5 3.5 3.5		6-7 ea. wdg.
F-65U	110-120	140-150-160	.75	60	115
F-66U	110-120	140-150-160	2.5	60	115
•F-74U	115	14-28 14-28		2 series conn. 4 parallel conn.	
•F-75U	115	14-28 14-28		4 series conn. 8 parallel conn.	
F-79U	115	24-26-28-30	15	11.4	22.8
F-80U	115 tapped for mult. sec.	12 to 18 or 24 to 36CT	40 20	—	13
F-84AC	230-115	24CT or 12CT	10 20	—	8.5
F85U		5 or 7.5CT 5 or 7.5CT	20 20		1500 1500
F-90X	115 tapped	40CT-20CT-10	100ma	15	30
F-91X	115 tapped	40CT-20CT-10	300ma	15	30
F-92A	115 tapped	40CT-20CT-10	1 amp	15	30
R-93A	115	6.3CT (voltage doubler circuit) 150-160-170	6 (500ma)	65	120
F-93X	115 tapped	40CT-20CT-10	750ma	15	30
F-94X	115 tapped	40CT-20CT-10	35ma	15	30

• New item.



Case AL



Case X

For REGULATED POWER SUPPLIES
Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma. Choke Input	Filament Windings Volts and Amperes	
R-70A	880 CT.	75	6.3V.-.6A. 6.3V.-.3A.	6.3V.-.9A. 6.3V.-3A.
R-26A	880-720 CT.	200	6.3 CT.-8A. 6.3V.-1A.	6.3V.-3A. 5V.-3A.
R-28A	1250 CT.	300	6.3 CT.-8A. 6.3V.-3A.	6.3V.-3A. 5V.-6A.
R-46A	1250 CT. 130 (Bias winding)	350	5V.-4A.	6.3V.-4A. 6.3V.-1A. 6.3V.-1A.

R-46A will supply 550 V. D.C. using 2 5R4G rectifier tubes, choke input. Will also supply 130 V. for bias using Selenuim rectifier. Sufficient filament windings to regulate screen voltages.

R-27A	1500 CT.	400	5V.-6A.	6.3V.-3A. 6.3V.-8A.

UNIVERSAL
Isolation, Autoformer, Voltage Control 50/60CPS

Type No.	V.A. (Isolation)	V.A. (Autoformer)
N-64AC	500	1000
N-62AC	1000	2000
N-60SC	2000	4000

SOLID STATE RECTIFIER POWER TRANSFORMERS
Primary 117 volts — 50/60 cycles

Type No.	Secondary No. 1 Volts	Secondary No. 1 MADC	Secondary No. 2 Volts @ A		Secondary No. 3 Volts @ A		Mounting Centers
R-82B	35-0-35	3.5 Amp.	—	—	—	—	3 x3¾
R200A	200-0-200	400	6.3	3	6.3	3	2¾x3⅛
R201A	150-0-150	600	6.3	2.5	6.3	2.5	2¾x3⅛
R202A	100-0-100	800	6.3	2	6.3	2	2¾x2⅛
R-203A	50-0-50	1600	6.3	1.5	6.3	1.5	2¾x2⅛
R-204A	40-0-40	2000	6.3	1.5	6.3	1.5	2¾x2⅛
R-205A	30-0-30	2500	6.3	1.5	6.3	1.5	2¾x2⅛
R-206B	27-0-27	1.9 Amp.	—	—	—	—	2½x3⅛
R-208A	40-0-40	1.2 Amp.	—	—	—	—	2¼x2½
•F-58A	25-0-25	5Amp.	—	—	—	—	3 x3⅜

FILAMENT Transformers, Single Secondary
Primary 115 volts — 50/60 cycles

Type No.	Secondary Volts	Secondary Amperes	Test Volts
F-1X	2.5 CT.	3	1500
*F-72Z	2.5 CT.	5	7500
F-6X	2.5 CT.	6	2500
*F-3X	2.5 CT.	10	3000
F-5U	2.5 CT.	10	7500
*F-71U	2.5 CT.	10	10000
F-7X	5 CT.	3	1500
F-8X	5 CT.	6	1500
F-12X	5 CT.	8	2500
*F-10U	5 CT.	14	10000
F-9U	5.2 CT.	13	1500
*F-15U	5 CT.	15	3000
F-11U	5.2 CT.	24	1500
F-13X	6.3	.6	1500
*F-14X	6.3 CT.	1.2	2500
F-52X	6.3	1.2	5000
*F-51X	6.3/5	2	5000
F-53X	6.3	4	5000
F-16X	6.3 CT.	3	2500
*F-43X	6.3	4	1500
F-18X	6.3 CT.	5	1500
F-18A	6.3 CT.	6	1500
F-19X†	6.3/6 CT.	6	2000
F-21A	6.3 CT.	10	1500
F20U†	6.3/6 CT.	11	3000
*F-17U	6.3 CT.	15	Pri. 1500 Sec. 10000
F-22A	6.3 CT.	20	2000
F-24U†	7.5/6.3 CT.	8	3000
F-28U†	7.5/6.3 CT.	25	3000
F-23U	10 CT.	7	1500
F-29U†	12/11/10 CT.	11	3000
F-25X	12.6 CT.	1.5	1500

* 60 cycles. † Tapped primary to produce lower voltages.

(Continued on next page.)

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

*F-44X	12.6 CT.	2	1500
*F-26X	12.6 CT.	2.5	1500
*F-45X	24 CT.	1	1500
F-46X	24	1	1500
•F-57X	25.2	1	1500
*F-41X	25.2 CT.	2	1500
•F-56X	25.2	2.8	1500
*F-40X	26.8 CT.	1	1500
F-55X	26.8	1.7	1500
*F-50X	Filament line transformer Pri. 6.3V/5V Sec. 6.3/5V 2A		5000
F-54X	35 CT.	1.5	1500

* 60 cycles.

CHOKES

SWINGING FILTER REACTORS

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS
C-31A	25/5	20/200	150	2500
C-33A	25/5	30/300	105	3000
C-32AL	20/4	35/350	105	5000
C-35A	20/4	40/400	65	3000
C-39A	25/5	50/500	65	3000

SMOOTHING FILTER REACTORS

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS
C-30X	50	15	3500	1500
C-2X	2	15	70	1500
C-1X	15	20	1000	1000
C-3X	10	50	500	1500
C-4X	4	50	360	1500
C-6X	5	65	330	1500
C-5X	12	75	390	1000
C-8X	7	75	240	1500
C-7X	10	90	270	1000
C-9X	4	90	100	1500
C-11X	6	110	160	1500
C-10X	9	125	250	1000
C-12X	6	160	165	1500
C-12A	6	160	165	1500
C-13X	3	160	75	1500
C-14X	6	200	150	1500
C-14A	6	200	150	1500
C-16A	10	200	150	2500
C-21X	1.5	225	65	1500
C-15X	4	250	100	1500
C-15A	4	250	100	1500
C-23X	1.2	260	45	1500
C-24X	1	240	50	1500
C-27X	.7	290	25	1500
C-36X	.5	300	30	1500
C-17X	1.5	300	40	1500
C-18A	8	300	90	2500
C-19A	10	300	105	3000
C-25A	2.6	310	44	1500
C-42AL	8	350	105	5000
C-34X	.6	350	35	1500
C-28X	1	350	35	1500
C-29X	1.5	375	50	1500
C-50X	2	400	40	2500
C-20A	6	400	60	3000
C-22A	10	500	65	3000
C-45AL	10	500	65	5000
C-40X	.32	600	10	1500
C-47U	.3-.075	1A-2A	3-.75	1500
C-48U	.08-.02	2.5A-5A	.57-.143	1500
C-49U	.032-.008	5A-10A	.19-.05	1500
C-80U	.024-.006	20A-40A	.1/.025	1500
C-56U	.035	2.0A	.75	1500
C-57U	.025	4.0A	.55	1500
C-58U	.01	8.0A	.15	1500
C-59U	.01	12.5A	.10	1500
C-60U	.005	22.5A	.06	1500

ISOLATION Transformers

Primary 115V—400 cycle to operate 380 to 1500 cycles

Type No.	Secondary Volts	Amp.	V. A.	F Dim. (Min.) Inches	Case
HS-470	115	.35	40	7/8	EA
HS-471	115	.7	80	7/8	FA
HS-472	115	1.4	160	7/8	GA
HS-474	115	2.6	300	7/8	JA
HS-475	115	4.4	500	7/8	KA

• New Item

60 cycle — hermetically sealed. Primary 115/230 volts

Type No.	secondary volts	amp.	V.A.	F dim. (Min.) inches	Case
HSM-270	105-115-125	.4	50	1	JB
HSM-271	105-115-125	1	125	1	KA
HSM-272	105-115-125	2	250	1 1/16	NB

All isolation transformers electrostatically shielded.

FILAMENT Transformers, Multiple Secondary

Primary 115 volts — 60 cycles

Type No.	Secondary Volts and Amperes		Test Volts RMS
F-27U	10 CT.-10A.	2.5 CT.-10A.	1500 7500
F-32A	6.3 CT.-3A.	6.3 CT.-3A.	1500
F-34A	6.3 CT.-1.75A. 6.3V.-1.75A.	6.3V.-1.75A. 6.3V.-1.75A.	1500
F-36A	6.3 CT.-3.5A. 6.3V.-3.5A.	6.3V.-3.5A. 6.3V.-3.5A.	1500
F-38A	6.3 CT.-5A. 6.3V.-1A. 5V.-4A.	6.3V.-5A. 5 CT.-2A.	1500
F-42A	12.6 CT.-2.5A.	12.6-2.5A.	1500
F-83A	12.6 CT. 12.6 CT.	5 5	1500

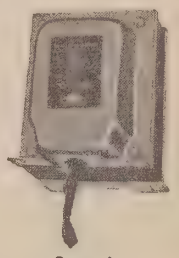
AUDIO TRANSFORMERS

Low Level High Fidelity

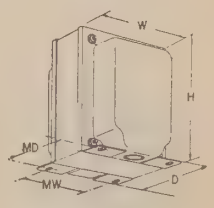
Type No.	Application	Frequency Response	Primary Impedance	Turns Ratio
A-9J	line or mike to grid	30-15000	600/250/50	12
A-10J	line to grid	30-15000	600/150 split wdgs.	10.5
A-11J	line or mike to grid 60-80DB shielding	30-15000	600/250/50	10
A-12J	same as A-11J	30-15000	600 CT./150 split windings	10
A-13J	line to transistor or line to line (70 db Shldg)	30-15000	600/300/ 200 CT./110/50 split windings	1
A-40J	par. fed 6J5 or 6SN7 plate to P.P. grids	30-15000	15000	2.76
A-52J	line or transistor to line or transistor	30-15000	500 CT./125 20 MA. D.C. Split Winding	2
A-55J	par. fed 6J5 or 6SN7 to line	30-15000	15000	5
A-56J	line or transistor to Voice Coil	30-15000	500 CT./125 15 MA. D.C. Split Winding	5.6
A-61J	line to 2 lines or transistors	60-15000	600/150 split wdgs.	1.41:1:1
A-65J	par. fed 6J5 or 6SN7 to line	30-15000	15000 CT.	5
A-66J	same as A-65J— 4 ma DC in primary	40-15000	15000	5
A-67J	line to line	30-15000	600 CT./150 split windings	1
A-68J	pp plate to line 4 ma DC in primary	40-15000	150000 CT.	5
A-69J	pp plates or bridging to line 3 MA. D.C. in Primary	50-20000	25000 CT./ 6250 Split Winding	7.1
A-70J	line or transistor to line or transistor	30-15000	500 CT./125 Split Winding	2.24
A-77J	Audio choke — dual winding	250 henries - 5 ma DC 62.5 henries - 10 ma DC		
A-57J	line or transistor to line	30-15000	600/250/50	1:1
A-79J	Transistor inter-stage 10ma in primary	20-15000	1000	2.2

Line or Microphone to Grid

Type No.	Application	Frequency Response	Primary Impedance	Turn Ratio
A-1X	Line or single button mike to grid.	100-15000	100	31.4
A-3X	Line or D.B. mike to grid.	200-10000	400 CT.	22.1
A-4X	Line to grid.	100-20000	500 CT./ 333/200 CT./125/ 67.5 50	12
A-5X	Single button mike to p.p. grids—Hi-gain.	100-15000	100	84
A-6X	Speaker V.C. to grid	150-20000	8/3.2	79.6
A-7J	Voice coil to grid	150-10000	3.2	124



Case A



Case A

Triad J Series offers flexibility enabling your amplifiers to exceed broadcast standards. Although economy in construction has cut costs, these transformers approach and closely approximate performance characteristics found in more costly hermetically sealed parts. Single hole mounting provides for rotation for maximum reduction of hum . . . alloy shielding gives you 40-60 db hum reduction (60-80 db in Types A-11J & A-12J) . . . you can obtain wide frequency ranges . . . flexible leads facilitate ease in mounting . . . input units are electrostatically and magnetically shielded . . . light weight and encased in Triad's satin smooth baked gray enamel cases, 1 3/8" diameter, 1 3/4" above chassis . . . legible circuit diagrams are permanently affixed to every case.

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

AUDIO OUTPUT TRANSFORMERS
Line to Voice Coil

Type No.	Primary Impedance	Output Imped.	Output Watts	Freq. Resp.
S-23X	50 (autoformer)..	3.2	1	100-8000
S-26X	500/50 (autoformer).	3.2	4	100-8000
S-65X	500	8/4	5	300-7000
S-66X	500 (autoformer).	16/8/4	3	100-10000
S-76Z	250/125/62.5/31	16/8/4	10	40-15000
S-77U	500 CT./125 split wdgs.	32/16/8/ 4/2	30	40-15000

POWER

Combined PLATE and FILAMENT Transformers
Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Rect. Fil. Volts	Rect. Fil. Amp.	Other Fil. Volts	Other Fil. Amp.
R-22A	380/320 CT.	70	6.3	.6	6.3 CT.	3
R-22B	380/320 CT.	70	6.3	.6	6.3 CT.	3
R-4A	500 CT.	40			6.3 CT.	2
R-4B	500 CT.	40			6.3 CT.	2
R-5A	600 CT.	65			6.3 CT.	2.7
R-5B	600 CT.	65			6.3 CT.	2.7
R-6A	480 CT.	50	5	2	6.3 CT.	2
R-6B	480 CT.	50	5	2	6.3 CT.	2
R-7A	600 CT.	50	5	2	6.3 CT.	2
R-7B	600 CT.	50	5	2	6.3 CT.	2
R-8A	500 CT.	75	5	2	6.3 CT.	2.5
R-8B	500 CT.	75	5	2	6.3 CT.	2.5
R-9A	600 CT.	75	5	2	6.3 CT.	3
R-9B	600 CT.	75	5	2	6.3 CT.	3
R-10A	525 CT.	90	5	2	6.3 CT.	5
R-10B	525 CT.	90	5	2	6.3 CT.	5
R-11A	700 CT.	90	5	2	6.3 CT.	3.5
R-11B	700 CT.	90	5	2	6.3 CT.	3.5
R-98B	650 CT. 40 Tap.	100	5	3	6.3 CT.	3
R-12A	550 CT.	110	5	2	6.3 CT.	5
R-12B	550 CT.	110	5	2	6.3 CT.	5
R-14A	700 CT.	125	5	3	6.3 CT.	4.5
R-14B	700 CT.	125	5	3	6.3 CT.	4.5
R-16A	700 CT.	160	5	3	6.3 CT.	5
R-16B	700 CT.	160	5	3	6.3 CT.	5
R-17A	750 CT. 80 Tap	160	5	3	6.3 CT. 2.5 CT.	5 5
R-18A	750 CT.	175	5	3	6.3 CT.	8
R-18B	750 CT.	175	5	3	6.3 CT.	8
R-99B	600 CT. 40 Tap.	200			6.3 CT.	4
R-19A	750 CT. 80 Tap	200	5	3	6.3 CT. 2.5 CT.	6 10
R-20A	700 CT.	200	5	3	6.3 CT.	8
R-20B	700 CT.	200	5	3	6.3 CT.	8
R-72A	800 CT.	140	5	3	6.3 CT.	4
R-21A	800 CT.	200	5	3	6.3 CT.	6
R-21B	800 CT.	200	5	3	6.3 CT.	6
R-24A	800 CT.	300	5	6	6.3 CT.	6
R-24B	800 CT.	300	5	6	6.3 CT.	6
R-25A	800 CT.	500	5	6	6.3 6.3 CT.	3 7
R-58A	875 CT.	185	5	3	6.3 6.3	4 3
R-59A	1200 CT.	200	5	3	6.3 6.3	3 3
R-71A	900 CT.	250	5 CT.	4	6.3 CT. 6.3	2 4



Case A



Case B



Case BS

Combined PLATE and FILAMENT Transformers "100" Series

Never have the outstanding features of Triad Combined Plate and Filament Power Transformers been available at such realistic costs. No quality or performance requirement has been overlooked... specify Triad and be certain. Shielding, impregnation, chatter freedom ...to Triad's demanding quality control standards.

PRIMARY 115 VOLTS 60 CYCLES

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Rect. Filaments Volts	Rect. Filaments Amp.	Other Filaments Volts	Other Filaments Amp.	Case Dim. H	Case Dim. W	Case Dim. D	Mtg. Dim. MW	Mtg. Dim. MD	Wt. Lbs.
R-104A	500 C.T.	40			6.3 V.C.T.	2	2¾	2⅜	2¼	1¾	1½	1.55
R-104B	500 C.T.	40			6.3 V.C.T.	2	1⅝	2⅝	2⅜	2⅜	1¾	1.55
R-105A	600 C.T.	65			6.3 V.C.T.	2.7	3⅛	2⅝	2½	2	1⅜	2
R-105B	600 C.T.	65			6.3 V.C.T.	2.7	1⅝	3⅛	2½	2½	2	2
R-106A	480 C.T.	50	5	2	6.3 V.C.T.	2	3⅛	2⅝	2⅜	2	1⅜	2.05
R-106B	480 C.T.	50	5	2	6.3 V.C.T.	2	1½	3⅛	2½	2½	2	2.05
R-107A	600 C.T.	50	5	2	6.3 V.C.T.	2	3⅛	2⅝	2½	2	1⅜	2.35
R-107B	600 C.T.	50	5	2	6.3 V.C.T	2	1⅝	3⅛	2½	2½	2	2.35
R-108A	500 C.T.	75	5	2	6.3 V.C.T.	2.5	3⅛	2⅝	2⅝	2	1⅜	2.4
R-108B	500 C.T.	75	5	2	6.3 V.C.T.	2.5	1¾	3⅛	2½	2½	2	2.4
R-109A	600 C.T.	75	5	2	6.3 V.C.T.	3	3½	3	2⅞	2¼	1¾	2.9
R-109B	600 C.T.	75	5	2	6.3 V.C.T.	3	1⅝	3⅛	2⅞	2⅜	2¼	2.9
R-110A	525 C.T.	90	5	2	6.3 V.C.T.	5	3½	3	3⅛	2¼	2	3.25
R-110B	525 C.T.	90	5	2	6.3 V.C.T.	5	1⅞	3⅛	2⅞	2⅜	2¼	3.25
R-111A	700 C.T.	90	5	3	6.3 V.C.T.	3.5	3½	3	3⅛	2¼	2	3.25
R-111B	700 C.T.	90	5	3	6.3 V.C.T.	3.5	1⅞	3⅛	2⅞	2⅜	2¼	3.25
R-112A	550 C.T.	110	5	2	6.3 V.C.T.	5	3½	3	3¼	2¼	2⅛	3.7
R-112B	550 C.T.	110	5	2	6.3 V.C.T	5	2	3⅛	2⅞	2⅜	2¼	3.7
R-113A	650 C.T.	40	5	2	6.3 V.C.T.	2	3⅛	2⅝	2⅝	2	1¾	2.3
R-113B	650 C.T.	40	5	2	6.3 V.C.T.	2	1¾	3	2½	2½	2	2.3
R-114A	700 C.T.	125	5	3	6.3 V.C.T.	4.5	3⅞	3¼	3¼	2½	2⅜	4.7
R-114B	700 C.T.	125	5	3	6.3 V.C.T.	4.5	2⅜	3¾	3½	3⅛	2½	4.7
R-115A	680 C.T.	70	5	2	6.3 V.C.T.	2.5	3⅜	3	3	2	1⅜	3.5
R-115B	680 C.T.	70	5	2	6.3 V.C.T.	2.5	2	3	2½	2½	2	3.5
R-116A	700 C.T.	160	5	3	6.3 V.C.T.	5	3⅞	3¼	3¾	2½	2⅝	5.65
R-116B	700 C.T.	160	5	3	6.3 V.C.T.	5	2⅝	3¾	3⅛	3⅛	2½	5.65
R-118A	750 C.T.	175	5	3	6.3 V.C.T.	8	4¼	3⅝	4	2¾	2⅞	7.45
R-118B	750 C.T.	175	5	3	6.3 V.C.T.	8	2¾	4⅛	3½	3⅜	2¾	7.45
R-120A	700 C.T.	200	5	3	6.3 V.C.T.	8	4¼	3⅝	4⅛	2¾	3	8.25
R-120B	700 C.T.	200	5	3	6.3 V.C.T.	8	2⅞	4⅛	3½	3⅜	2¾	8.25
R-121A	800 C.T.	200	5	3	6.3 V.C.T.	6	4¼	3⅝	4⅜	2¾	3¼	8.25

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

PLATE POWER Transformers
Primary 115 volts — 50/60 cycles

Type No.	Secondary Volts AC	Secondary Volts DC	Sec. D.C. Ma. CCS	Sec. D.C. Ma. ICAS	Rect. Fil.
P-1A	440/220 CT.	180/90	160	190	5V-3A
P-3A	600/300 CT.	250/125	300	360	5V-4A
P-5A°	1100 CT.	400	250	300	5V-4A
P-7A°	1235 CT.	500	250	300	5V-4A
P-9A	1235 CT.	500	500	600	5V-6A
■P-30A	600 CT. 105 Bias	800**	500 80		6.3V-4A 6.3V-4A
P-11A°	1455 CT.	600	250	300	
P-213AL*†	1780 CT.	750	250	300	
§P-14A	1780 CT.	750/600	250	300	
P-215AL*†	2340 CT.	1000	250	300	
P-216AL*†	2430 CT.	1000	500	600	
P-217AL*†	2880 CT.	1250	250	300	
P218AL*†	2880 CT.	1250	500	600	
P-220AL*†	3300 CT.	1500	350	420	
PR-21AL	3300 CT.	1500	500	600	

** FW bridge, cap. input filter.
† Plate leads out side of case for 866 rectifiers.
§ Tapped Pri. to produce the lower D.C. voltage.
*Prl. is 230/115V.
°60 cycle only.
■ New item.

POWER TRANSFORMERS

Combined Plate and Filament
Electrostatically shielded. Primary 115 volts 60 cycles.

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments — Volts and Amperes
R-37BC	735 V.C.T.	275	5V.—6A. 6.3V.—8.5A. 6.3V./5V.—2A.*
R-38A	750 V.C.T.	225	5V.—3A. 6.3V.—10A. 6.3V.—1.2A.* 6.3V.—2.5A.
R-40BC	780/440 V.C.T.	300	5V.—3A. 6.3V.—8.5A. 5V.—3A. 6.3V.—3.5A. 5V.—2A.
R-49BS	650 V.C.T.	240	5V.—3A. 6.3V.—9A. 6.3V.—0.9A. 6.3V.—1.2A.*
R-49BC			
R-50A	790/650 V.C.T.	310	5V.—3A. 6.3V.—5A. 5V.—3A. 6.3V.—5A. 5V.—2A. 6.3V.—2.6A.
R-50BC			
R-51BC	505 V.C.T.	320	5V.—6A. 6.3V.—5A. 6.3V.—5A. 6.3V.—1.2A.*
R-61BC	560 V.C.T.	300	5V.—6A. 6.3V.—6A. 6.3V.—6A. 6.3V.—1.2A.*
R-62BC	680 V.C.T.	290	5V.—6A. 6.3V.—10A. 6.3V.—2.5A. 6.3V.—1.2A.*
R-64BC	520 V.C.T.	270	5V.—3A. 6.3V.—10A.
R-65BC	550 V.C.T.	270	5V. —3A. 6.3V. —10A.
R-67BC	600 V.C.T.	250	5V. —3A. 6.3V. —9A.
R-69BC	550 V.C.T.	270	5V. —3A. 6.3V. —10A.
R-74BC	680 V.C.T.	190	6.3V.—7.8A. 5V.—3A. 6.3V.—1.2A. (damper wdg)

* Less than 100 m.m.f.d. capacity to ground and insulated for high voltage damper tube.
Height of transformers in BC cases is measured from chassis line to top of case. Copper shading ring on all BC cases to reduce external magnetic field.

Note: Last letter of Type No. denotes case style.

UNIVERSAL RECTIFIER POWERS

Type No.	Secondary No. 1 AC Volts	Secondary DC Amps Full Wave CT	Secondary DC Amps Bridge	Secondary No. 2 AC Volts DC Amps
F-200A	13 or 18 @ .9 ADC	—	—	13 or 18 @ .9 ADC
F-202U	11.0 to 29.5	2.0	1.25	—
F-203U	12.0 to 30.0	4.0	2.0	—
F-204U	11.5 to 29.0	8.0	4.0	—
F-205U	12.0 to 29.5	12.0	6.0	—

AUDIO

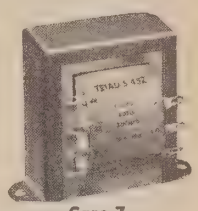
Triad Replacement Output Transformers furnish a wide range of size and mounting characteristics . . . specifically engineered for mounting in precise location in chassis. Climatite treated . . . manufactured to exacting quality standards of more costly types . . . progressively designed for advanced circuitry and audio tubes . . . total complete coverage over impedance and wattage ranges . . . Triad units provide finest response in minimum space . . . and outlive all others.

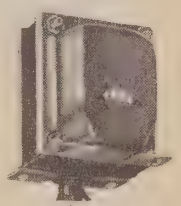
REPLACEMENT OUTPUT TRANSFORMERS
Single Tube To Standard Voice Coil 3-4 Ohms

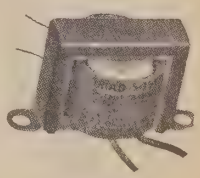
Type No.	Primary Impedance	D.C. Ma	Audio Watt
S-20X	2000	50	2-3
S-20Z	2000	50	2-3
S-2X	2000	55	3-5
S-12X	2500	50	2-3
S-12Z	2500	50	2-3
S-1X	2500	60	3-5
S-50X	2500	60	4-6
S-16X	3000 5% Tap	50	2-3
S-30X	3000	60	3-5
S-67X	3200	60	4-6
S-4X	3000	70	5-8
S-14Z	4000	50	2-3
S-41X	4000	50	3-5
S-6X	5000	35	2-3
S-6Z	5000	35	2-3
S-3X	5000	40	3-5
S-5X	5000	50	5-8
S-5Z	5000	50	5-8
S-48X	6500	35	2-3
S-48Z	6500	35	2-3
S-7X	7500	30	3-5
S-9X	7500	50	5-8
S-9Z	7500	50	5-8
S-8X	8000	30	2-3
S-8Z	8000	30	2-3
S18X	8000	45	4-6
S-18Z	8000	45	4-6
S-11X	10000	30	2-3
S-11Z	10000	30	2-3
S-17X	10000	30	3-5
S-10X	10000	45	4-6
S-40X	14000	5.5	¼
S-38X	16000	15	2-3
S-38Z	16000	15	2-3
S-37X	25000	4.0	¼
S-13X	25000	10	2-3
S-13Z	25000	10	2-3

REPLACEMENT PUSH-PULL OUTPUT TRANSFORMERS
Push-Pull Tubes To Voice Coil 3-4 Ohms

Type No.	Impedance	D.C. MA. Each Side	Audio Watts
S-39X	12000 CT.	30	3-4
S-64X	6000 CT.	40	4-6
S-15X	10000 CT.	35	7-10
S-19Z	10000 CT.	50	10-14
S-68Z	3000/3800 CT.	90	15-18
S-69Z	5000 CT.	60	15-18
S-21A	8000 CT.	55	15-18
S-21Z	8000 CT.	55	15-18


Case Z


Case A


Case X

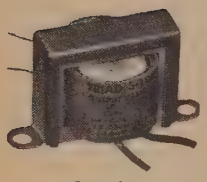
© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

LOW VOLTAGE, LOW CURRENT Transformers
All 117 v., 50/60 cycle pri

Type No.	Secondary Volts	Secondary Amps.	Test Volts
F-112X	14 v. CT.	250 ma.	1500
F-113X	12 volts	150 ma.	1500
F-114X	12 volts	700 ma.	1500
F-115X	24 v. CT.	85 ma.	1500
F-116X	24 v. CT.	200 ma.	1500
F-117X	24 v. CT.	400 ma.	1500
F-118X	24 v. CT.	700 ma.	1500
F-119X	26.8 v. CT.	150 ma.	1500
F-120X	26.8 v. CT.	500 ma.	1500



Case X

AUDIO

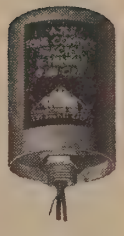
LOW LEVEL OUTPUT Transformers

Type No.	Application	Freq. Resp.	Pri. Imped.	Second. Imped.
A-51X	Tube to line.	300-3000	7000	50
A-53X	Single or p.p. tubes to line.	70-7000	18000 CT.	600/250/50
S-58X	Line to line. —Split windings—	100-10000	600/150	600/150
•S-81X	Line to line.	100-10000	600	600

• New Item.

SPLATTER Chokes

Type No.	Inductance Henries	Current Ma.	Res. Ohms	Wt. Lbs.
C-26X	Tapped .2 to 1.5	100	95	1¼
C-43X	Tapped .05 to 1	300	40	2



Case J

UNIVERSAL OUTPUT Transformers
Single Or Push-Pull Tubes To Voice Coil

Type No.	Application	Impedance	DC MA	Audio Watts
S-62X	Single or P.p. plates	2000-10000	30	2
S-52X	Single or p.p. plates	4000-24000	25	4
S-51X	Single or p.p. plates	4000-14000	35	5
S-63X	Single or p.p. plates	1500- 7000	50	6
S-54X	Single	1500- 5000	70	8
S-53X	Single or p.p. plates	4000-14000	40	8
S-55X	P.p. plates	4000-14000	40	10
S-55Z	P.p. plates	4000-14000	40	10
S-56Z	Single	1500- 6000	85	12
S-59Z	P.p. plates	1500- 4000	65	15
S-57Z	P.p. plates	4000-14000	55	15
S-61Z	P.p. plates	4000-10000	60	20



Case P

PLUG-IN INPUT Transformers

Type No.	Application	Pri. Imped.	Second Imped.	Freq. Resp.	Shld'g
A-202P	Line or mike to grid	200/50 CT. △	36,000	20-20000	90 db.
HS-273P	Same as above	200/50 CT. △	80,000	30-30000	70 db.
A-210P	Stereo Isolation	1:1 ratio	30,000	20-20000	45 db.

△ Split Winding

INTERSTAGE Transformers
Plate to Grid

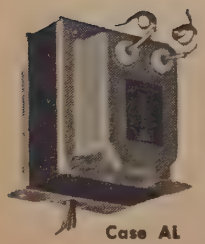
Type No.	Application	Freq. Resp.	Pri. Imped.	Second Imped.	Ratio
A-31X	Plate to single or p.p. grids	300-3000	10000	90000CT	1 : 3
A-33X	Plate to single or p.p. grids	70-7000	10000	90000CT	1 : 3
A-42Z	Multi-ratio single or p.p. plates to single or p.p. grids.	70-7000	15000 CT.	135000C.T. or 33750	1 : 1.5 1 : 3 1 : 6
A-35A	Plate to single or p.p. grids	50-10000	10000	90000CT	1 : 3
A-40J	Parallel-fed 6J5 or 6SN7. Plate to p.p. grid 45 db. shielding.	30-15000	15000	115000CT	1 : 2.76

MODULATION Transformers
Tube to RF Load

Type No.	Primary	Freq. Resp.	Secondary Impedance	Secondary Ma.	Aud. Wtts.
TY-65Z	32 CT. (575 Ma.) (Transistor use)	70-15000	3000-4000-6000	100	10
M-4Z	5000 (Auto-former).	300-3000	6750 4	100 (total)	10
M-1X	10000 CT. for 19, 1J6, 6N7, 6A6, etc.	300-3000	5000-8000-10000	50	5
M-3X	10000 CT. for 6N7, 6A6, 6F6's, etc.	300-3000	3000-5000-8000	100	20
TY-66A	6 CT. (5A) (Transistor use)	300-3000	3000-4000-6000	200	40
†M-7AL	4250 CT. for 807's	300-3000	3000-5000-8000	200	60
†M-12AL	Multi-match	300-3000	4000 to 20000	300	125

DRIVER Transformers

Type No.	Driver Tubes	Output Tubes	Frequency Response	Ratio Primary ½ Sec.	Primary D.C. Ma.
A-81X	30, 1H4, etc.	19, 30's, 1J6, etc.	200-20,000	2.66:1	15
A-83X	6F6, 42, 45, etc.	6L6, 6F6, 6V6, 807, etc.	70-7000	1.33:1	40
A-85X	6F6, 42, 45, etc.	6L6, 6F6, 6V6, 807, etc.	50-10000	2.66:1	40
A-89A	P.p. plates to class B or AB grids— Universal 15 watt.	Any class B or AB tubes. 100-500 watts output	50-10000	3.1 or 1.8:1	100 per side
TY-61X	Transistor use		70-10000	1:0.5	100
TY-158X	Transistor use, dual secondaries		20-20,000	1.5:1:1	50
TY-159X	Transistor use, dual secondaries		20-20,000	3:1:1	50
TY-160X	Transistor use, dual secondaries		20-20,000	6:1:1	50



Case AL

†Plate leads out side

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

OUTPUT Transformers
Tube to Voice Coil and Line

Type No.	Tubes	Pri. Imped.	Sec. Imped.	DC Pri.	Audio Watts
S-27A	2A3, 6A3, 6B4, 6L6, 6U6, 6Y6, 12A5, 25B6, 35B5, 50A5.	2500	500/16/8/4	80	8
S-28X	2A5, 6AC5, 6B5, 6F6, 6K6, 7B5, 14A5, 25AC5.	7500	500/16/8/4	40	5
S-29X	6AQ5, 6AS5, 6V6, 7C5, 25A6, 25B5, 25L6, 25N6, 35A5, 35L6.	5000	500/16/8/4	45	5
S-22A	P.p. 2A3, 6B4, 6A5, 6L6, etc.	5000 CT.	500/16/8/4	100 (bal.)	15
S-24A	P.p. 6V6, 7C5, 6K6, 6F6, etc.	8000 CT.	500/16/8/4	80 (bal.)	15
S-60A	P.p. 6L6, 5881, 807, etc.	6600 CT.	500/250/16/8/4	150	35

70.7 volt Line to Voice Coil

Type No.	Primary Impedance	Sec. Imped.	Output Watts	Freq. Resp.
S-70Z	Autoformer 16000/8000/4000/2000/1000.	8/4	5	40-15000
S-71Z	Autoformer 4000/2000/1000/500.	16/8/4	10	40-20000
S-25Z	Autoformer 4000/2000/1000/500.	8/4	10	30-20000
SR-45Z	Autoformer 4000/2000/1000/500.	16/8/4	10	20-20000
SR-74K	Weatherproof autoformer 4000/2000/1000/500.	16/8/4	10	20-20000
S-72Z	Autoformer 2000/1000/500/250.	16/8/4	20	40-20000
•S-43Z	Isolation	16/8/4	30-20 10-5	40-20000
•S-44Z	Isolation	16/8/4	50-40 25-15	40-20000

• New item.

70.7 volt Line to Voice Coil (Cont.)

Type No.	Primary Impedance	Sec. Imped.	Output Watts	Freq. Resp.
S-46A	Autoformer 2000/1000/500/250.	16/8/4	20	20-20000
S-75K	Weatherproof autoformer 2000/1000/500/250.	16/8/4	20	20-20000
S-78Z	Isolation 4000/2000/1000/500.	16/8/4	10	40-20000
S-79Z	Isolation 2000/1000/500/250.	16/8/4	20	40-20000
S-47Z	10K/5K/2.5K/1250/625	16/8/4	8	20-20000
S-73X	Isolation 16K/8K/4K/2K/1K	16/8/4	5	40-15000

25 VOLT LINE TRANSFORMERS

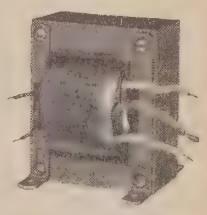
Type No.	Primary Matching Impedance	Secondary Load Impedance	Output Watts
S-131X	1250/625/312	8/4	2
S-132X	1000/500/250/125	16/8/4	5
S-133Z	500/250/125/62.5	16/8/4	10

MATCHING TRANSFORMERS FOR 25 OR 70.7 VOLT LINE

S-129Z	70.7V line to 25V line or, 25V line to 70.7V line	30	20-15000
S-130Z	70.7V line to 25V line or, 25V line to 70.7V line	10	20-15000

Special TRANSCEIVER Transformers
(Voice Frequencies)

Type No.	Application	Primary Impedance	Secondary Impedance
A-21X	S.B. mike or plate to grid (2 primaries)	100 10000	100000
A-23X	Tube to line and hi-impedance phones.	10000	50 and 2000



Case U

INSTRUMENTATION GEOFORMERS

LOW FREQUENCY TRANSISTOR TRANSFORMERS

Type No.	Impedance Ohms Pri.	Impedance Ohms Sec	Turns Ratio	Min. pri. Ind. @ 100MV—60 cy. With No Unbalanced D.C. Current	D.C. Resistance (Ohms) Pri.	D.C. Resistance (Ohms) Sec	Frequency Response in Cycles Primary Signal of 1 Volt Unbalanced D.C. Secondary Current of 1 Ma. −3DB	1 Ma. −1DB	2 Ma. −3DB	2 Ma. −1DB	3 Ma. −3DB	3 Ma. −1DB	5 Ma. −3DB	5 Ma. −1DB	Shielding	Case Mtg	Wt.
G-18	1000 or 250	125 or 31	2:83:1	60.	500	44	5 to 20000	8 to 7000	5 to 20000	8 to 7000	6 to 20000	9 to 7000	7 to 20000	10 to 7000	P1-H	GP-1F	3.2 oz.
G-19	1000 or 250	1000 or 250	1:1	65.	540	230	12 to 7000	15 to 3800	12 to 7000	15 to 3800	12 to 7000	15 to 3800	20 to 7000	40 to 3800	P1-H	GP-2L	5¼ oz.
G-30	1000 CT.	2500 CT.	1:1.58	20.	350	1800	20 to 8000	40 to 4200	22 to 8000	45 to 4200	40 to 8000	75 to 4200	70 to 8000	160 to 4200	P1	GP-1F	3.2 oz.

CHOPPER INPUT TRANSFORMERS

Triad Chopper Input Transformers provide exceedingly close balance between the two halves of the primary winding . . . minimum noise in microvolt ranges of input signals is assured with Triad's special core treatment techniques. For demanding transistor and tube applications, Triad's special design capabilities have an outstanding record. For special applications, consult Triad.

Type No.	Turns Ratio	Minimum Primary Inductance @ 1V—60 Hz.	Maximum Primary Volts @ 60 Hz.	Primary Matching Impedance In Ohms	Secondary Matching Impedance In Ohms	D.C. Resistance Primary In Ohms	D.C. Resistance Secondary In Ohms	Stray Fields Shield	Case and Mounting	Weight
G-20‡	1:8	120 h.	25	10,000 CT or 2500	640,000 CT	370	21,000	P5-H	GP-4T	11½ oz.
G-21‡	4:1	1200 h.	84	200,000 CT	12,500 CT	4000	1300	P1-H	GP-2L	5¼ oz.
G-21TS‡								P5-H	GP-4T	11½ oz.
G-22‡	1:4	1000 h.	90	50,000 CT	800,000 CT	2200	19,000	P5-H	GP-5W	1 lb.
G-23‡	6.32:1	1000 h.	75	40,000 CT	1000 CT	4400	160	P1-H	GP-2L	5¼ oz.
G-24‡	1:1	400 h. Low capacity coupling less than .02 μμF between windings.	19.5	40,000 CT	40,000 CT	1625	1625	P5	GP-5S	1 lb.
G-25‡	2:1	800 h.	70	40,000 CT or 10,000 CT	10,000 CT	3200	2200	P1-H	GP-2L	5¼ oz.
G-25TS‡								P5-H	GP-4T	11½ oz.

‡Static Shield

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

TOROIDS

Triad toroids may be ordered with standard leads in strong plastic coating, or epoxy molded encapsulated per Specification MIL-T-27A; TF5RX20ZZ. To specify molded toroids with gold-plated fixed terminals, an "A" should be added to the full type number; for example, EM-001A.



A

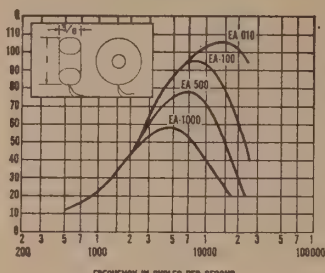
TOROIDS





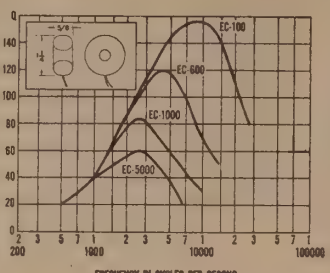


EA SERIES



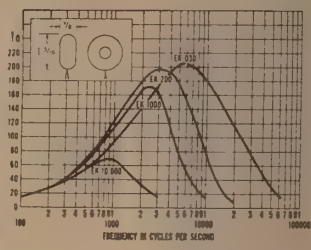
Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EA-001	1 mh	.40	270
EA-002	2 mh	.58	192
EA-003	3 mh	.73	157
EA-004	4 mh	.85	135
EA-005	5 mh	1.10	121
EA-007	7 mh	1.35	102
EA-010	10 mh	2.10	86
EA-015	15 mh	3.10	70
EA-020	20 mh	4.25	60
EA-025	25 mh	4.80	54
EA-030	30 mh	6.70	50
EA-040	40 mh	9.50	43
EA-050	50 mh	11.00	38
EA-070	70 mh	16.00	32
EA-100	100 mh	23.00	27
EA-150	150 mh	37.00	22
EA-200	200 mh	42.00	19
EA-250	250 mh	60.00	17
EA-300	300 mh	70.00	16
EA-400	400 mh	95.00	14
EA-500	500 mh	115.00	12
EA-600	600 mh	150.00	11
EA-700	700 mh	160.00	10
EA-1000	1000 mh	260.00	8.6

EC SERIES



Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EC-001	1 mh	.40	520
EC-002	2 mh	.56	368
EC-003	3 mh	.70	300
EC-004	4 mh	.82	260
EC-005	5 mh	.92	233
EC-007	7 mh	1.05	195
EC-010	10 mh	1.30	165
EC-015	15 mh	1.60	134
EC-020	20 mh	1.85	116
EC-030	30 mh	2.85	95
EC-040	40 mh	4.20	82
EC-050	50 mh	5.50	62
EC-070	70 mh	8.30	74
EC-100	100 mh	13.00	52
EC-200	200 mh	23.00	37
EC-250	250 mh	33.00	33
EC-300	300 mh	35.00	30
EC-400	400 mh	42.00	26
EC-500	500 mh	72.50	23
EC-600	600 mh	80.00	21
EC-700	700 mh	68.00	19.5
EC-1000	1000 mh	134.00	16.5
EC-1500	1500 mh	200.00	13.5
EC-2000	2000 mh	220.00	11.6
EC-3000	3000 mh	370.00	9.5
EC-4000	4000 mh	550.00	8.2
EC-5000	5000 mh	780.00	7.4
EC-7000	7000 mh	700.00	6.2
EC-10000	10000 mh	1100.00	5.2

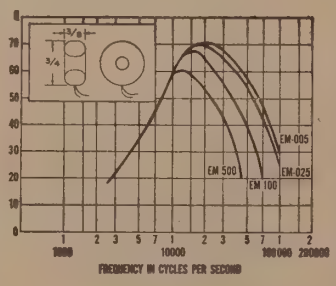
EK SERIES



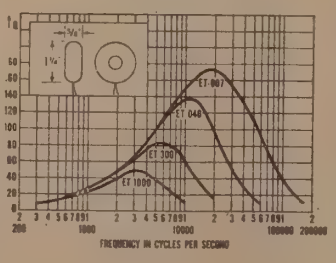
Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EK-010	10 mh	.82	262
EK-020	20 mh	1.10	184
EK-030	30 mh	1.40	150
EK-040	40 mh	1.90	130
EK-060	60 mh	2.60	106
EK-080	80 mh	3.10	92
EK-100	100 mh	4.40	82
EK-120	120 mh	4.80	75
EK-150	150 mh	6.20	67
EK-200	200 mh	7.50	58
EK-250	250 mh	9.00	52
EK-300	300 mh	12.00	47
EK-400	400 mh	14.00	41
EK-500	500 mh	19.00	37
EK-700	700 mh	27.00	31
EK-1000	1000 mh	45.00	26
EK-1500	1500 mh	67.00	21
EK-2000	2000 mh	100.00	18.4
EK-2500	2500 mh	108	16.5
EK-3000	3000 mh	116	15
EK-4000	4000 mh	150	13
EK-5000	5000 mh	200	11.6
EK-7000	7000 mh	300	9.8
EK-10000	10000 mh	350	8.2
EK-20000	20000 mh	800	5.8
EK-30000	30000 mh	1250	4.7
EK-40000	40000 mh	2000	4.1

Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EM-001	1 mh	1.25	150
EM-002	2 mh	1.70	108
EM-003	3 mh	2.25	87
EM-004	4 mh	2.60	76
EM-005	5 mh	3.10	68
EM-007	7 mh	4.5	57
EM-010	10 mh	6.5	48
EM-015	15 mh	10.00	39
EM-020	20 mh	11.5	34
EM-025	25 mh	16.5	30
EM-030	30 mh	18	27.6
EM-040	40 mh	27	24
EM-050	50 mh	30	22
EM-060	60 mh	40	19.5
EM-070	70 mh	43	18
EM-100	100 mh	66	15
EM-150	150 mh	100	12.5
EM-200	200 mh	115	11
EM-250	250 mh	155	9.6
EM-300	300 mh	180	8.8
EM-400	400 mh	265	7.6
EM-500	500 mh	295	7
EM-700	700 mh	400	5.8
EM-1000	1000 mh	650	4.8

EM SERIES



ET SERIES



Type No.	Ind.	Res Ohms Approx.	D.C.-Ma. for 5% Ind. drop
ET-001	1 mh	.30	680
ET-002	2 mh	.50	480
ET-003	3 mh	.68	396
ET-004	4 mh	.81	342
ET-005	5 mh	1.10	306
ET-007	7 mh	1.50	260
ET-010	10 mh	2	217
ET-015	15 mh	2.85	177
ET-020	20 mh	4.0	153
ET-025	25 mh	4.8	137
ET-030	30 mh	6.5	125
ET-040	40 mh	9.2	108
ET-050	50 mh	10.3	97
ET-060	60 mh	14.5	88
ET-070	70 mh	15.0	82
ET-100	100 mh	24.0	68
ET-150	150 mh	35.0	56
ET-200	200 mh	44.5	48
ET-250	250 mh	64	43
ET-300	300 mh	70	40
ET-400	400 mh	94	34
ET-500	500 mh	108	31
ET-700	700 mh	173	26
ET-1000	1000 mh	230	22

© United Technical Publications

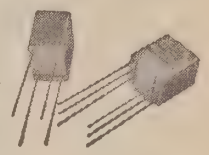
TRIAD DISTRIBUTOR DIVISION

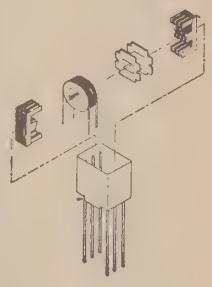
A DIVISION OF LITTON INDUSTRIES

RED SPEC TRANSISTOR TRANSFORMERS

Type No.	Application Type	MIL-T-27B Designation	Primary Impedance	D.C. Res. Pri. Ohms	Max. Unbal. Pri. D.C. Ma.	Secondary Impedance	Max. Power MW
SP-4	Input	TF5SX16ZZ	200000 c.t.	5300	0	1000 c.t.	10
SP-5	Input	TF5SX16ZZ	50000 c.t.	3800	0	1000 c.t.	25
SP-7	Input	TF5SX16ZZ	200000	5300	0	1000	10
SP-11	Interstage	TF5SX13ZZ	25000/20,000	1700	.5	1000/800	40
SP-13	Interstage	TF5SX13ZZ	25000 c.t./20,000 c.t.	1700	.5	1000 c.t./800 c.t.	40
SP-15	Interstage	TF5SX13ZZ	10000 c.t.	1050	1	1500 c.t.	50
SP-20	Driver	TF5SX13ZZ	10000 c.t.	1050	1	1200 c.t.	50
SP-21	Driver	TF5SX13ZZ	10000 c.t.	1050	1	2000 c.t.	50
SP-22	Driver	TF5SX13ZZ	10000	1050	1	2000 c.t./500†	50
SP-29	Driver	TF5SX13ZZ	10000 c.t.	1050	1	500 c.t.	50
SP-32	Output	TF5SX17ZZ	500	60	3	50	50
SP-33	Output	TF5SX17ZZ	1000	145	3	50	50
SP-34	Output	TF5SX17ZZ	600	70	3	3.2	50
SP-35	Output	TF5SX13ZZ	1200	131	2	3.2	50
SP-36	Output	TF5SX13ZZ	10000	1160	1	3.2	50
SP-42	Output	TF5SX17ZZ	150 c.t.	18	10	12	50
SP-47	Output	TF5SX13ZZ	1500 c.t.	179	3	12	50
SP-48	Output	TF5SX13ZZ	7500 c.t.	796	1	12	50
SP-49	Output	TF5SX17ZZ	300 c.t.	41	7	600	50
SP-50	Output	TF5SX17ZZ	500 c.t.	67	3	600	50
SP-51	Output	TF5SX17ZZ	900 c.t.	104	4	600	50
SP-52	Output	TF5SX13ZZ	1500 c.t.	168	3	600	50
SP-63	Output	TF5SX13ZZ	1200 c.t.	125	3	3.2	50
SP-64	Output	TF5SX13ZZ	1600 c.t.	186	2.5	3.2	50
SP-65	Output	TF5SX13ZZ	8000 c.t.	790	1	3.2	50
SP-66	Output Isolation	TF5SX13ZZ	10000 c.t.	1000	1	10000 c.t.	50
SP-67	Output Isolation	TF5SX17ZZ	600 c.t.	73	3	600 CT.	50
SP-68	Output Isolation	TF5SX13ZZ	10000	1000	1	10000 c.t./2500†	50
SP-69	Output Isolation	TF5SX17ZZ	600	72	3	600 c.t./150†	50
SP-70	Output Isolation	TF5SX17ZZ	600	72	3	600	50
SP-106	Choke	TF5SX20ZZ	6 hy.	1700	2		
SP-107	Choke	TF5SX20ZZ	1.25 hy.	180	2		
SP-108	Choke	TF5SX20ZZ	3.5 hy.	1100	2		
SP-117	Choke	TF5SX20ZZ	.9HY	110	2	—	—
SP-118	Choke	TF5SX20ZZ	.3 hy.	42	4		
SP-128	Choke	TF5SX20ZZ	.1HY	15	5	—	—
SP-310	Magnetic shielding case						

CT For Center Tap. †Split secondary.





Sub-miniature Encapsulated TOROIDAL INDUCTORS

Triad sub-miniature toroidal inductors, designed for quick, easy printed-circuit board mounting, are now stocked for immediate delivery in a range of standard ratings from 50 micro-henries to 400 milli-henries. Many uses, especially in airborne telemetering applications incorporating Triad's sub-miniature filters FL-384 through FL-388. Case size of units is 7/16 inch diameter by 1/4 inch high. Providing an optimum combination of high Q and extremely small-size, this series is ideal for printed board, transistor or vacuum tube application.

Triad sub-miniature inductors are toroidally wound on permalloy powdered cores. Encapsulated in high temperature epoxy resin. Weldable or solderable leads of gold plated nickel alloy. Highly resistant to severe acceleration, shock or vibration. Manufactured to MIL-T-27B, Grade 5 Class S (MIL type TF5SX20ZZ).

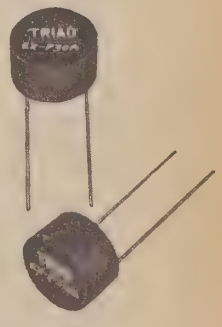
NOTE: Ma. DC maximum is for approximately 5% drop in inductance. Those figures marked * will give less than 5% inductance drop but should not be exceeded under operating conditions.

Inductance tolerance of EX-P05A through EX-P60A is ±5%; EX-001A through EX-400A is ±2%.

Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representatives or call the factory.

Cat. No.	Inductance (ODC)	DCR (ohms) ±25%	Maximum Ma DC
EX-P05A	50 μh	0.8	75*
EX-P10A	100 μh	1.2	75*
EX-P20A	200 μh	1.7	75*
EX-P30A	300 μh	2.0	75*
EX-P50A	500 μh	2.7	75*
•EX-P60A	600 μh	3.0	75*
EX-001A	1.0 mh	3.8	75*
•EX-001.5A	1.5 mh	4.9	60*
EX-002A	2.0 mh	7.0	60*
•EX-002.5A	2.5 mh	5.3	60*
EX-003A	3.0 mh	6.2	60
EX-005A	5.0 mh	10.0	47
•EX-006A	6.0 mh	11.5	43
•EX-008A	8.0 mh	13.0	37
EX-010A	10.0 mh	15.0	33
•EX-012.5A	12.5 mh	17.0	30
•EX-015A	15.0 mh	23.0	27
EX-020A	20.0 mh	32.0	23
•EX-025A	25.0 mh	37.0	21
EX-030A	30.0 mh	52.0	19
•EX-040A	40.0 mh	54.0	15
EX-050A	50.0 mh	62.0	13
•EX-060A	60.0 mh	82.0	12
EX-100A	100 mh	135.0	10
•EX-120A	120 mh	142.0	8
EX-200A	200 mh	145.0	6
EX-300A	300 mh	210.0	5
EX-400A	400 mh	315.0	4

• New item.



© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

PRICE INDEX BY TYPE NUMBER

Triad No.	Sugg'd Resale Price
A-1X	3.40
A-3X	3.32
A-4X	4.15
A-5X	4.28
A-6X	3.25
A-7J	4.95
A-9J	12.00
A-10J	11.31
A-11J	11.57
A-12J	11.93
A-13J	9.35
A-21X	3.53
A-23X	3.18
A-31X	4.48
A-33X	4.85
A-35A	8.90
A-39A	8.80
A-40J	11.78
A-41J	9.24
A-42Z	5.13
A-51X	3.33
A-52J	9.00
A-53X	4.08
A-54X	2.73
A-55J	9.47
A-56J	7.15
A-57J	9.12
A-58J	8.22
A-61J	10.70
A-64J	6.30
A-65J	9.69
A-66J	8.65
A-67J	13.50
A-68J	9.87
A-69J	9.19
A-70J	7.10
A-75J	5.85
A-77J	8.39
A-78J	10.10
A-79J	8.32
A-81X	3.23
A-83X	3.75
A-85X	4.12
A-89A	8.55
A-91A	8.45
A-95X	3.08
A-96X	3.67
A-97K	4.28
A-97X	3.50
A-97Y	4.70
A-98K	5.10
A-98X	2.68
A-99X	4.65
A-101U	6.00
A-102X	4.07
A-103X	4.27
A-104X	4.73
A-105X	3.93
A-107X	5.68
A-108X	5.20
A-109X	4.82
A-110X	4.08
A-111X	3.98
A-112X	4.43
A-113X	4.27
A-113Z	3.43
A-114X	5.63
A-115X	4.35
A-115Z	3.40
A-116X	3.82
A-117X	4.08
A-118X	4.53
A-119X	5.20
A-120Z	2.83
A-122X	2.72
A-122Z	2.72
A-131X	3.85
A-132X	4.63
A-133X	4.97
A-134X	5.08
A-135X	4.75
A-136X	3.98
A-137X	4.07
A-138X	4.23
A-139X	4.98
A-140X	5.07
A-141X	4.08
A-142X	4.48
A-143X	3.78
A-144X	4.53
A-146X	4.57
A-300X	5.55
A-301X	5.13
A-302X	5.33
A-304X	5.95
A-305X	6.17
A-200P	15.00
A-202P	20.85
A-210P	10.86
C-1X	2.70
C-2X	2.38
C-3X	3.17
C-4X	2.65
C-5X	3.78
C-6X	3.15
C-7X	4.00
C-8X	3.38
C-9X	2.90
C-10X	4.75
C-11X	3.62
C-12A	6.00
C-12X	4.97
C-13X	4.55
C-14A	6.48
C-14X	5.47
C-15A	6.27
C-15X	4.58
C-16A	9.08
C-17X	3.77
C-18A	9.80
C-19A	12.30
C-20A	13.65
C-21X	3.15
C-22A	22.50
C-23X	3.67
C-24X	3.08
C-25A	6.10
C-26X	3.55
C-27X	2.88
C-28X	3.57
C-29X	3.80
C-30X	3.45
C-31A	8.13
C-32AL	13.00
C-33A	12.22
C-34X	3.08
C-35A	13.98
C-36X	2.78
C-39A	23.34
C-40X	3.62
C-42AL	12.62
C-43X	4.77
C-45AL	30.74
C-47U	8.37
C-48U	10.50
C-49U	14.69
C-50X	6.88
C-56U	5.27
C-57U	6.72
C-58U	8.84
C-59U	11.80
C-60U	18.55
C-80U	45.47
CE-1	10.60
CE-4	11.00
CE-5	10.85
CL-1	.60
D-2	6.90
D-11	10.22
D-14R	7.80
D-19	9.01
DA-20	4.75
D-22	7.80
D-27	7.82
D-28	6.57
D-33	7.14
DA-36	3.77
D-40	9.95
D-41	6.28
D-42	8.92
D-43	7.82
D-44	6.65
D-45R	6.40
D-46	9.32
D-47R	7.50
D-48	7.12
D-49	9.32
D-50	8.63
D-52	4.98
D-53	8.67
D-54	5.10
D-55R	9.55
D-56	8.07
D-57	9.15
D-58	6.63
D-59	7.35
D-60R	6.43
D-61	5.55
D-62	5.82
D-63	6.40
D-64	7.50
D-65	9.25
D-66	9.60
D-67	9.98
D-68	10.15
D-69	7.28
D-70	8.40
D-71	7.20
D-72	8.27
D-73R	8.57
D-74	7.14
D-75	8.40
D-76R	9.02
D-77R	9.47
D-78	7.48
D-79	7.57
D-80	7.95
D-81	7.27
D-82	9.32
D-83R	5.95
D-84	9.35
D-85	9.44
D-86	9.77
D-87	8.18
D-88	7.40
D-89R	9.55
D-90	8.45
D-91	6.99
D-92	8.15
D-93R	8.30
D-94R	7.95
D-95	7.20
D-96	9.57
D-97R	10.30
D-98R	10.57
D-99	7.97
D-100	7.47
D-101	7.90
D-102	7.65
D-103	8.80
D-104	6.30
D-105	7.67
D-106	7.33
D-107	8.44
D-108	10.20
D-109	6.90
D-110	8.28
D-111	8.10
D-112	8.62
D-113	8.57
D-114	9.35
D-115R	7.17
D-116	10.94
D-117	7.02
D-118R	8.40
D-119	8.18
D-120	7.30
D-122	7.30
D-123	7.88
D-124	6.67
D-125	7.62
D-126	9.87
D-127	7.44
D-128	2.53
D-129	6.82
D-130R	7.25
D-131	9.58
D-132	7.77
D-133	9.12
D-134	7.58
D-135	2.02
D-136	5.23
D-138	7.68
D-139	7.42
D-141	7.50
D-142	12.89
D-143	8.60
D-151R	7.42
D-152	8.83
D-153 Kit	9.92
D-154	7.87
D-155	7.00
D-156R	9.35
D-157	10.35
D-158	4.88
D-159	7.90
D-160	8.55
D-161	7.50
D-162	7.80
D-163	6.62
D-164	7.28
D-165	7.41
D-166	6.45
D-167	9.92
D-168	5.35
D-169	8.40
D-170	7.83
D-171	7.33
D-172	8.49
D-173	8.73
D-174	8.75
D-175	7.13
D-176	2.85
D-178	8.43
D-179	6.88
D-180	7.88
D-181	7.80
D-182	7.48
D-183	7.50
D-184	8.22
D-185	8.70
D-186	7.80
D-188R	7.88
D-189	9.05
D-190 Kit	7.95
D-191	8.45
D-192	6.98
D-193	9.32
D-194	7.20
D-195	6.50
D-196	6.57
D-197	6.33
D-198	9.45
D-199	7.35
D-200	6.68
D-201	10.42
D-202	7.43
D-203	7.58
D-204	8.88
D-205	8.00
D-206	7.65
D-207	7.92
D-208	6.88
D-209	9.32
D-210	6.67
D-211	7.77
D-212	7.85
D-213	7.86
D-214	7.57
D-215	8.34
D-216	8.94
D-218	8.94
D-219	6.67
D-220	6.87
D-221	8.50
D-222	9.02
D-223	11.10
D-224	10.35
D-225	9.40
D-226	9.00
D-227	8.40
D-228	8.32
D-229	7.73
D-230	8.33
D-231	6.00
D-232	7.00
D-233	6.72
D-300	12.92
D-301	14.98
D-302	12.83
D-303	15.00
D-304	14.40
D-305	13.00
D-601	7.80
D-602	7.52
D-603	7.65
D-604	9.79
D-605	11.07
D-606	6.98
D-607	8.28
D-608	7.50
D-609	6.82
D-610	7.80
D-611	7.93
D-612	7.80
D-613	7.77
D-614	8.34
D-615	6.68
D-616	7.82
D-617	8.40
D-618	10.20
D-619	8.00
D-620	6.50
D-621	7.80
D-622	8.70
D-623	8.40
D-624	8.80
D-625	6.82
D-626	7.20
D-627	7.90
D-628	7.68
D-629	3.57
D-630	7.68
D-631	7.86
D-632	7.86
D-638	7.72
D-639	7.00
EA-001	3.28
EA-001A	5.70
EA-002	3.32
EA-002A	5.73
EA-003	3.33
EA-003A	5.75
EA-004	3.35
EA-004A	5.77
EA-005	3.37
EA-005A	5.78
EA-007	3.37
EA-007A	5.78
EA-010	3.38
EA-010A	5.80
EA-015	3.40
EA-015A	5.90
EA-020	3.42
EA-020A	5.92
EA-025	3.47
EA-025A	6.08
EA-030	3.47
EA-030A	6.08
EA-040	3.50
EA-040A	6.12
EA-050	3.50
EA-050A	6.12
EA-070	3.57
EA-070A	6.18
EA-100	3.62
EA-100A	6.23
EA-150	3.75
EA-150A	6.50
EA-200	3.80
EA-200A	6.55
EA-250	3.83
EA-250A	6.58
EA-300	3.88
EA-300A	6.63
EA-400	3.97
EA-400A	6.72
EA-500	4.08
EA-500A	6.83
EA-600	4.17
EA-600A	6.92
EA-700	4.25
EA-700A	7.00
EA-1000	4.35
EA-1000A	7.10
EC-001	3.60
EC-001A	5.72
EC-002	3.63
EC-002A	5.68
EC-003	3.67
EC-004	3.70
EC-005	3.73
EC-005A	5.73
EC-007	3.78
EC-007A	6.12
EC-010	3.83
EC-010A	6.20
EC-015	3.88
EC-015A	6.23
EC-020	3.93
EC-020A	6.27
EC-030	3.98
EC-030A	5.92
EC-040	4.03
EC-040A	6.33
EC-050	4.08
EC-050A	6.38
EC-070	4.13
EC-070A	6.63
EC-100	4.18
EC-100A	6.92
EC-200	4.27
EC-200A	6.72
EC-250	4.33
EC-250A	6.80
EC-300	4.40
EC-300A	6.95
EC-400	4.50
EC-400A	6.93
EC-500	4.60
EC-500A	6.93
EC-600	4.67
EC-600A	7.00
EC-700	4.75
EC-700A	7.08
EC-1000	4.85
EC-1000A	7.25
EC-1500	4.90
EC-1500A	7.57
EC-2000	5.00
EC-2000A	7.65
EC-3000	5.10
EC-3000A	7.97
EC-4000	5.18
EC-4000A	8.00
EC-5000	5.25
EC-5000A	8.32
EC-7000	5.35
EC-7000A	8.18
EC-10000	5.42
EC-10000A	9.60
EK-010	5.70
EK-010A	8.90
EK-020	5.73
EK-020A	8.92
EK-030	5.77
EK-030A	8.95
EK-040	5.82
EK-040A	9.00
EK-050A	9.00
EK-060	5.93
EK-060A	9.09
EK-080	5.98
EK-080A	9.24
EK-100	5.92
EK-100A	9.45
EK-120	6.13
EK-120A	9.40
EK-150	6.20
EK-150A	9.55
EK-200	6.27
EK-200A	9.55
EK-250	6.40
EK-250A	9.74
EK-300	6.57
EK-300A	9.85
EK-400	6.70
EK-400A	10.00
EK-500	6.77
EK-500A	10.07
EK-700	6.85
EK-700A	10.17
EK-1000	7.15
EK-1000A	10.24
EK-1500	7.05
EK-1500A	10.37
EK-2000	7.08
EK-2000A	10.44
EK-2500	7.15
EK-2500A	10.54
EK-3000	7.25
EK-3000A	10.57
EK-4000	7.35
EK-4000A	10.67
EK-5000	7.47
EK-5000A	10.87
EK-7000	7.58
EK-7000A	10.97
EK-10000	7.74
EK-10000A	11.10
EK-20000	7.87
EK-20000A	11.24
EK-25000	8.00
EK-25000A	11.37
EK-30000	8.28
EK-30000A	11.60
EK-40000	8.44
EK-40000A	11.74
EM-001	3.92
EM-001A	5.60
EM-002	3.93
EM-002A	5.33
EM-003	3.95
EM-003A	5.63
EM-004	3.98
EM-004A	5.67
EM-005	4.03
EM-005A	5.73
EM-007	4.08
EM-007A	5.75
EM-010	4.15
EM-010A	5.80
EM-015	4.23
EM-015A	5.88
EM-020	4.30
EM-020A	5.95
EM-025	4.38
EM-025A	6.00
EM-030	4.45
EM-030A	6.17
EM-040	4.50
EM-040A	6.20
EM-050	4.53
EM-050A	6.22
EM-060	4.55
EM-060A	6.25
EM-070	4.60
EM-070A	6.27
EM-100	4.65
EM-100A	6.33
EM-150	4.73
EM-150A	6.40
EM-200	4.83
EM-200A	6.47
EM-250	4.88
EM-250A	6.57
EM-300	4.93
EM-300A	6.67
EM-400	4.98
EM-400A	6.72
EM-500	5.03
EM-500A	6.73
EM-700	5.10
EM-700A	6.83
EM-1000	5.15
EM-1000A	6.92
ET-001	4.47
ET-001A	6.83
ET-002	4.50
ET-002A	6.92
ET-003	4.52
ET-003A	6.93
ET-004	4.53
ET-004A	6.97
ET-005	4.57
ET-005A	7.00
ET-007	4.60
ET-007A	7.03
ET-010	4.62
ET-010A	7.08
ET-015	4.63
ET-015A	7.10
ET-020	4.65
ET-020A	7.17
ET-025	4.70
ET-025A	7.20
ET-030	4.73
ET-030A	7.25
ET-040	4.80
ET-040A	7.37
ET-050	4.85
ET-050A	7.43
ET-060	4.90
ET-060A	7.50
ET-070	4.92
ET-070A	7.52
ET-100	4.93
ET-100A	7.55
ET-150	4.97
ET-150A	7.58
ET-200	5.00
ET-200A	7.60
ET-250	5.02
ET-250A	7.62
ET-300	5.05
ET-300A	7.62
ET-400	5.07
ET-400A	7.67
ET-500	5.10
ET-500A	7.70
ET-700	5.10
ET-700A	7.70
ET-1000	5.13
ET-1000A	7.75
EX-P05A	7.65
EX-P10A	7.65
EX-P20A	7.65
EX-P30A	7.65
EX-P50A	7.65
†EX-P60A	7.65
EX-001A	8.00
†EX-001.5A	8.00
EX-002A	8.00
†EX-002.5A	7.25
EX-003A	7.25
EX-005A	7.25
†EX-006A	7.25
†EX-008A	7.25
EX-010A	7.25
†EX-012.5A	7.65
†EX-015A	7.65
EX-020A	7.65
†EX-025A	7.65
EX-030A	7.65
EX-040A	8.35
EX-050A	8.35
†EX-060A	9.20
EX-100A	12.50
†EX-120A	9.20
EX-200A	10.35
EX-300A	11.05
EX-400A	11.05
F-1X	4.08
F-3X	5.73
F-5U	7.03
F-6X	4.62
F-7X	4.60
F-8X	5.22
F-9U	10.85
F-10U	11.10
F-11U	12.07
F-12X	6.05
F-13X	2.67
F-14X	3.65
F-14Z	3.57
F-15U	9.31
F-16X	4.33
F-17U	15.09
F-18A	7.75
F-18X	6.77
F-19X	6.15
F-20U	11.00
F-21A	9.90
F-22A	13.75
F-23U	9.77
F-24U	10.38
F-25X	4.32
F-26X	4.76
F-27U	15.92
F-28U	21.82
F29U	15.65
F-32A	7.72
F-34A	9.53
F-36A	11.39
F-38A	11.94
F-40X	3.72
F-41X	5.53
F-42A	8.13
F-43X	5.03
F-44X	4.30
F-45X	3.77
F-46X	3.87
F-47U	10.02
F-48U	12.32
F-49U	18.20
F-50X	5.35
F-51X	5.68
F-52X	4.77
F-53X	5.48
F-54X	5.60
†F-55X	5.15
†F-56X	7.67
†F-57X	5.00
†F-58A	19.72
F-60U	8.45
F-61U	12.80
F-26U	30.50
F-63U	7.93
F-64U	9.89
F-65U	12.31
F-66U	32.06
F-67U	24.60
F-68U	13.20
F-71U	8.70
F-72Z	5.77
F-74U	10.75
F-75U	17.84
F-79U	34.38
F-80U	53.28
F-83A	13.50
F-84AC	25.04

†New item

Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representative or call the factory.

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

PRICE INDEX BY TYPE NUMBER

Triad No.	Sugg'd Resale Price
F-85U	21.14
F-90X	4.33
F-91X	5.12
F-92A	8.50
F-93X	6.30
F-94X	4.27
F-102X	7.28
F-104U	9.77
F-105Z	4.17
F-106Z	5.80
F-107Z	7.25
F-108U	11.25
F-109U	20.17
F-112X	3.77
F-113X	3.12
F-114X	4.28
F-115X	3.85
F-116X	4.12
F-117X	4.42
F-118X	3.87
F-119X	4.12
F-120X	3.83
†F-131P	4.25
†F-132P	4.40
†F-133P	4.55
†F-134P	4.80
†F-135P	5.10
†F-141XP	4.05
†F-142XP	4.15
†F-143XP	4.30
†F-144XP	4.40
†F-145XP	4.50
†F-151XP	4.25
†F-152XP	4.40
†F-153XP	4.50
†F-154XP	4.50
†F-155XP	4.60
F-200A	7.22
F-202U	8.78
F-203U	11.05
F-204U	14.89
F-205U	19.25
FL-381	43.90
FL-384	62.25
FL-385	61.42
FL-386	61.42
FL-387	61.42
FL-388	63.62
FL-389	41.39
FL-404	39.00
FL-405	39.00
FL-406	39.00
FL-407	39.00
FL-408	39.00
FL-409	39.00
FL-410	39.00
FL-411	39.00
FL-412	39.00
FL-413	39.00
FL-414	39.00
FL-415	42.00
FL-416	42.00
FL-417	42.00
FL-418	42.00
FL-419	42.00
FL-420	42.00
FL-421	42.00
G-2	33.61
G-4	33.44
G-5	31.77
G-5TS	28.90
G-7	31.69
G-8	39.22
G-10	39.99
G-12	27.84
G-14TS	32.74
G-17	30.84
G-18	23.49
G-18TS	24.40
G-19	25.11
G-20	37.51
G-21	31.69
G-21TS	38.67
G-22	38.12
G-22H	25.85
G-23	31.22
G-24	33.34
G-25	31.11
G-25TS	38.22
G-30	18.00
G-31	25.69
G-32	32.74
G-33	30.79
G-36	19.79
G-40	29.86
G-40TS	37.27
G-48	18.40
G-48TS	26.69
G-51	22.02
G-51A	22.62
G-53	29.02
G-53A	20.80
G-54	28.79
G-57	19.62
G-59	31.39
G-64	17.40
G-65	17.40
G-72	21.20
G-80	31.32
G-84	21.20
G-101	26.22
G-101TS	32.67
G-135	24.02
G-150	19.60
G-183	29.41
G-202	26.21
G-235	24.17
G-250	22.19
G-255	23.10
G-266	26.61
G-274	26.17
G-284	24.57
G-285	20.00
G-286	25.15
G-301	20.82
G-306	21.40
G-309	63.89
G-310	49.87
G-313	21.77
G-315	21.57
G-335	20.00
G-336	19.74
G-388	16.34
G-391	18.91
G-394	14.02
G-401	19.60
G-435	23.89
G-435TS	25.85
G-437	23.52
G-455	23.07
G-500	34.44
G-501	32.84
G-502	35.84
GF-600	36.84
GF-601	47.87
GF-602	33.25
HC-115	29.25
HC-300	38.10
HS-1	25.27
HS-3	31.92
HS-4	28.40
HS-5	22.00
HS-11	19.05
HS-14	25.59
HS-15	31.92
HS-23	22.87
HS-25	26.22
HS-27	24.72
HS-29	25.92
HSM-31	27.33
HS-32	26.84
HS-35	19.51
HS-50	25.29
HS-52	26.27
HS-54	25.71
HS-56V	30.19
HS-58	36.64
HS-60	19.32
HS-61	20.64
HS-66	25.71
HS-71	14.10
HS-73	16.75
HS-75	24.39
HS-77	21.20
HSM-79	22.89
HSM-80	24.45
HSM-81	33.92
HSM-82	35.64
HSM-84	34.02
HSM-85R	36.52
HSM-94	49.87
HSM-95	43.65
HSM-181	23.60
HSM-182	37.21
HSM-184	30.02
HSM-187	44.43
HSM-189	43.14
HSM-190	45.19
HSM-200	18.20
HSM-201	23.09
HSM-202	17.79
HSM-203	26.34
HSM-205	33.87
HSM-207	36.24
HSM-208	44.49
HSM-212	47.43
HSM-216	54.64
HSM-218	78.78
HSM-219	72.53
HSM-223	11.62
HSM-224	19.94
HSM-225	22.47
HSM-226	19.00
HSM-227	22.42
HSM-228	26.66
HSM-229	24.25
HSM-230	17.35
HSM-231	25.39
HSM-232	33.14
HSM-233	18.97
HSM-234	37.61
HSM-235	50.43
HSM-236	23.15
HSM-237	16.49
HSM-238	30.19
HSM-239	18.67
HSM-240	21.77
HSM-241	44.83
HSM-245	53.51
HS-247	70.53
HSM-248	29.18
HSM-249	15.25
HSM-250	17.60
HSM-251	24.27
HSM-252	31.16
HSM-253	47.06
HSM-254	67.46
HSM-270	26.04
HSM-271	33.87
HSM-272	48.19
HS-273P	19.65
HSM-301	21.10
HSM-302	12.44
HS-303	14.49
HSM-305	16.95
HSM-307	22.65
HSM-309	21.82
HSM-315	23.59
HSM-319	33.87
HS-331	9.37
HS-333	10.67
HS-335	14.20
HS-339	16.50
HS-341	17.75
HS-400	15.34
HS-401	23.17
HS-402	15.96
HS-404	26.47
HS-405	28.56
HS-407	34.32
HS-409	30.87
HS-413	34.82
HS-415	47.21
HS-417	49.44
HS-425	16.34
HS-427	21.19
HS-433	23.34
HS-435	25.54
HS-436	11.75
HS-438	20.59
HS-441	39.47
HS-442	22.34
HS-443	18.69
HS-444	31.32
HS-445	21.89
HS-470	17.97
HS-471	20.75
HS-472	22.09
HS-474	31.77
HS-475	35.92
JAF-1	16.25
JAF-2	15.33
JAF-3	16.25
JAF-5	16.25
JAF-11	16.25
JAF-12	16.25
JAF-13	16.25
JAF-14	16.25
JAF-15	14.57
JAF-21	16.25
JAF-22	16.25
JAF-23	16.25
JAF-24	16.25
JAF-25	16.25
JAF-26	16.25
JAF-31	16.25
JAF-32	16.25
JAF-33	16.49
JAF-34	16.25
JAF-35	16.25
JAF-101	16.25
JAF-102	16.25
JO-1	12.84
JO-2	12.84
JO-3	12.84
JO-5	12.84
JO-11	12.84
JO-12	12.84
JO-13	12.84
JO-21	12.84
JO-22	12.84
JO-23	12.84
JO-31	12.84
JO-101	12.84
JZ-1	10.83
JZ-5	10.83
JZ-7	10.83
JZ-13	10.83
JZ-15	10.83
JZ-25	10.83
JZ-26	10.83
K-20 Kit	6.98
K-48U	21.45
K-100	24.50
K-101	30.00
K-102	40.00
K-103	59.00
K-104	92.40
K-105	106.00
K-106	153.60
KA-1	2.50
KA-2	2.50
KA-3	3.25
M-1X	3.48
M-3X	5.77
M-4Z	4.17
M-6X	4.77
M-7AL	11.22
M-8AL	14.77
M-12AL	22.15
M-15A	9.05
M-16AL	11.34
MB-20	.72
MB-31	.45
MK-1	3.25
MK-2	3.25
MK-3	4.10
MK-4	4.10
N-1X	4.72
N-3M	9.78
N-4M	11.21
N-5M	14.63
N-7M	27.52
N-7MG	27.89
N-9M	53.43
N-9MG	54.08
N-11M	60.18
N-11MG	60.95
N-34X	7.18
N-35M	18.17
N-48X	4.60
†N-49X	5.33
N-50M	41.58
N-51X	5.75
N-52M	57.08
N-53M	14.12
N-54M	16.32
R-5B	8.50
N-55M	25.44
N-55MG	26.02
N-56M	39.17
N-57M	54.19
N-57MG	54.58
N-59M	60.35
N-59MG	61.35
N-60SC	121.96
N-62AC	65.85
N-64AC	32.46
N-66A	21.15
N-67A	12.70
N-68X	6.77
N-73A	12.42
N-74A	12.83
N-469A	7.35
N-470A	10.62
N-471A	18.62
NW-1	.60
NW-2	.72
NW-3	.78
NW-4	.78
NW-5	.78
NW-6	.72
NW-7	.60
NW-10	.60
NW-14	.78
NW-18	.60
NW-19	.60
NW-21	.67
NW-22	.82
NW-23	.72
NW-24	.72
NW-25	.67
P-1A	9.90
P-3A	12.00
P-5A	15.65
P-7A	16.60
P-9A	30.00
P-11A	15.05
P-14A	23.00
P-15AL	27.30
P-17AL	28.41
P-18AL	53.13
P-20AL	52.03
P-30A	40.30
PR-21AL	51.96
P-213AL	21.77
P-215AL	24.34
P-216AL	47.49
P-217AL	26.79
P-218AL	54.84
P-220AL	45.86
PL-4	10.05
PL-5	12.13
PL-6	12.13
PL-10	2.10
PL-11	2.45
PL-20	4.38
PL-21	4.62
PL-80E	10.94
PL-80H	12.14
PL-81E	11.47
PL-82H	12.69
PL-83H	12.92
PL-83P	12.27
PL-84E	11.82
PL-84H	13.07
PL-124H	12.77
PL-139E	9.80
PL-139H	10.88
PL-139M	11.75
PL-140H	12.77
PL-140M	13.85
PL-146E	11.39
PL-146H	12.72
PL-146M	13.84
R-2C	6.98
R-3A	6.83
R-4A	7.32
R-4B	7.18
R-5A	8.55
R-5B	8.50
R-6A	8.83
R-6B	8.75
R-7A	8.22
R-7B	8.13
R-8A	9.52
R-8B	9.42
R-9A	10.15
R-10A	11.10
R-10B	11.00
R-11A	11.85
R-11B	11.77
R-12A	10.60
R-12B	10.60
R-14A	12.67
R-14B	12.67
R-16A	13.87
R-16B	13.87
R-17A	15.27
R-18A	16.13
R-18B	15.92
R-19A	16.45
R-20A	17.55
R-20B	17.20
R-21A	17.28
R-21B	17.00
R-22A	8.68
R-22B	8.58
R-23B	7.10
R-24A	21.29
R-24B	21.29
R-25A	33.14
R-26A	24.00
R-27A	44.03
R-28A	31.94
R-29A	6.52
R-30X	6.27
R-35A	20.85
R-37BC	27.22
R-38A	24.75
R-38BC	20.45
R-39BC	23.60
R-40BC	27.77
R-41C	15.97
R-42BC	17.97
R-43C	12.49
R-45C	14.99
R-46A	28.51
R-49BC	22.90
R-49BS	25.97
R-50A	26.06
R-50BC	24.60
R-51BC	22.19
R-52BC	17.15
R-53Z	5.89
R54X	3.12
R-56A	7.20
R-58A	18.39
R-59A	18.90
R-61BC	22.29
R-62BC	28.42
R-63BC	16.15
R-65BC	17.24
R-67BC	16.15
R-68A	9.77
R-69BC	17.37
R-70A	13.17
R-71A	21.12
R-72A	12.20
R-73B	8.64
R-74BC	17.99
R-75BA	19.29
R-76BC	26.97
R-77BC	20.27
R-77BS	31.72
R-78BC	18.65
R-79BA	13.19
R-80BA	24.72
R-81BC	24.32
R-81BS	32.09
R-82B	17.78
R-83A	18.59
R-84K	6.15
R-85A	15.99
R-86BA	12.48
R-87BC	16.62
R-88A	17.92
R-90BC	18.10
R-91HA	17.82
R-92A	18.15
R-94H	26.11
R-98B	13.45
R-99B	12.44
R-104A	6.00
R-104B	6.02
R-105A	6.90
R-105B	6.90
R-106A	8.02
R-106B	8.07
R-107A	7.60
R-107B	7.60
R-108A	7.82
R-108B	7.73
R-109A	7.38
R-109B	7.38
R-110A	8.65
R-110B	8.65
R-111A	8.95
R-111B	8.95
R-112A	9.15
R-112B	9.15
R-113A	7.57
R-113B	7.57
R-114A	9.95
R-114B	9.95
R-115A	8.50
R-115B	8.50
R-116A	11.07
R-116B	11.07
R-118A	13.00
R-120A	12.75
R-120B	12.75
R-121A	14.65
R-122A	17.15
R-123HA	16.47
R-124BC	13.84
R-125BC	16.15
R-126A	15.44
R-127A	16.14
R-128BC	17.34
R-129BC	19.00
R-131A	24.25
R-132BC	15.55
R-133A	17.15
R-134A	16.40
R-135BC	18.14
R-136BC	15.84
R-200A	16.20
R-201A	17.40
R-202A	16.57
R-203A	15.57
R-204A	16.35
R-205A	15.70
R-206B	11.32
R-208A	8.65
R-300A	20.00
R-675A	21.44
S-1X	3.10
S-2X	2.45
S-3X	2.98
S-4X	2.98
S-5X	3.32
S-5Z	3.32
S-6X	2.65
S-6Z	2.45
S-7X	2.60
S-8X	2.33
S-8Z	2.47
S-9X	3.12
S-9Z	3.27
S-10X	2.87
S-11X	2.45
S-11Z	2.45
S-12X	2.72
S-12Z	2.72
S-13X	2.48
S-13Z	2.58
S-14Z	2.47
S-15X	3.27
S-16X	2.28
S-17X	2.43
S-18X	3.38
S-18Z	3.40
S-19Z	4.22
S-20X	2.40
S-20Z	2.40
S-21Z	4.45
S-22A	7.13
S23X	2.37
S-24A	6.77
S-25Z	3.98
S-26X	2.50
S-27A	6.05
S-28X	4.72
S-29X	4.77
S-30X	2.67
S-31A	8.67
S-32A	8.82
S-34X	4.73
S-35A	10.27
S-36A	9.32
S-37X	4.43
S-38X	2.15
S-38Z	2.15
S-39X	2.77
S-40X	4.00
S-41X	2.30
S-42A	15.19
S-43Z	5.52
S-44Z	5.33
SR-45Z	7.37
S-46A	9.67
S-47Z	4.03
S-48Z	2.00
S-50X	3.20
S-51X	4.10
S-52X	4.38
S-53X	4.72
S-54X	4.52
S-55X	5.45
S-55Z	5.57
S-56Z	5.27
S-57Z	5.93
S-58X	3.67
S-59Z	5.72
S-60A	10.24
S-61Z	5.93
S-62X	4.17
S-63X	3.52
S-64X	2.80
S-65X	2.95
S-66X	2.85
S-67X	2.77
S-68Z	3.78
S-69Z	5.35
S-70Z	4.18
S-71Z	5.10
S-72Z	4.20
S-73X	4.60
SR-74K	6.45
S-76Z	5.23
S-77U	10.22
S-78Z	5.13
S-79Z	5.65
†S-81X	3.62
S-129Z	4.95
S-130Z	3.75
S-131X	3.45
S-132X	4.18
S-133Z	5.27
S-142A	10.38

†New Item

Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representative or call the factory.

© United Technical Publications

TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES

PRICE INDEX BY TYPE NUMBER

Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price	Triad No.	Sugg'd Resale Price
S-144A	15.24	SP-118	6.02	TY-1XT	3.82	TY-51X	5.70	TY-91	15.37	V-23Z	5.67	Y-21-1	8.90	Y-66-1	11.40
S-149A	18.35	SP-128	5.93	TY-2Z	4.13	TY-51XT	5.62	TY-92	15.50	VR-30Z	4.15	Y-21-3	7.05	Y-70	8.94
SP-4	10.50	SP-310	.84	TY-3XT	3.73	TY-52X	6.48	TY-93	24.77	V-31	4.47	Y-22	8.42	Y-70-1	9.49
SP-5	9.95	SX-201	7.44	TY-16XT	1.67	TY-53X	4.83	TY-94	22.64	WC-13	1.32	Y-22-1	9.09	Y-72-1	10.09
SP-7	9.52	SX-202	7.41	TY-17XT	2.32	TY-54X	5.22	TY-99	15.10	WLC-3	1.33	Y-22-3	9.07	Y-81-3	11.62
SP-11	8.27	SX-203	7.26	†TY-20Z	4.80	TY-55X	6.00	TY-100	23.95	WLC-4	1.32	Y-24	9.74	Y-82-1	11.90
SP-13	9.07	SX-204	7.44	TY-23X	5.57	TY-56X	3.77	TY-101	19.39	WLC-5	1.33	Y-24-3	7.00	Y-83-1	11.67
SP-15	8.99	SX-205	7.50	TY-24X	5.42	TY-57X	4.68	TY-102	19.75	WLC-6	1.32	Y-25	5.83	YC-1	.82
SP-20	8.72	SX-206	7.59	TY-25X	6.17	TY-58X	4.35	†TY-141P	4.70	WLC-7	1.35	Y-25-1	6.45	YC-110	1.17
SP-21	8.77	SX-207	7.62	TY-26X	9.17	TY-59X	6.73	†TY-142P	4.25	WLC-8	1.80	Y-25-3	6.33	YC-111	1.17
SP-22	9.10	SX-208	7.50	TY-27XT	4.85	TY-60X	6.32	†TY-143P	4.15	WLC-8A	1.80	Y-26-2	8.67	YC-112	1.17
SP-29	8.49	T-1X	5.00	TY-28XT	4.67	TY-61X	4.00	†TY-144P	4.70	WLC-9	1.88	Y-28	7.97	YC-300-1	22.50
SP-32	6.87	T-2X	5.30	TY-29X	4.95	TY-62X	4.32	†TY-145P	3.55	WLC-10	1.59	Y-28-3	8.37	YC-310-2	18.33
SP-33	7.10	T-3X	5.27	TY-30X	3.32	TY-63X	5.57	TY-158X	5.62	WLC-11	2.05	Y-30G	8.94	YC-311-2	19.51
SP-34	6.55	T-5X	4.32	TY-31X	3.73	TY-64X	4.95	TY-159X	5.67	WLC-12	1.38	Y-31G	9.24	YC-312-2	19.28
SP-35	6.65	T-11X	4.57	TY-32X	3.77	TY-65Z	5.20	TY-160X	6.28	WLC-17	1.41	Y-40	8.32	YT-101	8.91
SP-36	7.05	T-12X	5.32	TY-33X	3.72	TY-66A	10.22	TY-200X	7.57	WLC-21	1.33	Y-40-3	8.80	YT-102-2	10.72
SP-42	7.28	T-13X	5.08	TY-34X	3.60	TY-67A	11.57	TY-201TZ	5.32	WLC-23	1.33	Y-41	7.63	YT-103-1	10.85
SP-47	7.70	T-14X	4.00	TY-35X	3.95	TY-68S	7.52	TY-202X	5.77	WLC-25	1.52	Y-41-2	9.37	YT-106-2	9.80
SP-48	7.78	T-15X	4.12	TY-35XT	3.97	TY-69S	9.49	TY-462	16.64	WLC-26	1.62	Y-41-3	8.87	YT-107-2	9.80
SP-49	7.48	T-20X	4.35	TY-36X	4.10	TY-70S	10.10	TY-468	13.35	WLC-29	1.85	Y-42-2	8.73	13125	4.90
SP-50	7.62	T-21X	4.17	TY-37X	5.42	TY-71S	10.20	TZ-1	6.05	WLC-30	1.68	Y-44	8.75	13500-1	6.60
SP-51	7.67	T-22X	4.00	TY-37XT	5.45	TY-74S	12.25	TZ-2XT	6.38	WLC-31	1.88	Y-44-1	9.39	13500-2	8.20
SP-52	7.98	T-23X	5.38	TY-38X	5.23	TY-75A	16.54	TZ-5	8.07	Y-12-1	7.68	Y-45	9.15	13510	6.60
SP-63	7.23	T-24X	3.98	TY-38XT	5.25	TY-76A	10.67	TZ-7	4.75	Y-12-3	7.23	Y-45-2	9.90	13510-2	8.20
SP-64	7.27	T-25X	4.03	TY-39X	5.15	TY-78	14.72	TZ-13	6.37	Y-17	7.77	Y-46	5.95	13511	14.25
SP-65	7.50	T-26X	3.73	TY-40X	4.18	TY-79	14.72	TZ-15	4.62	Y-17-1	6.05	Y-46-3	7.57	13540	6.60
SP-66	8.48	T-31X	4.83	TY-41X	5.13	TY-80	15.94	TZ-17XT	5.07	Y-17-2	8.65	Y-47	5.98	13541	6.60
SP-67	7.55	T-32X	3.35	TY-42X	4.97	TY-81	15.19	TZ-24XT	5.80	Y-17-3	8.54	Y-48	6.40	†13542	6.60
SP-68	8.90	T-33X	5.63	TY-43X	4.88	TY-82	14.72	TZ-25	5.25	Y-19	8.03	Y-48-3	7.48	†13543	6.60
SP-69	8.50	T-34X	3.38	TY-44X	4.08	TY-83	21.17	TZ-26	4.65	Y-19-1	6.82	Y-60R	9.29	†13544	12.25
SP-70	6.95	T-35X	4.58	TY-45X	5.35	TY-84	21.57	TZ-28	4.08	Y-19-3	8.22	Y-60-1	9.29	†13545	6.60
SP-106	7.07	T-41X	4.62	TY-45XT	4.68	TY-85	22.94	TZ-32XT	4.87	Y-20	7.78	Y-60-2	11.49	†13546	6.60
SP-107	5.98	T-42X	3.90	TY-46X	3.03	TY-86	21.80	TZ-103XT	3.53	Y-20-2	8.90	Y-62	8.59	13600	9.20
SP-108	6.22	T-101X	4.02	TY-47X	4.55	TY-88	13.02	V-21B	5.93	Y-20-3	8.20	Y-62-1	9.40	13600-2	11.50
SP-117	6.28	T-102X	2.77	TY-48X	4.02	TY-89	12.82	V-21K	9.19	Y-21	8.50	Y-64	9.15	13750	3.92
				TY-49X	4.58	TY-90	16.10	V-21Z	5.38			Y-64-1	9.35	13751	3.92
				TY-50X	7.13			V-23	5.50						
								V-23K	8.34						

† New item. ■Discontinued item. Available until supply is exhausted

TRIAD CASES

	GB	HA	HB	JA	JB	KA	KB
A	2⅜	2⅝	2⅝	3 1/16	3 1/16	3⅜	3⅜
B	2¾	3 1/16	3 1/16	3 5/16	3 5/16	3 15/16	3 15/16
C	2 13/16	4¼	3 3/16	4⅞	3⅞	5¼	4 5/16
D	2⅛	2 13/64	2 11/64	2⅝	2⅝	3	3
E	1¾	1 55/64	1 53/64	2⅛	2⅛	2 7/16	2 7/16
G	⅜	⅜	⅜	⅜	⅜	½	½
I	6-32	8-32	8-32	8-32	8-32	10-32	10-32
Wt. (avg.) lbs.	1¾	2½	2¼	4½	4	7¾	7

	LA	LB	MA	MB	NA	NB
A	3 11/16	3 11/16	4	4	4 5/16	4 5/16
B	4 5/16	4 5/16	4 11/16	4 11/16	5 1/16	5 1/16
C	5 5/16	4½	6	4 13/16	6 13/16	5½
D	3 5/16	3 5/16	3 11/16	3 11/16	4 1/16	4 1/16
E	2 11/16	2 11/16	3	3	3 5/16	3 5/16
G	½	½	⅝	⅝	⅝	⅝
I	10-32	10-32	¼-20	¼-20	¼-20	¼-20
Wt. (avg.) lbs.	9¼	8½	13½	12½	18	16

	AH	AJ	EA	EB	FA	FB	GA
A	1 5/16	1 5/8	1 13/16	1 13/16	2 1/16	2 1/16	2⅜
B	1 5/16	1 5/8	1 13/16	1 13/16	2 5/16	2 5/16	2¾
C	1¾	2⅜	2¾	2 7/16	3⅛	2½	3 13/16
D	1¼	1 3/16	1⅜	1⅜	1 11/16	1 11/16	2⅛
E		1 3/16	1¼	1¼	1 7/16	1 7/16	1¾
G	⅜	⅜	⅜	⅜	⅜	⅜	⅜
I	6-32	6-32	6-32	6-32	6-32	6-32	6-32
Wt. (avg.) lbs.	4 oz.	9 oz.	1	15 oz.	1¾	1½	2

	AF	AG	AH-2	AJ-2	JZ*†
A	5/64	1	1 3/16	1 5/8	3/16 dia.
B	5/64	1	1 5/16	1 5/8	Round
*Bw	1 1/64	1 3/32	1 1/32		
C	1 5/32	1 3/8	1¾	2 3/8	2 3/32
D	*27/32	*1 1/32	*1 11/32	*1 5/8	
F	5/8	¾	⅞	⅞	
I	4/40	6/32	6/32	6/32	
Unit Wt.	1¼ oz.	2½ oz.	5¼ oz.	11 oz.	.5 oz.

* Not in conformance with MIL-T-27A.

	GP-1	GP-2	GP-3	GP-4	GP-5
A	⅞	1 1/16	1¼	1 1/16	1 5/8
B	1 1/16	1¼	1 5/16	1¾	2
Bw	1 1/16	1 11/32	1 13/32		
C	1 11/16	2¼	2 3/8	2½	2¾
D	1 3/32	1 3/16	1 15/32	1½	1½
F	¾	¾	13/16	13/16	13/16
Wt.	3 oz.	5½ oz.	8 oz.	12 oz.	17 oz.

	JOA	JOB
A	1 5/16 dia.	1 5/16 dia.
B	Round	Round
C	1 13/32	1 25/32
D	3/16	3/16
F	⅞	⅞
Unit Wt.	2 oz.	2½ oz.

SHIELDING

P-1—One nickel alloy high permeability shield — 45db. reduction in pickup.
P-3—Two nickel alloy shields interleaved with one heavy copper shading ring — 70db. reduction in pickup.
P-5—Three nickel alloy shields interleaved with two heavy copper shading rings— 95 db. reduction in pickup.

Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representative or call the factory.

© United Technical Publications

whatever electronic products
you require...

...you'll find them faster
in the MASTER...
...the world's largest catalog
of electronic
products
sold through
distributors



NEW ULTRAMINIATURE TRANSFORMERS & HIGH Q COILS

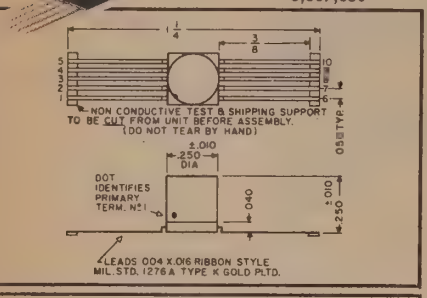
See UTC High Q Coils in inductor section 1800 and Electronic Wave Filters in filter section 2700.

BIT-250* A COMPLETELY NEW DEVELOPMENT IN TRANSFORMER TECHNOLOGY

WEIGHT 1.1 GM.



U.S. Pat. No. 3,507,039



NOTES

- Frequency response: ±2 db, 300 Hz — 250,000 Hz @ 1 MW Ref. level
- Dielectric strength tested @ 200V RMS
- Designed and tested to full MIL-T-27C environmental requirements
- MIL Grade 4, metal-encased, ruggedized
- Lead Material: Gold-plated ribbon-style Kovar, solderable and weldable — MIL-STD 1276A Type K

PACKAGING

Size reduction without loss of performance is achieved by major reduction of air gaps in the magnetic circuit. Core permeability closely approaches the theoretical maximum for material and structure.

Materials, dimensions and surface finish are identical with IC Flat Pack standards. Removable support protects terminal alignment prior to final assembly. This insulated support allows testing in conventional jigs.

RELIABILITY

Cylindrical bobbin-winding techniques eliminate corner stress normally found in fine-wire windings of conventional rectangular structures.

Lead arrangements and terminations have been designed to maximum reliability under thermal shock and temperature cycling.

FLEXIBILITY

These units are designed to afford maximum flexibility of application.

Transformers are 7-terminal types, with center-tapped primaries and split secondaries. When connected in parallel, split-winding secondaries provide ¼ the impedance and twice the DC current capability as series connections.

Inductors in the stock line include both single-winding and split-winding types.

Leader may be bent for plug-in PC application.

AUDIO TYPE TRANSFORMERS

TRANSFORMERS

BIT-250 Type No.	MIL Type No.	Pri Imp	Sec Imp (Split Wdg) Series/Par	Power Level MW for 5% Max Dist @ 1 KHz	Pri DCR Ω	(Series Conn.) Sec DCR Ω	Turns Ratio Pri/Sec/Sec	Turns Ratio Pri/Overall Sec	Typical Application
BIT-250-14	TF4RX17YY	150 CT	12/3	80	13	1.5	7.1:1:1	3.54:1	Output
BIT-250-18	TF4RX17YY	300 CT	600/150	80	30	65	1.4:1:1	1:1.4	Ouput or Matching
BIT-250-20	TF4RX17YY	400 CT	400/100	80	50	50	2:1:1	1:1	Matching or Interstage
BIT-250-26	TF4RX17YY	500 CT	50/12.5	80	58	5.5	7.3:1:1	3.65:1	Output
BIT-250-30	TF4RX17YY	600 CT	600/150	80	65	65	2:1:1	1:1	Isolation or Matching
BIT-250-36	TF4RX17YY	1000 CT	1000/250	80	110	100	2:1:1	1:1	Output or Matching
BIT-250-40	TF4RX12YY	1500 CT	600/150	75	150	65	3.16:1:1	1.58:1	Output
BIT-250-48	TF4RX12YY	2000 CT	8000/2000	75	140	600	1:1:1	1:2	Isolation or Interstage
BIT-250-56	TF4RX12YY	10K CT	500/125	75	900	60	8.92:1:1	4.46:1	Output or Driver
BIT-250-60	TF4RX12YY	10K CT	1200/300	75	900	100	5.78:1:1	2.89:1	Driver
BIT-250-64	TF4RX12YY	10K CT	2000/500	75	900	160	4.48:1:1	2.24:1	Interstage
BIT-250-70	TF4RX12YY	10K CT	10K/2500	75	900	900	2:1:1	1:1	Isolation or Interstage
BIT-250-90	TF4RX12YY	25K CT	1000/250	40	2400	80	10:1:1	5:1	Interstage

INDUCTORS

BIT-250 Type No.	MIL Type No.	Connections	Inductance Hys Min. @ 1 KHz 5V @	DC ma	DC Res Ω	Ratio of Wdgs
BIT-250-03 (2 wdgs)	TF4RX20YY	Series	8.6 2.5	0 2	2260	1:1
		Parallel	2.4 .63	0 4	565	
BIT-250-05 (1 wdg)	TF4RX20YY		5.5 1.5	0 2	1000	
BIT-250-06 (1 wdg)	TF4RX20YY		.80 .25	1 6	250	
BIT-250-09 (2 wdgs)	TF4RX20YY	Series	.60 .15	0 5	146	1:1
		Parallel	.15 .038	0 10	37	

BIT-P PULSE TRANSFORMERS

TO COMPLETE MIL-T-21038B SPECIFICATIONS PULSE WIDTH .05 μSEC-100 μSEC RATIO 4:4.1 MIL TYPE TP6RX4410CZ

	APPROX. DCR, OHMS			BLOCKING OSCILLATOR PULSE					COUPLING CIRCUIT CHARACTERISTICS						
Type No.	1 & 5	6 & 7	9 & 10	P Width μ Sec.	Rise Time	% Over Shoot	Droop %	% Back Swing	P Width μ Sec.	Volt Out	Rise Time	% Over Shoot	Droop %	% Back Swing	Imp.* in/out
BIT-P21	.32	.29	.28	.05	.01	0	0	35	.05	0.2	.01	0	0	20	50
BIT-P22	.33	.32	.29	.1	.012	0	0	25	.1	.5	.015	0	0	20	50
BIT-P23	.38	.37	.3	.2	.02	0	0	15	.2	1.2	.02	0	0	20	100
BIT-P24	.5	.48	.32	.5	.023	0	5	15	.5	1.5	.022	0	5	25	100
BIT-P25	.62	.57	.35	1	.03	0	10	14	1	1.5	.025	0	20	28	100
BIT-P26	.7	.64	.4	2	.035	0	12	15	2	1.5	.028	0	15	23	100
BIT-P27	.85	.76	.48	3	.04	0	13	15	3	1.5	.032	0	18	28	100
BIT-P28	.96	.86	.52	5	.045	0	15	14	5	2	.035	0	20	20	200
BIT-P29	1.4	1.1	.57	10	.065	0	15	10	10	2	.05	0	25	25	200
BIT-P30	2.1	1.7	.8	15	.07	0	15	13	15	2	.06	0	27	18	200
BIT-P31	2.7	2.1	.97	25	.08	0	15	13	25	3	.1	0	30	30	500
BIT-P32	20	15	6	50	.2	0	10	5	50	3	.3	0	22	20	500
BIT-P33	42	32	12	100	.35	0	11	13	100	6	.4	0	15	18	500

* Input winding terminals 1 & 5; output winding terminals 6 & 7; terminals 9 & 10 open.

UNITED® TRANSFORMER CO. TRW®

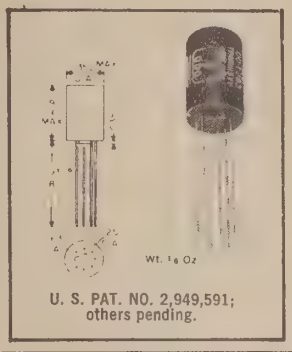
* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

AUDIO & POWER TRANSFORMERS AND MAG AMPS

DO-T200* SERIES, ULTRAMINIATURE PLUG-IN TRANSISTORS TRANSFORMERS

Manufactured and successfully tested to complete environmental requirements of MIL-T-27C. Most Ruggedized MIL Structure, Grade 4, Metal Encased. MIL types TF4RX13YY, TF4RX16YY. Immediate Delivery From Stock. Full Conformance to MIL Mounting Requirements. Solderable and Weldable Leads. Hermetically Sealed. Straight Pin Terminals. Excellent Response. High Efficiency. Low Distortion. Leads are ⅞" long, .016 Dumet wire, gold plated, and may be either welded or soldered. They are uninsulated and are spaced on a .1" radius circle. In pulse coupling impedance matching applications (when measured with a 30 microsecond input pulse voltage wave), typical values for these transformers are: 5% or less droop, zero overshoot, and less than 10% backswing. Also see **UTC page T-3 for other DO-T family constructions.**



U. S. PAT. NO. 2,949,591; others pending.

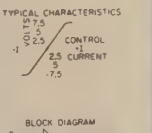
Type No.	Pri. Imp.	D.C. ma‡ in Pri.	Sec. Imp.	Application
DO-T255	1000 CT 1200 CT	3 3	50 60	Output or matching
DO-T275	10,000 CT 12,000 CT	1 1	1500 CT 1800 CT	Interstage
DO-T277	10,000 CT 12,000 CT	1 1	2000 split 2400 split	Interstage
DO-T278	10,000 12,500	1 1	2000 CT 2500 CT	Driver
DO-T283	10,000 CT 12,000 CT	1 1	10,000 CT 12,000 CT	Isolation or Interstage (Ratio 1:1) also pulse appl.
DO-T288	20,000 CT 30,000 CT	.5 .5	800 CT 1200 CT	Interstage
DO-T297	200,000 CT	0	1000 CT	Input and Chopper
DO-T200SH	Drawn Hipermalloy shield provides 15 to 20 db shielding through side of case			

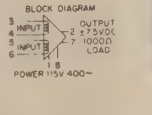
‡DCma shown is for single ended usage. For push pull, DCma can be any balanced value taken by .5W transistors. Where windings are listed as split, ¼ of the listed impedance is available by paralleling the winding.

NEW LINE OF SOLID STATE "MAS"* PUSH-PULL MAGNETIC AMPLIFIERS

For other Magamps see UTC page T-7.







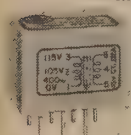
The "MAS" magamps operate on an input of 115 V 400 Hz with an output of ±7.5 V DC, 1000 ohm load and have 2 isolated control inputs. These magnetic amplifiers afford a **power gain of approximately 30,000.** The power input and output are also completely and individually isolated. The "MAS" magamps are manufactured to MIL-T-27C standards. Units are housed in a hermetically sealed steel case with plug-in octal compressed glass terminals. The "MAS" magamps are 3 inches high with a 1½ inch diameter and weighs approximately ½ pound.

The "MAS" magamps have many advantages over other active circuit elements such as tubes, transistors: • Long life and years of maintenance free operation due to magnetic characteristics and solid state elements. • Ruggedness can withstand high shock, vibration, radiation, and moisture. • Reliability — can withstand 10 times overloads and operate into short without damage.

Possible applications include: • Control Amplifier • Photocell • SCR Controls • Strain Gauge Amplifier • Meter Preamps • Thermocouple • Differential Amplifier • Signal mixing, summing, integration • Hydraulic Servo Valve Driver • Servo Motor • Linear Amplifications of Transducer Signals.

Type Number	Winding Number	Input Resistance Ohms	Trans-resistance Ohms	Nominal DC μamps 5V DC Output 1000 Ω Load
MAS-400	1	45	2.5×10^4	200
	2	45	2.5×10^4	200
MAS-410	1	500	8.0×10^4	60
	2	500	8.0×10^4	60
MAS-420	1	1000	12.5×10^4	40
	2	100	4.0×10^4	125

MOLDED ISOLATION & SUPPLY TRANSFORMERS



Designed, manufactured and successfully tested to complete MIL-T-27C specifications. These units are vacuum molded to MIL Grade 5. Units are ELECTROSTATICALLY SHIELDED. See page 5 for Metal Cased lines of transistor supply transformers.

Type No.	H-149	H-148
Application	—	Isolation
Primary	28V 380-1000Hz	105/115V 400Hz
Secondary	1) 6.3V-.08A 2) 6.3V-.08A	115VCT-.02A
Series Con. Parallel Con.	12.6V-.08A 6.3V-.16A	
MIL Type	TF5SX03ZZ	TF5SX03ZZ
Base	¾ x ⅞"	¾ x 1"
Height	9/16"	23/32"
Weight	.04 lbs.	.05 lbs.

EXPERIMENTER/HOBBYIST TRANSFORMER

HCA-308 OUTPUT TRANSFORMER



Primary: 125 ohms centertapped
Secondary: 3.2 ohms
Frequency Response: ±1 db, 100 Hz to 10 kHz
Power Level: up to 1 watt
Size: 2⅛ x 1¼; 1¾ mounting.
Weight: .2 lbs.

NEW "PIL"* AUDIO TRANSFORMERS

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.



Type No.	Connection	Ind.Hys. Min @ IV, 1KC	DC ma	DCR Ohms
PIL-5	Series	.12	0	43
	Parallel	.03	0	10.7
	Series	.10	10	
	Parallel	.025	10	
PIL-8	Series	.32	0	115
	Parallel	.08	0	28
	Series	.16	10	
	Parallel	.06	10	
PIL-12	Series	.8	0	300
	Parallel	.2	0	75
	Series	.4	5	
	Parallel	.15	5	

All units are subjected to a 500 volt dielectric strength test, instead of the usual 100 volts, for higher safety margins and reliability.

The units are terminated in weldable and solderable, insulated Gold plated Dumet leads. Dim: ¾₆" dia. x ¾₆" h., 1/20 oz.

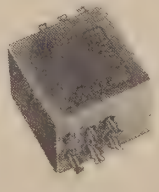
All units are metal encased to Grade 4. Units made to Class S are available on special order. U. S. Patent No. 2,949,591.

Type No.	MIL Type	Pri Imp	Unbal D.C. ma In Pri	Sec Imp	Pri DCR	Max Mw Level	±3 db Fre Range @ 1 Mw
PIL-50	TF4RX17YY	500 CT	3	500 CT	40	100	800 cps-250KC
PIL-70	TF4RX13YY	10K CT	1	500 CT	530	100	800 cps-250KC
PIL-75	TF4RX13YY	10K CT	1	2K CT	530	100	800 cps-250KC

BALANCED MODULATOR TRANSFORMER WITH ELECTROTATIC SHIELD

Type No.	MIL Type	Pri. Imp Ω	Sec. Imp Ω	Pri. DCR Ω ±25%	Sec. DCR Ω ±25%	Frequency Range
PIL-850	TF4RX16YY	150	600 CT	3	7	300 kHz-450 kHz

UNIVERSAL INVERTER AND CONVERTER TRANSFORMERS



NEW NV* SERIES

• Hermetically sealed • Made to complete MIL-T-27C specs; Grade 4, Class V.

DIMENSIONS

NV-520, NV-720, NV-920: 1⅜ sq x 1¾₆" high max.; NV-530, NV-730: 1⅜₆ sq x 1⅜₆" high max.; Approximate weights: 1.5 oz and 2.5 oz.

		FULL WAVE BRIDGE								FULL WAVE CT		
0 to Peak Volts →		81	64.5	57	48	40.5	33	24	16.5	81 CT	48 CT	33 CT
Type No.	Freq. (kHz)	Current in amperes RMS, at above voltages										
NV-520	10	.4	.45	.5	.55	.8	.6	1.05	1.2	.55	.65	.85
NV-530	10	.8	.9	1	1.1	1.6	1.2	2.1	2.4	1.1	1.3	1.7
NV-720	20	.55	.6	.65	.70	1.1	.8	1.3	1.6	.70	.85	1.05
NV-730	20	1.1	1.2	1.3	1.4	2.2	1.60	2.6	3.2	1.4	1.7	2.1
NV-920	50	1.0	1.1	1.2	1.3	2	1.5	2.5	3.0	1.3	1.55	2.0

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

TRW®

© United Technical Publications

TRANSISTOR TRANSFORMERS

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.

DO-T* AND DI-T* TRANSISTOR TRANSFORMERS



DO-T DI-T
(Actual Size)

Revolutionary transistor transformers hermetically sealed to MIL-T-27C specs. Plastic insulated solderable leads, firmly anchored to withstand 10 pound pull. Ideal for printed circuits. DO-T: 3/8" dia. x 1 3/4" long, wt., 1/10 oz. DI-T: 5/16" dia. x 1/4" long, wt., 1/15 oz. these compact units provide frequency response, high efficiency and low distortion. U.S. Pat. No. 2,949,591

DO-T Type	DI-T Type	Application	Pri. Imped., Ohms	Sec. Imped. Ohms
DO-T1	DI-T1	a	20K/30K, 0.5 ma	800/1200
DO-T2	DI-T2	b	500/600, 3 ma	50/60
DO-T3	DI-T3	b	1K/1.2K, 3 ma	50/60
DO-T4	.....	b	600, 3 ma	3.2
DO-T5	DI-T5	b	1.2K, 2 ma	3.2
DO-T6	.....	b	10K, 1 ma	3.2
DO-T7	.....	c	200K	1K
DO-T8	DI-T8	d•	3.5 hys. @ 2 ma	2.5 hys.‡‡
DO-T9	DI-T9	e	10K/12K, 1 ma	500/600 CT
DO-T10	DI-T10	f	10K/12.5K, 1 ma	1.2K-1.5K CT
DO-T11	DI-T11	f	10K/12.5K, 1 ma	2K/2.5K CT
DO-T12	.....	b	150/200 CT, 10 ma	12/16
DO-T13	.....	b	300/400 CT, 7 ma	12/16
DO-T14	.....	b	600/800 CT, 5 ma	12/16
DO-T15	.....	b	800/1070 CT, 4 ma	12/16
DO-T16	.....	b	1K/1330 CT, 3.5 ma	12/16
DO-T17	.....	b	1.5K/2K CT, 3 ma	12/16
DO-T18	.....	b	7.5K/10K CT, 1 ma	12/16
DO-T19	DI-T19	b	300 CT, 7 ma	600
DO-T20	DI-T20	b	500 CT, 5.5 ma	600
DO-T21	DI-T21	b	900 CT, 4 ma	600
DO-T22	DI-T22	b	1500 CT, 3 ma	600
DO-T23	DI-T23	a	20K/30K CT, .5 ma	0.8K/1.2K CT
DO-T24	.....	c	200K CT	1K CT
DO-T25	DI-T25	a	10K/12K CT, 1 ma	1.5K/1.8K CT
DO-T26	DI-T26	d†	6 hys. @ 2 ma	4.5 hys.‡‡
DO-T27	DI-T27	d‡	1.25 hys. @ 2 ma	0.9 hy.‡‡
DO-T28	DI-T28	d§	0.3 hy. @ 4 ma	0.1 hy.‡‡
DO-T29	.....	b	120/150 CT, 10 ma	3.2/4
DO-T30	.....	b	320/400 CT, 7 ma	3.2/4
DO-T31	.....	b	640/800 CT, 5 ma	3.2/4
DO-T32	.....	b	800/1K CT, 4 ma	3.2/4
DO-T33	.....	b	1060/1330 CT, 3.5 ma	3.2/4
DO-T34	.....	b	1.6K/2K CT, 3 ma	3.2/4
DO-T35	.....	b	8K/10K CT, 1 ma	3.2/4
DO-T36	DI-T36	a	10K/12K CT, 1 ma	10K/12K CT
DO-T37	DI-T37	a	2K/2.5K CT, 3 ma	8K/10K Split
DO-T38	DI-T38	a	10K/12K CT, 1 ma	2K/2.4 Split
DO-T39	.....	a	20K/30K CT, .5 ma	1K/1.5K Split
DO-T40	.....	a	40K/50K CT, .25 ma	400/500 Split
DO-T41	DI-T41	a	400/500 CT, 8/6 ma	400/500 Split
DO-T42	.....	a	400/500 CT, 8/6 ma	120/150 Split
DO-T43	DI-T43	a	400/500 CT, 8/6 ma	40/50 Split
DO-T44	DI-T44	a	80/100 CT, 12/10 ma	32/40 Split
DO-T45	.....	a	1K/1.25K CT, 3.5 ma	16K/20K Split
DO-T46	.....	c	100K CT	500 CT
DO-T47	.....	a	9K/10K, 1 ma	9K/10K CT
DO-T48	.....	a	8K/10K, 1 ma	1.2K/1.5K CT
DO-T49	.....	d§§	Series—20 hys @ 1 ma, 5100Ω Parallel—5 hys @ 2 ma, 1275Ω	
DO-T50	.....	d§§	Series—.075 hys @ 10 ma, 10.5Ω Parallel—.018 hys @ 20 ma, 2.6Ω	
DO-T51	DI-T51	a	2K/2.5K CT, 3 ma	2K/2.5 K split
DO-T52	DI-T52	a	4K/5K CT, 2 ma	8K/10K CT
DO-T53	DI-T53		400/500 CT, 8 ma	4K/5K CT
DO-T54	.....		40K/50K CT, .25 ma	4K/5K CT
DO-T400	.....	h	28V, 380-1 kHz	6.3 V, 60 ma
DO-T410	.....	h	28V, 380-1 kHz	Two 6.3 V, 30 ma
DO-T420	.....	h	28V, 380-1 kHz	28 V, 10 ma
DO-TSH	DI-TSH		High mu shield and cover; 25 db	

•630 ohms. †2100 ohms. ‡100 ohms. §25 ohms.
‡‡DI-T primary impedance. §§ Wdgs.
a—Interstage; b—Output; c—Input; d—Inductor; e—Driver or Output; f—Driver; g—matching; h—Power Unit.

NEW
DI-T200* SERIES TRANSISTOR TRANSFORMERS

(ALSO SEE UTC PAGE T-2 FOR DO-T200)



These revolutionary transistor transformers embody the same rugged reliable construction afforded by the unique winding techniques and physical construction found in the DO-T & DI-T transformers. DI-T200 series differ by having straight pin, 1" long, .017 d. Dumet wire, gold plated leads. To MIL-T-27C, size 5/16 x 3/8", wt. 1/15 oz. U.S. Pat. No. 2,949,591

Type No.	Application	Pri. Imped., Ohms	Sec. Imped., Ohms
DI-T225	Interstage	80 CT 100 CT	32 Split 40 Split
DI-T230	Output or Matching	300 CT	600 Split
DI-T235	Interstage	400 CT 500 CT	40 Split 50 Split
DI-T240	Interstage or Output (Ratio 2:1:1)	400 CT 500 CT	400 Split 500 Split
DI-T245	Output or Matching	500 CT 600 CT	50 CT 60 CT
DI-T250	Output or Mixing	500 CT	600 CT
DI-T255	Output or Matching	1,000 CT 1,200 CT	50 CT 60 CT
DI-T260	Output	1,500 CT	600 CT
DI-T265	Isolation or Interstage	2,000 CT 2,500 CT	8,000 Split 10,000 Split
DI-T270	Output or Driver	10,000 CT 12,000 CT	500 CT 600 CT
DI-T273	Output or Driver	10,000 CT 12,500 CT	1,200 CT 1,500 CT
DI-T276	Interstage or Driver	10,000 CT 12,000 CT	2,000 CT 2,400 CT
DI-T278	Interstage or Driver	10,000 CT 12,500 CT	2,000 Split 2,500 Split
DI-T283	Isolation or Interstage	10,000 CT 12,000 CT	10,000 CT 12,000 CT
DI-T288	Interstage or Driver	20,000 CT 30,000 CT	800 CT 1,200 CT
DI-T204	Split Inductor (2 wdgs)	Series: .1 hy @ 4 ma DC, 25Ω Parallel: .025 hy @ 8 ma DC, 6Ω	
DI-T208	Split Inductor (2 wdgs)	Series: .9 hy @ 2 ma DC, 105Ω Parallel: .2 hy @ 4 ma DC, 26Ω	
DI-T212	Split Inductor (2 wdgs)	Series: 2.5 hy @ 2 ma DC, 630Ω Parallel: .6 hy @ 4 ma DC, 157Ω	
DI-T216	Split Inductor (2 wdgs)	Series: 4.5 hy @ 2 ma DC, 2300Ω Parallel: 1.1 hy @ 4 ma DC, 575Ω	

DI-T200SH Drawn Hipermalloy shield provides 15 to 20 db shielding through side of case

PRECISION SCOTT-T REFERENCE TRANSFORMER
NEW SRC-10*

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications



Used in the precise conversion of three wire synchro information to equivalent resolver information. Two outputs 90° apart are obtained, which can be utilized in analog and digital computer application or coordinate transformation applications. Mil type TF4SX09AJ.

Special custom built units with other electrical values are available to your requirements

Input 90V 60/400 Hz 3 Phase high impedance suitable for synchro output.

Output 1) 3V @ .25 MA } 2 Phase Output.
2) 3V @ .25 MA }

a) Magnitudes of output voltage matched within 0.25%.
b) Phase angle of output voltages is 90° ± .225°.

AJ case see page T-12

PIP* SERIES TRANSISTOR PULSE TRANSFORMERS

UTC's PIP series of subminiature transistor type pulse transformers is designed to give a maximum of component density in equipments, their configuration being especially compatible with transistors. The design is based on the UTC DO-T and DI-T series to impart exceptional reliability. PIP-1 through PIP-9 have a ratio of 4:4:1, PIP-10 through PIP-12 have a ratio of 5:3:1. All units are checked and adjusted in a transistor test circuit to give the required pulse width.

Hermetically sealed, manufactured and guaranteed to MIL-T-20138B by full environmental testing . . . all units, completely METAL CASED, MIL type TP6RX4410CZ. See UTC pages T-1, T-7 for other miniature pulse transformers.

All Units Individually Adjusted to Parameters Shown in Table

U.S. Pat. No. 2,949,591

5/16" Dia. x 3/16" high
Weight 1/20 oz.

	APPROX. DCR, OHMS			BLOCKING OSCILLATOR PULSE					COUPLING CIRCUIT CHARACTERISTICS					
Type No.	1-Brn 2-Rd	3-Org 4-Yel	5-Grn 6-Blu	Width μSec.	Rise Time	% Over Shoot	Droop %	% Back Swing	P Width μSec.	Volt Out	Rise Time	% Over Shoot	Droop %	Back Swing	Imp. in, out,
PIP-1	.18	.20	.07	.05	.02	0	0	37	.05	9	.018	0	0	12	50
PIP-2	.47	.56	.17	.1	.025	0	0	25	.1	8	.02	0	0	5	50
PIP-3	1.01	1.25	.37	.2	.030	2	0	15	.2	7	.035	0	0	5	100
PIP-4	1.5	1.85	.54	.5	.05	0	0	15	.5	7	.06	0	0	0	100
PIP-5	2.45	3.1	.9	1	.08	0	0	14	1	6.8	.15	0	0	5	100
PIP-6	3.0	3.7	1.1	2	.10	0	0	15	2	6.6	.18	0	2	10	100
PIP-7	4.9	6.05	1.8	3	.20	0	0	14	3	6.8	.20	0	2	10	100
PIP-8	8.0	9.7	2.9	5	.30	0	0	3	5	7.9	.22	0	13	25	200
PIP-9	13.1	15.9	4.7	10	.35	0	5	12	10	6.5	.4	0	15	20	200
PIP-10	.55	.41	.15	.1	.01	0	0	20	.1	8	.01	0	0	5	140/50
PIP-11	2.9	2.2	.82	1	.02	4	4	6	1	6.6	.05	0	6	12	280/100
PIP-12	9.4	7.1	2.6	5	.05	0	12	12	5	8	.09	2	12	25	560/200

PIP-100 Transistor pulse transformer kit, consisting of PIP-1 thru PIP-9 in plastic case.
PIP-SH Drawn Hipermalloy shield and cover for PIP's provides 20 to 30 db shielding.



UNITED® TRANSFORMER CO. TRW®

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

TRANSISTOR TRANSFORMERS

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.



TRANSISTOR SUPPLY TRANSFORMERS

Primary 115V. 50/60 Hz (tapped on H-143 thru H-146 for dual secondary voltages). DC ratings are approximate, based on silicon bridge rectifier (except H-141, H-142 also shown F.W.CT.). Choke input DCV is based on 10% voltage drop in choke. Condenser value, C, is in 1000 mfd. H-141, H-142, H-147 listing under "Secs in parallel" is single winding. All units MIL type TF4RX02.

Type No.	Sec. V Rms	Sec. A Rms	Sec. in Parallel: Choke DCV	Input DCA	Cond. DVC	Input DCA	C	Sec. in Series: Choke DCV	Input DCA	Cond. DVC	Input DCA	C	MIL Case (Pg. T-12)
H-141	20 CT	.3	16.5	.3	26	.2	.2						EB
			8	.43	12	.3	.5						
H-142	20 CT	.6	16.5	.6	26	.4	.4						EA
			9	.85	13	.6	1						
H-143	17/21.5	1.5	14/17.5	3	18.5/25	2	1	28/35	1.5	43/56	1	.5	HA
	17/21.5	1.5											
H-144	17/21.5	4	14/17.5	8	18.5/25	5	2	28/35	4	43/56	2.5	1	LA
	17/21.5	4											
H-145	17/21.5	9	14/17.5	18	18.5/25	12	6	28/35	9	43/56	6	4	RC-175
	17/21.5	9											
H-146	34/43	4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	UTC Pg. 12
	34/43	4.5											
H-147	10	20	8.2	20	10	13	12						KA

UNIVERSAL TRANSISTOR SUPPLY TRANSFORMERS

Low Voltage DC Supply
Telephone Supply
Bias Supply
Battery Chargers
Plating Rectifiers

UTC universal transistor supply transformers are high reliability units in drawn MIL cases. Primary taps can modify nom. AC voltages by −6%, +6%, and +12%. The capacitor following the rectifier affects the DC voltage.

PRIMARY 115 VOLTS, 50/60 Hz
NOMINAL SEC. VOLTS, 8.25 to 40.5

Type No.	MIL DC Range	Indust. DC Range	MIL Case (Pg. T-12)
H-915	6V-.065A to 53V-.02A	6V-.085A to 53V-.025A	AH
H-925	6V-.22A to 53V-.07A	6V-.28A to 53V-.085A	AJ
H-935	6V-1.2A to 53V-4A	6V-1.52A to 53V-.48A	FA
H-94	6V-3A to 53V-1A	6V-3.8A to 53V-1.2A	HA
H-95	6V-7.5A to 53V-2.5A	6V-9A to 53V-3A	KA
H-96	6V-18A to 53V-6A	6V-23A to 53V-7.5A	OA

PRIMARY 115 VOLTS, 50/60 Hz
NOMINAL SEC. VOLTS, 16.5 TO 81

H-965	12V-1.5A to 106V-.5A	12V-1.9A to 106V-.6A	HA	$22.50

NEW 400 Hz MET* TYPES

PRIMARY 115 VOLTS, 400 Hz • NOMINAL SEC., 8.25-40.5 VOLTS

MET 455	6V-1.2A to 53V-.4A	6V-1.52A to 53V-.48A	AJ
MET 465	6V-3A to 53V-.4A	6V-3.8A to 53V-1.2A	FA
MET 475	6V-7.5A to 53V-2.5A	6V-9A to 53V-3A	HA
MET 495	12V-.6A to 106V-.2A	12V-.76A to 106V-.24A	
MET 445	6V-.6A to 53V-.2A	6V-.75A to 53V-.24A	



Primary 105/115 Volts 380-1000 Hz. Sec: 6.3 VCT 2500V RMS Test

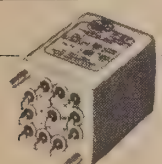
MOLDED 400 Hz TYPE TF55X01ZZ

Type No.	Sec. Amp.	L In.	W In.	H In.	Wt. Lbs.
H-101	3.5	1 25/32	1 31/32	2	.3
H-102	5.5	1 3/4	2	2 1/4	.44
H-103	10	2 3/16	2 1/8	2 1/2	.8
H-104	25	2 7/8	2 1/2	3 1/32	1.5
H-118	.3	Subouncers mold see pg. T-10			

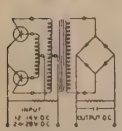
TRANSISTOR INVERTER TRANSFORMERS

High reliability (layer insulated) types providing high efficiency in small size. Units are in drawn MIL cases. Circuit details supplied with transformer. With 6 V. input instead of 12 V., output voltage is halved, current rating remains the same.

FOR 12/14 OR 24/48 VOLT BATTERY



Type No.	DC output, when used in circut shown	MIL Case (Pg. T-12)
H-97	250V.-60 ma	AH
H-98	375V.-100 ma	AJ
H-99	425V.-175 ma	FA
H-100	550V.-200 ma	GB



IMMEDIATE DELIVERY ON ALL ITEMS FROM STOCK

NEW MET* 400-Hz SERIES

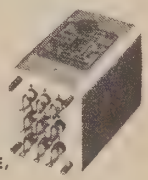
Type No.	MIL Type	Sec. Volt	Amps. (MIL)	Amps. (Indust.)	Sec. Test V. RMS	MIL Case (Pg. T-12)
MET-400††	TF4SX03AH 380-1000 Hz‡	115CT	.06	.072	1000	AH
		115CT	.06	.072		
		230▲	.06	.072		
		115•	.12	.144		
MET-405††	TF4SX01EA 380-1000 Hz‡	115CT	0.2	.24	1000	EA
		115CT	0.2	.24		
		230▲	0.2	.24		
		115•	0.4	.48		
MET-410#	TF4SX01YY 400 cy. pri.	6.3	.6	.75	500	RC-25 (Pg. T-6)
MET-420	TF4SX01AH 3800-1000 cy.‡	6.3CT	2	2.5	1500	AH
MET-430†	TF4SX01FA 400 cycles§	12.6CT	2	2.5	1500	FA
		12.6	2	2.5		
MET-435	TF4SX01FA 380-1000 cy.‡	6.3CT	10	12	2500	FA
MET-440	TR4SX01GB 380-1000 cy.‡	6.3CT	6	7	2500	GB
		6.3CT	6	7		

†Two MET-430's, Scott-connected, provide 26v., 2-phase from 115 v., 3-phase 400 Hz input. Replaces former No. H-139.
‡105/115/125 v. primary.
§57.5/99.7/115 v. primary.
▲ Series connected. • Parallel connected.
†† ELECTROSTATICALLY SHIELDED.

HERMETIC SEALED TRANSISTOR/FILAMENT SUPPLY TRANSFORMER

Primary: 105/115/210/220 volts, 50/60 Hz, except H-130, H-137, H-138, H-104 (115v.) and H-131 (115/220v.) Suited to 400/100 Hz. H-128: 6½ x 5½" x 7¾" h. (wt. 34 lbs.) H-129: 6½" x 5½" x 7¾" h. (wt. 28 lbs.)

METAL CASED TF4 TYPE



MIL-T-27C RATINGS IN REGULAR TYPE, INDUSTRIAL RATINGS IN BOLD TYPE.

Type No.	MIL Type	Sec. Volts	Amps. (MIL)	Amps. (Indust.)	Sec. Test V. RMS	MIL Case Pg T-12
H-119	TF4RX01AH	6.3CT	.3	.38	1500	AH
H-120	TF4RX01GB	2.5	10	12	4000	GB
H-121	TF4RX01JB	2.5	10	12	10000	JB
H-122	TF4RX01KB	2.5	20	26	10000	KB
H-123	TF4RX01NB	2.5	5	7.5	10000	NB
		2.5	5	7.5		
		2.5	10	15		
H-124	TF4RX01FB	5	3	3	2000	FB
H-125	TF4RX01KB	5	10	12	10000	KB
H-126	TF4RX01LA	5	20	25	10000	LA
H-127	TF4RX01NA Term. Opp. Mtg.	5	20	30	21000	NA
H-128	TF4RX01YY Term. Opp. Mtg.	5	60	75	21000	
H-129	TF4RX01YY Term. Opp. Mtg.	5	10	12	21000	
		5	10	12		
		5	20	24		
H-130	TF4RX01AJ	6.3CT	.6	.75	1500	AJ
H-131	TF4RX01FB	6.3CT	2	2.5	2500	FB
H-132	TF4RX01JA	6.3CT	6	7	2500	JA
		6.3CT	6	7		
H-133	TF4RX01HB	6.3CT	7	8	2500	HB
H-134	TF4RX01HA	6.3CT	10	12	2500	HA
H-135	TF4RX01JB	10 CT	10	13	2500	JB
H-136	TF4RX01LA	14, 12, 11 CT	10	14	2500	LA
H-137	TF4RX01EB	6.3	.6	.75	1500	EB
		6.3	.6	.75		
H-138	TF4RX01GA	12.6	2	2.5	1500	GA
		12.6	2	2.5		

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

TRANSISTOR TRANSFORMERS
(Commercial Types)
& M-S Transformers & Inductors

TRANSISTOR TRANSFORMERS *(Commercial Type)*.

NEW CAT* TRANSISTOR IMPEDANCE TYPES

All units in RC-50 case. (see page T-9) Frequency range ±2 db, 50-15,000 Hz. Power level 1 watt except CAT-15, 5 watts.

UTC Type	Application	Imped. Ohms	Primary Unbal. ma DC	Secondary Imped., Ohms
CAT-15	Output	48/12 spl.	750•	16 spl./8/4
CAT-20	Istg./outp.	500/125 spl.	20	16/4 split
CAT-25	Isol./outp.	500/125 spl.	20	500/125 spl.
CAT-30	Input/istg.	500/125 spl.	20	2K/500 split
CAT-40	Istg./outp.	10K/2.5K spl.	8	2K/500 split

• Balance. * Trade mark.

CIRCUIT DEVELOPMENT TRANSFORMERS FOR TRANSISTORS

The UTC LABoratory circuit development transformers aid the designer in selecting optimum impedances for best power and distortion results from his transistor circuit.

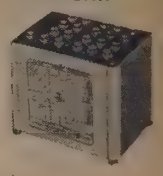
LAB-5
20 Hz to 20 kHz
Up to 50mw Continuous

Pri Imp. Ω	Sec. Imp. Ω
125	125
200 split	200 split
500 split	500 split
2000 split	2000 split

LAB-5 & LAB-10
units in LS-1 case
3⅛x2⅝x3¼"; 3 lbs.

LAB-20
units in LS-3 case
5¹³⁄₁₆x5x4¹⁵⁄₁₆"; 15 lbs.

LAB* UNIT



Terminal board as shown above

LAB-10
20 Hz to 20 kHz
Up to 1W Continuous

Pri. Imp. Ω Range	Pri. to Sec. Ratio	Sec. Imp. Ω Range
1900 Ω to 14,400 Ω	20:1 or 10:1	19 Ω to 36 Ω
925 Ω to 7600 Ω	10:1 or 5:1	37 Ω to 76 Ω

LAB-20
20 Hz to 20 kHz
Up to 50W Continuous

Pri. Imp. Ω	Sec. Imp.
6, 12, 24, 40, 54, 70,	4, 8, 16, 64

CHANNEL FRAME FILAMENT/TRANSISTOR TRANSFORMERS
Pri. 115 V. 50/60 Hz—Test Volts RMS: 1500

See Fig. E page T-11.

Type No.	Secondary	W	D	H	M	Lbs.
FT-1	2.5 VCT-3A	2⅞	1⅝	1¹¹⁄₁₆	2⅜	¾
FT-2	6.3 VCT-1.2A	2⅞	1⅝	1¹¹⁄₁₆	2⅜	¾
FT-3	2.5 VCT-6A	3⅝	1⅞	2	2¹³⁄₁₆	1
FT-4	6.3 VCT-3A	3⅝	1⅞	2	2¹³⁄₁₆	1
FT-5	2.5 VCT-10A	3¾	2⅛	2⅝	3⅛	1½
FT-6	5 VCT-3A	3¾	2⅛	2⅝	3⅛	1½
FT-7	7.5 VCT-3A	3¾	2⅛	2⅝	3⅛	1½
FT-8	6.3 VCT-8A	4	2½	2⅝	3⅝	2½
FT-10	24 VCT-2A or 12V-4A	4	2⅝	2¹¹⁄₁₆	3⅝	2½
FT-11	24 VCT-1A or 12 V-2A	3¾	2⅛	2⅝	3⅛	1½
FT-12	36 VCT-1.3A or 18 V-2.6A	4	2⅝	2⅝	3⅝	2½

Taps on pri. of FT-13, FT-14 & FT-15 to modify sec. nominal V, −6% +6%, +12%

FT-13	26 VCT-.04A	2¼	1⅜	1¼	1¾	¼
FT-14	26 VCT-.25A	2⅛	1⅝	1¹¹⁄₁₆	2⅜	¾
FT-15	48VCT-1A	4	2½	2⅝	3⅝	2½
FT-16*	11 VCT-2.5A or 5.5 V.-5A	3¼	2⅛	2⅝	3⅛	1½

* For 120 V input, use 6% tap

TRANSISTOR/FILAMENT TRANSFORMERS
Pri. 115 x 50/60 Hz; Bridge Rectifier
S-77, S-78 & S-79 Tapped For Dual Secondary Voltages

UTC Type	DCV	DCA	Case No. See Page T-11
S-75	5.2/14	1.2/.4	G-1
S-76	10/26	4/1.4	G-4
S-77	14/56	3/1	G-5
S-78	28/110	9/3	G-10
S-79	32/120	3/1	G-7

TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS
Primary 115 volts 50/60 Hz

Type No.	Sec. V RMS	Sec. A RMS	In Parallel Choke in DCV	In Parallel Choke in DCA	In Parallel C in DCV	In Parallel C in DCA	In Series Choke in DCV	In Series Choke in DCA	In Series C in DCV	In Series C in DCA	Case No See Pg. T-9
CG-30	17/21.5	1.5	14/17.5	3	18.5/25	2	28/35	1.5	43/56	1	RC-112
	17/21.5	1.5									
CG-31	34/43	4.5	28/35	9	43/56	6	56/70	4.5	85/110	3	RC-175
	34/43	4.5									
CG-32	6.3VCT	1.2									RC-62

FILAMENT/TRANSISTOR SUPPLY TRANSFORMERS

Primary 105, 115, 210, 220, 230 volts, 50/60 Hz, except CG-34 . . . 105, 115, 220, 230. These transformers may be used on 25 to 43 Hz if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.

Type No.	Sec. Volts C.T.	Sec. Amp.	Working Voltage	Sec. Test Volts RMS	Case No. See Page T-9
CG-33	6.3	4	500	2000	RC-75
CG-34	2.5	10	2500	6000	RC-112
CG-35	6.3	6	500	2000	RC-87
CG-36	6.3/6.3	5/5	500	2000	RC-100
CG-120	2.5	10	5000	11000	RC-125
CG-121	5	25	5000	11000	RC-150
CG-122	7.5/6.3	10	1500	4000	RC-125
CG-124	10	10	1500	4000	RC-150
CG-125	14/12/11	10	1500	4000	RC-150
CG-126	14/11/10 14/11/10	10	1500	4000	RC-152



RC CASE
See page T-9

MILITARY STANDARD TRANSFORMERS AND INDUCTORS

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications

FILAMENT, POWER, PLATE TRANSFORMERS

Primary 105/115/125 v., 54/66 Hz. Current ratings are for high voltage secondary DC, choke input filter. For condenser input, reduce by 70%. All units are MIL grade 4, ruggedized; equally usable where grade 1 is specified. Electrostatically shielded.

UTC Type	MS No.	MIL Type TF4RX-	Secondary Rating	MIL Case (Pg.T-12)
N-583A	90016-2	01EB002	2.5 v.-3 a.; 1000 WV	EB
N-584A	90017-2	01GB003	2.5 v.-10 a.; 1000 WV	GB
N-585A	90018-2	01FB004	5 v.-3 a.; 1000 WV	FB
N-586A	90019-2	01HB005	5 v.-10 a.; 1000 WV	HB
N-587A	90020-2	01FB006	6.3 v.-2 a.; 1000 WV	FB
N-588A	90021-2	01GB007	6.3 v.-5 a.; 1000 WV	GB
N-589A	90022-2	01JB008	6.3 v.-10 a.; 1000 WV	JB
N-590A	90023-2	01KB009	6.3 v.-20 a.; 1000 WV	KB
N-591A	90024-2	01JB012	2.5 v.-10 a.; 6300 WV	JB
N-592A	90025-2	01KB013	5 v.-10 a.; 6300 WV	KB
N-593A	90026-2	03HA001	200-100-0-100-200, 70 ma; 6.3/5 v.-2 a.; 6.3 v.-3 a.	HA
N-594A	90027-2	03JB002	325-0-325, 70 ma; 6.3/5 v.-2 a.; 6.3 v.-4 a.	JB
N-595A	90028-2	03KB006	325-0-325, 150 ma; 5 v.-3 a.; 6.3 v.-5 a.	KB
N-596A	90029-2	03LB003	400-0-400, 175 ma; 5 v.-3 a.; 6.3 v.-8 a.	LB
N-597A	90030-2	03MB004	450-0-450, 250 ma; 5 v.-3 a.; 6.3 v.-8 a.	MB
N-598A	90031-2	02KB001	350-0-350, 250 ma	KB
N-599A	90032-2	02LB002	550-0-550, 250 ma	LB
N-600A	90036-2	02NB003	800-0-800, 250 ma	NB

AUDIO TRANSFORMERS

Frequency response 300-10,000 Hz ±2 db. Split 600-ohm units provides for 600 ohms CT and 1500 ohms. Electrostatic shielding provided on W-784, W-785 and W-786. No. W-783 has center-tapped secondary for 90K CT or 22.5K CT. All units in AJ case (Pg.T-12) Wt., 0.6 lb.

UTC Type	MS No.	MIL Type TF4RX-	#	Pri. Ohms	Pri. DC ma., Unbal.	Sec. Ohms
W-783	90000-A	15AJ001	a	10K CT	10	90K spl.
W-784	90001-A	16AJ002	b	600 spl.	.....	4/8/16
W-785	90002-A	10AJ001	c	600 spl.	.....	135K CT
W-786	90003-A	16AJ001	d	600 spl.	.....	600 spl.
W-787	90004-A	13AJ001	e	7.6K/4.8K	40	600 spl.
W-788	90005-A	13AJ002	f	7.6K/4.8K	40	4/8/16
W-789	90006-A	13AJ003	g‡	15K CT	10	600 spl.
W-790	90007-A	13AJ004	g+	24K CT	20†	600 spl.
W-791	90008-A	13AJ005	g**	60K CT	20+	600 spl.

Use: a—PP plates to pp grids, 15 dbm level. b—Line to VC, 2 watts. c—Line to pp grids, 15 dbm. d—Line to line, 15 dbm. e—Plate to line, 2 watts. f—Plate to VC, 2 watts. g—PP plates to line. †Balanced. ‡2 watts. +1 watt. **0.5 watt.

INDUCTORS

Two windings for series or parallel connection. Inductance shown for series connection. All but Z-847 are standard MIL case types. Rated 3500 WVDC, unless otherwise noted.

UTC Type	MS No.	MIL Type	Induct. ma Hy.	ma DC	DCR Ohms	MIL Case Pg. T-12
Z-848*	90009-2	04FA001■	16	80	645	FA
Z-849*	90010-2	04GA002■	25	80	670	GA
Z-850*	90011-2	04HA003■	40	80	1020	HA
Z-851†	90013-2	04HA005■	16	125	330	HA
Z-852†	90014-2	04JB006■	25	125	460	JB
Z-853	90037-2	04KA007■	40	125	535	KA
Z-854	75000-2	04LA009•	16	200	180	LA
Z-855	75001-2	04MA010•	25	200	210	MA
Z-856	75002-2	04NA012•	16	315	105	NA
Z-857	75003-2	04YY013•	25	315	150	YY

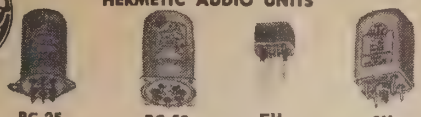
* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

HERMETIC COMPONENTS

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.

HERMETIC AUDIO UNITS



RC-25 RC-50 FH SM

These extremely compact units are proved to specifications of MIL-T-27B. **Response & level ratings:** RC-25: Similar to Ouncers for case (1 13/32" x 41/64" x 1 7/64" h. 1.5 oz.). RC-50: Similar to ultra compact units for case (1 5/8" x 1 5/8" x 2 5/64" h. 8 oz.). SM: Similar to SSO units for case (1 1/16" x 1 1/2" x 2 3/32" h. 0.8 oz.). FH: 27/32" x 23/32" x 3/16", h. .8 oz.

UTC Type	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	#
H-1	Line to grid	50, 200 CT, 500 CT	50K	a
H-2	Mike to grid	.82, 50 ma	135K	a
H-3	Pl. to grid	15K	60K	a
H-4	Pl. to grid	15K, 4 ma	60K	a
H-5	Pl. to p-p	15K	95K CT	a
H-6	Pl. to p-p	15K, 4 ma	95K split	a
H-7	Pl. to line	20K CT, 4 ma	150/600	a
H-8	Mixing	150/600	600 CT	a
H-9	Input	150/600	1 meg.	a
H-10	Pl. to grid	10K	1 meg.	a
H-11	Reactor: 300 hys, 50 ma @ 3 ma, 600 ohms			a
H-12	Line to p-p.	50, 200 CT, 500 CT	50K CT	a
H-13	Interstage	10K/2.5K split	2K/.5K split	a
H-14	Interstage	10K/2.5K split	4K/1K split	a
H-15	Tr. to line	1.5K CT	500/125 split	a
H-16	Tr. to V.C.	2K/4K CT	8/16	a
H-17	Tr. Input	600/150 split	2K/500 split	a
H-18	Tr. Interstage	10K CT	500/125 split	a
H-19A	Input*	250 CT/500 CT	50K/100 CT	b
H-20	Interstage	15K split	80K split	b
H-21	Pl. to p-p	15K, 8 ma	80K split	b
H-219	Tr. Interstage	50K CT	500/125 split	a
H-22	Pl. to line	15K, 8 ma	50/200, 125/500	b
H-220	Tr. Interstage	500/125 split	500/125 split	a
H-221	Tr. Interstage	500/125 split	150/37.5 split	a
H-222	Split Inductor:	Series: 60 Mhy-80 ma, 4 ohms Parallel: 15 Mhy-160 ma, 1 ohm		a
H-224	Split Inductor:	Series: 1 Hy-20 ma, 60 ohms Parallel: .25 Hy-40 ma, 15 ohms		a
H-225	Tr. Interstage	100/25 split	40/10 split	a
H-23	P-p to line	30K split	50/200, 125/500	b
H-24	Inductor: 250 hys.	@ 5 mat, 65 hys. @ 10 mat		b
H-25	Mixing	500 CT	125/500	b
H-26	Interstage	10K/2.5K split	2K/500 split	b
H-27	Tr. to V.C.	500 CT	16/4 split	b
H-280	Interstage	200 CT	400 split	b
H-281	Tr. to V.C.§	48 CT	16, 8, 4	b
H-282	Tr. to V.C.††	20 CT	16, 8, 4	c
H-283	Mixing/ Matching	50, 125/150 200/250, 333 500/600	50, 125/150, 200/250, 333 500/600	b
H-284	Split Inductor:	Series: 4 Hys-50 ma, 100 ohms Parallel: 1 Hy-100 ma, 25 ohms		b
H-286	Split Inductor:	Series: 40 Hys-15 ma, 1000 ohms Parallel: 10 Hys-30 ma, 250 ohms		b
H-290	Shld. chopper	2500 e. s.	100K	b
H-291	Max. shld. chop.	2000/500 e. s.	312K	c
H-295	Shld. chopper	10K/2.5K e. s.	63K	f
H-30	Input	50	62,500	d
H-31	Pl. to grid	10K	90K	d
H-32	Pl. to line	10K, 3 ma	200	d
H-33	Output	30K, 1 ma	50	d
H-35	Inductor: 100 hys.,	20 hys. @ 1 ma,	4400 ohms	d
H-36	Interstage	25K, 0.5 ma	1K	d
H-37A	Tr. output	500 CT	50	d
H-38	Interstage	10K CT, 2 ma	1.2K CT	d
H-39	Interstage	10K CT, 2 ma	2K CT	d
H-40A	Tr. output	500 CT	600 CT	d
H-41A	Tr. output	1500 CT	600 CT	d
H-42A	Isol./Tr. Inter.	10K CT	10K CT	d
FHA-5	Tr. Input	5VO/125 split, 12 ma	5K/1250 split	FH
FHA-10	Tr. Input or Isol.	5K/1250 split, 4 ma	5K/1250 split	FH
FHA-15	Tr. Interstage	10K CT/2.5K split	200 CT/50 split	e
FHA-25	Tr. Interstage	20K CT/5K split	800 CT/200 split	e
FHI-3	Split Inductor:	Series: 60 Mhys-32 ma, 6 ohms Parallel: 15 Mhys-64 ma, 1.5 ohms		e
FHI-7	Split Inductor:	Series: 1 Hy-8 ma, 100 ohms Parallel: .25 Hy-16 ma, 25 ohms		e
FHI-11	Split Inductor:	Series: 2.4 Hys-2 ma, 160 ohms Parallel: .6 Hys-4 ma, 40 ohms		e

*Has 75 db shielding. †6000 ohms. ‡1500 ohms. §5 watts. ††10 watts.
#Case: a—RC-25. b—RC-50. c—RC-62. d—SM. e—FH. f—RC-37.
(See above and pg. T-9)

HERMETIC SEALED FILTER INDUCTORS TUBE and TRANSISTOR TYPE



METAL CASED TF4 TYPE H-70 thru H-79, H-164 thru H-173



MOLDED MIL TYPE TF5SX04ZZ H-105 thru H-109 & H-300

The multiple ratings for the "H" series of filter chokes suit these units for the complete gamut of military and industrial applications. Transistor supply units are swinging type to enhance regulation. H-79 terminals opposite mounting.

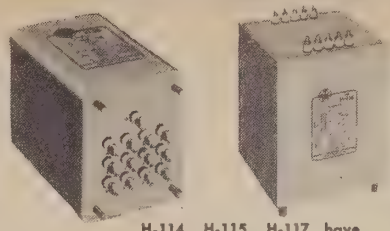
*Relates to ripple voltage, in input filter circuits only.

Type No.	Ind. Hys.	@ ma DC	Res. Ohms	Max. DCV* Ch. Input	Test V.- RMS	MIL Case Pg. T-12
H-70	20	20	925	350	1000	AH
H-71	20	40	350	500	2500	FB
H-72	13	70	215	500	2500	GB
H-73	11	100	180	700	2500	HB
H-74	11	150	135	700	2500	JB
H-75	11	200	90	700	2500	KB
H-76	11	200	85	1500	4500	LB
H-77	10	300	60	2000	5500	MB
H-78	7	400	48	2500	7000	OA
H-79	7	800	20	3000	9000	7x7x8
H-164 †	45‡	35	1.2		500	AG
(2 wdgs.) *	11.25‡	70	.295			
H-164 †	125‡	50	1.2		500	AH
(2 wdgs.) *	31‡	100	.3			
H-168 †	68‡	100	.8		750	AJ
(2 wdgs.) *	17‡	200	.2			
H-179 †	.18	125	.6		1000	GB
(2 wdgs.) *	.045	250	.15			
H-171 †	9‡	75A	.03		1000	JA
(2 wdgs.) *	2.25‡	1.5A	.0075			
H-172 †	70‡	.25A	.22		1000	HA
(2 wdgs.) *	17.5‡	.5A	.055			
H-173 †	90‡	.5A	.15		1000	KA
(2 wdgs.) *	22.5‡	1A	.038			
H-174†	90‡	.63A	.08		1000	MB
.2 wdgs.	12.5‡	1.3A	02			

Type No.	Inductance Henries @ DC MA	DCR Ohms	Test Volts	L	W	H	Wgt. Lbs.
H-105	2.5 @ 25 ma	225	1000	1¼	1 5/16	1 5/16	.1
H-106	2.25 @ 60 ma	110	1000	1¾	1 5/16	1 5/16	.28
H-107	2 @ 120 ma	55	2500	2⅛	1¾	1 5/16	.9
H-108	2 @ 220 ma	35	2500	2⅞	2½	2 1/32	1.7
H-109†	.2 @ 150 ma	.6	750	2⅞	2½	2 1/32	1.7
(2 wdgs.)*	.06 @ 250 ma	.15					
H-300 †	1 @ 5 ma	40	500	1	¾	2 3/32	0.5
(2 wdgs.)*	.25 @ 10 ma	10					

†Split winding in series *Split winding in parallel
‡Rated in millihenries

HERMETIC SEALED POWER and PLATE TRANSFORMERS



H-114, H-115, H-117 have terminals opposite mounting.

Power transformers: primary 115V, 60 Hz suited to 50* - 1000 Hz service. Plate transformers: primary 105/115/210/220 volts, 50/60 cycles. "L" ratings are choke input . . . "C" ratings are condenser input. H-80 thru H-197 MIL type TF4RX03, H-110 thru H-117 MIL type TF4RX02. The tapped high voltage winding provides either of two secondary voltages for greatest versatility. The power transformer listings indicate DC voltages and permissible currents for both choke and condenser input filters, as well as for military and industrial applications.

"W" suffix units designed for full wave center tap and full wave bridge application. Center tap of secondary may be disconnected from ground.

MIL-T-27C Ratings in Regular Type, Industrial Ratings in Bold Type

Type No.	HV Sec. C. T.		Approx. DC Volts	DC ma	Fil. Wdg.		Approx. DC Volts	DC ma	Fil. Wdg.	MIL Case Pg. T-12
H-80	450	C	240	30	6.3VCT-2A	C	215	38	6.3VCT-2.5A	FA
H-81	500	L	170	95		L	160	110		HA
		C	270	55	6.3VCT-3A	C	245	75	6.3VCT-3A	
	550	L	200	85	5V-2A	L	180	105	5V-2A	
		C	310	50		C	280	65		
H-82	550	L	180	145		L	160	190		JB
		C	290	90	6.3VCT-4A	C	270	115	6.3VCT-4.5A	
	600	L	215	135	5V-2A	L	190	180	5V-2A	
		C	330	85		C	315	100		
H-83	600	L	215	165		L	200	210		JA
		C	315	100	6.3V-5A	C	320	120	6.3V-6A	
	670	L	250	150	5V-2A	L	230	200	5V-2A	
		C	400	90		C	380	110		
H-84	700	L	245	225		L	240	255		KA
		C	390	135	6.3V-5A	C	375	160	6.3V-6A	
	750	L	275	205	6.3V-1A	L	270	230	6.3V-1.5A	
		C	430	125	5V-3A	C	410	150	5V-4A	
H-85	700	L	245	300		L	230	370		LA
		C	390	190	6.3V-6A	C	355	230	6.3V-6A	
	750	L	270	280	6.3V-1.5A	L	250	350	6.3V-2A	
		C	425	170	5V-3A	C	395	210	5V-4A	
H-86	720	L	270	310		L	250	360		MB
		C	425	180	6.3V-6A	C	395	225	6.3V-7.5A	
	790	L	295	300	6.3V-2A	L	280	350	6.3V-2A	
		C	475	160	5V-3A	C	440	210	5V-4A	
H-87	730	L	245	420		L	230	515		NB
		C	390	275	6.3V-6A	C	390	300	6.3V-6A	
	800	L	275	400	6.3V-2A	L	275	480	6.3V-2A	
		C	440	250	5V-4A	C	430	290	5V-6A	
H-89	850	L	305	430		L	275	550		OA
		C	460	280	6.3V-8A	C	445	340	6.3V-10A	
	1050	L	400	400	6.3V-4A	L	370	500	6.3V-5A	
		C	600	260	5V-6A	C	575	320	5V-6A	
H-91	900	L	340	200	6.3V-5A	L	330	220	6.3V-6A	KA
	1000	L	390	190	6.3V-1A 5V-3A	L	385	195	6.3V-1.5A 5V-4A	
H-92	900	L	340	265	6.3V-6A	L	330	310	6.3V-8A	MB
	1050	L	400	240	6.3V-2A 5V-4A	L	395	290	6.3V-2A 5V-4A	
H-93	1000	L	370	300	6.3V-8A	L	340	390	6.3V-10A	OA
	1200	L	465	265	6.3V-4A 5V-6A	L	455	350	6.3V-5A 5V-6A	
H-194**	200	L	170	140	6.3V-3.5A	L	160	155	6.3V-4A	HA
		C	275	85		C	260	95		
	235	L	200	125		L	190	135		
		C	325	75		C	310	85		
H-195**	215	L	185	285	6.3V-5A	L	175	300		JA
		C	300	180		C	285	195	6.3V-6A	
	265	L	230	240		L	220	255		
		C	375	150		C	360	165		
H-196**	230	L	200	445	6.3V-5A	L	190	480		KA
		C	320	280	6.3V-1.5A	C	300	300	6.3V-6A	
	285	L	250	380		L	240	420	6.3V-2A	
		C	400	235		C	380	260		
H-197**	260	L	230	500	6.3V-6A	L	220	550		MB
		C	360	320	6.3V-2A	C	340	350	6.3V-7A	
	320	L	280	420		L	270	470	6.3V-2A	
		C	450	260		C	430	290		
H-198 Highly shielded Scope transformer	No CT									HA
	800		1000	5	1.25 V—.2A connected to one					
	1600		2000	5	end of HV winding.					
	2400		3000	5	6.3 V—.6A 5.2 KV RMS test voltage					
H-110W #		L	730	210		L		280		MB
		L	860	190		L		265		
H-111W #		L	830	350		L		420		NA
		L	960	310		L		380		
H-112W #		L	1230	220		L		270		NA
		L	1580	190		L		230		
H-113	2500	L	1050	310		L		375		†
	3000	L	1275	275		L		330		
H-114	2500	L	1050	475		L		525		‡
	3000	L	1265	425		L		475		
H-115	3500	L	1500	275		L		375		‡
	4400	L	1900	235		L		320		
H-117	5000	L	2125	950		L		1150		††
	6000	L	2550	850		L		1050		

*For 50 Hz, secondary current ratings reduced by 10%
**DC ratings for bridge rectifier circuits.
†6x5⅛x6¾, ‡6¾x6½x8, ††11x11x14¾
#New full wave bridge rectifier types

IMMEDIATE DELIVERY ON ALL UTC STOCK ITEMS

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

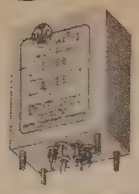
HERMETIC COMPONENTS

Designed, Manufactured and Successfully Tested to Complete MIL-T-27C Specifications.

MAT* MAGNETIC AMPLIFIERS FOR SERVO MOTOR APPLICATIONS

VACUUM TUBE TYPE

For NEW Magamps See UTC page T-2



The MAT 1-4 Magnetic Amplifiers are exceptionally stable units designed for the control of 2 phase, 115V., 400 Hz servo motors. They are compact . . . hermetically sealed . . . maanetically shielded . . . and meet MIL-T-27C and MIL-E-5400 Specifications. The output is sinusoidal, amplitude variable, and phase reversible. Control is provided by a dual triode such as 12AU7 operating with a plate voltage of 115 volts, 400 Hz, or higher. The signal to the triode grids can be polarity reversible DC or phase reversible 400 Hz with or without suppressed carrier modulation. These units eliminate DC power requirements as well as temperature sensitive dry disc rectifiers. The high input impedance provides minimum loading on sensing elements and high power gain. Ringing at low load level has been reduced to a minimum through high internal damping factors. The power output figures are conservative . . . power gain of the *Magnetic Structure* is approximately 40 . . . response time approximately 7.5 milliseconds. The maximum null voltage is 3 volts RMS. For single phase supply voltage the load capacitor should effect 90° phase shift with motor load . . . for 3 phase, 30° phase shift.

Type No.	MAT-1	MAT-2	MAT-3	MAT-4
230 Volt Supply				
Power output	4 W.	8 W.	11 W.	18 W.
Rl, ohms	3300	1600	1200	720
Cl, mfd., approx.	.2	.3	.5	.7
115 Volt Supply				
Power output	2 W.	4 W.	6 W.	9 W.
Rl, ohms	6500	3300	2200	1450
Cl, mfd.	.13	.2	.3	.45
Reson. Freq.	40 Hz	35 Hz	35 Hz	20 Hz
Log-Decr.	.18	.23	.03	.65
Cont. Wdg. Res.	6200 ohms	8450 ohms	4750 ohms	5650 ohms
Case, Length, in.	1¼	1½	1¾	2⅛
Width, In.	1⅝	2⅛	2½	3⅛
Height, In.	2⅜	2¾	2⅝	3⅜
Mtg. Dim., In.	⅜ x 1½	1 x 1⅝	1⅛ x 1⅞	1½ x 2½
Studs, stainless	4-40	6-32	8-32	8-32
Cutout, in.	1	1	1	1
Unit Weight, lbs.	.67	1.1	1.7	2.75

MAT-5 115V.-400 Hz to 460 VCT; provides 230V. 48 ma DC or 460V. 24 ma DC. RC-37 case (UTC pg. T-9). MIL-type TF4SY02YY.

MAT-6 Input . . . 10,000 ohms pri. . . . 1:15 C.T. ratio . . . phase shift under 1° . . . RC-25 case (UTC pg. T-6). MIL-type TF4R10YY.

TRANSISTOR TYPE

UTC transistor MAT units are identical to their vacuum tube counterparts, but designed for low impedance control. The input transformer may be chosen by impedance ratio rather than precise rated impedance.

Type No.	MAT-7	MAT-8	MAT-9	MAT-10	MAT-60
Power output	4 W.	8 W.	11 W.	18 W.	50 W.
Rl, ohms	3300	1600	1200	720	260
Cl, mfd approx.	.2	.3	.5	.7Ω	.7
Cont. Wind. Res.	38Ω	52Ω	30Ω	36Ω	50Ω
Case Length, In.	2⅝	2½	2¾	2 25/32	MIL MB
Width, In.	1 13/16	2¼	2½	2 25/32	
Height, In.	1 17/32	1 11/16	2	2¼	
Mtg. Dim., In	1⅜ x 1⅞	1 13/16 x 2	1 15/16 x 2⅜	2⅜ x 2⅜	60 cycle type
Studs, stainless	4-40	6-32	8-32	8-32	
Cutout, In.	1	1	1	1	
Weights, lbs.	.65	1.1	1.7	2.75	

MAT-11 115V.-400 Hz to two 28 Volt 2A windings for 56 VCT-.2A or 28V.-.4A RC-37 (UTC pg. T-9) case. MIL type TF4SY02YY

MAT-65 115V.-60 Hz to 8.5 VCT @ 500 ma & 63 VCT @ 300 ma. FA case (pg. T-12). MIL type TF4SX02FA.

ULTRASHIELDED POWER-LINE ISOLATION TRANSFORMERS

Simulates battery operation for critical circuits requiring extreme isolation from power line.



HIT*

Designed to give the ultimate in isolation, for line-powered equipment, which formerly could only be obtained from battery power. The effective capacity coupling between primary and secondary windings is less than 0.1 MMFD. For this purpose shields are individually terminated to allow maximum flexibility. Input and output terminals are brought out on opposite sides of a special housing in order to maintain the excellent isolation between line and load.

MIL-T-27C Ratings in Regular Type
Industrial Ratings in Bold Type
Primary 115 V 50/60 Hz

Type No.	Power Watts	Power Watts	Case Size
HIT-1	50	**60**	4 1/32 x 4 1/32 x 3 1/32"
HIT-15	120	**150**	5 1/32 x 5 x 3 1/2"
HIT-2	160	**200**	5 17/32 x 5 17/32 x 4 17/32"
HIT-3	400	**480**	8 x 6 17/32 x 5 17/32"
HIT-4	1000	**1200**	9 x 7 1/2 x 7 1/2"
HIT-450†	80	**100**	4 1/32 x 4 1/32 x 3 1/32"

† Primary 115v. 400 Hz. Secondary 115 volts.

PRECISION MINIATURE WIDE APPLICATION PULSE TRANSFORMERS MANUFACTURED & GUARANTEED TO COMPLETE MIL-T-21038B

UTC miniature, wound core, pulse transformers are individually precision adjusted in standard test circuits to close tolerances. They are high reliability units, hermetically sealed by vacuum molding and suited for service from −70° C. to +130° C. Wound core structure provides excellent temperature stability (unlike ferrite). Designs are high inductance type to provide minimum of droop and assure true pulse width. H-45 thru H-57 ratio 1:1:1. H-60 thru H-69 ratio 4:4:1. Others ratio 5:3:1.

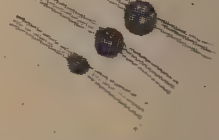
Also see pulse units on UTC pages T-1 & T-3.

ALL UNITS INDIVIDUALLY ADJUSTED TO PARAMETERS SHOWN IN TABLES

TRANSISTOR PULSE TRANSFORMERS

Type No.	APPROX. DCR, OHMS 1-2	3-4	5-6	BLOCKING OSCILLATOR PULSE Width μ Sec.	Rise Time	% Over Shoot	% Droop	% Back Swing	COUPLING CIRCUIT CHARACTERISTICS P Width μ Sec.	Volts Out	Rise Time	% Over Shoot	% Droop	% Back Swing	Imp. in, out, ohms
H-60	.124	.14	.05	.05	.016	0	0	30	.05	9.3	.012	0	0	20	50
H-61	.41	.48	.19	.1	.016	0	0	30	.1	8.2	.021	0	0	15	50
H-62	.78	.94	.33	.2	.022	0	0	18	.2	7.4	.034	0	5	12	100
H-63	1.86	2.26	.70	.5	.027	2	10	20	.5	7.5	.045	0	20	25	100
H-64	3.73	4.4	1.33	1	.033	0	12	25	1	7	.078	0	15	23	100
H-65	6.2	7.3	2.22	2	.066	0	15	25	2	6.6	.14	0	10	20	100
H-66	10.2	12	3.6	3	.087	0	18	30	3	6.8	.17	0	10	20	100
H-67	14.5	17.5	5.14	5	.097	0	23	28	5	7.9	.2	0	18	28	200
H-68	42.3	52.1	14.8	10	.14	0	15	28	10	6.5	.4	0	15	30	200
H-611	.426	.32	.132	.1	.018	8	0	12	.1	8.2	.02	0	0	30	140/50
H-641	5	3.6	1.4	1	.04	0	10	10	1	7	.07	0	20	30	280/100
H-671	21	16	6	5	.08	0	14	12	5	8	.2	0	25	30	560/200

H-69 Transistor pulse tranformer kit, consists of H-60 thru H-68 in plastic case.



Size & weight of these units same as H-45.

VACUUM TUBE PULSE TRANSFORMERS

Type No.	APPROX. DCR, OHMS 1-2	3-4	5-6	BLOCKING OSCILLATOR PULSE Width μ Sec.	Rise Time	% Over Shoot	% Droop	% Back Swing	COUPLING CIRCUIT CHARACTERISTICS P Width μ Sec.	Volts Out	Rise Time	% Over Shoot	% Droop	% Back Swing	DIMENSIONS Imp.in, out, ohms	L In.	W In.	Wt. Grams
H-45	3	3.5	4	.05	.022	0	20	10	.05	17	.01	20	0	35	250	⅜	⅜	1
H-46	5.5	6.5	7	.10	.024	0	25	10	.10	19	.01	30	10	50	250	⅜	⅜	1
H-47	3.7	4.0	4	.20	.026	0	25	8	.20	18	.01	30	15	65	500	9/16	9/16	4
H-48	5.5	5.8	6	.50	.03	0	20	5	.50	20	.01	30	20	65	500	9/16	9/16	4
H-49	8	8.5	9	1	.04	0	20	10	1	24	.02	15	15	65	500	9/16	9/16	4
H-50	20	21	22	2	.05	0	20	10	2	27	.05	10	15	35	500	9/16	9/16	4
H-51	28	31	33	3	.10	1	20	8	3	26	.07	10	10	35	500	9/16	9/16	4
H-52	36	41	44	5	.13	1	25	8	5	23	.15	10	10	45	1000	9/16	9/16	4
H-53	37	44	49	7	.28	0	25	8	7	24	.20	10	10	50	1000	5/8	5/8	6
H-54	50	58	67	10	.30	0	20	8	10	24	.25	10	10	50	1000	5/8	5/8	6
H-55	78	96	112	16	.75	0	20	10	16	23	.40	5	15	20	1000	5/8	5/8	6
H-56	93	116	138	20	1.25	0	25	10	20	23	.6	5	10	10	1000	5/8	5/8	6
H-57	104	135	165	25	2.0	0	30	10	25	24	1.5	5	10	10	1000	5/8	5/8	6
H-461	9.6	6.4	2.5	.1	.025	0	0	8	.1	19	.02	3	5	20	700/250	⅜	⅜	1
H-501	30	20	7	2	.08	0	12	5	2	27	.06	12	15	35	1400/500	9/16	9/16	4
H-531	66	47	17	7	.32	0	12	3	7	24	.23	12	10	40	2800/1000	5/8	5/8	6
H-561	180	142	53	20	1.75	0	13	5	20	23	.7	5	10	10	2800/1000	5/8	5/8	6

H-58 Pulse transformer kit. Consisting of H-45 thru H-57 in a partitioned plastic case.

UNITED® TRANSFORMER CO. **TRW**

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

HI-FI & BROADCASTING COMPONENTS

ULTRACOMPACT* HI-FI AUDIOS



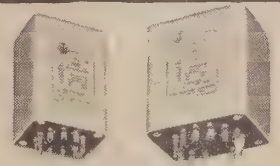
Small light weight, wide range units. Level +15 dbm except where otherwise noted. Top and bottom mounting. Die cast case, 1½" x 1½" x 2" h. Weight, ½ lb.

UTC Type	Application	Primary Impedance, Ohms	Sec. Imped., Ohms	#
A-10	Input	50, 125/150, 200/250, 333, 500/600	50K split	a
A-11	Shield. Input	50, 200, 500	50K CT	a
A-12	Input	Same as A-10	80K split	a
A-15	Interstage*	10K/2.5K split**	2K/500 sp.	c
A-16	Pl. to grid	15K	60K	a
A-18	Pl. to p-p	15K split	80K split	a
A-19	Pl. to p-p	15K, 8 ma	80K split	c
A-20	Mixing	Same as A-10	Same as pri.	d
A-21	Shield Mixing	50, 200/250, 500/600	Same as pri.	e
A-22	Tr. to line*	500 CT	500/125 spl.	c
A-23	Tr. to V.C.*	500 CT	16/4 split	c
A-24	Pl. to line	15K split	See A-10 pri.	f
A-25	Pl. to line	15K, 8 ma	See A-10 pri.	c
A-26	P-p to line	30K CT	See A-10 pri.	f
A-27	Input	100K split	See A-10 pri.	b
A-28	Tr. to V.C.	48 CT, 5 w. 25K/6250 split	16 (split), 8, 4 500/125 split	c b
A-35	Transistor	10K/2.5K split	500/125 split	b
A-36	Interstage	500/125 split	150/37.5 split	c
A-37		500/125 split	50/12.5 split	c
A-38		100/25 split	40/10 split	c
A-39	line to transist.	600/150 split	2K/500 split	a
A-30	Inductor: 250 hys. @ 5 ma†; 65 hys @ 10 ma†			
A-32 (2-wdgs.)	Split Filter Inductor	Series: 60 Hys @ 15 ma, 2000 ohms Parallel: 15 Hys @ 30 ma, 500 ohms		
A-33	Hipermalloy shield fits A units 20 db			
A-40	Power transformer: 115v 60 cycles to two 6.3 CT—.2A Secs.			
A-41 (2-wdgs.)	Split Filter Inductor	Series: 240 Mhy @ .2A, 6 ohms Parallel: 60 Mhy @ .4A, 1.50 ohms		
A-42 (2-wdgs.)	Split Filter Inductor	Series: 4 hys-50 ma, 100 ohms Parallel: 1 hy-100 ma, 25 ohms		
A-43	Matching to 2 simult. lines or Tr.	600/150 split	(2) 600/150 split	g
A-44	1st stge/output	4K/1K split, 12 ma	600/150 spl.	b
A-45	Spkr. match	4, 8, 16	4 w. max lvl.	c
A-46	Chopper	10K/2.5K	50K	.....
A-47	3-wdg. hybrd.	500/600CT	2 x 500/600CT	c
A-48	Hybrid	500/600	500/600 2 500/600 wdg	f

*+30 dbm. †6K ohms. ‡1.5K ohms. §2K ohms. ††500 ohms. **8 ma. #Frequency response (±2 db), cps: a—20-20,000. b—30-20,000. c—40-20,000. d—10-50,000. e—30-30,000. f—20-40,000. g—20-30,000.

HIPERMALLOY* TRANSFORMERS

Hipermalloy audio and power transformers are specifically designed for portable and compact service. High fidelity though light in weight and dependable. The frequency characteristic of the Hipermalloy audio units is uniform from 30 to 20,000 Hz. They incorporate a Hipermalloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Primary shown is maximum unbalanced.



TYPE H-2 CASE
Length ..... 3⅛"
Width ..... 2⅛"
Height ..... 3⅛"
Mounting 2 x 2¾"
Screws 6-32
Cutout 2⅛" dia.
Unit Wt. ..5 lbs.

TYPE H-1 CASE
Length ..... 2⅝"
Width ..... 1⅝"
Height ..... 3⅛"
Mount 1⅜ x 1⅜"
Screws 6-32
Cutout 1⅜" dia.
Unit Wt. ..2 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS
Units Housed in Type H-1 Case

UTC Type	Application	Primary Imped. Ohms	Sec. Imped. Ohms	Level dbm
HA-100	Line to grid	50, 125/150, 200, 250, 333, 500/600	60K split	+18
HA-100X	As above but multiple alloy shields for low hum pick up			+16
HA-101	Line to grids	Same as HA-100	120K split	+18
HA-101X	As above but muliple alloy shields for low hum pickup		80K split	+16
HA-103A	Mike/mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60	60K split	+18
HA-108*	Mixing	Same as HA-100	Same as Pri	+20
HA-108X*	As above but multiple alloy shields for low hum pick up			+18
HA-130X	Line to grids.	30, 50, 200, 250	60K Split	+18

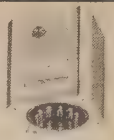
*High electrostatic shielding.

INTERSTAGE AUDIO TRANSFORMERS
Units Housed in Type H-1 Case, except HA-107: in H-2 Case

UTC Type	Application	Primary Imped. Ohms	Sec. Imped. Ohms	Level Mw.
HA-104	Pl. to grids	15K split	95K	100
HA-105	Pl. to grid	15K	60K	100
HA-106	Pl. to grids	15K split	135K	100
HA-107	Pl's. to grids	30K	80K	600
HA-137	Pl's. to grids	30K	68K	100

Continued on next column

LINEAR STANDARD* TRANSFORMERS



Guaranteed frequency response of ±1 db 20-20,000 Hz, ±1 db 7-50,000 Hz on high level units, make these ideal transformers for uniform frequency response and low distortion. High efficiency and dependability through shielding. Top and bottom mounting.

LOW LEVEL TRANSFORMERS

Type LS-1 case, 2⅝" x 3⅛" x 3¼" h. Suffix X indicates multiple alloy shield. Weight, 3 lbs.

UTC Type	Application	Pri. Imp., Ohms	Sec. mp., Ohms	Level, dbm
LS-10	Input	50, 125/150, 200, 250, 333, 500/600	60K split	+19
LS-10X	Input	As above	50K	+17
LS-12	Input	As above	120K split	+19
LS-12X	Input	As above	80K split	+17
LS-30	Mixing	As above	Same as pri.	+23
LS-30X	Mixing	As above	Same as pri.	+20
LS-19	Pl. to grids	15K	95K	+20
LS-21	Pl. to p-p	15K	135K split	+20
LS-40	Pl. to p-p	15K, 8 ma	135K split	+20
LS-25	P-P to p-p	30K split	50K split	+23
LS-27	Pl. to line	15K, 8 ma	See LS-10 pri.	+23
LS-50	Pl. to line	15K	See LS-10 pri.	+23
LS-51	P-p to line	30K split	See LS-10 pri.	+24
LS-14X	Lo-Z to grids	2.5, 5.5, 10, 15, 22, 30, 38, 60	50K	+17
LS-26	Line to grids	5K	60K	+23
LS-31	Line to line	30, 50, 200,250	See LS-10 pri.	+23
LS-32	Lo-Z to line	Same as LS-14X	See LS-10 pri.	+23
LS-68	Matching to 2 Simult. lines or Tr..	600/150 split	(2) 600/150 split	+15
LS-150	Line to line	4K	See LS-10 pri.	+23
LS-151	Line to line	16K	See LS-10 pri.	+26
LS-140	70 db hybrid	500/600 split	Same as pri.	+18
LS-141	Hybrid †	500/600 split	Same as pri.	+18

† Has 3 sets of coils.

HIGH LEVEL TRANSFORMERS

UTC Type	Application	Pri. Imped., Ohms	#	Level Watts
LS-33	Matching	50, 125/150, 200, 250, 333, 500/600	a	20
LS-34	Matching	As above	a	40
LS-47	Driver	5K	i	20
LS-48	Driver	12K	j	40
LS-6L1	P-p output	9K	b	30
LS-6L4	P-p output	4,500/3,800	b	55
LS-58	P-p output	2.5K/1.5K	b	40
LS-52	P-p output	8000	b	20
LS-55	P-p output	5K/3K split	b	20
LS-61	P-p output	10K/6K split	b	20
LS-54	P-p output	8000	c	20
LS-57	P-p output	5K/3K split	c	20
LS-63	P-p output	10K/6K split	c	20
LS-56	P-p output	5K/3K split	d	20
LS-35	EL-34's †	5K CT 43% taps	e	35
LS-65	6550's †	3.3K CT 40% taps	e	60
LS-666	P-p transistor	8 split	f	50
LS-667	P-p transistor	8 split	e	50
LS-691	Modulation	10,400	g	1,000
LS-692	Modulation	4,750	h	2,500

† With feedback. #Secondary Impedance: a—1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200/250, 333, 500/600 ohms. b—500, 333, 250/200, 125, 50, 30, 20, 10, 7.5, 5, 2.5, 1.2 ohms. c—30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. d—6K, 5K, 4K, 1.8K, 1.5K, 1K, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. e—4, 8; 16 ohms. f—500 ohms split. g—4.5K, 4K, 3.5K, 2.75K, 2K. h—2.5K, 2K, 1.75K, 1.5K, 1.25K. i—Pri./½ Sec. 3.2:1. j—Pri./½ Sec. 5.1:1.

Sizes: LS-33, -47, -52, -54, -55, -56, -57, -61, -63, 3½" x 4⅛" x 4⅛" h. (Wt., 7½ lbs.). LS-6L1, -6L4, -34, -35, -48, -58, -65, -666, -667, 5" x 5⅛" x 4¼" h. (Wt., 15 lbs.). LS-691,13" x 15¾" x 24"h. (Wt., 370 lbs.). LS-692, 13" x 15¾" x 28"h. (Wt., 520 lbs.).

Continued from bottom of previous column

PLATE TO LINE TRANSFORMERS
Units Housed in Type H-1 Case

UTC Type	Application	Prim. Imped. Ohms	Sec. Imped. Ohms	Level mw
HA-113	to multiple line	15K split	50, 125/150, 200, 250, 333, 500/600	125
HA-114	Lo-Z to multi-line	30K		200
HA-133	to multi-line	15K split		160

OUTPUT TRANSFORMERS
Units Housed in Type H-2 Case

UTC Type	Application	Prim. Imped. Ohms	Sec. Imped. Ohms	Level Watts
HA-134	P-p to line	5K/9.4K	50, 125/150, 200, 250, 330, 500/600	15
HA-135	P-p to V.C.	3K/5K	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	18
HA-136	5881's screen-taps	6.6K	4, 8, 16	20

POWER TRANSFORMERS
Units Housed: HP-122 in Type H-1 Case; HP-123 in Type H-2 Case

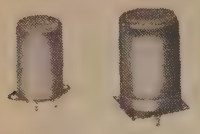
UTC Type	Application	Psi. Volt 50/60 ~	Hi-Volt	Fil. Wind
HP-122	Pre-amp	115	220-0-220 15 Ma	6.3 V.C.T.—.6A 6.3 V.C.T.—1.2A
HP-123	Pre-amp or Tuner	115	275-0-275 35 Ma	6.3 V.C.T.—.6A 6.3 V.C.T.—2A

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC

© United Technical Publications

COMMERCIAL GRADE COMPONENTS

DIMENSIONS, COMMERCIAL GRADE "RC" CASE



Performance insured during constant usage due to the ruggedness of this vacuum impregnated component with special sealing compound. Case, finished in light gray enamel, is ready for mounting on chassis. (All audio components linear).

Case No.	Base Dim.(Sq.)	Mounting Dim. (Sq.)	Ht., +⅛, −1/16	Cutout Dia.	Unit Wt. (Lbs.)
RC-37	1⅜	1⅛	1⅝	1¼	.35
RC-50	1⅝	1⅜	2¼	1½	½
RC-62	1 13/16	1½	2½	1½	1
RC-75	2¾	1 13/16	2⅞	1⅞	1½
RC-87	2 9/16	2 5/32	3¼	2	2½
RC-100	3	2⅝	3¾	2⅝	3½
RC-112	3 7/16	2 11/16	4⅛	2⅞	5
RC-125	3¾	3	4½	3	6½
RC-150	4½	3 9/16	5½	3¾	11
RC-152	5⅛	4⅛	5½	4	15½
RC-175	5¾	4⅞	7	4	22

SWINGING INPUT AND FILTER INDUCTORS

UTC Type	Induct. Henries	DC ma	DC Res. Ohms	Test Volts	Case No.
CG-40	10	200	110	1750	RC-112
CG-44	30	100	400	1750	RC-100
CG-45	250	15	5000	1750	RC-87
CG-48C	75	50	2200	1750	RC-87
CG-100	12	150	110	2500	RC-125
CG-102	12	250	100	3000	RC-150
CG-104	10	350	90	5000	RC-152
CG-108	10	500	52	7000	RC-175
CG-1S	10	1000	40	9000	11½ x 4¾ x 6⅞ H. Wt., 40 lbs.
CG-101	25/5	150	110	2500	RC-125
CG-103	25/5	250	100	3000	RC-150
CG-105	25/5	350	90	5000	RC-152
CG-109	25/5	500	52	7000	RC-175
CG-111§	100/10mh	2.5a.	.6	1500	RC-87
(2 wdgs)‡	25/2.5mh	.5a.	.15		
CG-112§	40/10mh	6 a.	.24	1500	RC-112
(2 wdgs)‡	10/2.5mh	12 a.	.06		
CG-113§	7/1.75mh	17.5a.	.036	1500	RC-125
(2 wdgs)‡	1.8/.45mh	35 a.	.009		
CG-1C	25/5	1000	40	9000	11½ x 4¾ x 6⅞ H. Wt., 40 lbs.

§Split winding in series. †Wt., 40 lbs. ‡Split winding in parallel.

PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts; 50/60 Hz. For reduced power, secondary can be cut in half, using 220 v. primary on 110 volts; may be used on 25 to 43 Hz in this case. "W" suffix units designed for full wave center tap and full wave bridge application. Center tap may be disconnected from ground.

UTC Type	High Voltage	DC Volts	Case No.
CG-300W	625-515-0-515-625	1000/800	RC-150
CG-301W	580-530-300-0-300-530-580	950/850/500	RC-152
CG-302W	950-750-0-750-950	1520/1220	RC-175
CG-303W	1500-1235-400-0-400-1235-1500	2500/2000 600	RC-175

POWER AND BIAS TRANSFORMERS

Primary 115 volts, 50/60 Hz. DCma is for choke input; reduce 70% for condenser input. Filament 1 is 5 volts, 3 amps., and Filament 2 is 5 volts, 2 amps., except as otherwise noted.

UTC Type	High Voltage	DC ma	Filament 3	Filament 4	Case No.
CG-422	435-365-0-365-435 125-0-125	125 25	6.3 VCT-3A	2.5 VCT-5A	RC-150
CG-428	500-0-500 80-0-80	250 100	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152
CG-429*	600-525-0-525-600	250	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152
CG-431†	500-400-0-400-500 80-0-80	500 100	6.3 VCT-5A	6.3 VCT-3A	RC-175
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6%—250 MA				RC-125
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6%—250 MA				RC-152

*Filament 2 is 6.3 VCT-3A. †Filament 1 is 5V-6A.

AUDIO UNITS

UTC Type	Use †	Pri. Imped., Ohms	Level	Case RC-
CG-131	a	15K	+28 dbm	50
CG-132	b	15K	+30 dbm	62
CG-133	c	30K CT	+32 dbm	75
CG-134	d	50, 200, 500	+30 dbm	50
CG-135	e	50, 200, 500	+30 dbm	50
CG-235	f	50, 200, 500	+28 dbm	75
CG-136	g	15K, 50, 200	+30 dbm	62
CG-137	h	50, 200, 500	+28 dbm	50
CG-140	i	15K	+30 dbm	50
CG-141	j	30K CT	+32 dbm	50
CG-233	k	30K CT	+35 dbm	87
CG-333	k	30K CT	+35 dbm	87
CG-433	k	5K CT	10 w.	100
CG-15	l	8K CT	20 w.	100
CG-16	l	3K/5K CT	20 w.	100
CG-19	l	6K/10K CT	20 w.	100
CG-710	l	14K/20K CT	20 w.	100
CG-216	l	9K CT	30 w.	125
CG-20	m	5K CT, 43% screen taps	25 w.	125
CG-21	m	3.3K CT, 40% screen taps	50 w.	150
CVP-1	n	3K/5K/6K/8K/10K/14K CT	12 w.	100
CVP-2	n	"	30 w.	125
CVP-3	n	"	60 w.	150
CVP-4	n	"	125 w.	152
CVP-5	n	"	300 w.	175
CVL-1	p	500	15 w.	87
CVL-2	p	500	40 w.	125
CVL-3	p	500	75 w.	150
CVM-0	q	Any Class B	12 w.	100
CVM-1	q	"	30 w.	125
CVM-2	q	"	60 w.	150
CVM-3	q	"	125 w.	152
CVM-4	q	"	300 w.	175
CVM-5	q	"	600 w.	†
CG-51AX	r	15K	5 w.	87
CG-53AX	r	3K/10K/ CT	20 w.	112
CG-59AX	r	50, 200, 500	20 w.	112

† 7" x 12" x 9"; Wt., 60 lbs. †a—Pl. to grid. b—Pl. to 2 grids. c—2 pl. to 2 grids. d—Input, humbucking. e—P-p input, humbucking. f—Input, mag. shielded. g—Dual input, humbucking. h—Mixing. i—Pl. to line. j—P-p to line. k—Driver. l—Output. m—Feedback output. n—Universal output. p—Universal matching. q—Universal modulator. r—Universal driver.

END CASTING UNITS

See note on "W" suffix units under plate transformers.

UCT Type	High Volt	DC Volt	L	W	H	Wt. Lbs.
CG-304W†	1500-1235-0-1235-1500	2.5K	2K	14⅝	8½	10⅜ 100
CG-305W†	2400-1750-0-1750-2400	4K	3K	10½	4¾	6⅞ 50
CG-306W†	as above	4K	3K	13⅞	8½	10⅜ 100
CG-307	3500-3000-2400-0-2400-3000-3500	3K 2K	2.5K	13⅝	8½	10⅜ 90
CG-308	as CG-307	3K 2K	2.5K	15⅛	8½	10⅜ 125
CG-309	as CG-307	3K 2K	2.5K	21	10	13¼ 253
CG-310	4600-4050-3500-0-3500-4050-4600	4K	3.5K 3K	17¼	10	13¼ 150
CG-311W	1500-1235-0-1235-1500	2.5K	2K	10½	4¾	6⅞ 50
CG-312	1800-1500-0-1500-1800	1.5K	1.25K	10½	4¾	6⅞ 38

† Full Wave Bridge Rectifier types.

VARIPOWER* AUTOFORMERS

Simultaneous control of filament, plate and line voltage. Filament voltage control within 2½%. Output voltage from 0 to 130 volts. 50/60 Hz. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts.

UTC Type	Watts Output	Case No.	Sugg. Net Ea.	UTC Type	Watts Output	Case No.
CVA-1	150	RC-112	$27.50	CVA-4	1000	RC-152
CVA-2	250	RC-125	31.50	CVA-5	2000	RC-175
CVA-3	500	RC-150	29.40			

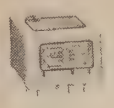
UNITED® TRANSFORMER CO. TRW®
UTC PAGE T-9 * UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

MINIATURE, OUNCER, SUBOUNCER & SUB-SUBOUNCER UNITS

SUBOUNCER*& SUB-SUBOUNCER*AUDIO TRANSFORMERS
TRANSISTOR & TUBE TYPES HERMETICALLY SEALED







Designed, Manufactured and Successfully Tested to complete MIL-T-27C Specifications.

UTC SSO-#P and SO-#P units are ideal miniaturized components having high efficiency and wide frequency response. Special nickel iron core materials and winding methods provide exceptional performance and reliability.

SO-#P UNIT Dim. ¾x1x2³⁄₃₂" Pin Length ¼" Wt. .....05 lb.

SSO-#P UNIT Dim. ¾x⅞x⁵⁄₁₆" Pin Length ¼" Wt. .....04 lb.

SML-70 ¹⁄₁₆x³⁄₁₆x⁵⁄₁₆" Wt. .2 oz.

These units are vacuum molded to MIL Grade 5. They employ 50 mil deeply anchored pin terminals ideally suited for printed circuit and transistor application. Terminals are strong enough to support these light weight units.

The UTC SML-70 is an ultra miniature transformer providing high shielding, extremely low insertion loss with wide band response, 200 Hz to 20 kHz. These units are provided with pin terminals (.025 dia.) strong enough to support the unit and are ideal for printed circuits.

PRINTED CIRCUIT AUDIO UNIT — HIPERMALLOY SHIELD CASE

Type No.	Application	Pri. Imp. ohms	Sec. Imp. ohms
SML-70	Input or Chopper Service	200K	1K

MIL TYPE: TF5RX16ZZ.

PRINTED CIRCUIT MOLDED TYPES TO MIL GRADE 5

Type No.	Application	Pri. Imp. ohms	Sec. Imp. ohms
SO-2P	Interstage/3:1	10K	90K
SO-3P*	Plate to Line	10K	200
		25K	500
SO-5P	Inductor: 40 hy at 1 ma, 2675 ohms, series; 4 hy at 4 ma, 670 ohms, parallel;		
SO-7P*	Transistor	20K	800
	Interstage	30K	1200
SO-8P	Transistor to PP Sec.	10K	2000 CT
SO-9P	PP Transistor to V.C.	500 CT	3.2
SO-14P	Transistor	80 CT	32 Split
	Interstage	100 CT	40 Split
SO-15P	Tr. output	600 CT	600 Split
SO-17P	Inductor: 16 hy at 2 ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel;		
SO-18P	Tr. output	50K CT	600 Split

MIL TYPES: TF5RX13ZZ: SO-3P, SO-7P, SO-8P, SO-18P; TF5RX15ZZ: SO-2P; TF5RX17ZZ: SO-9P, SO-14P, SO-15P, SO-17P; TF5RX20ZZ: SO-5P.

SSO-3P	Plate to line	10K	200
		25K	
SSO-5P	Inductor: 100 hy at 0 ma, 4.4K ohms, series; 25 hy at 0 ma, 1.1K ohms, parallel		
SSO-8P	Transistor to pp sec.	10K	2000 CT
SSO-14P	Transistor	10K CT	200 CT
	Interstage	25K CT	500 CT
SSO-15P	Transistor	20K CT	800 CT
	Interstage	30K CT	1200 CT
SSO-19P	Output matching	500 CT	600 CT
SSO-20P	Output	1.5K CT	600 CT
SSO-21P	Crystal/Chopper	200K CT	1000 CT
SSO-22P	Interstage	10K CT	1500 CT
		12K CT	1800 CT
SSO-23P	Inductor: 8 hy at 2 ma, 600 ohms, series; 2 hy at 4 ma, 150 ohms, parallel		
SSO-24P	Inductor: 3.5 hy at 2 ma, 160 ohms, series; 0.9 hy at 4 ma, 40 ohms, parallel		
SSO-25P	Transistor	10K CT	10K/
	Interstage		2.5K spl.
SSO-27P	Tr. Output	4K CT 2.5 ma	600 spl.

MIL TYPES: TF5RX13ZZ: SSO-3P, SSO-8P, SSO-14P, SSO-15P, SSO-20P, SSO-22P, SSO-25P, SSO-27P; TF5RX16ZZ: SSO-21P; TF5RX17ZZ: SSO-19P; TF5RX20ZZ: SSO-5P, SSO-23P, SSO-24P.

SUB-SUBOUNCERS*AND SUBOUNCERS*



Lead mounted (channel available as separate item) miniature nickel iron core units for transistor or vacuum tube circuits. Plastic mounted leads. SSO Sub-Subouncers: Approx. 2 db, 140-10,000 Hz; +20 VU except inputs +7 VU. (⁷⁄₁₆" x ¾" x ⁴³⁄₆₄"; wt., .02 lb.) SO Subouncers: Approx. 2 db, 100-10,000 Hz; +24 VU except inputs +10 VU. (1³⁄₃₂" x ⁴³⁄₆₄" x ⅞"; wt., .03 lbs.)

UTC SSO-	Application	Pri. Imp., Ohms	Sec. Imp., Ohms	UTC SO-
1	Input	50/200	62.5K/250K	1
2	Interstage	10K, .25 ma	90K	2
3	Pl. to line	10K/25K, 1.5 ma	200/500	3
4	Output	30K, 1 ma	50	4
5	Inductor:	50 hys. @ 1 ma	4400 ohms#	5‡
6	Output	100K, .5 ma	60	6
7	Tr. intrstg.°	20K/30K†	80/1200	7
8	Tr. intrstg.	10K, 1 ma	2K CT	8
9	Tr. to V.C.	10K, 2 ma	16	.....
.....	Tr. to V.C.	500 CT	3.2	9
10	Tr. to V.C.	10K, 2 ma	3.2	.....
.....	Tr. to V.C.	2K/4K CT	8/16	10
11	Tr. Output	500/600§	50/60	.....
.....	Transist. Int.	400/500 CT	400/500 Split	11
12	Tr. Output	1K/1.2K††	50/60	.....
.....	Transist. Int.	400/500 CT	120/150 Split	12
13	Input	200K	1K	.....
.....	Transist. Int.	400/500 CT	40/50 Split	13
14	Tr. intrstg.	10K/25K CT	200/500 CT	.....
.....	Transist. Int.	80/100 CT	32/40 Split	14
15	Tr. intrstg.	20K/30K CT	.8K/1.2K CT	.....
.....	Tr. output	600 CT, 5 ma	600 Split	15
16	Tr. output	1.2K/1.5K††	3.2/4	.....
.....	Tr. intrstg.	2.5K CT, 4 ma	2500 Split	16
17	Output	10K/12.5K**	500/600 CT	.....
.....	Inductor: 16 hy at 2ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel			17
18	Output	10K/12.5K CT	3.2/4	.....
.....	Tr. Output	50K CT	600 Split	18
19	Matching	500 CT	600 CT	.....
20	Output	1.5K CT	600 CT	.....
21	Chopper	200K CT	1K CT	.....
22	Tr. intrstg.	10K/12K CT	1.5 K/1.8K CT	.....
23	Inductor: 4 hys @ 5 ma, 650 ohms			
24	Inductor: 1.5 hys. @ 5 ma, 160 ohms			
25	Transist. Int.	10K/12K CT	10K/12 CT	.....
26	Transist. Int.	40K/50K CT	400/500 Split	.....
27	Tr. output	4K CT, 2.5 ma	600 Split	.....
CH	Mounting channel for any of above			CH

†0.5 ma. ‡Resis., 2675 ohms. §3.5 ma. **2 ma. ††3 ma. #DC resis.

OUNCER*AUDIO UNITS
Standard and Plug-in Types



UTC ouncer components provide wide range ±1 db, 30 to 20,000 Hz (except Nos. 0-14 and 0-15). O unit case: ⅞" Dia x 1³⁄₁₆" H, Wt: 1 oz. (except 0-16; heavy shielding case 1¹⁄₁₆" Dia x 1½" H, Wt: 3 oz.) P unit case: 1³⁄₃₂" Dia x 1¹³⁄₃₂" H, Wt: 2 oz. (except P-16: heavy shielding case 1³⁄₁₆" Dia x 2¾" H, Wt: 4 oz.)

UTC No.	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	UTC No.
O-1	Input	50, 200, 500	50K	P-1
O-2	P-p input	50, 200, 500	50K CT	P-2
O-3	Input	7.5/30	50K	.....
O-4	Pl. to grid	15K	60K	.....
O-5	Pl. to grid	15K, 2 ma	60K	.....
O-6	Pl. to p-p	15K	95K CT	P-6
O-7	Pl. to p-p	15K, 2 ma	95K CT	P-7
O-8	Pl. to line	15K	50, 200, 500	P-8
O-9	Pl. to line	15K, 2 ma	50, 200, 500	P-9
O-10	P-p to line	30K CT	50, 200, 500	P-10
O-T1	Cryst. out.	50K	50, 200, 500	P-11
O-12	Mixing	50, 200,	50, 200, 500	P-12
O-13	Inductor	300 Hys-0 ma; 6000 ohms		.....
O-14	50:1 input	200	500K	.....
O-15	10:1 P/G	15K	1 meg.	P-15
O-16	Shld. input	250 CT	50K	P-16
O-17	Hipermalloy shield, 25 db, for Ouncers			.....
O-18	Tr. intrstg.	10K split	2K split	.....
O-19	Tr. intrstg.	10K split	4K split	.....
O-20	Tr. to line	1.5K CT	500 split	.....
O-21	Tr. to V.C.	2K/4K CT	8/16	.....
O-22	Tr. to V.C.	500/400 CT	4/3.2	.....
O-23	Inductor 7 Hys-3 ma; 230 ohms			.....
O-24	Inductor 1.6 Hys-3 ma; 25 ohms			.....
O-25	Transist. Input	600/150 split	2K/500 split	.....
O-26	Transist. Int.	10K CT 4 ma.	10K CT	.....
O-27	Transist. Int.	10K CT 4 ma.	500/125 split	.....
O-28	Transist. Int.	50K CT. 2 ma.	500/125 split	.....
O-29	Transist. Int. or chopper	100K CT 1 ma.	500/125 split	.....
O-30	Transist. Int.	500/125 split	500/125 split	.....
O-31	Transist. Int.	500/125 split	150/37.5 split	.....
O-32	Transist. Int.	500/125 split	50/12.5 split	.....
O-33	Transist. Int.	100/25 split	40/10 split	.....
O-34	Split Inductor	Series: 60 Mhy-80 ma; 4 ohms Parallel: 15 Mhy-160 ma; 1 ohm		
O-36	Split Inductor	Series: 1 Hy-20 ma; 60 ohms Parallel: .25 Hy-40 ma; 15 ohms		
O-37	Tr. to line	4K/1K spl., 4 ma	650/150 split	
O-38	Spkr. match	0, 4, 8, 16 ODC		....
O-BR	Mounting U-bracket for ouncers			

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

AMATEUR & PUBLIC ADDRESS TRANSFORMERS "S"* SERIES

DIMENSIONS, SPECIAL SERIES TRANSFORMERS



G-1 thru G-4 G-5 thru G-12

UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. These units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided, permitting above chassis or breadboard wiring in addition to standard chassis type.

G-CASE SIZES

Case	Height, In.	Width, In.	Depth, In.	Wt., Lbs.
G-1	1 7/8	2 13/16	1 3/4	1
G-2	2 5/16	3 3/8	1 15/16	1 1/2
G-3	2 1/2	3 3/4	2 5/32	2
G-4	2 15/16	4 1/8	2 5/16	3
G-5	3 3/4	3 1/8	4 1/2	4 1/2
G-7	4 5/8	4 5/8	5 1/2	8
G-8	4 5/8	5 3/8	5 3/8	12
G-9	5 7/8	5 3/8	6 3/4	21
G-10	5 7/8	6 1/8	6 5/8	24
G-11	5 7/8	6 1/2	7 3/8	31
G-12	10 1/4	7 3/8	9 1/4	52

INPUT AND DRIVER TRANSFORMERS

Type UTC	Application	Ratio Pri. to Sec.	Level	Case
S-2	Plate to p-p grids	1:4†	+30 dbm	G-2
S-3	Pl. to 1 or 2 grids	1:4†	+25 dbm	G-1
S-5	Line to grid, humbkg.	1:16	+30 dbm	G-2
S-6	Line to grid, compact	1:16	+25 dbm	G-1
S-8	Driver pl. to p-p	2.66:1, 5:1†	5 w.	G-3
S-9	Driver p-p to p-p	2.66:1, 3.6:1 5:1†	20 w.	G-4
S-10	Driver p-p to p-p	2.25:1 †	5 w.	G-3

† Center tapped.

MATCHING, OUTPUT AND MODULATION UNITS

UTC Type	Application	Pri. Imped., Ohms	†	Level, Watts	Case
S-11	Pl. to line	15K	a	.25	G-2
S-12	Line to V.C.	.5K/2K/4K	b	15	G-2
S-13	Line to V.C.	.5K/2K/4K	b	30	G-4
S-14	Output	2.5K/4K/7K/10K	c	10	G-2
S-15	PP output	4K/5K/10K CT	c	12	G-2
S-16	PP output	3K/6K/9/10K CT	c	30	G-4
S-17	PP output	3.8K/4.5/5K CT	c	55	G-5
S-18	Univ. modul.	Any Class B	d	12	G-3
S-19	Univ. modul.	Any Class B	d	30	G-4
S-20	Univ. modul.	Any Class B	d	55	G-5
S-21	Univ. modul.	Any Class B	d	110	G-7
S-22	Univ. modul.	Any Class B	d	250	G-9

†Secondary Impedance: a—200/500 ohms. b—2, 4, 8, 15 ohms. c—2, 8, 15, 500 ohms. d—Any Class C.

FILTER, SWINGING AND AUDIO INDUCTORS

Type	Henries	ma DC	Ohms	Insul.	Case
S-23§	300	5	5000	1500 v.	G-2
S-24‡	500	3	6000	1500 v.	G-2
S-25	30	30	800	1500 v.	G-2
S-26	12	60	250	1500 v.	G-2
S-27	25	75	350	1500 v.	G-4
S-28	20	100	350	1500 v.	G-4
S-29	6	175	90	1500 v.	G-4
S-30†	4/20	175	90	1500 v.	G-4
S-31	6	225	100	2700 v.	G-5
S-32†	4/20	225	100	2700 v.	G-5
S-33	8	300	100	4000 v.	G-7
S-34†	4/20	300	100	4000 v.	G-7
S-35	8	400	60	5000 v.	G-8
S-36†	4/20	400	60	5000 v.	G-8
S-37	8	550	60	6000 v.	G-8
S-38†	4/20	550	60	6000 v.	G-8
S-80	50/10 Mhy	1.75A	.5	500 v.	G-1
S-81 (2Wdgs)	100/8 Mhy 25/2 Mhy	2.5A 5A	.6 .15	1500 v.	G-3

§Audio. ‡P.P. Audio C. T. †Swinging.

Information on components in this box listed on UTC page T-12.

REPLACEMENT TYPE COMPONENTS

The shells and brackets of these vacuum sealed components are finished in shiny black enamel. A minimum number covers any replacement requirement.

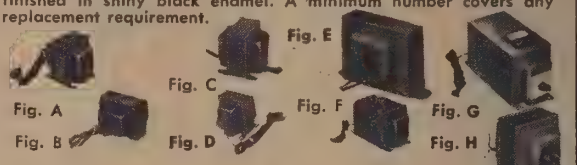


Fig. A Fig. B Fig. C Fig. D Fig. E Fig. F Fig. G Fig. H

FILAMENT TRANSFORMERS

Primary Tapped 105, 115 Volts, 50-60 Hz.

UTC Type	Secondary Volts	Secondary Current	Insulation	Case No.
S-53	2.5 VCT	10 Amp	1500 V	G-3
S-54	5 VCT	4 Amp	2500 V	G-3
S-55	6.3 VCT	3 Amp	1500 V	G-3
S-57	2.5 VCT	10 Amp	10000 V	G-5
S-58	2.5 VCT	20 Amp	10000 V	G-5
S-59	5 to 5.25 VCT	13 Amp	5000 V	G-5
S-60	5 to 5.25 VCT	22 Amp	10000 V	G-7
S-61	7.5 VCT tapped 6.3 VCT	10 Amp	3000 V	G-5
S-62	10 VCT	10 Amp	3000 V	G-5
S-63	14 VCT tapped 12 VCT & 11 VCT	10 Amp	5000 V	G-7

Type	Filament 1	Filament 2	Filament 3	Case
‡S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	G-5
‡S-67	5 VCT-6A	6.3 VCT-5A	-	G-5
‡S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	G-5
‡S-70	6.3 VCT-5A	6.3 VCT-5A	.....	G-5
§S-71	2.5 VCT 6A	2.5 VCT-6A	2.5 VCT-12A	G-7
†S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	G-5

§Insulation 10,000 v. †Insulation 5000 v. ‡Insulation 3000 v.

COMBINED PLATE AND FILAMENT TRANSFORMERS

Primary 115 V., 50-60 Hz

UTC Type	Voltage	DC V.	Rect. Fil.	Filament No. 1	Filament No. 2	Case No.
S-39	490-400-0-400-490 175 ma	400/310	5V-3A	2.5 VCT-6A	6.3 VCT-4A	G-7
S-40	525-425-0-425-525 250 ma	400/310	5V-3A	6.3 VCT-3A	6.3 VCT-3A	G-7
S-41	600-0-600 200 ma	475	5 V-3A	7.5 V tapped 6.3 V-3A	6.3 VCT-2A	G-7
S-42	600-525-0-525-600 300 ma	480/400	5 V-6A	7.5 V tapped 6.3 V-3A	6.3 VCT-3A	G-7

PLATE AND BIAS TRANSFORMERS

Primary 115 V. 50/60 Hz.

UTC Type	2.5 VCT-12A High Voltage	DC Voltages †	DC Ma	Case
S-44	575-525-0-525-575	470/430	500	G-9
S-45	900-750-0-750-900	750/620	200	G-8
S-46	1000-750-0-750-1000	825/600	300	G-9
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300	G-10
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500	G-11
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300	G-11
S-50	3000-2500-0-2500-3000	2625/2175	300	G-12
S-51	Any bias voltage from 15 to 100 ± 6%		200	G-5
S-52	Any bias voltage from 75 to 400 ± 6%		200	G-7

†Based on two section filter for 200 ma. and 300 ma. units. Single section filter for 500 ma. units, both choke input.

CONTACT YOUR LOCAL DISTRIBUTOR FOR CURRENT PRICES & DISCOUNTS

UNITED® TRANSFORMER CO. TRW®

UTC PAGE T-11

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

TRANSFORMERS FOR INDUSTRY WIDE APPLICATIONS

DOUBLE SHELL POWER TRANSFORMERS (FIG. B SEE PG. T-11)

Rectifier filaments 5 volts, 3 amps except R-101, 2 amps.

UTC Type	High V.	DC ma	Amplifier Filament	Overall Height	Wt., Lbs.
R-101	275-0-275	50	6.3 v. CT-2.7A	3"	2½
R-102	350-0-350	70	6.3 v. CT-3A	3⅝"	3½
R-103	350-0-350	90	6.3 v. CT-3.5A	3¹⁵⁄₁₆"	4½
R-104	350-0-350	120	6.3 v. CT-5A	3⅞"	5½
R-105	385-0-385	160	6.3 v. CT-5A	4⅝"	7

VERTICAL SHELL POWER TRANSFORMERS (FIG. C SEE PG. T-11)

Rectifier filaments 5 volts, 3 amps., except R-110, 2 amps.

R-110	300-0-300	50	6.3 v. CT-2.7A	3¼"	2½
R-111	350-0-350	70	6.3 v. CT-3A	3¼"	3½
R-112	350-0-350	120	6.3 v. CT-5A	4"	5½
R-113	400-0-400	200	6.3 v. CT-6A	4⅝"	8

CHANNEL FRAME FILTER INDUCTORS (FIG. E SEE PG. T-11)

Inductance Shown is at Rated D.C. ma .—Test Volts RMS: 1500

Type No.	Induct. Hys.	Current	Resist. Ohms	Dimensions, in. W	D	H	M	Wt. Lbs.
R-55	6	40 ma	300	2⅜	1⅜	1⅜	2	½
R-14	8	40 ma	250	2⅞	1½	1¹¹⁄₁₆	2⅜	¾
R-15	12	30 ma	450	2⅞	1½	1¹¹⁄₁₆	2⅜	¾
R-16	15	30 ma	630	2⅞	1½	1¹¹⁄₁₆	2⅜	¾
R-17	20	40 ma	850	3⅝	1⅝	2	2¹³⁄₁₆	1
R-18	8	80 ma	250	3⅝	1⅝	2	2¹³⁄₁₆	1
R-19	14	100 ma	450	3¾	1⅞	2⅝	3⅛	1½
R-20	5	200 ma	90	4⅛	2¼	2⅝	3⅜	2½
R-21	15/3	200 ma	90	4⅛	2¼	2⅝	3⅜	2½
R-220	100/8 Mhy.	2.5A	.6	3¾	2	2⅝	3⅛	1½
	25/2 Mhy.	5A	.16					

PHOTOFLASH TRANSFORMERS

STANDARD 982

Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash tubes. Circuit details included with transformer.

PF-1 Primary for 115 volts, 50/60 Hz. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 (UTC page T-11) case 2⅛ x 2¾ (3¾ including flanges) x 2½ inches high. Wt. 2 lbs.

PF-3 Trigger Transformer 15 KV peak. ⅞ O.D.x3 long. Weight 2 oz.



PF-6

TRANSISTOR TYPE

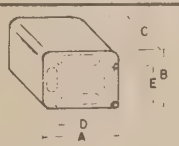
These are miniaturized light weight units for transistor type photoflash supply.

PF-5 Primary for 115 volts, 50/60 Hz or for 4½ V. battery switched by PF-6 inverter transformer. Output delivers 400 V. DC when used in voltage doubler circuit to charge photoflash capacitor (typically 40 watt-Sec.). G-1 case (UTC page T-11)

PF-6 Inverter transformer transforms 4½ V. DC from battery to input for PF-5 stepup transformer. Ouncer case (UTC page T-11)

PF-7 Trigger transtormer. Shorting .25 mfd. capacitor (charged to approx. 225 V. DC) across terminals 1-2 produces 6 KV pulse at terminal 3 for triggering flash tube. ⅞" Dia. x 1⅝"; Wt. ½ oz.

MIL-T-27C CASE SIZES



MIL Case	Size, Inches: Dimension A	B	C	D	E	Mtg. Studs
AF	¾	¾	1⅛	Diag.	⅜	4-40 x ⅜
AG	1	1	1⅜	Diag.	¾	4-40 x ⅜
AH	1⅜	1⅜	1¾	Diag.	1¼	6-32 x ⅜
AJ	1⅜	1⅜	2⅜	1¾	1⅜	6-32 x ⅜
EA	1¹³⁄₁₆	1¹³⁄₁₆	2¾	1⅜	1¼	6-32 x ⅜
EB	1¹³⁄₁₆	1¹³⁄₁₆	2⅞	1⅜	1¼	6-32 x ⅜
FA	2⅝	2⅛	3⅛	1¹¹⁄₁₆	1⅞	6-32 x ⅜
FB	2⅝	2⅛	2½	1¹¹⁄₁₆	1⅞	6-32 x ⅜
GA	2¾	2⅜	3¹³⁄₁₆	2⅛	1¾	6-32 x ⅜
GB	2¾	2⅜	2¹³⁄₁₆	2⅛	1¾	6-32 x ⅜
HA	3⅛	2⅝	4¼	2¹³⁄₁₆	1⁵⁵⁄₆₄	8-32 x ⅜
HB	3⅛	2⅝	3¾	2¹³⁄₁₆	1⁵⁵⁄₆₄	8-32 x ⅜
JA	3⅛	3⅛	4⅞	2⅝	2⅛	8-32 x ⅜
JB	3⅛	3⅛	3⅞	2⅝	2⅛	8-32 x ⅜
KA	3¹⁵⁄₁₆	3⅜	5¼	3	2⅜	10-32 x ½
KB	3¹⁵⁄₁₆	3⅜	4⅝	3	2⅜	10-32 x ½
LA	4⅝	3¹¹⁄₁₆	5⅜	3⅝	2¹¹⁄₁₆	10-32 x ½
LB	4⅝	3¹¹⁄₁₆	4½	3⅝	2¹¹⁄₁₆	10-32 x ½
MA	4¹¹⁄₁₆	4	6	3¹¹⁄₁₆	3	¼-20 x ⅝
MB	4¹¹⁄₁₆	4	4¹⁵⁄₁₆	3¹¹⁄₁₆	3	¼-20 x ⅝
NA	5⅛	4⅜	6¹³⁄₁₆	4⅛	3⅝	¼-20 x ⅝
NB	5⅛	4⅜	5½	4⅛	3⅝	¼-20 x ⅝
OA	5½	4½	6¾	3¾	3	¼-20 x ⅝

STEP-DOWN AUTO-TRANSFORMERS (FIG. A SEE PG. T-11)

With 6-ft. cord and female receptacle, except R-64; 220/240 to 110/120 v., 50/60 Hz.

UTC Type	Rating	Size, Inches L.	W.	H.	Wt., Lbs.
R-41	85 watt capacity	3⅜	2⅝	3⅛	4
R-42	125 watt capacity	3½	3	3½	5
R-43	175 watt capacity	3¾	3¼	3⅞	5½
R-44	250 watt capacity	4⅜	3¼	3⅞	6½
R-45	500 watt capacity	4⅝	3⅞	4⅝	12
R-46	1200 watt capacity	6⅞	3⅞	4⅝	18
R-64	2500 watts, no cord	10½	4¾	6¾	30

ISOLATION TRANSFORMERS (FIG. F SEE PG. T-11)

Ideal for isolating line noise. AC-DC sets, etc. Excellent electrostatic shielding 1500 volt breakdown test. Six foot cord and female receptacle, except R-77.

Primary 110-120 volts 50/60 Hz—Secondary 110-120 volts
Except R-97 220 volt Primary—120 volt Sec.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-72	40	3⅛	2⅝	3⅛	2x1⅞	4
R-73	100	3¾	3¼	3⅞	2½x2⅜	6
R-74	250	4⅞	3⅞	4⅝	3x3½	12
R-75	600	7⅜	3⅞	4⅝	3x5⅞	20
R-76	1200	8½	4½	6⅛	3⅝x6⅝	30
R-77	2500	12	7	9	6x11	70
R-97	250	4⅞	3⅞	4⅝	3x3½	12

LINE VOLTAGE ADJUSTERS WITH METERS (FIG. H SEE PG. T-11)

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage. These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly. The nine-tap switch provides for line voltage of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output model. All units are designed for 50/60 Hz service and come complete with 6 foot input cord and plug and outlet receptacle.

Type No.	Primary Voltages	Sec. Volts	Watts Ratings	L	W	H	Wgt. Lbs.
R-78	†	115	150	7	4	4¾	6
R-79	†	115	300	7	4	4¾	9
R-80	†	115	600	10¼	4	4¾	13
R-81	†	115	1200	10¼	4	4¾	21
R-86	‡	230	1200	10¼	4	4¾	21

† 60, 70, 80, 90, 100, 110, 120, 130, 140
‡ 160, 170, 180, 190, 200, 210, 220, 230, 240

EXPORT VOLTAGE ADAPTER (FIG. D SEE PG. T-11)

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 Hz. Output voltage 115.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-47	85	4¾	3	3½	2¼x2⅝	4½
R-48	150	4¾	3¼	4	2½x2¾	5½

TV VOLTAGE REGULATOR (FIG. D SEE PG. T-11)

Complete with cord, plug, and special locking switch. Permits operation of 115 volt 50/60 Hz TV sets on line voltages of 85, 90, 95, 100, 105, 110, 120, 125 V.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-49	350	4¹³⁄₁₆	3¼	4	2½x2¹³⁄₁₆	5

SIGNALLING & CONTROL TRANSORMERS (FIG. HSEE PG. T-11)

Primary 110-220 volts, 50/60 Hz — Secondary
4/8/12/16/20/24 volts

High power transformers suitable for operating relays, sirens horns, gongs, etc. from 115 V. 50/60 Hz line. These units have four secondary terminals providing 4, 8, 12, 16, 20 and 24 volt output. The volt ampere rating is based on the 24 volt secondary tap with corresponding reduction at the lower voltages. Underwriters' approved primary leads are employed, and screw-type binding posts.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
SC-3	50	3	3⅛	3⅜	1¾x2¼	3
SC-4	100	3¼	3⅜	4	2⅛x2½	5
SC-5	250	4	4⅝	4¾	3⅜x3	10

IMMEDIATE DELIVERY ON ALL ITEMS

* UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1970 United Transformer Co., Div. of TRW INC.

© United Technical Publications

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

Amperex

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

POWER TUBES—TETRODES & PENTODES

TYPE NO.	FILAMENT Volts	FILAMENT Amps	MU GRID #1 TO GRID #2	MAX. DISS. WATTS	TYPICAL OPERATION PLATE Volts DC	PLATE Amps DC	PLATE Output Watts	GRID Volts DC	GRID mA DC	SCREEN Volts DC	MAX. FREQ. MHz Full Input	INTERELECTRODE CAPACITANCE—pF G.P.	G.F.	P.F.	DESCRIPTION
SD605	2	3.45		CCS=2x7.5 ICAS=2x10 PTTS=2x25	PTTS 580	PTTS 200 mA	PTTS 66	PTTS −88	PTTS 3.8	PTTS 176	175	0.15	Input 8.8 Output 4.1		Radiation cooled, beam power tetrode which provides full output power in less than ½ second. It is designed for use as an RF power amplifier, oscillator, and frequency multiplier in mobile transmitting equipment up to 175 MHz.
SD646	6.3	120	7.5	6k	5.5k	1.7	grounded grid 6.3	−115	25	600	250	Input 48 Output 15.8		0.16	Air cooled coaxial power tetrode designed for use as a linear RF power amplifier in VHF television service.
SD647	8	120	8.5	12k	7.5k	2.5	grounded grid 13k	−125	90	650	250	Input 53.5 Output 17.7		0.1	Air cooled coaxial power tetrode designed for use as a linear RF power amplifier in VHF television service.
SD648	4.2	53	16	1.5k	3k	700	930	−23	60	500	250	Input 30 Output 10		0.1	Air cooled coaxial power tetrode designed for use as a linear RF power amplifier in VHF television service.
SD652	6.3	120	9	6k	6k	1.5	5.7k	−75	70	500	110	0.3	Input 70 Output 16		Air cooled coaxial power tetrode of all metal-ceramic construction. It is designed for use in VHF transmitter final amplifiers with transistorized drivers. It incorporates a unique new design called inverted construction which utilizes the center contact as the control grid contact. This innovation precludes the need for crossover wiring when the tube is to be used as a grounded cathode amplifier in a cavity type circuit.
SD653	8	120	8	6k	7.5k	2.4	11.7k	−90	175	175	110	0.3	Input 85 Output 17		
RS1032C	4.1	130	6	10k	5k	3	11k		120		790	0.22	53	0.09	Forced-air cooled power tetrode designed especially for UHF television transmitters.
RS1052C	3.2	80	4.2	3.5k	3.3k	1.3	2.5k		30		790	0.17	28	0.05	Forced-air cooled tetrode designed especially for UHF television transmitters.
RS1082CL RS1082CW RS1082CV	10 10 10	200 200 200		25k 30k 45k	8k 8k 8k	5.9 5.9 5.9	30k 30k 30k	−170 −170 −170		1200 1200 1200	30 30 30	1.3 1.3 1.3	110 110 110	0.2 0.2 0.2	Power Tetrodes primarily designed for SSB communications transmitters operating at frequencies up to 250 MHz. The RS1082CL is forced air cooled, the RS1082CW is water cooled and the RS1082CV is vapor phase cooled.
RS2002W RS2002V	22 22	350 350	4 4	120k 150k	9k 9k	21 21	120k 120k	−450 −450		1500 1500	30 30	8.5 8.5	280 280	1.7 1.7	Power tetrodes designed for use in SSB transmitters. The RS2002W is water cooled and the RS2002V is vapor phase cooled.
4-65A	6	3.5	5	65	3,000	0.115	280	−100	5	400	150	0.08	8	2.1	Convection and radiation cooled tetrode having a fast heating thoriated tungsten filament. Excellent for mobile use.
(CERAMIC) 4X250B[1] 4X250F (CERAMIC)	6.0 26.5	2.6 0.56	5.2	250	2,000	0.250	390	−90	26	250	500	0.06	15.7	4.5	Forced-air cooled external anode tetrodes with brazed radiator. For airborne and mobile applications extending into the UHF region. Also excellent for single sideband and pulse applications. Directly interchangeable with the 7203 and 7204.
4X500A	5.0	13.5	6.2	500	4,000	0.315	930	−150	16	500	120	0.05	12.8	5.6	Forced-air cooled external anode tetrode. Useful as power amplifier in FM, TV and VHF communication transmitters.
4-125A/4D21 (SEE 6155)	5.0	6.5	5.9	125	2,500	0.200	375	−150	12	350	120	0.05	10.8	3.1	Radiation and forced-air cooled tetrode. Designed for use as power amplifier, modulator, or oscillator.
4-250A/5D22 (SEE 6156)	5.0	14.5	5.1	250	4,000	0.312	1,000	−225	90	500	110	0.12	12.7	4.5	Radiation and forced-air cooled tetrode. Designed for use as RF power amplifier, modulator, or oscillator
4-400A/8438	5.0	14.5	5.1	400	4,000	0.350	1,100	−220	18	500	75	0.12	12.5	4.7	Radiation and forced-air cooled tetrode. Designed for use as power amplifier, modulator or oscillator at frequencies up to 110 MHz
807	6.3	0.9	8	25	600	0.100	40	−45	4	250	60	0.2	11.0	7.0	Radiation-cooled tetrode. Popular replacement as well as for initial equipment
813	10	5	8.5	125	2,000	0.18	275	−120	10	040	120	0.25	16.3	14	Beam power pentode designed for use as an RF amplifier and oscillator
5894 5894A	12.6 6.3	0.9 1.8	8.2	CCS=40 ICAS=45	CCS=600 ICAS=750	0.200	CCS=85 ICAS=105	−80	5	250	250	0.08	Input 6.7 Output 2.1 (Push-Pull)		Radiation and/or forced-air cooled twin-tetrode of original Amperex design as HF version of conventional 829-B makes ideal multiplier, as well as straight amplifier and modulator.
5894B (SEE 8737)															
5895	6.3 3.15	10.68 1.36	7.5	CCS 12 ICAS=16	600	0.8	33.6	−80	2.6	200	186	0.05	Input 5.7 Output 1.7 (Push-Pull)		Radiation cooled twin, four electrode tube. Designed for use as a radio frequency power amplifier, oscillator, modulator and frequency multiplier. This tube features a directly heated cathode, making it suitable for instant heating applications.
6075	6.3 6.3	33.5 33.5	7.5 7.5	3,000 3,000	4,000 5,000	1.10 1.10	3,300 4,100	−250 −250	70 70	800 800	220 75	—	24.0 24.0	8.5 8.5	Water-cooled low drive, HF tetrode designed for FM and television transmitter power amplifier.
6079	10.0	9.7	9.5	500	5,000	0.452	1,760	−200	30	700	75	0.24	Input 25 Output 7.2		Radiation and/or forced-air cooled low drive HF tetrode for FM and AM transmitters. Also ideal in screen modulator stages.
6083	12.6	1.35	6.7	45	1,000	0.017	132	−120	5	250	60	0.1	22.5	11.0	Radiation-cooled pentode with low voltage—high current characteristics. Powdered glass dish type base with short internal lead connections. Up to 150 watts, Class C Telephony, ICAS.
6146B/8298A, 6159B, 6883B/8032A/ 8552	6.3 26.5 12.6	1.125 0.3 0.562	4.5 4.5 4.5	27 27 27	600 600 600	150 150 150	63 63 63	−70 −70 −70	2.8 2.8 2.8	200 200 200	60 60 60	<0.22 <0.22 <0.22	13.0 13.0 13.0	8.5 8.5 8.5	Compact radiation cooled beam power tetrodes designed for use as RF power amplifiers, oscillators, AF power amplifiers and modulators in mobile and base station equipment operating at frequencies up to 175MHz.
6155	5.0	6.5	6.2	125	2,500	0.200	375	−150	10	350	120	0.05	10.8	3.5	Convection and forced-air cooled tetrode. "Magnisorb" anode and low drive make it excellent RF amplifier tube in FM broadcasting. Improved version of 4-125A/4D21.
6156	5.0	14.1	5.1	250	3,000	0.345	800	−180	10	500	75	0.12	12.7	4.5	Convection and forced-air cooled tetrode. "Magnisorb" anode and low drive characteristics with "sintered" glass base. Improved version of 4-250A/5D22.
6159	26.5	0.3	4.5	CCS=20 ICAS=25	600 750	0.112 0.12	52 70	−58 −62	2.8 3.1	150 160	60	0.22	13.5	8.5	Beam power tetrode for use as RF power amplifier, oscillator frequency multiplier, AF power amplifier or modulator for fixed and mobile equipment.
6252 6252 USN	12.6 6.3	0.65 1.3	8.5	CCS=20 ICAS=25	600 750	0.100 0.150	42 79	−60 −60	1.4 2	250 250	300	—	Input 4.0 Output 1.3		Radiation and/or forced-air cooled twin tetrode of Amperex design. HF version of conventional 832A. Makes ideal multiplier as well as straight amplifier and modulator. Useful up to 700 MHz at reduced ratings. Delivers 15 watts at 600 MHz under CCS conditions.
6293	6.3	1.25	4.5	10	3k	0.015						0.22	13.5	8.5	Compact radiation cooled beam power amplifier designed for pulse modulator service.
6360 6360 A	12.6 6.3	0.410 0.820	7.5	CCS=10 ICAS=14	300	0.100	ICAS=18.5	−45	3	200	200	<0.1	Input 6.2 Output 2.6		High-gain twin tetrode for use as Class C amplifier, oscillator, frequency multiplier and modulator, ICAS plate input=30 watts up to 200 MHz. Capable of delivering 18.5 watts output at 200 MHz.
6907	12.6 6.3	0.65 1.3	8.5	CCS=20 ICAS=25	600 750	0.100 0.150	42 79	−60 −60	1.4 2	250 250	300	—	Input 4.0 Output 1.3		Twin tetrode, radiation-cooled. Special Amperex design for mobile service. HF version of conventional 832A. Ideal multiplier & straight amplifier & modulator. Useful up to 1000 MHz. Delivers 15 watts at 600 MHz, CCS.
6939, 8577, 8595	12.6 6.3	0.3 0.6	31	CCS=6 ICAS=7.5	180 200	2x0.027 2x0.030	5.8 7.2	−20 −20	0.75 0.75	180 200	500	2x0.15	2x6.4	2x1.6	High-gain twin tetrode for use as Class C amplifier, oscillator, frequency multiplier & modulator. ICAS plate input=14 watts up to 500 MHz. Capable of delivering 7.5 watts output at 500 MHz.
6979	6.0	2.6	5	250	2,000	0.250	410	−90	12	250	250	0.03	15.7	4.5	Forced-air cooled external tetrode. Brazed radiator. Replaced with 7034/4X150A.
7034/4X150A 7035/4X150D	6.0 26.5	2.6 0.58	5	250	1,250	0.200	140	−115	11	280	500	0.03	16	4.4	Forced-air cooled external anode tetrode. Suited for high power mobile applications. Makes an excellent wide-band amplifier for video application.
7203/4CX250B 7204/4CX250F	6.0 26.5	2.6 0.56	5.2	250	2,000	0.250	390	−90	26	250	500	0.06	15.7	4.5	Forced-air cooled external anode tetrodes with brazed radiator. For airborne and mobile applications extending into the UHF region. Also excellent for single sideband and pulse application.
7377	12.6 6.3	0.3 0.6	28	8	250	0.035	7	−15	0.75	160	960	0.145	4.5	1.35	Radiation cooled twin tetrode designed for push-pull Class C operation at frequencies up to 1000 MHz.

[1] A glass seal version of 4X250B (ceramic) is available See tube Type 6979

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

POWER TUBES—TETRODES & PENTODES (Continued)

TYPE NO.	FILAMENT Volts	FILAMENT Amps	MU GRID #1 TO GRID #2	MAX. DISS. WATTS	TYPICAL OPERATION PLATE Volts DC	PLATE Amps DC	PLATE Output Watts	GRID Volts DC	GRID mA DC	SCREEN Volts DC	MAX. FREQ. MHz Full Input	INTERELECTRODE CAPACITANCE—pF G.P.	G.F.	P.F.	DESCRIPTION
7378	6.3	3.9	5.7	100	750	0.385	200	−90	7	250	30	0.9	30 Input	12.7 Output	Radiation and convection cooled all-glass beam-power tetrode designed for use as an AF and RF amplifier, oscillator and multiplier for frequencies to 30 MHz.
7527 7527A	5	14.1	5.1	400	4,000	0.270	800	−170	9.5	500	110	0.12	12.7	4.9	All glass tetrode. Designed for amplifier, oscillator, or modulator service extending in the VHF region at frequencies up to 110 MHz.
7580 7580 W	6.0	2.6	4	250	2,000	0.250	360	−250	50	400	500	0.03	17	4.5	Forced-air cooled beam power tetrode of ceramic and metal construction. Designed especially for SSB and other linear RF amplifier applications at altitudes to 20,000 ft.
7609	26.5	0.57	5	250	1,250	0.200	140	−115	10	[illegible]0	500	0.03	Input 15.5 Output 4.5		A tetrode designed for use as an RF power amplifier and oscillator. The plate is forced air cooled; the cathode is oxide coated, indirectly heated. Similar to 4X150D except that it is designed for aircraft use and other applications in which resistance to vibration is important.
7645	6.3 12.6	0.6 0.3	31	CCS=5.5 ICAS=7	180	0.04	4.2	−20	0.6	180	400	0.15	6.4	1.6	Miniature twin tetrode featuring frame grid construction. It is a reduced height version of the 6939 for compact equipment.
7650	6.3	7.85	13	700	2,250	0.450	650	−45	10	400	1215	0.11	—	—	Ceramic and coaxial forced-air cooled power tetrode with integral radiator. Designed for use as a UHF amplifier or oscillator at frequencies to 1215 MHz.
7854	12.6 6.3	0.9 1.8	8.2	60	1,000	0.200	134	−85	5.4	250	175	0.09	Input 11.6 Output 3.7		Twin tetrode. Designed for use as an RF power amplifier, oscillator, modulator and frequency multiplier. Heat sink or forced-air cooling is necessary at or near maximum ratings. Built-in cross neutralizing capacitors insure neutralization over entire band. Useful to 500 MHz.
7983	3.15	1.65	7.5	7	300	0.55	11	−40	1.5	155	200	0.08	6.8	3.2	Quick heating twin tetrode having a filament designed for hybrid mobile transceivers for power output, driver or frequency multiplier circuits. Internally neutralized up to 200 MHz.
7984	13.5	0.58		35	450	180 mA	46	−60	12	125	175	0.17	Input 15 Output 5.5		Compact radiation cooled beam pentode designed for use as an oscillator or power amplifier at frequencies up to 175 MHz.
8042	1.6	3.2	4.5	25	650	0.160	65	−71	2.8	180	—	0.24	13	8.5	"Harp Cathode" instant heating beam power tetrode for use as power output, oscillator or frequency multiplier in mobile or base equipment. Full output power is available in less than one half second after filament power is applied.
8116 8116A	26.5 13.25	0.433 0.866	7	2x30	1,000	2x0.110 2x0.131	141 PEP	−34	0	250	175	0.09	11.8 Input	3.7 Output	Twin tetrode designed and rated for SSB applications where 26.5 V is available for heater. Particularly adapted to heat sink cooling because of calibrated glass envelope.
8117 8117A	12.6 6.3	0.9 1.8	7	2x30	1,000	2x0.131	141 PEP	−34	0	250	175	0.09	11.8 Input	3.7 Output	Twin tetrode designed and rated for SSB applications where 12.6 V is available for the heater.
8118	1.6	4.25	9	2x10	400	2x0.05	28	−50	2x1.5	250	500	—	4.5 Input	1.8 Output	Instant heating twin tetrode for use as an output amplifier, driver or multiplier at frequencies up to 500 MHz. The 8118 is especially intended for transistorized mobile equipment.
8177	4	60	9	1,200	3,110	0.8	1,280	−300	10	610	900	0.15	46	6	Ceramic coaxial power tetrode useful as a UHF amplifier or oscillator up to 1000 MHz.
8179	7.5	22.6	5.1	800	5,500	0.6	1,300	−500	0	800	30	0.1	47	9.5	Radiation and/or air-cooled tetrode for use as an AM or SSB amplifier. Features low distortion.
8300	2.0	3.4	7	CCS=2x30 ICAS=2x34	1,000	200	140	−100	6	250	75	0.09	10.5 Input	3.2 Output	Instant heating radiation cooled, beam power, twin tetrode for RF power amplifier, oscillator and multiplier service in transistorized mobile and base station equipment.
8321/4CX350A 8322/4CX350F	6.0 26.5	3.2 0.73	13	350	2,200	0.290	385	−27	2	400	500	—	21.5	5.5	Ceramic and metal constructed radial beam tetrodes. Designed to be used in class-AB audio or RF amplifier service up to 500 MHz internally ruggedized Forced-Air cooled.
8348	1.6	2.5	7.5	CCS=10 ICAS=14	300	0.100	ICAS=17.0	−45	3	200	200	0.1	8.5 Input	3.2 Output	"Harp Cathode" instant heating tetrode intended for use as intermittent or continuous filament service in transistorized mobile equipment for output stages. The tube is internally neutralized for frequencies up to 200 MHz.
8408 8438A (SEE 4-400A)	1.1	3.0	26	8.0	275	0.080	15	−25	2x1.25	200	500	0.19	4.1 Input	1.0 Output	Instant heating twin tetrode for use as an RF amplifier, frequency multiplier and modulator. The tube is designed for intermittent or continuous filament operation in transistorized mobile or fixed transmitters.
8457	6.75 13.5	0.76 0.38	7.5	CCS=10 ICAS=14	300	0.100	ICAS=18.5	−45	3	200	200	—	6.2 Input	2.6 Output	Twin tetrode for use as a Class C amplifier and oscillator, frequency multiplier and modulator for frequencies up to 200 MHz. The heater is designed to withstand battery voltage fluctuations encountered in mobile service.
8458	6.75 13.5	0.76 0.38	7.5	CCS=15 ICAS=20	450	0.110	ICAS=30.0	−50	3.1	200	200	0.1	6.8 Input	3.2 Output	Twin tetrode employing an indirectly heated cathode in an all glass novar base construction. It is designed for mobile service as a Class C amplifier, oscillator or frequency multiplier up to 200 MHz.
8463	1.1	1.05	8.0	5.0	300	0.040	8.0	−35	0.85	150	200	—	6.5 Input	3.8 Output	Instant heating RF power pentode for use as a power amplifier or frequency doubler in mobile equipment up to 200 MHz.
8505/8505A	6.75 13.5	1.32 0.66	8.0	CCS=25 PTTS=25	550 600	.136 .175	51 73	−50 −50	5 5	210 241	250	0.2	11.5 Input	5.0 Output	Compact, single-ended, beam power tetrode designed for use as an RF Power amplifier Oscillator and Multiplier at frequencies to 250 MHz. Features special modified magnoval base with anode pin displaced from normal pin circle. Under PTTS ratings it supplies 73 watts output with 1.1 watts drive power.
8509	2.0	3.25	8.2	2x20	750	2x.08	85	−80	2x1.5	250	250	0.06	9.4 Input	11.6 Output	Instant heating twin tetrode for RF power amplifier, oscillator, modulator and frequency multiplier for operation at frequencies to 500 MHz. Similar in electrical characteristics to the popular 5894.
8516	6.3	32.5	8.5	3k	4k	0.9	2.7	−375	120	800	110	0.2	30	7.0	Four electrode forced-air cooled tetrode designed for use as an RF power amplifier and frequency multiplier
8560 8560A	6.0	2.6	5.2	150	2,000	0.2	270	−90	16	200	200	0.03	15.7 Input	4.5 Output	A compact conduction cooled power tetrode designed for power amplifier service to 175 MHz. Uses external anode, metal and ceramic envelope with an indirectly heated oxide coated cathode.
8577	13.5	0.28	31	CCS=6 ICAS=7.5	180 200	2x.027 2x.030	5.8 7.2	−20 −20	0.75 0.75	180 200	500	2x0.15	2x6.4	2x1.6	13.5 Volt Version of the 6939—twin—tetrode for use as class C amplifier, oscillator, freq. multiplier & modulator.
8579	6.3 12.6	2.6 1.3	4.7	75	600	.325	100	−50	0.5	250	[illegible]0	0.2	22 Input	4.5 Output	Beam power tetrode designed primarily for use as an RF amplifier in SSB transmitters for frequencies up to 60 MHz. Features low intermodulation distortion as well as low cost power supply requirements.
8580	1.1	3.8	22	2x8	260	2x.07	14.5	−22.5	2x3.25	260	500	—	4.7 Input	1.2 Output	An instant heating twin tetrode for use as an RF amplifier and frequency multiplier up to 500 MHz, designed for intermittent or continuous filament operation in transistorized mobile and fixed transmitters.
8595	6.3 12.6	0.6 0.3	31	CCS=4 ICAS=5	180	2x.02	4.2	−20	2x.3	180	500	0.16	6.6 Input	1.7 Output	Miniature twin tetrode for applications where high levels of vibration are encountered. It is similar in electrical characteristics to the 6939.
8621/ 4CX250FG 8621 JAN	25.6	0.56	5.2	Class AB, Linear Amplifier—Single Sideband 250	2,000	0.166	269 PEP Two Tone	72	0	350	500	0.06	15.7 Input	4.5 Output	External anode, oxide coated cathode power tetrode. Made completely of ceramic and metal. Designed for use in class AB1 Linear RF amplifier and single side band service similar to the 7204. Forced air cooled. 1 AVG. DC Two Tone
8624	2.0	3.4	7	CCS 2x20 PTTS 2x26	850 950	200 mA 230 mA	112 141	−100	5.0	250	175	0.09	10.5 Input	3.2 Output	Instant Heating version of the 7854. Radiation cooled beam power twin tetrode designed for use as an RF power amplifier oscillator and frequency multiplier in transistorized mobile and base station equipment operating at frequencies up to 175 MHz. Uses a glass envelope and the Amperex "Harp Cathode." Full output power after less than ½ second.

© United Technical Publications

POWER TUBES—TETRODES & PENTODES (Continued)

TYPE NO.	FILAMENT Volts	FILAMENT Amps	MU GRID #1 TO GRID #2	MAX. DISS. WATTS	TYPICAL OPERATION PLATE Volts DC	PLATE Amps DC	PLATE Output Watts	GRID Volts DC	GRID mA DC	SCREEN Volts DC	MAX. FREQ. MHz Full Input	INTERELECTRODE CAPACITANCE—pF G.P.	G.F.	P.F.	DESCRIPTION
8637	13.5	0.80	30	PTTS 2x22.5	600	210 mA	72	−75	30	200	175	0.12	10.0 Input	3.8 Output	Radiation cooled beam power tetrode having high thermal inertia anodes. Designed for use as an RF power amplifier oscillator and frequency multiplier in mobile and base station equipment up to 175 MHz. Has a glass envelope and an indirectly heated cathode.
8639 8639 JAN	6.3 12.6	1.8 0.9	80	40	4,000	220 mA	—	−175	10.0	450	—	0.3	20.0 Input	6.5 Output	Radiation cooled beam power tetrode having an indirectly heated cathode. Designed for use as a pass tube in regulated high voltage power supplies. Will replace the 3D21WB or 7403 in most pass tube applications with only a change in top cap connector.
8643	7.25	2.0	7	CCS 2x30 PTTS 2x38	750	210 mA 264 mA	135—PTTS	−90	5.6 8.1	230	175	0.09	Input 11.6 Output 3.7		Radiation cooled beam power twin tetrode incorporating the new wide range cathode. Designed for use as an RF power amplifier, oscillator and frequency multiplier up to 175MHz with maximum power input. However may be operated at frequencies up to 500 MHz at reduced ratings.
8647	1.1	3.9	7	CCS—25 PTTS—35	400 550	150 mA 165 mA	33 49	−60	4 6.5	245 225	175	0.2	11.5 Input	5.0 Output	Instant heating radiation cooled beam power tetrode. Designed for use as an RF power amplifier, oscillator, and frequency multiplier in transistorized mobile and base station equipment up to 250 MHz. Has glass envelope and the Amperex "Harp" cathode. Full output power after less than ½ second warm-up.
8654	6.3	19.5	—	Class AB, Linear Operation—Single Sideband 1500	2,500	600	1,000 PEP 2 tone	−50	0	500	Class C, 220 MHz Class AB 60MHz	0.2	40.0	0.02	Forced-air cooled beam power tetrode designed for use as a high efficiency linear amplifier in single side band systems which require especially low intermodulation distortion. Has ceramic envelope with oxide coated matrix type cathode. 1. AVG. Two Tone.
8737/5894B	13.5 6.75	1.0 2.0	8.2	CCS—2x20	CCS—450 ICAS 600	CCS 75 ICAS 83	71W	CCS 105 ICAS 130	CCS 2x3.8 ICAS 2x1.7	250	250		Push-Pull Input 6.7 Output 2.1		Radiation cooled beam power twin tetrode incorporating the new Wide Range Cathode. It is especially designed for use as an RF power amplifier, oscillator and frequency multiplier up to 250 MHz. It may be operated at frequencies up to 500 MHz at reduced ratings
8753 (SEE SD605)															

POWER TUBES—TRIODES

TYPE NO.	FILAMENT Volts	FILAMENT Amps	MU	MAX. DISS. WATTS	TYPICAL OPERATION PLATE Volts DC	PLATE Amps DC	PLATE Output Watts	GRID Volts DC	GRID mA DC	MAX. FREQ. MHz Full Input	INTERELECTRODE CAPACITANCE—pF G.P.	G.F.	P.F.	DESCRIPTION
833A	10.0	10.0	35	400	4,000	0.450	1,440	−200	75	30	6.3	12.3	8.5	Radiation and forced-air cooled triode used widely in AM transmitters and also some RF heating applications. (Refer to 5868/AX9902 data.)
5866 7986	6.3	5.8	25	150	2,700	0.215	440	−220	55	150	5.0	4.9	0.1	Radiation and/or forced-air cooled HF triode of the original Amperex design. Suited for use as an RF power amplifier, modulator, oscillator and particularly useful for high frequency dielectric heating. 7986 is improved version of the 5866.
5867 5867A	5.0	14.1	25	250	3,000	0.363	840	−250	69	100	5.0	6.3	0.16	Radiation and/or forced-air cooled HF low drive triode of original Amperex design.
5868	10.0	10.0	27	450	4,000	0.475	1,673	−350	100	100	8.0	11.0	0.35	Radiation and/or forced-air cooled HF triode with rugged 100 watt filament. Of original Amperex design, for all heavy duty RF applications
5923	12.6	33.0	32	6,000	6,000	1.5	6,900	−400	310	75	11.0	16.0	0.3	Water-cooled low drive HF triode. Rugged for HF heating application
5924	12.6	33.0	32	5,000	6,000	1.5	6,900	−400	310	75	11.0	16.0	0.3	Forced-air cooled version of type 5923.
5924A	12.6	33.0	32	6,000	CLASS B, TV SERVICE, SYNC. LEVEL 5,000	1.90	6,250	−140	350	75 Full Input 220 Derated	11.0	16.0	0.3	Forced-air cooled triode for FM & TV transmitters. Brazed radiator shell & external surfaces silverplated throughout
6078	17.5	196	27	45,000	12,000	12	108,000	−1000	2.25 Amps	15	86	116	3.4	Forced-air cooled power amplifier, oscillator and modulator having a plate dissipation of 45 kW. Operates at reduced ratings up to 30 MHz. Ideal for pulse applications.
6617	8.0	98	34	20,000	12,000	3.2	29,000	−1500	500	30	30	37	0.4	Water-cooled triode for use in industrial HF generators
6618	8.0	98	34	15,000	12,000	4.5	39,000	−1000	800	30	30	37	0.5	Forced-air cooled triode for use as a high power RF amplifier and oscillator.
6756	7.5	100	13.5	20,000	12,000	3.5	30,640	−1220	210	30	47.6	25.1	1.5	Water-cooled triode with special characteristics as a low impedance, RF industrial oscillator. Particularly suited to induction and dielectric heating applications.
6759	12.6	33	9	6,000	7,000	1.72	6,000	−820	82	30	15	12	2	Forced-air cooled triode designed for use as a low impedance RF industrial oscillator. The anode can dissipate up to 6 kW.
6960	12.6	33	32	6,000	6,500	2.0	10,000	−450	600	55	11.0	16.0	0.3	Industrial water-cooled triode with large overload capacity on grid and plate currents. Suitable for 7.5 kW induction and dielectric heaters and 10 kW plastic sealers
6961	12.6	33	32	6,000	6,500	2.0	10,000	−450	600	55	11.0	16.0	0.3	Forced-air cooled version of 6960. Suitable for 7.5 kW induction and dielectric heaters and 10 kW plastic sealers
7092	6.3	32.5	22	800 1,300[1]	6,000 6,000	0.600 0.950	2,840 4,400	−450 −475	150 190	50	6.2	10.5	0.25	Radiation-cooled triode for industrial oscillator and amplifier applications. Rugged construction. Graphite anode with unusual overload capability. Thoriated tungsten filament.
7237	12.6	33	32	6,000	6,500	2.0	10,000	−450	600	55	11.0	16.0	0.3	Identical with Amperex Type 6961 except with radiator design intended for interchangeability with competitive types 6366 and 6367.
7459	12.6	30	32	4,000	6,000	1.5	6,900	−400	310	110	11.0	16.0	0.3	Forced-air cooled triode designed for use in broadcast FM & TV communication transmitters. It will replace the 5762/7C24 in most applications.
7753	6.3	65	5	2,100	6,000	1.33	4,750	Grid Bias Res 1450Ω	380	50	7.2	13	0.5	Forced-air cooled, high vacuum power triode of the external plate type. Designed for use as an oscillator in industrial equipment.
7800	8	130	33	15,000	13,000	4.8	40,000	−1500	1 Amp	30	27	45	0.6	Forced-air cooled triode. Designed for communication and industrial service. Also useful as pulse amplifier and hard tube modulator to 200 kW peak
7804	6.3	130	17.5	CCS—10,000	6,000	3.3	14,300	—	800	30	40	40	1.0	Forced-air cooled external anode triode. Designed for use as an oscillator in industrial equipment. Large grid and plate overload capabilities.
7805	6.3	130	17.5	15,000	6,000	3.3	14,300	—	800	30	40	40	1.0	Water-cooled version of 7804
7806	8	130	21	15,000	12,000	4.5	39,300	—	900	30	23.5	42.5	0.9	Same as for 7804.
7807	8	130	21	15,000	12,000	4.5	39,300	—	900	30	23.5	42.5	0.9	Water-cooled version of 7806
7899	8	130	33	8,500	15,000	70	200,000	−500	15 Amps	—	27	45	0.6	Designed for pulse application as a hard tube modulator. Forced-air cooled.
7900	12.6	32	32	4,000	4,500	1.75 (sync.)	5,600 (sync.)	−130	350 (sync.)	220	18.0	17.0	0.3	Forced-air cooled triode. Designed for TV transmitter operation to 220 MHz. Features brazed and silver plated radiator for high efficiency.
7986 5866	6.3	5.8	25	150	2,700	0.215	440	−220	55	150	5.0	4.9	0.1	Radiation and/or Forced-air cooled MFH triode of the original Amperex design. Suited for use as an RF power amplifier, modulator, oscillator and particularly useful for high frequency dielectric heating. 7986 is improved version of the 5866.
8078	5	32.5	21	500	6,000	0.70	3,200	−1250	170	50	5.1	9.2	0.2	Radiation cooled triode designed especially for industrial oscillator and amplifier applications.
8119	3.4	19	33	400	Grounded Grid Operation 2,000	400	510	−140	120	900	6.5	11.5 input	<0.12 output	Forced-air cooled, coaxial transmitting triode with a ceramic envelope designed for use in HF amplifier, oscillator, or frequency multiplier operation at frequencies up to 900 MHz.
8120	3.4	19.0	70	500	2,500	0.38	620	−70	160	400	3.8	11	0.05	Forced-air cooled transmitting triode with ceramic envelope and coaxial terminal arrangement. Can be used as "plug-in" in coaxial circuits. Designed for use as an RF amplifier, oscillator or frequency multiplier at frequencies up to 1000 MHz.

[1]50% duty cycle.

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

POWER TUBES—TRIODES (Continued)

TYPE NO.	FILAMENT Volts	FILAMENT Amps	MU	MAX. DISS. WATTS	TYPICAL OPERATION PLATE Volts DC	PLATE Amps DC	PLATE Output Watts	GRID Volts DC	GRID mA DC	MAX. FREQ. MHz Full Input	INTERELECTRODE CAPACITANCE—pF G.P.	G.F.	P.F.	DESCRIPTION
8163	5.0	14.1	200	400	2,500	0.265	666+34	0	70	110	4.1	7.4	0.04	High-mu transmitting power triode for use as a zero bias class AB_1 linear amplifier in SSB service.
8268	12.6	33	24	6,000	7,200	1.5	7,500	−1250	360	50	7.9	14.2	1	Water cooled triode intended for use in industrial RF heating generators.
8269	12.6	33	24	6,000	7,200	1.5	7,500	−1250	360	50	7.9	14.2	1	Forced-air cooled triode designed for use in industrial RF heating generators.
8591	6.3	130	17.5	1,500	7,000	3.5 0.7	17,700	−1600	950 1350	30	33.5	44.5	1.2	Water-cooled triode designed for use in industrial RF generators. Water-cooler is an integral part of the anode and consists of a helically-wound copper tube soldered to the anode wall.
8592	12.6	33	32	6,000	5,000	2.0	7,100	−300	500	50	11	16	0.3	Water-cooled triode intended for use in industrial HF generators and AF amplifiers. Water-cooler is an integral part of the anode and consists of a helically-wound copper tube soldered to the anode wall.
8593	12.6	33	24	6,000	7,200	1.5 0.36	7,500	−1250	360 470	50	7.9	14.2	10	Helical cooled version of the 8268. This water cooled triode is intended for use in industrial high frequency generators.
8594	8.0	130	21	20,000	12,000	4.5 0.65	39,000	−2000	900 1220	30	23.5	45	0.9	Helical cooled version of the 7807. Constant power tube intended for use in industrial HF generators.
8666 8667 8668	5.8	130	22	10,000	6,000	3.4	16,000	—	600	120	—	—	—	Triodes designed for use as industrial oscillators for frequencies up to 120 MHz. The 8666 is forced-air cooled. The 8667 is water cooled with separate water jacket. The 8668 is water cooled with an integral cooler. Electrically identical.
8680	12.6	380	33	120,000	14,000	23.5	81.5		6.0 Amps	30	60	185	3.0	Integral jacket water cooled triode designed especially for industrial induction and dielectric heating applications.
8731 8732 8733	6.3	66	20	5,000	6,000	1.6	8,000		480	150	19	16	0.5	Triodes designed for use as industrial oscillators for frequencies up to 150 MHz. The 8731 is forced-air cooled. The 8732 is water cooled with separate water jacket. The 8733 is water-cooled with an integral cooler. Electrically identical.
8734	5.4	65	45	10,000	10,000	1.75	13,500		0.45A	50	17	42	0.4	Forced-air cooled triode designed especially for industrial induction and dielectric heating applications.
8735	7.0	175	34	20,000	7,500	5.4	33,000		1.45A	90	32	61	1.0	Water-cooled triode designed especially for industrial induction and dielectric heating applications.
8736	8.4	235	35	40,000	8,000	10	65,000		2.25A	30	45	100	1.3	Water-cooled triode designed especially for industrial induction and dielectric heating applications.
8752	12.2	250	30	80,000	10,000	16	124,000		3.5A	30	55	170	2.7	Water-cooled triode designed especially for industrial induction and dielectric heating applications.
8801	7.0	175	34	15,000	7,500	5.4	33,000		1.45A	90	32	61	1.0	Forced-air cooled triode designed especially for industrial induction and dielectric heating applications.
8802/ 3-500Z	5.0	14.1	350	400	2,500	69.5		0		110	5.0	8.0	0.03	Radiation and/or forced-air cooled zero bias triode. Suited for use as an RF and AF amplifier at frequencies up to 110 MHz.
8867	5.0	6.1	25	2,000	5,000	800	3,175		5	5	10.1	9.1	0.55	Neotron® featuring integral water jacket cooling. Suited for use as a Class C amplifier or oscillator for frequencies up to 5 MHz.

THYRATRONS-HYDROGEN

TYPE NO.	PEAK FORWARD ANODE VOLTAGE MAX.	PEAK ANODE CURRENT MAX. (AMPS)	AVG. ANODE CURRENT MAX. (mA)	PULSE WIDTH MAX.	DESCRIPTION
6268/4C35	8,000	90	100	2 μsec.	These tubes are used as drivers for pulsing magnetrons and other oscillators and as high speed switches. Hydrogen-filled, they have extremely low deionization time. They are zero bias tubes, triggered by a positive grid pulse. Maximum pulse repetition frequency (prf in pulses per second) will depend on the peak forward anode voltage (epy in volts) according to formula: $(epy)^2 \times (prf) = 2.6 \times 10^{11}$ max.
6279/5C22	16,000	325	200	2 μsec.	Completely interchangeable with 5C22 in every respect except that it has self-contained source of hydrogen providing life expectancy of minimum 1000 hours.

THYRATRONS-MERCURY VAPOR & INERT GAS-TRIODES & TETRODES

TYPE NO.	HEATER OR FILAMENT Volts	HEATER OR FILAMENT Amps	FIL. HEATING TIME (SEC.)	TUBE DROP (VOLTS)	PEAK VOLTAGE Forward Volts	PEAK VOLTAGE Inverse Volts	ANODE CURRENT Peak Amps	ANODE CURRENT Average Amps	MAX. GRID VOLTS	ION-IZATION TIME (μSEC.)	DEION-IZATION TIME (μSEC.)	CONDENSED MERCURY TEMP. RANGE (°C)	DESCRIPTION
AX105	5.0	10.0	300	16	10000	10000	8.0	4.0	−500	10	1000	+40° to +80°	Radiation-cooled mercury-vapor thyratron-tetrode.
AX255	5.0	16.0	300	12	1500	2500	80.0	12.5	−300	10	1000	+35° to +75°	Heavy-duty, mercury vapor thyratron for motor control and A.C. welder control.
AX260	5.0	25.0	600	10	1500	2500	160.0	25.0	−300	10	1000	+35° to +75°	Heavy-duty, mercury vapor thyratron for motor control and A.C. welder control.
2D21	6.3	0.6	10	8	650	1300	0.5	0.1	−100	0.5	—	—	High control ratio, temperature independent Thyratron with high circuit sensitivity. Inert gas filled. Negative control characteristics.
2050	6.3	0.6	10	8	650	1300	1.0	—	−250	0.5	50	—	Gas tetrode for relay service.
5544	2.5	12.0	60	16	1500	1500	40.0	3.2	−250	—	400	—	Xenon filled thyratron with reliable operation over wide temperature range. For electronic control of D.C. motor speed, regulation of current and voltage, counting and sorting devices and electronic switching machines.
5545	2.5	21.0	60	16	1500	1500	80.0	6.4	−250	—	500	—	Same as for type 5544 above.
5557/1701	2.5	5.0	5	16	2500	5000	1.0	0.5	−500	10	1000	+30° to +80°	Radiation-cooled mercury-vapor low voltage thyratron. Similar in structure to 866 A.
5559	5.0	4.5	300	16	1000	1500	15.0	2.5	−500	10	1000	+40° to +75°	Indirectly heated, mercury-vapor triode with negative control characteristics.
5560/FG95	5.0	4.5	300	16	1000	1000	15.0	2.5	−1000	10	1000	+40° to +80°	Four electrode, mercury vapor thyratron with negative control characteristics. Designed for applications where the available grid power is very small and where it is desired to actuate the grid from a high impedance source.
5632/C3J	2.5	8.5	60	10	900	1250	30.0	2.5	−300	10	1000	—	Xenon filled, three-electrode thyratron with negative-control characteristics for reliable operation over wide temperature range. Especially suitable for control relay service, motor control, and ignitor firing service.
5684/C3JA	2.5	8.5	60	10	1000	1250	30.0	2.5	−300	10	1000	—	Xenon filled, three-electrode thyratron with negative-control characteristics for reliable operation over wide temperature range. Especially suitable for control relay service, motor control, and ignitor firing service.
5685/C6JA	2.5	21	60	9	1000	1250	77	6.4	−100	—	1000	—	A gas filled triode for applications requiring precise control.
5727	6.3	0.6	10	8	650	1300	0.5	0.1	−100	0.5	35 min.	—	Ruggedized version of 2D21. Particularly suitable for mobile and aircraft operation where mechanical strength and reliability are important. Designed for relay, servo control applications, etc.
5869/AGR9950	5.0	5.5	120	15	13000	13000	4.0	1.0	−100	10	250	+25° to +55°	Radiation-cooled mercury-vapor thyratron. Oxide coated filament. Used for stepless control of voltage output and D-C motor control.
5870/AGR9951	5.0	14.0	120	12	27000	27000	10.0	2.5	−100	10	250	+30° to +45°	Same as above for type 5689/AGR9950.
6786	5.0	15-20	600	12	15000	15000	45.0	10-15	—	—	—	+25° to +55°	High voltage, grid controlled mercury vapor thyratron. For industrial RF generators and transmitting equipment.
8270	5	13	90	12	21000	21000	10	2.5	−300	10	500	+25° to +45°	Grid controlled mercury vapor thyratron.

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

SUBMINIATURE TUBES (SCREEN GRID TYPES)

TYPE NO.	FILAMENT D-C Volts	FILAMENT Current mA	CAPACITANCES pF G-P	CAPACITANCES pF Input	CAPACITANCES pF Output	PLATE Volts	PLATE Diss. Milliwatts	GRID NO. 1 VOLTS	GRID NO. 2 VOLTS	PLATE Micro-Amps	PLATE Resistance Megohms	Trans-conductance Micromhos	Output Milliwatts	DESCRIPTION
6007/5913	1.25	13.3	0.2	2.5	2.2	45	25	−0.2	45	475	0.4	420	6	Radiation-cooled pentode output amplifier for hearing aids and other purposes, where small size, light weight and low battery drain are important. An ideal tube for receivers.
6008/5911	0.625	13.3	0.2	—	1.5		1.5	−0.2	45	50	0.4	100	2.25	Same as above except this tube is a voltage amplifier.

ENTERTAINMENT & AUDIO TUBES

TYPE NO.	FILAMENT Volts	FILAMENT Amps	APPLIED VOLTAGES Plate	APPLIED VOLTAGES Screen	APPLIED VOLTAGES Grid	TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS: Plate Current (mA)	Screen Current (mA)	Amplification Factor	Plate Resistance (k ohms)	Transconductance (micromhos)	Max. Power Output-2 Tubes, Push-Pull Class B	Load Resistance (k ohms)	Cut-Off Bias (volts)	DESCRIPTION
1BG2	1.4	0.575	Peak negative plate to cathode—18 kV			Plate current average 350μA		Peak Plate current 40 mA			—	—	—	Half-wave rectifier for use for high voltage supplies in portable TV receivers.
1BQ2	1.4	0.6	20kV	—	—	200	—	—	—	—	—	—	—	High-vacuum single anode rectifier for high voltage in television receivers (HV supply from the line time base). It has a chemically treated envelope which avoids flash-over under conditions of high humidity and low atmospheric pressure.

TUNING INDICATOR TUBES

TYPE NO.	FILAMENT Volts	FILAMENT Amps	SUPPLY AND SCREEN VOLTS	SCREEN CURRENT AT START OF CONTROL (mA)	ANODE SERIES RESISTANCE (MEGOHMS)	GRID BIAS FOR END OF CONTROL RANGE (VOLTS)	DESCRIPTION
1M3/DM70	1.4	0.025	85	0.17	—	−10	Tuning indicator especially designed for battery operated sets featuring low filament consumption (25mA), subminiature size and "on-off" indication. Ideal for transistorized computers.
1N3/DM71	1.4	0.025	85	0.17	—	−10	Tuning indicator especially designed for battery operated sets featuring low filament consumption (25mA), subminiature size and "on-off" indication. Ideal for transistorized computers.
6CD7/EM34	6.3	0.2	250	2.0	1.0	Section 1=−5 Section 2=−16	Tuning indicator featuring double sensitivity, clear indication even with weak signals.
6FG6/EM84	6.3	0.27	250	1.1	0.47	−22	9 pin miniature tuning indicator for use in broadcast receivers and tape recorders. The deflection electrode is connected separately to a pin at the base. Converging dual fluorescent bar pattern.
6HU6/EM87	6.3	0.3	250	2	0.1	−10	Designed especially as an audio level indicator for tape recorders.

PREMIUM QUALITY TUBES

TYPE NO.	PROTOTYPE	HEATER Volts	HEATER Amps	AMPLIFICATION FACTOR	TRANSCONDUCTANCE (MICROMHOS)	TYPICAL OPERATION: PLATE Volts DC	PLATE Current mA-DC	PLATE Resistance k Ohms	Grid Volts DC	SCREEN Volts DC	SCREEN Current mA-DC	POWER OUTPUT WATTS	LOAD RESISTANCE k OHMS	CUT-OFF BIAS VOLTS	CAPACITANCES pF G-P	CAPACITANCES pF Input	CAPACITANCES pF Output	DESCRIPTION
5654	6AK5	6.3	0.175	—	5000	120	7.5	340	R_k=200	120	2.5	—	—	−12	0.02	4.0	2.9	Sharp cut-off pentode particularly suited for use as a wide band, high frequency amplifier. Ruggedized construction makes it suitable for critical applications in which operational dependability is of primary importance.
5847	404A	6.3	0.3	—	12500	160	13	—	+8.5	160	4.50	—	—	—	0.05	7.0	2.5	High-gain, miniature pentode for use in broad band amplification where its high figure of merit is required for replacement purposes only. For new equipment design Amperex 6688 is recommended.
6201	12AT7	6.3 12.6	0.30 0.15	60	5500	250	10	10.9	R_k=200	—	—	—	—	−20	1.6	2.5	0.45	Premium quality twin triode designed for use as RF amplifier in grounded grid circuits; as a frequency changer below 300 MHz, in mobile and industrial equipment with intermittent operation; and in on-off control applications where operation under cut-off conditions is required.
6218/E80T		6.3	0.15	—	—	100	1.35	—	0	70	—	—	—	—	—	2.2	2.0 max	Ruggedized beam deflecting tube designed for use as a phase discriminator in impulse governed-oscillators.
7316		6.3	0.3	19.5	3100	100	11.8	6250	−8.5	—	—	—	—	—	1.6	1.8	0.5	Medium mu long life, reliable twin triode with separate cathodes designed for application in computer circuits not critical as to hum, microphony and noise.
7643	Triode Section	6.3	0.33	18	5000	Supply 100	14	—	R_k=120 Ohms	—	—	—	—	—	1.5	2.5	1.5	Long-life, ruggedized triode-pentode. Pentode section designed for use as a mixer, RF or AF amplifier. Triode section designed for use as an oscillator up to 300 MHz, multivibrator or blocking oscillator.
	Pentode Section	6.3	0.33	40[1]	6200	Supply 170	10	0.4 meg	R_k=155 Ohms	Supply 170	2.8	—	—	—	0.025	5.6	3.4	
7693/E90F		6.3	0.15	50	4600	250	7.4	1.3 meg	—	150	2.9	—	—	6.5[2]	0.0035	5.0	4.2	Sharp cut-off, shock and vibration resistant HF pentode for mobile applications. Premium type replacement for 6BH6/6661.
7694/E99F		6.3	0.15	27[1]	3600	250	9.2	1 meg	−20[3]	100	3.3	—	—	—	0.0035	4.5	5.2	Variable slope HF pentode for mobile and industrial applications. Shock and vibration resistant premium type replacement for 6BJ6/6662.
8233		6.3	0.6	30	45000	140	50	20	−1.5	140	5.5	—	—	−6	110	18	4	Double frame grid power pentode for video, pulse or deflection amplifier service in microwave, radar, TV or measuring instruments. It has a plate dissipation of 10 watts.
8608		6.3	0.600	30	45000	125	50	20	−3	125	5.5	—	—	—	0.110	18	3.2	Premium quality power pentode. Constructed in a magnoval envelope with double frame grids. Designed for use as a wideband video amplifier in applications requiring low output capacitance.

[1]Grid 2 to Grid 1 [2]Plate Current = 10μA approx. [3]For transconductance of 1500 micromhos.

PREMIUM QUALITY 10,000 HOUR TUBES[1]

TYPE	HEATER Voltage volts	HEATER Current amps	CAPACITANCES—pF Cold Values	CAPACITANCES—pF Input	CAPACITANCES—pF Output	MAXIMUM RATINGS: Max. Anode Dissipation watts	Anode Voltage volts	Suppressor Grid Voltage volts	Screen Grid Voltage volts	TYPICAL CHARACTERISTICS: Cathode Current mA	Screen Grid Voltage volts	Anode Current mA	Cathode Resistor ohms	Anode Current mA	Screen Grid Current mA	Transconductance micromhos	Amplification Factor	Plate Resistance megohms	Maximum Length inches	Maximum Diameter inches
E92CC Twin Triode	6.3	0.4	one section	3.1	0.3	2.0[2] (absolute value)	300	—	—	15	—	150	—	8.5	—	6,000	45	0.0083	2⅝	¾
5842[4] Triode	6.3	0.3	—	9.0	1.8	4.5	400	—	—	38	—	130	360	27	—	27,000	43	0.0016	1¾	⅞
5920/E90CC Twin Triode	6.3	0.4	one section	3.4	0.35	2.0[2] (absolute value)	300	—	—	15	—	100	—	8.5	—	6,000	27	0.0045	2⅝	¾
6004/E80F[3] Sharp cut-off amplifier pentode	6.3	0.3	—	5.0	7.3	1.3 (absolute value)	300	0	200	9	100	250	550	3	0.65	1,850	25	1.5	2⅝	⅞

[1]These tubes are designed for a life of 10,000 hours or more. [2]Ratings and operating conditions apply to one section. [3]Rugged construction. [4]Available to military specifications.

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

PREMIUM QUALITY 10,000 HOUR TUBES[1]

TYPE	HEATER		CAPACITANCES—pF			MAXIMUM RATINGS				TYPICAL CHARACTERISTICS									
	Voltage volts	Current amps	Cold Values	Input	Output	Max. Anode Dissipation watts	Anode Voltage volts	Suppressor Grid Voltage volts	Screen Grid Voltage volts	Cathode Current mA	Screen Grid Voltage volts	Anode Current mA	Cathode Resistor ohms	Anode Current mA	Screen Grid Current mA	Transconductance micromhos	Amplification Factor	Plate Resistance megohms	Maximum Length inches	Maximum Diameter inches
6085/E80CC[3] Twin Triode	Series 12.6 Par. 6.3	0.3 0.6	one section	2.6	3.5	2.02[2] (absolute value)	300	—	—	12	—	250	920	6	—	2,700	27	0.01	3 1/16	7/8
6211 Twin Triode	6.3 12.6	0.3 0.15	one section	2.9	0.35	1.5[2] (absolute value)	200	—	—	14	—	100	470	4.6	—	3,600	27	0.0075	2 5/8	7/8
6211A	6.3 12.6	0.300 0.150	sec. 1 sec. 2	2.9 2.9	0.45 0.35	1.5 (absolute value)	600	—	—	14	—	100	470	4.6	—	3,600	27	.0075	2 5/8	7/8
6227/EB0L[3] Power Pentode	6.3	0.75	—	11.0	7.0	8.0 (absolute value)	300	0	300	50	250	250	270	24	3.3	9,000	21.5	0.09	3 1/16	7/8
6463 medium mu twin triode	6.3 12.6	0.6 0.3	one section	3.4	0.5	4.4	330	—	—	31	—	250	620	14.5	—	5,200	20	—	2 5/8	7/8
6686/E81L Power Pentode	6.3	0.375	—	11.5	6.5	4.5 (design center value)	210	0	210	30	210	210	120	20	5.3	11,000	36	0.3	2 5/8	7/8
6687/E91H dual control heptode	6.3	0.27	—	5.4	7.6	1.0	250	−100 0	100	20	Dual control heptode for use as a gated amplifier in computer and "on-off" control circuits. With either control at −10 volts and plate voltage at 150 volts, the plate current will be less than 0.2mA. With both control grids at 0 volts, the plate current is nominally 5.75 mA. Direct replacement for 5915A.								2 1/8	3/4
6688[3,4] Broad-band amplifier pentode 6688A	6.3	0.3	—	7.5	3.0	3.0 (absolute value)	210	0	175	25	160	190	630	13	3.3	16,500	50	0.09	1 3/4	7/8
6689/E83F wide-band amplifier pentode	6.3	0.3	—	8.0	3.6	2.1 (design center value)	210	0	210	16	120	210	165	10	2.1	9,000	34	0.5	2 5/8	7/8
6922/E88CC[3] Twin Triode	6.3	0.3	one section	3.1	0.5	1.5[2] (design center value)	220	—	—	20	—	100	680	15	—	12,500	33	0.00264	2 1/16	7/8
7062 Twin Triode	6.3 12.6	0.400 0.200	one section	3.5	0.5	2.0[2] (absolute value)	600	—	—	20	—	150	—	8.5	—	6,400	46	0.0072	2 5/8	7/8
7119/E182CC Twin Triode	Series 12.6 Par. 6.3	0.4 0.8	one section	5.3	6.7	4.5 (absolute value)	300	—	—	60	—	120	—	36	—	15,500	24.5	0.0016	2 5/8	7/8
7308/E188CC[4] Twin Triode	6.3	0.335	one section	3.1	1.75	2.0	250	—	—	22	—	100 (supply)	680	15	—	12,500	33	—	2 3/16	7/8
7534 Pentode	6.3	1.7	—	35	17	27.5	900	—	250	300	150	250	—	100	4	25,000	6.5	—	5	1 3/16
7737[4] Pentode	6.3	0.32	—	7.6	3.3	3	210	—	175	25	—	—	630	13	3.3	16,500	53	0.1	1 1/2	7/8
7788 Pentode	6.3	0.34	—	16.5	3.3	5	250	—	200	50	—	—	360	35	5	50,000	60	—	2 1/16	7/8

[1]These tubes are designed for a life of 10,000 hours or more. [2]Ratings and operating conditions apply to one section. [3]Rugged construction. [4]Available to military specifications.

UHF SPECIAL PURPOSE TUBES

TYPE NO.	FILAMENT		PLATE DISSIPATION WATTS	MU	TRANSCONDUCTANCE (MICROMHOS)	PLATE		POWER OUTPUT CHARACTERISTICS	MAX. FREQ. MHz	CAPACITANCES pF			DESCRIPTION
	Volts	Amps				Volts	mA			G-P	Input	Output	
6923/EA52	6.3	0.3	—	—	—	1000 V at <100 MHz fo[1] 1000 x f at >100 MHz	0.3	—	1000	—	0.5	—	Disc-seal, vacuum diode for UHF voltmeters and monitoring devices. Anode pin connection adaptable for use as probe contact.
EA53	6.3	0.3	—	—	—	Inverse 1000 V at <1000 MHz fo[1] 1000 x f at >100 MHz	0.3	—	1000	—	0.5	—	Disc seal, vacuum diode for UHF voltmeters and monitoring devices. Anode pin connection suitable for use as probe contact. Coaxial filament connection suited for use in coaxial probes.
EFP60	6.3	0.37	2	—	25,000	300	20	—	—	0.004	9.2	6	Secondary emission pentode for wide band amplifier application where stability and high ratio of transconductance to capacities is important. Used in high speed computer service and high quality TV applications.
6Q4/EC80	6.3	0.45	4	30	12,000	550	15	15 dB gain at 300 MHz (Bandwidth 4.5 MHz)	500	0.06	5.4	3.4	Radiation-cooled triode, button type base, indirectly heated cathode. For use as amplifier and mixer up to 500 MHz. Ideally suited for UHF television, balloon sondes, measuring equipment, etc.
6R4/EC81	6.3	0.24	5	16	5,500	300	27.7	Power output 1.1 W at 750 MHz	1200	1.5	1.7	0.5	Radiation-cooled triode, standard button base, indirectly heated cathode. Used as oscillator up to 1200 MHz. High efficiency at high frequencies.
7699	6.3	0.6	6	—	10,500	275	90	—	500	0.15	6.4	1.6	Wide band push-pull amplifier tube for use in test instruments, distributed amplifiers and computers. Push-pull construction offers high gain band width product coupled with low output capacitance.
8254	6.3	0.185	1.5	—	14,500	110	22	—	Z in= 450 Ω at 250 MHz	1.9	3.5	0.3	Special quality triode for use as an amplifier in probes.

[1]fo = 100 MHz

RECTIFIERS-DIODES

TYPE NO.	FILAMENT		FIL. HEATING TIME (SEC.)	TUBE DROP (VOLTS)	PEAK INVERSE ANODE VOLTS	ANODE CURRENT		SURGE CURRENT	TEMPERATURE	RANGE (°C)	DESCRIPTION
	Volts	Amps				Peak Amps	Average Amps	Amps	Ambient	Mercury	
3B28	2.5	5.0	5	10.0	10,000	1.0	0.250	—	—	—	Xenon gas filled half-wave rectifier with wider temperature ranges than mercury-vapor tubes. Used largely by armed services to replace 866-A's.
4B32	5.0	7.5	30	10.0	10,000	5.0	1.25	50.0	—	—	Xenon gas filled half-wave rectifier with wider temperature ranges than mercury-vapor tubes. Used largely by armed services to replace 872-A's.
249-B	2.5	7.5	15	15.0	7,500	2.5	0.640	—	—	+25 to +70°	Convection-cooled mercury-vapor half-wave rectifier. Used in most Western Electric r-f equipment.
575-A (SEE 7136)											
673	5.0	10.0	30	10.0	15,000	6.0	1.5	60.0	—	+20 to +50°	Convection-cooled mercury-vapor half-wave rectifier. Refer to 6693 for improved version.
857-B	5.0	30.0	60	10.0	22,000	40.0	10.0	400.0	—	+30 to +40°	Mercury-vapor half-wave rectifier with low voltage drop. Extremely popular in most high power broadcasting stations. Convection cooled.
866-A	2.5	5.0	20	10.0	10,000	1.0	0.250	—	—	+25 to +70°	Mercury-vapor half-wave rectifier of Amperex own design. More rugged trouble-free operation at only slight additional cost. Convection cooled.
869-B	5.0	18.0	60	10.0	20,000	10.0	2.50	—	—	+30 to +40°	Mercury-vapor half-wave rectifier. Refer to type 6508, economy version.
869-BL	5.0	18.0	60	10.0	20,000	10.0	2.50	—	—	+30 to +40°	Electrically same as 869-B. Base has flexible filament leads with spade lugs for better, low-resistance contact with socket.
872-A	5.0	7.5	30	10.0	10,000	5.0	1.25	50.0	—	+20 to +60°	Mercury-vapor half-wave rectifier. Universally used by almost every user and designer of H-V equipment. Convection cooled.
6339	6.3	1.5	30	—	WITH LIQUID COOLING						High vacuum clipper diode and rectifier. Miniature version of 3B29 for liquid immersion cooling or air operation.
					16,000	0.250	0.065	—	−65 to 165°	/—	
					10,000	0.400	0.100				
					WITHOUT COOLING—AIR OPERATION						
					12,000	0.200	0.050	—	−55 to +85°	—	
6508	5.0	12.5	90	12.0	21,000	10.0	2.5	100.0	—	+25 to +45°	Mercury vapor rectifier for relatively high voltage and current. A high quality, long-life tube priced lower than any tube in its class on the market.

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

RECTIFIERS-DIODES (Continued)

TYPE NO.	FILAMENT Volts	FILAMENT Amps	FIL. HEATING TIME (SEC.)	TUBE DROP (VOLTS)	PEAK INVERSE ANODE VOLTS	ANODE CURRENT Peak Amps	ANODE CURRENT Average Amps	SURGE CURRENT Amps	TEMPERATURE (°C) Ambient	RANGE (°C) Mercury	DESCRIPTION
6693	5.0	11.5	60	12.0	2,500 15,000	10.0 12.0	5.0 3.0	200.0 120.0	+15 to +55° +15 to +35°	+25 to +75° +25 to +55°	Single-anode, mercury vapor rectifier with ratings, intermediate between standard types 575A and 869B. Delivers 9 amps up to 12 kV in a full wave, 3 phase power supply. Three tubes in a three phase half-wave power supply deliver 6 kV at 9 amps using only one filament transformer. Has large contact area, industrial base preventing base contact oxidation. Priced low for replacement market and original equipment.
7136	5.0	11.5	60	12.0	15,000	12.0	2.5	120.0	+15 to +35°	+25 to +55°	Single anode, mercury vapor, high voltage rectifier. Plate current ratings intermediate between types 575-A and 6693. Cathode and anode design similar to 6693 but with 575-A base. Recommended replacement for 575-A in older equipment. For new equipment design, the 6693 is recommended.
8008-AX	5.0	7.5	30	10.0	10,000	5.0	1.25	50.0	–	+20 to +60°	Mercury-vapor half-wave rectifier similar to 872-A characteristics; with heavy long pin industrial base. Used by armed services and in commercial applications. Convection cooled.
8020-AX	5.0	6.0	5	200V at 100 mA	40,000	0.750	0.100	–	–	–	Half-wave, high vacuum rectifier with high inverse voltage and low average current. Used in radar and precipitator power supplies.

COUNTING, SELECTING and INDICATING TUBES

TYPE NO.	FILAMENT Volts	FILAMENT Amps	Maintaining Voltage (V)	Maximum Current (A)	Counting Rate per Sec. (Max)	Bias (V)	Minimum A-K Ignition Voltage (V)	K_c Reset Voltage (V)	DESCRIPTION
6370/E1T	6.3	0.3	–	–	100K	–	–	–	Special beam deflecting decade counter with numerals 0 to 9 for scalers, computers, etc.
6977[1]	1.0	0.3	Anode: 50 DC	–	Zero light output at 3.5 grid volts. Maximum light output at 0 grid volts.		–	–	Subminiature vacuum triode with fluorescent anode particularly suited for transistorized circuits. 20,000 hour life.
Z303C	–	–	186 to 196	300	4K	+35 Guide −20 Cath.	–	−120	Cold cathode bi-directional visual indicating decade counter tube.
Z502S	–	–	186 to 196	300	4K	+35 Guide −20 Cath.	–	−120	Cold cathode bi-directional visual indicating decade selector tube.
Z503M	–	–	108	60	–	–	129	Ext'ing 150 V	Cold cathode decade indicator tube.
Z550M	–	–	82	3 mA	–	Fires on 5 V above starter common voltage.		–	Cold cathode decade numerical indicator tube especially designed for transistorized circuits.

[1] *Available to Military Specifications.*

COLD CATHODE GAS FILLED NUMERICAL INDICATOR TUBES

TYPE NO.	DISPLAY Characters	DISPLAY Character Size	DISPLAY Color	DISPLAY Arrangement	SUPPLY VOLTAGE (VOLTS)	EXTINGUISHING VOLTAGE VOLTS (MAX)	ANODE CURRENT (mA)	OPERATION
ZM1000 ZM1002	Digits 0 to 9 and decimal point	0.6" high	Bright Red	Vertical Numerals 14 pin T 5½ Envelope (Side Viewing)	170	118	2.5	Cold cathode numerical indicator. Can be driven by integrated circuit or discrete circuitry. ZM1002 is a red coated bulb.
ZM1001	Characters i, –, ~, x, y, z	0.6" high	Bright Red	Vertical Characters 14 pin T 5½ (Side Viewing)	170	118	2.5	Special character indicator for use with ZM1000 and ZM1002.
ZM1020 ZM1022	Digits 0 to 9	0.61" high	Bright Red	Vertical Characters End View	±170	118	2	Numerical indicator in a round end-view envelope with a red lacquer coating to reduce glare. The ZM1022 has a clear bulb.
ZM1021 ZM1023	Special Characters A, V, Ω, %, ~, +, –	0.6" high	Bright Red	Vertical Characters End View	170	118	2	Special character indicator in a round end view envelope with a red lacquer coating to reduce glare. The ZM1023 has a clear bulb.
ZM1024 ZM1025	Special Characters c/s, kc/s, Mc/s, μs, ms, ns, s	0.61" high	Bright Red	Vertical Characters End View	170	118	2	Special character indicator in a round end view envelope with a red lacquer coating to reduce glare. The ZM1025 has a clear bulb.
ZM1030 ZM1032	Digits 0 to 9	0.6" x 0.4"	Bright Red	Vertical Numerals in 9-pin T 6½ Envelope (Side Viewing)	200	100	4	Two separate anodes and five interconnected cathode pairs provide for simplified drive circuitry. Expected tube life is 20,000 hours. The bulb of the ZM1030 is coated with red lacquer to reduce glare. Tube type ZM1032 has a clear bulb. These tubes are designed to be used with biquinary logic.
ZM1031 ZM1033	Signs + –	0.5" x 0.5"	Bright Red	– Sign, Rear + Sign, Front (side viewing)	170	110	5	Two anodes and two cathodes separated by a shield provide the circuitry. The bulb of the ZM1031 is covered by a red contrast Filter. Tube type ZM1033 has a clear bulb.

COLD CATHODE INDICATOR DIODES

TYPE NO.	BREAKDOWN VOLTAGE V_{IGN} Max. (V)	BREAKDOWN VOLTAGE V_{IGN} Min. (V)	MAINTAINING VOLTAGE V_M Max. (V)	MAINTAINING VOLTAGE V_M Min. (V)	CATHODE CURRENT I_k mA	DESCRIPTION
ZA1001	135	120	95	9	1.5	Shock and Vibration resistant cold cathode, gas filled subminiature diode, designed for switching and stable saw-tooth generator circuits. Operable thru audio frequency range. It may be used in frequency divider chains as in electronic organs.
ZA1002	175	165	109	103	2.0	Switching and light diode intended for logic functions both in sensing and programming circuits.
ZA1004	90	88	*	*	1.0	Shock and vibration resistant close tolerance cold cathode, gas filled subminiature diode with visible glow-discharge for read-out purposes. The tube contains two electrodes, a rod shaped molybdenum cathode and a concentric gauze anode. May be used with signal voltages as low as 3.0 volts depending upon readout circuit mode of operation.
ZA1005	138	108	86	70	5.0**	Cold cathode, gas filled subminiature diode with pure molybdenum cathode designed for firing of silicon controlled rectifiers. It is shock and vibration resistant, has high peak current capability and a minimum life of 4000 operating hours.

* *Extinction Voltage $V_{EXT}(MIN) = 83.5$ Volts* ** *Peak Cathode Current = 250 mA*

COLD CATHODE TRIGGER TUBES

TYPE NO.	Anode Voltage Range (V)	Starter-To-Cathode Breakdown Voltage (V)	Anode-To-Cathode Maintaining Voltage (V_M)	Anode-To-Cathode Breakdown Voltage (V)	Recommended Priming Resistor (Megohms)	Cathode Current Range (mA)	Peak Cathode Current (mA)	Typical DC Starter Current (μA)	Maximum Negative Starter Current (μA)	Maximum Ambient Temperature (°C)	DESCRIPTION
Z70U/7710	200-310	137-153	111-121	>325	18	2-4	16	20	150	70	Subminiature tube with priming cathode and positive starter voltage, for DC circuits. It may be used as an electronic switching element in counter circuits and in logic units. Other applications are in welding timers, touch controls.
Z70W/7709	200-310	137-153	111-121	>325	18	2-4	16	30	150	70	Subminiature tube with priming cathode and positive starter voltage for DC circuit.
Z71U/7711	125-165	73-90	54-68	>175	–	3-7[2]	12	40	100	70	Subminiature tube with two starters for counting and switching in DC circuit.
Z803U/6779	170-290	128-137	105	>290	10	25 (max.)	100	50	–	70	Stable trigger striking characteristic for position triggering.
Z805U/7714	250-450 dc 180-275 ac	137-155 dc 98-110 ac	118-128	>500	–	5-25	150	50	–	70	Miniature relay tube for ac circuits, short ignition delay and excellent high voltage properties.
Z900T/5823	140-200 dc 117 ac	73-105	62	>200	–	(25 max.)	100	100	–	70	Three electrode, gas filled relay tubes for "on-off" control of low-voltage apparatus.
ZC1040	250-350[1] 180-250[2]	120-240[1] 85-100[2]	112	350[1] 250[2]	10	15-25[1] 10-40[2]	25 40	200	200	+70°C +2°C/mA	Gas filled cold cathode trigger tube with molybdenum cathode and electrical priming. It has been designed to be ignited with positive voltages on starter and anode only and can be fed from a.c. or d.c. anode voltages.
ZC1050	300	180	136	265	–	1-10	10	7.5-30	–	–	Ruggedized cold cathode trigger tube with pure molybdenum electrodes. A very high light output makes this tube especially suitable for use in moving text display shift registers for switching and indicator functions.
ZC1060	100-800	–	–	–	–	20 mA to 5000A	5000A	–	–	125	Subminiature cold cathode trigger tube for switching very high peak currents, e.g. in capacitor discharge circuits. The tube contains an internal cathode, an internal anode and external (capacitive) starter.

† *Typical value* * *At zero starter voltage (minimum value)* *1—D.C. 2—A.C. (rms)*

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUC

VOLTAGE REFERENCE & REGULATOR TUBES

TYPE NO.	OPERATING VOLTAGE (APPROX. VOLTS)	OPERATING VOLTAGE LIMITS[1] (VOLTS)	RECOMMENDED QUIESCENT CURRENT (mA)	IGNITION VOLTAGE[2] (VOLTS)	INTERNAL RESISTANCE (MAX. OHMS)	CURRENT RANGE (mA)	REGULATION[3] (MAX. VOLTS)
OA2	150	144-164	17.5	185 max.	240	5-30	6
OB2	108	106-111	17.5	133 max.	140	5-30	3.5
OE3/85A1[5,6]	85	83-87	4	120 max.	—	1-8	3.15
OG3/85A2[4]	85	83-87	6	125 max.	450	1-10	Notes 5 & 6
9OC1	90	86-94	20	125 max.	350	1-40	14
5651[6]	87	82-92	2.5	115 max.	—	1.5-3 5	3
6354/150B2	150	146-154[4]	10	180 max.	500	5-15	5
7980/83A1[4]	83	82.6-84.1	4.5	130 max.	350	3.5-6.0	Notes 7 & 8
8228/ZZ1000	82	81-84	2	115 max.	500	0.5-3.5	1

[1] *Spread in operating voltage from tube to tube at recommended quiescent current.*
[2] *Over tube life.*
[3] *Over full current range.*
[4] *Voltage Reference Tubes.*
[5] *Drift in operating voltage during the first 300 hours of life: max. 0.3%. Short term drift in operating voltage (100 hours max.) after the first 300 hours of operation: max. 0.1%.*
Temperature coefficient of operating voltage = 2.7 mV/°C.
[6] *Drift in operating voltage during 1000 hours: max. 1%.*
[7] *Variation in anode voltage during the first 300 hours of life: Max. + 0.35 mV.*
Between 300-2500 hours: Max. + 0.2.
Between 300-10000 hours: Max. + 0.35 mV (T_{bulb} = 25°C).
[8] *Temperature coefficient of anode voltage over temperature range of 25°C to 120°C. −0.003%.*

CADMIUM-SULFIDE CELLS

TYPE NO.	DESCRIPTION	CELL VOLTAGE (Volts)	POWER DISSIPATION (Watts)	CELL RESISTANCE (Ohms @ 50 Lux)	SIZE (mm)
ORP 52	Top & Side Sensitive	200	400 mW	1200	15.9 dia x 44
ORP 61	Side Sensitive	350	70 mW	60k	6 dia. x 16.5
ORP 62	Side Sensitive	350	100 mW	45k	6 dia. x 16.5
ORP 66	Top Sensitive	350	70 mW	≤ 55k	6 dia. x 16.5
ORP 90	Side Sensitive	350	1.0	1000	19 dia. x 60.3*
RPY 18	Side Sensitive	100	0.5 (2**)	25	27 x 16.3 x 6
RPY 19	Side Sensitive	400	0.5 (2**)	3000	27 x 16.3 x 6
RPY 20	Side Sensitive	400	1.0 (3**)	1500	43 x 16.3 x 6
RPY 27	Top Sensitive	400	1.0	650	31.5 dia. x 7.25
RPY 43	Side Sensitive	400	0.75	1500	30.5 x 13.5 x 2
RPY 54	Side Sensitive	200	0.5	1500	27 x 16.3 x 6
RPY 55	Top Sensitive	200	1.0	420	32 dia. x 7.6
RPY 58	Side Sensitive	50	200 mW	600	6 x 6 x 2

* *7 pin miniature base.*
** *With heat sink.*

PHOTO TUBES

TYPE NO.	DESCRIPTION	SENSITIVITY (μA/L)	SUPPLY VOLTAGE (Volts)	AVERAGE CURRENT (nA)	SIZE (mm)	SPECTRAL RESPONSE
150AV	For Precision Photometry	60	6-90 D.C.	50	52 x 85	F
150CV	For Precision Photometry	20	6-90 D.C.	35	52 x 85	G
150UV	For Precision Photometry	35	6-90 D.C.	50	53 x 110	H
155UG	For Flame Failure Detection	—	220 R.M.S.	<0.3mA	28.5 dia. x 25*	J

* *Noval base.*

PULSE MAGNETRONS

TYPE NO.	DESCRIPTION	FREQUENCY RANGE (MHz)	HEATER		TYPICAL OPERATION			MAX. PULSE DURATION (μsec)	MAX. DUTY CYCLE	TYPE[1] OUTPUT
			(Volts)	(Amps)	P_o (kW)	E_A (kV)	I_A (Amps)			
DX343	Fixed Frequency	725-775	23 5	2.2	100	16	12	1.0	0.004	WG
DX342	Fixed Frequency	820-880	23 5	2.2	450	23	50	5.0	0 002	WG
5J26 JAN	Tunable	1220-1350	23.5	2.2	450	28	46	6.0	0.0025	CO
YJ1150	Tunable	1220-1350	23.5	2 2	750	29	79	6.0	0 0025	CO
5586	Tunable	2700-2900	16.0	3.1	800	30	70	2.5	0 001	CO
8798	Fixed Frequency	2700-2900	16.0	2 8	800	28	70	2.0	0.0007	WG
5657	Tunable	2900-3100	16.0	3.0	800	27.5	70	1	0 0005	CO
55100-04	Fixed Frequency	2940-2980	5.0	2.6	400	30	35	2.5	0.0012	CO
55100-03	Fixed Frequency	2980-3005	5.0	2.6	400	30	35	2.5	0 0012	CO
55100-02	Fixed Frequency	3005-3030	5.0	2.6	400	30	35	2.5	0 0012	CO
55100-01	Fixed Frequency	3030-3060	5.0	2.6	400	30	35	2.5	0.0012	CO
6589	Tunable	3350-3500	16 0	3.0	500	26-30	50	1	0 0005	WG
YJ1030	Tunable	5400-5900	5.0	0.5	0 16	1 2	0.8	3.0	0.002	CO
4J59	Fixed Frequency	6275-6375	12.6	3.5	210	16-19	30	1	0.001	WG
4J58	Fixed Frequency	6375-6475	12.6	3.5	210	16-19	30	1	0.001	WG
4J57	Fixed Frequency	6475-6575	12.6	3.5	210	16-19	30	1	0.001	WG
DX368	Fixed Frequency	8140-8160	12.6	2.1	50	15	15	1.0	0.0016	WG

[1] *CO = Coaxial WG = Waveguide*

© United Technical Publications

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS®

PULSE MAGNETRONS (Continued)

TYPE NO.	DESCRIPTION	FREQUENCY RANGE (MHz)	HEATER		TYPICAL OPERATION			MAX. PULSE DURATION (μsec)	MAX. DUTY CYCLE	TYPE[1] OUTPUT
			(Volts)	(Amps)	P_O (kW)	E_A (kV)	I_A (Amps)			
YJ1101	Tunable	8500-9000	5.0	0.5	0.18	1.18	0.9	2.0	0.004	CO
YJ1170	Tunable (spin tuned)	8500-9300	12.6	1.0	90	15.5	15	2.0	0.0016	WG
2J51(A)	Tunable	8500-9600	6.3	1.0	60	14	14	3.6	0.0012	WG
YJ1010/7008	Tunable	8500-9600	13.75	3.1	225	21.5	27.5	2.75	0.0011	WG
YJ1011	Tunable	8500-9600	13.75	3.1	225	21.5	27.5	2.6	0.0011	WG
DX285/YJ1180	Tunable (spin tuned)	8700-9500	13.75	3.15	205	22.5	27.5	1.5	0.0011	WG
JP8-02B	Fixed Frequency	8770-8830	6.3	1.2	0.025	0.8	0.15	5.0	0.5	WG
YJ1100	Tunable	9000-9500	5.0	0.5	0.18	1.18	0.9	2.0	0.004	CO
55032-01	Fixed Frequency	9003-9085	13.75	3.4	250	21.5	27.5	1.0	0.001	WG
4J78	Fixed Frequency	9003-9167	13.8	3.35	225	22	28	2.5	0.001	WG
55032-02	Fixed Frequency	9003-9168	13.75	3.4	250	21.5	27.5	1.0	0.001	WG
55031-01	Fixed Frequency	9168-9260	13.75	3.4	250	21.5	27.5	1.0	0.001	WG
YJ1000	Fixed Frequency	9190-9320	6.3	0.5	3.0	3.4	3.0	1.0	0.001	WG
JP9-7A	Fixed Frequency	9210-9270	6.3	0.6	7.5	5.5	4.5	2.5	0.0025	WG
2J56	Fixed Frequency	9215-9275	6.3	1.0	40	16	16	2.5	0.001	WG
55031-02	Fixed Frequency	9260-9345	13.75	3.4	250	21.5	27.5	1.0	0.001	WG
JPT9-01C	Tunable	9300-9500	6.3	1.2	0.015	1	0.1	50	0.25	WG
7028	Fixed Frequency	9345-9475	6.3	0.5	3	3.4	3.0	1.0	0.001	WG
2J42	Fixed Frequency	9345-9405	6.3	0.6	7.5	5.5	4.5	2.5	0.0025	WG
JP9-7D	Fixed Frequency	9345-9405	6.3	0.6	10.5	5.9	7.0	1.0	0.002	WG
YJ-1040	Fixed Frequency	9345-9405	6.3	0.55	14	6.7	5.25	2.5	0.0015	WG
YJ1110	Fixed Frequency	9345-9405	6.3	0.6	20	7.8	7.5	1.5	0.0015	WG
JP9-15(D)	Fixed Frequency	9345-9405	6.3	0.55	22	7.7	8.0	2.5	0.0015	WG
YJ1060	Fixed Frequency	9345-9405	6.3	0.55	20	7.2	7.5	2.5	0.002	WG
2J55	Fixed Frequency	9345-9405	6.3	1.0	50	12	12	2.5	0.01	WG
725A	Fixed Frequency	9345-9405	6.3	1.0	50	12	12	2.5	0.012	WG
6972/JP9-75	Fixed Frequency	9345-9405	10.0	2.85	80	15	15	5.5	0.002	WG
4J52A	Fixed Frequency	9350-9400	12.6	2.2	80	15	15	5.0	0.003	WG
4J50(A)	Fixed Frequency	9345-9405	13.75	3.4	225	21.5	27.5	6.0	0.002	WG
55030	Fixed Frequency	9345-9405	13.75	3.4	250	21.5	27.5	1.0	0.001	WG
YJ1071	Fixed Frequency	9380-9440	6.3	0.55	10	5.8	6	1.0	0.001	WG
YJ1120	Fixed Frequency	9380-9440	6.3	0.55	25	8.3	9	1.5	0.0015	WG
55029	Fixed Frequency	9405-9505	13.75	3.4	250	21.5	27.5	1.0	0.001	WG
JP9-2.5D	Fixed Frequency	9415-9475	6.3	0.5	3	3.5	3.0	1.0	0.001	WG
JP9-2.5E	Fixed Frequency	9415-9475	6.3	0.5	3	3.5	3.0	1.0	0.001	WG
JP9-15B	Fixed Frequency	9415-9475	6.3	0.55	22	7.7	8.0	2.5	0.0015	WG
YJ1140	Fixed Frequency	16,350-16,650	12.6	3.0	50	12.5	18.0	1.0	0.001	WG
YJ1020	Fixed Frequency	32,700-33,400	4.0	3.4	25	12.5	10.5	0.05	0.0003	WG
YJ1021	Fixed Frequency	32,700-33,400	4.0	3.4	30	12.5	12.5	0.5	0.0003	WG
7093	Fixed Frequency	34,512-35,208	5.0	3.9	40	12.5	12.5	0.4	0.0003	WG
8153/55008	Fixed Frequency	34,512-35,208	5.0	3.9	80	17	20	0.5	0.0005	WG
DX164	Fixed Frequency	74,000-76,000	4.8	4.12	10	13	10	1	0.0002	WG
DX287	Fixed Frequency	94,000-97,000	3.25	7.25	10	9	12	0.2	0.0002	WG

[1] CO = Coaxial WG = Waveguide

CONTINUOUS WAVE MAGNETRONS

TYPE NO.	DESCRIPTION	FREQUENCY (MHz)	HEATER		MINIMUM CATHODE PREHEAT TIME (Sec)	COOLING	TYPICAL OPERATION		
			(Volts)	(Amps)			E_A (kV)	I_A (Amps)	P_O (kW)
7090	Fixed Frequency	2425 to 2475	5.3	3.5	180	Conduction	1.65	0.2	0.2
DX206/DX260	Fixed Frequency	2425 to 2475	4.0	30	5	Forced air	5.6	0.38	1.2
DX312	Fixed Frequency	2425 to 2475	4.0	18	—	Forced air	3.5	0.75	1.2
YJ1160	Fixed Frequency	2425 to 2475	5.0	35	180	Water	4.8	0.8	2.5
YJ1162	Fixed Frequency	2425 to 2475	5.0	35	180	Forced air	4.8	0.8	2.5
YJ1191	Fixed Frequency	2400 to 2475	5.5	46	30	Forced air	5.5	1.25	5.5
JPT9-01	Tunable	9150 to 9600	6.3	1.2	120	Forced air	0.92	0.05	0.010

DISC-SEAL TRIODES

TYPE NO.	DESCRIPTION	MAXIMUM FREQUENCY (MHz)	HEATER		PLATE DISSIPATION (Watts)	AMPLIFICATION FACTOR	TRANSCONDUCTANCE (Micromhos)	PLATE		POWER OUTPUT CHARACTERISTICS		
			(Volts)	(Amps)				(Volts)	(Amps)	Power (Watts)	Gain (dB)	Frequency (MHz)
5861/EC55	For amplifier and oscillator applications	3,000	6.3	0.4	1.0	30	6,000	250	0.002	0.5	OSC	3,000
8108/EC157	For amplifier, oscillator doubler or tripler applications	4,200	6.3	0.73	12.5	43	21,000	180	0.060	1.8	13	4,200
8436/EC158	For amplifier, oscillator doubler or tripler applications	4,200	6.3	0.9	30	30	28,000	180	0.140	5.3	11.5	4,200

TRAVELING-WAVE TUBES (Listed in Order of Frequency Range)

TYPE NO.	DESCRIPTION	FREQUENCY RANGE (MHz)	HEATER		COOLING	SATURATION POWER OUTPUT (Watts)	TYPICAL OPERATION				
			(Volts)	(Amps)			GAIN (dB)	HELIX VOLTAGE (Volts)	COLLECTOR VOLTAGE (Volts)	BEAM CURRENT (mA)	NOISE FACTOR (dB)
LB3-250B	Amplifier-Pulsed	2700-3300	6.3	1.0	Water	250	33	Note 1	Note 1	800	—
YH1090	Amplifier-C.W.	3400-4200	6.3	1.05	Natural	23	40	2200	1300	60	25
55340	Amplifier-C.W.	3800-4200	6.3	0.8	Natural	10	39	1100	1150	50	27
7537	Amplifier-C.W.	4400-5000	6.3	0.8	Natural	8	36	1100	1150	50	27
YH1170	Amplifier-C.W.	5800-8500	6.3	1.0	Natural	22	42	2800	1300	55	25
LB6-20	Amplifier-C.W.	5900-6500	6.3	0.95	Natural	20	37	3300	1800	45	27
YH1030	Amplifier-C.W.	5900-7200	6.3	0.80	Natural	10	36	2250	1500	65	30
LB6-10	Amplifier-C.W.	5925-6425	6.3	0.95	Natural	10	35	2650	1700	40	25
LB6-15	Amplifier-C.W.	5925-6425	6.3	0.95	Natural	15	37	2.65	1.7	40	30
LB7-5	Amplifier-C.W.	7000-7450	6.3	0.9	Natural	8	33	2.6	1.7	40	30
LA9-3B	Amplifier-C.W.	7000-11500	6.3	0.5	Natural	0.01	30	1300	1400	0.55	20
YH1080	Amplifier-C.W.	7400-8500	6.3	0.9	Natural	15	37	3300	1800	40	27
LB8-20	Amplifier-C.W.	7700-8500	6.3	0.95	Natural	16	33	2.6	1.7	42	30
LB11-20	Amplifier-C.W.	10700-11700	6.3	1.0	Natural	10	37	3500	2500	50	30

[1] Peak pulse cathode voltage = −5.0 kV, other electrodes grounded.

© United Technical Publications

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

INDUSTRIAL TUBES, POWER TUBES, SPECIAL PURPOSE TUBES

DUMONT ERP
DUTREX INDUSTRIES, INC.

Type	Sugg. Dist. Resale and User Price	Warranty Class	Description
▲OA2	$ 1.39	S	Voltage Regulator
OA2WA	3.35	S	Diode
▲OA3	1.67	S	Voltage Regulator
▲OA4G	2.21	S	Thyratron
OA5	6.96	N	Trigger Tube
▲OB2	1.50	S	Voltage Regulator
▲OB2WA	2.59	S	Voltage Regulator
OB3	2.35	S	Voltage Regulator
▲OC3	1.58	S	Voltage Regulator
▲OD3	1.57	S	Voltage Regulator
C1K/6014	12.30	A	Grid Controlled Rectifier
▲1P39	3.95	S	Phototube
▲1P40	5.90	S	Phototube
2-01C	22.00	E	Rectifier
2C39A	20.75	E	Power Amplifier
2C39B	32.15	G	Power Amplifier
2C39WA	22.40	C	Power Amplifier
▼2C40A	35.00	G	Power Amplifier
▼2C43	25.80	G	Power Amplifier
2C51	4.05	S	Duotriode
▲2D21	1.43	S	Thyratron
2D21W	.....	..	(See 5727/2D21W)
▲2E24	8.00	S	Power Amplifier
▲2E26	4.35	S	Power Amplifier
▲2X2A	4.60	S	Rectifier
3-400Z	.....	..	(See 8163/3-400Z)
▲3B28	9.55	S	Rectifier
3C23	11.98	K	Thyratron
3CPN10A5	.....	..	(See 7815/3CPN10A5)
3CX100A5	.....	..	(See 7289/3CX100A5)
▲3CX2500A3	206.00	E	Power Amplifier
▲3CX2500F3	211.00	E	Power Amplifier
▲3CX3000A1	241.00	E	Power Amplifiers
▲3CX3000F1	246.00	E	Power Amplifiers
▲3E29	23.20	K	Power Amplifier
C3J/5632	13.65	A	Grid Controlled Rectifier
C3J/A/5684	14.05	A	Grid Controlled Rectifier
▲C3J/AL/7556A	15.35	A	Thyratron
3X2500A3	.....	..	(See 8161/3X2500A3)
3X2500F3	.....	..	(See 8251/3X2500F3)
4-65A	.....	..	(See 8165/4-65A)
▲4-125A	44.00	E	Power Amplifier
4-250A	48.00	E	Power Amplifier
4-400A	.....	..	(See 8438/4-400A)
4-1000A	.....	..	(See 8166/4-1000A)
4CX250B	.....	..	(See 7203/4CX250B)
4CX250F	.....	..	(See 7204/4CX250F)
4CX250K	.....	..	(See 8245/4CX250K)
4CX300A	.....	..	(See 8167/4CX300A)
4CX1000A	.....	..	(See 8168/4CX1000A)
4CX5000A	.....	..	(See 8170/4CX5000A)
●4CX10000D	.....	..	(See 8171/4CX10000D)
4E27A/5-125B	50.00	E	Power Amplifier
4PR60B	.....	..	(See 8252/4PR60B)
4W20,000A	.....	..	(See 8173/4W20,000A)
4X150A	.....	..	(See 7034/4X150A)
4X250B	35.60	E	Power Amplifier
4X500A	127.50	E	Power Amplifier
▲5R4GYB	2.28	S	Duodiode
5Y3WGTA	4.05	S	Duodiode
6AD4	3.40	S	Subminiature Triode
6AH6WA	7.60	S	Pentode
6AJ5	3.85	S	Pentode
6AK6	1.40	S	Power Pentode
6AN5	4.20	S	Beam Pentode
6AN5WA	10.80	S	Pentode
▲6AS6	3.77	S	Pentode
▲6AS7G	5.25	S	Duo Power Triode
▲6AS7GA	5.25	S	Duo Power Triode
▲6AU6WB	3.11	S	Pentode
6BF7W	4.90	S	Subminiature Duo-Triode
6C4W	1.55	S	Triode
6C4WA	3.15	S	Triode

Type	Sugg. Dist. Resale and User Price	Warranty Class	Description
6D4	$ 3.30	S	Thyratron
6DJ8	1.90	S	Twin Triode
▲C6J/A/5685	28.90	A	Grid Controlled Rectifier
●C6J/F	.....	..	(See 6860/C6J/F)
●C6J/L	.....	..	(See 7321/C6J/L)
▲6J4	4.51	S	Triode
6J4WA	5.60	S	Triode
6J6WA	5.35	S	Duotriode
6SJ7WGT	3.25	S	Pentode
6SL7WGT	3.15	S	Duotriode
6SN7WGT	2.35	S	Duotriode
6SN7WGTA	4.90	S	Duotriode
6V6GTY	1.45	S	Beam Pentode
6X4WA	2.85	S	Duo-Diode
6X5WGT	1.70	S	Duo-Diode
7AK7	8.15	S	Pentode
7F8W	7.05	S	Duotriode
▲12AT7WA	2.86	S	Duotriode
▲12AT7WB	2.86	S	Duotriode
12AY7	2.45	S	Duotriode
C16J/5665	52.50	A	Grid Controlled Rectifier
25T	43.00	E	Power Amplifier
28D7	4.95	S	Duo. Beam Pentode
▲83	2.21	S	Rectifier
FG-95	.....	..	(See 5560/FG95)
100	.....	..	(See 5575/100)
▲102A	181.45	E	Rectifier
200	.....	..	(See 5576/200)
●207	367.40	E	Triode
SK-220C, F	.....	..	(See Klystrons)
SK-221C	.....	..	(See Klystrons)
250TH	45.00	E	Power Amplifier
304TH	83.00	E	Power Amplifier
304TL	83.00	E	Power Amplifier
407A	5.90	S	Duotriode
408A	4.95	S	Pentode
●414	316.00	T	Thyratron
450TL	103.00	E	Power Amplifier
●456/332	333.00	E	Vacuum Rectifier
▲481B	12.10	E	Rectifier
▲575A†	20.75	E	Rectifier
▲579B	20.90	F	Rectifier
592/3-200A3	63.00	E	Power Amplifier
▲604L	16.40	A	Rectifier
●KU-610	32.29	F	Thyratron
615	10.05	A	Rectifier
●KU-624	82.95	T	Thyratron
▲627	28.88	H	Thyratron
●629	19.16	F	Thyratron
632B	34.65	H	Thyratron
▲635L	14.90	A	Rectifier
652	.....	..	(See 5551A/652)
▲672A	41.40	H	Thyratron
▲673	20.71	E	Rectifier
●676	68.00	T	Thyratron
●677	68.00	T	Thyratron
▲678	50.20	H	Thyratron
710	.....	..	(See 6011/710)
●759	52.50	F	Thyratron
760	28.10	A	Thyratron
760L	29.40	A	Thyratron
▲807†	5.15	S	Power Amplifier
▲810	33.60	K	Power Amplifier
▲811A	8.60	S	Power Amplifier
812AW	9.10	S	Power Amplifier
▲813	29.60	K	Power Amplifier
815	35.75	K	Power Amplifier
816	4.50	S	Rectifier
▼828	37.00	K	Power Amplifier
▲829B	20.80	K	Power Amplifier
▲832A	17.70	K	Power Amplifier

PRICES — All prices are subject to change or withdrawal without notice.

© United Technical Publications

Net

DU MONT

E R P

DUTREX INDUSTRIES, INC.

INDUSTRIAL TUBES, POWER TUBES, SPECIAL PURPOSE TUBES

Type	Sugg. Dist. Resale and User Price	Warranty Class	Description
▲833A†	$ 79.50	E	Power Amplifier
▲857B	221.00	E	Rectifier
▲866A	4.05	S	Rectifier
▲869B†	145.00	E	Rectifier
▲872A	11.70	E	Rectifier
889RA	.....	..	(See 5667/889RA)
▲891	326.00	E	Triodes
▲892	329.00	E	Triodes
●895	2483.00	E	Triode
▲921	6.15	S	Phototube
▲922	3.90	S	Phototube
▲923	5.80	S	Phototube
▲927	7.60	S	Phototube
▲929	3.90	S	Phototube
▲930	5.90	S	Phototube
▲931A	12.50	K	Phototube
▲1000T	172.00	E	Power Amplifier
1051A	68.00	H	Ignitron
1052A	104.00	H	Ignitron
1061	68.00	H	Ignitron
1218A	5.00	S	Triode
1219/5670	3.70	S	Duotriode
1220/5654	3.05	S	Pentode
▲1229	8.75	S	Tetrode
1252/6U8A	2.00	S	Triode Pentode
1319	125.00	G	Vidicon
▲2050	2.48	S	Thyratron
▲2050A	2.21	S	Thyratron
5530-H	450.00	E	Power Amplifier
5531	795.00	E	Power Amplifier
▲5541	690.00	E	Power Amplifier
▲5550/681	51.40	T	Ignitron
▲5551A/652	68.00	H	Ignitron
●5552A/651	104.00	H	Ignitron
▲5553B	254.00	H	Ignitron
▲5554/679	225.00	L	Ignitron
▲5555/653B	320.00	T	Ignitron
▲5555A	320.00	T	Ignitron
5557†	9.50	B	Thyratron
5558	17.50	B	Rectifier
5559†	23.00	B	Thyratron
5560/FG95†	33.00	B	Thyratron
▲5575/100	231.00	E	Rectifier
5576/200	245.00	E	Rectifier
▲5604	598.00	E	Power Amplifier
▼5606	297.00	E	Power Amplifier
●5619	490.00	E	Triode
5632	.....	..	(See C3J/5632)
5636	6.10	S	Subminiature Pentode
5639	5.25	S	Subminiature Beam Pentode
5641	7.55	S	Subminiature Diode
5642	3.55	S	Subminiature Diode
5643	9.05	S	Subminiature Gas Tetrode
5644	9.90	S	Subminiature Gas Diode
5647	9.15	S	Subminiature Diode
▲5651	1.95	S	Gas Diode
▲5651WA	3.95	S	Gas Diode
▲5654	2.73	S	Pentode
5658	595.00	E	Power Amplifier
5665	.....	..	(See C16J/5665)
▲5667(889RA)†	370.00	E	Power Amplifier
▼5668	363.00	E	Power Amplifier
●5669	541.00	E	Triode
▲5670	2.70	S	Duotriode
▲5682	2743.00	E	Triode
5684	.....	..	(See C3J/A/5684)
5685	.....	..	(See C6J/A/5685)
▲5687	4.28	S	Duotriode
5687WA	5.66	S	Duotriode
▲5692	8.75	S	Duotriode
▲5693	7.10	S	Pentode
▲5696	2.25	S	Thyratron
5718	4.20	S	Subminiature Triode

Type	Sugg. Dist. Resale and User Price	Warranty Class	Description
▲5719	$ 4.20	S	Subminiature Triode
5722	8.35	S	Diode
▲5725	3.40	S	Pentode
▲5726	2.02	S	Duodiode
▲5727	3.05	S	Tetrode Thyratron
▲5727/2D21W	3.05	S	Tetrode Thyratron
▲5736	202.00	E	Power Amplifier
▲5749	2.86	S	Pentode
5750	3.45	S	Heptode
▲5751	2.83	S	Duotriode
▲5763	2.69	S	Power Amplifier
5796	17.25	F	Thyratron
▲5814A	2.66	S	Duotriode
▲5822A	121.70	T	Ignitron
▲5823	1.78	S	Thyratron
5840	5.35	S	Subminiature Pentode
5845	9.95	S	Duodiode
▲5855	111.65	T	Thyratron
●5859/5860	63.55	E	Vacuum Rectifier
●5877	20.30	A	Thyratron
5879	2.20	S	Pentode
5881	3.10	S	Power Amplifier
5894	28.25	E	Power Amplifier
5896	4.60	S	Subminiature Duodiode
5899	5.55	S	Subminiature Pentode
5902	4.80	S	Subminiature Pentode
5903	7.45	S	Subminiature Duodiode
5904	7.90	S	Subminiature Triode
5905	8.40	S	Subminiature Pentode
5906	9.80	S	Subminiature Pentode
5907	9.80	S	Subminiature Pentode
▲5918A	1197.00	E	Triodes
5931	6.80	S	Duodiode
5932	11.30	S	Beam Pentode
5933	12.35	S	Beam Pentode
5933WA	16.50	S	Beam Pentode
5934	22.00	I	Rectifier
▲5936	1553.00	E	Triode
▲5963	1.48	S	Duotriode
▲5964	1.86	S	Duotriode
▲5965	2.11	S	Duotriode
5977	6.55	S	Subminiature Triode
5987	11.10	S	Subminiature Triode
▲6005	3.57	S	Beam Pentode
▲6011/710	13.15	T	Thyratron
▲6012	8.00	S	Thyratron
6014	.....	..	(See C1K/6014)
6021	3.50	S	Subminiature Duotriode
6028	4.95	S	Pentode
▲6072	4.24	S	Duotriode
▲6080	5.50	S	Duotriode
6080WA	10.80	S	Duotriode
▲6101	5.75	S	Duotriode
6110	8.05	S	Subminiature Duotriode
6111	3.70	S	Subminiature Duotriode
6112	4.10	S	Subminiature Duotriode
6135	2.40	S	Triode
▲6136	3.08	S	Pentode
6146A	4.35	S	Power Amplifier
6146B/8298A	5.20	S	Power Amplifier
6159A	4.80	S	Power Amplifier
▲6186	4.35	S	Pentode
▲6186/6AG5WA	4.35	S	Pentode
▼6189	4.00	S	Duotriode
▲6197	2.59	S	Pentode
▲6201	3.15	S	Duotriode
6205	5.90	S	Subminiature Pentode
6206	7.25	S	Subminiature Pentode
▲6211	2.50	S	Duotriode
6216	4.15	S	Beam Power Pentode
▲6257	345.00	E	Power Amplifier
▲6350	2.20	S	Duotriode

PRICES — All prices are subject to change or withdrawal without notice.

Net

© United Technical Publications

INDUSTRIAL TUBES, POWER TUBES, SPECIAL PURPOSE TUBES

DUMONT ERP
DUTREX INDUSTRIES, INC.

Type	Sugg. Dist. Resale and User Price	Warranty Class	Description
6352	$ 9.85	S	Subminiature Duodiode
6360	4.95	S	Twin Tetrode
▲6420	460.00	E	Triode
▲6421	540.00	E	Triode
▲6421-F	572.00	E	Power Amplifier
▲6422	463.00	E	Triode
▲6423	543.00	E	Triode
▲6423F	569.00	E	Triode
▲6424	538.00	E	Triode
6425	672.00	E	Triode
▲6425-F	671.00	E	Power Amplifier
▲6426	727.00	E	Triode
●6427	872.00	E	Triode
6476A	14.95	O	Counter Tube
6483	3.09	O	Trigger Tube
6485	2.05	S	Power Pentode
▲6550	4.95	S	Power Amplifier
▲6623	207.00	E	Triode
▲6660/6BA6	1.08	S	Pentode
▲6661/6BH6	1.43	S	Pentode
▲6662/6BJ6	1.30	S	Pentode
▲6663/6AL5	.99	S	Duodiode
▲6664/6AB4	1.25	S	R.F. Amplifier
▲6669/6AQ5A	1.12	S	Beam Pentode
▲6676/6CB6A	1.13	S	Pentode
▲6677/6CL6	1.86	S	Beam Pentode
▲6678/6U8A	1.58	S	Tri. Pentode
▲6679/12AT7	1.58	S	Duotriode
▲6680/12AU7A	1.26	S	Duotriode
▲6681/12AX7	1.34	S	Duotriode
▲6688	8.75	S	Pentode
▲6696	1154.00	E	Triode
6788	10.85	S	Subminiature Pentode
6802	11.43	O	Counter Tube
▲6807	36.40	T	Thyratron
6832	20.65	S	Subminiature Duo Triode
●6860/C6J/F	34.00	A	Thyratron
▲6883A	4.70	S	Power Amplifier
●6893	4.75	E	VHF Beam
●6894	26.05	E	Vapor Rectifier
▲6897	36.35	G	Power Amplifier
6909	11.43	O	Counter Tube
6910	13.37	O	Counter Tube
6922	4.87	S	Double Triode
▲6939	12.25	S	Twin Power Pentode
6943	11.10	S	Subminiature Pentode
6944	11.10	S	Subminiature Pentode
6945	11.10	S	Subminiature Beam Pentode
6946	10.85	S	Subminiature Triode
6947	11.35	S	Subminiature Duotriode
6948	11.35	S	Subminiature Duotriode
6973	.....	..	(Receiving Type)
6977	2.50	S	Indicator Triode
7025	.....	..	(Receiving Type)
7034/4X150A	23.15	E	Power Amplifier
7038	170.00	G	Vidicons
▲7044	2.95	S	Duotriode
▲7054	1.68	S	Power Pentode
▲7056	1.02	S	Pentode
▲7058	1.50	S	Twin Triode
▲7059	1.65	S	Triode Pentode
▲7060	1.96	S	Triode Tetrode
●7120	597.00	E	Triode
●7121	679.00	E	Triode
7155	13.37	O	Counter Tube

Type	Sugg. Dist. Resale and User Price	Warranty Class	Description
▲7167	$ 1.61	S	7 Pin Miniature Tetrode
7199	.....	..	(Receiving Type)
7203/4CX250B	35.60	E	Power Amplifier
7204/4CX250F	38.00	E	Power Amplifier
▲7215	221.00	E	Triode
▲7255	221.00	E	Triode
▲7258	2.28	S	Triode Pentode
●7269	66.30	A	Thyratron
7289/3CX100A5	26.50	E	Power Amplifier
●7297	25.25	A	Thyratron
●7321/C6J/L	30.00	A	Thyratron
7325	170.00	G	Vidicon
●7363	25.20	A	Thyratron
●7464	221.00	E	Triode
●7540	881.00	E	Triode
▲7551	3.67	S	Beam Pentode
●7556A	.....	..	(See C3J/AL/7556A)
▲7560	4495.00	E	Triode
▲7560V	4590.00	E	Triode
●7565	233.00	E	Triode
●7604	150.55	E	Triode
●7659	232.00	E	Vapor Rectifier
▲7669	68.00	T	Ignitron
▲7670	79.50	T	Ignitron
▲7671	103.35	T	Ignitron
▲7681	161.00	D	Ignitron
●7685	150.50	E	Triode
▲7703	176.00	T	Ignitron
▼7735A	150.00	G	Vidicon
7735B	170.00	E	Vidicon
7738	2.80	S	Triode
▲7761	10.00	S	Subminiature Pentode
▲7815/3CPN10A5	25.50	E	Power Amplifier
7962	7.50	S	Subminiature Double Triode
▲7963	9.50	S	Subminiature Double Triode
7984	5.35	S	Beam Pentode
▲8008	10.55	K	Rectifier
8035(CT-4251)	11.10	O	Counter Tube
●8043	46.60	T	Thyratron
▲8070	9.50	S	Subminiature Triode
▲8071	9.50	S	Subminiature Triode
▲8077/7054	1.54	S	Power Pentode
8161/3X2500A3	200.00	E	Power Amplifier
8163/3-400Z	36.00	E	Power Amplifier
▲8165/4-65A	32.50	E	Power Amplifier
▲8166/4-1000A	135.00	E	Power Amplifier
8167/4CX300A	60.00	E	Power Amplifier
8168/4CX1000A	200.00	E	Power Amplifier
8170/4CX5000A	495.00	E	Power Amplifier
●8171/4CX10000D	584.00	E	Tetrode
8173/4W20,000A	2750.00	E	Power Amplifier
8210	10.75	S	Subminiature Pentode
8233	13.25	S	Twin Triode
8238/3X3000A1	.....	..	(See 3CX3000A1)
8239/3X3000F1	.....	..	(See 3CX3000F1)
8245/4CX250K	70.00	E	Power Amplifier
8251/3X2500F3	205.00	E	Power Amplifier
8252/4PR60B	115.00	E	Power Amplifier
8298A	.....	..	(See 6146B/8298A)
▲8306	70.25	T	Ignitron
8334	5.00	S	Triode
8353	11.10	O	Counter Tube
8438/4-400A	48.00	E	Power Amplifier
8484	170.00	G	Vidicon
8507	215.00	E	Vidicon
70780	.65	..	Socket types 8035, 8353
7460-0008	1.20	..	Socket types 6476A, 6910

DELIVERY: Orders for total billing value of $250.00 or more of any mix shipped F.O.B. city of destination unless otherwise noted.

▼ Price Decrease.

▲ Price Increase.

● Indicates additions to line since last price list.

PRICES — All prices are subject to change or withdrawal without notice.

DU MONT E R P

DUTREX INDUSTRIES, INC.

DUMONT WARRANTY
SPECIAL PURPOSE AND INDUSTRIAL TUBES

Warranty Class Subject to Adjustment	Full Adjustment	Pro-rata Adjustment	Adjustment from Date of Shipment
A		3000 hours	1½ years
B		1 year	1½ years
C	50 hours		1½ years
D		2 years	3 years
E	50 hours	1000 hours or 1 year	1½ years
F	1 month		1 year
G	50 hours	500 hours	1½ years
H	1 month	1 year	2 years
I	50 hours		
J		5000 hours	
K	1000 hours or 3 months		1½ years
L		2 years	3 years
M	10,000 hours or 2 years		2½ years
N	1 year		1½ years
O	6 months		
P	3 months		6 months
Q		7500 hours	2 years
R		2000 hours	2 years
S	5% in lieu of defective adjustment		
T	15 days	12 months or 3000 hours	2 years
U	6 months	12 months	1½ years unless tube life exceeds 1000 hours
V	12 months	24 months	2 years unless tube life exceeds 1000 hours
W	50 hours	750 hours	1½ years

To receive credit consideration for tube failure within warranty period, claim must be presented within thirty (30) days after failure of tube.

All in warranty industrial products other than code classification "S" must be accompanied with a tube service report.

WARRANTY AND ADJUSTMENTS

When operated within their specified ratings, Du Mont E. R. P. Power, Transmitting, and Special Purpose tubes are warranted against defects in workmanship and materials. No other warranties are given or may be implied. In no instance will Dutrex Industries, Inc. be liable for consequential damage.

PRICE POLICY

Prices of Du Mont E. R. P. Industrial Electronic tubes are those stated in current published price schedules and special price bulletins as issued by Dutrex Industries, Inc. All prices are subject to change or withdrawal without notice.

This is a partial listing of tube types available from our warehouse. Contact us for your requirements on:

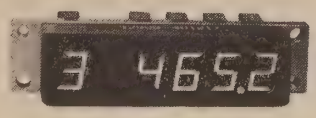
- IGNITRONS
- PHOTO TUBES
- THYRATRONS
- VIDICONS
- RECTIFIERS
- INDUSTRIAL RECEIVING TUBES
- POWER & TRANSMITTING TUBES
- IMAGE ORTHICONS
- KLYSTRONS
- INDUSTRIAL CATHODE RAY
- VOLTAGE REGULATORS

© United Technical Publications

ELECTRONS Industrial Components

ELECTRONS HI-CONTRAST DIGITAL READOUT

Electrons Digital Readouts features an easy to read, bright display with low voltage operation from inexpensive integrated circuit modules. Illuminated Segments emit an even distribution (no breaks in light pattern) at the viewing surface. High contrast and brilliance is extended to 150° in any plane, thus eliminating parallax problems. Readouts can be made with any number and combination of digits, spaces and special characters.



Multi-Digit Unit



Single Digit Unit

THYRATRONS

Type	Other Designations	Description	
EL C1B	3C31	A4-10 Base. Anode Cap.	Xenon
EL C1B/A	5664	A4-10 Base. Anode Cap.	Xenon
EL C1K	6014	A4-10 Base. Single End.	Xenon
EL C1K/B	7319	A4-10 Base. Single End.	Xenon
EL C3J	5632	A4-10 Base. Anode Cap.	Xenon
EL C3J/A	5684	A4-10 Base. Anode Cap.	Xenon
EL C3J/L	7216	Lug Type Base. Anode Cap.	Xenon
EL C3J/AL	7566	Lug Type Base. Anode Cap.	Xenon
EL C4H-1		A4-81 Base. Anode Cap.	Xenon
EL C4H-2		Panel Mounted. Anode Cap.	Xenon
EL C4H-3		Lug Type Base. Anode Cap.	Xenon
EL C4H-4		Panel Mounted. Flexible Leads.	Xenon
EL C4H-5		Lug Type Base. Flexible Lead.	Xenon
EL C6C	6987	#4310 Base. Anode Cap.	Xenon
EL C6H-1		A4-81 Base. Anode Cap.	Xenon
EL C6H-2		Panel Mounted. Anode Cap.	Xenon
EL C6H-3		Lug Type Base. Anode Cap.	Xenon
EL C6H-4		Panel Mounted. Flexible Leads.	Xenon
EL C6H-5		Lug Type Base. Flexible Lead.	Xenon
EL C6J	5C21	A4-81 Base. Anode Cap.	Xenon
EL C6J/A	5685	A4-81 Base. Anode Cap.	Xenon
EL C6J/F	6860	Panel Mounted. Anode Cap.	Xenon
EL C6J/L	6988	Lug Type Base. Anode Cap.	Xenon
EL C6J/K	6864	A4-81 Base. Anode Cap.	Xenon
EL C6J/KF	6871	Panel Mounted. Flexible Leads.	Xenon
EL C6J/KL	6989	Lug Type Base. Anode Cap.	Xenon
EL C16J	5665	Panel Mounted. Flexible Leads.	Xenon
EL C16H		Panel Mounted. Flexible Leads.	Xenon
EL 6011/710	7307A	A4-10 Base. Anode Cap.	Mercury Gas
EL 7518/710L	7509A	Lug Type Base. Anode Cap.	Mercury Gas

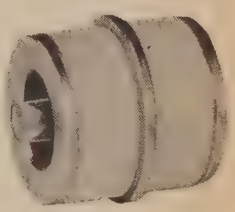


RECTIFIERS Xenon-Filled

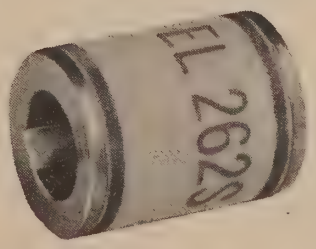
Type	Other Designations	Description
EL 1C	3B22	Full Wave. A4-10 Base. Single End.
EL 3B	6013	Half Wave A4-10 Base. Anode Cap.
EL 3C	4B24	Full Wave. A4-81 Base. Single End.
EL 3C/L	6982	Full Wave. Lug Type Base. Single End.
EL 6B	5892	Half Wave. A4-81 Base. Anode Cap.
EL 6B/L	6983	Half Wave. Lug Type Base. Anode Cap.
EL 6C		Full Wave. A4-81 Base. Single End.
EL 6F	6015	Half Wave. Panel Mounted. Flexible Leads.
EL 16F		Half Wave. Panel Mounted. Flexible Leads.

GAS GAP SURGE ARRESTERS AND EQUIPMENT

Type	Description	APPLICATION	
		Volts ① RMS	KVA ②
EL 252S	.313" O.D. Ceramic	127	1
EL 252SL	Same with Pig Tail Soldering Leads	127	1
EL 262S	.375" O.D. Ceramic	127	2
EL 262SL	Same with Pig Tail Soldering Leads	127	2
EL 272S	.375" O.D. 3 Element Ceramic Center Electrode .50" O.D. max.	127 ③	2
EL 272SL	Same with Pig Tail Soldering Leads	127 ③	2
EL 460A	Ceramic to fit Western Electric Equipment	127	1
EL 2140	3 Element Glass, 4 pin base	127	1



EL 272S



EL 262S

① 127 volts to ground (can be used on 220V, 3ϕ, 3 or 4 wire system)

② KVA capability of line, not equipment KVA load

③ Maximum line voltage between any combination of elements.

ELECTRONS COMPANY
A Unit of General Signal Corporation

© United Technical Publications

ENTERTAINMENT RECEIVING TUBES

Type	Suggested List Price‡
0Z4/0Z4A	$3.85
1A7GT	5.40
1AD2	3.40
1AY2	3.55
1AY2A	4.05
1B3GT — (Use 1G3GT/1B3GT)	
1BC2	2.90
1BG2	2.80
1BH2	3.05
1DG3	4.10
1D-K1	3.45
1D-K27	4.30
1D-K29	3.00
1DN5	4.40
1G3GT/1B3GT	3.40
1G3GTA/1B3GTA	3.95
1H2	3.95
1K3/1J3 — (Use 1K3A/1J3)	
1K3A/1J3	3.95
1L6	12.55
1LH4	7.60
1N2A	4.40
1R5	4.45
1R-K23 — (Use 1S2A/DY87)	
1S2A/DY87	2.55
1S5	3.40
1T4	3.85
1U4	3.85
1U5	3.40
1Y2	2.40
1X2A/1X2B	4.10
2AF4	4.10
2AF4B — (Use 2DZ4/2AF4B)	
2AH2	3.85
2AS2 — (Use 2BU2/2AS2A)	
2AV2	3.10
2BN4A	3.55
2BU2/2AS2A	3.90
2CN3A	4.10
2CW4	4.90
2CY5	4.40
2DS4	4.90
2DV4	6.45
2DZ4/2AF4B	4.10
2EN5	3.20
2ER5	3.70
2FH5	3.70
2FQ5A — (Use 2GK5/2FQ5A)	
2FS5	4.85
2GK5/2FQ5A	3.85
2GU5	4.50
2HA5	3.85
2HK5	3.85
2HQ5	3.85
3A2	5.50
3A3A/3AW3/3B2 — (Use 3A3C/3AW3/3B2)	
3A3C/3AW3/3B2	4.05
3AF4B — (Use 3DZ4/3AF4B)	
3AL5	2.70
3AT2B	3.90
3AU6	2.95
3AV6	2.95
3AW2 (Use 3AW2A)	
3AW2A	4.05
3AW3 — (Use 3A3C/3AW3/3B2)	
3B2 — (Use 3A3C/3AW3/3B2)	
3BC5 (Use 3CE5/3BC5)	
3BE6	2.70
3BL2	3.55
3BM2	3.60
3BN2	4.00
3BN4	3.40
3BN6	4.75
3BS2A (Use 3BW2/3BS2A/3BT2)	
3BT2 (Use 3BW2/3BS2A/3BT2)	
3BU8/3GS8	4.90
3BW2/3BS2A/3BT2	4.20
3BY6	3.00
3BZ6	3.70
3CA3	3.70
3CB6/3CF6	2.30
3CE5/3BC5	2.95
3CF6 (Use 3CB6/3CF6)	
3CN3A	3.45
3CS6	3.70
3CU3 (Use 3CU3A)	
3CU3A	4.90
3CX3 (Use 3DA3/3CX3)	
3CY3 (Use 3DB3/3CY3)	
3CY5	3.75
3CZ3	4.35
3DA3/3CX3	4.20
3DB3/3CY3	4.45
3DC3	4.60
3DF3	4.20
3DG4	5.90
3DJ3	4.25
3DK6	2.95
3DT6	3.25
3DZ4/3AF4B	4.10
3EH7/XF183	2.55
3EJ7/XF184	2.55
3ER5	4.45
3FS5	4.30
3GK5	3.85
3GS8 (Use 3BU8/3GS8)	
3HA5 — (Use 3HM5/3HA5)	
3HM5/3HA5	3.85
3HQ5	5.65
3HS8	4.30
3JC6A	4.40
3KT6	3.80
3Q4	3.35
3S4	3.40
3V4	3.75
4AU6	3.40
4AV6	2.95
4BC8	4.00
4BL8/XCF80	2.40
4BN6	4.05
4BQ7A — (Use 4BZ7/4BQ7A)	
4BS8	4.25
4BU8/4GS8	4.45
4BZ6	3.70
4BZ7/4BQ7A	4.45
4CB6	2.70
4CS6	3.40
4CY5	2.70
4DE6	2.95
4DK6	3.40
4DT6	3.25
4EH7	3.55
4EJ7	3.55
4ES8	5.50
4EW6	3.55
4GK5	3.85
4GM6	2.15
4GS8 (Use 4BU8/4GS8)	
4GX7	4.60
4HA5/PC900	2.30
4HA7/4HC7	4.25
4HM6	3.10
4HQ5	4.60
4HS8	3.70
4JC6A	5.05
4JD6	4.60
4KE8	6.05
4KN8/4R-HH8	7.95
4LU6	3.40
4R-HH2 (Use 4BC8)	
4R-HH8 — (Use 4KN8/4R-HH8)	
5AM8	4.90
5AN8	5.20
5AQ5	3.70
5AR4/GZ34	4.25
5AS4A — (Use 5U4GB/5AS4A)	
5AS8	4.40
5AT8	4.45
5AU4 (Use 5V3/5AU4)	
5AV8	4.05
5B8	5.50
5BC3A	3.40
5BK7A	4.05
5BQ7A — (Use 5BZ7/5BQ7A)	
5BR8 (Use 5FV8/5BR8)	
5BT8	3.10
5BW8	4.30
5BZ7/5BQ7A	4.30
5CG8	4.00
5CL8A	4.90
5CQ8	4.10
5CZ5	4.45
5DH8	5.50
5DJ4	3.55
5EA8	5.05
5ES8	5.50
5EU8	4.00
5EW6	3.40
5FG7	4.05
5FV8/5BR8	4.90
5GH8	4.90
5GJ7	2.95
5GM6	3.25
5GS7	3.65
5GX7	4.60
5HA7	4.25
5HB7	3.40
5HG8/LCF86	3.70
5HZ6	3.25
5J6	3.60
5JK6	3.85
5JL6	3.85
5KD8 (Use 6U8A/6KD8/5KD8)	
5KE8	6.05
5KZ8	4.25
5LJ8	4.40
5MB8	3.65
5M-HH3 (Use 5J6)	
5T8	4.20
5U4GB/5AS4A	3.05
5U8	4.70
5U9/LCF201	2.95
5V3/5AU4	3.80
5V4GA	4.30
5V6GT	3.70
5X8	4.15
5Y3GT	2.95
5Z3	4.45
6AB4	3.60
6AC7	5.75
6AC10	4.25
6AD10	8.15
6AF3	3.55
6AF4	4.90
6AF4A (Use 6DZ4/6AF4A)	
6AF9	3.50
6AF11	5.20
6AG5	3.80
6AG7	6.85
6AG9	6.25
6AG11	6.00
6AH4GT	3.25
6AH6	5.20
6AH9	4.75
6AK5/EF95	4.50
6AK6	2.55
6AK10	5.05
6AL3/EY88	2.60
6AL5	2.95
6AL7GT	8.85
6AL11	5.70
6AM4	7.20
6AM8A	4.60
6AN4	6.15
6AN8A	5.20
6AQ5A/6HG5	3.40
6AQ6	3.25
6AQ7GT	4.70
6AQ8/ECC85	3.00
6AR5	2.45
6AR8	5.90
6AR11	5.35
6AS5	4.00
6AS8	4.85
6AS11	6.05
6AT6	2.05
6AT8A	5.20
6AU4GTA	4.85
6AU5GT	5.20
6AU6A	2.95
6AU8A	5.65
6AV5GA	5.20
6AV6	2.70
6AV11	4.40
6AW8A	4.45
6AX3	3.40
6AX4GTB	3.70
6AX5GT	3.85
6AX8	3.45
6AY3B/6BS3A	3.70
6AY11	5.90
6AZ8	5.55
6B10	4.45
6BA6/EF93	3.25
6BA7	5.90
6BA8A	4.60
6BA11	4.90
6BC4	5.50
6BC5 (Use 6CE5/6BC5)	
6BC7	3.60
6BC8/6BZ8	4.90
6BD6	2.30
6BD11	6.15
6BE3	4.45
6BE6	3.40
6BF5	3.35
6BF6	2.80
6BF11	5.05
6BG6GA	6.45
6BH6	4.00
6BH8	4.60
6BH11	4.70
6BJ3	3.25
6BJ6	4.05
6BJ7	2.95
6BJ8	4.45
6BK4C/6EL4A	7.70
6BK5	3.45
6BK7B	4.90
6BL7GTA	5.60
6BL8/ECF80	2.70
6BM8/ECL82	2.90
6BN4A	3.95
6BN6 — (Use 6KS6/6BN6)	
6BN8	3.70
6BN11	5.35
6BQ5/EL84	3.90
6BQ6GA/6CU6	5.40
6BQ6GTB	5.40
6BQ7A — (Use 6BZ7/6BQ7A)	
6BR3/6R-K19	4.85
6BR8A — (Use 6FV8A/6BR8A)	
6BS3A — (Use 6AY3B/6BS3A)	
6BS8	5.00
6BU8	5.05
6BV8	3.30
6BV11	4.95
6BW4	2.75
6BW8	4.70
6BW11	5.35
6BX7GT	5.90
6BY5GA	4.80
6BY6	3.40
6BY8	2.70
6BZ3	4.45
6BZ6	3.10
6BZ7/6BQ7A	5.00
6BZ8 (Use 6BC8/6BZ8)	
6C4	3.70
6C5	5.35
6C9	5.50
6C10	3.70
6CA4	3.25
6CA5	3.00
6CA7/EL34	5.35
6CB5A	9.40
6CB6A/6CF6	3.25
6CD3 (Use 6CG3/6CE3/6CD3)	
6CD6GA	6.65
6CE3 (Use 6CG3/6CE3/6CD3)	
6CE5/6BC5	3.25
6CF6 — (Use 6CB6A/6CF6)	
6CG3/6CE3/6CD3	3.90
6CG7 (Use 6FQ7/6CG7)	
6CG8A	4.30
6CH8	5.65
6CJ3/6DW4B/6CL3	3.70
6CK3	3.70
6CK4	3.55
6CL3 (Use 6CJ3/6DW4B/6CL3)	
6CL6	4.75
6CL8A	4.60
6CM3	4.90
6CM6	3.85
6CM7	4.15
6CM8	4.05
6CN7	4.45
6CQ4 — (Use 6DE4/6CQ4)	
6CQ8	4.10
6CR6	2.95
6CS6	3.30
6CS7	3.75
6CU5	4.00
6CU6 — (Use 6BQ6GA/6CU6)	
6CU8	4.60
6CW4	5.65
6CW5/EL86	2.75
6CX8	5.20
6CY5	4.25
6CY7	3.05
6CZ5	4.75
6D10	4.65
6DA4A/6DM4A	3.70
6DB5	5.00
6DC6	3.85
6DE4/6CQ4	3.55
6DE6	3.25
6DE7	4.45
6DG6GT	3.85
6DK6	2.95
6DL5/EL95	2.95
6DM4A — (Use 6DA4A/6DM4A)	
6DN6	7.00
6DN7	4.60
6DQ5	8.15
6DQ6B/6GW6	4.60
6DR7	5.05
6DS4	5.65
6DS5	3.65
6DT5	3.55
6DT6A	3.25
6DT8	3.75
6DV4	6.45
6DW4B (Use 6CJ3/6DW4B/6CL3)	
6DX8/ECL84	2.95
6DZ4/6AF4A	4.90
6DZ7	10.35
6E5	5.65
6EA4 (Use 6EH4A)	
6EA7 (Use 6EM7/6EA7)	
6EA8	3.90
6EB8 (Use 6GN8/6EB8)	
6EF4 (Use 6EJ4A)	
6EH4A	8.20
6EH5	3.55
6EH7/EF183	3.85
6EH8	3.50
6EJ4A	9.35
6EJ7/EF184	3.55
6EL4 — (Use 6BK4C/6EL4A)	
6EM5	4.45
6EM7/6EA7	5.70
6EQ7	2.95
6ER5	4.20
6ES5	2.85
6ES8/ECC189	5.45
6EU7	3.95
6EU8	3.70
6EV5	3.55
6EV7	3.25
6EW6	3.55
6EW7	6.00
6EY6	5.00
6EZ5	5.05
6EZ8	3.55
6F5	5.85
6F6	6.15
6F6GT (Use 6F6)	
6FD6	3.55
6FD7	5.70
6FG5	5.35
6FG6/EM84	3.30
6FG7	4.60
6FH5	4.55
6FH8	4.40
6FJ7	4.15
6FM7	4.60
6FM8	3.95
6FQ5A — (Use 6GK5/6FQ5A)	
6FQ7/6CG7	2.95
6FS5	4.10
6FV6	4.45
6FV8A/6BR8A	4.70
6FW5	4.90
6FY5	2.75
6FY7	3.50
6G11	6.00
6GB3A (Use 6BQ6GTB)	
6GB5/EL500	3.80
6GB6 — (Use 6DQ6B/6GW6)	
6GC5	5.00
6GE5	5.70
6GF5	3.80
6GF7A	5.35
6GH8A	3.20
6GJ5A	6.15
6GJ7/ECF801	3.10
6GK5/6FQ5A	4.60
6GK6	3.70
6GK17 (Use 6AU4GTA)	
6GL7	5.75
6GM5	3.05
6GM6	3.85
6GM8/ECC86	4.35
6GN8/6EB8	5.05
6GQ7	3.75
6GS7	3.75
6GT5A	6.35
6GU5	4.10
6GU7	4.15
6GV5	4.10
6GW6 — (Use 6DQ6B/6GW6)	
6GW8/ECL86	3.05
6GX6 (Use 6GY6/6GX6)	
6GX7	4.60
6GY5	4.60
6GY6/6GX6	3.20
6GY8	5.10
6GZ5	2.70
6H6	5.25
6HA5 — (Use 6HM5/6HA5)	
6HA6 — (Use 6HB6/6HA6)	
6HB5	4.60
6HB6/6HA6	4.45
6HB7	4.30
6HD7	3.30
6HE5	4.60
6HF5	8.70
6HF8	5.25
6HG5 — (Use 6AQ5A/6HG5)	
6HG8/ECF86	3.70
6HJ8	3.10
6HK5	3.90
6HL8	3.05
6HM5/6HA5	3.85
6HM6	2.95
6HQ5	5.05
6HR5	2.55
6HS5	7.75
6HS6	3.70
6HS8	4.75
6HV5	7.75
6HZ6	2.90
6HZ8	5.50
6J5	4.60
6J6A	4.45
6J7	5.75
6J10 (Use 6Z10/6J10)	
6J11	5.75
6JB5	4.75
6JB6A	6.35
6JC6A	4.45
6JC8	3.30
6JD6	3.55
6JE6B — (Use 6JE6C/6LQ6)	
6JE6C/6LQ6	8.65
6JE8	3.70
6JF6	7.25
6JG6A	6.50
6JH6	3.60
6JH8	5.50
6JK6	3.85
6JK8	4.05
6JM6	5.70
6JN6	5.35
6JN8	3.65
6JQ6	3.85
6JS6B (Use 6JS6C)	
6JS6C	7.50
6JT6A	5.40
6JT8	4.45
6JU8A	4.40
6JV8	4.40
6JW8/ECF802	3.10
6JZ6	4.60
6JZ8	3.55
6K6GT	3.45
6K7	5.50
6K11/6Q11	3.80
6KA8	4.90
6KD6	8.85
6KD8 (Use 6U8A/6KD8/5KD8)	
6KE8	6.05
6KL8	2.95
6KM6	8.85
6KM8	3.45
6KN6	7.20
6KN8/6R-HH8	7.95
6KR8	4.25
6KS6/6BN6	4.50
6KT6	3.30
6KT8	5.40
6KU8	4.80
6KV8	5.85
6KY8A	7.70
6KZ8	4.05
6L6	9.65
6L6GC	5.90
6LB6	8.85
6LB8	4.70
6LC6 (Use 6LH6A)	
6LC8	4.75
6IE8	5.55
6LF6	8.45
6LF8	5.10
6LH6A — (Use 6LJ6A/6LH6A)	
6LJ6A/6LH6A	8.30
6LJ8	4.40
6LM8	4.90

‡ Manufacturer's suggested list price: subject to change without notice.

GENERAL ELECTRIC

Trade Discount Applies To List Prices Only

© United Technical Publications

ENTERTAINMENT RECEIVING TUBES

Type	Suggested List Price‡
6LN8	2.40
6LQ8	5.55
6LR6	8.15
6LR8	4.75
6LT8	4.00
6LU8	4.75
6LX8/LCF802	2.60
6LY8	3.90
6M11	5.75
6MB8	3.65
6MD8	5.35
6ME8	5.65
6MF8	4.75
6MG8	2.45
6MJ8	4.60
6M-HH3	(Use 6J6A)
6MK8A	4.30
6MN8	4.75
6MV8	5.40
6N7	5.05
6Q11	(Use 6K11/6Q11)
6R-HH2 —	(Use 6BC8/6BZ8)
6R-HH8 —	(Use 6KN8/6R-HH8)
6R-P22	10.70
6R-K19 —	(Use 6BR3/6R-K19)
6S4A	3.70
6SA7	5.50
6SC7	5.35
6SF5	5.00
6SG7	5.60
6SH7	6.15
6SJ7	5.35
6SK7	5.00
6SL7GT	4.90
6SN7GTB	4.00
6SQ7	4.95
6T8A	4.70
6T9	4.40
6T10	5.55
6U8A/6KD8/5KD8	3.90
6U9	2.90
6U10	4.05
6V3A	4.55
6V4/EZ80	1.50
6V6	6.80
6V6GTA	4.45
6W4GTA	3.30
6W6GT	4.60
6X4	3.40
6X5GT	3.55
6X8A	4.45
6X9/ECF200	2.95
6Y6GT	3.55
6Y9	2.95
6Z10/6J10	6.20
7A7	7.15
7AU7	3.10
7B5	8.35
7C5	3.30
7C7	3.40
7EY6	3.70
7F7	7.50
7F8	8.25
7GS7	4.70
7GV7	3.90
7HG8/PCF86	2.75
7N7	7.10
8A8 —	(Use 9A8/8A8/PCF80)
8AC10	5.05
8AL9	8.15
8AR11	5.35
8AU8	3.85
8AW8A	5.35
8B10	4.40
8BA11	5.50
8BM11	4.70
8BN11	4.35
8BQ5	3.75
8BQ11	4.30
8BU11	5.00
8CB11	5.60
8CG7	(Use 8FQ7/8CG7)
8CM7	2.70
8CN7	3.05
8CS7	3.95
8CW5	2.55
8CX8	4.40
8EB8 —	(Use 8GN8/8EB8)
8EM5	4.10
8ET7	4.15
8FQ7/8CG7	2.95
8GJ7/PCF801	2.90
8GN8/8EB8	4.15
8JU8A	3.35
8JV8	4.30
8KA8	4.65
8KR8	6.70
8LC8	4.75
8LT8	4.00
9A8/8A8/PCF80	2.65
9AH9	5.05
9AQ8	7.65
9AU7	2.95
9BJ11	5.85
9BR7	3.15
9CL8	2.95
9GH8A	4.10
9GV8	3.40
9JW8	3.25
9KC6	4.35
9KZ8	2.95
9MN8	4.45
9R-AL1	(Use 10DE7)
9R-HR2	5.25
10AL11	4.55
10BQ5	2.75
10C8	6.05
10CW5/LL86	2.55
10DE7	4.90
10DX8/LCL84	2.75
10EG7	4.40
10EM7	4.90
10EW7	5.25
10GF7A	4.75
10GK6	3.45
10GN8	4.90
10HF8	5.35
10JA8 —	(Use 10LZ8/10JA8)
10JY8	3.65
10JT8	4.05
10KR8	4.25
10KU8	4.85
10LB8	4.70
10LE8	5.90
10LW8	5.30
10LY8	3.90
10LZ8/10JA8	4.15
10T10	5.35
10Z10	6.15
11AF9	3.10
11AR11	5.35
11BM8	5.85
11BQ11	5.35
11BT11	6.50
11CA11	7.50
11CF11	7.80
11CY7	4.80
11FY7	3.70
11HM7	5.25
11JE8	3.85
11KV8	6.50
11LQ8	5.90
11LT8	4.00
11R3	5.25
11Y9/LFL200	3.70
12AB5	3.85
12AC6	2.10
12AC10A	5.05
12AD6	3.50
12AE6A	3.10
12AE10	5.75
12AF3	4.25
12AF6	3.15
12AL5	2.75
12AL8	6.20
12AL11	5.65
12AQ5	3.45
12AT6	2.75
12AT7/ECC81	3.55
12AU6	3.55
12AU7A/ECC82	3.10
12AV5GA	5.45
12AV6	2.30
12AV7	4.60
12AX3	3.00
12AX4GTB	3.30
12AX7/ECC83	2.80
12AX7A/7025	2.80
12AY3A/12BS3A	2.90
12AZ7A	4.00
12B4A	4.00
12BA6	2.80
12BA7	5.90
12BD6	2.30
12BE3	3.45
12BE6	3.05
12BF6	2.30
12BF11	5.75
12BH7A	3.85
12BK5	3.75
12BL6	3.70
12BN6	4.60
12BQ6GA/12CU6	4.20
12BQ6GTB	4.20
12BR3/12R-K19	3.85
12BR7	3.05
12BS3A —	(Use 12AY3A/12BS3A)
12BT3	3.45
12BV7	(Use 12BY7A/12BV7/12DQ7)
12BV11	4.80
12BW4	3.30
12BY7A/12BV7/12DQ7	3.55
12BZ7	4.15
12C5 —	(Use 12CU5/12C5)
12CA5	3.95
12CN5	3.25
12CR6	2.95
12CT8	6.40
12CU5/12C5	4.30
12CU6 —	(Use 12BQ6GA/12CU6)
12CX6	2.75
12D4	3.05
12DB5	2.60
12DE8	3.10
12DQ6B/12GW6	4.95
12DQ7	(Use 12BY7A/12BV7/12DQ7)
12DS7	5.40
12DT5	3.10
12DT8	3.55
12DW4A	5.85
12DY8	7.95
12DZ6	(Use 12EK6/12DZ6/12EA6)
12EA6	(Use 12EK6/12DZ6/12EA6)
12ED5	2.70
12EG6	3.45
12EK6/12DZ7/12EA6	3.60
12EQ7	2.75
12EZ6	3.55
12F8	3.25
12FK6	2.55
12FM6	2.60
12FQ7	3.70
12FQ8	5.20
12FX5	3.25
12FX8A	3.85
12GA6	2.70
12G-B3	10.00
12G-B7 —	(Use 12DQ6B/12GW6)
12GC6	4.35
12GE5	5.20
12GN7A/12HG7	5.65
12GT5A	5.35
12GW6 —	(Use 12DQ6B/12GW6)
12H6	4.45
12HE7	6.80
12HG7 —	(Use 12GN7A/12HG7)
12HL7	4.90
12J5	4.10
12J8	4.35
12JN6	3.90
12JN8	3.70
12JQ6	3.70
12JT6A	4.95
12K5	3.45
12L6GT	3.55
12MD8	4.85
12R5	3.30
12R-K19 —	(Use 12BR3/12R-K19)
12SA7	5.50
12SF5	3.95
12SG7	4.70
12SJ7	4.30
12SK7	5.25
12SL7GT	4.95
12SN7GTA	4.30
12SQ7	4.95
12T10	4.65
12V6GT	4.45
12W6GT	4.90
12X4	2.25
13CW4	5.05
13DE7	4.75
13DR7	5.25
13EM7/15EA7	5.85
13FD7	5.25
13FM7 —	(Use 15FM7/13FM7)
13GB5/XL500	3.80
13GF7A	5.20
13J10 —	(Use 13Z10/13J10)
13JZ8	5.05
13V10	5.90
13Z10/13J10	6.20
14BL11	7.30
14BR11	5.80
14GT8	3.50
14JG8	4.00
15AF11	4.75
15BD11A	5.50
15CW5/PL84	2.45
15DQ8	3.55
15EA7 —	(Use 13EM7/15EA7)
15FM7/13FM7	4.00
15FY7	3.90
15KY8A	6.35
15LE8	7.65
15MF8	5.10
16A8/PCL82	3.45
16AK9	6.80
16AQ3/XY88	2.70
16BQ11	5.35
16BX11	6.20
16GK6	3.05
16GY5	4.85
16KA6	6.25
16LU8A	7.25
17A8	6.30
17AB9	6.50
17AB10/17X10	5.50
17AX3	2.60
17AX4GTA	3.55
17AY3A/17BS3A	3.70
17BB14	10.50
17BE3	3.70
17BF11	5.90
17BR3/17R-K19	3.35
17BS3A —	(Use17AY3A/17BS3A)
17BW3	3.20
17BZ3	3.70
17C5 —	(Use 17CU5/17C5)
17C9	7.15
17CK3	3.55
17CT3	2.95
17CU5/17C5	3.10
17D4/17DM4A	4.05
17DE4	3.65
17DM4A —	(Use 17D4/17DM4A)
17DQ6B/17GW6	5.25
17DW4A	3.70
17EW8/HCC85	2.75
17GE5	4.35
17GJ5	6.05
17GT5A	5.55
17GV5	4.20
17GW6 —	(Use 17DQ6B/17GW6)
17HB25	8.15
17H3	3.70
17JB6A	5.85
17JM6	5.90
17JN6	5.35
17JT6A	5.60
17JZ8	3.55
17KV6A	7.85
17R-K19 —	(Use 17BR3/17R-K19)
17X10 —	(Use 17AB10/17X10)
17Z3	4.75
18A5	5.20
18AJ10	5.90
18FW6	2.45
18FX6	2.95
18FY6	2.95
18GB5	5.50
19AU4GTA	4.35
19BG6GA	6.65
19CG3	3.60
19CL8A —	(Use 19JN8/19CL8A)
19DE3	4.50
19EA8	4.45
19EZ8	5.40
19GQ7	3.80
19HV8	4.70
19JN8/19CL8A	3.20
19KG8	3.10
19MR9	(Use 18FW6)
19T8	4.90
20AQ3/LY88	3.30
20EZ7	3.45
21GY5	4.60
21HB5A	4.75
21JS6A/23JS6A	13.35
21JV6	4.60
21JZ6	4.85
21KA6	4.45
21KQ6	13.65
21LG6	8.95
21LR8	4.75
21LU8	4.75
22BH3A	3.10
22BW3	4.15
22DE4	4.20
22JF6	7.25
22JG6A	6.20
22JR6	6.20
22JU6	6.35
22KM6	8.20
23JS6A —	(Use 21JS6A/23JS6A)
23Z9	4.75
24BF11	5.20
24JE6A —	(Use 24LQ6/24JE6C)
24JZ8	4.50
24LQ6/24JE6C	8.65
25AV5GA	5.65
25AX4GT	3.05
25BK5	3.40
25BQ6GA/25CU6	4.35
25BQ6GTB	4.35
25C5	3.70
25CA5	3.60
25CD6GB	6.40
25CG3	3.40
25CU6	(Use 25BQ6GA/25CU6)
25DK4	2.20
25DN6	6.60
25E5	7.10
25EC6	6.95
25EH5	3.70
25F5A	3.85
25L6GT/25W6GT	3.70
25W4GT	3.70
25W6GT —	(Use 25L6GT/25W6GT)
25Z6GT	3.85
26HU5	12.05
26LX6	9.50
27	5.10
27GB5/PL500	3.70
29GK6	3.60
29KQ6	12.60
30AE3	3.25
30AG11	6.45
30JZ6	6.15
30KD6	8.65
31AL10	6.35
31JS6A	7.30
32ET5A	2.40
32HQ7	7.70
33GT7	6.95
33GY7A	6.40
33JV6	4.60
34CE3/34CD3	3.90
34GD5	2.95
34R3	3.70
35B5	3.20
35C5	3.20
35EH5	3.40
35GL6	2.90
35L6GT	3.85
35W4	1.95
35Y4	4.50
35Z5GT	2.95
36AM3B	2.55
36KD6/40KD6	8.85
38HE7	7.25
38HK7	7.10
40KD6 —	(Use 36KD6/40KD6)
42KN6	7.20
45B5/UL84	2.80
50B5	2.95
50C5	3.05
50DC4	2.40
50EH5	3.55
50FE5	4.45
50HC6	4.15
50HK6	2.15
50HN5	2.75
50IY6	7.50
50L6GT	4.45
53HK7	8.35
60FX5	2.95
80	4.80
117Z3	4.50
5879	5.35
6267	2.85
6931	3.40
6973	5.05
7025 —	(Use 12AX7A/7025)
7027A	7.40
7189A	3.85
7199	4.90
7247	4.05
7355	3.65
7408	3.20
7543	3.25
7581A/KT66	6.15
7591A	2.80
7695	4.40
7868	4.75
8417	5.65
8425A/6AU6A	3.25
8426A/12AU6	3.75
DY87	(Use 1S2A/DY87)
ECC81 —	(Use 12AT7/ECC81)
ECC82 —	(Use 12AU7A/ECC82)
ECC83 —	(Use 12AX7/ECC83)
ECC85 —	(Use 6AQ8/ECC85)
ECC86 —	(Use 6GM8/ECC86)
ECC189 —	(Use 6ES8/ECC189)
ECF80 —	(Use 6BL8/ECF80)
ECF86 —	(Use 6HG8/ECF86)
ECF200 —	(Use 6X9/ECF200)
ECF801 —	(Use 6GJ7/ECF801)
ECF802 —	(Use 6JW8/ECF802)
ECL82 —	(Use 6BM8/ECL82)
ECL84 —	(Use 6DX8/ECL84)
ECL86 —	(Use 6GW8/ECL86)
EF93	(Use 6BA6/EF93)
EF95	(Use 6AK5/EF95)
EF183 —	(Use 6EH7/EF183)
EF184 —	(Use 6EJ7/EF184)
EL34	(Use 6CA7/EL34)
EL84	(Use 6BQ5/EL84)
EL86 —	(Use 6CW5/EL86)
EL95	(Use 6DL5/EL95)
EL500 —	(Use 6GB5/EL500)
EM84 —	(Use 6FG6/EM84)
EY88	(Use 6AL3/EY88)
EZ80	(Use 6V4/EZ80)
GZ34	(Use 5AR4/GZ34)
HCC85 —	(Use 17EW8/HCC85)
KT66 —	(Use 7581A/KT66)
LCF86 —	(Use 5HG8/LCF86)
LCF201 —	(Use 5U9/LCF201)
LCL84 —	(Use 10DX8/LCL84)
LFL200 —	(Use11Y9/LFL200)
LL86 —	(Use 10CW5/LL86)
LY88 —	(Use 20AQ3/LY88)
PC900 —	(Use 4HA5/PC900)
PCF80	(Use 9A8/8A8/PCF80)
PCF86 —	(Use 7HG8/PCF86)
PCF801 —	(Use 8GJ7/PCF801)
PCL82 —	(Use 16A8/PCL82)
PL84 —	(Use 15CW5/PL84)
PL500 —	(Use 27GB5/PL500)
UL84 —	(Use 45B5/UL84)
XCF80 —	(Use 4BL8/XCF80)
XF183 —	(Use 3EH7/XF183)
XF184 —	(Use 3EJ7/XF184)
XL500 —	(Use 13GB5/XL500)
XY88 —	(Use 16AQ3/XY88)

‡ Manufacturer's suggested list price: subject to change without notice.

GENERAL ELECTRIC

© United Technical Publications

Trade Discount Applies To List Prices Only

TV PICTURE TUBES

ULTRACOLOR

Tube Type	Suggested Price (or Replacement)
11SP22θ	$63.60
11WP22θ	78.55
15LP22θ	77.05
15MP22θ	79.35
15NP22θ	74.35
19EXP22θ	74.55
19EYP22θ	81.35
19FMP22	19EYP22
19FXP22	19EYP22
19GLP22	19EYP22
19GVP22	19EXP22
19GWP22	19EYP22
19GXP22	19EXP22
19GYP22	19EXP22
19GZP22	19EYP22
21AXP22Aφ	66.65
21CYP22Aφ	66.65
21FBP22φ	54.55
21FBP22Aθ	62.65
21FJP22φ	61.40
21FJP22Aθ	68.15
21FKP22A	21FJP22A
21GFP22θ	120.00
21GWP22θ	126.65
22ABP22	22JP22
22JP22θ	89.00
22KP22θ	80.80
22LP22	22JP22
22QP22	22JP22
22RP22	22KP22
22SP22	22JP22
22YP22	22JP22
23EGP22φ	102.35
23EGP22Aθ	155.30
25AP22	25AP22A
25AP22Aθ	65.80
25BP22	25BP22A
25BP22Aθ	59.65
25CP22θ	65.80
A25CP22	25CP22
25FP22,A	25BP22A
25GP22,A	25AP22A
25RP22	25BP22A
25SP22	25AP22A
25UP22θ	152.00
25VP22	25AP22A
25WP22	25AP22A
25XP22	25AP22A
25YP22	25BP22A
25ZP22	25AP22A
A63-16X	25UP22
370AB22	15NP22
370CB22	15NP22
490AB22	19EXP22
490ACB22	19EXP22
490ADB22	19EXP22
490AEB22	19EYP22
490AFB22	19EYP22
490AGB22	19EYP22
490AHB22	19EXP22
490AHB22A	19EXP22
490AJB22	19EYP22
490AJB22A	19EYP22
490AKB22	19EXP22
490ALB22	19EXP22
490AMB22	19EXP22
490ANB22	19EXP22
490ARB22	19EYP22
490ASB22	19EYP22
490BAB22	19EXP22
490BCB22	19EYP22
490BDB22	19EYP22
490BGB22	19EXP22
490BHB22	19EYP22
490BRB22	19EYP22
490CB22	19EXP22
490DB22	19EXP22
490EB22	19EXP22
490EB22A	19EXP22
490FB22	19EXP22
490GB22	19EXP22
490HB22	19EXP22
490JB22	19EXP22
490JB22A	19EXP22
490KB22	19EXP22
490KB22A	19EXP22
490LB22	19EXP22
490MB22	19EXP22
490NB22	19EYP22
490RB22	19EYP22
490SB22	19EYP22
490TB22	19EYP22
490UB22	19EXP22
490VB22	19EYP22
490WB22	19EXP22
490XB22	19EYP22
490YB22	19EYP22
490ZB22	19EYP22

θ Rare earth phosphor.

φ Sulfide phosphor.

COLOR TEST TUBES

Tube Type	Suggested Price (or Replacement)
CT19	$53.35
CT19B	62.65
CT21	52.65

MONOCHROME

Tube Type	Suggested Price (or Replacement)
8XP4	$28.35
8YP4	39.35
9AGP4	22.60
9VP4	25.00
10ARP4	21.35
11AP4	11HP4
11BP4	11HP4
11GP4	27.10
11HP4	23.90
11HP4A	11HP4
11RP4	11UP4
11UP4	25.70
12BEP4	22.60
12BGP4	23.50
12BKP4	22.80
12BLP4	12BKP4
12BMP4	12CDP4
12BZP4	25.00
12CDP4	23.95
12CWP4	25.00
12DGP4	18.55
13AP4	26.60
14HP4	14QP4B
14QP4,A	14QP4B
14QP4B	28.35
16ATP4	27.60
16AUP4	27.70
16AVP4	16BCP4
16AYP4	27.70
16AZP4	23.95
16BCP4	34.50
16BDP4	16AUP4
16BMP4	16AYP4
16BSP4	16ATP4
16BUP4	27.60
16BVP4	16ATP4
16BXP4	33.90
16BYP4	29.40
16CEP4	16ATP4
16CFP4	16CQP4
16CHP4,A	16ATP4
16CJP4	16ATP4
16CMP4,A	16ATP4
16CNP4	31.95
16CQP4	30.60
16CUP4	16ATP4
16CWP4	30.60
16KP4A	16RP4B
16RP4B	18.40
16XP4	16RP4B
17AP4	17BP4B
17ATP4,A	17BJP4
17AVP4,A	17BJP4
17BJP4	23.15
17BP4,A,C	17BP4B
17BP4B	21.20
17BRP4	17DSP4
17BUP4	17BJP4
17BVP4	17BWP4
17BWP4	24.00
17BZP4	17DSP4
17CAP4	17DSP4
17CBP4	17BJP4
17CDP4	26.35
17CFP4	22.35
17CKP4	17DSP4
17CLP4	17BJP4
17CRP4	24.00
17CSP4	17BWP4
17CWP4	17DSP4
17CXP4	17CRP4
17CZP4	17BJP4
17DAP4	29.55
17DHP4	17DXP4
17DKP4	22.35
17DLP4	22.35
17DQP4	24.00
17DRP4	29.55
17DSP4	25.00
17DTP4	17DKP4
17DXP4	24.00
17DZP4	17DXP4
17EAP4	17HP4C
17EBP4	17DXP4
17EFP4	17DXP4
17FP4,A	17HP4C
17HP4,A,B	17HP4C
17HP4C	21.20
17KP4,A	17HP4C
17LP4,A	17LP4B
17LP4B	22.55
17QP4,A	17QP4B
17QP4B	22.55
17RP4,C	17HP4C
17SP4	17LP4B
17UP4	17QP4B
17VP4,B	17LP4B
17YP4	17QP4B
470ACB4	19AYP4
19ABP4	31.40
19ACP4	19CHP4
19AFP4	32.55
19AGP4	19AVP4
19AHP4	27.75
19AJP4	27.75
19ARP4	19AFP4
19AUP4	19AFP4
19AVP4	27.75
19AXP4	19AYP4
19AYP4	27.75
19BDP4	27.75
19BLP4	19AVP4
19BMP4	19AFP4
19BRP4	19DKP4
19BTP4	27.75
19BVP4	19AVP4
19BWP4	19AYP4
19CDP4	27.70
19CFP4	19CHP4
19CHP4	27.70
19CJP4	19AVP4
19CKP4	19CHP4
19CLP4	19CRP4
19CQP4	19CDP4
19CRP4	32.00
19CUP4	27.70
19CVP4	30.60
19CXP4	27.70
19CYP4	19BTP4
19CZP4	30.60
19DAP4	31.40
19DBP4	30.60
19DCP4	19EDP4
19DEP4	19AVP4
19DHP4	19EFP4
19DKP4	30.60
19DLP4	19CHP4
19DNP4	19DKP4
19DQP4	19DWP4
19DRP4	19EDP4
19DSP4	19EFP4
19DUP4	31.30
19DVP4	35.75
19DWP4	31.40
19DYP4	19CVP4
19DZP4	19DVP4
19EAP4	19ENP4
19ECP4	31.30
19EDP4	31.40
19EFP4	33.75
19EGP4	35.10
19EHP4,A	19EDP4
19EJP4	19DUP4
19EKP4	35.10
19ELP4	19AVP4
19ENP4	33.75
19ENP4A	19ENP4
19ERP4	19EDP4
19ESP4	19EFP4
19EUP4	19EDP4
19EZP4	32.75
19FBP4	19EGP4
19FCP4	19DWP4
19FEP4,A,B	19DUP4
19FJP4	33.75
19FLP4	19DWP4
19FSP4	19ENP4
19FTP4	19DWP4
19GAP4	35.10
19GBP4	19CZP4
19GJP4	33.75
19GTP4	19DUP4
19GUP4	19DUP4
19XP4	19AVP4
19YP4	19BTP4
19ZP4	19AVP4
20AHP4	32.95
20CP4,A,B,C,D	20DP4D
20DP4,A,B,C	20DP4D
20DP4D	31.40
21ACP4,A	21AMP4B
21AFP4	21YP4A
21ALP4,A,B	21CBP4A
21AMP4,A	21AMP4B
21AMP4B	21.20
21ANP4,A	21CBP4A
21AQP4,A	21AMP4B
21ATP4,A,B	21CBP4A
21AUP4,A,B	21AUP4C
21AUP4C	26.35
21AVP4,A,B,C	21AUP4C
21AWP4	21AWP4A
21AWP4A	25.00
21BAP4	21CBP4A
21BDP4	21AUP4C
21BNP4	21CBP4A
21BSP4	21AMP4B
21BTP4	21CBP4A
21CBP4	21CBP4A
21CBP4A	17.70
21CBP4B	21CBP4A
21CEP4,A	21EMP4
21CMP4	21CBP4A
21CQP4	29.30
21CUP4	21AMP4B
21CVP4	21CBP4A
21CWP4	21CBP4A
21CXP4	21DSP4
21CZP4	21DMP4
21DAP4	21DMP4
21DEP4,A	21DMP4
21DFP4	21EMP4
21DHP4	29.30
21DLP4	24.70
21DMP4	26.00
21DNP4	21CBP4A
21DQP4	21DLP4
21DSP4	26.00
21EAP4	21FDP4
21EMP4	26.00
21EP4,A,B	21EP4C
21EP4C	28.80
21EQP4	30.15
21ESP4	21FAP4
21EVP4	21FDP4
21FAP4	26.00
21FDP4	36.70
21FLP4	21CBP4A
21FMP4	35.35
21FP4,A,C	21FP4D
21FP4D	28.80
21FUP4	41.20
21FXP4	41.20
21GBP4	39.35
21WP4,A	21WP4B
21WP4B	29.55
21YP4,A	21YP4B
21YP4B	21.30
21ZP4,A,B	21ZP4C
21ZP4C	21.30
23ACP4	23BTP4
23AFP4	23BTP4
23AHP4	33.20
23ALP4	33.20
23ANP4	23BKP4
23ARP4	39.40
23ASP4	33.20
23ATP4	23BKP4
23AUP4	23AHP4
23AVP4	23CP4A
23AWP4	23BJP4
23BDP4	23BTP4
23BGP4	38.00
23BHP4	23BGP4
23BJP4	33.20
23BKP4	38.00
23BLP4	23BKP4
23BMP4	23BTP4
23BNP4	23CP4A
23BQP4	38.00
23BTP4	38.00
23BVP4	23BTP4
23BWP4	23BTP4
23BXP4	23EDP4
23CBP4	23BQP4
23CP4	23CP4A
23CP4A	38.00
23CQP4A	23ALP4
23CZP4	23AHP4
23DBP4	38.60
23DKP4	39.30
23DLP4	23DLP4A
23DLP4A	39.30
23DNP4	38.00
23DSP4A	49.60
23DTP4	23DKP4
23DWP4	50.45
23DYP4	23FVP4A
23DZP4	23EWP4A
23ECP4	38.00
23EDP4	38.00
23ENP4	23DLP4A
23EQP4	23EWP4A
23EP4	38.00
23ESP4	40.75
23ETP4	23GTP4
23EWP4	23EWP4A
23EWP4A	40.50
23EYP4	43.10
23FBP4	23DLP4A
23FCP4	23GWP4
23FDP4	23GWP4
23FEP4	40.60
23FHP4	23 WP4
23FMP4	23FVP4A
23FNP4	43.10
23FP4	23FP4A
23FP4A	33.30
23FRP4	41.90
23FSP4	41.90
23FVP4A	40.60
23GBP4	40.60
23GCP4	23FRP4
23GEP4	23DLP4A
23GFP4	41.90
23GJP4	23GWP4
23GP4	23CP4A
23GTP4	40.60
23GVP4	23GWP4
23GWP4	40.60
23HFP4	23FVP4A
23HP4	23CP4A
23HQP4	41.95
23HWP4	41.90
23HXP4	23ESP4
23JP4	38.00
23KP4,A	23FP4A
23MP4,A	23FP4A
23NP4	33.30
23TP4	23BTP4
23UP4	23BQP4
23WP4	23FP4A
23XP4	23BTP4
23YP4	23BTP4
24ADP4	24CP4B
24AEP4	29.00
24AHP4	37.90
24AJP4	35.40
24ALP4	24AHP4
24ANP4	24AEP4
24ATP4	24AJP4
24AUP4	35.40
24AVP4	24BEP4
24BEP4	48.35
24CP4,A	24CP4B
24CP4B	29.00
24DP4,A	24AEP4
24QP4	24CP4B
24TP4	24CP4B
24VP4,A	24CP4B
24XP4	24CP4B
24YP4	24AEP4
24ZP4	24AEP4
27ABP4	27ADP4
27ADP4	86.15
27AGP4	27ADP4
27EP4	27RP4
27GP4	27RP4
27NP4	27RP4
27RP4	72.00
27VP4	27XP4
27XP4	72.00
27ZP4	76.35

ULTRACOLOR — These tubes are manufactured to all of the essential original equipment specification; will utilize rare earth or sulfide phosphors, new electron guns, and may or may not utilize used glass and other materials.

MONOCHROME — All materials and parts used in the manufacture of General Electric monochrome picture tubes are new except for the envelope which, prior to re-use, has been inspected and tested to meet our high-quality standards.

GENERAL ELECTRIC

Trade Discount Applies To List Prices Only

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC



5654

FIVE STAR TUBES

In industrial and communication equipment — critical sockets where there can be no compromise with electronic tube performance — you can depend on the proven reliability of GE Five-Star tubes. Their high reliability is a result of special design features, special manufacturing processes, special tests, and stabilizing periods.



5670



6146A

INDUSTRIAL RECEIVING TUBES

For industrial and military applications involving electronic instrumentation and control, there is a G-E industrial receiving tube specifically designed to meet your particular requirement.



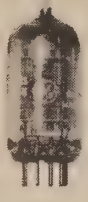
6661



6688A

ENTERTAINMENT TUBES

G. E. offers a full line of entertainment tubes encompassing the fields of radio, TV, and hi-fi. Featured as a portion of this line are 26 types specifically designed for high-fidelity monaural and stereo applications.



5963



5965A

COMPUTER TUBES

Two complete tube lines, Computer and Five-STAR Computer, are designed to meet the specialized needs of the computer industry. Outstanding features include: high perveance, low heater power requirements, controlled cutoff characteristics, and long life.



6005

TYPE	DESCRIPTION	GENERAL: Base Connections	Dimensions In Inches: Length	Dimensions In Inches: Diameter	Cathode: Volts	Cathode: Current Amps.	Cathode: Type	MAXIMUM RATINGS: Max. Freq. for Full Ratings, mc.	DC Plate Volts	Plate Dissipation Watts	Screen Grid No. 2, Volts	Screen Dissipation Watts	TYPICAL OPERATING CONDITIONS: Class and Type of Service	Plate Input Watts	Voltages: Plate	Voltages: Screen Grid No. 2	Voltages: Control Grid No. 1	Currents: Plate, ma	Currents: Screen Grid No. 2, ma	Currents: Control Grid No. 1, ma	GM. μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
0A2σ	Glow-Discharge Diode Voltage Regulator	5BO	2⅝	¾	—	—	—	Regulation (5 to 30 ma)=2 volts Min. anode supply=185 volts DC						DC operating current=5 ma min. DC operating current=30 ma max.							Ionizing voltage=155 volts DC* Operating voltage=150 volts DC*				
0A3	Glow-Discharge Diode Voltage Regulator	4AJ	4⅛	1⅜₆	—	—	—	Regulation (5 to 40 ma)=5 volts Min. anode supply=105 volts DC						DC operating current=5 ma min. DC operating current=40 ma max.							Ionizing voltage=100 volts DC* Operating voltage=75 volts DC*				
0A4G	Gas Triode	4V	4⅛	1⅜₆	—	—	—							Peak cathode current=100 ma max. DC cathode current=25 ma max.							Starter anode drop=55 volts DC* Anode drop=70 volts DC*				
0B2σ	Glow-Discharge Diode Voltage Regulator	5BO	2⅝	¾	—	—	—	Regulation (5 to 30 ma)=1 volt Min. anode supply=133 volts DC						DC operating current=5 ma min. DC operating current=30 ma max.							Ionizing voltage=115 volts DC* Operating voltage=105 volts DC*				
0B3	Glow-Discharge Diode Voltage Regulator	4AJ	4⅛	1⅜₆	—	—	—	Regulation (5 to 40 ma)=8 volts Min. anode supply=125 volts DC						DC operating current=5 ma min. DC operating current=40 ma max.							Ionizing voltage=110 volts DC* Operating voltage=90 volts DC*				
0C3	Glow-Discharge Diode Voltage Regulator	4AJ	4⅛	1⅜₆	—	—	—	Regulation (5 to 40 ma)=2 volts Min. anode supply=133 volts DC						DC operating current=5 ma min. DC operating current=40 ma max.							Ionizing voltage=115 volts DC* Operating voltage=105 volts DC*				
0D3	Glow-Discharge Diode Voltage Regulator	4AJ	4⅛	1⅜₆	—	—	—	Regulation (5 to 40 ma)=4 volts Min. anode supply=185 volts DC						DC operating current=5 ma min. DC operating current=40 ma max.							Ionizing voltage=160 volts DC* Operating voltage=150 volts DC*				
1AD4α	Sharp-Cutoff RF/AF Pentode	1AD4	1.50	0.385	1.25	0.1	CF	—	45¶	—	45¶	—	Class A Amplifier	—	45	45	R_{g_1}= 2 Meg.	3.0	0.8	—	2,000				
2D21σ	Thyratron	7BN	2⅛	¾	6.3	0.6	CU	Anode voltage drop= 8 volts					Controlled Rectifier	Max. DC cathode current=100 ma■ Max. peak inverse voltage=1,300 volts■				Max. peak cathode current=500 ma■							
2DF4σ	Pentode	9JL	2¾₆	⅞	2.5 1.25	0.345 0.60	CF	—	250■	30■	125■	1.5■	Class A Amplifier	4.4	120	120	−3.6	37	3.5	—	6,850				
2E26	Beam Power Amplifier	7CK	2³¹⁄₃₂	1⅜₆	6.3	0.8	CU	125	300■	10■	200■	2.5■	A_1(1) CCS	8.8	250	160	−14	35† −42*	7† −10*	—	3,500	—	0	5,500	4
									500■	12.5■	200■	2.5■	AB_2(2)ICAS	72*	500	125	−15	22† −150*	32*	—	—	—	0.36	6,200ρ	42
									400■	10■	200■	2.5■	AB_2(2) CCS	60*	400	125	−15	20† −150*	32*	—	—	—	0.36	8,000ρ	54
									400■	6.7■	200■	2.5■	C-P CCS	20	400	160	−50	50	7.5	5.2	—	—	0.15	—	12.5*
									500■	9■	200■	2.5■	C-P ICAS	27	500	180	−50	54	9	5.2	—	—	0.15	—	18*
									500■	10■	200■	1.7■	C-T CCS	30	400	190	−30	75	11	3	—	—	0.15	—	20*
													C-T CCS	30	500	185	−40	60	11	3	—	—	0.15	—	20*
									600■	13.5■	200■	2.3■	C-T ICAS	39.6	600	185	−45	66	10	3	—	—	0.17	—	27*
2X2-A	Half-Wave, High-Voltage Rectifier	4AB	4¹³⁄₃₂	1⅜₆	2.5	1.75	CU							Max. DC output current=7.5 ma; max. peak inverse voltage=12,500 volts; rms supply voltage=5,500 volts; max. peak current=60 ma											
GL-3B28	Half-Wave Gas Rectifier	4P	6⅝₃₂	2⅛₆	5.2	5.0	CF						Tube voltage drop=10 v.	For 10,000 peak inverse volts, 1 peak amp. max.; 0.25 avg. amp. max. For 5,000 peak inverse volts, 2 peak amp. max.; 0.5 avg. amp. max.											
5R4-GYA	Full-Wave, High-Vacuum Rectifier	5T	4¹³⁄₁₆	1⅜₆	5.0	2.0	CF						Tube voltage drop per section= 67 volts at 250 ma DC	Max. DC output current=250 ma; max. peak inverse voltage=2,800 volts; rms supply voltage per plate= 750 volts; max. peak current per plate=650 ma											
5Y3WGTBθ(R)	See 6087(R)																								
6AC7WAθ(R)	See 6134(R)																								
	Power Amplifier Pentode	7BK	2⅛	¾	6.3	0.15	CU	—	300¶	2.75¶	250¶	0.75¶	Class A Amplifier	2.70	180	180	−9.0	15†	2.5†	—	2,300	—	—	10,000	1.1
6AN5σ	Beam Power Amplifier	7BD	2⅛	¾	6.3	0.45	CU	—	120¶	4.2¶	120¶	1.4	Class A Amplifier	4.2	120	120	R_k= 120	35†	12†	—	8,000	—	—	2,500	1.3
6AS6σ	Dual-Control RF Pentode	7CM	1¾	¾	6.3	0.175	CU	—	180¶	1.7¶	140¶	0.75	Class A Amplifier	—	120	120	−2.0	5.2	3.5	—	3,200	E_{g_2}=0 volt		—	—
														—	120	120	−2.0	3.6	4.8	—	1,850	E_{g_2}=−3 volt		—	—
6AS7GA	Low-Mu Twin Triode	8BD	4¼	1⅜₆	6.3	2.5	CU	—	250¶	13§	—	—	DC Amplifier	—	135	—	R_k= 250	125	—	—	7,000	2.0			
6C4WAθ(R)σ	See 6100θ(R)																								
6D4	Gas Triode	5AY	2⅛	¾	6.3	0.25	CU						Relay Control	Tube voltage drop*=16 volts at 25 ma DC; max. DC cathode current=25 ma; max. voltage between elements=450 volts; max. peak cathode current=100 ma											

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC

TYPE	DESCRIPTION	GENERAL: Base Connections	Dimensions In Inches: Length	Dimensions In Inches: Diameter	Cathode: Volts	Cathode: Current Amps.	Cathode: Type	MAXIMUM RATINGS: Max. Freq. for Full Ratings, mc.	DC Plate Volts	Plate Dissipation Watts	Screen Grid No. 2, Volts	Screen Dissipation Watts	TYPICAL OPERATING CONDITIONS: Class and Type of Service	Plate Input Watts	Voltages: Plate	Voltages: Screen Grid No. 2	Voltages: Control Grid No. 1	Currents: Plate, ma	Currents: Screen Grid No. 2, ma	Currents: Control Grid No. 1, ma	GM. μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
6DJ8	Twin Triode	9DE	2 3/16	7/8	6.3	0.365	—	—	130	1.8	—	—	Class A Amplifier	—	90	—	−1.3	15	—	—	12,500	33	—	—	—
6J4σ	High-Frequency Triode	7BQ	2 1/8	3/4	6.3	0.4	CU	—	150¶	2.25¶	—	—	Class A Amplifier	2.25	150	—	Rk= 100	15†	—	—	12,000	55	—	—	—
6SK7WAθ(R)	See 6137(R)																								
6X4WAθ(R)σ	See 6202(R)																								
12AT7WB θ(R)σ	See 6201																								
12AY7σ	Twin Triode	9A	2 3/16	7/8	6.3 12.6	0.3 0.15	CU	—	300¶	1.5§¶	—	—	Class A Amplifier (per section)	0.75	250	—	−4.0	3.0	—	—	1,750	44	—	—	—
28D7	Double Beam Power Amplifier	8BS	3 5/32	1 3/16	28.0	0.4	CU	—	100¶	3.0§¶	67.5¶	0.5¶	Class A Amplifier (per section)	0.35	28	28	−3.5	12.5†	1.0†	—	3,400	—	—	4,000	0.100
407Aσ	Medium-Mu Twin Triode	407A	1 3/4	7/8	40 2.0	0.05 0.1	CU	—	330■	1.35§■	—	—	Class A Amplifier	—	150	—	Rk= 240	8.2	—	—	5,500	35	—	—	—
408Aσ	Sharp-Cutoff Pentode	7BD	1 3/4	3/4	2.0	0.05	CU	—	180■	1.7■	180♦■	0.5■	Class A Amplifier	—	120	120	Rk= 200	7.0	2.2	—	5,000	—	—	—	—
83	Full-Wave Mercury-Vapor Rectifier	4C	5 3/8	2 1/16	5.0	3.0	CF	Tube voltage drop *=15 volts					Max. DC output current=225 ma; max. peak inverse voltage=1,550 volts; max. rms supply voltage per plate=450 volts; max. peak current per plate=1,000 ma													
807	Beam Power Amplifier	5AW	5 3/4	2 1/16	6.3	0.9	CU	60	400■	25■	400■τ	—	AB_1τ CCS	24	400	400τ	−45	60†	—	0	6,000	8	0	3,000	15
									400■	30■	400■τ	—	AB_1τ ICAS	24	400	400τ	−45	60† −140*	—	0	6,000	8	0	3,000	15
													AB_1(2) CCS	57.2*	400	300	−30	56† −143*	2† −16*	0	—	—	0	6,800ρ	36
									600■	25■	300■	3.5■	AB_1(2) CCS	70.5*	500	300	−32	44† −141*	1† −15*	0	—	—	0	8,200ρ	46
													AB_1(2) CCS	83.3*	600	300	−34	36† −139*	0.6† −15*	0	—	—	0	10,000ρ	56
									750■	30■	300■	3.5■	AB_1(2) ICAS	105*	750	300	−35	30† −139*	0.5† −16*	0	—	—	0	12,000ρ	72
													AB_2(2) CCS	96*	400	300	−28	72† −240*	2.0† −20*	0.2	—	—	0.2	3,700ρ	55
									600■	25■	300■	3.5■	AB_2(2) CCS	120*	500	300	−30	60† −240*	0.9† −20*	0.2	—	—	0.2	4,600ρ	75
													AB_2(2) CCS	120*	600	300	−32	48† −200*	0.7† −18*	0.2	—	—	0.1	6,900ρ	80
									750■	30■	300■	3.5■	AB_2(2) ICAS	180*	750	300	−35	30† −240*	0.5† −20*	0.2	—	—	0.2	7,300ρ	120
													B-P CCS	30	400	300	−40	75	5	0	—	—	0.4	—	9*
									600■	25■	300■	2.5■	B-P CCS	35	500	300	−40	70	4	0	—	—	0.3	—	11*
													B-P CCS	37.5	600	300	−40	62.5	4	0	—	—	0.2	—	12.5*
									750■	30■	300■	2.5■	B-P ICAS	45	750	300	−40	60	3	0	—	—	0.2	—	15*
													C-P CCS	26	325	250	−75	80	6	3.5	—	—	0.3	—	17*
									475■	16.5■	300■	2.5■	C-P CCS	32	400	250	−75	80	6	3.5	—	—	0.3	—	22*
													C-P CCS	39.4	475	250	−85	83	8	4	—	—	0.4	—	28*
									600■	25■	300■	2.5■	C-P ICAS	60	600	300	−85	100	8	4	—	—	0.4	—	44*
													C-T CCS	40	400	250	−45	100	8	4	—	—	0.3	—	25*
									600■	25■	300■	3.5■	C-T CCS	50	500	250	−45	100	8	4	—	—	0.3	—	32*
													C-T CCS	60	600	250	−45	100	8	4	—	—	0.3	—	40*
									750■	30■	300■	3.5■	C-T ICAS	75	750	250	−45	100	8	4	—	—	0.3	—	54*
													B(2) CCS	262*	750	—	0	32† −350*	—	—	—	160	9.7	5,100ρ	178
									1,250	45	—	—	B(2) CCS	350*	1,000	—	0	44† −350*	—	—	—	160	7.5	7,400ρ	248
													B(2) CCS	325*	1,250	—	0	50† −260*	—	—	—	160	3.8	12,400ρ	235
									1,500	65	—	—	B(2) ICAS	448*	1,250	—	0	54† −350*	—	—	—	160	6	9,200ρ	310
													B(2) ICAS	470*	1,500	—	−4.5	32† −313*	—	—	—	160	4.4	12,400ρ	340
GL-811-A	High-Perveance High-Mu Zero—Bias Triode	3G	6 13/32	2 1/16	6.3	4.0	TF		1,000	30	—	—	C-P CCS	115	1,000	—	−55	115	—	45*	—	160	6.1*	—	88*
									1,250	45	—	—	C-P ICAS	175	1,250	—	−120	140	—	45*	—	160	10*	—	135*
									1,250	45	—	—	C-T CCS	175	1,250	—	−50	140	—	45*	—	160	5.7*	—	135*
									1,500	65	—	—	C-T ICAS	260	1,500	—	−70	173	—	40*	—	160	7.1*	—	200*
									1,750■‡	45■	—	—	C-Tω CCS	204	1,750‡	—	−70	130	—	45*	—	160	12*	—	175*
									1,125■	45■	—	—	C-Tβ CCS	175	1,125	—	−35	125	—	25*	—	160	3*	—	135*
									1,250■	45■	—	—	B(2) CCS	325*	1,250	—	−40	22† −260*	—	—	—	29	3.5	12,200ρ	235
									1,500■	65■	—	—	B(2) ICAS	465*	1,500	—	−48	28† −310*	—	—	—	29	5	13,200ρ	340
GL-812-A	High-Perveance Medium-Mu Triode	3G	6 13/32	2 1/16	6.3	4.0	TF	30	1,000■	30■	—	—	C-P CCS	115	1,000	—	−110	115	—	33*	—	29	6.6*	—	85*
									1,250■	45■	—	—	C-P ICAS	175	1,250	—	−115	140	—	35*	—	29	7.6*	—	130*
									1,250■	45■	—	—	C-T CCS	175	1,250	—	−90	140	—	30*	—	29	5.4*	—	130*
									1,500■	65■	—	—	C-T ICAS	260	1,500	—	−120	173	—	30*	—	29	6.5*	—	190*
									1,750■‡	45■	—	—	C-Tω CCS	236	1,740‡	—	−100	150	—	29*	—	29	12*	—	200*
GL-816	Half-Wave, Mercury-Vapor Rectifier	4P	4 11/16	1 3/16	2.5	2.0	CF	—	—	—	—	—	max. peak plate current■=0.5 ampere; max. average plate current■=0.125 ampere Tube voltage drop=15 volts; max. peak inverse voltage■=7,500 volts;													
GL-866-A	Half-Wave, Mercury-Vapor Rectifier	866-A	6 5/16	2 1/16	2.5	5.0	CF	—	—	—	—	—	Tube voltage drop= 15 volts	For 10,000 peak inverse volts, max. peak current■=1.0 amp.; max. average current■=0.25 amp. For 5,000 peak inverse volts, max. peak current■= 1.0 amp.; max. average current■=0.25 amp. For 2,500 peak inverse volts, max. peak current■=2.0 amp.; max. average current■=0.5 amp.												
GL-872A/ 872	Half-Wave, Mercury-Vapor Rectifier	872-A	8 1/2	2 3/16	5.0	7.5	CF	—	—	—	—	—	Tube voltage drop= 15 volts	For 10,000 peak inverse volts, max. peak current■=5.0 amp.; max. average current■=1.25 amp. For 5,000 peak inverse volts, max. peak current■= 5.0 amp.; max. average current■=1.25 amp.												

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC

TYPE	DESCRIPTION	GENERAL						MAXIMUM RATINGS					TYPICAL OPERATING CONDITIONS													
		Base Connections	Dimensions In Inches		Cathode			Max. Freq. for Full Ratings, mc.	DC Plate Volts	Plate Dissipation Watts	Screen Grid No. 2, Volts	Screen Dissipation Watts	Class and Type of Service	Plate Input Watts	Voltages			Currents			GM. μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
			Length	Diameter	Volts	Current Amps.	Type								Plate	Screen Grid No. 2	Control Grid No. 1	Plate, ma	Screen Grid No. 2, ma	Control Grid No. 1, ma					
2050	Thyratron	6BS	4⅛	1⅝	6.3	0.6	CU	Anode voltage drop=8 volts					Controlled Rectifier	Max. DC cathode current■=100 ma; max. peak inverse voltage■=1,300 volts; max. peak cathode current■=1.0 ampere												
2050A	Thyratron	6BS	3⅛	1⅝	6.3	0.6	CU	Anode voltage drop=8 volts						(Same as 2050)												
5636θ■(M)	Dual-Control Pentode	8DC	1.375	0.400	6.3	0.15	CU	—	165	0.65	155	0.7	Gated Amplifier	.53 .4	100 100	100 100	Rk= Rk=	5.3 4.0	3.6 5.8	— —	3,200 1,950	G_3 tied to cathode Eg_3=−1.0 volts				
5642α	Half-Wave, High-Voltage Rectifier	5642	2.380	0.400	1.25	0.2	CF	—	—	—	—	—	TV Flyback Rectifier	Voltage drop=30 volts at 4.0 ma DC; max. DC output current=0.25 ma; max. peak inverse voltage=10,000 volts; max. peak current=5.0 ma												
5651σ	Glow-Discharge Diode Voltage Reference	5BO	2⅝	¾	—	—	—	—	—	—	—	—	Max. anode supply voltage■=150 volts; max. DC operating current■=3.5 ma; max. ionization voltage=115 volts. Min. DC operating current=1.5 ma; max. operating voltage=92 volts. Regulation (1.5 to 3.5 ma)=3.0 volts, max.													
5654θ(R)σ	Sharp-Cutoff RF Pentode	7BD	1¾	¾	6.3	0.175	CU	—	200■	1.65■	135■	0.55■	Class A Amplifier	.9	120	120	Rk= 200	7.5	2.5	—	5,000	—	—	—	—
5663σ	Thyratron	6CE	1½	¾	6.3	0.15	CU	—	—	—	—	—	Controlled Rectifier	Anode voltage drop =11 volts; max. DC cathode current■=20 ma; max. peak inverse voltage■=500 volts; max. peak cathode current■=60 ma												
5670θ(R)σ	High-Frequency Twin Triode	8CJ	1¾	⅞	6.3	0.35	CU	—	330■	1.35■	—	—	Class A Amplifier AB_1(1)	1.2 3.8	150 300	— —	Rk= 240 Rk= 800_e	8.2 9.8† −12.6*	— —	— —	5,500 —	35 —	— —	— 27,000	— 1.0
5686θ(R)σ	Beam Power Amplifier	9G	2¾	⅞	6.3	0.35	CU	— 160 160	— 275■ —	— 7.5■ —	— 275■ —	— 3.0■ —	Class A Amplifier C-T CCS C-T CCS	6.7 10.0	250 250 250	250 180 250	−12.5 −30 −50	27† 30 40	3† 6.5 10.5	— 2.0* 2.0*	3,100 — —	— — —	— 0.1* 0.15*	9,000 — —	2.7 5* 6.5*
5687θσ	Medium-Mu Twin Triode	9H	2¾	⅞	12.6 6.3	0.45 0.9	CU	— —	300¶ —	4.2¶§ 7.5¶ω	— —	— —	Class A Amplifier (per section)	4.1 3.0	180 250	— —	−7.0 −12.5	23.0 12.0	— —	— —	8,500 5,400	17 16	— —	— —	— —
5687WAθ(R)σ See 5687θ																										
5691	High-Mu Twin Triode	8BD	2⅞	1⅝	6.3	0.6	CU	—	275■	1.0■§	—	—	Class A Amplifier (per section)	.58	250	—	−2.0	2.3	—	—	1,600	70	—	—	—
5692	Medium-Mu Twin Triode	8BD	2⅞	1⅝	6.3	0.6	CU	—	275■	1.75■§	—	—	Class A Amplifier (per section)	1.6	250	—	−9.0	6.5	—	—	2,200	20	—	—	—
5693	Sharp-Cutoff Pentode	8N	2⅝	1⅝	6.3	0.3	CU	—	300■	2.0■	125■	0.3■	Class A Amplifier	.75	250	100	−3.0	3.0	0.85	—	1,650	—	—	—	—
5718θα	Medium-Mu Triode	8DK	1.375	0.400	6.3	0.15	CU	— 500	165■	0.9■	—	—	Class A Amplifier UHF Oscillator	.85 3.0	100 150	— —	Rk= 150 —	8.5 20.0	— —	— —	5,800 —	27 —	— —	— —	— 0.9*
5719θα	High-Mu Triode	8DK	1.375	0.400	6.3	0.15	CU	—	165■	0.1■	—	—	Class A Amplifier	.073	100	—	Rk= 1500	0.73	—	—	1,700	70	—	—	—
5725(R)σ	Dual-Control RF Pentode	7CM	1¾	¾	6.3	0.175	CU	—	200■	1.65■	155■	0.55■	Class A Amplifier	.62	120	120	−2.0	5.2	3.5	—	3,200	Eg=0 volts			
5726(R)σ	Twin Diode	6BT	1¾	¾	6.3	0.30	CU	—	—	—	—	—	Half Wave Rectifier	Tube voltage drop per section=10 volts at 60 ma DC; max. DC output current er plate■=10 ma; max. peak inverse voltage■=360 volts; rms supply voltage per plate=117 volts; max. peak current per plate■=60 ma												
5727(R)σ	Thyratron	7BN	2⅛	¾	6.3	0.6	CU	—	—	—	—	—	Controlled Rectifier	Anode voltage drop=8 volts; max. DC cathode current■=100 ma; max. peak inverse voltage■=1,300 volts; max. peak cathode current■=500 ma												
5749(R)σ	Remote-Cutoff RF Pentode	7BK	2⅛	¾	6.3	0.3	CU	—	330■	3.1■	300■↓	1.1■	Class A Amplifier	2.75 1.08	250 100	100 100	Rk= 68 Rk= 68	11.0 10.8	4.2 4.4	— —	4,400 4,300	— —	— —	— —	— —
5750θ(R)σ	Pentagrod Converter	7CH	2⅛	¾	6.3	0.3	CU	—	330■	1.1■	110■	1.0■	Converter	.65	250	100	−1.5	2.6	7.5	osc. Ig_1=0.5 ma; Rg_1=20,000 ohms					
5751θ(R)σ	High-Mu Twin Triode	9A	2¾	⅞	12.6 6.3	0.175 0.35	CU	—	330■	0.8■	—	—	Class A Amplifier (per section)	.25 .08	250 100	— —	−3.0 −1.0	1.0 0.8	— —	— —	1,200 1,200	70 70	— —	— —	— —
5763σ	Beam Power Amplifier Pentode	9K	2⅝	⅞	6.0	0.75	CU	30-Amp. 30-Amp. 30-Amp. 30-Amp. 30-Amp. 50-Amp. 175-Dbl. 175-Trip.	250■ 300■ 300■ 300■ 350■ 300■ 300■	8.0■ 12.0■ 12.0■ 12.0■ 13.5■ 12.0■ 12.0■	250■ 250■ 250■ 250■ 250■ 250■ 250■	1.5■ 1.5■ 2.0■ 2.0■ 2.0■ 2.0■ 2.0■	C-P CCS C-P ICAS C-T CCS C-T ICAS C-T CCS Doubler-CCS Tripler-CCS	10 15 15 17 15 12 8.5	250 300 300 350 300 300 300	250 250 250 250 250 250 235	−39 −42.5 −28.5 −28.5 −60 −75 −100	40 50 50 48.5 50 40 35	5.6 6 6.6 6.2 5 4 5	1* 2.4* 1.6* 1.6* 3* 1* 1*	7,000 7,000 — — — — —	— — — — — — —	0.05* 0.15* 0.1* 0.1* 0.35* 0.6* 0.6*	— — — — — — —	6.4* 10* 10.3* 12* 7* 2.1* 1.3*
5814-Aθ(R)σ	Medium-Mu Twin Triode	9A	2¾	⅞	12.6 6.3	0.175 0.35	CU	—	330■	3.0§	—	—	Class A Amplifier (per section)	2.7 1.2	250 100	— —	−8.5 0.0	10.5 11.8	— —	— —	2,200 3,100	17 19.5	— —	— —	— —
5823	Gas Triode	4CK	1⅞	¾	—	—	—	—	—	—	—	—	Peak cathode current■=100 ma max; d-c cathode current■=25 ma max; starter voltage drop■=61 volts; anode drop■=62 volts													
5824	Beam Power Amplifier	7AC	4⅝	1¹³⁄₁₆	25.0	0.3	CU	—	200¶	12.5¶	135¶	2.0¶	Class A Amplifier	9.4	135	135	-22.0	61† −69*	2.5† −14.5*	—	5,000	—	—	1,700	4.3
5840θα	Sharp-Cutoff RF Pentode	8DL	1.375	0.400	6.3	0.15	CU	—	165■	0.8■	155■	0.35■	Class A Amplifier	.75	100	100	Rk= 150	7.5	2.4	—	5,000	—	—	—	—
5844σ	Medium-Mu Twin Triode	7BF	2⅛	¾	6.3	0.3	CU	—	200■	1.0■§	—	—	Class A Amplifier (per section)	.75	100	—	Rk= 470	4.8	—	—	3,700	28	—	—	—
5879σ	Sharp-Cutoff AF Pentode	9AD	2¾	⅞	6.3	0.15	CU	— —	300¶ 250¶	1.25¶ 1.5¶	250¶ —	0.25¶ —	Class A Amplifier (pentode con.) Class A Amplifier (Triode con.)	.45 1.4	250 250	100 —	−3.0 −8.0	1.8 5.5	0.4 —	— —	1,000 1,530	— 21	— —	— —	— —

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC

TYPE	DESCRIPTION	GENERAL: Base Connections	Dimensions In Inches: Length	Dimensions In Inches: Diameter	Cathode: Volts	Cathode: Current Amps.	Cathode: Type	MAXIMUM RATINGS: Max. Freq. for Full Ratings, mc.	DC Plate Volts	Plate Dissipation Watts	Screen Grid No. 2, Volts	Screen Dissipation Watts	TYPICAL OPERATING CONDITIONS: Class and Type of Service	Plate Input Watts	Voltages: Plate	Voltages: Screen Grid No. 2	Voltages: Control Grid No. 1	Currents: Plate, ma	Currents: Screen Grid No. 2, ma	Currents: Control Grid No. 1, ma	GM. μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
								—	360¶	23¶	270¶	3.0¶	Class A Amplifier	13.3	350	250	−18	53†	2.5†	—	5,200	—	—	4,200	11.3
													(single tube)	18.8	250	250	−14	75† −65ˣ	4.3† −8.5ˣ	—	6,100	—	—	2,500	6.7
5881	Beam Power Amplifier	7AC	3 15/32	1 1/16	6.3	0.3	CU	—	360¶	23¶	270¶	3.0¶	Class A (2 tubes, push-pull)	30	250	250	−16.0	120† −80ˣ	10† −7.6ˣ	—	—	—	—	5,000ρ	14.5
														36.2	270	270	−17.5	134† −155ˣ	11† −17ˣ	—	—	—	—	5,000ρ	17.5
								—	360¶	23¶	270¶	3.0¶	Class AB_1 (2 tubes, push-pull)	32	360	270	−22.5	88† −132ˣ	5.0† −15ˣ	—	—	—	—	6.600ρ	26.5
								—	360¶	23¶	270¶	3.0¶		32	360	270	−22.5	88† −140	5.0† −11ˣ	—	—	—	—	3,800ρ	18.0
5886	Electrometer Pentode	5886	1½	0.400	1.25	0.01	—	—	45	—	45	—	Elec-trometer	—	12	4.5	-2.0	6.0	3.6	—	14	—	—	—	—
5896θα	High-Frequency Twin Diode	8DJ	1.375	0.400	6.3	0.3	CU	—	—	—	—	—	Full-Wave Rectifier	Tube voltage drop (per section)=4.5 volts at 18 ma DC; max. DC output per plate■=10 ma; max. perk inverse voltage■=460 volts; rms supply voltage per plate=150 volts; max. peak current per plate■=60 ma											
5899θα	Semi-Remote-Cutoff RF Pentode	8DL	1.375	0.400	6.3	0.15	CU	—	165■	0.75■	155■	0.35■	Class A Amplifier	.72	100	100	Rk=120	7.2	2.0	—	4,500	—	—	—	—
5902θα	Beam Power Amplifier	8DL	1.750	0.400	6.3	0.45	CU	—	165■	3.7■	155■	0.4■	Class A Amplifier	3.3	110	110	Rk=270	30	2.2	—	4,200	—	—	3,000	1.0
5963σ	Medium-Mu Twin Triode	9A	2 3/16	7/8	12.6	0.15	CU	—	250■	2.5■§	—	—	Class A Amplifier (per section)	.58	67.5	—	0	8.5	—	—	3,200	21	—	—	—
					6.3	0.3		—	—	—	—	—	Freq. Halfer (per section)	— .75	150♦ 150♦	— —	−15 0	0 5.1	Rg_1=47,000 Rg_1=47,000	—	— —	— —	— —	20,000 20,000	— —
5964σ	High-Mu Twin Triode	7BF	2⅛	¾	6.3	0.45	CU	—	250■	1.5■§	—	—	Class A Amplifier (per section)	.95	100	—	Rk=50	9.5	—	—	6,000	39	—	—	—
								—	—	—	—	—	Freq. Halfer (per section)	— .75	150♦ 150♦	— —	−10 0	0 5.0	Rg_1=47,000 Rg_1=47,000	—	— —	— —	— —	20,000 20,000	— —
5965σ 5965Aσ	Twin Triode	9A	2 3/16	7/8	12.6 6.3	0.225 0.45	CU	— —	330	2.4■§ 4.4■ω	— —	— —	Class A Amplifier (per section) Freq. Halfer (Per section)	1.28 1.25	150 150♦ 150♦	— — —	Rk=220 — −5.5	8.5 10.5* 0.15*	— Ic=140 ma —	— — —	6,700 — —	47 — —	— — —	— 7,200 7,200	— — —
5938A	Low-Mu Twin Triode	8BD	4¼	1 5/16	6.3	2.4	CU	—	275■	15§■	—	—	Class A Amplifier	11	110♦		Rk=105	100	—	—	15,500	5.4	—	—	—
6005θ(R)σ	Beam Power Amplifier	7BZ	2⅝	¾	6.3	0.45	CU	—	275	11	275	2.2	Class A Amplifier (single tube)	11 5.4	250 180	250 180	−12.5 −8.5	45† −47ˣ 29† −30ˣ	4.5† −7.0ˣ 3.0† −4.5ˣ	— —	4,100 3,700	— —	— —	5,000 5,500	4.5 2.0
								—	—	—	—	—	AB_1(2) CCS	—	250	250	−15	70† −79ˣ	5† −13ˣ	—	—	—	—	10,000ρ	10.0
6012	Thyratron	6CO	3⅞	1⅝	6.3	2.6	CU	—	—	—	—	—	Contro'ed Rectifier	Tube voltage drop■=10 volts; max. peak inverse voltage■=1,300 volts; max. peak current■=5 amp.; max. average current■=0.5 amp.; max peak forward voltage■=650 volts.											
6021θα(R)	Medium-Mu Twin Triode	8DG	1.375	0.400	6.3	0.3	CU	—	165■	0.7■§	—	—	Class A (per seciton)	.65	100	—	Rk=150	6.5	—	—	5,400	35	—	—	—
6046	Beam Power Amplifier	7AC	3 5/16	1 5/32	25.0	0.3	CU	—	200¶	10¶	125¶	1.5¶	Class A Amplifier	9.2 5.5	200 110	125 110	Rk=180 −7.5	46† 49†	2.2† 4.0†	—	8,000 8,000	— —	— —	4,000 2,000	3.8 2.1
													Relay Energizer	— —	115♦ 115♦	115♦ 115♦	0 −25	105 0.1*	12.8 —		Rg_1=2 megohms Rg_2=1000 ohms			500 500	— —
6072Aθ(R)σ	Twin Triode	9A	2 3/16	7/8	12.6 6.3	0.175 0.35	CU	—	330■	1.6■§	—	—	Class A (per section)	.75	250	—	−4.0	3.0	—	—	1,750	44	—	—	—
6080θ	Low-Mu Twin Triode Power Amplifier	8BD	4 1/16	1 23/32	6.3	2.5	CU	—	250■	13■§	—	—	DC Amplifier (per section)	17	135	—	Rk=250	125	—	—	7,000	2	—	—	—
6087θ(R)	See 6087/5Y3WGTBθ(R)																								
6087θ(R) 5Y3WGTB	Full-Wave, High-Vacuum Rectifier	5L	3 5/16	1 5/32	5.0	2.0	CU	—	—	—	—	—	Full-Wave Rectifier	Tube voltage drop per section=50 volts at 125 ma DC; max. DC output current=125 ma; max. peak inverse voltage=1,400 volts; rms supply voltage per plate=350 volts; max. peak current per plate=375 ma											
6111θα(R)	Medium-Mu Twin Triode	8DG	1.375	0.400	6.3	0.3	CU	—	165■	0.95■§	—	—	Class A Amplifier (per section)	.85	100	—	Rk=220	8.5	—	—	5,000	20	—	—	—
6112θα(R)	High-Mu Twin Triode	8DG	1.375	0.400	6.3	0.3	CU	—	165■	0.3■§	—	—	Class A Amplifier (per section)	.26 .08	150 100	— —	Rk=820 Rk=1,500	1.75 0.8	— —	— —	2,500 1,800	70 70	— —	— —	— —
6134	Sharp-Cutoff RF Pentode	8N	2⅝	1 5/16	6.3	0.45	CU	—	330	3.3	330	0.45	Class A Amplifier	3.0	300	150	Rk=160	10	2.5	—	9,000	—	—	—	—
6135θ(R)σ	Medium-Mu Triode	6BG	2⅛	¾	6.3	0.175	CU	—	330	3.8■	—	—	Class A Amplifier	2.6 1.2	250 100	— —	−8.5 0	10.5 11.8	— —	— —	2,200 3,100	17 19.5	— —	— —	— —
6136σ	Sharp-Cutoff RF Pentode	7BK	2⅛	¾	6.3	0.3	CU	—	330■	3.3■	165■	0.7■	Class A Amplifier	2.6 .5	250 100	150 100	Rk=68 Rk=150	10.6 5.0	4.3 2.1	— —	5,200 3,900	— —	— —	— —	— —
6137θ(R)	Remote-Cutoff RF Pentode	8N	2⅝	1 5/16	6.3	0.3	CU	—	330■	3.3■	140■	0.44■	Class A Amplifier	2.3 1.3	250 100	100 100	−3 −1	9.2 13.0	2.6 4.0	— —	2,000 2,350	— —	— —	— —	— —
6146A	Beam Power Amplifier	7CK	3 13/16	1 23/32	6.3	1.25	CU		400■	20■	400■τ	—	AB_1(2) CCS	31.3ˣ	250	250τ	−50	120† −125ˣ	—	0	7,000	4,5	0	5,000ρ	10
													AB_1(2) CCS	40ˣ	400	400τ	−100	40† −100ˣ	—	0	—	—	0	8,000ρ	22
									400■	25■	400■τ	—	AB_1(2)ICAS	40ˣ	400	400τ	−100	40† −100ˣ	—	0	—	—	0	8,000ρ	22
													AB_1(2) CCS	91ˣ	400	190	−40	63† −228ˣ	2.5† −25ˣ	0	—	—	0	4,000ρ	55

(Continued)

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC

TYPE	DESCRIPTION	GENERAL: Base Connections	GENERAL: Dimensions In Inches: Length	GENERAL: Dimensions In Inches: Diameter	GENERAL: Cathode: Volts	GENERAL: Cathode: Current Amps.	GENERAL: Cathode: Type	MAXIMUM RATINGS: Max. Freq. for Full Ratings, mc.	MAXIMUM RATINGS: DC Plate Volts	MAXIMUM RATINGS: Plate Dissipation Watts	MAXIMUM RATINGS: Screen Grid No. 2, Volts	MAXIMUM RATINGS: Screen Dissipation Watts	TYPICAL OPERATING CONDITIONS: Class and Type of Service	Plate Input Watts	Voltages: Plate	Voltages: Screen Grid No. 2	Voltages: Control Grid No. 1	Currents: Plate, ma	Currents: Screen Grid No. 2, ma	Currents: Control Grid No. 1, ma	GM, μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
(Continued)									600■	20■	250■	3.0■		108*	500	185	−40	57†	2†	0	—	—	0	5,500ρ	70
																		−215*	−25*						
														120*	600	180	−45	26†	1†	0	—	—	0	7,000ρ	82
																		−200*	−23*						
													AB_1(2)ICAS	137*	600	200	−50	28†	1†	0	—	—	0	6,000ρ	95
									750■	25■	250■	3.0■						−229*	−27*						
														165*	750	195	−50	23†	1†	0	—	—	0	8,000ρ	120
																		−220*	−26*						
													AB_2(2) CCS	93*	400	175	−41	33†	1.1†	1.6*	—	—	0.2	3,700ρ	62
																		−232*	−18*						
								60	600■	20■	250■	3.0■		121*	500	175	−44	27†	0.7†	1.9*	—	—	0.3	4,600ρ	83
																		−242*	−18*						
6146	Beam Power Amplifier	7CK	3 1/16	1 23/32	6.3	1.25	CU							124*	600	165	−44	22†	0.6†	1.1*	—	—	0.2	6,800ρ	90
																		−207*	−17*						
													AB_2(1)ICAS	162*	600	190	−48	28†	1.2†	2.0*	—	—	0.3	5,000ρ	113
									750■	25■	250■	3.0■						−270*	−20*						
														180*	750	165	−46	22†	0.3†	2.6*	—	—	0.4	7,400ρ	131
																		−240*	−20*						
											250■	2.0■	C-P CCS	45	400	150	−87	112	7.8	3.4*	—	—	0.4*	—	32*
														45	475	135	−77	94	6.4	2.8*	—	—	0.3*	—	34*
									600■	16.7■	250■	2.0■	C-P ICAS	67.2	600	150	−87	112	7.8	3.4*	—	—	0.4*	—	52*
									600■	20■	250■	3.0■	C-T CCS	67.2	500	170	−66	135	9	2.5*	—	—	0.2*	—	48*
														67.2	600	150	−58	112	9	2.8*	—	—	0.2*	—	52*
									750■	25■	250■	3.0■	C-T ICAS	90	600	180	−71	150	10	2.8*	—	—	0.3*	—	66*
														90	750	160	−62	120	11	3.1*	—	—	0.2*	—	70*
6146B								175	—	—	—	—	C-T CCS	44.8	320	180	−51	140	10	2*	—	—	3*	—	25*
													C-T ICAS	60	400	190	−54	150	10.4	2.2*	—	—	3*	—	35*
6197σ	Sharp-Cutoff Power Amplifier Pentode	9BV	2 5/8	7/8	6.3	0.65	CU	—	300■	7.5■	250■	2.5■	Class A Amplifier	7.5	250	150	−3.0	30	7.0	—	11,000	—	—	—	—
6201σ	High-Frequency Twin Triode	9A	2 3/16	7/8	12.6	0.15	CU	—	330	2.5§	—	—	Class A Amplifier (per section)	2.5	250	—	Rk= 200	10	—	—	5,500	60	—	—	—
					6.3	0.3								.33	100	—	Rk= 270	3.3	—	—	4,000	57	—	—	—
6202σ	Full-Wave, High-Vacuum Rectifier	5BS	2 5/8	3/4	6.3	0.6	CU	—	—	—	—	—	Tube voltage drop per section=22 volts at 50 ma DC; max. DC output current■=55 ma; max. peak inverse voltage■=1,375 volts; rms supply voltage per plate=325 volts; max. peak current per plate■=220 ma													
6203θ(R)σ	Full-Wave, High-Vacuum Rectifier	9CD	2 5/8	7/8	6.3	0.9	CU	—	—	—	—	—	Tube voltage drop per section=22 volts at 70 ma DC; max. DC output current■=77 ma; max. peak inverse voltage■=1,375 volts; rms supply voltage per plate=325 volts; max. peak current per plate■=300 ma													
6205θ(R)σ	Sharp-Cutoff RF Pentode	8DC	1.375	0.400	6.3	0.15	CU	—	165■	0.8■	155■	.35■	Class A Amplifier	.75	100	100	Rk= 150	7.5	2.4	—	5,000	—	—	—	—
6206θ(R)σ	Semi-Remote-Cutoff RF Pentode	8DC	1.375	0.400	6.3	0.15	CU	—	165■	0.75■	155■	.35■	Class A Amplifier	.72	100	100	Rk= 120	7.2	2.2	—	4,500	—	—	—	—
								—			—	—	Class A (per section)	.46	100	—	Rk= 470	4.6	—	—	3,600	27	—	—	—
6211σ	Medium-Mu Twin Triode	9A	2 3/16	7/8	12.6	0.15	CU	—	200■	1.5■§	—	—	Freq. Halfer (per section)	—	150↓	—	0	4.8 min.	—	Rg_1=47,000	—	—	20,000	—	—
6211Aσ					6.3	0.3		—			—	—		—	150↓	—	−10 max.	0.1	—	Rg_1=47,000	—	—	20,000	—	—
6216	Beam Power Amplifier	9CE	2 5/8	7/8	6.3	1.2	—	—	300	10	200	2.0	Class AA Amplifier	—	200	100	−6.0	47*	2.0*	—	8,800	—	3.8	—	—
6222θα	High-Mu Triode	8HF	1.375	0.400	6.3	0.175	CU	—	165■	0.55■	—	—	Class A Amplifier	.07	100	—	Rk= 1500	0.7	—	—	1,700	70	—	—	—
6265θ(R)σ	Sharp-Cutoff RF Pentode	7CM	2 1/8	3/4	6.3	0.175	CU	—	300¶	2.0¶	300¶↓	0.5¶	Class A Amplifier	1.85	250	150	Rk= 100	7.4	2.9	—	4,600	—	—	—	—
6336A	Low-Mu Twin Triode	8BD	4.750	2.070	6.3	5.0	CU	—	400■	30■§	—	—	DC Amplifier (per section)	35	190	—	Rk= 200	185	—	—	13,500	2.7	—	—	—
6350σ	Medium-Mu Twin Triode	9CZ	2 5/8	7/8	12.6	0.3	CU	—	330■	4.0■§	—	—	Class A Amplifier (per section)	1.65	150	—	−5.0	11	—	—	4,600	18	—	—	—
					6.3	0.6																			
													AB_1(2) CCS (Both sec. in push-pull)	13.2*	200	200	−21.5	30†	2.4†	0	—	—	0	6,500ρ	7
																		−66*	−14*						
									300■	7■§	200■	2■ε		17.3*	250	200	−21.5	30†	1.4†	0	—	—	0	8,000ρ	9.3
																		−69*	−12.4*						
														21.6*	300	200	−21.5	30†	1.2†	0	—	—	0	10,000ρ	12
																		−72*	−12.6*						
													AB_2(2) CCS (Both sec. in push-pull)	16.4*	200	200	−21.5	30†	2.4†	0.44	—	—	0.02*	5,000ρ	8.7*
																		−82.2*	−19*						
									300■	7■§	200■	2■ε		25*	250	200	−21.5	30†	1.4†	1.24	—	—	0.04*	5,000ρ	14*
																		−100*	−13*						
														30*	300	200	−21.5	30†	1.2†	1.12	—	—	0.04*	6,500ρ	17.5*
																		−100*	−11.4*						
													C-T CCS (Both sec. in push-pull)	14	200	200↓	Rg_1= 15,000	70	2.2	2.7*	Rg_2=22,000	0.14*	—	8.4*
								200	300■	5■§	200■	2■ε		16.8	250	250↓	Rg_1= 18,000	67	1.8	2.2*	Rg_2=47,000	0.12*	—	11*
														22.5	300	175	−40	75	2.3	1.8*	—	—	0.1*	—	14.5*
													C-T ICAS (Both sec. in push-pull)	16.8	200	200↓	Rg_1= 15,000	84	3.1	3*	Rg_2=8,200	0.18*	—	10*
								200	300■	7■§	200■	2■ε		20	250	250↓	Rg_1= 18,000	80	2.4	2.5*	Rg_2=27,000	0.15*	—	13*
														30	300	200	−45	100	3.0	3*	—	—	0.2*	—	18.5*
								200	300■	5■§	200■	2■ε	C-T CCS (Freq. tripler both sec.)	11.4	200	155	−105	57	3	3.2*	—	—	0.35*	—	3.8*
														12.5	250	160	−94	50	1.9	2*	—	—	0.23*	—	5*
														14.4	300	150	−100	48	2	2*	—	—	0.23*	—	6.5*

(Continued)

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC

TYPE	DESCRIPTION	GENERAL: Base Connections	Dimensions In Inches: Length	Dimensions In Inches: Diameter	Cathode: Volts	Cathode: Current Amps.	Cathode: Type	MAXIMUM RATINGS: Max. Freq. for Full Ratings, mc.	MAXIMUM RATINGS: DC Plate Volts	MAXIMUM RATINGS: Plate Dissipation Watts	MAXIMUM RATINGS: Screen Grid No. 2, Volts	MAXIMUM RATINGS: Screen Dissipation Watts	TYPICAL OPERATING CONDITIONS: Class and Type of Service	Plate Input Watts	Voltages: Plate	Voltages: Screen Grid No. 2	Voltages: Control Grid No. 1	Currents: Plate, ma	Currents: Screen Grid No. 2, ma	Currents: Control Grid No. 1, ma	GM. μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
(Continued)													C-T ICAS	15.6	200	175	−102	78	5.2	4.6*	—	—	0.52*	—	4.5*
6360σ	Twin Tetrode Power Amplifier	9PW	3 1/16	7/8	12.6	0.41	CU	200	300■	7■§	200■	2■ε	(Freq. tripler, both sec.)	18	250	175	−102	72	4.1	3.8*	—	—	0.43*	—	6.2*
					6.3	0.82								19.5	300	175	−100	65	2.7	2.4*	—	—	0.28*	—	7.2*
								200	240■	3.3■§ 4.6■§	200■	1.3■ε		19.5	300	150	−100	65	3.5	3.8*	—	—	0.45*	—	7.8*
													C-P CCS	13.4	200	170	−50	67	2.6	1.5*	—	—	0.1*	—	8.1*
													C-P ICAS	17.2	200	165	−50	86	3.1	3.3*	—	—	0.2*	—	9.8*
6386θ(R)σ	Medium-Mu Remote-Cutoff Twin Triode	8CJ	1 3/4	7/8	6.3	0.35	CU	—	300¶	1.5¶§	—	—	Class A Amplifier (per section)	.96	100	—	Rk= 200	9.6	—	—	4,000	17	—	—	—
6397a	Power Amplifier Pentode	6CL	1.60	0.400	2.5	0.0625	CF	—	135■	1.5■	135■	0.6■ε	Class A Amplifier	.9	125	125	−7.5	7.25	1.2	—	1,950	—	—	—	—
					1.25	0.125																			
6414θ(R)σ	Twin Triode	9A	2 5/8	7/8	12.6	0.225	CU			2.2■§			Class A Amplifier	1.44	180	—	−2.0	8.0	—	—	5,550	42.5	—	—	—
					6.3	0.45		—	200■		—	—		—	150	—	−4.8	0.15	—	—	—	—	—	—	—
										4.0■ε			(per section)	1.7	100	—	—	17.0	Ic=0.2 ma		—	—	—	—	—
6463σ	Medium-Mu Twin Triode	9CZ	2 5/8	7/8	12.6	0.3	CU	—	300¶	4.0¶§	—	—	Class A (per section)	3.7	250	—	Rk= 620	14.5	—	—	5,200	20	—	—	—
					6.3	0.6					—	—													
										7.0¶ε	—	—	Freq. Halfer (per section)	2.9	100	—	—	29	Ic=0.2 ma		—	—	—	—	—
														.2	200	—	−11	1.0	—	—	—	—	—	—	—
6485σ	Sharp-Cutoff RF Pentode	7BK	2 1/8	3/4	6.3	0.45	CU	—	300¶	3.2¶	150¶	0.6¶	Class A Amplifier	3.0	300	150	Rk= 160	10	2.5	—	9,000	—	—	—	—
6550	Beam Power Amplifier	7AC	4 3/4	2 1/16	6.3	1.8	—	—	660	42	440	6.0	Class A Amplifier	—	400	225	−16.5	87	4.0	—	—	—	2.0	—	—
6660σ	Remote-Cutoff RF Pentode	7BK	2 1/8	3/4	6.3	0.3	CU	—	330	3.3	330♦	0.65	Class A Amplifier	2.75	250	100	Rk= 68	11	4.2	—	4,400	Ec3=0 volt			
														1.08	100	100	Rk= 68	10.8	4.4	—	4,300	Ec3=0 volt			
6661σ	Sharp-Cutoff RF Pentode	7CM	2 1/8	3/4	6.3	0.15	CU	—	330	3.3	330♦	0.65	Class A Amplifier	1.85	250	150	Rk= 100	7.4	2.6	—	4,600	Ec3=0 volt			
6662σ	Remote-Cutoff RF Pentode	7CM	2 1/8	3/4	6.3	0.15	CU	—	330	3.3	330♦	0.55	Class A Amplifier	2.3	250	100	Rk= 80	9.2	3.3	—	3,600	Ec3=0 volt			
														.9	100	100	Rk= 80	9.0	3.5	—	3,650	Ec3=0 volt			
6663σ	Twin Diode	6BT	1 3/4	3/4	6.3	0.3	CU	—	—	—	—	—	Rectifier Service	Tube voltage drop per section=10 volts at 60 ma DC; max. peak inverse voltage=250 volts; max. DC output current per plate=9.0 ma; max. peak current per plate=54 ma.												
6664σ	High-Frequency Triode	5CE	2 1/8	3/4	6.3	0.15	CU	—	330■	2.8■	—	—	Class A Amplifier	2.5	250	—	Rk= 200	10	—	—	5,500	60	—	—	—
														.37	100	—	Rk= 270	3.7	—	—	4,000	60	—	—	—
6669σ	Beam Power Amplifier	7BZ	2 5/8	3/4	6.3	0.45	CU	—	250	12	250	2.0	Class A Amplifier (single tube)	11.3	250	250	−12.5	45† −47‡	4.5† −7.0‡	—	4,100	—	—	5,000	4.5
													AB_1 (2 tubes, push-pull)	17.5	250	250	−15	70† −79‡	5.0† −13‡	—	—	—	—	10,000ρ	10
6676σ	Sharp-Cutoff RF Pentode	7CM	2 1/8	3/4	6.3	0.3	CU	—	330■	2.3■	330■♦	0.55■	Class A Amplifier	1.63	125	125	Rk= 56	13	3.7	—	8,000	—	—	—	—
														.35	125	125	−3.0	2.8							
6677σ	Power Amplifier Pentode	9BV	2 5/8	7/8	6.3	0.65	CU	—	330	8.5	330♦	2.0■	Class A Amplifier	7.5	250	150	−3.0	30† −31‡	7.0† −7.2‡	—	11,000	g3 tied — to k		7,500	2.8
6678σ	Triode-Pentode	9AE	2 3/16	7/8	6.3	0.45	CU	—	330	3.0	330♦	0.55■	Class A Amplifier (Pentode sec.)	2.5	250	110	Rk= 68	10	3.5	—	5,200	—	—	—	—
								—	330■	3.0■	—	—	Class A Amplifier (Triode sec.)	2.7	150	—	Rk= 56	18	—	—	8,500	40	—	—	—
6679σ	High-Mu Twin Triode	9A	2 3/16	7/8	12.6	0.15	CU	—	330	2.8§	—	—	Class A Amplifier (per section)	2.5	250	—	Rk= 200	10	—	—	5,500	60	—	—	—
					6.3	0.3																			
6680σ	Medium-Mu Twin Triode	9A	2 3/16	7/8	12.6	0.15	CU	—	330■	3.0■	—	—	Class A Amplifier§	2.63	250	—	−8.5	10.5	—	—	2,200	17	—	—	—
					6.3	0.3								1.18	100	—	0	11.8	—	—	3,100	20	—	—	—
6681σ	High-Mu Twin Triode	9A	2 3/16	7/8	12.6	0.15	CU	—	330	1.1§	—	—	Class A Amplifier (per section)	.3	250	—	−2.0	1.2	—	—	1,600	100	—	—	—
					6.3	0.3								.05	100	—	−1.0	0.5	—	—	1,250	100	—	—	—
6688Aθ(R)σ	RF Pentode	9EQ	1 3/4	7/8	6.3	0.3	CU	—	210■	3.0■	175■	0.9■	Class A Amplifier	2.5	190	160	Rk= 630 Ecc1= +9v.	13	3.3		16,500	—	—	—	—
6814aθ	Medium-Mu Triode	8DK	1.375	0.400	6.3	0.15	CU	—	165	2.1	—	—	Class A Amplifier	1.0	100	—	Rk= 150	10	—	—	6,000	29	—	—	—
6829θ(R)σ	Twin Triode	9A	2 5/8	7/8	12.6	0.225	CU			2.2§	—	—	Class A Amplifier (per section)	1.28	150	—	Rk= 220	8.5	—	—	6,700	47	—	—	—
					6.3	0.45		—	275		—	—		.0225	150	—	−4.8	0.15	—	—	—	—	—	—	—
										4.0ε	—	—		1.7	100	—	Ic= 0.2 ma	17	—	—	—	—	—	—	—
6883	Beam Power Amplifier	8EC	3 13/16	1 31/32	12.6	0.625	CU	Ratings otherwise same as for Type 6146 Beam Power Amplifier																	
6919σ	Twin Diode	6BT	1 3/4	3/4	6.3	0.2	CU	—	—	—	—	—	Gating and Clamping Service	Tube voltage drop per section=1.2 volts at 6 ma DC; max. peak inverse voltage=360 volts; max. DC output current per plate=10 ma; max. peak current per plate=30 ma.												
6922	Twin Tetrode	9AJ	2 5/8	7/8	6.3	0.3	—	—	220	1.5	—	—	Class A Amplifier	—	90	—	Rk= 120	12	—	—	—	—	—	—	—
7036σ (Continued)	Heptode	7CH	2 5/8	3/4	6.3	0.3	CU						Gated	—	150♦	75	−10	0	0	—	Ec3=0 v.; Rg1=Rg3=47,000			20,000	—

© United Technical Publications

Industrial Receiving and Communication Tubes

GENERAL ELECTRIC

TYPE	DESCRIPTION	GENERAL: Base Connections	Dimensions In Inches: Length	Dimensions In Inches: Diameter	Cathode: Volts	Cathode: Current Amps.	Cathode: Type	MAXIMUM RATINGS: Max. Freq. for Full Ratings, mc.	DC Plate Volts	Plate Dissipation Watts	Screen Grid No. 2, Volts	Screen Dissipation Watts	TYPICAL OPERATING CONDITIONS: Class and Type of Service	Plate Input Watts	Voltages: Plate	Voltages: Screen Grid No. 2	Voltages: Control Grid No. 1	Currents: Plate, ma	Currents: Screen Grid No. 2, ma	Currents: Control Grid No. 1, ma	GM. μmhos	Triode μ Factor	Drive Watts	Load for Rated Output Ohms	RMS Power Output Watts
(Continued)								—	250	0.9	250♦	1.35	Amplifier	—	150♦	69*	0	0	.4	—	E_{c_3}=10 v.; $R_{g_1}=R_{g_3}$=47,000			20,000	—
7036σ	Heptode	7CH	2⅝	¾	6.3	0.3	CU						(Computer service)	.8	150♦	71*	0	5.8	9	—	E_{c_3}=0 v.; $R_{g_1}=R_{g_3}$=47,000			20,000	—
7044	Medium-Mu Twin Triode	9H	2⅝	⅞	6.3	0.9	—	—	300	4.5	—	—	Class A Amplifier	—	120	—	2.0	36	—	—	12,000	—	—	—	—
7054σ	RF Pentode	9GT	2⅝	⅞	13.5	0.275	CU	—	330■	5.0■	180■	1.0■	Class A Amplifier	4.8	250	250	R_k= 120	19	3.5	—	11,500	—	—	—	—
7056σ	Sharp-Cutoff Pentode	7CM	2⅛	¾	13.5	0.15	CU	—	330■	2.0■	330■♦	0.5■	Class A Amplifier	1.9	200	150	R_k= 180	9.5	2.8	—	6,200	—	—	—	—
7058σ	High-Mu Twin Triode	9AJ	2 3/16	⅞	13.5	0.155	CU	—	330■	1.0■§	—	—	Class A (per section)	.31	250	—	−2.0	1.25	—	—	1,650	100	—	—	—
7059σ	Triode-Pentode	9AE	2 3/16	⅞	13.5	0.195	CU	—	300■	2.8■	300■♦	0.5■	Class A (Pentode sec.)	2.5	250	110	R_k= 68	10	3.5	—	5,200	—	—	—	—
								—	330■	2.5■	—	—	Class A (Triode sec.)	2.7	150	—	R_k= 56	18	—	—	8,500	40	—	—	—
7061σ	Beam Power Amplifier	9EU	2⅝	⅞	13.5	0.21	CU	—	345■	9.0■	310■	2.0■	Class A Amplifier	7.1†	200	200	−10.0	35.5†	9.0†	—	4,200	—	—	5,000	3.0
7077	Ceramic tube, see page on ceramic tubes.																								
7167	Tetrode	7EW	2⅛	¾	13.5	0.09	—	—	180	2.0	180	0.5	Class A Amplifier	—	125	80	−1.0	10	1.4	—	8,000	—	—	—	—
7233	Low-Mu Triode	9FR	3 1/16	⅞	6.3	1.0	CU	—	330	8.0	—	—	Series Regulator Service	6	50	—	R_k= 22	120	—	—	17,500	4	—	—	—
														—	125	—	−60	—	—	1	—	—	—	—	—
7239θσ	Beam Pentode	9KH	2 13/32	⅞	6.3	0.3	CU	—	2000■	4.0	—	—	High-Voltage Pulse Amplifier	—	1,500	100	−12.0	0.2*	—	—	E_{c_3}=0 (Applied for short [2 sec. max.] intervals only)			—	—
														4.3	100	100	E_{c_3}= 0	43	13.5	.4					
														4.05	300	100	−5.0	10.5	2.6	—	4,200	—	E_{c_3}=	—	—
7266	Ceramic tube, see page on ceramic tubes.																								
7296	Ceramic tube, see page on ceramic tubes.																								
7462	Ceramic tube, see page on ceramic tubes.																								
7486	Ceramic tube, see page on ceramic tubes.																								
7588	Ceramic tube, see page on ceramic tubes.																								
7625	Ceramic tube, see page on ceramic tubes.																								
7701σ	Beam Power Pentode	9MS	2⅝	⅞	13.6	0.16	—		350	9	300	3.5	Class C Amplifier	7.0	250	250	−12.5	28	3.1	—	3,600	—	—	—	—
7716σ	High-Mu Triode and Sharp-Cutoff Pentode	9DX	2⅝	⅞	13.6	0.35	CU	—	330	1.0	—	—	Avg. Ch. Triode	0.19	125	—	−1	1.5	—	—	2,900	102	—	—	—
								—	330	5.0	330♦	1.1	Avg. Ch. Pentode	4.8	200	125	R_k= 68	24	5.2	—	10,000	—	—	—	—
7717σ	Sharp-Cutoff VHF Tetrode	7EW	2⅛	¾	6.3	0.2	CU	—	180	2.0	180♦	0.5	Class A Amplifier	1.25	125	80	−1.0	10	1.4	—	8,000	—	—	—	—
7720	Ceramic tube, see page on ceramic tubes.																								
7724σ	Duplex-Diode, High-Mu Triode (with separate cathodes)	9KR	2 3/16	⅞	14.0	0.15	—	—	330	1.1	—	—	Class A Amplifier FM Detector	.175	250	—	−3.0	0.7	—	—	1,000	72	—	—	—
														Average diode current at 5.0 volts DC=18 ma; diode current for continuous operation (each diode)=5 ma.										
7841	Ceramic tube, see page on ceramic tubes.																								
7861θσ	Medium-Mu Twin Triode	8CJ	1¾	⅞	12.6	0.175	CU	—	330	1.35§	—	—	Class A Amplifier	1.25§	150	—	R_k= 240	8.2	—	—	5,500	35	—	—	—
7984	Beam Power Amplifier	12EU	2⅞	1 1/16	13.5	0.58	CU	175	750■	35■	250■	3.0■	Class A Amplifier	25	200	125	−20	125	4.5	—	7,300	—	—	—	—
													Class C Amplifier	81	450	200	−60	180	12	4.0	—	—	2.0	—	—
8102σ	Triode-Pentode	9PJ	2 3/16	⅞	13.5	0.23	CU	—	330■	2.5■	330♦■	0.55■	Class A Amplifier	—	125	125	−1.0	12	4.0	—	7,500	—	—	—	—
							CU	—	330	2.5	—	—	Class A Amplifier	—	125		−1.0	13.5	—	—	8,500	46	—	—	—
8106σ	Beam Pentode	9PL	2 3/16	⅞	13.5	0.25	CU	—	330■	6.0■	300■	1.25■	Class A Amplifier	—	300	150	−3.5	16	3.2	—	9,000	—	—	—	—
8156	Beam Pentode	12EU	2 3/16	1 1/16	13.5	0.3	CU	175	600■	15■	250■	2.5■	Class A Amplifier	7.0	200	125	−9.0	75	3.5	—	7,600	—	—	—	—
													Class C Amplifier	36	400	170	−60	90	10	—	3.0	—	1.0	—	21

A_1(1) Single Tube Class A Audio Power Amplifier.
A_1(2) Push-Pull Class A Audio Power Amplifier.
AB_1(1) Single Tube Class AB_1 Audio Power Amplifier.
AB_1(2) Push-Pull Class AB_1 Audio Power Amplifier.
■ Absolute Maximum rating.
‡ AC (rms) Plate Voltage.
ç Applied for short interval (2 seconds, maximum) so as not to damage the tube.
* Approximate rating.
AB_2(2) Push-Pull Class AB_2 Audio Power Amplifier.
B(2) Push-Pull Class B Audio Power Amplifier.
B-P Single Tube Class RF Telephony Service.
CCS Continuous Commercial Service.
CF Coated filament (directly heated).
C-P Single Tube Class C Plate-Modulated Telephony Service.
C-T Single Tube Class C Telegraphy or FM Service.
CU Coated, Indirectly Heated Cathode (unipotential).
ICAS Intermittent Commercial and Amateur Service.
(R) Special ruggedized type for sever mechanical environment.

▲ Design-maximum Ratings
TF Thoriated-Tungsten Filament (directly heated).
Metal types are in boldface type.
σ Miniature types.
ρ Plate-to-Plate.
β Class C Amplifier with separate, rectified, unfiltered single phase, full-wave plate supply.
¶ Design-Center Value.
θ Five-Star type.
ε For Both Sections.
* Maximum Signal Value with Sine Wave Signal.
φ Peak Value during 15-microsecond pulse with Duty Factor of 0.0012.
§ Per Section.
ω Self-Rectifying Amplifier — Class C.
a Subminiature type.
♦ Supply Voltage.
τ Triode Connected; Grid No. 2 Tied to Plate.
† Zero Signal rating.

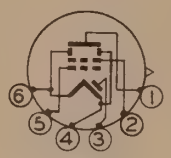
© United Technical Publications

Industrial Receiving and Communication Tubes

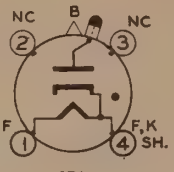
GENERAL ELECTRIC



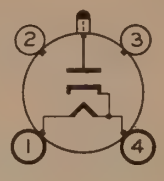
1AD4



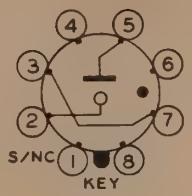
1AG5



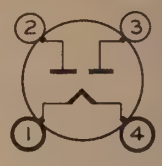
4P1



4AB



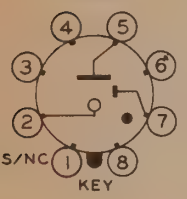
4AJ



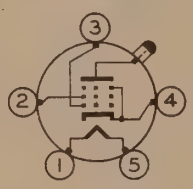
4C



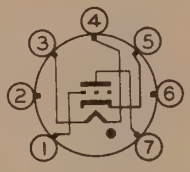
4CK



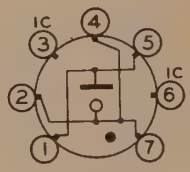
4V



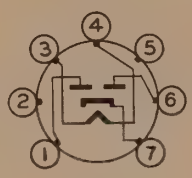
5AW



5AY



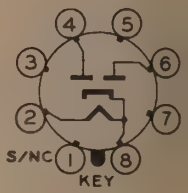
5BO



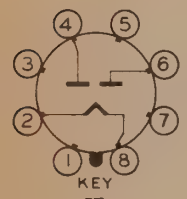
5BS



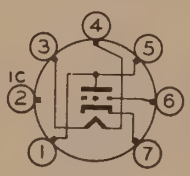
KEY
5CE



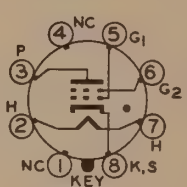
5L



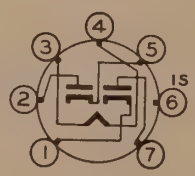
5T



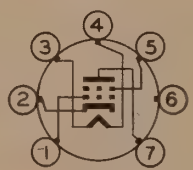
6BG



6BS



6BT



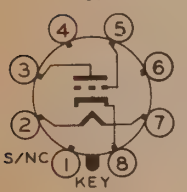
6CE



6CG



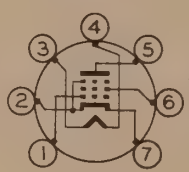
6CL



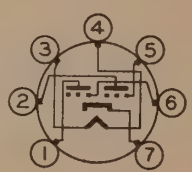
6Q



7AC



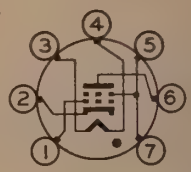
7BD



7BF



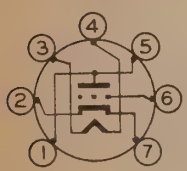
7BK



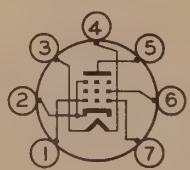
7BN



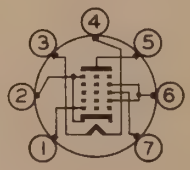
7BQ



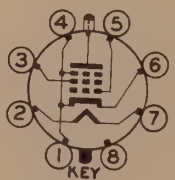
7BS



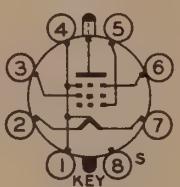
7BZ



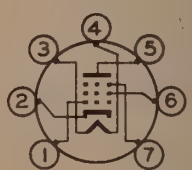
7CH



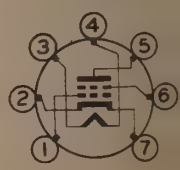
7CK



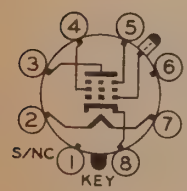
7CL



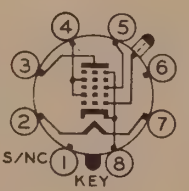
7CM



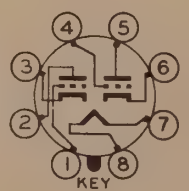
7EW



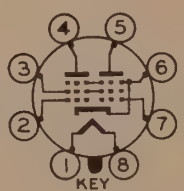
7R



7T



8BD



8BS



8CJ

8DC

8DG

8DJ

8DK

8DL

8EC

8HF

8KN

8LC

8N

9A

9AE

9AJ

9AD

9BV

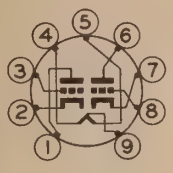
9CD

© United Technical Publications

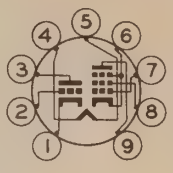
Industrial Receiving and Communication Tubes

GENERAL ELECTRIC


9CE

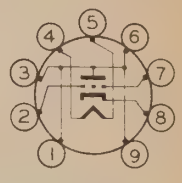

9CZ


9DE


9DX

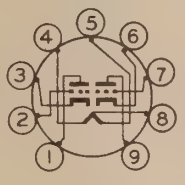

9EQ

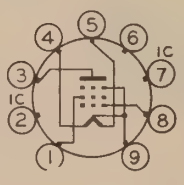

9EU


9FR


9G

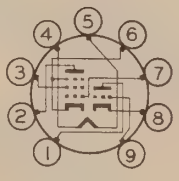

9GT


9H



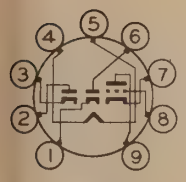
9JL

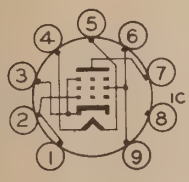

9K


9JT

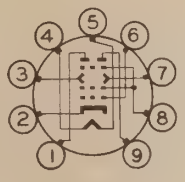


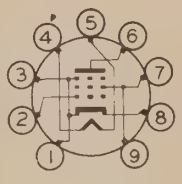
9KH

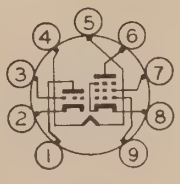

9KR

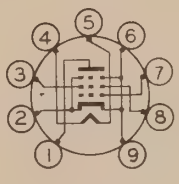


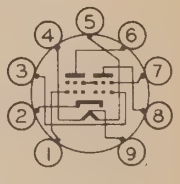
9LE

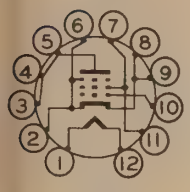

9NF

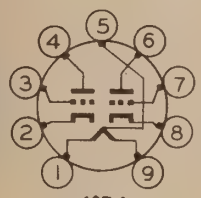

9MS

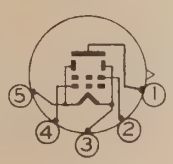

9PJ


9PL

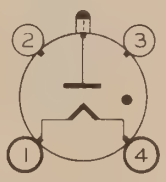

9PW

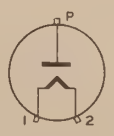

12EU


407-A

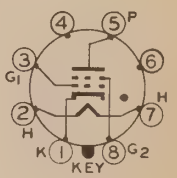

512-AX


809

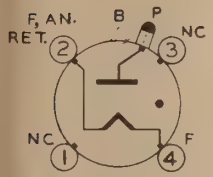

4P



5642



6CO



4AT

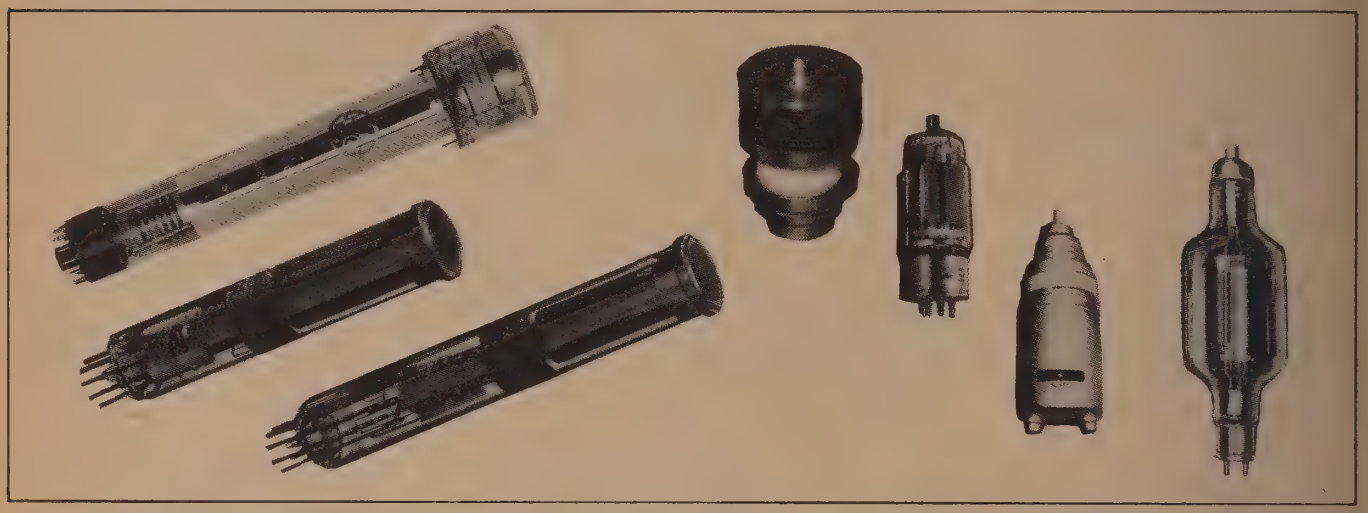
18 VALUE-ANALYZED benefits of GE 5-Star Tubes...

- Controlled inside diameter on bulbs reduces vibrational output and microphonics.
- Highly efficient getter performs throughout tube life and guides flash to avoid inter-element leakage.
- A getter flash shield improves initial leakage characteristics.
- Two double mica spacers, with additional anti-leakage slots, brace internal parts, provide superior inter-element insulation and improve vibration characteristics. 12 or 16 contact points give firmer fit between bulb and mount.
- Short, sturdy cages increase rigidity of tube structure.
- Plate ears are embossed for added strength and improved mica fit.
- U-bolt construction through top and bottom micas firmly secures the cage assembly.
- Smooth grid legs prevent a "sawing" action on the mica, reducing grid vibration and microphonic noise.
- Critical grids are plated with gold or silver to minimize grid emission.
- Passive cathode alloys assure reliability and long life in low-duty cycle circuits where interface tends to develop.
- Outside diameter and density of cathode coating are statistically controlled.
- Low thermo-conductivity cathode tab reduces heat loss.
- Cataphoretic coating of all heater bends after forming insures complete heater-cathode insulation.
- Folded heater design proved most reliable under shock, vibration and heater cycling conditions. Heater is temperature-controlled to further improve reliability and lengthen life.
- Rhenium-tungsten heater material increases tensile strength, reduces brittleness, and allows larger-diameter heater wire.
- Lead-glass stems help ward off glass electrolysis.
- Pins are annealed to prevent glass strain at socket insertion.
- Stem design minimizes welds — fewer points of possible failure — less change of short-causing particles from weld splash.

© United Technical Publications

Broadcast, Industrial & Special Purpose Power Tubes

GENERAL ELECTRIC



LONG LIFE IMAGE ORTHICONS

Type	Target	Field Mesh	Signal:Noise (4.5 mc)	Amplitude Response @ 400 TV Lines	Typical Lens Aperture vs. Scene Illumination		Application	
					Color	Monochrome	Primary	Other
Z7899	Electronic Glass	No	65:1	65%	—	f:16 @ 80 - 100 ft-c	Studio, VTR	Color remote
Z7888		Yes	65:1	65%	f:8 @ 200 ft-c	f:16 @ 80 - 100 ft-c	Color remote	Monochrome VTR
Z7866	Semiconductor	Yes	50:1	70%	f:5.6 @ 50 ft-c	f:22 @ 50 - 100 ft-c	Color studio	Monochrome X-ray
7629A	MgO	No	50:1	65%	—	f:16 @ 25 - 50 ft-c	Monochrome Remote	X-ray

STANDARD IMAGE ORTHICONS

4401	Glass	No	50:1	60%	—	f:16 @ 50 ft-c	Studio, remote	X-ray
5820A 5820A/R	Glass (Ruggedized)	No	50:1	60%	—	f:16 @ 100 ft-c	Studio, VTR	Remote
7293A 7293A/R	Glass (Ruggedized)	Yes	50:1	60%	—	f:16 @ 100 ft-c	Monochrome studio	Color studio
8093A 8093A/R	Glass (Ruggedized)	Yes	60:1	60%	—	f:16 @ 120 ft-c	Studio color, VTR	Monochrome

SPECIAL PURPOSE IMAGE ORTHICONS

Type	Target	Field Mesh	Photo Cathode	Resolution Sensitivity*	Applications
Z5395 Z7805	MgO Ruggedized Z5395	No	S-1	500 @ 7.6 x 10^{-5} 200 @ 1.0 x 10^{-5}	**Near IR sensitive,** infrared detection aerial mapping, star tracking, missile tracking
7538 7409	MgO Ruggedized 7538	No	S-10	500 @ 1.5 x 10^{-5} 100 @ 4 x 10^{-7}	**Low light level** surveillance, electro optical telescope systems, airborne and tank fire control
7967 Z7806	MgO Ruggedized 7967	No	S-20	500 @ 5 x 10^{-6} 100 @ 1.5 x 10^{-7}	**Extremely low light level** surveillance, underwater TV systems, astronomical systems
7969 Z7807	MgO Ruggedized 7969	No	UV	500 @ 1.5 x 10^{-5} 100 @ 4 x 10^{-7}	**Near UV sensitive** medical biological studies, missile detection
Z7809	MgO	No	S-10		**Similar to 7538** except fiber optic faceplate. Fibre optic systems. Can be coupled to image intensifier
Z7810 Z7822	MgO Ruggedized Z7810	No	S-20		**Similar to 7967** except fiber optic faceplate. Fiber optic systems, radiation scintillator studies. Can be coupled to image intensifier
Z7814	MgO	Yes	S-20	500 @ 5 x 10^{-6} 100 @ 2.7 x 10^{-7}	**Improved Corner resolution,** electro-optical telescope systems
7198A	Glass	No	S-10		**General Purpose** surveillance, fire control

* Resolution sensitivity is defined as television lines per target inch @ specified photocathode illumination in foot-candles.

BROADCAST AND INDUSTRIAL VIDICONS

Type	Application	Maximum Dimensions		Heater Current @ 6.3 V Amperes	Amplitude Response @ 400 TV Lines Focus Coil Field Strength		Sensitivity	OPERATING PARAMETERS			
		Dia. Inches	Length Inches		@ 40 Gauss	@ 60 Gauss		Faceplate Illumination ft-c	Target Volts	Dark Current Micro-amperes	Signal Output Micro-amperes
7038 7038V	Film Color Film	1.135	6.50	.6	30%	40%	Average Min. Lag	15 100	30 - 50 10 - 30	.02 .004	.4 .3
8134V	Color Film	1.135	6.35	.09	30%	35%	Average Max.	1.0 .1	30 - 50 40 - 60	.03 .1	.27 .1
7735A	Live	1.135	6.50	.6	30%	40%	Average Max.	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
7735B	Live	1.135	6.50	.6	35%	45%	Average Max.	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2

© United Technical Publications

Special Purpose Power Tubes
Broadcast, Industrial &

GENERAL ELECTRIC

BROADCAST AND INDUSTRIAL VIDICONS (Continued)

Type	Application	Maximum Dimensions Dia. Inches	Maximum Dimensions Length Inches	Heater Current @ 6.3 V Amperes	Amplitude Response @ 400 TV Lines Focus Coil Field Strength @ 40 Gauss	Amplitude Response @ 400 TV Lines Focus Coil Field Strength @ 60 Gauss	Sensitivity	OPERATING PARAMETERS Faceplate Illumination ft-c	OPERATING PARAMETERS Target Volts	OPERATING PARAMETERS Dark Current Micro-amperes	OPERATING PARAMETERS Signal Output Micro-amperes
7226	Live	1.135	5.25	.15	30%	40%	Average Max.	1.0 .2	30 - 50 40 - 100	.02 .2	.2 .2
8484	Live	1.135	5.50	.6	30%	40%	Average Max.	1.0 .2	30 - 50 40 - 100	.02 .2	.2 .2
7262A	Live	1.135	5.25	.09	30%	40%	Average Max.	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
7263A	Ruggedized 7262A	1.135	5.25	.09	30%	40%	Average Max.	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
8507 8507A	Live	1.135	6.50	.6	50%	70%	Average Max.	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
8541	Live	1.135	6.50	.09	50%	70%	Average Max.	1.0 .0	20 - 40 35 - 70	.02 .2	.2 .2
8572 8572V	Film Color Film	1.135	6.50	.6	50%	70%	Average Min. Lag	15 100	30 - 50 10 - 30	.02 .004	.4 .3
8604	Film	1.135	6.50	.09	50%	70%	Average Min. Lag	15 100	30 - 50 10 - 30	.02 .004	.4 .3
7735BX	X-Ray	1.135	6.50	.6	30%	45%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
8541X	X-Ray	1.135	6.50	.09	50%	70%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
8573X	X-Ray	1.135	5.00	.09	50%	70%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
8484H	Low Light Level, Live	1.135	6.50	.6	30%	45%	Average Max	1.0 .1	20 - 35 35 - 70	.02 .2	.25 .22
Z7912	Live Ruggedized	1.135	5.25	.3	50%	70%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
Z7933	Live Ruggedized	1.135	5.25	.09	50%	70%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
R Z7929G B	Live - Color	1.135	6.35	.09	Low Voltage 35%	High Voltage 55%	Average	1.0	20 - 40	.02	.2
Z7919	Low Cost (8541) Live - CCTV	1.135	6.50	.09	50%	70%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2
Z7911	Low Cost Live - CCTV	1.135	6.50	.6	30%	40%	Average Max	1.0 .1	20 - 40 35 - 70	.02 .2	.2 .2

TRANSMITTING TUBES

TYPE	DESCRIPTION	DIMENSIONS IN INCHES Length	DIMENSIONS IN INCHES Diameter	CATHODE Volts	CATHODE Amps.	CATHODE Type	MAXIMUM RATINGS Max. Freq. for Full Input, mc.	MAXIMUM RATINGS Plate Dissipation Watts	MAXIMUM RATINGS Plate Volts	MAXIMUM RATINGS Plate Input Watts	MAXIMUM RATINGS Screen Grid No. 2 Volts	CLASS AND TYPE OF SERVICE	TYPICAL OPERATING CONDITIONS Plate Volts	Plate Current, ma	Screen Grid No. 2 Volts	Screen Grid No. 2 Current, ma	Grid No. 1 Volts	μ Factor	GM μmhos	Approx. Drive Power, Watts	Approx. Output Power, Watts
2H21θ	Phasitron type. For use as phase modulator. Max. frequency 500 KC.	4 3/16	1 5/8	6.3	0.3	CU				DC Plate Volts=300; Deflector volts=100; RF output volts=4.											
4-400A	Forced-air cooled power tetrode.	6 3/8	3 3/16	5.0	14.5	TF	110	400 270 400	4,000 3,200 4,000	— — —	600 600 600	AB2(2) C-P C-T	3,000 2,500 3,000	700 275 350	500 500 500	40 28 46	—80 —220 —220	5.1	4,000	4.5 3.5 6.1	1,375 510 800
4-1000A	Forced-air cooled beam power tetrode.	9 5/8	5 1/4	7.5	21	TF	110	1,000	6,000	—	1,000	C-T C-P	6,000 5,000	700 600	500 500	140 130	—200 —200	7.2	10,000 —	15 11	3,440 2,440
4D21/ 4-125A	Air-cooled beam power tetrode.	5 11/16	2 7/8	5.0	6.5	TF	120 120	85 125	2,500 3,000	— —	400 400	C-P C-T	2,500 3,000	152 167	350 350	30 30	—210 —150	6.2	2,450 —	3.3 2.5	300 375
4X150A	Air-cooled beam power tetrode.	2 15/32	1.635	6.0	2.6	CU	— 500 500	150 100 150	1,250 1,000 1,250	— — —	400 300 300	AB2(2) C-P C-T	1,250 1,000 1,250	475 200 200	300 250 280	65 20 20	—44 —150 —115	5.0	— 12,000 —	0.15 2 30	425 140 140
7C29θ	Forced-air cooled triode.	5 3/8	2 1/2	10.5	28	TF	110	500	3,000	1,200	—	C-T	2,800	330	—	—	—250	29	—	—	600
7D21θ	Thoriated-tungsten filiment. Forced-air cooled tetrode.	7 1/2	3.015	6.3	30	TF	110	1,200	4,000	3,000	750	C-T	3,750	670	600	100	—102	8.0	—	60	1,575
810	High-perveance triode; jumbo 4-pin base. Medium grid and plate caps.	8 3/4	2 1/4	10	4.5	TF	— 30 30	175 125 175	2,750 2,000 2,500	510 500 750	— — —	B(2)■ C-P■ C-T	2,250 2,000 2,500	450 250 300	— — —	— — —	—60 —350 —180	36	— — —	13 35 19	725 380 575
813	Beam power amplifier; giant 7-pin bayonet base; medium cap.	7 1/2	2 3/16	10	5.0	TF	— 30 30	125 100 125	2,500 2,000 2,250	450 400 500	— — —	AB1(2)■ C-P■ C-T■	2,500 2,000 2,250	290 200 220	750 350 400	— — —	—95 —175 —155	— — —	— — —	0 4.3 4.0	490 300 375
829-B	Twin beam power amplifier; septar 7-pin base; wire plate terminals.	4 3/16	2 3/8	6.3 12.6	2.25 1.125	CU	— 200 200	30 28 40	750 600 750	100 90 120	— — —	AB1(2)■ C-P■ C-T■	600 600 750	110 150 160	200 200 200	— — —	—18 —60 —50	9.0	8,500 —	0 0.5 0.4	44 70 99
832-A	Twin beam power amplifier; septar 7-pin base; wire plate terminals.	3 3/16	2 3/8	6.3 12.6	1.6 0.8	CU	200 200	15 20	600 750	36 50	— —	C-P■ C-T■	600 750	60 65	200 200	— —	—70 —50	6.5	3,500 —	0.21 0.24	26 35

© United Technical Publications

Broadcast, Industrial & Special Purpose Power Tubes

GENERAL ELECTRIC

TRANSMITTING TUBES (Continued)

TYPE	DESCRIPTION	DIMENSIONS IN INCHES		CATHODE			MAXIMUM RATINGS					CLASS AND TYPE OF SERVICE	TYPICAL OPERATING CONDITIONS							
		Length	Diameter	Volts	Amps.	Type	Max. Freq. for Full Input, mc.	Plate Dissipation Watts	Plate Volts	Plate Input Watts	Screen Grid No. 2 Volts		Plate Volts	Plate Current, ma	Screen Grid No. 2 Volts	Screen Grid No. 2 Current, ma	Grid No. 1 Volts	μ Factor	GM μmhos	Approx. Drive Power, Watts	Approx. Output Power, Watts
833-A	High perveance triode; forced-air cooled; special post terminals.	8 13/16	4 19/32	10	10	TF	— 20 20	450 350 450	4,000 4,000 4,000	1,800 1,800 2,000	—	B(2)■ C-P■ C-T■	4,000 4,000 4,000	900 450 500	— — —	— — —	−100 −325 −225	— 35 —	— — —	38 42 35	2,700 1,500 1,600
838	Air-cooled triode; jumbo 4-pin base.	7 7/8	2 5/16	10	3.25	TF	30	100	1,250	220	—	C-T	1,250	150	—	—	−90	—	—	6.0	130
862-Aθ	Water-cooled triode. Dissipation 50 to 100 KW.	60	3 1/8	33	207	TF	1.6	100,000	20,000	100,000	—	C-P	12,000	5,000	—	—	−800	45	—	2,000	45,000
880θ	Water-cooled triode; for broadcast and RF heating; special terminals.	11 1/2	7	12.6	320	PT	— 25 25	15,000 12,000 20,000	10,500 10,500 10,500	40,000 36,000 60,000	— — —	B(2) C-P C-T	10,000 10,000 10,000	7,000 3,600 6,000	— — —	— — —	−450 −1200 −1000	— 20 —	— — —	540 1,100 1,500	46,000 27,000 40,000
889-Aθ	Water-cooled triode; for broadcast and RF heating; special terminals.	10 11/16	3 5/8	11.0	125	PT	— 50 50	5,000 3,000 5,000	8,500 6,000 8,500	12,000 6,000 16,000	— — —	B(2) C-P C-T	7,500 6,000 7,500	3,200 1,000 2,000	— — —	— — —	−300 −900 −800	— 21 —	— — —	150 140 400	15,000 4,000 10,000
892	Water-cooled triode; two-section filament; special connections.	20 7/8	6 3/16	11.0 per sec.	60	PT	— 1.6 1.6	7,500 6,000 10,000	15,000 10,000 15,000	20,000 10,000 30,000	— — —	B(2) C-P C-T	12,500 10,000 12,000	2,800 780 1,550	— — —	— — —	−170 −1,600 −1,600	— 50 —	— — —	160 460 565	22,000 6,000 14,000
5513θ	Forced-air cooled triode; thoriated-tungsten filament.	7 1/2	3.015	6.3	32.0	TF	220	1,200	3,000	3,300	—	Class B,TV	2,000	680	—	—	−20	—	—	223	1,125
5518θ	Forced-air cooled triode tungsten filament.	12 3/8	5.530	6.3	235	PT	110	4,000	7,000	12,000	—	C-T	6,600	1,300	—	—	−520	21	—	180	6,500
5549	Forced-air cooled triode. Dissipation 4.0 KW.	11	5 1/2	12.6	57	TF	50	4,000	8,500	10,000	—	C-T	8,000	1,250	—	—	−800	23	—	230	7,500
5556	Air-cooled triode; small 4-pin bayonet base.	4 1/2	1 5/8	4.5	1.1	TF	6	10	350	14		C-T	350	35	—	—	−80	—	—	0.25	6
5593θ	Phasitron type for use as phase modulator.	4 3/16	1 5/8	6.3	0.3	CU	Max. frequency for full rating=250 MC.; Anode volts=300; Deflector volts=100; RF output volts=4.														
5675	Medium-mμ "pencil type" triode; for service up to 3,000 MC.	2.252	0.816	6.3	0.135	CU	—	9	300	9	—	C-T oscillator at 1,700 MC.	120	25	—	—	−8	20	—	—	0.475
5736	Forced-air cooled triode. Special connections.	7 3/8	3 5/8	6.0	60	TF	— 60 60	2,500 2,500 1,650	3,000 5,000 3,500	4,200 5,000 4,000	—	B C-T C-P	3,000 5,000 3,500	2,800 1,000 1,140	— — —	— — —	−160 −850 −600	— 22 —	— — —	140 250 270	4,350 4,100 3,200
5762/ 7C24	Forced-air cooled triode; special terminal connections.	7 1/8	4 1/16	12.6	29	TF	— 30 30	3,000 2,000 3,000	6,200 5,000 6,200	8,700 5,000 8,700	— —	B C-P C-T-F	4,700 4,700 6,000	2,800 960 1,250	— — —	— — —	−200 −400 −550	— 29 —	— — —	195 720 1,225	8,800 4,200 7,000
5894	Air-cooled twin tetrode. Max. ratings up to 250 MC.	4 5/16	1 15/16	6.3 12.6	1.8 0.9	CU	250	40	750	120	300	B C-T C-P	600 600 600	200 200 150	300 250 250	26 16 20	−25 −80 −80	— 8.2 —	+ — —	0.2 3.0 0.8	86 90 71
6039θ	Water-cooled triode; Replaces GL-9C24 with filament change.	8 17/32	3.9	5.0	78	TF	220	7,000	6,000	13,500	—	Class B, TV	5,000	2,100	—	—	−300	21	—	1,060	4,900
6161θ	Forced-air cooled triode; special terminal connections.	3 13/32	1.76	6.3	3.4	CU	900 900 Doubler to 900 Mc.	250 250	1,600 1,600	560 400	—	B-T C-T-F C-M	1,600[b] 1,650[b] 1,675[b]	350 250 250	— — —	— — —	−100[a] −150[a] −175[a]	— 2 —	— — —	75[c] 80[c] 100[c]	230[d] 180[d] 140[d]
6251θ	Water-cooled metal and ceramic tetrode.	13 1/4	5 5/32	5.5	19.0	TF	220	25,000	7,000	50,000	700	Class B, TV	6,800	7,500	600	50	−20	20	—	2,300	25,000
6907	Twin tetrode for use up to 600 MC. Standard 7-pin base.	3 3/8	1.8	12.6	0.65	CU	— 400 600	20 14 20	600 500 600	— 60 36	250 300 250	B C-P C-T	500 400 400	70 80 100	250 300 250	16 6 5	−26 −50 −50	8	2,500	— — —	23.5 13 20
6942θ	Forced-air cooled metal and ceramic tetrode.	8 3/4	3 1/2	5.7	24	CV	1,000 1,000	1,500 1,500	4,000 4,000	2,500 2,500	— —	Class B, TV C-T	3,500 4,000	520 420	500 500	35 11	−40 −110			100 65	1,000 1,000
7007#	Forced-air cooled metal and ceramic tetrode. Special connections.	11.63	6.4	5.0	180	CU	220 220	8,000 12,000	5,000 7,500	10,000 20,000	2,000 2,000	C-P C-T	4,800 7,000	1,800 2,600	800 1,000	160 200	−300 −300	10	—	100 80	6,000 12,000
7034/4X150A	See 4X150A																				
7289	High transconductance triode, forced-air cooled with integral radiator.	2 3/4	1 17/64	6.3	1.0	Otherwise same as 2C39-B															
8005	Maximum ratings up to 150 MC.	5	1 15/16	16.0	38	PT	150	750	2,500	1,250	—	C-P	—	—	—	—		20	—	—	—
8020	High-perveance triode; jumbo 4-pin base; medium cap.	6 11/16	2 7/16	10	3.25	TF	— 60 60	85 75 85	1,500 1,250 1,500	250 240 300	—	B C-P C-T	1,500 1,250 1,500	330 190 200	— —	— —	−67.5 −195 −130	20	—	5.5 9 7.5	330 170 220

See Ceramic Section pgs. 0 - 0 for types 2C39B.
See Ceramic Section pgs. 0 - 0 for GL-6299 - GL-6897.
Outline diagrams for GL-7644 and GL-7784 are on page 12.
Outline diagrams for GL16897 and GL-7289 are on page 4.
Basing diagram for GL-7085/356 is on page 9.
Footnotes are on page 14.

FOOTNOTES FOR TRANSMITTING TUBE LISTINGS

A Cathode to grid volts.
A_1(1) Single tube class A audio power amplifier.
AB_1(2) Push-pull class AB_1 audio power amplifier.
AB_2(2) Push-pull class AB_2 audio power amplifier.
B Referred to grid terminal.
B(2) push-pull class B audio power amplifier.
B-P Single tube class B RF telephone service.
C Driver power output.
C-P Single tube class C plate-modulated telephony service.
C-T Single tube class C telegraphy or FM service.
C-T (Pulsed) Single tube class C RF pulsed oscillator.
CF Coated filament (directly heated).
CV Thoriated tungsten cathode (indirectly heated)
CU Coated indirectly heated cathode (unipotential).
D Useful power output.
C-G-T Single tube class C grid-modulated video service.
PT Pure tungsten filament (directly heated).
TF Thoriated-tungsten filament (directly heated).
Broadcast tube type.
■ Intermittent Commercial and Amateur Service rating.
[a] Cathode to grid volts.
[b] Referred to grid terminal.
[c] Driver power output.
[d] Useful power output.

© United Technical Publications

Broadcast, Industrial & Special Purpose Power Tubes

GENERAL ELECTRIC

BROADCAST, INDUSTRIAL & SPECIAL PURPOSE POWER TUBES—HIGH VACUUM RECTIFIERS

TYPE	DESCRIPTION	DIMENSIONS IN INCHES		CATHODE		MAXIMUM ANODE RATINGS			TYPICAL OPERATION*			
		Length	Diameter	Volts	Amps.	Peak Inverse Volts	Peak Amperes	Average Current Amperes	Peak Inverse Volts	A.C. Anode Volts	D.C. Output Volts	D.C. Output Current Amperes
2B22	UHF lighthouse type diode, 8-pin octal base.	1 5/16	1.312	6.3	0.75	300	0.7	0.02	150	100	50	0.005
2B23	Magnetically-controlled diode. Six-pin octal base.	3 5/16	1 3/16	6.3	0.3			0.03		—	150	0.030
3B24-W	Small size, high peak—Inverse voltage diode, shock and vibration resistant.	4 7/8	1 1/2	2.5 5.0	3.0 3.0	20,000 20,000	0.15 0.3	0.03 0.06	20,000 20,000	— —	— —	0.03 0.06
836	Heater-cathode type. Small 4-pin bayonet base. Medium cap.	6 5/16	2 1/16	2.5	5	5,000	1	0.25	5,000¶	3,400¶	1,550¶	0.5¶
1616	Coated-filament type. Small 4-pin bayonet base. Medium cap.	6 13/16	2 1/16	2.5	5	6,000	0.8	0.13	5,500¶	3,800¶	1,730¶	0.26¶
5973	Thoriated tungsten filament. Two-pin base. Medium cap.	19 1/2	6 1/8	16.0	19.1	75,000 40,000	5.0 5.0	1.0 1.25	75,000 40,000	— —	— —	1.0 1.25
8020	Tungsten-filament type. Small 4-pin bayonet base.	8	2 5/16	5.0	6.0	40,000	0.75	0.1	40,000	28,000	—	0.1

BROADCAST, INDUSTRIAL & SPECIAL PURPOSE POWER TUBES—GAS-FILLED RECTIFIERS

TYPE	DESCRIPTION	Tube Voltage Drop	MAX. ANODE RATING — FOR 60 CPS SUPPLY				DIMENSIONS IN INCHES		CATHODE		OPERATING CONDITIONS#			
			Temp. Range Condensed Mercury, C.	Peak Inverse Volts	Peak Amperes	Average Amperes	Fault Amperes	Length	Diameter	Volts	Amps.	Peak Inverse Volts	Max. A.C. Plate-to-Plate Supply Volts	Approx. D.C. Output Volts to Filter	D.C. Output Amperes
3B28	Small 4-pin, bayonet base. Medium cap—ceramic-insulated, Xenon-filled.	10	—75 to +90	5,000 10,000	2 1	0.5 0.25	20 20	6	2 1/16	2.5	10.0	5,000 10,000	3,400 7,000	1,550 3,200	1.0 0.5
FG-32	See GL-5558/FG-32														
FG-104	See GL-5561/FG-104														
FG-280	All-metal tube for use in low-voltage applications. Flexible leads.	15	40 to 80	1,000	40	6.4	200	10 3/4	2 1/4	5.0	10.0	2,000	1,400	645	12.8
575-A	Jumbo 4-pin, bayonet base. Medium cap.	10	20 to 50	15,000	10	2.5	100	11 1/8	3 1/8	5.0	10.0	15,000	10,600	4,800	5
673	Same as GL-575-A except for super-jumbo 4-pin, bayonet base.	Same as GL-575-A						11 7/16	3 1/8						
857-B	Special terminal connections. Skirted large cap.	15	30 to 40 25 to 60	22,000 10,000	40 40	10 10	400 400	19 7/8[a]	7 1/8	5.0	30.0	22,000 10,000	15,400 7,000	7,000 3,200	20 20
866-A	Small 4-pin, bayonet base. Medium cap—ceramic-insulated.	15	20 to 60	10,000	1	0.25	20	6 5/16	2 7/16	2.5	5.0	10,000	7,000	3,200	0.5
869-B	4-pin base. Skirted large cap.	15	30 to 40	20,000	10	2.5	100	14 7/16	5 1/8	5.0	19.0	20,000	14,000	6,400	5
870-A	Heavy-duty heater-cathode type. Flexible leads.	16	35 to 40 35 to 50	16,000 7,500	450 450	75 75	4,500 4,500	26[a]	5 1/2	5.0	65.0	16,000 7,500	9,060 4,260	4,150 1,950	150
872-A	Jumpo 4-pin base. Medium cap—ceramic-insulated.	10	20 to 60 20 to 70	10,000 5,000	5 5	1.25 1.25	50 50	8 1/2	2 5/16	5.0	7.5	10,000 5,000	7,000 3,400	3,200 1,550	2.5 2.5
5558/ FG-32	Small 4-pin, bayonet base. Medium cap.	15 —	30 to 60 30 to 80	5,000 2,000	15 15	2.5 2.5	200 200	7 —	3 —	5.0 —	4.5 —	5,000 2,000	3,400 1,400	1,550 645	5 5
5561/ FG-104	Super-jumbo 4-pin, bayonet base. Maximum averaging time 15 sec. for welder-control service.	15 15	40 to 80 25 to 50	3,000 10,000	40 16	6.4 4.0	400 160	11 1/4	3 13/16	5.0	10.0	3,000	2,000	910	12.8
								Welder-control Service				—	—	—	—
8008	Same as GL-872-A except for super-jumbo 4-pin, bayonet base.	Same at GL-872-A						8 3/4	2 5/16						

THYRATRON TUBES

TYPE	DESCRIPTION	Dimensions Inches (Max.)		Cathode		Approx. Tube Drop Volts	MAXIMUM RATINGS						Critical Grid Volts at Anode Volts
		Length	Diam.	Volts	Amps.		Temperature Range of Condensed Mercury, °C.	Peak Forward Anode Volts	Peak Inverse Anode Volts	Peak Cathode Amperes	Average Cathode Amperes	Fault Amperes	
2D21	Negative-control, heater-cathode type. Miniature 7-pin base.	2 1/8	3/4	6.3	0.6	8	−75 to +90*	650	1,300	0.5	0.1	10	4.2 @ 450
3C23	Gas and mercury-filled. Negative-control, filament type. Small 4-pin bayonet base, medium cap.	6 1/8	2 1/16	2.5	7	15	−40 to +80 −40 to +100	1,250 200	1,250 200	6 6	1.5 1.5	120 120	−5.5 @ 1,000 −2.5 @ 100
6D4	Relay tube or relaxation oscillator. Miniature 7-pin base.	2 1/8	3/4	6.3	.25	16	−55 to +90*	350	350	0.11	.025	—	—
FG-81-A	Mercury vapor type for relay control Medium 4-pin bayonet base, medium cap.	6 5/8	2 1/16	2.5	5	16	−55 to +85	500	500	2.0	0.5	40	−7.5 @ 500
FG-97	Mercury vapor, double-grid type. Medium 4-pin bayonet base, medium cap top and side.	6 3/4	2 1/16	2.5	5	16	+40 to +80	1,000	1,000	2.0	0.5	40	−13 @ 1,000
FG-98A	Mercury vapor, double-grid type. Medium 4-pin bayonet base, medium cap top and side.	6 3/4	2 1/16	2.5	5	16	−55 to +85	500	500	2.0	0.5	40	−16 @ 500
FG-105	Negative-control, heater-cathode type. Super-jumbo 4-pin bayonet base, large cap top and side.	11 1/4	2 1/2R	5.0	10	16	−40 to +80	2,500	2,500	40	6.4	400	−9 @ 1,000
FG-154	Negative-control, heater-cathode type. Uses low grid power. Medium 4-pin bayonet base, medium cap.	8	3	5.0	7	16	−20 to +50*	500	500	10	2.5	80	−9 @ 500
FG-172	Negative-control, heater-cathode type. Metal envelope with flexible leads and threaded terminal. †Welder Control Ratings.	10 3/4	2 5/8R	5.0 5.5†	10 11†	16 16	+40 to +80 +30 to +95	2,000 750	2,000 750	40 77	6.4 2.5	400 400	−9 @ 1,000

© United Technical Publications

Broadcast, Industrial & Special Purpose Power Tubes

GENERAL ELECTRIC

THYRATRON TUBES (Continued)

TYPE	DESCRIPTION	Dimensions Inches (Max.)		Cathode		Approx. Tube Drop Volts	MAXIMUM RATINGS						Critical Grid Volts at Anode Volts
		Length	Diam.	Volts	Amps.		Temperature Range of Condensed Mercury, °C.	Peak Forward Anode Volts	Peak Inverse Anode Volts	Peak Cathode Amperes	Average Cathode Amperes	Fault Amperes	
393-A	Negative-control, filament type, mercury vapor and gas-filled. Octal base, small cap.	6 5/8	2 1/16	2.5	7	15	−40 to +80	1,250	1,250	6.0	1.5	—	−5.5 @ 1,000
414	Negative-control, mercury vapor, heater-cathode type. Bracket mounted, flexible leads.	15 3/16	3 1/8	5	19	20	+40 to +80	3,000	3,000	100	5.0	1,500	−10 @ 1,000
672-A	Negative-control, heater-cathode type. Ignitor firing applications. Super-jumbo 4-pin bayonet base, medium cap.	8 1/8	2 5/16	5	5	12	+40 to +80	2,500	2,500	40	3.2	150	−10 @ 1,000
678	Negative-control, filament type. Relay control application. Jumbo 4-pin bayonet base, medium cap.	10 3/4	2 5/16	5	7.5	15	+25 to +50	10,000	15,000	6.0	1.6	50	−15 @ 1,000
2050-A	Negative-control, heater-cathode type. Octal 8-pin base.	4 1/8	1 5/16	6.3	0.6	8	−75 to +90*	650	1,300	1.0	0.1	10	−3 @ 650
5544	Negative-control, inert gas, filament type. Quick-heating cathode. Super-jumbo 4-pin base, medium cap.	7 1/2	2 5/8	2.5	12	16	−55 to +70*	1,500	1,500	40	3.2	560	−8 @ 1,000
5557	Negative-control, mercury vapor, filament type. Medium 4-pin bayonet base, medium cap.	6 1/8	2 1/16	2.5	5	16	+40 to +80	2,500	5,000	2	0.5	40	−7 @ 1,000
5559	Negative-control, heater-cathode type. Small 4-pin bayonet base, medium cap.	7 1/4	3	5.0	4.5	16	+40 to +80	1,000	1,000	15	2.5	200	−6.5 @ 1,000
5560	Negative-control, heater-cathode type. Ignitor firing applications. Small 4-pin bayonet base, two medium caps.	7 5/16	2 1/4	5.0	4.5	16	+40 to +80	1,000	1,000	15	2.5	200	−9 @ 1,000
5563-A	Negative-control, filament type. Jumbo 4-pin bayonet base, medium cap.	10 17/32	2 5/8	5.0 FOR QUADRATURE OPERATION	10	15	+25 to +50 +25 to +55 +25 to +50 +25 to +55	20,000 15,000 20,000 15,000	20,000 15,000 20,000 15,000	6.4 10 11.5 11.5	1.6 1.8 2.5 2.5	70 70 70 70	−2.5 @ 500
5632/C3J	Negative-control, filament type. Small 4-pin bayonet base, medium cap.	6	1 5/16	2.5	9	10	−55 to +75*	900	1,250	30	2.5	300	−4.5 @ 750
5663	Negative-control, inert-gas-filled. For relay and grid-control rectifier applications. Seven-pin miniature.	1 1/2	3/4	6.3	0.15	11	−55 to +90*	500	500	0.06	0.02	1.0	−2.5 @ 500
5665/C16J	Negative-control, xenon, filament type. Base bracket and flexible leads.	10 1/2	2 1/16	2.5	31	11	−55 to +75*	1,000	1,250	160	16	1,000	−2.2 @ 500 −4.0 @ 1,000
5696A	Negative-control, inert-gas-filled cathode type. seven-pin miniature.	1 3/4	3/4	6.3	0.15	10	−55 to +90	500	500	0.125	0.028	2.0	—
5720	Positive-control, heater-cathode type. Medium 4-pin bayonet base, medium cap.	7 1/2	3	5.0	4.5	—	+35 to +80	1,000	1,000	15	2.5	200	+9.5 @ 1,000
5727	Negative-control, inert-gas-filled cathode type. Seven-pin miniature.	1 7/8	3/4	6.3	0.6	8	−75 to +90*	650	1,300	0.5	0.1	10	−3.5 @ 450
5830	Negative-control, heater-cathode type for high voltage and current applications.	17 3/4	5 1/16	5.0	20	16	+40 to +65	10,000	10,000	75	12.5	1,500	−6 @ 10,000
5855	Negative-control, filament type. High commutation factor for motor control. Lugs for connections.	11 1/64	3 5/8	2.5	34	16	−55 to +70*	1,500	1,500	160	18	2,000	−3 @ 1,000
6011/710	Negative-control, mercury vapor and gas-filled type. Medium 4-pin bayonet base, large cap.	6 1/4	1 5/8	2.5	9	15	−40 to +80	1,000	1,250	30	2.5	250	−5 @ 1,000
6012	Negative-control, heater-cathode type. Octal, 6-pin base.	4 1/4	1 1/32	6.3	2.5	10	−75 to +90*	650	1,300	5	0.5	20	−10 @ 650
6014/C1K	Negative-control, filament, xenon type. Small 4-pin bayonet base.	4 1/4	1 5/16	2.5	6.3	8	−55 to +75*	1,000	1,250	8	1	77	−2 @ 500
6807	Negative-control, gas type. Super-jumbo bayonet base.	9	2 5/8	2.5	21	16	−55 to +70*	1,500	1,500	80	6.4	1,120	−6 @ 1,000
6808	Same as GL-6807 with flexible leads and bracket mount.	9	2 5/8	2.5	21	16	−55 to +70*	1,500	1,500	80	6.4	1,120	−6 @ 1,000
6809	Same as GL-6807 with spade lugs for panel mounting.	9	2 5/8	2.5	21	16	−55 to +70*	1,500	1,500	80	6.4	1,120	−6 @ 1,000
6858/760	Negative-control, filament type. Four-pin bayonet base. Medium cap.	9 1/2	2 5/16	2.5	21	12	−40 to +80	1,500	1,500	77	6.4	770	−4 @ 500 −5.5 @ 1,250
6859/760-P	Negative-control, filament type. Bracket-type base for panel mounting. Medium cap.	9 1/2	2 5/16	2.5	21	12	−40 to +80	1,500	1,500	77	6.4	770	−4 @ 500 −5.5 @ 1,250
7518/710-L	Negative-control, gas and mercury type. Spade lugs for panel mounting. Medium cap.	6 1/4	1 5/8	2.5	9	15	−40 to +80	1,000	1,250	30	2.5	250	−5 @ 1,000
7725	Negative-control, gas and mercury type. Quick-heating filament. Four-pin bayonet base. Medium cap.	6 1/4	1 5/8	2.5	9	15	−40 to +80	3,500	3,500	30	2.5	250	−5 @ 1,000 −9 @ 3,500
7726	Same as GL-7725 except spade lugs for panel mounting.	6 1/4	1 5/8	2.5	9	15	−40 to +80	3,400	3,500	30	2.5	250	−5 @ 1,000 −9 @ 3,500

Miniature types are in bold face.

* Temperature rating expressed in ambient temperature range over which the tube will operate.

© United Technical Publications

Ignitrons

GENERAL ELECTRIC



Ignitrons are gas-discharge tubes employing a mercury pool as the cathode. The mercury pool cathode provides extremely high emission capability. Initiation of conduction in the ignitron is accomplished by means of a starting electrode called the ignitor. The ignitor is a small rod of highly refractory material which dips into the mercury pool. The passage of ignition current through the ignitor causes a cathode spot to form at the junction of the ignitor and mercury pool. Ionization from the cathode spot spreads throughout the volume of the ignitron and when the anode is positive electrons flow to it. By control of the point in the A-C cycle at which the ignitor is fired the duration of current flow through the ignitron is controlled. The ignitron, therefore, is ideally suited for high current rectification and control service. The following charts present summarized rating information for General Electric ignitrons. All ratings are based on 25-60 CPS operation. For convenience to the user the ignitron types are grouped by typical application service. Many types are rated for more than one service and therefore appear in two or more rating charts. More detailed ratings are available upon request for all of the G.E. ignitrons listed.

The ignitron has long been recognized as a long life, highly reliable device. As the industry's leading ignitron manufacturer General Electric is pleased to present the information contained in this booklet and invites your inquiry for additional application assistance if required.





IGNITRONS — RESISTANCE WELDING CONTROL SERVICE

TYPE	SIZE	MECHANICAL DATA			MAXIMUM ELECTRICAL RATINGS*				
		Maximum Dimensions - Inches							
		Rigid Length	Diameter	Mounting	Supply Volts RMS	Maximum Demand KVA	Corresponding Average Anode Current Amperes	Maximum Average Anode Current Amperes	Corresponding Demand KVA
GL-5550	A	9 1/16	2 7/64	Clamp	250-600	300	12.1	22.4	100
GL-5551A/GL-5551A-PC	B	13	2 3/4	Conventional	250-600	600	30.2	56	200
GL-5552A/GL-5552A-PC	C	14	4 1/4	Conventional	250-600	1200	75.6	140	400
GL-5553B/GL-5553B-PC	D	19 1/2	5 5/8	Conventional	250-600	2400	192	355	800
GL-5554 (2)	—	17	4 1/8	Conventional	2400	1200	75	113	600
GL-5555 (2)	—	17 15/16	5 3/4	Conventional	2400	2400	135	207	1105
GL-5564 (2)	—	27 1/16	9 1/8	Special	2400	4800	270	414	2210
GL-6512 (2)	Integral Thermostat Version of GL-5554. Same Ratings Apply.								
GL-6513 (2)	Integral Thermostat Version of GL-5555. Same Ratings Apply.								
GL-6515 (2)	Integral Thermostat Version of GL-5564. Same Ratings Apply.								
GL-7151	E	23 1/4	9 1/8	Special	250-600	4800 (1)	486	900	1600
GL-7669/GL-7669-PC	B	9 7/8	2 3/4	Coaxial	250-600	600	30.2	56	200
GL-7671/GL-7671-PC	C	11 7/8	4 1/4	Coaxial	250-600	1200	75.6	140	400
GL-7673/GL-7673-PC	D	19 1/2	5 5/8	Coaxial	250-600	2400	192	355	800
GL-7681/GL-7681-PC	Jumbo C	17 1/2	4 1/4	Conventional	250-600	1800	135	220	600
GL-7998/GL-7998-PC	Jumbo C	14 1/4	4	Coaxial	250-600	1800	135	220	600
GL-8205	E	23	9 1/8	Coaxial	250-600	4800 (1)	486	900	1600
GL-37250/GL-37250-PC	B-2000	13	2 3/4	Conventional	250-600	1000	43.2	75	200
GL-37251/GL-37251-PC	B-2000	13	2 3/4	Coaxial	250-600	1000	43.2	75	200
GL-37252/GL-37252-PC	C-4000	14 1/4	4 1/4	Conventional	250-600	2000	108	150	380
GL-37253/GL-37253-PC	C-4000	14 1/4	4 5/8	Coaxial	250-600	2000	108	150	380
GL-37254/GL-37254-PC	D-6000	19 1/2	5 5/8	Conventional	250-600	3000	224	400	1000
GL-37255/GL-37255-PC	D-6000	19 1/2	5 5/8	Coaxial	250-600	3000	224	400	1000

Warranty for all types listed above is H-12 except for those marked (2), see footnote below.
PC Indicates plastic coated version.
* All ratings based on use of liquid cooling.

(1) Maximum demand current below 500 volts should not exceed 9600 amperes RMS.
(2) Have H-24 warranty.

IGNITRONS — FREQUENCY-CHANGER WELDING CONTROL SERVICE

TYPE	SIZE	MECHANICAL DATA			MAXIMUM ELECTRICAL RATINGS*				
		Maximum Dimensions - Inches							
		Rigid Length	Diameter	Mounting	Peak Inverse Voltage Volts	Maximum Peak Anode Current Amperes	Corresponding Average Anode Current Amperes	Maximum Average Anode Current Amperes	Corresponding Peak Anode Current Amperes
GL-5551A GL-5551A-PC	B	13	2 3/4	Conventional	1200 1500	600 480	5 4	22.5 18	135 108
GL-5553B GL-5553B-PC	D	19 1/2	5 5/8	Conventional	1200 1500	3000 2400	40 32	140 112	840 672
GL-5822A GL-5822A-PC	C	14 1/4	4 1/4	Conventional	1200 1500	1500 1200	20 16	70 56	420 336
GL-7669 GL-7669-PC	B	9 7/8	3 1/4	Coaxial	1200 1500	600 480	5 4	22.5 18	135 108
GL-7672 GL-7672-PC	C	11 7/8	4 5/8	Coaxial	1200 1500	1500 1200	20 16	70 56	420 336
GL-7673 GL-7673-PC	D	19 1/2	5 5/8	Coaxial	1200 1500	3000 2400	40 32	140 112	840 672
GL-7681 GL-7681-PC	Jumbo C	17 1/2	4 1/4	Conventional	1200 1500	2250 1800	30 24	105 84	630 502
GL-7998 GL-7998-PC	Jumbo C	16	4	Coaxial	1200 1500	2250 1800	30 24	105 84	630 502

Warranty for all types listed above is H-12. PC Indicates plastic coated version. * All ratings based on use of liquid cooling.

© United Technical Publications

Ignitrons

GENERAL ELECTRIC

IGNITRONS — PULSE WELDING CONTROL SERVICE

TYPE	SIZE	MECHANICAL DATA			MAXIMUM ELECTRICAL RATINGS*						
		Maximum Dimensions - Inches									
		Rigid Length	Diameter	Mounting	Peak Inverse Voltage Volts	Initial Peak Inverse Voltage Volts	Peak Anode Current Amperes	Average Anode Current Amperes	Averaging Time Seconds	Anode Current Repetition Rate - Pulses Per Second	Anode Current Pulse Width Microseconds
GL-7670	B	9⅞	2¾	Coaxial	2500	1250	2000	10	2	60	1000
GL-7673	C	19½	5⅝	Coaxial	2500	1250	4000	20	2	60	1200
GL-8360	B	9⅞	2¾	Coaxial	2500	1250	2000	10	2	60	1000

Warranty for all types listed above is H-12.

* All ratings based on use of liquid cooling.

IGNITRONS — POWER RECTIFIER SERVICE

TYPE	DESCRIPTION	MECHANICAL DATA			MAXIMUM ELECTRICAL RATINGS*				Warranty
		Max. Dimensions Inches			Peak Anode Voltage Volts		Anode Current Amperes		
		Rigid Length	Diameter	Mounting	Forward	Inverse	Peak	Average	
GL-5554	For continuous-duty power rectifier service at 100 amperes at 900 volts peak forward and inverse. Has auxiliary anode and two ignitors.	17	4⅛	Conventional	900 2,100	900 2,100	900 600	100 75	H-24, G-12
GL-5555	For continuous-duty power rectifier service at 200 amperes at 900 volts peak forward and inverse. Has auxiliary anode and two ignitors.	17⅜	5¾	Conventional	900 2,100	900 2,100	1,800 1,200	200 150	H-24, G-12
GL-5564	For continuous-duty power rectifier service at 400 amperes at 900 volts peak forward and inverse. Has auxiliary anode and two ignitors.	27¹¹⁄₁₆	9⅛	Special	750	750	3,600	400	H-24, G-12
GL-5630	For high voltage power-rectifier and inverter service. Also used as capacitor discharge or DC short-circuiting switch.	22⅜	5¾	Conventional	20,000	20,000	200	50	G-12
GL-5779	Small glass air-cooled type for demonstrating the operating principles of ignitors and ignitrons.	8¼	2½	Conventional	350	350	30	10	G-12
GL-5788	Similar to GL-5555. Features reliable operation at higher water temperatures and phase-retard operation; has larger diameter ignitor terminals.	19¼	5¾	Conventional	2,100	2,100	1,200	150	H-24, G-12
GL-6228	For high voltage power-rectifier and inverter service. Also used in capacitor discharge and DC short-circuiting switch service.	42	9	Special	20,000	20,000	900	150	H-36, G-12
GL-6504	Double-grid type with three ignitors for locomotive rectifier service. Twelve tubes will supply DC power for 4000 HP locomotive.	30¼	9	Coaxial	4,000	4,000	2,000	350	G-12
GL-6509	Similar to GL-5555. For auxiliary power in rectifier locomotives. Has three ignitors.	7⅜	5¾	Conventional	900 2,100	900 2,100	1,800 1,200	200 150	G-12
GL-6512	Integral thermostat version of GL-5554. Same ratings apply.								H-24, G-12
GL-6513	Integral thermostat version of GL-5555. Same ratings apply.								H-24, G-12
GL-6514	Integral thermostat version of GL-5788. Same ratings apply.								H-24, G-12
GL-6515	Integral thermostat version of GL-5564. Same ratings apply.								H-24, G-12
GL-6878	Double-grid type for locomotive rectifier service. Features coaxial cathode connection to reduce magnetic field effects.	30¼	13⅛	Coaxial	100	4,000	2,500	675	G-12
GL-6958	Double-grid type for industrial power rectifier and inverter service. Especially suited for phase retard operation. Features coaxial cathode connection to reduce magnetic field effects.	29⅞	9	Special	4,000	4,000	2,000	275	G-12
GL-7042	Integral thermostat version of GL-6958. Same ratings apply.								G-12
GL-7736	Similar to GL-5564. Features reliable operation at high voltage and with phase-retard operation.	27⅞	9⅛	Special	900 2,100	900 2,100	3,600 2,400	400 300	G-12
GL-8420	Forced-air-cooled type for locomotive electronic contactor service. Features coaxial cathode connection to reduce magnetic field effects; integral thermostat control.	22¹³⁄₁₆	10¹¹⁄₁₆	Coaxial	1,000	1,000	2,500	200	G-12
GL-8465	For motor control service. Has auxiliary anode and two ignitors.	17⅜	5¾	Conventional	900 2,100	900 2,100	1,800 1,200	200 150	H-24, G-12
GL-8466	Integral thermostat version of GL-8465. Same ratings apply.								H-24, G-12
GL-35438	Double-grid motor control ignitron. Features cathode connection to reduce magnetic field effects.	30¼	13⅛	Special	4,000	4,000	2,500	675	G-12

* All ratings are based on use of liquid cooling except GL-5779 and GL-8420 whose ratings are based on use of forced air cooling.

© United Technical Publications

Ignitrons

GENERAL ELECTRIC

IGNITRONS — CAPACITOR DISCHARGE SERVICE

TYPE	MECHANICAL DATA			MAXIMUM ELECTRICAL RATINGS					Cooling
	Maximum Dimensions - Inches		Mounting	Peak Anode Voltage Volts		Peak Anode Current Amperes	Typical Discharge Rate Pulses Per Minute	Ionization Time-Micro-seconds	
	Rigid Length	Diameter		Forward	Inverse				
GL-5630	22 3/16	5 3/4	Conventional	35,000	35,000	20,000	2	0.8	Liquid
GL-6228	42	9	Special	50,000	50,000	30,000	2	0.8	Liquid
GL-7171	8 3/4	2 5/32	Clamp	15,000	15,000	35,000	2	0.5	Air
GL-7703	7 5/8	2 1/4	Clamp	20,000	20,000	100,000	2	0.5	Liquid or Air
GL-37207	20	5 3/4	Conventional	25,000	25,000	300,000	500	0.5	Liquid
GL-37228	7 5/8	2 1/4	Clamp	20,000	20,000	100,000	2	0.5	Liquid or Air
GL-37248	7 5/8	2 1/4	Clamp	50,000	50,000	25,000	2	0.7	Liquid or Air
GL-37267A	10 1/4	6 1/2	Coaxial	20,000	20,000	300,000	500	0.7	Liquid

For above types, warranty is normally K-1000, however warranty information for specific applications will be supplied upon request.

IGNITRON ACCESSORIES

THERMOSTAT KITS

Kit includes thermostat and spring-loaded fastener in a captive assembly for connection to mounting pad located on ignitron water jacket.

Single-pole contacts perform control functions as shown in chart below.

Kit No.	Function	Contacts	Temperature Open (°F)	Temperature Close (°F)	Termination
N15272AA	Water control	NO	86	96	36-inch leads with spade terminals
N15273AA	Over-temperature protection	NC	125	105	36-inch leads with spade terminals
N15286AA	Water control	NO	86	96	Terminal block
N15287AA	Over-temperature protection	NC	125	105	Terminal block

COOLING CLAMP

Suitable for use with GL-5550, GL-7171 and GL-7703 to accomplish cathode connection and liquid cooling: Cat. No. L 6922259-G5

IGNITOR TERMINAL CONNECTING LEADS

Insulated leads for connection to 0.250-inch diameter ignitor terminals

Cat. No. N 22006LC — 7¾ inches long
Cat. No. N 22007LC — 13½ inches long

QUICK-CHANGE WATER CONNECTORS

Ignitron installation time is reduced through the use of slotted anode and cathode terminals . . . provided as a regular feature on all standard G-E welding ignitrons . . . and the use of the quick-change brass water hose connectors shown in table.

Fitting No.	Description	Use with G-E Ignitron Type
B1HK	Socket	GL-5551-A, GL-5552-A, GL-5822-A, GL-7669, GL-7670, GL-7671, GL-7672, GL-7681, GL-7998, GL-8360, GL-37250, GL-37251, GL-37252, GL-37253
B1K11	Plug	
B2HK	Socket	GL-5553-B, GL-5554, GL-5555, GL-6512, GL-6513, GL-7673, GL-37254, GL-37255
B2K16	Plug	

CONDENSED WARRANTY INFORMATION

G-12—
(Rectifier service only.) Warranted for full replacement within one year of service. Expires 18 months from date of sale to ultimate user or two years from date of shipment by G.E.

H-12—
Warranted for one year with prorated adjustment after 15 days of service. Expires 18 months from date of sale to ultimate user, 12 months from date of initial installation, or 2 years from date of shipment by G.E.

H-24—
Warranted for two years with prorated adjustment after 15 days of service. Expires 36 months from date of sale to ultimate user, 24 months from date of initial installation, or 3½ years from date of shipment by G.E.

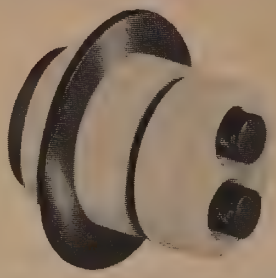
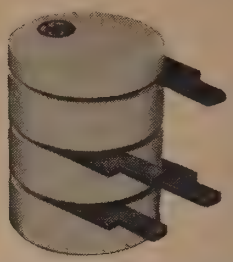
K-1000—
Warranted for 1000 operations or six months of service with prorated adjustment for the difference between elapsed number of operations and 1000. Expires nine months from date of sale to ultimate user, six months from date of initial installation, or twelve months from date of shipment by G.E.

© United Technical Publications

PLANAR TUBES — CERAMIC • GLASS LIGHTHOUSE

GENERAL ELECTRIC




GENERAL, MAXIMUM RATINGS

CHARTERISTIC AND TYPICAL OPERATION

TYPE	GENERAL DESCRIPTION	Outline Dwg.	Heater Volts	Heater Amps	Max. Plate Volts And Watts	Max. Grid Current ma	Max. Freq. MC (8)		Plate Volts	Neg. Grid Volts	Plate Milliamperes	Grid Milliamperes	μ	Rp, Ohms	Gm, μMhos	Gain in db	R.F. Power Output	Freq. MC
2B22	Metal-glass diode — "lighthouse" type, intended for detector service.	A	6.3	0.75	300 (1)	—	1,500	Signal detector	Tube voltage drop: 6.0 volts at I_b=20 milliamperes. Maximum DC cathode current=20 milliamperes; maximum peak cathode current=700 milliamperes									
2C39-A	Metal-ceramic triode — intended for UHF power amplifier, oscillator, or frequency multiplier service.	B	6.3	1.03	1,000 100 (3)	50	2,500	Avg. char. Class C Oscillator Class C Oscillator	600 900 800	(7) −22 −20	70 90 80	— 27 32	100 — —	— — —	2,500 — —	— — —	— 27W 12W	— 500 2,500
2C39-B	Metal-ceramic triode — intended for UHF power amplifier, oscillator, or frequency multiplier service.	B	6.3 (2)	1.03	1,000 100 (3)	50	2,500	Avg. char. Class-C oscillator Class-C oscillator	600 900 900	(4) 22 40	75 90 90	— 27 30	95 — —	— — —	24,800 — —	— — —	— 17W 40W	— 2,500 500
2C39-WA	Military version of 3C39B when subject to considerable vibration and shock. Interchangeable with 2C39B.	Same as 2C39B																
2C40	Metal-glass triode — "lighthouse" type, intended for UHF oscillator or amplifier service.	C	6.3	0.75	500 6.5	8.0	3,370	Avg. char. Radio-frequency oscillator	250 250	R_k=200 5.0	17 20	— 0.5	36 —	— —	4,850 —	— —	— 75MW	— 3,370
2C40-A	Metal-glass triode — "lighthouse" type, intended for UHF oscillator service, either CW or pulse.	C	6.3	0.75	500 6.5 1,400 (5) 4.0 (6)	8.0 1,000 (6)	3,370	Avg. char. Radio-frequency oscillator Plate-pulsed oscillator D.F.=.001	250 250 1,400	R_k=200 5.0 —	17 20 1,000	— 0.5 —	35 — —	— — —	5,100 — —	— — —	— 75MW 300W	— 3,370 3,000
2C42	Lighthouse triode. For use as plate-pulsed oscillator up to 1300 mc.	D	6.3	0.9	3,000 25			C-T Oscillator At 3370 mc.	250	−5	20	—	36	—	4,850	—	—	—
2C43	Metal-glass triode — "lighthouse" type, intended for UHF CW	D	6.3	0.9	500 12 3,500 (5)	—	1,500 3,370 (6)	Avg. char. Push-pull radio-frequency oscillator — values for two tubes Plate-pulsed oscillator D.F.=.001	250 470 3,000	R_k=100 R_g=1,000 R_g=100	21 38 2,500	— — —	50 — —	— — —	8,100 — —	— — —	— 9.0W 1.7KW	— 350 3,370
2C46	Lighthouse triode. For use in cavity as stable oscillator between 1,000 and 1,200 mc.	D	6.3	0.75	500 12			C-T UHF Oscillator	150	—	8	—	60	—	3,500	—	—	—
3CX100A5	Metal-ceramic triode — intended for UHF oscillator or amplifier service, either CW or pulse.	E	6.0 (2)	1.0	1,000 100 (3)	50	2,500 3,000 (6)	Avg. char. Class-C amplifier Plate-pulsed oscillator D.F.=.0025	600 900 3,500	(7) 40 —	70 90 3,000	— 30 1,800	100 — —	— — —	25,000 — —	— — —	— 40W 1.6W	— 500 3,000
6299	Metal-ceramic triode — intended for low-noise UHF amplifier service.	F	6.3	0.3	200 2.0	0	3,000	Avg. char. Class-A radio-frequency amplifier — grounded-grid	175 (10) (10)	(9) 0 0	10 10 10	— — —	110 115 —	7,300 9600 —	15,000 — —	— 17.5 11	— — —	— 450 3,000
6442	Metal-ceramic triode — intended for UHF oscillator or amplifier service, either CW or pulse.	G	6.3 (2)	0.9	350 8.0 (3) 3,000 (5) 7.5 (6)	15 1,250 (6)	2,500 5,000 (6)	Avg. char. Class-C amplifier Plate-pulsed oscillator — D.F.=.001	350 250 3,000	4.25 — 75	35 23 2,500	— 6.0 1,250	50 — —	— — —	16,500 — —	— — —	— 2.8W 0.5KW	— 1,000 5,000
6771	Metal-ceramic triode — intended for UHF oscillator or amplifier service, either CW or pulse.	G	6.3 (2)	0.575	300 6.25 (3) 1,750 (5)	8.0 700 (6)	4,000 5,000 (6)	Avg. char. Radio-frequency oscillator	250 275	1.6 —	25 25	— —	90 —	— —	23,000 —	— —	— 300MW	— 4,000
6897	Metal-ceramic triode — intended for UHF CW oscillator or amplifier service.	B	6.3 (2)	1.03	1,000 100 (3)	50	2,500	Avg. char. Class-C oscillator	600 900 500	(4) 22 40	75 90 90	— 27 30	90 — —	— — —	24,800 — —	— — —	— 17W 40W	— 2,500 500
7077	Metal-ceramic triode — intended for low-noise UHF amplifier service.	H	6.3	0.24	250 1.1	—	3,000	Avg. char. Grounded-grid amplifier	250 (11) 250 (11)	R_k=82 R_k=82	6.5 6.5	— —	90 —	9,000 —	10,000 —	— 14.5	— —	— 450
7266	Metal-ceramic diode — intended for instrument-probe service.	I	6.3	0.215	600 (1)	—	3,000	Instrument detector	Tube voltage drop: 1.0 volts at I_b=1.0 milliamperes. Maximum DC cathode current=2.2 milliamperes; maximum peak cathode current=11 milliamperes									
7289	Metal-ceramic triode — intended for UHF oscillator or amplifier service, either CW or pulse.	E	6.0 (2)	1.0	1,000 100 (3) 3,500 (5) 27 (6)	50 1,800 (6)	2,500 3,000 (6)	Avg. char. Class-C amplifier Plate-pulsed oscillator — D.F.=.0025	600 900 3,500	(7) 40 —	70 90 3,000	— 30 1,800	100 — —	— — —	25,000 — —	— — —	— 40W 1.6KW	— 500 3,000
7296	Metal-ceramic triode — intended for VHF oscillator or amplifier service.	J	6.3	0.4	330 5.5	10	500	Avg. char.	200	R_k=68	17	—	90	5,450	16,500	—	—	—
7391	Metal-ceramic triode — intended for UHF oscillator service.	F	6.3	0.38	200 2.25	3.0	6,000	Avg. char. Class-C oscillator	175 150 150	1.5 — —	10 12 12	— 3.0 3.0	62 — —	— — —	11,000 — —	— — —	— 65MW 500MW	— 5,400 500
7462	Metal-ceramic triode — intended for low-noise VHF amplifier service.	K	6.3	0.24	250 1.1	—	500	Avg. char.	150	(12)	7.2	—	94	10,500		—	—	—
7486	Metal-ceramic triode — intended for UHF oscillator or amplifier service.	H	6.3	0.24	250 1.0	2.2	3,000	Avg. char. UHF oscillator service Class-C amplifier	150 150 150	R_k=82 R_g=1,000 R_g=3,000	7.5 8.0 5.0	— 2.0 1.0	90 — —	— — —	10,500 — —	— — —	— 300MW 300MW	— 1,200 450
7588	Metal-ceramic triode — intended for VHF amplifier service.	J	6.3	0.4	300 5.5	—	500	Avg. char.	200	(13)	24	—	175	3,900	45,000	—	—	—

© United Technical Publications

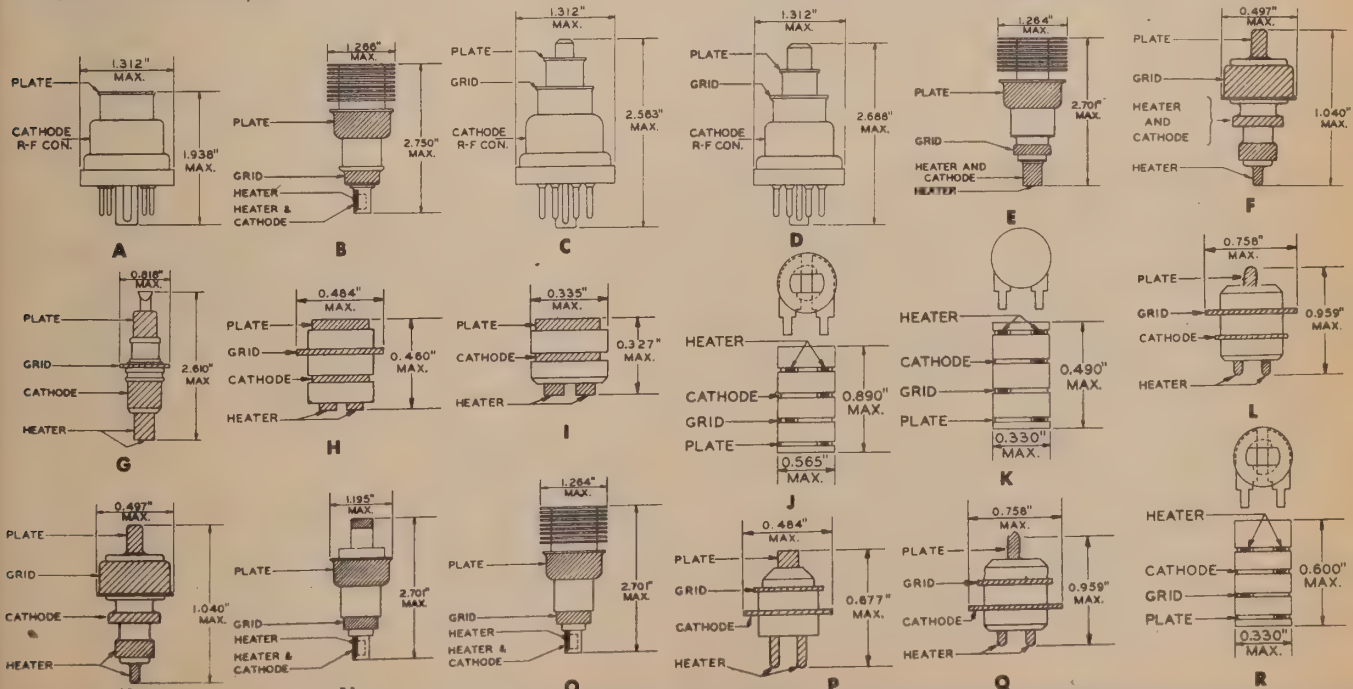
PLANAR TUBES — CERAMIC • GLASS LIGHTHOUSE

GENERAL ELECTRIC

TYPE	GENERAL DESCRIPTION	Outline Dwg.	Heater Volts	Heater Amps	Max. Plate Volts And Watts	Max. Grid Current ma	Max. Freq. MC (8)		Plate Volts	Neg. Grid Volts	Plate Milliamperes	Grid Milliamperes	μ	Rp, Ohms	Gm, μMhos	Gain in db	R.F. Power Output	Freq. MC
			GENERAL, MAXIMUM RATINGS						**CHARTERISTIC AND TYPICAL OPERATION**									
7625	Metal-ceramic triode—intended for low-level audio-frequency amplifier service.	K	6.3	0.215	275 0.85	—	—	Avg. char.	150	Rk=1,000	0.95	—	80	57,000	1,400	—	—	—
7644	Metal-ceramic triode—intended for low-noise UHF amplifier service.	F	6.3	0.3	200 2.0	—	3,000	Avg. char. Class-A radio-frequency amplifier—grounded-grid	175 300 (14) 300 (14)	(9) 0 0	10 10 10	— — —	110 — —	7,300 — —	15,000 — —	— 11 17.5	— — —	— 3,000 450
7720	Metal-ceramic triode—intended for VHF oscillator service.	K	6.3	0.24	250 1.0	2.2	500	Avg. char. Class-C oscillator	150 150	Rk=82 Rg=7,000	7.5 4.0	— 0.5	90 —	— —	10,500 —	— —	— 100MW	— 450
7768	Metal-ceramic triode—intended for UHF amplifier service.	L	6.3	0.4	330 5.5	—	3,000	Avg. char.	200	(13)	24	—	225	4,500	50,000	—	—	—
7784	Metal-ceramic triode—intended for low-noise UHF amplifier service.	M	6.3	0.3	200 2.0	—	3,000	Avg. char. Class-A radio-frequency amplifier—grounded-grid	175 (10) (10)	(9) 0 0	10 10 10	— — —	110 — —	7,300 — —	15,000 — —	— 17.5 11	— — —	— 450 3000
7815	Metal-ceramic triode—intended for UHF pulsed oscillator or amplifier service.	N	6.0 (2)		3,500	5.0	3,000	Plate-pulsed oscillator — D.F.=.003	3,500	—	3,000	3.0	—	—	—	—	2KW	2,500
7815R	Metal-ceramic triode—intended for UHF pulsed oscillator or amplifier service.	O	6.0 (2)	1.0	3,500 (5) 10 (6, 15)	5.0	3,000	Plate-pulsed oscillator — D.F.=.003	3,500	—	3,000	3.0	—	—	—	—	2KW	2,500
7841	Metal-ceramic diode — intended for detector service.	I	6.3	0.215	350 (1)	—	3,000	Signal detector	Tube voltage drop: 2.6 volts at Ib=5.0 milliamperes. Maximum DC current=55 milliamperes; maximum peak current=22 milliamperes									
7910	Metal-ceramic triode—intended for UHF plated-pulsed oscillator or amplifier service.	P	6.3	0.275	1,200 (5) 1.5 (6)	200 (6)	7,500	Avg. char. Plate-pulsed oscillator — D.F.=.001	125 1,000	Rk=82 —	11.5 600	— 200	75 —	— —	16,000 —	— —	— 100W	— 5,900
7911	Metal-ceramic triode—intended for UHF plate-pulsed oscillator or amplifier service.	Q	6.3	0.55	3,000 (5) 6.5 (6)	1,000 (6)	6,000	Avg. char. Plate-pulsed oscillator — D.F.=.001	200 3,000	Rk=100 —	23 2,500	— 300	58 —	2,300 —	25,000 —	— —	— 2.2KW	— 4,100
7913	Metal-ceramic triode—intended for UHF oscillator or amplifier service.	L	6.3	0.4	330 5.5	10	3,000	Avg. char. Class-C oscillator	200 300	Rk=47 Rg=1,500	25 25	— 5.0	100 —	2,500 —	40,000 —	— —	— 4.0W	— 400
8081	Metal-ceramic triode—intended for low-level audio-frequency amplifier service.	R	6.3	0.215	275 0.85	—	—	Avg. char.	150	Rk=1,000	0.95	—	80	57,000	1,400	—	—	—
8082	Metal-ceramic triode—intended for UHF oscillator service.	R	6.3	0.24	250 1.0	2.2	500	Avg. char. UHF oscillator	150 150	Rk=82 Rg=7,000	7.5 4.0	— 0.5	90 —	— —	10,500 —	— —	100MW	450
8083	Metal-ceramic triode—intended for low-noise VHF amplifier service.	R	6.3	0.24	250 1.1	—	500	Avg. char.	150	(12)	7.2	—	94	9,000	10,500	—	—	—

NOTES

(1) Peak inverse voltage.
(2) This is the bogey value at which average characteristics are determined. For some classes of operation a lower value may be recommended.
(3) These are the highest values listed for any class of CW operation; lower values may be indicated for some classes of CW operation. Refer to complete data sheets for this information.
(4) Adjusted for Ib=75 milliamperes.
(5) Peak voltage rating for pulse service.
(6) Pulse service.
(7) Adjusted for Ib=70 milliamperes.
(8) The frequency listed is one at which significant application data are available or expected, and does not necessarily represent an absolute frequency limit.
(9) Adjusted for Ib=10 milliamperes.
(10) Adjusted for Ib=10 milliamperes; range must be variable from 75 to 200 volts.
(11) Bypassed resistor (18k) in plate-supply lead.
(12) With Rk=910 and Eg=+6.0 volts.
(13) With Rk=270 and Eg=+6.0 volts.
(14) Bypassed resistor (17.5k) in plate-supply lead.
(15) Plate dissipation of 100 watts is permissible with forced-air cooling.



© United Technical Publications

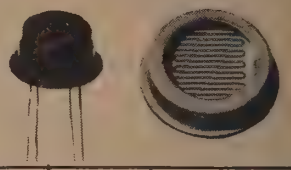
Special Devices — Photo Conductive Cells

GENERAL ELECTRIC



Reliable, hermetically sealed, or plastic encapsulated, cadmium sulfide and cadmium selenide photoconductive cells are available in a wide assortment of package sizes and electrical characteristics.

Photocell-lamp combinations consist of a photoconductive cell and an illumination source enclosed in a light tight, metal package available in an assortment of electrical characteristics.



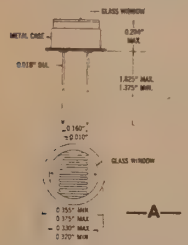
TYPE	Outline Drawing	Enclosures	Sensitive Material	Peak Spectral Response	MAXIMUM RATINGS			Resistance at 2 Footcandles — Ohms	Resistance at 20 Footcandles — Ohms	Dark Current (Maximum)	RESPONSE TIME	
					Ambient Temperature	Power Dissipation	Voltage				Turn-on Time[1] Sec.	Turn-off Time[2] Sec.
A33	A	Metal-Glass	CdS	5500A	−40 to +65C	75 MW[3]	30	6,300	1,070	100μA[4]	0.88	0.21
A33P1	B	Plastic	CdS	5500A	−40 to +65C	50 MW[10]	30	6,300	1,070	100μA[4]	0.88	0.21
A35	A	Metal-Glass	CdS	5500A	−40 to +65C	75 MW[3]	50	12,000	2,900	100μA[4]	1.0	0.28
A36M1	A	Metal-Glass	CdS	5500A	−40 to +65C	75 MW[3]	60	30,000	3,800	60μA[4]	0.089	0.005
B46	C	Metal-Glass	CdS	6100A	−40 to +80C	250 MW[5]	60	1,250	260	80μA[6]	0.75	0.57
B425	C	Metal-Glass	CdS	6100A	−40 to +65C	250 MW[3] 500 MW[7]	250	9,100	1,400	80μA[4]	0.56	0.09
B425P1	D	Plastic	CdS	6100A	−40 to +65C	200 MW[3]	250	9,100	1,400	80μA[4]	0.56	0.09
C425P1	D	Plastic	CdSe	7300A	−40 to +65C	50 MW[10]	250	15,000	1,800	50μA[4]	0.016	0.021
B430	C	Metal-Glass	CdS	6100A	−40 to +65C	250 MW[3] 500 MW[7]	300	15,000	2,500	100μA[4]	0.32	0.08
B1035M1	F	Metal-Glass	CdS	6100A	−40 to +65C	600 MW[3] 1.0 W[8]	350	12,000	1,570	400μA[9]	0.23	0.1
B1035M2	F	Metal-Glass	CdS	6100A	−40 to +65C	600 MW[3] 1.0 W[8]	350	5,500	970	400μA[9]	0.23	0.1
B1035M3	F	Metal-Glass	CdS	6100A	−40 to +65C	600 MW[3] 1.0 W[8]	350	2,750	580	1500μA[9]	0.23	0.1
B1035P1	G	Plastic	CdS	6100A	−40 to +65C	600 MW[3] 1.0 W[8]	350	21,500	1,570	40μA[9]	0.23	0.1
B1035P2	G	Plastic	CdS	6100A	−40 to +65C	600 MW[3] 1.0 W[8]	350	1,000	970	40μA[9]	0.23	0.1

NOTES

(1) The time required for current through the cell to reach 90% of its steady value upon switching from darkness to a light level of 5 footcandles.
(2) The time required for current through the cell to decrease to 10% of its steady value upon switching from a light level of 5 footcandles to darkness.
(3) This dissipation is allowable at ambient temperatures from −40 to +40C. From +40 to +65C, the allowable dissipation decreases linearly, reaching zero at +65C.
(4) Measures approximately 30 seconds after removal of illumination of two footcandles produces by a tungsten-filament source operated at a color temperature of 2854 Kelvin and at rated cell voltage.
(5) This dissipation is allowable at ambient temperatures from −40 to +40C. From +40 to +80C, the allowable dissipation decreases linearly, reaching 37 milliwatts at +80C, and going to zero above +80C.
(6) Measured approximately 20 seconds after removal of illumination of two footcandles produced by a tungsten-filament source operated at a color temperature of 2854 Kelvin; d-c polarizing voltage 12 volts.
(7) Allowable dissipation may reach 500 milliwatts with external heat-conducting bracket.
(8) For a maximum of 20 minutes at 12-hour intervals.
(9) Measured approximately 30 seconds after removal of illumination of one footcandle produced by a tungsten-filiment source operated at a color temperature of 2854 Kelvin; d-c polarizing voltage 50 volts.
(10) This dissipation is allowable at ambient temperatures from −40 to +30C. From +30 to +65C, the allowable dissipation decreases linearly, reaching zero at +65C.

OUTLINE DRAWINGS

A33 - A35 - A36M1



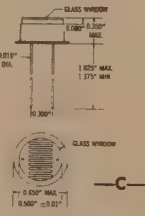
—A—

A33P1



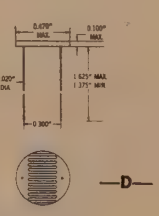
—B—

B46 - B425 - B430



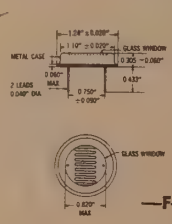
—C—

B425P1 - C425P1



—D—

B1035M1 - M2 - M3



—F—

B1035P1 - P2



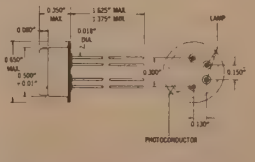
—G—

Photoconductive Cell — Lamp Combinations

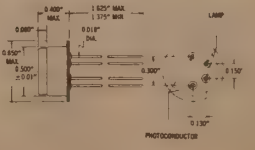
TYPE	Outline Drawing	Sensitive Material	MAXIMUM RATINGS PHOTOCONDUCTIVE CELL Ambient Temperature	Power Dissipation	Voltage	LAMP Voltage	Current[1]	Cell Resistance At 20% Of Maximum Lamp Voltage — Ohms	Cell Resistance At 90% Of Maximum Lamp Voltage — Ohms	Dark Current (Maximum)
PL5B1	A	CdS	−40 to +65C	100 MW[2]	250	5.0	60 MA	40,000	260	80μA[4]
PL5C1	A	CdSe	−40 to +65C	100 MW[2]	200	5.0	60 MA	20,000	260	15μA[6]
PL5B2	A	CdS	−40 to +65C	100 MW[2]	60	5.0	60 MA	3,400	60	400μA[3]
Y-1248*	A	CdS	−40 to +65C	100 MW[2]	60	28	40 MA	2,000	30	100μA[3]
Y-1260*	A	CdS	−40 to +65C	100 MW[2]	250	28	40 MA	5,000	130	80μA[4]

NOTES

(1) Current of a bogey lamp at rated voltage.
(2) This dissipation is allowable at ambient temperatures from −40 to +30C. From +30 to +65C, the allowable dissipation decreases linearly, reaching zero at +65 C.
(3) Measured approximately 5 minutes after removal of illumination; d-c polarizing voltage 60 volts.
(4) Measured approximately 5 minutes after removal of illumination; d-c polarizing voltage 250 volts.
(6) Measured approximately 5 minutes after removal of illumination; d-c polarizing voltage 200 volts.
* Publication of these data does not obligate the General Electric Company to manufacture a device with these characteristics.



OUTLINE DRAWINGS



© United Technical Publications

Special Devices — Reed Switches

GENERAL ELECTRIC

In a relatively short period of years, the dry reed switch has begun to play an important role in performing the switching function for a wide variety of electronic/electro-mechanical equipment. Major application, now in general use, range from telephone switchgear, appliances, and data processing units to logic circuitry for industrial controls.

The General Electric reed switch capsule consists of a pair of low reluctance, magnetically actuated, flat metal reeds, hermetically sealed in an atmosphere of dry inert gas. The reeds are of equal length and are supported as cantilevers, overlapping at the center of the glass cylinder where they are separated by a small air gap, thus forming a normally opn Single Pole, Single Throw (SPST) switch.

Type[1]	Former Designation	MAXIMUM CONTACT RATING			SENSITIVITY		Maximum Initial Contact Resistance In Milliohms	Breakdown Voltage Minimum, 60 cps rms	Life Expectancy In Millions of Cycles[2]	MAXIMUM DIMENSIONS IN INCHES			Contacts And Leads
		Resistive Load	Maximum Current	Maximum Voltage	Pull-In Ampere-Turns	Drop-Out Ampere-Turns				Glass Dia. (A)	Glass Length (B)	Overall Length (C)	
MINIATURE — INERT-GAS FILLED													
DR100	IDR04	4VA	0.25A	250	43±11[3]	18±8[3]	150	300	20[4]	0.108	0.84	2.03	[5]
DR121	Y-1292	10VA	0.25A	250	43±11[3]	28±8[3]	150	300	20[4]	0.108	0.84	2.55	[6]
DR123	Y-1513	10VA	0.25A	250	35±11[3]	15±10[3]	150	300	20[4]	0.108	0.84	2.55	[6]
DR125	Y-1454	4VA	0.25A	250	35±13[3]	18±10[3]	150	300	20[4]	0.108	0.84	2.03	[5]
DR145		10VA	0.25A	250	28±10	6 Min.	150	300	20[4]	0.108	0.84	2.55	[6]
2" — INERT-GAS FILLED													
DR101	2DR15	15VA	1.0A	250	90±15[7]	34±8[7]	50	500	20[8]	0.215	2.10	3.21	[9]
DR104	2DR15-3	15VA	1.0A	125	40±10[7]	23±7[7]	50	350	20[8]	0.215	2.10	3.21	[9]
DR113	2DR50	50VA	3.0A	250	90±15[7]	45±10[7]	50	500	20[15]	0.215	2.10	3.21	[18]
2" — VACUUM													
DRV120	2VR15	—	3.0A[16]	5000[16]	113±20[17]	52±10[17]	50	7000	—	See Drawing			
FORM C													
DR158		5VA	0.25A	250	90±20	32±15	50	350	20	See Drawing			

NOTES

(1) All switches use single-pole, single-throw, normally open, Form A contact arrangements. With the exception of type DRV120, which is a vacuum switch, all switches are filled with inert gas at an internal pressure ½ atmosphere

(2) Some degradation or improvement in performance may be expected at operating conditions other than those specified.

(3) Sensitivity measured using a 6300 turn coil of #41 wire wound on a 0.8" long bobbin approximately 0.17" in diameter.

(4) Full load, 25 volts d-c, 60 operations per second at H.V.A.

(5) Diffused gold contacts with gold-plated leads.

(6) Rhodium-plated contacts with gold-plated leads.

(7) Sensitivity measured using a 10,000 turn coil of #39 wire wound on a 2.0" long bobbin approximately 0.25" in diameter.

(8) Full load, 50 volts d-c, 60 operations per second.

(9) Diffused gold contacts with both leads tinned.

(12) Sensitivity measured using a 10,000 turn coil of #36 wire wound on a 1.750" long bobbin approximately 0.330" in diameter.

(13) Nominal center-to-center of bent leads.

(14) Diffused gold contacts with both leads tinned and bent on 90° angle.

(15) Full load, 125 volts d-c, 60 operations per second.

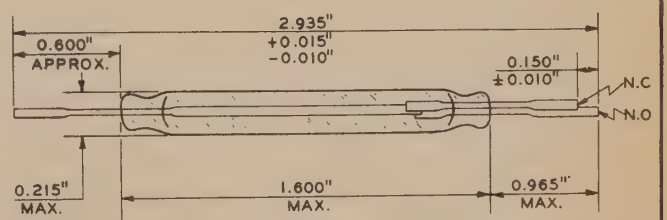
(16) The voltage rating is a "hold-off" value, and the current rating is a measure of the current the contacts will carry but not switch. Maximum permissible switching currents are to be determined.

(17) Sensitivity measured using a 5,700 turn coil of #36 wire wound on a 2.0" long bobbin having an oval cross-section of approximately 0.5" x 0.28".

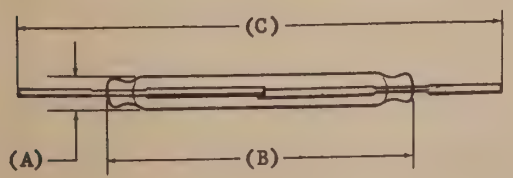
(18) Rhodium-plated contacts with both leads tinned.

OUTLINE DRAWING

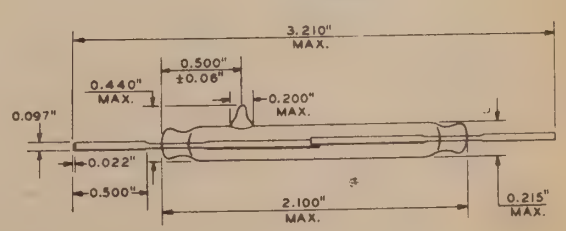
DR138



GAS-FILLED



VACUUM



© United Technical Publications

GE Interchangeability Listing

GENERAL ELECTRIC

Type To Be Replaced	GE Replacement Type
AG	83
CCa	6922/E88CC
SBS	GL-5551A
SCS	GL-5552A
SDR	GL-5555
SDS	GL-5553B
SR3	OB3
TGRA	575A
TGRB	872A/872
TGRG	5563A
TVTA	892
TVTB	833A
TVTC	889A
OAZ	OA2
WL-OAZ	OA2
OA2	OA2
WL-OA2	OA2
OA3	OA3
GL-OA3	OA3
HY-OA3	OA3
WL-OA3	OA3
OA3/VR175	OA3
RK-OA3/VR175	OA3
OA4G	OA4G
GL-OA4G	OA4G
NU-OA4G	OA4G
RK-OA4G	OA4G
OB2	OB2
GL-OB2	OB2
NU-OB2	OB2
RK-OB2	OB2
WL-OB2	OB2
TS-OB2	OB2
OB3	OB3
WL-OB3	OB3
OC3	OC3
GL-OC3	OC3
HY-OC3	OC3
NU-OC3	OC3
WL-OC3	OC3
OC3/VR105	OC3
OD3	OD3
OD3/VR150	OD3
WL-OD3	OD3
OG3	5651
CT1-2500	5559
C1J	6014/C1K
EL-C1J	6014/C1K
GL-C1J	6014/C1K
EL-C1JA	6014/C1K
C1J/K	6014/C1K
C1K	6014/C1K
C1K/6014	6014/C1K
EL-C1K	6014/C1K
GXU1	3B28
QEL1/150	4X150A
QV1/150	4X150A
QV1/150A	4X150A
TD1-100	2C39A
TQ1/2	3C23
XG1-2500	5559
XR1-3200	5544
XR1-6400	6807§
XR1-6400A	6807§
1AD4	1AD4
1D21	1D21/SN4
1D21/SN4	1D21/SN4
1F2	1L4
1G50	2050A
1L36	GL-1L36
GL-1L36	GL-1L36
1P32	927
1P40	1P40
GL-1P40	1P40
WL-1P40	1P40
1R21	GL-5550
2-100A/100R	8020
B2A	2050A
BTL2-1	5762/7C21
D2M9	6663
DQ2	866A
DX2	3B28
H2-10	2X2A
P2-12	832A
P2-40	829B
P2-40B	829B
QB2/250	813
QEL2/275	4CX250B
QQE02/5	6939
QQV02/6	6939
QV1-150A	4X150A
QY2-100	813
QY2/250	813
TQ2	5557
TX-2/3	5544
TX-2/6	6807§
V2M70	6202*
XGQ2-6400	FG-105
2B21	2X2A
2B23	GL-2B23
GL-2B23	GL-2B23
2B29	829B
2B32	832A
2B46	6146A
2B94	5894
2B/250A	807
2C4	5696A
2C38	2C39A
2C39	2C39A
GL-2C39	2C39A
ML-2C39	2C39A
WL-2C39	2C39A
2C39A	2C39A
GL-2C39A	2C39A
ML-2C39A	2C39A
SV-2C39A	2C39A
WL-2C39A	2C39A
2C39B	2C39B
GL-2C39B	2C39B
ML-2C39B	2C39B
WL-2C39B	2C39B
2C39WA	2C39WA
2C39WB	2C39WA
2C40	2C40
GL-2C40	2C40
2C40A	2C40A
GL-2C40A	2C40A
2C42	2C42
GL-2C42	2C42
2C43	2C43
GL-2C43	2C43
2C44	2C43
GL-2C44	2C43
2C46	2C46
GL-2C46	2C46
2C51	5670¶*
2C51W	5670¶*
2D	1P40
2D21	2D21
CH-2D21	2D21
GL-2D21	2D21
NU-2D21	2D21
PL-2D21	2D21
WL-2D21	2D21
2D21W	5727*
2DF4	2DF4
2E26	2E26
GL-2E26	2E26
HY-2E26	2E26
RK-2E26	2E26
WL-2E26	2E26
2G57	5557
2H21	GL-2H21
GL-2H21	GL-2H21
2H28	3B28
2H66	866A
2J42	2J42
2V/400A	866A
2XM600A	866A
2X2	2X2A
2X2/879	2X2A
2X2A	2X2A
GL-2X2A	2X2A
NU-2X2A	2X2A
RK-2X2A	2X2A
TS-2X2A	2X2A
WL-2X2A	2X2A
2Y2	2X2A
C3J	5632/C3J
C3J/5632	5632/C3J
EL-C3J	5632/C3J
QB3/300	4D21/4-125A
QB3/300GA	4D21/4-125A
QE03/10	5763
QQE03/12	6360
QQV03/10	6360
QQV03/12	5763
QV03/12	5763
QY3-125	4D21/4-125A
RG3-250A	866A
RR3-250	3B28
TD3-12	2C42
3B24W	3B24W
3B25	3B28
3B27	3B28
3B28	3B28
3B28/CR275	3B28
3B28/6277	3B28
AX-3B28	3B28
CH-3B28	3B28
UE-3B28	3B28
3C23	3C23
AX-3C23	3C23
CE-3C23	3C23
GL-3C23	3C23
NL-3C23	3C23
WL-3C23	3C23
UE-3C23	3C23
3CX100A5	7289/3CX100A5
3CX1000A7/8283	3CX1000A7/8283
3CX2500A3/8161	3CX2500A3/8161
3CX2500F3/8251	3CX2500F3/8251
3CX3000A1	3CX3000A1
3E21	829B
3E29	829B
3G501A	6807§
3H150J	2C39B
3H151J	2C39B
3SU103	3B28
3V390A	5559
BPM04	6669
CE4D	1P40
4-125A	4D21/4-125A
4-125A/4D21	4D21/4-125A
AX-4-125A	4D21/4-125A
AX-4-125A/6155	4D21/4-125A
EM-4-125A	4D21/4-125A
4-400A	4-400A
GL-4-400A	4-400A
WL-4-400A	4-400A
4-1000A	4-1000A
GL-4-1000A	4-1000A
WL-4-1000A	4-1000A
EM-4-1000A	4-1000A
DCG4-1000	866A
DCX4-1000G	3B28
DQ4	872A/872
KC-4	5575/100/616
GL-KC-4	5575/100/616
HM04	5750/6BE6W*
PM04	6660
QB4/1100GA	4-400A
QBL4-800	4X500A
QQE04/15	832A
QQE04/20	832A
QQV04/15	832A
QY4-400	4-400A
QY4-500A	4X500A
TY4-350	833A
4B13	813
4CX250B	4CX250B
4CX300A	4CX300A/8167
4CX300A/8167	4CX300A/8167
4CX1000A	4CX1000A/8168
4CX1000A/8168	4CX1000A/8168
4CX3000A	4CX3000A/8169
4CX3000A/8169	4CX3000A/8169
4CX5000A	4CX5000A/8170
4CX5000A/8170	4CX5000A/8170
4D21	4D21/4-125A
GL-4D21	4D21/4-125A
PL-4D21	4D21/4-125A
RK-4D21	4D21/4-125A
WL-4D21	4D21/4-125A
4D21/4-125A	4D21/4-125A
4G23	3C23
4G63	5563A
4G93	393A
4G/280K	5727*
4H72	872A/872
4H88	8008
4H135M	4X150A/7034
4T100	813
4T150A1	813
4T250AD	813
4X150A	4X150A/7034
GL-4X150A	4X150A/7034
WL-4X150A	4X150A/7034
4X250B	4CX250B
4X500A	4X500A
EM-4X500A	4X500A
GL-4X500A	4X500A
WL-4X500A	4X500A
4Y25	807
4Y25N	807
BT5	5559
DCG5/5000GB	872A/872
DCG5/5000GS	8008
G5A	872A/872
G5D	872A/872
PM05	5654/6AK5W*
QB4/1100	4-400A
QE05/40	6146A
QE05/40F	6883/8032A/8552
QV05-10	2E26
QV05/25	807
TD05-12	2C46
XG5-500	5557
5B/250A	807
5C21	6807§
5C21/C6J	6807§
WL-5C21	6807§
5C/100A	813
5H69A	GL-869B
5R4G	5R4GYA
5R4GY	5R4GYA
5R4GYA	5R4GYA
5R4GYB	5R4GYB
5S1	807
5T33	833A
5Y3WGTB	6087*
C6H-1	6807§
EL-C6H-1	6807§
WL-C6H-1	6807§
C6H-2	6808§
EL-C6H-2	6808§
WL-C6H-2	6808§
C6H-3	6809§
EL-C6H-3	6809§
WL-C6H-3	6809§
C6J	6807§
EL-C6J	6807§
NL-C6J	6807§
C6J/5C21	6807§
C6JA/A	6807§
C6JA/5685	6807§
C6J/F	6808§
EL-C6J/F	6808§
C6J/K	6807§
EL-C6J/K	6807§
C6J/KF	6808§
EL-C6J/KF	6808§
C6J/KL	6809§
EL-C6J/KL	6809§
C6J/KP	6808§
NL-C6J/KP	6808§
C6J/L	6809§
EL-C6J/L	6809§
DD6	6663
DD6G	6663
DQ6	GL-869B
FA-6	GL-5627
QE06/50	807
QQE06/40	5894
QQV06/40	5894
QQV06/40A	5894
QV06/20	6146A
QV06/20B	6883/8032A/8552
QV06/50	807
WT6	6L6
ZP6B	2C43
6AB4	6664
6AC7W	6134*
6AC7WA	6134*
6AC7Y	6AC7Y
6AG7Y	6AC7Y
6AH6	6485
6AH6W	6485
6AH6WA	6485
6AJ7	6134*
6AK5	5654/6AK5W*
6AK5W	5654/6AK5W*
6AK5WB	6AK5WB*
6AL5W	5726/6AL5W*
6AN5	6AN5
6AQ5	6005/6AQ5W*
6AQ5A	6005/6AQ5W*
6AQ5A/6HG5	6005/6AQ5W*
6AQ5L	6005/6AQ5W*
6AQ5W	6005/6AQ5W*
6AS6	6AS6
6AS6W	5725/6AS6W*
6AS6/409	5725/6AS6W*
6AS7G	6080
6AS7GA	6080
6AU6	7543
6AU6A	7543
6AU6W	6136*
6AU6WA	6136*
6AU6WB	6136*
6AU6WA/WB	6136*
6B32	6663
6BA6W	5749/6BA6W*
6BE6W	5750/6BE6W*
6BH6	6661
6BJ6	6662
6BJ6A	6662
6BY4	7077
6C4WA	6C4WA*
6C31	6J4
6CB6	6676
6CB6A	6676
6CB6A/6CF6	6676
6CC10	5692
6CC42	5670*
6CF8	6267
6CL6	6197
6CY5	8113*
6D2	6663
6D4	6D4
6DJ8	6DJ8/ECC88
6DJ8/ECC88	6DJ8/ECC88
6F22	6267
6F31	6660
6F33	6AS6
6F50R	4X500A
6G10	FG-105
6G45	6807
6J4	6J4
6J4WA	6J4WA
6J4WB	6J4WA
6J6L	5844*
6K4	5718
6L6A	7581A
6L6AY	7581A
6L6B	7581A
6L6G	7581A
6L6GA	7581A
6L6GB	7581A
6L6GC	7581A
6L6GT	7581A
6L6GY	7581A
6L6W	7581A
6L6WA	7581A
6L6WB	7581A
6L13	7025
6L41	5763
6R-R8C	5847/404A
6SA7Y	6SA7Y
6SG7Y	6SG7Y
6SJ7	5693
6SJ7Y	5693
6SK7	6137*
6SK7Y	6SK7Y
6SN7GT	5692ϕ†
6SN7GTA	5692ϕ†
6SN7GTB	5692ϕ†
6SS7	6137*
6U8	6678
6U8A	6678
6X4W	6202*
6X4WA	6202*
GB6X4WA	6202*
7C24	5762/7C24
ML-7C24	5762/7C24
7C29	GL-7C29
7D11	6550
7D21	GL-7D21
7F25A	4-1000A/8166
QV07-40	829B
QQV07-40	829B
7H57	GL-857B
PJ-8	GL-5556
8F66R	7007/6166A
8T92	892
MS-9S	931A
D2M9	6663
TT10	813
10E/9	832A
10E/587	807
10E/11-141	807
11E13	6360
GU12	866A
TM12	6J4
RY12-100	8020

■ Low-Microphonic † Lower Ratings ‡Higher Ratings • Balanced Sections ϕ Shorter Envelope ¶ Higher Heater Current

▲ Electrical and Mechanical replacement for other type listed. May require change in water control or oven temperature protection switches.

§ Minor dimensional and voltage differences exist which will not affect interchangeability in most circuits. * General Electric Five-Star Type

This interchangeability listing has been prepared to help you find a GE replacement for your tube requirements. It is believed to be accurate as of date issued. However, no responsibility is assumed by the General Electric Company for its use; nor for any infringements of patents or other rights of third parties which may result from its use.

© United Technical Publications

GE Interchangeability Listing

GENERAL ELECTRIC

Type To Be Replaced	GE Replacement Type
12AT7	6679
12AT7W	6201*
12AT7WA	6201*
12AT7WB	6201*
12AU7	6189/12AU7WA*
12AU7A	6189/12AU7WA*
12AU7WA	6189/12AU7WA*
12AX7	7025
12AX7A	7025
12AX7WA	12AX7WA*
12AV7	5965A*
12AY7A	6072A*
12E13	6550
12SA7Y	12SA7Y
12SG7Y	12SG7Y
13D2	5692
AR14	GL-5551A▲
AR14T	GL-5551A▲
AR14TP	GL-5551A/PC▲
AR14TWS	GL-5551A/PC▲
NL-14	5557
P-14	5557
PL-14	5557
14GT8	7724
G15F	927
C16J	5665/C16J
EL-16J	5665/C16J
NL-C16J	5665/C16J
C16J/5665	5665/C16J
GS-16SO	1P40
QQV16/40A	5894
TT16	4D21/4-125A
TT16D	4D21/4-125A
17	5557
DET-17	810
DR-17	5557
EE-17	5557
FG-17	5557
HT-17	5557
MT-17	5557
P17A	807
P17W	807
RL17	5557
TT-17	5557
WE-17	5557
WL-17	5557
18AK5	408A
TT-18	829B
CE-20	927
NU-20	927
REE-20A	829B
20A3	5727*
NU-20C	927
KD-21	OA3
PL-21	5727*
RL-21	2D21
BK-24	GL-5552A▲
BK-24A	GL-5552A▲
BK-24B	GL-5552A▲
KD-24	OC3
ARS-25	807
ARS-25A	807
ATS-25	807
CE-25A	927
CE-25B	927
CE-25A/B	927
CEB-25A/B	927
RK-25B	807
CE-25C	927
CEB-25C	927
CE-25D	927
CEB-25D	927
G25/3000	866A
KD-25	OD3
NC-25C	927
NU-25	927
25BG6G	5824
25L6GT	6046
CV26	813
BT-27	FG-105
CR-27	866A
D27	6663
L29	6299
CE-30	1P40
CE-30A	930
CE-30B	930
CE-30C	930
CE-30D	930
CE-30Q	5557
NU-30	930
REE-30B	5894
CV-32	866A
ECC32	5692
EN32	2050A
FG-32	5558
WL-32	5558
FG-33	5720
WL-33	5720
BK-34	GL-5553B▲
BK-34A	GL-5553B▲
BK-34B	GL-5553B▲
REL-34	2C40
ECC35	5691
TE-35	5654/6AK5W*
CE-36D	927
EL37	7581A
RK-39	807
VT39A	869B
G40	869B
V40	8020
FG-41	GL-5830
WL-41	GL-5830
BK-42	GL-5551A▲
BK-42A	GL-5551A▲
BK-42B	GL-5551A▲
EB-42	GL-857B
VT42	872A/872
L-FTX-44-5	5665/C16J
TX-44-5	5665/C16J
BK-46	GL-5555
VT46	866A
VT46A	866A
B47	GL-5623/B-47
GS-47X	927
U50	5Y3WGTB
51A	927
HD-51	OA2
HD-52	OB2
51A3	927
HY51B	829B
R51A	927
TS-51	5654/6AK5W*
HD-52	OB2
53AWB	927
VT53	872A/872
TE-54	5687*
E55L	8233
SR-55	OB2
55B/400A	5894
SR-56	OA2
FG-57	5559
GL-57	5559
MT-57	5559
PL-57	5559
RL-57	5559
TG-57	5559
WL-57	5559
RK-58	GL-838
VT60	807
VT60A	807
DP-61	5654/6AW5W*
HY61	807
HY-61/807	807
R61A	930
61A3	930
61DV3	929
DF62	1AD4
B65	5692
BK66	5550
DY70	5642
EC70	5718
ECC70	6021
EC71	5718
EF71	5899
EL71	5902
EF72	5840
RK-R72	481B
G75/2D	OA3
GL-75-30	OA3
VR75	OA3
VR75/30	OA3
VR75/ST	OA3
VT75	7581A
BT-77	6807§
D77	6663
DD77	5726/6AL5W*
KT77	7581A
L77	6135*
QD77	5726/6AL5W*
QL77	6135*
X77	5750/6BE6W*
U78	6X4WA*
80	80
CC81E	6201*
E81CC	6201*
FG-81	FG-81A
FG-81A	FG-81A
WL-81A	FG-81A
E82CC	6189/12AU7WA*
E82M	5824
EBF82	6678
83	83
GL-83	83
E83CC	6681
ECC83	7025
QS83/3	5651
VT83	83
85A2	5651
EF86	6267
EF87	6267
ECC88	6DJ8/ECC88
E88CC	6922/E88CC
KT88	6550
VT88	832A
E90F	6265
GL-90-30	OB3
EL90	6005/6AQ5W*
VR90	OB3
VR90-30	OB3
VR90ST	OB3
AA91E	5726/6AL5W*
BT91	5544
E91AA	5726/6AL5W*
E91N	5727*
EB91	5726/6AL5W*
EN91	2D21
EC92	6664
EN92	5696A
EF93	6660
EN93	5696A
EF94	6136*
E95F	5654/6AK5W*
FG-95	5560
QV95/25	807
FG-98	FG-98A
FG-98A	FG-98A
E99F	6662
100	5575/100/616
100A	8020
100R	8020
G100A	GL-857B
ML-100	5575/100/616
OT-100	8005
QY2-100	813
QY2-250	813
RL100/2K	813
TXM100	2D21
VT100	807
WTT-100	6202*
WTT-102	6087*
ESU103	866A
WTT-103	6H6
X-103	4D21/4-125A
104	GL-5561
FG-104	GL-5561
WL-104	GL-5561
WTT-104	575A
105	FG-105
105A	FG-105
AX-105	FG-105
AX-105/FG-105	FG-105
FG-105	FG-105
G105/1D	OC3
GL-105/30	OC3
MT-105	FG-105
PL-105	FG-105
RL-105	FG-105
WL-105	FG-105
VR105	OC3
VR105MT	OB3
VR105-30	OC3
VR105ST	OC3
WTT-105	892
PL-106	6858/760P
WTT-106	5632/C3J
WTT-108	3C23
108C1	OB2
E108K	OB2
STR108/30	OB2
STV108/30	OB2
WTT-108	3C23
WTT-110	GL-5830
WTT-111	5559
TQ-112	3C23
WTT-112	5560
WTT-114	OZ4/OZ4A
VT115A	7581A
VT116	5693
WTT-117	5557
VT118	832A
WTT-118	FG-105
VT119	2X2A
WTT-119	FG-172
P-120-1a	813
WTT-122	5693
WTT-123	7408
CV124	807
E125A	4D21/4-125A
RE-125A	4D21/4-125A
T125	810
F127A	833A
WTT-127	833A
BW129	889A
HF130	GL-838
BR132	5762/7C24
WTT-132	OA4G
WTT-133	393A
WTT-134	5665/C16J
VT139	OD3
WTT-139	6807
B142	833A
KX142	2X2A
B143	833A
C143	813
CV143	813
C144	829B
VT-144	813
BW147	892
WTT-149	FG-172
150C1	OA2
150C2	OA2
150C3	OD3
150C4	OA2
G150/3D	OD3
G150/4K	OA2
QS150/40	OD3
SM150-30	OA2
STR150/30	OA2
STV150/30	OA2
VR150	OD3
VR150-30	OD3
VR150MT	OA2
VR150ST	OD3
B152	6679
D152	6663
Q160-1	4D21/4-125A
BK168B	GL-5822A▲
172	FG-172
FG-172	FG-172
WL-172	FG-172
BW175	892
CV177	813
C178	589A
C180	832A
E180F	6688
G180-2M	OD3
E182CC	7044
E182F	5847/404A
VT-187	575A
BR191	5762/7C24
BR-191B-4606	5762/7C24
VT-200	OC3
AH201	866A
WT210-0001	2D21
WT210-0004	2050
WT210-0006	6H6
WT210-0008	866A
WT210-0011	OC3
WT210-0012	80
WT210-0013	5Z3
WT210-0015	5557
WT210-0016	OB3
WT210-0018	OD3
WT210-0019	83
WT210-0021	6X5GT
WT210-0027	872A/872
WT210-0029	6C4
WT210-0038	FG-172
WT210-0040	6202*
WT210-0042	6087*
WT210-0043	5632/C3J
WT210-0044	575A
WT210-0045	892
WT210-0047	3C23
WT210-0048	5U4GB
WT210-0051	OA2
WT210-0054	GL-5830
WT210-0056	5559
WT210-0057	5560
WT210-0060	OZ4/OZ4A
WT210-0062	5557
WT210-0066	5665/C16J
WT210-0067	393A
WT210-0069	5557
WT210-0070	GL-5550
WT210-0071	GL-5551A
WT210-0072	GL-5552A
WT210-0073	GL-5553B
WT210-0074	FG-105
WT210-0075	GL-5822A
WT210-0077	5725*
WT210-0078	FG-172
WT210-0079	FG-105
WT210-0081	5693
WT210-0082	7408
WT210-0086	833A
WT210-0088	6J5
WT210-0091	OA4G
WT210-0093	5668
WT210-0100	672A
WT210-0106	5632/C3J
WT210-0108	6080
WT210-0116	5560
WT210-0134	678
WT210-0137	2050A
WT210-0141	5632/C3J
WT210-0147	GL-5552A
WT210-0149	GL-5551A
WT210-0152	GL-5553B
WT210-0156	GL-5551A
WT210-0157	GL-5552A
WT210-0158	GL-5551A
WT210-0159	GL-5552A
WT210-0162	7518
WT210-0165	GL-5553B
WT210-0166	GL-7151
WT210-0170	GL-5822A
WT210-0179	6858/760
WT210-0181	6809
WT210-0188	6014/C1K
WT210-0234	5665/C16J
WT210-0235	GL-5552A
WT210-0237	GL-5551A
WT210-0240	GL-5553B
WT210-0245	6808§
WT210-0246	GL-7681
WT210-0249	GL-5551A/PC
WT210-0252	GL-5552A/PC
WT210-0258	GL-7681
WT210-0263	GL-8205
WT210-0274	GL-7669
WT210-0275	GL-7671
WT210-0281	GL-7998
WT210-0282	GL-37255
WT210-0283	GL-7670
WT210-0285	GL-7671/PC
WT210-0290	GL-7669/PC
WT210-0305	GL-37253/PC
WT210-0306	GL-37254
AFX-212	6D4
AH-213	GL-869B
AH216	872A/872
CV216	OD3
VT-216	816
VR-216A	866A
AH-217	872A/872
AX-224	3B28
ATS-225A	807
Z225	866A
TS229	5687*
VT-229	5691
ECC230	6080
230N	5558
VT-231	5692
CE-232	5558
235A	GL-5552A
FG-235A	GL-5552A
238A	GL-5555
GL-238A	GL-5555
238B	GL-5555
FG-238B	GL-5555
VT-245	2050
WT-246	2050
G250-3000	866A
GRG250/3000	5557
RG250/3000	866A
K251	866A
HF-255	GL-869B
PL-255	GL-414‡
255A	GL-869B
255B	GL-869B
258A	GL-5553B
FG-258A	GL-5553B
258B	GL-5553B
FG-258B	GL-5553B
FG-259	GL-5554
VT-259	829B
VT260	OA3
WT-261	6H6
WT-261A	6H6
WT-262	866A
WT-269	OC3
WT-270	80
WT-270X	5Z3
FG-271	GL-5551A
272	5557
WE-272	5557
WT-272	5557
WT-272A	5557
CR-273	8008
CR-273/8008	8008
CR-274	872A/872
CR-274/872A	872A/872
274B	5R4GYB
WE-274B	5R4GYB
WT-274	OB3
CR-275	3B28
FG-280	FG-280
WT-280	6807§
VT-286	832A

For footnotes see Page 1278.

© United Technical Publications

GE Interchangeability Listing

GENERAL ELECTRIC

Type To Be Replaced	GE Replacement Type
WT-294	OD3
Z300T	OA4G
WT-301	83
304TL	304TL
CE-306	6807§
CE-308	6807§
WT-308	6X5GT
309	5557
CE-309	5557
QB309	6201*
311	3C23
CE-311	3C23
F319A	872A/872
WE-319A	872A/872
CE-320	6011/710
320A	6011/710
CE-320A	6011/710
QM328	5686*
B329	6680
B339	7025
350A	807
353A	872A/872
F357A	GL-857B
F357B	GL-857B
F363A	892
F366A	866A
WE-366A	866A
F369B	GL-869B
375A	575A
F375A	575A
381	2C39B
ML-381	2C39B
WT-382	872A/872
WT-390	6C5
393A	393A
CE-393A	393A
GL-393A	393A
NL-393A	393A
WE-393A	393A
396A	5670*
E-400A	4-400A
RE-400F	4-400A
WE-403	5654/6AK5W*
403A	5654/6AK5W*
403B	5654/6AK5W*
404A	5847/404A
407A	407A
408A	408A
409A	6AS6
WE-409A	6AS6
412A	6203*
414	GL-414
GL-414	GL-414
WE-414	GL-414
415	GL-5550
G415	GL-5550
GL-415	GL-5550
417A	5842/417A
421	5998A
CV424	5894
X424D	4X150A/7034
WT-439	FG-172
GL-446	2C40
GL-446A	2C40
GL-446B	2C40
CV449	5651
451	8020
GL-451	8020
ZP451	8020
GL-452	892
SRS-455	4D21/4-125A
464	2C43
464A	2C43
GL-464	2C43
ZP464A	2C43
473	5736
GL-473	5736
ML-473	5736
WL-473	5736
X474	2C39A
CV475	5899
CV477	5899
WL-481	481B
WL-481A	481B
WL-481B	481B
CV491	6189/ 12AU7WA*
CV492	7025
502	2050A
GL-502	2050A
502A	2050A
GL-502A	2050A
WL-502A	2050A
506	GL-6228
GL-506	GL-6228
507	GL-5564
GL-507	GL-5564
GL-509	889A
GL-510	GL-857B
512	575A
GL-512	575A
GL-512A	575A
DE-0517	5557
DG-0517	5557
GL-549	5663
VH550A	866A
VH550H	866A
VX550A	3B28
P552/1E	4D21/4-125A
ZP-552	2C39A
QM556	6202*
QM557	5654/6AK5W*
QM558	5725/6AS6W*
QM559	5726/6AL5W*
EC560	2C40
EC562	2C39B
CK-571AX	5886
572	2C39A
GL-572	2C39A
ZP-572	2C39A
575A	575A
AM-575A	575A
AX-575A	575A
DR-575A	575A
EE-575A	575A
F575A	575A
GL-575A	575A
ML-575A	575A
NL-575A	575A
WL-575A	575A
578	8020
WL-578	8020
CV597	2X2A
WT-606	2D21
ACC612	6807
CK612	6AN5
R612G	2X2A
ZP-613	2C43
616	5575/100/616
WL-616	5575/100/616
CV618	83
ZP-620	2C40
CV627	810
CV628	811A
630	2050A
WL-630	2050A
630A	2050A
WL-630A	2050A
631	5559
WL-631	5559
CV632	829B
632B	5560
GL-632B	5560
NL-632B	5560
632C	5560
CV635	833A
WT-635	6807§
CV638	GL-838
CV642	872A/872
CV644	575A
651	GL-5552A
651/656	GL-5552A
WL-651	GL-5552A
DF652	1AD4
652	GL-5551A
WL-652	GL-5551A
652/657	GL-5551A
653	GL-5555
WL-653	GL-5555
653A	GL-5555
WL-653A	GL-5555
653B	GL-5555
WL-653B	GL-5555
655	GL-5553B
WL-655	GL-5553B
WL-655/658	GL-5553B
656	GL-5552A
WL-656	GL-5552A
657	GL-5551A
WL-657	GL-5551A
658	GL-5553B
DF658	1AD4
WL-658	GL-5553B
672	672A
GL-672	672A
WL-672	672A
672A	672A
GL-672A	672A
WL-672A	672A
673	673
AX673	673
AX673/6693	673
GL-673	673
ML-673	673
WL-673	673
678	678
GL-678	678
WL-678	678
679	GL-5554
WL-679	GL-5554
681	GL-5550
681/686	GL-5550
WL-681	GL-5550
WL-681/686	GL-5550
682	GL-5550
WL-682	GL-5550
RS-685	4D21/4-125A
686	GL-5550
CV686	OC3
WL-686	GL-5550
CV688	2C43
688	GL-5564
WL-688	GL-5564
689	GL-6228
WL-689	GL-6228
CV691	575A
WT-699	GL-5550
710	6011/710
NL-710	6011/710
710/6011	6011/710
NL-710/6011	6011/710
NL-710A	7725
NL-710AL	7726
NL-715	5557
715/5557	5557
715/5557/FG-17	5557
NL-715/5557	5557
NL-716	6014/C1K
CV717	5R4GYB
D717	6663
T717	5557
CV724	816
N727	6669
W727	6660
ML-728	5557
EF730	5636
NL-730	5544
EF731	5899
731A	5654/6AK5W*
EF732	5840
EF734	6205
NL-734	5544
NL-734/5544	5544
CV752	OA4G
760	6858/760
CK760	6807
NL-760	6807
NL-760L	6809▲
760P	6808
760P/6859	6859/760P
NL-761	6858/760
NL-761L	6809§
NL-761P	6859/760P
XB-767	2050A
CV788	832A
CV797	2D21
ECC801	6201*
ECC801S	6201*
ECC802	6189/ 12AU7WA*
ECC802S	6189/ 12AU7WA*
ECC803	7025
ECC803S	7025
807	807
DR-807	807
GL-807	807
HY-807	807
ML-807	807
NU-807	807
P-807	7293
RK-807	807
TS-807	807
UY807	807
WL-807	807
810	810
DR-810	810
GL-810	810
ML-810	810
NU-810	810
P-810	7038
T-810	810
WL-810	810
UE-810	810
811	811A
DR-811	811A
GL-811	811A
NU-811	811A
WL-811	811A
811A	811A
DR-811A	811A
GL-811A	811A
NU-811A	811A
RK-811A	811A
WL-811A	811A
812	812A
DR-812	812A
GL-812	812A
NU-812	812A
UE-812	812A
WL-812	812A
812A	812A
DR-812A	812A
GL-812A	812A
NU-812A	812A
WL-812A	812A
813	813
DR-813	813
ECC813	6463
GL-813	813
ML-813	813
NU-813	813
P-813	7038
RK-813	813
T-813	813
TH-813	813
UE-813	813
WL-813	813
816	816
DR-816	816
GL-816	816
HY-816	816
NU-816	816
P-816	5820A
RK-816	816
WL-816	816
P-820	7038
829	829B
GL-829	829B
NU-829	829B
RK-829	829B
829A	829B
829B	829B
GL-829B	829B
ML-829B	829B
NU-829B	829B
RK-829B	829B
T-829B	829B
WL-829B	829B
830B	830B
GL-830B	830B
NU-830B	830B
UE-830B	830B
832	832A
GL-832	832A
NU-832	832A
RK-832	832A
832A	832A
DR-832A	832A
GL-832A	832A
ML-832A	832A
NU-832A	832A
RK-832A	832A
T-832A	832A
WL-832A	832A
833	833A
C-833	833A
WL-833	833A
833A	833A
DR-833A	833A
ES-833A	833A
GL-833A	833A
ML-833A	833A
UE-833A	833A
WL-833A	833A
838	GL-838
C-838	GL-838
DR-838	GL-838
GL-838	GL-838
NU-838	GL-838
T-838	GL-838
UE-838	GL-838
WL-838	GL-838
P-841	8507A
P-843	8572
P-844	8572
P-848	8507A
CV850	5654/6AK5W*
S-856	OA2
857	GL-857B
857A	GL-857B
F-857A	GL-857B
GL-857A	GL-857B
857B	GL-857B
DR-857B	GL-857B
F-857B	GL-857B
GL-857B	GL-857B
ML-857B	GL-857B
WL-857B	GL-857B
S-859	OC2
S-860	OB2
EF861	6688*
862	862A
F-862	862A
GL-862	862A
P-862	7735B
RCA-862	862A
ECC863	7025
F-863	892
RCA-863	892
F-863A	892
P-864	7735B
866	866A
C-866	866A
P-866	8573
RK-866	866A
UX-866	866A
866A	866A
866AX	866A
866A/CR27	866A
866A/3B28	866A
AG-866A	866A
C-866A	866A
CE-866A	866A
EE-866A	866A
ESU-866A	866A
GL-866A	866A
GL-866A/866	866A
HF-866A	866A
HY-866A/866	866A
ML-866A	866A
NU-866A/866	866A
RCA-866A	866A
T-866A/866	866A
UE-866A	866A
UX-866A	866A
WL-866A	866A
866JR	816
869	GL-869B
869A	GL-869B
UV-869A	GL-869B
869B	GL-869B
AG-869B	GL-869B
CE-869B	GL-869B
DR-869B	GL-869B
EE-869B	GL-869B
F-869B	GL-869B
GL-869B	GL-869B
ML-869B	GL-869B
NL-869B	GL-869B
WL-869B	GL-869B
870	GL-870A
870A	GL-870A
GL-870A	GL-870A
872	872A/872
872A	872A/872
872AX	872A/872
DR-872	872A/872
EE-872	872A/872
F-872A	872A/872
GL-872A	872A/872
ML-872A	872A/872
ML-872A/872	872A/872
NL-872A	872A/872
RK-872A	872A/872
UE-872A	872A/872
VE-872A	872A/872
WL-872A	872A/872
WL-872A/872	872A/872
875A	575A
T-875A	575A
879	2X2A
880	880A
GL-880	880A
ML-880	880A
UE-880	880A
WL-880	880A
880A	880A
889	889A
889A	889A
F-889A	889A
GL-889A	889A
ML-889A	889A
UE-889A	889A
WL-889A	889A
892	892
ESW-892	892
ESW-892C	892
F-892	892
GL-892	892
ML-892	892
UE-892	892
WL-892	892
892A	892
A-0897	A-0897
B-0897	B-0897
EH-900S	7036*
Z-900T	5823
EAA901	5726/6AL5W*
EAA901S	5726/6AL5W*
S901C	5651
EF905	5654/6AK5W*
UL-905	5559
A-0913	A-0913
TX-920	5559
927	927
GL-927	927
WL-927	927

For footnotes see Page 1278.

© United Technical Publications

GE Interchangeability Listing

GENERAL ELECTRIC

Type To Be Replaced	GE Replacement Type
930	930
GL-930	930
WL-930	930
UE-930	830B
UE-930B	830B
931	931A
931A	931A
GL-931A	931A
WL-931A	931A
CV932	2C40
UE-938	GL-838
CV939	5824
CV945	28D7
CV946	28D7
SN-956	5642
SN-956A	5642
SN-956B	5642
UE-966	866A
UE-966A	866A
BM-966B	866A
HV-966B	866A
967	5557
NU-967	5557
UE-967	5557
UE-972	872A/872
UE-972A	872A/872
SN-972D	5899
SN-973	5840
SN-973C	5840
975A	575A
UE-975A	575A
976	5557
SN-976	5902
SN-976D	5902
SN-979	5718
SN-979D	5718
SN-980	5719
SN-980D	5719
SN-994B	5896
RG-1000/3000	872A/872
STE-1000/2.5-15	5559
RS-1002A	OZ4/OZ4A
RS-1007	4D21/4-125A
SN-1007	5636
SN-1007A	5636
NL-1009A	GL-7681
NL-1009/AP	GL-7681/PC
RS-1009	5894
WT-1009	GL-7681
WT-1009/210/0246	GL-7681
NL-1011	GL-5551A
NL-1011A	GL-5551A
NL-1011/AP	GL-5551A/PC
NL-1012	GL-5552A
NL-1012A	GL-5552A
NL-1012AP	GL-5552A/PC
NL-1013	GL-5553B
NL-1013A	GL-5553B
NL-1014A	GL-7151
NL-1016	GL-7681
NL-1016A	GL-7681
NL-1016AP	GL-7681/PC
RS-1020	6360
NL-1022	GL-5822A
NL-1022A	GL-5822A
NL-1022AP	GL-5822A/PC
WT-1022/210/0170	GL-5822A
ZP-1031	GL-8513
NL-1036	GL-7176
NL-1037	GL-35329
NL-1039	GL-37228
SN-1039A	5840
NL-1051	GL-5551A
NL-1051A	GL-5551A
NL-1051AP	GL-5551A/PC
WT-1051A/210/0158	GL-5551A
WT-1051A/210/0244	GL-5551A/PC
NL-1051P	GL-5551A/PC
NL-1052	GL-5552A
NL-1052A	GL-5552A
NL-1052AP	GL-5552A/PC
WT-1052A/210/0159	GL-5552A
NL-1052P	GL-5552A/PC
WT-1052P/210/0252	GL-5552A/PC
NL-1053	GL-5553B
WT-1053A/210/0165	GL-5553B
WT-1053P	GL-5553B/PC
NL-1053B	GL-37254
NL-1054	GL-7151
NL-1054A	GL-7151
NL-1059	GL-37207
CV1060	807
NL-1061	GL-7669
NL-1061P	GL-7669/PC
NL-1062	GL-7671
NL-1062P	GL-7671/PC
NL-1063	GL-37255
NL-1064	GL-8205
NL-1066	GL-7670
NL-1068	GL-7672
NL-1069	GL-7998P
NL-1071	GL-7669
NL-1071P	GL-7669/PC
NL-1072	GL-7671
NL-1072P	GL-7671/PC
NL-1073	GL-7673
NL-1074	GL-8205
CV1075	7581A
NL-1079	GL-7998
CV-1088	832A
CK-1090	5823
V-1103	6360
C-1108	4D21/4-125A
C-1136	4-400A
SC-1104A	5719
CV1144	5557
SC-1156A	5636
Y-1171	Y-1171
QS1205	OA3
QS1206	OC3
QS1207	OA2
QS1208	OB2
QS1209	5651
GB1219	5670*
1220	5654/6AK5W*
1257	5559
1266	OB3
PL-1267	OA4G
RL-1267	OA4G
1295	5560
S-1300-01-05	2D21
TD1320	7038
CV1364	807
YL1370	6146/8298A
YL-1371	6883B/8032A/8552
CV1374	807
1381HQ	5654/6AK5W*
CV1449	872A/872
ME1504	5559
CV1572	807
1614	7581A
GL-1614	7581A
RK-1614	7581A
1620	6J7
1622	7581A
GL-1622	7581A
1632	12W6GT
1649	6134*
1656	2C43
1657	2050
1665	2050
1672	FG-172
1701	5557
HF-1701	5557
CV1730	7581A
CV1763	6J4
CV1832	OA2
CV1833	OB2
A1834	6080
CV1835	3B28
1852	6134*
CV1852	OA2
1853	6134*
E-1870	4D21/4-125A
G-1889A	889A
CV1949	6D4
E1955	2D21
CV1992	OA4G
2014	6197
CV2014	5763
CV2020	5654/6AK5W*
2050	2050
GL-2050	2050
RK-2050	2050
WL-2050	2050
2050A	2050A
GL-2050A	2050A
NL-2050A	2050A
WL-2050A	2050A
2051	2050
RK-2051	2050
2076	5R4GYB
2081	6AW8A
2082	6072A
2100A	8020
CV2103	6973
CV2129	5763
CV2130	4D21/4-125A
A-2130A	8005
2179A	2C40
A-2203	2C43
A-2209	6J4
CV2210	5544
A-2214J	6161
CV2215	6807§
A-2222	2C43
A-2229A	2C40
CV2237	1AD4
CV2241	5642
A-2252	5675
A-2293C	2C42
A-2294C	2C46
A-2352	5675
QA2401	6C4WA*
QS2404	5726/6AL5W*
QS2406	6201*
QA2407	6202*
QA2408	5692
CV2432	6205
CV2466	6939
CV2492	6922/E88CC
STE-2500/6/40	FG-105
AG-2509	5651
CV2522	6AS6
CV2523	6AS7GA
CV2565	2050A
CV2573	5651
CV2575	5670¶*
CV2578	5687*
CV2638	393A
CV2642	5842/417A
CV2643	2C40
CV2650	12AY7
CV2661	812A
CV2666	829B
CV2679	816
CV2685	880A
CV2686	889A
CV2693	929
CV2694	930
CV2695	931A
CV2696	931A
CV2698	5896
CV2721	2050
CV2723	GL-869B
CV2753	5632/C3J
CV2754	6807*
CV2790	6014/C1K
CV2797	5894
CV2798	6360
CV2842	6C4WA*
CV2844	6202*
CV2854	6AN5
CV2858	3B24W
CV2876	5727*
CV2877	5654/6AK5W*
CV2882	5726/6AK5W*
CV2883	6005/6AQ5W*
CV2884	5725/6AS6W*
CV2901	6267
CV2957	5557
CV2963	4D21/4-125A
CV2967	8020
CV2984	6080
CV2990	6136*
3069	866A
3070	872A/872
3071	GL-869B
3072	GL-857B
WX-3172	672A
WX-3187	GL-414
WX-3194	GL-5550
XRI-3200	5544
WX-3230	678
CV3508	6201*
CV3512	5696A
CV3523	6146B/8298A
3546PW	927
3572	866A
CV3599	12AY7
CV3650	807
CV3679	5693
CV3706	832A
CV3714	2X2A
WX-3751	866A
CV3789	5842/417A
CV3798	OA3
CV3799	OB3
3852A	2C39A
3861B	4X150A/7034
3874A	813
CV3880	4-1000A
3881A	2C43
3885A	3B28
CV3900	5963
CV3905	5847/404A
CV3908	6661
CV3928	5636
CV3929	5840
CV3930	5718
CV3938	5636
CV3942	5692
CV3974	6AS7GA
CV3986	6021
CV3990	2E26
CV3998	6688*
CV4003	6189/12AU7WA*
CV4007	5726/6AL5W*
CV4008	5719
CV4009	5749/6BA6W*
CV4010	5654/6AK5W*
CV4011	5725/6AS6W*
CV4016	6189/12AU7WA*
4017	866A
CV4017	5751*
CV4018	5727*
CV4019	6005/6AQ5W*
CV4022	6135*
CV4023	6136*
CV4024	6201*
CV4025	5726/6AL5W*
CV4029	5902
CV4032	5841A*
CV4039	5763
CV4050	5654/6AK5W*
A-4051	807
A-4051G	807
A-4051J	807
CV4054	5654/6AK5W*
4078F	GL-869B
4078Z	GL-869B
4260	5557
4261	5557
A-4273B	5692
TY-4350	833A
4401	5820A
4414	5820A
4414/7611	5820A
SRS-4451	5894
A-4461	5749/6BA6W*
4471	931A
4472	931A
A-4475	6AS7GA
4478	7262A
A-4522	7025
A-4524A	7025
A-4535	6080
A-4535A	6080
A-4541H	5763
4606	5762/7C24
4620	GL-857B
WX-4681	GL-37228
5000GB	872A/872
5000GS	8008
EHW5000	889A
ESW5000	889A
CV5008	6080
AGS5017	5557
PA-5021	866A
TH-5021B	866A
AGS5021	2D21
AGS5023	3C23
CV5027	5559
TH-5031B	872A/872
CV5043	811A
Z-5053	GL-6942
TH-5071	GL-857B
CV5122	5823
CV5186	5651
CV5188	5651
CV5189	5726/6AL5W*
CV5190	6005/6AQ5W*
AG5210	OB2
AG5211	OA2
CV5212	6201*
CV5216	5654/6AK5W*
CV5220	6550
TH-5221V/B	3B28
CV5311	6J4WA
CV5358	6DJ8/ECC88
CV5404	6463
Z-5420	Z-5420
5513	GL-5513
GL-5513	GL-5513
WL-5513	GL-5513
5518	GL-5518
GL-5518	GL-5518
ML-5518	GL-5518
5528	6807§
5528/C6L	6807§
5544	5544
ASG5544	5544
GL-5544	5544
MT-5544	5544
PL-5544	5544
5545	6807§
ASG5545	6807§
GL-5545	6807§
5549	GL-5549
GL-5549	GL-5549
5550	GL-5550
AX-5550	GL-5550
GL-5550	GL-5550
NL-5550	GL-5550
WL-5550	GL-5550
5550/GL-415	GL-5550
GL-5550/GL-415	GL-5550
WL-5550/681	GL-5550
WL-5550/681/686	GL-5550
WT-5550/210-0070	GL-5550
AJ-5551	GL-5551A
AX-5551	GL-5551A
AX-5551/652	GL-5551A
GL-5551	GL-5551A
GL-5551/FG-271	GL-5551A
NL-5551	GL-5551A
PL-5551	GL-5551A
VJ-5551	GL-5551A
WL-5551	GL-5551A
WL-5551/652	GL-5551A
WT-5551	GL-5551A
5551A	GL-5551A
5551A/PC	GL-5551A/PC
AJ-5551A	GL-5551A
AX-5551A	GL-5551A
GL-5551A	GL-5551A
GL-5551A/PC	GL-5551A/PC
GL-5551A/FG-271	GL-5551A
PL-5551A	GL-5551A
WL-5551A	GL-5551A
WL-5551A/PC	GL-5551A/PC
5552	GL-5552A
AX-5552	GL-5552A
AX-5552/651	GL-5552A
GL-5552	GL-5552A
NL-5552	GL-5552A
PL-5552	GL-5552A
WL-5552	GL-5552A
WT-5552	GL-5552A
5552A	GL-5552A
5552AP	GL-5552A/PC
5552A/PC	GL-5552A/PC
5552A/651	GL-5552A
AJ-5552A	GL-5552A
AX-5552A	GL-5552A
GL-5552A	GL-5552A
GL-5552A/FG-235A	GL-5552A
NL-5552A	GL-5552A
PL-5552A	GL-5552A
VJ-5552A	GL-5552A
WL-5552A	GL-5552A
WL-5552AP	GL-5552A/PC
WL-5552A/651	GL-5552A
WL-5552A/651/PC	GL-5552A/PC
5553	GL-5553B
AX-5553	GL-5553B
AX-5553/655	GL-5553B
WL-5553	GL-5553B
5553A	GL-5553B
AJ-5553A	GL-5553B
GL-5553A	GL-5553B
5553B	GL-5553B
5553B/PC	GL-5553B/PC
5553B/655	GL-5553B
AJ-5553B	GL-5553B
AX-5553B	GL-5553B
GL-5553B	GL-5553B
NL-5553B	GL-5553B
NL-5553B/PC	GL-5553B/PC
PL-5553B	GL-5553B
VJ-5553B	GL-5553B
WL-5553B	GL-5553B
WL-5553B/655	GL-5553B
WL-5553B/PC	GL-5553B/PC
WL-5553B/655/PC	GL-5553B/PC
5554	GL-5554
5554/FG-259B	GL-5554
AX-5554	GL-5554
AX-5554/679	GL-5554
GL-5554	GL-5554

For footnotes see Page 1278.

© United Technical Publications

GE Interchangeability Listing

GENERAL ELECTRIC

Type To Be Replaced	GE Replacement Type
GL-5554/FG-259B	GL-5554
WL-5554	GL-5554
WL-5554/679	GL-5554
5555	GL-5555
AX-5555	GL-5555
GL-5555	GL-5555
NL-5555	GL-5555
PL-5555	GL-5555
WL-5555	GL-5555
5555/FG-238B	GL-5555
5555/238	GL-5555
AX-5555/653B	GL-5555
GL-5555/FG-238A	GL-5555
GL-5555/RG-238B	GL-5555
5555A	GL-6513▲
NL-5555A	GL-6513▲
WL-5555A	GL-6513▲
5556	GL-5556
5556/PJ8	GL-5556
GL-5556	GL-5556
5557	5557
AX-5557	5557
AX-5557/17/1701	5557
GL-5557	5557
GL-5557/FG-17	5557
WL-5557	5557
WL-5557/17	5557
5557/715	5557
5558	5558
5558/FG-32	5558
GL-5558	5558
GL-5558/FG-32	5558
NL-5558	5558
WL-5558	5558
WL-5558/32	5558
5559	5559
AX-5559	5559
GL-5559	5559
GL-5559/FG-57	5559
NL-5559	5559
NL-5559/FG-57	5559
WL-5559	5559
WL-5559/57	5559
5560	5560
GL-5560/FG-95	5560
NL-5560/FG-95	5560
5561	5561
5561/104	5561
5561/FG-104	5561
GL-5561	5561
GL-5561/FG-104	5561
WL-5561	5561
WL-5561/104	5561
5563	5563A
F-5563	5563A
5563A	5563A
GL-5563A	5563A
5564	GL-5564
GL-5564	GL-5564
GL-5564/GL-507	GL-5564
5575	5575/100/616
5575/100/616	5575/100/616
GL-5575/100/616	5575/100/616
ML-5575	5575/100/616
WL-5575	5575/100/616
5576/200	5576/200
5591	5654/6AK5W*
5593	GL-5593
GL-5593	GL-5593
5604	5604
5606	5606
5606A	5606A
5610	5610
GL-5610	5610
GL-5623/B47	GL-5623/B47
5625	5575/100/616
GL-5625	5575/100/616
GL-5625/KC-4	5575/100/616
5627	GL-5627
GL-5627	GL-5627
5630	GL-5630
GL-5630	GL-5630
5632	5632/C3J
5632/C3J	5632/C3J
GL-5632/C3J	5632/C3J
NL-5632/C3J	5632/C3J
5636	5636
5636A	5636
5640	5902
5642	5642
5648	2C39B
5651	5651
GL-5651	5651
WL-5651	5651
5654	5654/6AK5W*
5654/6AK5W/6096	5654/6AK5W*
CK5654	5654/6AK5W*
GL-5654	5654/6AK5W*
WL-5654/6AK5W	5654/6AK5W*
5658	880A
5662	5662
5663	5663
5665	5665/C16J
5665/C16J	5665/C16J
GL-5665	5665/C16J
WL-5665	5665/C16J
5668	5668
5670	5670*
5670WA	5670*
GL-5674	GL-5674
5675	5675
5682	5682
5684	5632/C3J
5685/C6J	6807§
AX-5685/C6J	6807§
WL-5685/C6J/A	6807§
5686	5686*
5687	5687*
5687WA	5687WA*
GL-5687	5687*
WL-5687	5687*
5691	5691
GL-5691	5691
WL-5691	5691
5692	5692
GL-5692	5692
WL-5692	5692
5693	5693
GL-5693	5693
WL-5693	5693
5696	5696A
GL-5696	5696A
WL-5696	5696A
5696A	5696A
5703	5703WA
5703WA	5703WA
5703WB	5703WB
5718	5718
GL-5718	5718
WL-518	5718
5718A	5718
5719	5719
5719A	5719
5720	5720
GL-5720	5720
GL-5720/FG-33	5720
NL-5720	5720
NL-5720/FG-33	5720
WL-5720	5720
5725	5725/6AS6W*
5725/6AS6W	5725/6AS6W*
5725/6AS6W/6187	5725/6AS6W*
GL-5725	5725/6AS6W*
5726	5726/6AL5W*
5726/6AL5W/6097	5726/6AL5W*
5727	5727*
5727/2D21W	5727*
GL-5727	5727*
WL-5727	5727*
5736	5736
GL-5736	5736
ML-5736	5736
WL-5736	5736
5744WB	5744WB
5749	5749/6BA6W*
5749/6BA6W	5749/6BA6W*
GL-5749	5749/6BA6W*
5750	5750/6BE6W*
5750/6BE6W	5750/6BE6W*
GL-5750	5750/6BE6W*
5751	5751*
CK5751	5751*
GL-5751	5751*
WL-5751	5751*
5762	5762/7C24
5762-7C24	5762/7C24
5762A	5762/7C24
5763	5763
GL-5763	5763
WL-5763	5763
GL-5779	GL-5779
CK5783	5651
GL-5788	GL-5788
5796	
5814	5814A*
CK5814	5814A*
5814A	5814A*
CK5814A	5814A*
GL-5814A	5814A*
WL-5814A	5814A*
5820	5820A
GL-5820	5820A
ML-5820	5820A
WL-5820	5820A
5820A	5820A
5820A/L	5820A
GL-5820A	5820A
WL-5820A	5820A
5820E	5820A
5822	GL-5822A
GL-5822	GL-5822A
NL-5822	GL-5822A
WL-5822	GL-5822A
5822A	GL-5822A
AX-5822A	GL-5822A
GL-5822A	GL-5822A
NL-5822A	GL-5822A
PL-5822A	GL-5822A
WL-5822A	GL-5822A
5823	5823
WL-5823	5823
5824	5824
GL-5824	5824
WL-5824	5824
5830	GL-5830
GL-5830	GL-5830
GL-5830/FG-41	GL-5830
WL-5830	GL-5830
5840	5840
GL-5840	5840
5842	5842/417A
5842/417A	5842/417A
CV5843	5965A
5844	5844*
5847	5847/404A
5855	5855
GL-5855	5855
5877	5544
WL-5877	5544
5878	6807§
WL-5878	6807§
5879	5879
GL-5879	5879
WL-5879	5879
5881	5881
GL-5881	5881
WL-5881	5881
5886	5886
CK5886	5886
WL-5886	5886
CV5893	5654/6AK5W*
5894	5894
CV5894	5670*
GL-5894	5894
ML-5894	5894
WL-5894	5894
5894A	5894
CV5895	5750/6BE6W*
CV5896	6136*
5896	5896
5897	5718
5898	5719
5899	5899
5899A	5899
5900	5899
5901	5840
5902	5902
GL-5902	5902
WL-5902	5902
5902A	5902
5915	7036θ*
GL-5915	7036θ*
5915A	7036θ*
5918A	5918A
5924	5924A
5924A	5924A
5932	7581A‡
5933	807
5936	5936
5963	5963
GL-5963	5963
WL-5963	5963
5964	5964
GL-5964	5964
WL-5964	5964
5965	5965A*
GL-5965	5965A*
WL-5965	5965A*
5965A	5965A*
CV5986	6112
5998	5998A
5998/421	5998A
5998A	5998A
6005	6005/6AQ5W*
6005/6AQ5W	6005/6AQ5W*
6005/6AQ5W/6095	6005/6AQ5W*
6011	6011/710
ASG-6011	6011/710
GL-6011	6011/710
GL-6011/710	6011/710
PL-6011	6011/710
WL-6011	6011/710
TH-6011	5557
6012	6012
WL-6012	6012
6014	6014/C1K
6014/C1K	6014/C1K
GL-6014	6014/C1K
WL-6014	6014/C1K
6021	6021
GL-6021	6021
WL-6021	6021
6028	408A
6028/408A	408A
6031	5559
TH-6031	5559
6039	GL-6039
GL-6039	GL-6039
6046	6046
GL-6046	6046
ZM-6046	ZM-6046
ZM-6047	ZM-6047
ZM-6051	ZM-6051
6057	7025
6058	5726/6AL5W*
6060	6201*
6062	5763
6067	5814A‡
6072	6072A*
GL-6072	6072A*
WL-6072	6072A*
6072A	6072A*
6076	6076
6080	6080
WL-6080	6080
ZM-6085	ZM-6085
ZM-6086	ZM-6086
6087	6087*
ZM-6087	ZM-6087
6095	6005/6AQ5W*
6096	5654/6AK5W*
6097	5726/6AL5W*
6100	6C4WA*
6106	6087*
6111	6111
6112	6112
6113	6SL7GT
TH-6120	FG-105
6125	6C4WA*
6134	6134*
6135	6135*
6136	6136*
GL-6136	6136*
WL-6136	6136*
6137	6137*
6146	6146A
GL-6146	6146A
R-6146	8008
WL-6146	6146A
6146A	6146A
GL-6146A	6146A
WL-6146A	6146A
6146B	6146B/8298A
6146B/8298A	6146B/8298A
6149	5703WA
6151	5744WB
6155	4D21/4-125A
6155/4-125A	4D21/4-125A
6166A	6166A
6166A/7077	7007/6166A
WL-6166A	7007/6166A
R6175B	5R4GYB
6180	5692
6183	GL-6942
6183/Z-5053	GL-6942
GL-6183	GL-6942
6187	5725/6AS6W*
6189	6189/12AU7WA*
GL-6189	6189/12AU7WA*
WL-6189	6189/12AU7WA*
6197	6197
WL-6197	6197
6198	6198A
GL-6198	6198A
WL-6198	6198A
6198A	6198A
GL-6198A	6198A
ML-6198A	6198A
WL-6198A	6198A
R6200	2D21
6201	6201*
GL-6201	6201*
WL-6201	6201*
6202	6202*
6203	6203*
ZM-6203	ZM-6203
6205	6205
ZM-6205	ZM-6205
6206	6206
6211	6211A*
6211A	6211A*
ZM-6211A	ZM-6211A
6216	6216*
TH-6220	6807§
TH-6220A	6807§
ZM-6220	ZM-6220
6222	6222
ZM-6222	ZM-6222
6228	GL-6228
6228/506	GL-6228
6228/689	GL-6228
GL-6228/GL-506	GL-6228
NL-6228	GL-6228
WL-62228	GL-6228
TH-6230	3C23
ZM-6231	ZM-6231
ZM-6238	ZM-6238
ZM-6239A	ZM-6239A
ZM-6240A	ZM-6240A
ZM-6242	ZM-6242
ZM-6244	ZM-6244
ZM-6245A	ZM-6245A
ZM-6246	ZM-6246
GL-6251	GL-6251
ZM-6257	ZM-6257
6265	6265*
6267	6267
6268	6268
ZM-6276	ZM-6276
6277	3B28
ZM-6277	ZM-6277
ZM-6279	ZM-6279
ZM-6280	ZM-6280
6283	GL-6283
GL-6283	GL-6283
6288	816
6299	6299
GL-6299	6299
6326	GL-7038
6326A	GL-7038
6336	6336A
TS-6336A	6336A
WL-6336A	6336A
6346	GL-5551A▲
AJ-6346	GL-5551A▲
GL-6346	GL-5551A▲
6347	GL-5552A▲
AJ-6347	GL-5552A▲
GL-6347	GL-5552A▲
6348	GL-5553B▲
GL-6348	GL-5553B▲
6350	6350
6360	6360
AX-6360	6360
6386	6386*
6397	6397
XRI-6400	6807§
XRI-6400A	6807§
6414	6414*
6414W	6414W*
6420	6420
ML-6420	6420
WL-6420	6420
6421	6421
6421F	6421F
6422	6422
ML-6422	6422
WL-6422	6422
6423	6423
ML-6423	6423
WL-6423	6423
6423F	6423F
ML-6423F	6423F
WL-6423F	6423F
6424	6424
ML-6424	6424
WL-6424	6424
6425	6425
6425F	6425F
ML-6425F	6425F
WL-6425F	6425F
6426	6426
ML-6426	6426
WL-6426	6426
6442	6442
GL-6442	6442
6463	6463
6485	6485
GL-6504	GL-6504
GL-6509	GL-6509
6511	GL-5822A▲
GL-6511	GL-5822A▲
6512	GL-6512
GL-6512	GL-6512
6513	GL-6513

For footnotes see Page 1278.

© United Technical Publications

GE Interchangeability Listing

GENERAL ELECTRIC

Type To Be Replaced	GE Replacement Type
GL-6513	GL-6513
6514	GL-6514
GL-6514	GL-6514
6515	GL-6515
GL-6515	GL-6515
6520	6080
6550	6550
WL-6550	6550
GL-6619	GL-6619
GL-6620	GL-6620
GL-6621	GL-6621
6626	OA2
6627	OB2
6660	6660
GL-6660	6660
WL-6660	6660
6661	6661
GL-6661	6661
WL-6661	6661
6662	6662
GL-6662	6662
WL-6662	6662
6663	6663
GL-6663	6663
WL-6663	6663
6664	6664
GL-6664	6664
WL-6664	6664
6669	6669
GL-6669	6669
WL-6669	6669
6676	6676
GL-6676	6676
WL-6676	6676
6677	6677
GL-6677	6677
WL-6677	6677
6678	6678
GL-6678	6678
WL-6678	6678
6679	6679
GL-6679	6679
WL-6679	6679
6680	6680
GL-6680	6680
WL-6680	6680
6681	6681
GL-6681	6681
WL-6681	6681
6688	6688*
6693	673
AX-6693	673
6697	6697
6697A	6697A
6761	6216*
6771	6771
6807	6807
ASG-6807	6807
GL-6807	6807
WL-6807	6807
6808	6808
GL-6808	6808
WL-6808	6808
6809	6809
GL-6809	6809
6814	6814
6829	6829*
GL-6829	6829*
6858	6858/760
6858/760	6858/760
GL-6858	6858/760
GL-6858/760	6858/760
WL-6858	6858/760
6859	6859/760P
6859/760P	6859/760P
GL-6859/760P	6859/760P
WL-6859	6859/760P
GL-6860	6808
6864	6807§
6871	6808§
6878	GL-6878
GL-6878	GL-6878
6883	6883B/ 8032A/8552
GL-6883	6883B/ 8032A/8552
WL-6883	6883B/ 8032A/8552
6883A	6883B/ 8032A/8552
6883B	6883B/ 8032A/8552
6884	6884
6894	575A
6895	673
6897	6897
GL-6897	6897
6900	5687*
6907	6907
GL-6907	6907
6919	6919*
6922	6922/E88CC
6922/E88CC	6922/E88CC
WL-6922	6922/E88CC
6927	5844*
6928	6005/6AQ5W*
6939	6939
6942	GL-6942
GL-6942	GL-6942
GL-6958	GL-6958
6968	5654/6AK5W*
ZT-7004	ZT-7004
7007	7007/6166A
7007/6166A	7007/6166A
ML-7007	7007/6166A
WL-7007	7007/6166A
TH-7020	GL-5551A
TH-7021	GL-5551A▲
7023	6809§
7025	7025
TH-7030	GL-5552A
TH-7031	GL-5552A▲
7034	4X150A
7036	7036*
7038	7038
WL-7038	7038
7038V	7038V
TH-7040	GL-5553B
7041	GL-5553B▲
TH-7041	GL-5553B
7044	7044
7054	7054
7056	7056
7058	7058
7059	7059
7060	7060
7061	7061
7077	7077
7120	7120
7121	7121
7136	575A
7151	GL-7151
GL-7151	GL-7151
7167	7167
7171	GL-7171
GL-7171	GL-7171
NL-7171	GL-7171
WL-7171	GL-7171
7203	4CX250B
ZG-7207	GL-37207
7212	6146B/8298A
7225	866A
7226	7226
7233	7233
7239	7239
ZG-7248	GL-37248
7262	7262A
7262A	7262A
7263	7263A
7263A	7263A
7266	7266
7289	7289/ 3CX100A5
7289/3CX100A5	7289/ 3CX100A5
7293	7293
GL-7293	7293
7293A	7293
7296	7296
7298	6809§
7299	6808§
WL-7299	6808§
7306	5632/C3J
7306A	5632/C3J
WL-7306A	5632/C3J
7307	6011/710
7307A	6011/710
WL-7307A	6011/710
7316	7189/12AU7A*
7321	6809§
WL-7321	6809§
7325	7325
7370	7370
7386	6807
GL-7390	GL-7390
GL-7390A	GL-7390A
7391	7391
GL-7391	7391
7399	GL-7399
GL-7399	GL-7399
VH-7400	872A/872
7462	7462
7486	7486
7509	7518
7509A	7518
WL-7509A	7518
WL-7509/710L	7518
ZR-7512	ZR-7512
ZR-7513	ZR-7513
ZR-7514	ZR-7514
ZR-7516	ZR-7516
ZR-7517	ZL-7517
7518	7518
GL-7518	7518
ZR-7518	ZR-7518
ZR-7519	ZR-7519
ZR-7520	ZR-7520
7527	4-400A
7543	7543
7560	7560
7560V	7560V
7581	7581A
7581A	7581A
7585	GL-5552A
AX-7585	GL-5552A
7588	7588
7611	8093A
7625	7625
7629	7629A
7629A	7629A
7644	7644
GL-7644	7644
7645	6939
7669	GL-7669
GL-7669	GL-7669
WL-7669	GL-7669
7669/PC	GL-7669/PC
GL-7669/PC	GL-7669/PC
WL-7669/PC	GL-7669/PC
7670	GL-7670
GL-7670	GL-7670
WL-7670	GL-7670
7671	GL-7671
GL-7671	GL-7671
WL-7671	GL-7671
7671/PC	GL-7671/PC
GL-7671/PC	GL-7671/PC
WL-7671/PC	GL-7671/PC
7672	GL-7672
GL-7672	GL-7672
WL-7672	GL-7672
7673	GL-7673
GL-7673	GL-7673
NL-7673	GL-7673
7673/PC	GL-7673/PC
GL-7673/PC	GL-7673/PC
NL-7673P	GL-7673/PC
WL-7673/PC	GL-7673/PC
7681	GL-7681
GL-7681	GL-7681
WL-7681	GL-7681
GL-7681/PC	GL-7681/PC
7697	7697
7701	7701
7703	GL-7703
GL-7703	GL-7703
NL-7703	GL-7703
WL-7703	GL-7703
7716	7716
7717	7717
7720	7720
7724	7724
7725	7725
7726	7726
7728	6201*
7729	7025
7730	6189/ 12AU7WA*
7731	6678
7732	6676
7733	12BY7A/ -BV7/-DQ7
7734	6GE8/7734
7735A	7735A
7735B	7735B
7736	7736
GL-7736	7736
7752	5725/6AS6W*
7768	7768
7784	7784
GL-7784	7784
7815	7815/ 3CPN10A5
7815/3CPN10A5	7815/ 3CPN10A5
7815R	7815R
7841	7841
Z-7856	Z-7856
7861	7861*
Z-7866	Z-7866
Z-7888	Z-7888
GL-7890	GL-7890
Z-7899	Z-7899
7910	7910
7911	7911
Z-7911	Z-7911
7913	7913
Z-7929R, G, B	Z-7929R, G, B
7964	GL-7964
GL-7694	GL-7964
GL-7964-1	GL-7964-1
7984	7984
7985	7985
GL-7985	GL-7985
7998	GL-7998
GL-7998	GL-7998
8005	8005
GL-8005	8005
ML-8005	8005
WL-8005	8005
8008	8008
CE-8008	8008
DR-8008	8008
EE-8008	8008
GL-8008	8008
ML-8008	8008
UE-8008	8008
VE-8008	8008
WL-8008	8008
8016	1G3/1B3GT
GL-8016	1G3/1B3GT
8018	807
8020	8020
DR-8020	8020
EE-8020	8020
GL-8020	8020
WL-8020	8020
8020/100R	8020
8024	832A
8032	6883B/8032A/ 8552
8032A	6883B/8032A/ 8552
WL-8032A	6883B/8032A/ 8552
CV8039	5840
8042	8042
CV8065	6922/E88CC
8068	8068
CV8068	6267
CV8073	6072A*
8077	7054
8077/7054	7054
M8079	5726/6AL5W*
M8080	6135*
8081	8081
8082	8082
8083	8083
8092	8092A
GL-8092	8092A
8092A	8092A
8093	8093A
8093A	8093A
M8096	5763
M8100	5654/6AK5W*
M8108	5749/6BA6W*
8102	8102
8106	8106
8113	8113*
M8121	5840
8134	8134
8134V	8134V
8136	8136
M8136	6189/ 12AU7WA*
M8137	7025
GL-8138	GL-8138
8156	8156
CV8158	2D21
8159/ 3CX10000A3	3CX10000A3/ 8159
8161/ 3CX2500A3	8161/ 3CX2500A3
CV8161	OA2
CV8162	OB2
M8162	6201*
8166	4-1000A
8167	4CX300A/8167
8168	4CX1000A/ 8168
8170	4CX5000A/ 8170
M8178	5727*
CV8189	5R4GYA
M8196	5725/6AS6W*
CV8204	5R4GYA
M8204	5727*
CV8205	6D4
CV8206	5763
M8212	5726/6AL5W*
CV8214	8020
M8214	7025
CV8216	6080
M8223	OA2
M8224	OB2
CV8226	6AS6
CV8227	5750/6BE6W*
CV8229	6005/6AQ5W*
CV8232	6080
M8232	6J4WA
8233	8233
8236	6DQ5
M8245	6005/6AQ5W*
CV8246	5654/6AK5W*
CV8247	5670*
CV8248	5750/6BE6W*
CV8249	6136*
8251	3CX2500F3/ 8251
CV8287	5686*
8298	6146B/8298A
WL-8298	6146B/8298A
8298A	6146B/8298A
8306	GL-7171
WL-8306	GL-7171
CV8310	5725/6AS6W*
CV8311	5726/6AL5W*
CV8312	5751*
CV8324	5844WA*
GL-8326	GL-8326
GL-8326A	GL-8326A
8327	6BQ5
8348	4-400A
8360	GL-8360
GL-8360	GL-8360
CV8403	6136*
GL-8420	GL-8420
8438	4-400A
8438/4-658	4-400A
8465	GL-8465
GL-8465	GL-8465
8466	GL-8466
GL-8466	GL-8466
8484	8484
8484H	8484H
8507A	8507A
8511	8511
8513	GL-8513
GL-8513	GL-8513
8532	6J4WA
8541	8541
8552	6883B/8032A/ 8552
8572	8572
8572V	8572V
8573	8573
8604	8604
8643	8643
8683	8683
GL-8866	GL-8866
9903	5894
AX-9903	5894
AX-9903/5894	5894
GLE13000/1.5/6	872A/872
GE-14501	GE-14501
GE-14811	GE-14811
GLE15000/¼	872A/872
GE-15371	GE-15371
GE-15372	GE-15372
GE-16411	GE-16411
GE-16841	GE-16841
GE-17241	GE-17241
GLE20000/ 2.5/10	866A
WL-22746	N15286AA
WL-22747	N15272AA
WL-22748	N15287AA
WL-22749	N15273AA
WL-22994	5544
WL-23011	GL-5551A
WL-23011/PC	GL-5551A/PC
WL-23012	GL-5552A
WL-23012/PC	GL-5552A/PC
WL-23013	GL-5553B
WL-23013/PC	GL-5553B/PC
WL-23014	GL-7669
WL-23014/PC	GL-7669/PC
WL-23015	GL-7671
WL-23016	GL-7681
WL-23017	GL-7673
WL-23018	GL-7673
GL-37207	GL-37207
GL-37248	GL-37248
GL-37274	GL-37274
38172	872A/872
38807	807
QY53000A	6076
56000	8020

For footnotes see Page 1278.

© United Technical Publications

HEINTZ AND KAUFMAN LTD SINCE 1927

Type	Resale Price
OG3/85A2	230
1AD4	3.05
1AJ5	3.50
1B24A	32.00
1B58A	83.00
1B63A	35.00
1P30	5.25
1P37	6.35
1P39	3.05
1P40	4.90
1P41	4.75
1R5WA	8.00
1T4WA	7.70
1U4WA	7.70
1U5WA	7.70
1Z2	11.20
2-450A	175.00
2AC15	11.00
2AS15A	10.50
2C36	67.00
2C37	67.00
2C39A	20.75
2C39WA	19.95
2C51	3.45
2C53	9.65
2D21W	2.90
2E22	23.20
2J55	205.00
2J70A	500.00
2K25	43.00
2K26	70.00
2K28	85.00
2K39	540.00
2K48	110.00
2K50	419.00
3B4	3.50
3B24WA	8.50
3B24WB	9.75
3B28	8.40
3B29W	18.00
3BP1A	39.00
3C23	8.00
3C24	27.50
3C45	19.85
3C45W	45.00
3D21WA	32.80
3D21WB	80.00
4B32	9.80
4C35A	40.00
4D32	72.00
4PR60B	115.00
4X150A	23.15
5A6	6.50
5C22	39.00
5R4WGA	9.65
5R4WGB	14.20
5Y3WGTB	5.40
6AH6WA	6.40
6AN5	4.14
6AN5WA	9.50
6AS6	3.33
6B4G	9.15
6BF7	2.40
6BL6	90.00
6BM6A	90.00
6C21	90.00
6D4	2.97
6J6WA	4.75
6L6WGB	7.00
6Q5G	6.80
6SA7WGT	7.90
7JP1	48.50
7VP1	48.50
12AT7WA	2.50
12AU7WA	3.45
12E1	9.35
25T	43.00
26A7GT	7.50
26Z5W	3.54
28D7W	9.50
35T	40.00
35TG	30.00
100TH	29.75
100TL	29.75
203WA	48.00
211W	55.50
249B	15.42
249C	12.30
250TH	40.00
250TL	40.00
254W	39.80
310A	13.25
311CH	45.00
311CT	48.00
313CA	5.67
313CC	4.97
323B	8.90
328A	9.75
329A	8.28
353A	7.25
354A	30.00
355A	28.00
371B	18.75
393A	8.75
394A	18.00
403B	4.00
407A	5.90
408A	4.95
416B	54.00
417A	7.15
418A	27.00
429A	17.00
468	54.00
543	45.00
545	92.00
572B	18.50
575A	19.50
576A	25.00
577W	46.00
582	43.00
583	16.00
673	20.00
705WA	54.00
715C	50.00
719A	178.00
725A	275.00
726B	68.00
726C	78.00
803	36.00
805	23.00
807	3.40
807W	Use 5933
808	12.25
809	11.00
810	23.00
811A	7.50
812A	7.50
813	25.00
814	20.00
815	26.00
816	4.05
826	40.00
829B	19.75
830B	21.00
832A	16.30
836	13.60
845	22.22
845W	49.00
851	995.00
861	150.00
866A	3.65
868	5.85
872A	8.50
873	18.00
917	8.00
918	6.40
922	3.65
923	4.50
927	4.95
930	4.80
934	4.70
966	8.70
973	24.75
1236C	22.00
1258	35.00
1319	115.00
1603	6.90
1611	4.45
1612	4.60
1616	10.30
1620	8.26
1621	3.85
1622	5.90
1624	9.75
2033	5.50
2050A	2.05
4401/V1	1087.65
4415	1389.76
4415A/L	1777.77
4416	1389.76
4416A/L	1777.77
4492	1644.44
4513A/L	1777.77
4536	1888.88
5530	375.00
5581	5.95
5608A	13.50
5636	6.00
5639	4.20
5641	5.90
5642	3.43
5643	8.75
5646	11.00
5647	9.15
5650	229.00
5651	1.78
5651WA	3.50
5654/6AK5W	2.35
5656	16.35
5670	2.35
5670WA	2.45
5672	2.48
5676	3.15
5678	2.48
5679	6.60
5686	3.30
5687	3.00
5687WA	5.25
5702WA	6.10
5702WB	9.50
5703	3.00
5703WA	7.00
5703WB	8.50
5718	3.65
5719	3.00
5721	120.00
5725/6AS6W	3.05
5726/6AL5W	1.35
5727/2D21W	2.90
5736	190.00
5744WA	6.88
5749/6BA6W	2.14
5750/6BE6W	3.45
5751	2.50
5751WA	2.83
5755/420A	8.65
5768	82.00
5780	795.00
5783WA	7.07
5784WB	15.00
5787	4.50
5787WA	998.50
5796	19.79
5814A	2.25
5820A	845.67
5820A/L(B)	1777.77
5823	1.70
5829WA	7.48
5836	90.00
5837	90.00
5840	5.05
5841	10.80
5842/417A	8.75
5842WA	15.29
5847/404A	9.40
5861	40.00
5864	39.00
5875	2.70
5881	3.10
5886	5.30
5894	25.00
5896	3.05
5897	6.00
5899	5.05
5901	7.50
5902	4.50
5903	7.75
5904	7.50
5906	9.80
5908	9.70
5910	2.40
5922	44.00
5932/6L6WGA	11.30
5933/807W	11.45
5933WA	16.25
5948/1754	165.00
5949/1907	160.00
5956	75.00
5957	75.00
5962	19.00
5976	70.00
6005/6AQ5W	3.15
6014/C1K	12.50
6057	4.75
6058	4.00
6059	6.95
6060	4.80
6061	6.35
6067	4.95
6076	338.00
6080WA	10.10
6080WB	21.00
6100/6C4WA	2.50
6111	3.50
6112	4.10
6115A	95.00
6130	19.85
6136/6AU6WA	2.60
6146B/8298A	5.10
6186/6AG5WA	3.85
6189/12AU7WA	3.50
6198A	135.00
6201/12AT7WA	2.50
6227	4.10
6236	123.00
6236A	134.00
6247	11.00
6252	25.00
6279	72.00
6280	54.00
6303	85.00
6326A	790.00
6336A	18.00
6336B	26.00
6360	4.95
6390	125.00
6442	39.50
6481	68.00
6503	79.00
6528	21.55
6550	4.95
6686	5.60
6688	6.55
6689	4.95
6788	10.85
6857	22.50
6883B	5.30
6888	4.00
6901	19.25
6922	4.65
6939	14.40
6977	2.50
7006	1388.00
7025	1.55
7035	29.00
7038	130.00
7038A	135.00
7038B	165.00
7062	2.95
7119	4.05
7198A	1432.10
7203/4CX250B	35.60
7226	275.00
7226A	705.00
7241	59.00
7242	65.00
7262	145.00
7262A	195.00
7289	26.50
7290	490.00
7291	395.00
7293A	1043.21
7293A/L	1777.77
7293B	1777.77
7293E	1777.77
7295B	1234.56
7295C	1777.77
7308	5.10
7325	130.00
7336	515.00
7360	3.75
7389B	1432.10
7389C	1888.88
7409	3555.55
7410	14.00
7513	1234.54
7513A/L	1777.77
7522	1265.00
7538	1432.10
7611	999.99
7693	4.95
7697	130.00
7722	8.00
7735	100.00
7735A	115.00
7735B	165.00
7737	8.15
7788	9.75
7967	3111.11
8000	26.50
8093A/L	1777.77
8108	225.00
8165	32.50
8252	115.00
8355	245.00
8370	105.00
8429	48.00
8436	375.00
8483	150.00
8484	150.00
8485	327.00
8507	170.00
8507A	175.00
8541	310.00
8552	5.30
8572	205.00
8673	1777.77
8674	1777.77
8748	1777.77
8749	1777.77
8758	145.00
8758A	160.00
8775	1777.77
8861	1418.18
8862	1874.74
8865	1490.90
9677C	245.00
C1A	13.50
C1K	12.50
C3J,C3JA	14.25
FG17	8.24
FP265	75.00
GC10/4B	20.15
GC10B	15.20
GC10D	23.85
GC12/4B	25.20
GS10C	18.70
GS10D	23.85
GS10H	15.80
GS12D	34.20
HF200	48.00
HF300	39.40
HK24	43.00
HK24G/3C24	27.50
HK253	48.50
HK254W	39.80
KT66	6.35
KT88	7.45
KU17	62.50
KU23	40.00
PL177A	32.00
SGR-1	42.00
SS501	29.30
UXCV11	20.50
X-13	402.00

HEINTZ & KAUFMAN Ltd. • Sold World Wide Since 1927

Net

© United Technical Publications

metro tubes

laboratory tested fully guaranteed

over 26 years of electron tube experience

TYPE	PRICE
1AD2*	$ .69
1AY2	.71
1G3GT/1B3GT*	.70
1K3/1J3	.70
1R5	.87
1S2A/DY87	.50
1T4	.76
1U4	.76
1U5	.67
1V2	.50
1X2A/B*	.74
2AV2*	.55
2BN4A	.71
2BU2	.80
2CN3A*	.81
2CY5	.87
2DZ4/2AF4B*	.85
2GK5/2FQ5A*	.77
2HA5	1.25
2HQ5*	.77
3A3C/3AW3/3B2*	.88
3AL5*	.53
3AT2*	.86
3AU6	.58
3AW2*	.86
3BN2*	.90
3BN6	.94
3BS2A*	.80
3BU8/3GS8	.97
3BW2/3BS2A/3BT2*	.90
3BZ6*	.67
3CB6/3CF6	.60
3CE5/3BC5	.59
3CS6*	.73
3CU3A/3DC3*	.94
3DA3/3CX3*	.90
3DB3/3CY3*	.81
3DC3*	.93
3DG4*	1.03
3DJ3*	.88
3DK6	.62
3DT6	.67
3GK5*	.83
3HQ5*	1.00
3HS8	.87
3JC6	.87
3KT6*	.75
3V4	.74
4AU6*	.67
4BS8	.85
4BU8/4GS8	.89
4BZ6	.58
4BZ7/4BQ7A	1.00
4CB6*	.59
4CS6	.67
4DK6	.67
4DT6	.64
4EH7*	.70
4EJ7*	.70
4EW6	.71
4GK5	.77
4GS8 Use 4BU8/4GS8	.89
4HA7/4HC7	.83
4HS8	.74
4JC6A	.91
4JD6	.91
4KE8	1.20
5AM8	.97
5AQ5*	.59
5AT8	.90
5BC3A/5BC3*	.67
5CG8*	.73
5CL8A	.97
5EA8	1.00
5EW6*	.67
5FG7	.80
5FV8/5BR8	.97
5GH8	.91
5GM6*	.64
5HA7	.85
5HZ6	.65
5J6	$ .73
5JK6	.73
5KE8	1.15
5KZ8	.70
5T8	.88
5U4GB/5AS4A	.55
5U8	.95
5V3/5AU4	1.20
5V4GA	.86
5V6GT	.74
5X8	.83
5Y3GT	.51
6AB4	.71
6AC10*	1.00
6AD10	2.00
6AF3	.75
6AF9*	1.20
6AF11	1.55
6AG5	.75
6AG9	1.45
6AG11	1.75
6AH6*	1.03
6AL5*	.53
6AL11	1.10
6AM8A	.80
6AN8A*	.95
6AQ5A/6HG5	.58
6AQ6	.65
6AQ7GT	.93
6AQ8/ECC85*	.59
6AR8	1.60
6AR11	1.08
6AS5	.74
6AS8	.98
6AS11	1.70
6AT6	.47
6AT8A	1.03
6AU4GTA*	.87
6AU5GT	1.05
6AU6A*	.54
6AU8A*	1.03
6AV5GA	1.03
6AV6*	.41
6AV11	1.30
6AW8A*	.90
6AX3	.63
6AX4GT8*	.67
6AX5GT	.78
6AY3B/6BS3A*	.67
6AY11	1.50
6B10	.95
6BA6/EF93*	.53
6BA8A*	.91
6BA11	.94
6BD11	1.65
6BE3*	.75
6BE6	.61
6BF11	1.40
6BH6	.72
6BH8*	.92
6BH11	1.05
6BJ3	.95
6BJ6	.71
6BJ7*	.80
6BJ8*	.88
6BK4C/6EL4A*	1.85
6BK7B	.89
6BL7GTA*	1.12
6BL8/ECF80*	.70
6BM8/ECL82*	.57
6BN4A*	.78
6BN8*	.74
6BN11*	1.65
6BQ5/EL84	.70
6BQ6GA/6CU6*	1.22
6BS8*	.98
6BT4/EZ40	1.30
6BU8*	.90
6BV8*	1.10
6BV11	.99
6BW8	1.20
6BW11	$1.50
6BX7GT	1.17
6BY6*	.67
6BY8	.75
6BZ3	1.00
6BZ6*	.54
6BZ7/6BQ7A*	.91
6C4*	.58
6C10	1.27
6CA4*	.64
6CB6A/6CF6*	.57
6CE5/6BC5	.65
6CF8/EF86	.88
6CG3/6CE3/6CD3*	.98
6CG8A*	.77
6CJ3/6DW4B/6CL3*	.88
6CK3	.74
6CL8A*	.82
6CM7*	.73
6CN7*	.89
6CS6*	.65
6CT7/EAF42	2.10
6CU5	.69
6CX8	1.03
6CY5	.84
6DC8/EBF89	.90
6DE4/6CQ4	.70
6DE6*	.70
6DE7	.88
6DK6*	.58
6DN6	2.50
6DN7	.91
6DT6A*	.54
6DT8	.77
6DZ4/6AF4A*	.88
6EA8*	.71
6EH4A*	2.25
6EH5	.71
6EH7/EF183*	.76
6EJ4A*	2.20
6EJ7/EF184*	.70
6EM5	.80
6EM7/6EA7*	1.03
6ER5*	.83
6EU7*	.71
6EW6*	.59
6FD7	1.13
6FG7*	.82
6FM7*	.79
6FQ7/6CG7*	.59
6FV8A/6BR8A*	.93
6G11	1.70
6GC5*	.99
6GF5	1.25
6GF7A*	.97
6GH8A*	.64
6GJ5	1.22
6GK5/6FQ5A*	.82
6GK6*	.67
6GL7*	1.15
6GM6*	.64
6GN8/6EB8*	1.00
6GT5A/6GT5	1.26
6GU7*	.73
6GW8/ECL86*	.90
6GY6/6GX6*	.57
6H6	1.04
6H85	1.35
6HB6/6HA6	.88
6HB7*	.79
6HE5*	.83
6HM5/6HA5*	.76
6HS6	1.55
6HS8*	.85
6HZ6*	.60
6J5	.92
6J6A*	.80
6J11	2.01
6JB6A	1.16
6JC6A*	.78
6JD6*	.70
6JF6	$1.36
6JH6*	.59
6JK6*	.76
6JN6*	.97
6JN8	.72
6JU8A*	.76
6JV8	.87
6JX8/ECH84	1.20
6K6GT	.69
6KA8*	.89
6KD6*	2.25
6KE8*	1.12
6KM6*	1.64
6KN6*	2.15
6KS6/6BN6*	.81
6KT8*	.90
6KY8A/6KY8	1.44
6KZ8*	.73
6L6GC	1.05
6LF8*	.93
6LJ8*	.88
6LM8*	.88
6LQ8	1.12
6LT8*	.70
6M11*	1.86
6MD8*	.96
6MJ8*	.93
6MK8*	.88
6N8/EBF80	1.50
6SG7	2.25
6SH7	1.26
6SL7GT	.87
6SN7GTB*	.70
6T8A*	.86
6T9	1.20
6V6GTA	.74
6W4GTA	.65
6W6GT	.81
6X4	.54
6X5GT	.65
6X8A*	.77
7AU7*	.62
8AC10*	1.23
8AW8A*	.96
8B10	1.22
8BM11	1.64
8BQ5	.62
8BQ11*	1.49
8BU11	1.50
8CS7	.78
8GJ7/PCF801	.80
8JV8*	.85
9BJ11	1.86
9V9/PCH200	1.20
10AL11	1.40
10C8	1.20
10GF7A/10GF7*	.95
10GK6*	.68
10LZ8/10JA8	.82
11AR11	1.50
11BQ11	1.50
11FY7*	1.28
11HM7*	1.04
11KV8	1.17
11LQ8*	1.17
11LT8*	1.28
12AB5	.76
12AC10A*	1.50
12AD6	.69
12AE10	2.00
12AF3	.84
12AL5	.54
12AL11	1.12
12AQ5	.68
12AT6	.54
12AU6	.57
12AV5GA	1.08
12AV7	.82
12AX7/ECC83*	.53
12AZ7A*	.73
12B4A	.69
12BA6	$ .42
12BE3	.69
12BE6	.51
12BF11*	1.80
12BT3	1.20
12CA5	.78
12CU5/12C5	.77
12DT8*	.79
12FX5	.64
12GE5*	.90
12GN7A*	1.01
12HE7	2.35
12SL7GT	.98
12SN7GTA	.76
12SQ7	1.35
12V6GT	.88
12W6GT	.97
12X4	.44
13DE7	.88
13EM7/15EA7	1.16
13GF7A	.93
13JZ8*	1.49
14GW8/PCL86	1.85
15DQ8/PCL84*	.67
15FM7/13FM7	.92
15GV8/PCL85	1.10
16A8/PCL82*	.67
16GK6	.61
17AX4GTA	.70
17AY3A/17BS3A/17AY3	.67
17CU5/17C5	.61
17D4/17DM4A	.80
17DQ6B/17GW6	1.04
17JB6A	1.09
17Z3A/PY83*	.87
18FX6	.58
19AU4GTA*	.87
19T8	.97
19Y3/PY82	.85
22BW3	.68
22DE4	.83
22JF6	1.36
22JU6	1.26
25C5	.65
25EH5	.73
25L6GT/25W6GT	.73
30AF3/PY88	1.00
33C5	.53
35EH5	.67
35L6GT	.76
35Z5GT	.58
36AM3A	.50
AZ41	1.50
50DC4	.40
50EH5	.59
50L6GT	.79
E80CC	1.95
7189A	.76
7247	.80
KT66	3.63
KT66MP	8.00
KT88	4.75
KT88MP	10.00
AW17-20	99.00
AW36-48	99.00
A2426	14.75
A2900	5.95
TWS-12	1489.00
TWS-15	1489.00

* COLOR

Prices subject to change without notice.

INDIVIDUALLY BOXED!

Special Discount on Quantity Orders. Minimum order $200.00.
Terms of Sale — 1% 10 days. F.O.B. N.Y. Ask about our contract and blanket order program.
Manufacturers warranty applies on all purchases.

Copyright 1970



Metropolitan Supply Co.

Division of Metropolitan Overseas Supply Corp.

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The RADIO-ELECTRONIC **MASTER**
A United Technical Publication

Penta LABORATORIES DIVISION OF KILOVAC

HIGH EFFICIENCY POWER TUBES

Because of their proven reliability, long life and high efficiency, Penta power tubes are specified by an ever increasing number of equipment manufacturers. More and more power tube users, too, now specify Penta tubes for replacements. Extra care in every step of production and test assures you of top performance and quality in each Penta power tube you buy.

ELECTRICAL SPECIFICATIONS



PL-5D22 (4-250A) Power Tetrode

Fil. Volts	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt. Max.	Plate Current Ma., Max.	Screen Voltage Max.	List Price
5.0	14.5	250	4,000	350	800	$ 46.50

Power tetrode, used in communications and amateur equipment. Can be used at full ratings up to 75 Mc. and with reduced ratings to 120 Mc. Unusually small amount of driving power normally required for specified value of power output. Useful as r-f power amplifier, or a-f amplifier and modulator.



PL-6775 Power Tetrode

Fil. Volts	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt. Max.	Plate Current Ma., Max.	Screen Voltage Max.	List Price
5.0	14.5	400	4,000	350	800	$ 52.00

Ruggedized power tetrode, unilaterally interchangeable with 4-400A. Can be mounted in any position, will withstand high levels of shock and vibration. Design minimizes possibility of inter-electrode shorts. One-piece plate seal and cap can't loosen, fall off, or easily break. Excellent in applications where high level of reliability is required.



PL-8438/4-400A Power Tetrode

Fil. Volts	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt. Max.	Plate Current Ma., Max.	Screen Voltage Max.	List Price
5.0	14.5	400	4,000	350	800	$ 48.00

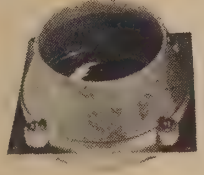
Widly used power tetrode. Excellent as r-f amplifier and a-f amplifier and modulator. Penta unique ribbed-anode construction provides large effective plate radiating area, with minimum plate, screen-grid and control-grid temperatures.



PL-8295/172 Beam Pentode

Fil. Volts	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt. Max.	Plate Current Ma., Max.	Screen Voltage Max.	List Price
6.0	8.2	1000	3,000	1000	600	$155.00

1000-watt beam pentode. Provides high power gain and good efficiency at relatively low plate voltages. Cooled by forced air. Widely used as Class-AB_1 linear amplifier, delivering over 1500 watts useful power output. Also excellent for Class-AB_2, Class-B, and Class-C service.

Accessories	Type	Description	List Price
	PL-184A	Socket for PL-8295/172 and PL-8295A, including the chimney. Suppressor-grid contacts are grounded.	$49.00
	PL-265A	Sockets for PL-264. Includes chimney, screen-grid by-pass capacitors. Provides for correct distribution of air for proper tube cooling at full rated plate dissipation.	$53.00

Penta Laboratories, a name well known in the electronics industry for over 17 years, is now a division of KILOVAC, leading manufacturer of high voltage vacuum relays and capacitors.

Kilovac® CORPORATION

Kilovac Vacuum Relays • **Penta** RF Power Tubes • **Dow-Key** Coaxial Relays

© United Technical Publications

Trade Discount Applies To List Prices Only

RCA

ELECTRON TUBES
FOR INDUSTRY AND COMMUNICATIONS

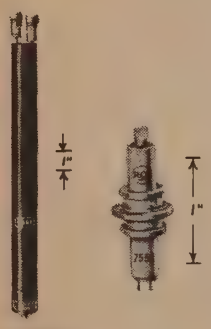
RESALE PRICE SCHEDULE • JUNE 1, 1970

POWER / MICROWAVE / PHOTOSENSITIVE / CAMERA / DISPLAY / INDUSTRIAL RECEIVING

MICROWAVE DEVICES



Magnetrons



Traveling Wave — Pencil

CAMERA & DISPLAY

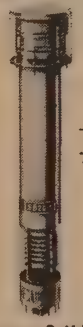


Image Orthicons



Vidicons

RCA Type	Optional Distributor Resale Price
0A2	$1.39
0A2WA	3.35
0A3	1.67
0A3A	1.67
0A4G	2.21
0B2	1.50
0B2WA	2.59
0C2	1.70
0C3	1.58
0C3A	1.58
0D3	1.57
0D3A	1.57
1C21	4.55
1EP1	31.50
1EP2	14.00
1EP11	32.90
1L4	1.50
1P21	56.70
1P22	18.75
1P28	22.50
1P28/V1	30.10
1P28A	28.70
1P28A/V1	46.20
1P29	9.00
1P37	7.20
1P39	3.95
1P40	5.90
1P41	6.50
1P42	17.15
2AP1A	21.85
2BP1	15.50
2BP11	12.40
2C39A	20.75
2C39A/V1	28.00
2C39WA	28.00
2C40	(Withdrawn 3/70)
2C43	25.80
2D21	1.43
2D21W	(Use 5727)
2E24	8.00
2E26	4.35
2K26	68.00
2X2A	4.60
3A4	2.05
3A5	2.23
3AP1A	43.55
3AQP1	34.35
3B4WA	5.85
3B28	9.55
3BP1A	33.90
3C23	11.98
3C33	35.00
3C45	(Use 6130/3C45)
3CX3000A7	278.00
3CX10000A7	580.00
3D22A	41.00
3E29	23.20
3JP1	25.40
3JP7	27.65
3KP1	32.20
3KP7	14.00
3KP11	14.00
3RP1	19.70
3RP1A	30.80
3RP7A	35.00
3WP1	39.20
3WP11	41.65
3X200F1	(Use 8239/ 3X3000F1)
4-65A	(Use 8165/4-65A)
41-125A/4D21	36.00
4-250A/5D22	48.00
4-400A	(Use 8438/4-400A)
4-1000A	(Use 8166/4-1000A)
4CX250B	35.60
4CX250F	(Use 7204/4CX250F)
4CX300A	(Use 8167/4CX300A)
4CX1000A	(Use 8168/ 4CX1000A)
4CX5000A	(Use 8170/ CX5000A)
4CX10,000D	(Use 8171/ 4CX10,000D)
4CX15,000A	(Use 8281/ 4CX15,000A)
4D21	(Use 4-125A/4D21
4E27A/5-125B	50.00
4X150A	23.15
4X150D	(Use 7035/4X150D)
4X500A	128.50
5-125B	(Use 4E27A/5-125B)
5ABP1	51.05
5ABP7	49.70
5ABP11	21.00
5ABP31	47.60
5ADP1	51.05
5ADP31	51.05
5AUP24	150.00
5AZP4	135.00
5BP1A	43.05
5C21	(Use C6J/5C21)
5CP1A	40.60
5CP11A	$21.00
5D22	(Use 4-250A/5D22)
5FP4A	36.05
5FP7A	40.95
5R4GYB	2.28
5UP1	21.10
5UP7	28.00
5UP11	23.50
5UP31	23.10
5WP11	49.00
5WP15	(Withdrawn 7/69— No RCA Replacement)
5ZP16	110.00
6AC7W	5.45
6AG5WA	(Use 6186/6AG5WA)
6AG7Y	2.80
6AH6WA	7.60
6AK5W	(Use 5654/6AK5W)
6AK6	1.40
6AL5W	(Use 5726/6AL5W)
6AN5	4.20
6AQ5W	(Use 6005/6AQ5W)
6AS6	3.77
6AS6W	(Use 5725/6AS6W)
6AS7G	5.25
6AS7GA	4.93
6AU6WB	3.11
6BA6W	(Use 5749/6BA6W)
6BE6W	(Use 5750)
6CY5	(Use 7717/6CY5)
6D4	3.20
6DJ8/ECC88	1.89
6F4	14.40
6J4	4.51
6J4WA	5.60
6J6WA	5.35
6SJ7Y	2.65
6X4W	1.60
7BP7A	35.45
7C24	(Use 5762)
7CP4	(Withdrawn 5/69— No RCA Replacement)
7MP7	59.95
7NP4	1140.00
7TP4	73.15
7VP1	30.80
7VP31	30.80
7WP4	1140.00
8HP4	52.50
8NP4	59.50
8QP4	63.00
9C25	2640.00
10SP4	99.35
12A6	3.60
12AT7WA	2.86
12AT7WB	2.86
12AU7WA	(Use 6189/ 12AU7WA)
12AX7A	(Use 6681/12AX7A)
12SW7	1.78
12SX7GT	(Withdrawn 5/69— No RCA Replacement)
12SY7	3.01
14GT8	(Use 7724/14GT8)
17DWP4	60.00
21EYP4	44.60
26A6	3.70
26A7GT	7.70
26C6	3.05
26D6	3.05
83	2.21
105	59.00
356	(Use 5771)
404A	(Use 5847/404A)
407A	5.90
408A	4.95
417A	(Use 5842/417A)
575A	23.40
579B	20.90
604/7014	12.90
615/7018	10.05
627	28.88
632B	34.65
672A	41.40
673	22.75
676	68.00
677	68.00
710/6011	12.00
714/7021	10.00
716/6855	12.50
760/6858	28.10
801A	(Withdrawn 7/68— Refer to TPG200E)
807	5.15
810	33.60
811A	8.60
812A	7.20
813	25.85
815	(Withdrawn 3/68— Refer to TPG200E)
816	4.50
827R	$615.00
828	37.00
829B	20.80
830B	15.55
832A	17.70
833A	71.70
834	19.25
836	14.70
837	16.65
845	35.20
857B	225.00
860	(Withdrawn 11/69— Refer to TPG200E)
866A	4.05
868	7.20
869B	138.00
872A	11.70
880	(Withdrawn 6/70)
884	2.77
889RA	(Withdrawn 4/69— No RCA Replacement)
891R	453.00
892	329.00
892R	443.00
902A	22.40
917	10.10
918	7.20
919	10.80
920	11.15
921	6.15
922	3.75
923	5.80
925	6.35
926	6.05
927	7.60
929	3.90
930	5.90
931A	12.50
931VA	13.10
934	7.40
935	14.70
955	7.05
959	13.85
991	1.62
1319	67.00
1612	6.52
1613	3.30
1614	5.40
1616	17.85
1619	6.89
1620	8.26
1621	3.85
1622	6.00
1624	12.50
1625	6.30
1629	2.55
1635	4.76
1640	(Use 6405/1640)
1858	430.00
1946	16.15
1947	47.00
1949	23.75
2020	93.85
2022	5.80
2031	17.60
2041	(Price on Request)
2048	720.00
2050	2.48
2050A	2.21
2054	(Price on Request)
2055	19.00
2060	55.30
2061	66.50
2062	66.50
2063	105.00
2064B	120.00
2065	153.00
2067	175.00
2076/5R4GYB	2.05
2081/ 6AW8A	(Price on Request)
2082/ 12AY7	(Price on Request)
AJ2100 Series	(See end of Table)
HT2100	69.00
DP2118 [8575 Socket]	(Withdrawn 11/68— Use AJ2145)
AJ2117V2	(Withdrawn—See end of Table)
AJ2132 [8575 Adaptor]	42.00
AJ2142 [4522 Accessory]	63.00
AJ2143 [4522 Adaptor]	35.00
AJ2143A [4522 Adaptor]	35.00
AJ2144 [8575 Socket]	13.20
AJ2145 [8575 Socket]	13.20
AJ2148 [4641 Accessory]	35.00
AJ2149 [4641 Accessory]	130.00
SQ2500 Series	(Refer to Semiconductor Price Schedule)
4009	$1670.00
4010	920.00
4012	(Price on Request)
4013	(Price on Request)
4015	(Price on Request)
4017	(Price on Request)
4019	(Price on Request)
4020	(Price on Request)
4021	(Price on Request)
4028A	32.35
4037A	28.50
4041	(Price on Request)
4053	(Price on Request)
4054	(Price on Request)
4055	32.90
4058	17.60
4062A	32.90
4065	31.50
4401/V2	1165.00
4409	5.60
4412	3415.00
4427	(Withdrawn 5/70)
4438	120.00
4439	120.00
4440	115.00
4441	170.00
4441A	350.00
4449A	(Price on Request)
4452	850.00
4454	970.00
4456	670.00
4459	495.00
4459A/8507A	235.00
4460	235.00
4461	310.00
4462	103.00
4463	260.00
4464	260.00
4465	305.00
4470	8775.00
4471	19.00
4472	24.60
4473	63.00
4478	36.00
4482	(Withdrawn 3/70)
4486	1150.00
4488	(Use 7735)
4489	(Withdrawn 5/69— No RCA Replacement)
4490	36.05
4491	39.85
4499	28.00
4500	480.00
4503	470.00
4503A	555.00
4510	35.70
4516	185.00
4517	80.00
4518	105.00
4521	585.00
4522	645.00
4523	125.00
4524	135.00
4525	170.00
4526	400.00
4542	430.00
4557	57.40
4572	22.15
4588	370.00
4589	370.00
4600A	370.00
4604	9.80
4612	(Withdrawn 7/70)
4614	345.00
4616	(Price on Request)
4621	125.00
4624	295.00
4626	645.00
4628	1225.00
4629	445.00
4630	2670.00
4631	95.25
4632	1160.00
4634	(Use 4634/V1)
4634/V1	440.00
4635	2500.00
4636	525.00
4637	117.30
4638	700.00
4640	3165.00
4641	(Withdrawn 5/69)
4651	390.00
4652/8042	11.65
4654/5762	430.00
4656	1520.00
4661	645.00
MW4900	320.00
MW4901	495.00

Net

© United Technical Publications

RCA

ELECTRON TUBES
FOR INDUSTRY AND COMMUNICATIONS

RESALE PRICE SCHEDULE • JUNE 1, 1970

POWER / MICROWAVE / PHOTOSENSITIVE / CAMERA / DISPLAY / INDUSTRIAL RECEIVING

RCA Type	Optional Distributor Resale Price
5550	$51.40
5551A	67.90
5552A	103.55
5556	67.00
5557	9.50
5558	17.50
5559	23.00
5560	33.00
5561	59.00
5563A	53.90
5581	6.60
5582	7.90
5583	9.85
5632	(Use C3J/5632)
5636	6.10
5639	5.25
5642	3.53
5651A	1.95
5651WA	3.95
5652	9.15
5653	5.65
5654	2.73
5654/6AK5W	(Use 5654)
5654/6AK5W/6096	(Use 5654)
5663	2.65
5665	(Use C16J/5665)
5670	2.70
5670WA	2.70
5671	2540.00
5672	2.48
5675	7.10
5678	2.48
5684	(Use C3JA/5684)
5685	(Use C6JA/5685)
5686	3.97
5687	4.28
5691	9.15
5692	8.75
5693	7.10
5696	2.25
5696A	2.00
5713	850.00
5718	3.65
5719	3.15
5725	3.40
5725/6AS6W	3.40
5726	2.02
5726/6AL5W	2.02
5726/6AL5W/6097	2.02
5727	3.05
5727/2D21W	(Use 5727)
5734	22.05
5749	2.86
5749/6BA6W	2.86
5750	4.10
5750/6BE6W	(Use 5750)
5751	2.83
5751WA	2.83
5762	255.00
5762/7C24	(Use 5762)
5763	2.69
5770	1930.00
5771	700.00
5783	4.19
5786	310.00
5794A	(Use 6562/5794A)
5814A	2.66
5814WA	(Use 5814A)
5819	85.55
5823	1.78
5824	4.58
5825	33.00
5840	5.35
5842/417A	7.35
5844	2.72
5847/404A	9.55
5876A	7.60
5881	3.10
5893	18.45
5896	3.80
5899	5.55
5902	4.80
5915	1.85
5946	145.00
5963	1.48
5964	1.86
5965	2.11
6005	3.57
6005/6AQ5W	3.57
6005/5W/6095	3.57
6011	(Use 710/6011)
6012	8.00
6014	(Use C1K/6014)
6021	3.50
6072	4.24
6072A	4.25
6073	$3.25
6073/0A2	3.60
6074	3.70
6074/0B2	3.85
6076	338.00
6076A	345.00
6080	5.50
6080WA	10.80
6082	5.60
6095	(Use 6005/5W/6095)
6096	(Use 5654/5W/6096)
6097	(Use 5726/5W/6097)
6099	(Price on Request)
6101	5.75
6101/6J6WA	5.75
6111	3.70
6112	4.15
6130/3C45	25.75
6136	3.08
6146A	4.30
6146B/8298A	5.15
6146W	6.60
6155	42.00
6156	(Withdrawn 4/70)
6159	(Use 6159B)
6159B	5.05
6159W	9.00
6159W/7357	6.60
6161	150.00
6166	910.00
616A/7007	1055.00
6173	15.20
6181	1390.00
6186	4.35
6186/6AG5WA	4.35
6189	4.00
6189/12AU7WA	4.00
6197	2.59
6199	53.20
6201	3.15
6202	2.69
6206	7.25
6211	2.50
6217	85.55
6263A	13.55
6264A	14.35
6293	5.85
6328	14.45
6336A	19.04
6342A	66.50
6350	2.20
6360	4.95
6360A	6.25
6381	(Price on Request)
6386	9.50
6405/1640	9.55
6417	3.33
6472	16.20
6485	2.25
6499	285.00
6521	725.00
6521/R	725.00
6524	28.70
6550	6.00
6550/V1 [Matched Pair]	12.50
6562/5794A	(Price on Request)
6570	12.90
6626/0A2WA	3.50
6655A	66.50
6660/6BA6	1.69
6661/6BH6	2.06
6662/6BJ6	2.08
6663/6AL5	1.54
6664/6AB4	1.85
6669/6AQ5A	1.76
6676/6CB6A	1.69
6677/6CL6	2.46
6678/6U8A	2.02
6679/12AT7	1.83
6680/12AU7A	1.61
6681/12AX7A	1.44
6686	6.00
6688A	6.80
6810A	225.00
6814	(Withdrawn 11/69— No RCA Replacement)
6816	56.00
6850	25.90
6855	(Use 716/6855)
6858	(Use 760/6858)
6861	995.00
6866	1280.00
6883	4.70
6883B/8032A/8552	5.60
6884	39.20
6887	1.40
6894	$25.90
6895	25.90
6897	36.35
6903	430.00
6914	(Price on Request)
6914A	(Price on Request)
6922/E88CC	4.87
6929	(Price on Request)
6939	11.37
6949	(Price on Request)
6950	(Price on Request)
6952	(Price on Request)
6953	9.15
6977	2.48
7007	(Use 6166A/7007)
7008	1140.00
7014	(Use 604/7014)
7018	(Use 615/7018)
7019	(Use 635/7019)
7021	(Use 714/7021)
7034/4X150A	(Use 4X150A)
7035/4X150D	(Withdrawn 7/69— Refer to TPG200E)
7038	175.00
7043	(Withdrawn 6/70)
7044	2.95
7046	(Price on Request)
7054	1.68
7055	1.09
7056	1.02
7057	2.02
7058	1.50
7059	1.65
7060	1.96
7061	1.54
7094	44.00
7102	115.00
7117	13.65
7167	1.61
7183A	1025.00
7198A	1335.00
7200	210.00
7203/4CX250B	(Use 4CX250B)
7203/4CX250B/V1	(Use 4CX250B)
7204/4CX250F	38.00
7212	(Use 6146W)
7213	430.00
7214	465.00
7258	2.28
7262A	190.00
7263A	360.00
7264	265.00
7265	390.00
7268B	(Price on Request)
7271	44.80
7308	5.20
7315	925.00
7326	370.00
7360	3.42
7457	63.90
7533	7.75
7539	1765.00
7551	3.67
7552	46.65
7553	55.80
7554	39.20
7558	3.49
7586	3.65
7587	5.50
7642	1265.00
7643	6.00
7649	130.00
7650	265.00
7651	270.00
7717/6CY5	1.39
7724/14GT8	1.48
7735	110.00
7735A	150.00
7735B	175.00
7746	215.00
7764	135.00
7767	130.00
7788	11.25
7801	280.00
7835	(Price on Request)
7842	63.90
7843	35.00
7850	260.00
7870	120.00
7895	3.70
7898	1.50
7905	3.85
7967	(Withdrawn 12/69— Refer to TPG200E)
8000	$26.25
8005	21.00
8008	12.40
8013A	21.45
8020	23.50
8032	4.90
8032A	(Use 6883B/8032A/8552)
8042	(Use 4652/8042)
8053	107.65
8054	125.00
8055	155.00
8056	5.15
8058	15.80
8072	21.65
8077/7054	1.54
8121	33.60
8122	35.00
8134	200.00
8136	1.43
8156	(Withdrawn 3/70)
8160/3CX10000A7	(Use 3CX10000A7)
8165/4-65A	29.50
8166/4-1000A	135.00
8167/4CX300A	54.00
8168/4CX1000A	200.00
8170/4CX5000A	495.00
8171/4CX10000D	575.00
8184	2555.00
8203	3.90
8226	80.05
8233	14.70
8234	(Price on Request)
8239/3X3000F1	245.00
8281/4CX15000A	695.00
8298	(Use 6146A)
8298A	(Use 6146B/8298A)
8379	1525.00
8393	3.60
8437	2890.00
8438/4-400A	48.00
8462	53.90
8480	760.00
8501	1150.00
8507A	190.00
8521	610.00
8532	5.60
8532/6J4WA	5.60
8541A	215.00
8552	(Use 6883B/8032A/8552)
8567	995.00
8568	(Price on Request)
8571	215.00
8573	(Withdrawn 3/70)
8573A	210.00
8575	325.00
8575/V1 [Includes AJ2132]	340.00
8587	(Price on Request)
8596	105.00
8627	14.15
8627A	57.90
8628	5.00
8644	310.00
8645	415.00
8664	1665.00
8664/V1	1800.00
8684	2335.00
8685	1440.00
8727	35.00
8791	(Withdrawn 4/70)
8791/V1	148.00
8792	(Withdrawn 4/70)
8793	555.00
8794	645.00
8806	645.00
8807	760.00
8808	16.20
8811	215.00
8828	130.00
8840	(Price on Request)
8850	600.00
9001	5.38
9002	4.14
9003	5.38
9005	8.05
9006	2.70
C1K/6014	12.30
C3J/5632	13.65
C3JA/5684	14.05
C3J/L	15.05
C6J/5C21	28.10
C6JA/5685	28.30
C16J/5665	52.50

PHOTOSENSITIVE



Multiplier



Phototubes



Photocells

POWER TUBES



Small



Large



Super

AJ2100 SERIES — Except for AJ numbers listed on the price schedule (sockets & adaptors), other AJ numbers refer to special accessories for the RCA 8568 super power Klystron used in very sophisticated Gov't Systems. Orders thru distributors will be handled in same manner as Developmental types. Contact your RCA Distributor for price and delivery information.

DEVELOPMENTAL TYPES — RCA tube type numbers which have an 'A' or 'C' prefix are usually identified as **Developmental** types. Contact your RCA Distributor for price and delivery information.

© United Technical Publications

Net

RCA

PICTURE TUBES

RCA SILVERAMA® BLACK AND WHITE PICTURE TUBE INTERCHANGEABILITY GUIDE

All materials and parts used in the manufacture of RCA Silverama picture tubes are new except for the envelope which, prior to re-use, was carefully inspected to meet the standards of the original new envelope.

Type to be Replaced	Replaced by RCA Type†
7JP4	7JP4
8DP4	8DP4
9AEP4	9AEP4
9WP4	9WP4
10ATP4	10ATP4
11AP4 11BP4	11HP4A
11CP4	11CP4
11GP4	11GP4
11HP4 11HP4A	11HP4A
12BNP4 12BNP4A	12BNP4A
12CFP4	12CNP4
12CGP4	12BNP4A
12CNP4	12CNP4
12DEP4	12DEP4
12DFP4	12DFP4
12DSP4	12DSP4
14NP4 14NP4A 14RP4 14RP4A 14SP4	14WP4
14WP4 14WP4/ 14ZP4 14ZP4 14ZP4/ 14WP4	14WP4
15VACP4	16CHP4 16CHP4A
16ASP4 16AXP4	16CMP4A
16AYP4	16BGP4
16BFP4	16CMP4A
16BGP4	16BGP4
16BKP4	16CHP4A
16BMP4	16BGP4
16BQP4	16CMP4A
16BTP4	16CHP4A
16BVP4	16CMP4A
16BWP4 16CAP4	16BGP4
16CEP4	16CMP4A
16CHP4 16CHP4A	16CHP4A
16CJP4 16CMP4 16CMP4A	16CMP4A
16CTP4	16BGP4
16CUP4	16CMP4A
16CVP4	16CHP4A
16KP4 16KP4A	16RP4B
16QP4	16RP4B
16RP4 16RP4/ 16KP4 16RP4A 16RP4A/ 16KP4A	16RP4B
16RP4B	16RP4B
16TP4	16TP4
16UP4	16RP4B
16XP4	16RP4B
17AP4	17BP4D
17ATP4 17ATP4/ 17AVP4 17ATP4A 17ATP4A/ 17AVPA 17AVP4 17AVP4/ 17ATP4 17AVP4A 17AVP4A/ 17ATP4A	17BJP4
17BJP4	17BJP4
17BP4	17BP4D
17BP4A 17BP4B 17BP4C	17BP4D
17BP4D	17BP4D
17BRP4	17DSP4
17BUP4	17BJP4
17BZP4 17BZP4/ 17CAP4/ 17CKP4 17BZP4/ 17CAP4/ 17CKP4/ 17BRP4 17CAP4	17DSP4
17CBP4	17BJP4
17CFP4	17CFP4
17CKP4	17DSP4
17CLP4	17BJP4
17CTP4	17EFP4
17CWP4	17DSP4
17CYP4	17CFP4
17DAP4	17DAP4
17DHP4	17EFP4
17DKP4	17DSP4
17DLP4	17DSP4
17DQP4	17DQP4
17DRP4	17DRP4
17DSP4	17DSP4
17DTP4	17DSP4
17DXP4 17DZP4	17DXP4
17EAP4	17HP4C
17EBP4	17EFP4
17EFP4	17EFP4
17EMP4	17EMP4
17EWP4	17EWP4
17FP4 17FP4A 17HP4 17HP4/ 17RP4 17HP4A 17HP4B 17HP4B/ 17RP4C	17HP4C
17HP4C	17HP4C
17JP4	17BP4D
17KP4 17KP4A	17HP4C
17LP4 17LP4/ 17VVP4 17LP4A 17LP4A/ 17VP4B	17LP4B
17LP4B	17LP4B
17QP4 17QP4A	17QP4B
17QP4B	17QP4B
17RP4 17RP4C	17HP4C
17SP4	17LP4B
17UP4	17QP4B
17VP4 17VP4/ 17LP4 17VP4B	17LP4B
17YP4	17QP4B
19ABP4	19ABP4
19ACP4	19CHP4
19ADP4	19AVP4
19AFP4	19AFP4
19AGP4	19AVP4
19AHP4	19AYP4
19AJP4	19AJP4
19AKP4	19AVP4
19ANP4	19AYP4
19ARP4	19AFP4
19ATP4	19AFP4
19AUP4	19AFP4
19AVP4	19AVP4
19AWP4	19AYP4
19AXP4 19AYP4	19AYP4
19AZP4	19AVP4
19BDP4	19BDP4
19BHP4	19AVP4
19BLP4	19AVP4
19BMP4	19AFP4
19BRP4	19DRP4
19BSP4 19BTP4	19AVP4
19BVP4	19AVP4
19BWP4	19AYP4
19BXP4	19AYP4
19CAP4	19AVP4
19CDP4	19CXP4
19CFP4	19CHP4
19CHP4	19CHP4
19CJP4	19AVP4
19CKP4	19CHP4
19CLP4	19BDP4
19CMP4 19CMP4A	19CMP4
19CQP4	19CXP4
19CRP4	19BDP4
19CSP4	19CHP4
19CUP4	19CMP4
19CXP4	19CXP4
19CYP4	19AVP4
19CZP4 19DAP4	19DQP4
19DCP4	19DRP4
19DEP4	19AVP4
19DFP4	19CHP4
19DHP4	19DSP4
19DKP4	19DRP4
19DLP4	19CHP4
19DNP4	19DRP4
19DQP4	19DQP4
19DRP4	19DRP4
19DSP4	19DSP4
19DTP4	19DQP4
19DUP4	19DUP4
19DWP4	19DQP4
19EAP4	19FEP4B
19EBP4	19EBP4
19EDP4	19DRP4
19EFP4	19DSP4
19EGP4	19EGP4
19EHP4 19EHP4A	19DRP4
19EJP4	19FEP4B
19ELP4	19AVP4
19EMP4	19EBP4
19ENP4 19ENP4A	19FEP4B
19ERP4	19DRP4
19ESP4	19DSP4
19EUP4	19DRP4
19EVP4 19EWP4	19DQP4
19EZP4	19EZP4
19FBP4	19EGP4
19FCP4 19FCP4A 19FDP4	19DQP4
19FEP4 19FEP4A 19FEP4B	19FEP4B
19FJP4 19FJP4A	19DQP4
19FLP4	19FLP4
19FSP4	19FEP4B
19FTP4	19FLP4
19FWP4	19AYP4
19GAP4	19GAP4
19GBP4	19DQP4
19GEP4 19GEP4A 19GFP4	19EGP4A
19GHP4	19DUP4
19GJP4 19GJP4A	19DQP4
19GNP4	19DRP4
19GRP4	19DQP4
19GTP4	19FEP4B
19VAHP4	2DSP4
19VAJP4	19VAJP4
19XP4	19AVP4
19YP4	19AVP4
19ZP4	19AVP4
20RP4	20RP4
20SP4	20SP4
20TP4 20XP4	20TP4
20YP4 20ZP4	20SP4
21ACP4/ 21AMP4 21ACP4A 21ACP4A/ 21AMP4A 21ACP4A/ 21BSP4 21ACP4A/ 21BSP4/ 21AMP4A	21AMP4B
21AFP4	21YP4B
21ALP4 21ALP4A 21ALP4B 21ALP4B/ 21ALP4A	21CBP4A
21AMP4 21AMP4A	21AMP4B
21AMP4B	21AMP4B
21ANP4 21ANP4A	21CBP4A
21AP4	21ZP4C
21AQP4 21AQP4A	21AMP4B
21ASP4	21XP4B
21ATP4 21ATP4A 21ATP4A/ 21ATP4 21ATP4B	21CBP4A
21AUP4 21AUP4A 21AUP4B 21AUP4B/ 21AUP4A	21AVP4C
21AUP4C	21AVP4C
21AVP4 21AVP4/ 21AUP4 21AVP4A 21AVP4B 21AVP4B/ 21AVP4A 21AVP4B/ 21AUP4B/ 21AVP4A/ 21AUP4A	21AVP4C
21AVP4C	21AVP4C
21AWP4	21AWP4A
21AWP4A	21AWP4A
21AYP4	21XP4B
21BAP4	21CBP4A
21BCP4	21YP4B
21BDP4	21AVP4C
21BNP4	21CBP4A
21BSP4	21AMP4B
21BTP4	21CBP4A
21CBP4 21CBP4A 21CBP4A/ 21CBP4/ 21CMP4 21CBP4B	21CBP4A
21CEP4 21CEP4A	21EMP4/ 21EQP4
21CMP4	21CBP4A
21CQP4	21CQP4
21CUP4	21AMP4B
21CVP4	21CBP4A
21CWP4	21CBP4A
21CXP4	21DSP4
21CZP4	21EMP4/ 21EQP4
21DAP4 21DEP4 21DEP4A 21DEP4A/ 21DEP4/ 21CZP4	21EMP4/ 21EQP4
21DFP4	21EMP4/ 21EQP4
21DHP4	21DHP4
21DLP4	21DLP4
21DMP4	21EMP4/ 21EQP4
21DNP4	21CBP4A
21DQP4	21DLP4
21DRP4	21CBP4A
21DSP4	21DSP4
21EAP4	21FDP4
21EDP4 21EMP4 21EMP4/ 21EQP4	21EMP4/ 21EQP4
21EP4	21EP4C
21EP4A 21EP4B	21EP4C
21EP4C	21EP4C
21EQP4 21ESP4 21ETP4	21EMP4/ 21EQP4
21EVP4	21FDP4
21FAP4	21EMP4/ 21EQP4
21FDP4	21FDP4
21FLP4	21CBP4A
21FP4	21FP4D
21FP4A 21FP4C	21FP4D
21FP4D	21FP4D
21FVP4 21FWP4 21FZP4	21FVP4
21GAP4 21GAP4A	21GAP4A
21KP4 21KP4A	21FP4D
21MP4	21YP4B
21WP4 21WP4A	21WP4B
21WP4B	21WP4B
21XP4 21XP4A	21XP4B
21XP4B	21XP4B
21YP4 21YP4A	21YP4B
21YP4B	21YP4B
21ZP4	21ZP4C
21ZP4A 21ZP4B	21ZP4C
21ZP4C	21ZP4C
23ACP4 23AFP4	23YP4
23AGP4	23CP4
23AHP4 23AHP4/ 23ASP4	23AHP4/ 23ASP4
23AKP4	23FP4A
23ALP4	23CQP4
23ANP4	23BKP4
23ARP4	23ARP4
23ASP4	23AHP4/ 23ASP4
23ATP4	23BKP4
23AUP4	23AHP4/ 23ASP4
23AVP4	23CP4
23AWP4	23BJP4
23BAP4	23CP4
23BDP4	23YP4
23BFP4	23FP4A
23BGP4 23BHP4	23BGP4
23BJP4	23BJP4
23BKP4 23BLP4	23BKP4
23BMP4	23YP4
23BNP4	23CP4
23BP4	23CP4
23BQP4	23BQP4
23BTP4 23BVP4 23BWP4	23YP4
23BXP4	23EKP4
23BZP4	23CGP4
23CBP4	23BQP4
23CEP4	23ARP4
23CGP4	23CGP4
23CP4 23CP4A	23CP4
23CQP4	23CQP4
23CUP4	23CP4
23CZP4	23AHP4/ 23ASP4
23DAP4	23DAP4
23DBP4	23DBP4
23DKP4	23EKP4
23DLP4 23DLP4A	23ENP4
23DNP4	23BKP4
23DP4	23CP4
23DQP4	23BKP4
23DSP4 23DSP4A	23ENP4
23DTP4	23EKP4
23DXP4	23CP4
23DYP4	23ETP4
23DZP4	23EQP4
23ECP4	23ENP4
23EDP4	23EKP4
23EHP4 23EKP4 23ELP4 23EMP4	23EKP4
23ENP4	23ENP4
23EP4	23EP4
23EQP4	23EQP4
23ESP4	23HFP4A
23ETP4	23ETP4
23EWP4 23EWP4A	23EQP4
23EYP4	23EYP4
23EZP4	23EZP4
23FBP4	23ENP4
23FCP4 23FDP4	23GJP4A
23FEP4	23ENP4
23FHP4	23GJP4A
23FJP4	23ETP4
23FLP4	23EKP4
23FMP4	23HFP4A
23FP4 23FP4A	23FP4A
23FRP4	23FRP4
23FSP4	23FSP4
23FVP4 23FVP4A	23HFP4A
23FZP4	23GSP4
23GBP4	23HFP4A
23GEP4	23ENP4
23GFP4	23HGP4
23GJP4 23GJP4A	23GJP4A
23GP4	23CP4
23GSP4	23GSP4
23GTP4	23ETP4

© United Technical Publications

RCA

PICTURE TUBES

RCA SILVERAMA® BLACK AND WHITE PICTURE TUBE INTERCHANGEABILITY GUIDE (Cont'd.)

Type to be Replaced	Replaced by RCA Type†
23GUP4	23FRP4
23GVP4	23HUP4A
23GWP4	23GWP4
23GXP4	23GSP4
23GZP4	23EKP4
23HFP4 23HFP4A	23HFP4A
23HGP4	23HGP4
23HLP4	23GSP4
23HP4	23CP4
23HQP4	23HGP4
23HRP4 23HSP4	23HWP4A
23HUP4 23HUP4A	23HUP4A
23HWP4 23HWP4A	23HWP4A
23HXP4	23HFP4A
23HYP4	23JEP4
23JAP4	23GJP4A
23JBP4	23FSP4
23JEP4	23JEP4
23JGP4	23FRP4
23JHP4	23HFP4A
23JLP4	23HUP4A
23JP4	23JP4
23KP4 23KP4A	23FP4A
23LP4	23ETP4
23MP4 23MP4/ 23MP4A/ 23WP4 23MP4A	23FP4A
23NP4	23NP4
23QP4	23CP4
23TP4	23YP4
23UP4	23BQP4
23WP4	23FP4A
23XP4 23YP4	23YP4
24ADP4 24ADP4/ 24VP4A/ 24CP4A/ 24TP4	24CP4B
24AEP4	24AEP4
24AHP4 24ALP4	24AHP4
24ANP4	24AEP4
24AUP4	24AUP4
24AVP4	24BEP4
24BEP4	24BEP4
24CP4	24CP4B
24CP4A	24CP4B
24CP4B	24CP4B
24DP4 24DP4A 24DP4A/ 24YP4	24AEP4
24QP4	24CP4B
24TP4 24VP4 24VP4A	24CP4B
24XP4	24CP4B
24YP4	24AEP4
24ZP4	24AEP4
230RB4	9WP4
310AVB4	12CNP4
470ACB4	19AYP4
500KB4	20TP4
SG14WP4	14WP4
SG16KP4A	16RP4B
SG17BJP4	17BJP4
SG17BP4B	17BP4D
SG17CKP4	17DSP4
SG17HP4B	17HP4C
SG17LP4A	17LP4B
SG17QP4A	17QP4B
SG21ACP4A	21AMP4B
SG21AUP4B	21AVP4C
SG21AWP4	21AWP4A
SG21DEP4A	21EMP4/ 21EQP4
SG21EP4B	21EP4C
SG21FLP4	21CBP4A
SG21FP4C	21FP4D
SG21WP4A	21WP4B
SG21XP4A	21XP4B
SG21YP4A	21YP4B
SG21ZP4B	21ZP4C
SG24AEP4	24AEP4
SG24CP4A	24CP4B

RCA COLOR PICTURE TUBE INTERCHANGEABILITY GUIDE

11SP22 11WP22	C-11WP22
15AEP22 15AFP22 15AGP22	H-15AEP22 C-15AEP22
15LP22	H-15LP22 C-15LP22
15NP22	H-15NP22 C-15NP22
15SP22	H-15AEP22 C-15AEP22
15TP22	H-15NP22 C-15NP22
15WP22	H-15LP22 C-15LP22
15XP22	H-15NP22 C-15NP22
15ZP22	H-15LP22 C-15LP22
17EZP22 17FAP22 17FKP22	H-17EZP22 C-17EZP22
19EXP22 19EXP22/ 19GVP22	H-19GVP22 C-19GVP22/ 19EXP22
19EYP22 19EYP22/ 19GWP22 19FMP22 19FXP22 19GSP22	H-19GWP22 C-19GWP22/ 19EYP22
19GVP22 19GVP22/ 19EXP22	H-19GVP22 C-19GVP22/ 19EXP22
19GWP22 19GWP22/ 19EYP22	H-19GWP22 C-19GWP22/ 19EYP22
19GXJ22 19GYP22	H-19GVP22 C-19GVP22/ 19EXP22
19GZP22 19HBP22	H-19GWP22 C-19GWP22/ 19EYP22
19HCP22 19HCP22/ 19HKP22	H-19HCP22/ 19HKP22 C-19HCP22/ 19HKP22
19HFP22	H-19GWP22 C-19GWP22/ 19EYP22
19HJP22 19HKP22	H-19HCP22/ 19HKP22 C-19HCP22/ 19HKP22
19HNP22	H-19HNP22 C-19HNP22
19HQP22	H-19GVP22 C-19GVP22/ 19EXP22
19HRP22	H-19GWP22 C-19GWP22/ 19EYP22
19HXP22	H-19HCP22/ 19HKP22 C-19HCP22/ 19HKP22
19JBP22 19JDP22	H-19GVP22 C-19GVP22/ 19EXP22
19JGP22	H-19JWP22 C-19JWP22
19JHP22 19JKP22	H-19GWP22 C-19GWP22/ 19EYP22
19JQP22	H-19GVP22 C-19GVP22/ 19EXP22
19JWP22	H-19JWP22 C-19JWP22
21AXP22 21AXP22A 21AXP22A/ 21AXP22	C-21AXP22A C-21CYP22A C-21FBP22 H-21GUP22 C-21GUP22/ 21FBP22A
21CYP22 21CYP22A	C-21CYP22A C-21FBP22 H-21GUP22 C-21GUP22/ 21FBP22A
21FBP22 21FBP22A 21FBP22A/ 21GUP22	C-21FBP22 H-21GUP22 C-21GUP22/ 21FBP22A
21FJP22 21FJP22A 21FKP22 21FJP22A/ 21GVP22	C-21FJP22 H-21GVP22 C-21GVP22/ 21FJP22A
21GFP22 21GLP22 21GRP22	H-22JP22 C-22JP22
21GUP22 21GUP22/ 21FBP22A	H-21GUP22 C-21FBP22 C-21GUP22/ 21FBP22A
21GVP22 21GVP22/ 21FJP22A	H-21GVP22 C-21FJP22 C-21GVP22/ 21FJP22A
21GWP22	H-22JP22 C-22JP22
21GXP22 21GYP22	H-21GVP22 C-21FJP22 C-21GVP22/ 21FJP22A
22ADP22 22AGP22 22AHP22 22ALP22	H-22UP22 C-22UP22
22JP22	H-22JP22 C-22JP22
22KP22	H-22KP22 C-22KP22
22LP22 22QP22	H-22JP22 C-22JP22
22RP22	H-22KP22 C-22KP22
22SP22	H-22JP22 C-22JP22
22UP22 22XP22	H-22UP22 C-22UP22
22YP22	H-22JP22 C-22JP22
23EGP22 23EGP22A	C-23EGP22
23VBHP22 25ABP22	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25ADP22	H-25AJP22 C-25AJP22
25AEP22	H-25YP22 C-25YP22/ 25BP22A
25AFP22	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25AGP22 25AJP22	H-25AJP22 C-25AJP22
25ANP22 25AP22 25AP22A 25AP22A/ 25XP22 25AQP22	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25ASP22 25AWP22 25AXP22 25AZP22	H-25AJP22 C-25AJP22
25BAP22 25BCP22	H-25BCP22 C-25BCP22
25BGP22	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25BHP22	H-25AJP22 C-25AJP22
25BJP22 25BMP22	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25BP22 25BP22A 25BP22A/ 25YP22	H-25YP22 C-25YP22/ 25BP22A
25BRP22 25CP22 25CP22A	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25FP22 25FP22A	H-25YP22 C-25YP22/ 25BP22A
25GP22 25GP22A	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25RP22	H-25YP22 C-25YP22/ 25BP22A
25SP22 25VP22 25WP22 25XP22 25XP22/ 25AP22A	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
25YP22 25YP22/ 25BP22A	H-25YP22 C-25YP22/ 25BP22A
25ZP22	H-25BCP22 C-25BCP22 H-25XP22 C-25XP22/ 25AP22A
370AB22	H-15AEP22 C-15AEP22
370CB22	H-15NP22 C-15NP22
490AB22 490ACB22 490ADB22	H-19GVP22 C-19GVP22/ 19EXP22
490AEB22 490AFB22 490AGB22	H-19GWP22 C-19GWP22/ 19EYP22
490AHB22	H-19GVP22 C-19GVP22/ 19EXP22
490AHB22A	H-19GVP22 C-19GVP22/ 19EXP22
490AJB22 490AJB22A	H-19GWP22 C-19GWP22/ 19EYP22
490AKB22 490ALB22 490AMB22 490ANB22	H-19GVP22 C-19GVP22/ 19EXP22
490ARB22	H-19GWP22 C-19GWP22/ 19EYP22
490ASB22	H-19GWP22 C-19GWP22/ 19EYP22
490BAB22	H-19GVP22 C-19GVP22/ 19EXP22
490BCB22	H-19GWP22 C-19GWP22/ 19EYP22
490BDB22	H-19GWP22 C-19GWP22/ 19EYP22
490BGB22	H-19GVP22 C-19GVP22/ 19EXP22
490BHB22	H-19GWP22 C-19GWP22/ 19EYP22
490BNB22	H-19JWP22 C-19JWP22
490BRB22	H-19GWP22 C-19GWP22/ 19EYP22
490BVB22 490BXB22	H-19JWP22 C-19JWP22
490CB22 490DB22 490EB22 490EB22A 490FB22 490GB22	H-19GVP22 C-19GVP22/ 19EXP22
490HB22 490JB22 490JB22A	H-19GVP22 C-19GVP22/ 19EXP22
490KB22 490KB22A 490LB22 490MB22	H-19GVP22 C-19GVP22/ 19EXP22
490NB22 490RB22 490SB22 490TB22	H-19GWP22 C-19GWP22/ 19EYP22
490UB22	H-19GVP22 C-19GVP22/ 19EXP22
490VB22	H-19GWP22 C-19GWP22/ 19EYP22
490WB22	H-19GVP22 C-19GVP22/ 19EXP22
490XB22 490YB22 490ZB22	H-19GWP22 C-19GWP22/ 19EYP22

RCA HI-LITE COLOR TELEVISION PICTURE TUBES

Manufactured to all OEM specifications, RCA HI-LITE Picture Tubes contain all new glass, parts and material, and feature: Perma-Chrome; "Rare Earth" and Unity Current Ratio.

H-15AEP22 H-15LP22 H-15NP22 H-17EZP22	H-19GVP22 H-19GWP22 H-19HCP22/ 19HKP22	H-19HNP22 H-19JWP22 H-21GUP22 H-21GVP22	H-22JP22 H-22KP22 H-22UP22 H-25AJP22	H-25BCP22 H-25XP22 H-25YP22

RCA COLORAMA PICTURE TUBES

RCA Colorama Picture Tubes contain used materials which, prior to re-use, are carefully inspected to meet our high quality standards. Sulfide types are marked with *; all others are "Rare Earth" types.

Rare Earth Types	Rare Earth Types	Rare Earth Types	Rare Earth Types	Sulfide Types
C-19GVP22/19EXP22 C-19GWP22/19EYP22 C-19HCP22/19HKP22 C-19HNP22	C-19JWP22 C-21GUP22/21FBP22A C-21GVP22/21FJP22A C-22JP22	C-22KP22 C-22UP22 C-25AJP22 C-25BCP22	C-25XP22/25AP22A C-25YP22/25BP22A	C-21AXP22A C-21CYP22A C-21FBP22 C-21FJP22 C-23EGP22

NOTICE: † Replacement information supplied in this chart is based primarily on electrical and mechanical similarity of the picture-tube types covered. The serviceman should make certain that replacement is in accord with all safety precautions required by the TV receiver for picture-tube insulation or mechanical mounting. Please consult the RCA Picture Tube Product Guide, PIX-300D, for specific characteristics and replacement information.

© United Technical Publications

RCA

ELECTRON TUBES

ENTERTAINMENT RECEIVING TYPES

PRICE SCHEDULE — JUNE 1, 1970

RCA Type	Optional List Price
0Z4	$3.85
0Z4A	3.40
1A3	6.65
1A5GT	4.00
†1AD2	3.85
1AY2	3.55
1B3GT use 1G3GT/1B3GT	
1BC2	3.25
1BH2	3.05
†1G3GT/1B3GT	3.95
1K3/1J3	3.95
1L6	12.55
1N5GT	4.90
1R5	4.45
1S2A/DY87	2.55
1S4	4.10
1S5	3.40
1T4	3.85
1U4	3.85
1U5	3.40
†1V2	2.55
†1X2A use 1X2B/1X2A	
†1X2B/1X2A	4.10
2A3	9.90
†2AF4B/2DZ4	4.10
2AH2	3.85
2AS2	3.70
†2AV2	3.10
2BJ2	4.20
2BN4A	3.55
†2BU2	3.90
†2CN3A	4.10
2CW4	4.90
2CY5	4.40
2DS4	4.90
†2DV4	6.45
2DZ4 use 2AF4B/2DZ4	
†2EG4	4.90
2EN5	3.20
2ER5	3.70
2FH5	3.70
†2FQ5A use 2GK5/2FQ5A	
TFS5	4.85
†2GK5/2FQ5A	4.20
2GU5	4.50
2HA5	3.85
†2HQ5	3.85
†3A2	5.50
†3A3A/3B2 use 3A3B	
†3A3B	3.40
3AF4A/3DZ4	4.10
†3AL5	2.70
†3AT2	3.70
3AU6	2.95
3AV6	2.95
†3AW2	3.20
†3AW3 use 3A3B	
†3B2 use 3A3B	
3BA6	2.35
3BC5/3CE5	2.95
†3BL2	3.55
†3BM2	3.60
†3BN2	4.00
3BN4A	3.40
†3BN6	4.75
†3BS2A use 3BW2/3BS2A/3BT2	
†3BT2 use 3BW2/3BS2A/3BT2	
3BU8/3GS8	4.90
†3BW2/3BS2A/3BT2	4.20
†3BY6	3.00
†3BZ6	3.70
†3CA3	3.70
3CB6/3CF6	2.95
3CE5 use 3BC5/3CE5	
3CF6 use 3CB6/3CF6	
†3CN3A	3.50
†3CS6	3.70
†3CU3A	4.90
†3CX3	3.50
†3CY3 use 3DB3/3CY3	
†3CY5	3.90
†3CZ3	4.35
†3DB3/3CY3	4.50
†3DC3	4.65
†3DG4	5.90
†3DJ3	4.25
3DK6	2.95
†3DT6A	3.25
3DZ4 use 3AF4A/3DZ4	
3EA5	3.55
3EH7/XF183	2.55
3EJ7/XF184	2.55
3ER5	4.45
3FH5	3.25
3FS5	4.30
†3GK5	4.20
3GS8 use 3BU8/3GS8	
3HM5/3HA5	3.85
†3HQ5	$5.65
†3JC6A	4.40
†3KT6	3.80
3Q4	3.35
3Q5GT	5.85
3S4	3.40
3V4	3.75
†4AU6	3.40
4AV6	2.95
4BC8	4.00
†4BL8/XCF80	2.40
4BN6	4.05
4BQ7A	4.90
4BS8	4.25
4BU8/4GS8	4.45
†4BZ6	3.70
4BZ7	4.90
†4CB6	2.85
4CS6	3.40
4DE6	2.95
4DK6	3.40
†4DT6A	3.25
†4EH7/LF183	3.55
†4EJ7/LF184	3.55
4ES8/XCC189	5.50
4EW6	2.90
†4GK5	3.90
4GM6	2.20
4GS8 use 4BU8/4GS8	
4GX7	4.60
4GZ5	2.35
†4HA5/PC900	2.35
4HA7	4.25
4HC7	4.25
4HM6	3.10
4HQ5	4.60
4HS8	3.70
4HT6	2.55
†4JC6A	5.05
4JD6	4.60
4JH6	3.40
†4KE8	6.05
4KT6	4.15
†4LJ8	4.40
†5AM8	4.90
†5AN8	5.20
†5AQ5	3.70
5AR4/GZ34	4.25
5AS4A	3.45
5AS8	4.40
†5AT8	4.45
5AU4 use 5V3A/5AU4	
5AV8	4.05
5AZ4	5.30
5B8	5.50
†5BC3A	3.40
5BE8	3.10
5BK7A	4.15
5BQ7A	4.30
5BR8	4.90
†5BT8	3.10
5BW8	3.85
†5CG8	4.00
5CL8A	4.90
5CQ8	4.10
5CZ5	4.45
5DJ4	3.55
5EA8	5.05
5ES8/YCC189	5.50
5EU8	4.00
5EW6	3.40
5FG7	4.05
5FV8	3.25
†5GH8A	4.90
†5GJ7/LCF801	2.95
5GM6	3.25
†5GS7	3.65
5GX6	2.45
†5GX7	4.60
5HA7	4.25
5HB7	3.40
5HG8/LCF86	3.70
†5HZ6	3.25
5J6	3.70
†5JK6	3.85
†5JL6	3.85
5KD8	2.50
5KE8	6.05
†5KZ8	3.55
†5LJ8	4.40
†5MB8	3.65
5T8	4.45
†5U4G	2.75
†5U4GB	3.05
5U8	4.70
†5U9/LCF201	2.95
†5V3A/5AU4	3.80
5V4GA	4.30
†5V6GT	3.70
5X8	4.15
†5Y3GT	2.95
5Y4GA	2.45
5Y4GT	3.40
5Z3	4.45
5Z4 use 5Y3GT	
6A7	8.00
6A8	7.10
6AB4	3.60
6AC5GT	5.85
6AC7	$5.75
†6AC10	4.25
†6AD10	8.15
6AF3	3.55
†6AF4	4.90
†6AF4A	4.90
6AF6G	6.30
†6AF9	3.55
6AF11	5.20
6AG5	3.80
†6AG7	6.85
†6AG9	6.15
6AG11	5.70
†6AH4GT	3.25
†6AH6	5.20
†6AH9	4.75
6AK5/EF95	4.75
6AK8/EABC80	3.30
6AL3/EY88	2.60
†6AL5	2.95
6AL7GT	6.95
†6AL11	5.70
6AM4	7.20
6AM8A	4.60
6AN4	6.15
†6AN8A	5.20
†6AQ5A	3.40
6AQ6	3.25
6AQ7GT	4.70
†6AQ8/ECC85	3.00
6AR5	2.45
6AR8	5.90
6AR11	5.35
6AS5	4.00
†6AS8	4.85
6AS11	5.85
†6AT6	2.40
†6AT8A	5.20
†6AU4GTA	4.85
†6AU5GT	5.20
†6AU6A	2.95
†6AU8A	5.65
†6AV5GA	5.20
†6AV6	2.70
†6AV11	4.40
†6AW8A	4.45
6AX3	3.40
†6AX4GTB	3.70
6AX5GT	3.85
6AX8	3.50
6AY3B	3.70
6AY11	5.70
†6AZ8	5.50
6B8	6.85
6B10	4.45
6BA3	3.05
†6BA6/EF93	3.25
6BA7	5.85
†6BA8A	4.65
†6BA11	4.90
6BC4	5.50
6BC5/6CE5	3.25
†6BC7	3.60
†6BC8/6BZ8	4.90
6BD6	2.35
6BD11	5.85
†6BE3/6BZ3	4.45
6BE6	3.40
6BF5	3.35
6BF6	2.85
6BF11	5.05
†6BG6G	6.45
6BH3A	2.80
†6BH6	4.00
†6BH8	4.60
†6BH11	4.70
6BJ3	3.25
6BJ6	4.05
†6BJ7	2.95
†6BJ8	4.45
†6BK4B use 6BK4C/6EL4A	
6BK4C/6EL4A	7.70
†6BK5	3.50
†6BK7B	4.90
†6BL7GTA	5.60
†6BL8/ECF80	2.70
†6BM8/ECL82	2.90
†6BN4A	4.00
†6BN6/6KS6	4.50
†6BN8	3.70
6BN11	5.35
†6BQ5/EL84	3.90
†6BQ6GTB/6CU6	5.40
†6BQ7A/6BZ7/6BS8	5.00
†6BR3/6RK19	4.55
†6BR8A	4.70
†6BS3A	3.70
†6BS8 use 6BQ7A/6BZ7/6BS8	
†6BU8	5.05
†6BV8	3.30
†6BV11	4.95
†6BW3 use 6CG3/6CE3/6CD3/6BW3	
6BW4	2.75
6BW8	4.50
6BW11	5.35
6BX7GT	$5.90
6BY5GA	4.80
†6BY6	3.40
†6BY8	2.70
†6BZ3 use 6BE3/6BZ3	
†6BZ6	3.10
†6BZ7 use 6BQ7A/6BZ7/6BS8	
†6BZ8 use 6BC8/6BZ8	
†6C4	3.70
6C5	5.35
6C6	7.85
6C9	5.50
6C10	3.70
6CA4	3.25
6CA5	3.00
6CA7/EL34	5.35
†6CB5A	9.35
†6CB6A/6CF6	3.25
†6CD6GA	6.65
†6CE3 use 6CG3/6CE3/6CD3/6BW3	
6CE5 use 6BC5/6CE5	
6CF6 use 6CB6A/6CF6	
†6CG3/6CE3/6CD3/6BW3	3.90
6CG7 use 6FQ7/6CG7	
†6CG8A	4.30
†6CH3 use 6CJ3/6CH3	
6CH8	5.60
†6CJ3/6CH3	3.70
6CK3	3.70
6CK4	3.55
†6CL3	3.70
†6CL6	4.75
†6CL8A	4.60
†6CM3	4.90
†6CM6	3.85
6CM7	4.15
6CM8	4.05
†6CN7	4.45
6CQ4	3.55
†6CQ8	4.10
6CR6	2.95
†6CS6	3.30
6CS7	3.75
6CU5	4.00
6CU6 use 6BQ6GTB/6CU6	
6CU8	4.60
†6CW4	5.65
†6CW5/EL86	2.75
6CX8	5.20
6CY5	4.25
6CY7	3.05
†6CZ5	4.75
6D10	4.65
6DA4 use 6DM4A/6DA4	
6DB5	5.00
†6DC6	3.85
6DC8/EBF89	3.05
6DE4	3.55
†6DE6	3.25
6DE7	4.45
6DG6GT	3.85
†6DK6	2.95
†6DL4/EC88	7.95
6DL5/EL95	2.95
6DM4A/6DA4	3.70
6DN6	7.00
6DN7	4.60
†6DQ5	8.15
†6DQ6B use 6GW6/6DQ6B	
6DR7	5.05
†6DS4	5.65
6DS5	3.65
6DT5	3.55
†6DT6A	3.25
†6DT8	3.75
†6DV4	6.45
†6DW4B	3.70
6DW5	3.85
†6DX8/ECL84	2.90
†6DZ4	4.45
6E5	5.65
6EA5 use 6CY5	
6EA7 use 6EM7/6EA7	
†6EA8	3.90
6EB8	5.05
†6EH4A	8.20
6EH5	3.55
†6EH7/EF183	3.85
6EH8	3.50
†6EJ4A	9.35
†6EJ7/EF184	3.55
†6EL4 use 6BK4C/6EL4A	
†6EM5	4.45
†6EM7/6EA7	5.70
6EQ7	2.95
†6ER5	4.20
6ES5	$2.85
6ES8/ECC189	5.45
6ET7	4.00
6EU7	3.95
6EU8	3.70
6EV5	3.55
6EV7	3.25
†6EW6	3.55
6EW7	6.00
†6EZ5	5.05
6EZ8	3.55
6F5	5.85
6F6	6.15
6F6GT	5.80
6F8G	8.45
6FA7	2.95
6FD7	5.70
6FE5	3.40
6FG6/EM84	3.35
†6FG7	4.60
†6FH5	4.55
6FH8	4.40
†6FJ7	4.15
†6FM7	4.60
6FM8	3.55
6FQ5A use 6GK5/6FQ5A	
†6FQ7/6CG7	2.95
6FS5	4.10
6FV6	4.45
6FV8A	4.70
6FW5	4.65
6FY5/EC97	2.75
6FY7	3.50
6G11	5.30
6GB5/EL500	3.80
†6GC5	5.00
6GE5	5.70
6GF5	3.80
†6GF7A	5.35
†6GH8A	3.20
6GJ5A	6.15
†6GJ7/ECF801	3.10
†6GK5/6FQ5A	4.60
†6GK6	3.70
†6GL7	5.80
6GM5	3.05
†6GM6	3.85
6GN8	5.05
†6GQ7	3.75
†6GS7	3.75
6GT5A	6.35
6GU5	4.10
†6GU7	4.15
6GV5	4.15
6GV8/ECL85	4.60
†6GW6/6DQ6B	4.65
†6GW8/ECL86	3.05
†6GX6	3.20
†6GX7	4.60
6GY5	4.60
†6GY6	3.20
6GY8	4.70
6H6	5.30
†6HA5 use 6HM5/6HA5	
†6HA6 use 6HB6/6HA6	
6HB5	4.60
†6HB6/6HA6	4.45
†6HB7	4.30
†6HE5	4.65
†6HF5	8.70
†6HF8	5.30
6HG5	3.40
†6HG8/ECF86	3.70
6HJ5	5.80
6HJ8	3.10
6HK5	3.90
†6HL8	3.05
†6HM5/6HA5	3.85
6HM6	2.95
†6HQ5	5.05
6HR5	2.55
6HR6	3.70
†6HS5	7.75
6HS6	3.70
†6HS8	4.75
6HU6/EM87	4.85
6HU8/ELL80	5.40
†6HV5	7.75
†6HZ6	3.00
6HZ8	5.50
6J5	4.60
6J5GT	4.10
†6J6A	4.45
6J7	5.80
†6J10 use 6Z10/6J10	
6J11	5.75
6JB6A	6.35
†6JC6A	4.45
6JC8	3.35
†6JD6	3.55
†6JE6A use 6LQ6/6JE6C	
6JE8	3.70
6JF6	7.25
6JG6A	6.50
†6JH6	3.60
†6JH8	5.50
†6JK6	$3.85
†6JK8	4.05
†6JM6A	5.70
†6JN6	5.35
6JN8	3.65
†6JQ6	3.85
6JR6	6.35
†6JS6C	7.50
6JT6A	5.40
†6JT8	4.45
6JU6	6.35
6JU8A	4.40
6JV8	4.40
†6JW8/ECF802	3.10
6JZ6	4.65
6JZ8	3.55
6K6GT	3.50
6K7	5.90
6K8	7.70
6K11/6Q11	3.80
†6KA8	4.90
†6KD6	8.85
6KD8 use 6U8A/6KD8	
†6KE8	6.05
6KL8	2.95
†6KM6	8.85
6KM8	3.45
†6KN6	7.20
6KR8	4.25
†6KS6 use 6BN6/6KS6	
†6KT6	3.30
†6KT8	5.40
6KU8	4.80
6KV8	5.85
6KY8A	7.70
†6KZ8	4.05
6L6	9.65
†6L6GC	5.90
6L7	6.95
†6LB6	8.85
6LB8	4.70
6LC8	4.75
†6LE8	6.20
†6LF6	8.45
†6LF8	5.10
†6LH6A	7.70
†6LJ6	7.55
†6LJ8	4.40
†6LM8	4.90
†6LN8/LCF80	2.40
†6LQ6/6JE6C	8.65
6LQ8	5.55
†6LR6	8.15
†6LR8	4.75
†6LT8	4.00
†6LU8	4.75
6LX8/LCF802	2.60
†6LY8	3.90
†6M11	5.35
†6MB8	3.65
†6MD8	5.35
†6ME8	5.65
†6MF8	4.75
†6MG8	2.45
†6MJ8	4.65
†6MK8	4.30
†6MN8	4.75
†6MQ8	3.80
†6MU8	5.20
6N7	5.05
6N7GT	5.90
6Q7	5.90
6Q11 use 6K11/6Q11	
†6RK19 use 6BR3/6RK19	
†6S4A	3.70
6S8GT	4.15
6SA7	5.90
6SA7GT	4.40
6SB7Y	5.95
6CS7	5.35
6SF5	5.00
6SF7	6.30
6SG7	5.60
6SH7	6.15
6SJ7	5.35
6SJ7GT	3.90
6SK7	5.00
6SK7GT	5.50
6SL7GT	4.90
†6SN7GTB	4.00
6SQ7	4.95
6SQ7GT	4.00
6SR7	4.90
†6T4	5.15
†6T8A	4.70
6T9	4.40
†6T10	5.55
6U5	7.40
†6U8A/6KD8	3.90
†6U9/ECF201	2.90
†6U10	4.05
6V3A	4.55
6V6	6.80
†6V6GTA	4.45
6W4GT	3.30
†6W6GT	4.60
6X4	3.40

† Denotes Type Used in Color TV

Trade Discount Applies To List Prices Only

© United Technical Publications

RCA

ELECTRON TUBES

ENTERTAINMENT RECEIVING TYPES

PRICE SCHEDULE — JUNE 1, 1970

RCA Type	Optional List Price
6X5GT	$3.55
†6X8A	4.45
†6X9/ECF200	2.90
6Y6GA/6Y6G	4.95
6Y6GT use 6Y6GA/6Y6G	
†6Y9/EFL200	2.95
6Z4 use 84/6Z4	
†6Z10/6J10	6.20
7A7	7.15
†7AU7	3.10
7C5	3.35
7C7	3.40
7EY6	3.70
7F7	7.50
7F8	8.25
†7GS7	4.70
7HG8/PCF86	2.75
†7KY6	4.30
7N7	7.10
7V7	4.65
7X7	7.65
†8AC10	5.05
†8AR11	5.35
8AU8	3.85
8AW8A	5.35
8B8	5.45
8B10	4.40
8BA8A	3.45
8BA11	5.50
8BH8	3.35
†8BM11	4.70
8BN8	3.70
†8BN11	4.35
8BQ5	3.75
†8BQ11	4.30
†8BU11	5.00
8CG7 use 8FQ7/8CG7	
8CM7	2.70
8CN7	3.05
8CS7	4.00
8CW5/XL86	2.55
8CX8	4.40
†8EB8 use 8GN8/8EB8	
8EM5	4.10
8ET7	4.15
†8FQ7/8CG7	2.95
8GJ7/PCF801	2.90
†8GN8/8EB8	4.15
†8GU7	3.20
†8JU8A	3.35
†8JV8	4.30
8KA8	4.65
8LC8	4.75
8LT8	4.00
†9A8/PCF80	2.65
†9AH9	4.75
9AU7	2.95
9BJ11	5.35
9BR7	3.15
9EA8	3.05
†9GH8A	4.10
9GV8/XCL85	3.40
†9KC6	4.35
9KX6	4.15
9KZ8	2.95
†9LA6	4.20
9U8A	3.10
10AL11	4.55
10BQ5	2.75
10C8	5.15
†10CW5/LL86	2.55
10DE7	4.90
10DR7	4.45
10DX8/LCL84	2.75
10EG7	4.35
10EM7	4.90
10EW7	5.30
†10GF7A	$4.75
10GK6	3.45
†10GN8	4.90
10HF8	5.35
10JA8/10LZ8	4.15
†10JT8	4.05
10JY8	3.65
10KR8	4.25
10KU8	4.85
†10LB8	4.70
†10LE8	5.90
10LW8	4.25
10LZ8 use 10JA8/10LZ8	
†10Z10	5.50
†11AF9	6.15
11AR11	5.35
†11BM8	5.85
11BQ11	5.35
†11BT11	6.50
†11CA11	6.95
11CY7	4.65
†11DS5	4.60
†11FY7	3.70
†11HM7	5.25
11JE8	3.85
11KV8	6.50
†11LQ8	5.90
†11LT8	4.00
11Y9/LFL200	3.70
12AB5	3.85
12AC6	2.10
†12AC10A	5.05
12AD6	3.50
12AE6A	3.10
12AE10	5.35
12AF3/12BR3/ 12RK19	4.25
12AF6	3.15
12AJ6	2.40
12AL5	2.75
12AL8	6.15
12AL11	5.65
12AQ5	3.50
12AT6	2.75
†12AT7/ECC81	3.55
12AU6	3.55
†12AU7A/ ECC82	3.10
12AV5GA	5.45
†12AV6	2.35
†12AV7	4.60
12AW6	3.55
†12AX3	3.00
12AX4GTB	3.35
†12AX7A/ ECC83	2.80
12AY3A	2.90
12AY7	5.70
†12AZ7A	4.00
12B4A	4.00
12BA6	2.85
12BA7	5.90
12BD6	2.35
12BE3	3.45
12BE6	3.05
12BF6	2.35
†12BF11	5.80
†12BH7A	3.85
†12BK5	3.75
12BL6	3.70
12BN6	3.65
12BQ6GTB/ 12CU6	4.45
12BR3 use 12AF3/ 12BR3/12RK19	
12BR7	3.05
12BS3A	3.70
12BT3	3.45
12BV7 use 12BY7A/ 12BV7/12DQ7	
†12BV11	$4.80
12BW4	3.35
†12BY7A/12BV7/ 12DQ7	3.55
12BZ6	2.40
12BZ7	4.15
12C5 use 12CU5/12C5	
12CA5	3.95
†12CL3	3.50
12CN5	3.25
12CR6	2.95
†12CT3	3.25
12CU5/12C5	4.30
12CU6 use 12BQ6GTB/12CU6	
12CX6	2.75
12D4	3.05
12DB5	2.60
12DK6	2.30
12DQ6B use 12GW6/12DQ6B	
†12DQ7 use 12BY7A/ 12BV7/12DQ7	
12DS7	5.40
12DT5	3.10
12DT8	4.00
12DU7	4.40
†12DW7	3.05
12DY8	7.95
12DZ6	3.60
12ED5	2.70
12EK6	3.55
12EQ7	2.75
12F8	3.25
12FK6	2.55
12FM6	2.60
†12FQ7	2.45
12FQ8	5.20
12FV7	3.40
12FX5	3.25
12FX8A	3.85
†12GC6	4.35
†12GE5	5.20
12GJ5A	4.90
†12GN7A	5.65
12GT5	5.35
12GW6/ 12DQ6B	4.95
12H6	4.45
12HE7	6.80
†12HG7	5.65
†12HL7	4.90
12J5GT	4.80
12J8	4.35
12JB6A	6.20
12JN6	3.90
12JN8	3.70
†12JQ6	4.45
12JT6A	4.95
12K5	3.45
12K7GT	6.60
12KL8	2.45
12L6GT	3.55
†12MD8	4.85
12R5	3.35
12SA7	5.90
12SA7GT	4.90
12SC7	5.20
12SF5	3.85
12SF7	6.20
12SG7	4.70
12SH7	5.40
12SJ7	4.30
12SK7	5.30
12SK7GT	4.45
12SL7GT	4.95
12SN7GTA	4.30
12SQ7	$4.95
12SQ7GT	4.45
†12T10	4.65
12V6GT	4.45
12W6GT	4.90
12X4	2.25
13CW4	5.05
13DE7	4.75
13DR7	5.30
13EM7/15EA7	5.85
13FD7	5.30
13FM7/15FM7	4.00
13GB5/XL500	3.70
13GF7A	5.20
13J10 use 13JZ10/13J10	
13JZ8	5.05
13V10	5.90
13Z10/13J10	6.20
14BL11	6.95
14BR11	5.80
14GT8	3.45
14JG8	3.10
15AF11	4.75
15BD11	5.30
15BD11A	5.50
†15CW5/PL84	2.45
†15DQ8/PCL84	3.40
15EA7 use 13EM7/15EA7	
15FM7 use 13FM1/15FM7	
15FY7	3.90
15KY8A	6.35
†15LE8	7.65
†15MF8	4.75
†16A8/PCL82	3.40
†16AK9	6.40
16AQ3/XY88	2.70
16BQ11	5.35
†16BX11	5.85
16GK6	3.05
16GY5	4.85
17AB10/ 17X10	5.50
17AX3	2.60
17AX4GTA	3.70
17AY3A	3.70
17BB14	10.45
17BE3/17BZ3	3.70
17BF11	5.90
17BH3	2.85
17BQ6GTB	5.20
17BR3/ 17RK19	3.35
17BS3A/ 17DW4A	3.70
17BW3	3.20
17BZ3 use 17BE3/17BZ3	
17C5 use 17CU5/17C5	
17C9	7.15
17CK3	3.55
17CT3	2.95
17CU5/17C5	3.10
17D4	4.05
17DE4	3.65
17DM4A	4.05
17DQ6B use 17GW6/17DQ6B	
17DW4A use 17BS3A/17DW4A	
17EW8/HCC85	2.75
17GE5	4.35
17GJ5A	6.05
17GT5A	5.55
17GV5	4.20
17GW6/17DQ6B	5.25
17HB25	8.20
17JB6A	$5.85
†17JF6	6.85
17JG6A	6.30
17JM6A	5.90
17JN6	5.35
†17JQ6	4.45
17JT6A	5.60
17JZ8	3.55
†17KV6A	7.85
17LD8 use 15KY8A	
17X10 use 17AB10/17X10	
17Z3/PY81	4.40
†18AJ10	5.35
18FW6A	2.45
18FX6A	2.95
18FY6A	2.95
18GB5/LL500	5.15
18GD6A	2.95
18GV8/PCL85	4.65
†19AU4GTA	4.35
19BG6GA	6.65
†19CG3	3.60
19CL8A use 19JN8/19CL8A	
19EA8	4.45
19EZ8	4.50
19FX5	3.55
19GQ7	3.80
19HR6	2.45
19HS6	2.40
19HV8	4.15
19J6	3.70
19JN8/19CL8A	3.20
19KG8	3.10
19T8	4.90
19X8	4.10
20AQ3/LY88	3.25
20EZ7	3.40
†20LF6	8.50
21GY5	4.65
21HB5A	4.75
21JV6	4.65
21JZ6	4.85
21KA6	4.45
†21LG6	8.95
†21LR8	4.75
†21LU8	4.75
22BH3A	3.10
22BW3	4.15
22DE4	4.20
22JF6	7.25
22JG6A	6.20
22JR6	6.20
22JU6	6.35
†22KM6	8.20
†22KV6A	7.30
†23JS6A	13.35
23Z9	4.70
24BF11	5.20
†24JE6A use 24LQ6/24JE6C	
24JZ8	4.50
†24LQ6/24JE6C	8.65
25AV5GA	5.65
25AX4GT	3.05
25BK5	3.40
25BQ6GTB/ 25CU6	4.40
25C5	3.70
25CA5	3.60
25CD6GB	6.40
†25CG3	3.40
†25CK3	3.40
25CU6 use 25BQ6GTB/25CU6	
25DN6	6.60
25E5/PL36	6.65
25EC6	6.15
25EH5	3.70
25F5A	$3.85
25L6GT/25W6GT	3.70
25W4GT	3.70
25W6GT use 25L6GT/25W6GT	
25Z6GT	3.85
†26HU5	12.05
27GB5/PL500	3.70
30AE3/PY88	3.25
30JZ6	6.15
31AL10	5.85
†31JS6C	7.30
†31LQ6	8.50
32ET5A	2.40
32HQ7	7.70
33GT7	6.95
33GY7A	6.45
33JV6	4.65
†34CE3	3.90
34GD5A	2.95
35B5	3.20
35C5	3.20
35EH5	3.40
35GL6	2.90
35L6GT	3.85
†35LR6	8.15
35W4	1.95
35Y4	4.50
35Z3	4.70
35Z4GT	2.55
35Z5GT	2.95
36AM3B	2.55
†36KD6	8.85
38HE7	7.25
38HK7	7.10
†40KD6	8.70
42	4.85
†42KN6	7.20
43	7.20
50A5	5.85
50B5	2.95
50BM8/UCL82	4.35
†50C5	3.05
50DC4	2.40
50EH5	3.55
50FE5	4.45
50FK5	2.20
50HC6	3.55
50HK6	2.15
50L6GT	4.45
50X6	5.85
50Y6GT	4.35
50Y7GT	4.25
53HK7	8.35
60FX5	2.95
80	4.80
84/6Z4	5.20
117L7/M7GT	14.75
117N7GT	12.85
117P7GT	12.85
117Z3	4.50
117Z6GT	6.70
5879	5.35
6973	5.05
7025	3.10
7027A	7.45
7189	3.85
7199	4.90
7247	4.05
7355	3.65
7408	3.35
7543	3.25
7581A	6.15
7591A	2.80
7695	4.40
7868	4.75
8417	5.65
EM84/6FG6 use 6FG6/EM84	

† Denotes Type Used In Color TV

INDUSTRIAL TUBES FOR DEALER SERVICE

0A2	$1.95
0A2WA	4.05
0A3	2.35
0A3A	2.35
0A4G	3.10
0B2	2.10
0B2WA	3.65
0C3	2.25
0C3A	2.25
0D3	2.20
0D3A	2.20
1L4	3.10
1P40	6.90
2D21	2.00
2E24	9.40
2E26	5.10
2X2A	5.40
3A5	3.15
3AQP1	40.20
3B25	11.90
5CP1A	47.50
5R4GY	2.85
5R4GYB	3.20
5UP1	29.45
6AK6	2.90
6AS6	5.30
6TS7G	$7.35
6AS7GA	6.95
6AU6WB	4.35
6DJ8/ECC88	2.65
6J4	6.35
6X4W	2.25
12A6	5.05
12AT7WA	4.05
12AT7WB	4.05
12SW7	2.10
12SX7GT	3.55
12SY7	3.75
83	3.10
502A	3.20
807	6.05
811A	10.10
812A	8.45
816	5.25
866A	4.75
868	8.45
884	3.90
918	8.45
920	13.05
922	4.40
925	7.45
927	8.90
929	$4.55
930	6.90
991	2.30
1612	9.15
1614	7.60
1619	9.65
1620	11.60
1625	7.40
1629	3.60
1635	6.70
2050	3.50
2050A	3.10
2076/5R4GYB	3.25
5581	7.75
5642	4.95
5651	2.50
5651A	2.75
5654	3.85
5654/6AK5W	3.40
5670	3.80
5672	3.65
5686	5.00
5687	6.00
5725	4.80
5725/6AS6W	4.80
5726	2.85
5749	$4.05
5750	4.85
5751	4.00
5763	3.80
5783	5.90
5814A	3.75
5823	2.50
5824	5.35
5881	4.35
5915	2.60
5963	2.10
5964	2.65
5965	3.00
6005	5.00
6005/6AQ5W	4.55
6072	5.95
6080	7.70
6136	4.35
6146A	5.05
6146B/8298A	6.05
6159	5.55
6159B	5.90
6197	3.65
6201	4.45
6202	3.80
6336A	26.70
6350	$3.10
6360	6.30
6360A	8.75
6386	11.20
6417	4.70
6550	6.45
6550VI (Matched Pair)	14.80
6660/6BA6	1.55
6661/6BH6	2.05
6662/6BJ6	1.85
6663/6AL5	1.40
6664/6AB4	1.75
6669/6AQ5A	1.60
6676/6CB6A	1.60
6677/6CL6	2.65
6678/6U8A	2.30
6679/12AT7	2.25
6680/12AU7A	1.80
6681/12AX7A	1.90
6883	5.50
6883/8032A/ 8552	6.55
6922/E88CC	6.85
6939	15.95
6977	3.50
7054	2.40
7055	1.55
7056	1.45
7057	2.85
7058	2.10
7059	2.35
7060	2.75
7061	2.20
7167	2.30
7258	3.20
7308	6.00
7360	4.80
7551	5.15
7558	4.90
7717/6CY5	1.95
7724/14GT8	2.10
7898	2.10
7905	5.40
8077/7054	2.20
8136	2.00
8156	5.45
9001	7.55
9002	5.80
9003	7.55

© United Technical Publications

Trade Discount Applies To List Prices Only

United-Page TUBES & SEMICONDUCTORS

TYPE	PRICE
0A2	$ .99
0A3/VR75	1.08
0B2	1.02
0D3/VR150	1.12
0G3/85A2	1.35
C1K/6014	11.00
CE-1C/3B22	8.50
1B24A	24.00
1B35A	8.80
1B58A	75.00
1B63A	22.00
EL1C	12.15
1P23	2.99
1P28A	26.00
1P30	6.75
1P37	5.00
1P39	3.15
1P40	5.15
1P41	5.00
1V	1.50
1Z2	5.00
2-01C	20.00
2A3	2.00
2AS15A	13.50
2C36	60.00
2C37	60.00
2C39A	18.50
2C39B	29.00
2C40	24.40
2C43	18.00
2C46	20.50
2C53	9.00
2D21	.97
2E22	8.75
2J42	102.00
2J55	183.00
2K25	32.00
2K26	65.00
2K28	85.00
2X2A	3.25
C3J/5632	11.50
C3JA/5684	12.00
EL3C	14.05
3B4WA	4.95
3B24	3.00
3B24WA	8.40
3B24WB	8.95
3B25	6.75
3B28	6.20
3B29	11.70
3C23	10.00
3C45	22.00
3D21A	7.50
3D21B	9.00
3D21WA	29.00
3E29	19.50
3X2500A3	200.00
3X2500F3	205.00
3X000F1/8239	220.00
4-65A/8165	29.50
4-125A/4D21	36.00
4-250A/5D22	42.50
4-400A/8438	43.00
4-1000A/8166	130.00
4B26	6.50
4B28	6.00
4B31	30.00
4CX300A/8167	50.00
4CX1000A/ 8168	200.00
4CX10,000D/ 8171	550.00
4E27/8001	35.00
4E27A/5-125B	47.00
4X150A	22.00
4X150G/8172	60.00
5R4GYB	2.05
5R4WGA	9.50
5R4WGB	14.00
5R4WGY	6.00
5Y3WGTB/6087	5.10
C6J/K/6864	29.00
C6J/KL/6989	30.00
C6J/L/6988	28.00
6AG7Y	2.50
6AH6	1.04
6AH6WA	7.00
6AK5	.90
6AL6	6.50
6AN5	3.75
6AN5WA	9.72
6AR6WA/6098	8.90
6AS7G	4.40
6AU6WA/6136	2.20
6B4G	4.50
6BL6	85.00
6BM6A	85.00
6C4W	1.40
6CA7/EL34	2.10
6CL6/6677	1.32
6CW4	1.60
6DJ8	1.59
6J4	3.22
6J4WA	4.85
6J5WGT	3.75
6J6WA	3.25
6L6WGB	3.75
6SA7GTY	1.75
6SG7Y	1.75
6SJ7WGT	2.30
6SK7GTY	1.50
6SL7WGT	2.24
6SN7WGT	1.95
6SU7WGT/6188	5.00
6V6GTY	1.30
6V6Y	2.25
6X4W	1.25
6X4WA	2.23
6X5WGT	1.32
7F8W	5.50
GC10B	12.50
GC10/4B	16.50
GS10C/S	15.50
GS10D	19.90
GS10H	14.50
UX-CV11	17.50
GC12/4B	24.00
GS12D	34.00
12AU7WA/6189	2.04
12AY7	2.00
12J5WGT	3.57
FG17/5557	7.85
25Z6WGT	5.55
26E6WG	30.00
28D7	3.54
35TG	35.00
EA53	17.00
83	2.00
90C1	2.25
100TH	24.00
121A	2.40
150B2	2.55
150C2	2.20
177A	46.00
177WA	49.00
211W	45.00
249B	14.10
250TH	38.50
250TL	38.50
262B	7.00
274A	5.50
274B	5.50
287A	16.00
E288CC/8223	5.45
304TH	80.00
304TL	80.00
307A	4.75
309A	9.00
311A	9.00
311B	14.00
311CH	45.00
313C	3.50
323B	10.50
327A	7.00
328A	8.00
329A	7.50
337A	9.50
339A	11.50
347A	7.00
348A	7.15
371B	12.80
403B/5591	3.95
404A/5847	6.79
407A	4.22
408A/6028	3.52
409A	3.60
412A	10.00
416B	38.00
417A/5842	4.90
429A	13.00
481B	10.90
572B	18.00
575A	21.00
576A	26.00
577W	52.00
610/7723	11.40
631P1	7.00
660/7786	13.00
705A	12.00
710/6011	12.00
714/7021	10.00
723A/B/	18.00
724B	40.00
726B	45.00
740/6856	21.70
760/6858	28.10
805	20.00
807	3.65
809	11.00
810	28.00
811A	6.30
812A	6.35
813	23.00
814	21.80
815	30.00
816	3.60
826	30.00
828	34.00
829B	20.00
832A	15.00
833A	60.00
836	14.75
845	33.00
845W	45.00
849	225.00
857B	225.00
866A	2.95
868/PJ23	6.50
872A/872	7.55
873	17.00
884	2.35
889RA	320.00
918	5.50
919	9.80
921	5.65
922	3.40
923	4.35
927	4.70
929	3.50
930	5.40
1222A	2.75
1236C	18.00
1258	30.00
1608	4.75
1612	6.00
1614	5.00
1616	12.75
1620	7.00
1622	5.00
1624	10.00
2033	1.50
2050A	1.85
2050W	5.80
4046	58.00
5545	45.00
5557/FG17	7.85
5575/100	215.00
5576/200	245.00
5608A	18.25
5632/C3J	11.50
5636	5.50
5639	5.00
5642	3.50
5647	8.00
5650/5981	75.00
5651	1.60
5651WA	3.50
5654/6AK5W	2.00
5656	14.80
5663	1.78
5667/889RA	320.00
5670	1.82
5670WA	1.92
5672	2.20
5675	7.10
5676	3.10
5678	1.94
5685/C6JA	27.00
5686	3.20
5687	2.46
5687WA	3.84
5691	7.00
5692	6.23
5693	5.50
5696	1.36
5702	3.27
5702WA	5.10
5702WB	7.80
5703	2.50
5703WA	6.00
5703WB	7.90
5718	3.00
5719	2.94
5725	2.43
5726/6AL5W	1.44
5727/2D21W	2.50
5736	175.00
5744WA	6.00
5744WB	8.80
5749/6BA6W	2.20
5750/6BE6W	3.00
5751	2.02
5751WA	2.02
5755	7.50
5780	400.00
5787	4.50
5787WA	4.55
5796	15.75
5799	28.75
5814A	1.90
5814WA	1.90
5823	1.49
5836	85.00
5837	85.00
5840	4.75
5861/EC55	37.50
5876	7.60
5881	2.90
5886	4.50
5894	23.00
5896	3.75
5902	3.75
5915	1.65
5920/E90CC	3.28
5930/2A3W	6.00
5932/6L6WGA	10.50
5933/807W	11.00
5933WA	15.00
5948A/1754A	345.00
5949A	165.00
5956/E36	66.00
5957/E37	66.00
5958/E40	48.00
5959/E41	48.00
5963	1.13
5965	1.51
5976	70.00
5977	5.90
5993	8.00
5998	10.60
6005/6AQ5W	2.75
6012	7.65
6014/C1K	11.00
6021	2.75
6021WA	7.85
6027	180.00
6057/E83CC	3.85
6062	5.90
6065	4.60
6072A	3.80
6073	2.94
6074	3.35
6080	4.80
6080WA	9.75
6080WB	26.80
6082	5.10
6082WA	9.00
6084/E80F	4.50
6085/E80CC	3.90
6087	5.10
6100	2.85
6101/6J6WA	4.80
6111	3.15
6111WA	7.85
6112	3.49
6112WA	5.70
6115A	92.00
6121	3.75
6130	20.00
6135	2.10
6136/6AU6WA	2.20
6146B/8298A	4.60
6146W	6.10
6147	2.75
6155/4-125A	34.00
6156/QY4-250	42.00
6159	4.50
6159W	6.60
6186/6AG5WA	3.60
6189/12AU7WA	2.72
6197	2.10
6201/12AT7WA	2.24
6227/E80L	3.90
6252	27.00
6263A	12.50
6264A	13.00
6280	45.00
6299	60.00
6303/X80	68.00
6336	9.00
6336A	17.50
6360/A	4.40
6390	140.00
6400A	182.00
6442	39.00
6463	1.70
6484/3C	10.50
6510/4J52A	225.00
6528	19.50
6528A	30.00
6533	13.25
6533WA	19.50
6550	5.50
6655A	63.00
6660	.89
6660/6BA6	.89
6661/6BH6	1.14
6662/6BJ6	1.10
6663/6AL5	.81
6664/6AB4	.98
6669/6AQ5A	.94
6676/6CB6A	.94
6677/6CL6	1.57
6678/6U8A	1.38
6679/12AT7	1.28
6680/12AU7	1.06
6681/12AX7	1.11
6686/E81L	4.25
6687/E91H	4.00
6688A	6.50
6689/E83F	4.90
6700	45.00
6777	35.00
6788	9.00
6807	32.00
6814	5.25
6872	9.35
6883	4.35
6883B/8032A	4.95
6900	30.00
6914A	135.00
6922	3.05
6923/EA52	14.00
6939	10.25
6977	2.25
7014/604	11.80
7038	49.50
7054/8077	1.55
7055	1.00
7056	.95
7057	1.90
7058	1.40
7059	1.50
7060	1.75
7061	1.40
7062	2.50
7077	39.00
7167	1.45
7189	2.79
7199	2.50
7203/4CX250B	32.00
7204/4CX250F	35.00
7211	75.00
7246	7.60
7247	1.62
7286	21.60
7289	23.00
7306A/5684	13.00
7308	4.68
7320	3.75
7360	3.40
7377	25.00
7378	50.00
7427	2.65
7486	39.00
7534	21.00
7543	1.75
7558	3.20
7580W/ 4CX250R	40.00
7586	3.30
7587	4.90
7643	5.50
7728	1.70
7729	1.40
7730	1.60
7731	1.80
7732	1.75
7733	1.74
7734	4.00
7735A	54.50
7735B	70.00
7751	6.25
7788	9.80
7815AL	31.00
7815R	24.00
7895	3.50
8001/4E27	35.00
WL8008	9.90
8056	5.15
8058	15.00
8106	1.55
8283/ 3CX1000A7	162.00
8425	1.10
8426	1.20
8507	94.00
8577	12.45
2BP1	16.00
3JP1	25.40
3JP2	41.00
3JP7	27.65
3KP1	32.00
3KP7	32.00
3XP1	75.00
4MP1	75.00
4QP1	140.00
5ABP1	40.00
5ABP1A	46.00
5ADP1A	41.00
5AHP1	36.00
5AHP7	49.00
5AQP1A	48.00
5BGP2A	95.00
5BHP2/A/ T54P2	98.00
5BP1A	27.75
5UP1	21.25
7BP1A	42.00
7CP1	65.00
10WP7	57.00

UPI SEMICONDUCTORS

TYPE	1-99	100-999
Jetec Transistor's Silicon Low Power PNP		
2N696	$ .52	$ .38
2N697	.52	.38
2N698	1.57	1.05
2N699	1.27	.80
2N717	.80	.40
2N718	.40	.34
2N743	1.90	1.20
2N744	1.75	1.10
2N753	.72	.46
2N783	1.20	.80
2N784	3.50	2.15
2N929	2.25	1.50
2N930	2.60	1.65
2N1711	.85	.60
2N2217	3.00	2.00
2N2218	.75	.50
2N2218A	1.45	.95
2N2219	.75	.50
2N2219A	1.45	.95
2N2220	2.40	1.60
2N2221	.75	.50
2N2221A	1.40	.95
2N2222	.75	.50
2N2222A	1.40	.95
2N2369	1.07	.93
2N2369A	1.65	1.10
2N3252	9.75	4.00
2N3253	9.75	4.00
2N3724	5.00	3.35
2N3734	6.60	4.40
2N3736	6.60	4.00
2N4046	3.50	2.33
2N4047	4.00	2.65
Jetec Transistor's Germanium Low Power PNP		
2N394	.45	.33
2N395	.50	.33
2N396	.55	.41
2N397	.60	.47
2N404	.40	.28
2N610	.95	.60
2N611	.95	.60
2N613	.90	.55
2N616	1.55	1.05
2N1316	1.40	1.00
2N1317	1.20	.85
2N1318	1.00	.65
2N1343	1.25	.85
2N1344	1.25	.85
2N1345	1.50	.95
2N1372	.60	.45
2N1373	.80	.60
2N1374	.65	.50
2N1375	.85	.70
2N1376	.80	.60
2N1377	.95	.75
2N1378	.55	.33
2N1379	.90	.70
2N1380	.50	.32
2N1381	.60	.45
2N1382	.90	.60
2N1383	.90	.60
2N1681	1.15	.70
2N1683	2.00	1.50
Jetec Diodes		
1N50	.30	.20
1N55	.40	.31
1N63	.36	.28
1N69	.30	.23
1N70	.43	.32
1N83	.55	.40
1N270	.18	.12
1N273	.66	.50
1N277	.34	.26
1N281	.31	.23
1N283	.21	.14
1N289	.27	.18
1N291	.36	.24
1N292	.33	.22
1N294	.34	.24
1N297	.34	.26
1N458	.45	.30
1N459	.45	.30
1N460	3.50	2.63
1N464	.45	.30
1N482	.47	.32
1N485	.57	.38
1N774	.32	.21
1N775	.27	.18
Jetec Rectifiers		
1N536	.36	.27
1N2148	2.10	1.41
1N2266	1.25	.70
1N2246	1.13	.85
1N4001	.32	.20
1N4002	.32	.20
1N4003	.32	.20
1N4004	.32	.20
1N4005	.37	.29
1N4006	.52	.41
1N4007	.79	.63
UPI Rectifiers		
UPI 2069	.30	.19
UPI 2069A	.32	.28
UPI 2070	.33	.21
UPI 2070A	.41	.35
UPI 2071	.37	.29
UPI 2071A	.50	.44

Net

© United Technical Publications

The replacement picture tube no other color tube can replace!



Now you can install the revolutionary Chromacolor picture tube in almost any brand of 23" (diag.) color TV. And let your customer see the difference: a new, sharper Chromacolor picture with greater brilliance, contrast and color definition.

Zenith pioneered, developed and patented (U.S. Patent No. 3146368) the Chromacolor picture tube. And only Zenith has Chromacolor.

Chromacolor is an easy sale because people already know of Chromacolor's superiority. (Last year, after the revolutionary new Chromacolor system was introduced, Zenith giant-screen color TV sets became the No. 1 best-seller!)

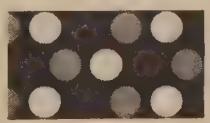
Full two-year warranty.

Here's your sales clincher: Chromacolor replacement color tubes are warranted for two full years. Exactly double the warranty period for most other replacement color picture tubes.

Give your customers the best — Chromacolor replacement color tubes. Only your Zenith Distributor has them.

TWO-YEAR WARRANTY

Zenith Radio Corporation warrants the replacement CHROMACOLOR picture tube to be free from defects in material arising from normal usage for two years from date of original consumer purchase. Warranty covers replacement or repair of picture tube, through any authorized Zenith dealer; transportation, labor and service charges are the obligation of the owner.



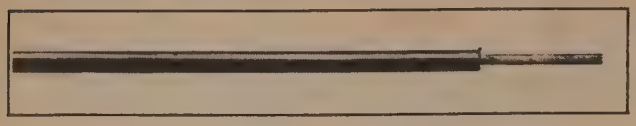
Zenith Chromacolor picture tube pinpoints the color dots on a jet black background and for the first time fully illuminates every dot.

ZENITH®

The quality goes in before the name goes on

© United Technical Publications

ALPHA WIRE



MIL-W-76B-PLASTIC WIRE

TYPE MW—UNCOVERED PLASTIC

DESCRIPTION: Solid or extra flexible stranded tinned copper, color coded **medium wall** polyvinylchloride insulation. The stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating —40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

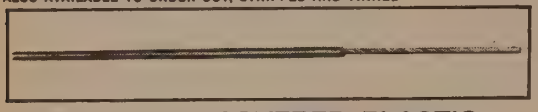
STRANDED

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1550	MW-C 24(7)U	24	7/32	.016"	.059"	1-19 AS LISTED BELOW
1551	MW-C 22(7)U	22	7/30	.016"	.064"	
1553	MW-C 20(10)U	20	10/30	.016"	.073"	
1555	MW-C 18(16)U	18	16/30	.016"	.084"	
1557	MW-C 16(26)U	16	26/30	.016"	.095"	
1559	MW-C 14(41)U	14	41/30	.016"	.110"	
1560	MW-C 12(65)U	12	65/30	.016"	.125"	

SOLID

1561 24	MW-C 24(1)U	24	1	.016"	.055"	1-19 AS LISTED BELOW
1561	MW-C 22(1)U	22	1	.016"	.060"	
1563	MW-C 20(1)U	20	1	.016"	.066"	
1565	MW-C 18(1)U	18	1	.016"	.074"	

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED



TYPE LW — UNCOVERED PLASTIC

Regular Tinned Conductor

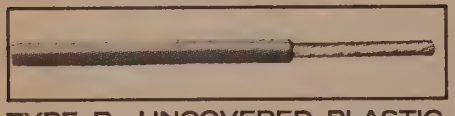
DESCRIPTION:
Stranded tinned copper, color coded **light wall** polyvinylchloride insulation. **(Nom. wall thickness .010".)**

CHARACTERISTICS:
Temperature rating —40°C to +80°C. Voltage rating 300 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. O.D.
1685	LW-C 30(7)U	30	7/38	.033"
1686	LW-C 28(7)U	28	7/36	.035"
1687	LW-C 26(7)U	26	7/34	.038"
1688	LW-C 24(7)U	24	7/32	.043"
1689	LW-C 22(7)U	22	7/30	.049"
1690	LW-C 20(7)U	20	7/28	.060"

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED

Mil-W-16878D



TYPE B—UNCOVERED PLASTIC

Pre-Bonded Tinned Copper Conductor

DESCRIPTION:
Each strand of the conductor is double tinned and then heated, which bonds the individual strands together for easy stripping. Color coded .010" polyvinylchloride insulation. The insulation meets requirements of MIL-W-16878D.

CHARACTERISTICS:
Temperature rating —55°C to +105°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

APPLICATION:
A pre-bonded conductor is the ideal construction when leads are to be cut and stripped for point to point wiring. The pre-bonded conductor maintains much of the flexibility of an ordinary stranded wire but reduces processing and handling costs on soldering, retwisting of strands after stripping and hand tinning operations. Since the individual strands are bonded, expensive induction heating equipment is unnecessary.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.
3154	B-24	24	7/32	.010"	.044"
3155	B-22	22	7/30	.010"	.051"
3156	B-20	20	7/28	.010"	.059"
3157	B-18	18	7/26	.010"	.070"

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED.

STOCK COLORS
(Other striped combinations available to order.)

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Orange
18—White/Gray
19—White/Violet



MIL-W-76B-PLASTIC WIRE

TYPE MW—SHIELDED

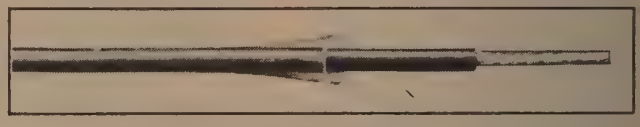
DESCRIPTION: Extra flexible stranded tinned copper, color coded **medium wall** polyvinylchloride insulation, braided tinned copper shield overall, 80% coverage. Stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating —40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1350	MW-C 24(7)S	24	7/32	.016"	.075"	White
1351	MW-C 22(7)S	22	7/30	.016"	.085"	White
1352	MW-C 20(10)S	20	10/30	.016"	.095"	White

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

*Other solid colors and striped combinations available to order.



MIL-W-76B-PLASTIC WIRE

TYPE MW—NYLON JACKET

DESCRIPTION: Extra flexible stranded tinned copper, color coded **medium wall** polyvinylchloride insulation, clear nylon (polyamide) jacket overall. Stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating —40°C to +90°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICK.	NOM. O.D.	* STOCK COLORS
1504	MW-C 22(7)J	22	7/30	.016"	.003"	.072"	1-19 as listed below
1505	MW-C 20(10)J	20	10/30	.016"	.003"	.079"	1-19 as listed below
1506	MW-C 18(16)J	18	16/30	.016"	.003"	.090"	1-19 as listed below
1507	MW-C 16(26)J	16	26/30	.016"	.004"	.103"	1-19 as listed below
1508	MW-C 14(41)J	14	41/30	.016"	.004"	.118"	1-6 as listed below
1509	MW-C 12(65)J	12	65/30	.016"	.005"	.135"	1-3 as listed below

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

*Other solid colors and striped combinations available to order.



MIL-W-76B-PLASTIC WIRE

TYPE MW—SHIELDED—NYLON JACKET

DESCRIPTION: Stranded tinned copper, white **medium** wall polyvinylchloride insulation, braided tinned copper shield, 80% minimum coverage, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating —40° to +90°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL JACKET	NOMINAL O.D.
1370	MW-C 24(7)SJ	24	7/32	.016"	.005"	.091"
1371	MW-C 22(7)SJ	22	7/30	.016"	.005"	.100"
1372	MW-C 20(7)SJ	20	7/28	.016"	.005"	.105"
1373	MW-C 18(19)SJ	18	19/30	.016"	.005"	.115"
1374	MW-C 16(19)SJ	16	19/29	.016"	.005"	.125"

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

*** STOCK COLORS**

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White Black
12—White Red
13—White/Green
14—White Yellow
15—White Blue
16—White Brown
17—White Orange
18—White Gray
19—White Violet

*Other striped color combinations available to order.

Sold Nationally to Electronic Parts Distributors by: Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications





Mil-W-16878D Plastic Wire

TYPE B — UNCOVERED PLASTIC

Regular Tinned Copper Conductor

DESCRIPTION: Stranded tinned copper, color coded. .010" polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating −55°C to +105°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.
1850	B-32	32	7/40	.010"	.028"
1851	B-30	30	7/38	.010"	.032"
1852	B-28	28	7/36	.010"	.034"
1853	B-26	26	7/34	.010"	.038"
1854	B-24	24	7/32	.010"	.043"
1854/19	B-24	24	19/36	.010"	.043"
1855	B-22	22	7/30	.010"	.050"
1855/19	B-22	22	19/34	.010"	.050"
1856	B-20	20	7/28	.010"	.058"
1856/19	B-20	20	19/32	.010"	.058"
1857	B-18	18	7/26	.010"	.068"
1857/19	B-18	18	19/30	.010"	.068"
1858/19	B-16	16	19/29	.010"	.077"
1859/19	B-14	14	19/27	.010"	.091"

* STOCK COLORS

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Orange
18—White/Gray
19—White/Violet

*Other striped color combinations to order.

TYPE B — NYLON JACKET

Regular Tinned Copper Conductor

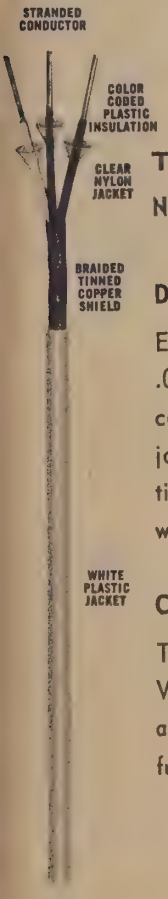
DESCRIPTION: Stranded tinned copper, color coded. .010" polyvinylchloride insulation, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating −55°C to +115°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1863	B-26	26	7/34	.010"	.003"	.044"
1864	B-24	24	7/32	.010"	.003"	.049"
1864/19	B-24	24	19/36	.010"	.003"	.049"
1865	B-22	22	7/30	.010"	.003"	.056"
1865/19	B-22	22	19/34	.010"	.003"	.056"
1866	B-20	20	7/28	.010"	.003"	.064"
1866/19	B-20	20	19/32	.010"	.003"	.064"
1867	B-18	18	7/26	.010"	.003"	.074"
1867/19	B-18	18	19/30	.010"	.003"	.074"
1868/19	B-16	16	19/29	.010"	.003"	.085"
1869/19	B-14	14	19/27	.010"	.004"	.099"

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED.

Mil-W-16878D Multi-Conductor Cable



TYPE B — NYLON SHIELDED-PLASTIC JACKET

DESCRIPTION:

Each conductor stranded tinned copper .010" polyvinylchloride insulation, color coded, clear nylon (polyamide) jacket, conductors cabled, braided tinned copper shield 90% coverage, white polyvinylchloride jacket overall.

CHARACTERISTICS:

Temperature rating –55°C to +105°C Voltage rating 600 volts, resistant to acids, alkalis, oil, flame, moisture, fungus, solvents.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. NYLON THICKNESS	NOM. OVERALL JACKET	NOM. O.D.
3200	1	26	7/34	.010"	.003"	.010"	.087"
3201	2	26	7/34	.010"	.003"	.014"	.138"
3202	3	26	7/34	.010"	.003"	.014"	.142"
3210	1	24	19/36	.010"	.003"	.010"	.092"
3211	2	24	19/36	.010"	.003"	.016"	.152"
3212	3	24	19/36	.010"	.003"	.016"	.161"
3220	1	22	19/34	.010"	.003"	.010"	.100"
3221	2	22	19/34	.010"	.003"	.016"	.168"
3222	3	22	19/34	.010"	.003"	.017"	.178"
3230	1	20	19/32	.010"	.003"	.010"	.106"
3231	2	20	19/32	.010"	.003"	.019"	.186"
3232	3	20	19/32	.010"	.003"	.019"	.196"
3240	1	18	19/30	.010"	.003"	.012"	.120"
3241	2	18	19/30	.010"	.003"	.021"	.210"
3242	3	18	19/30	.010"	.003"	.022"	.227"
3245	1	16	19/29	.010"	.003"	.016"	.137"
3246	2	16	19/29	.010"	.003"	.023"	.236"
3247	3	16	19/29	.010"	.003"	.023"	.240"

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

COLOR CODE OF CONDUCTORS
1—White, 2—Black, 3—Red

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Mil-W-16878D Plastic Wire



TYPE C — UNCOVERED PLASTIC

DESCRIPTION: Stranded tinned copper, color coded .016" polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating —55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1830	C-24	24	7/32	.016"	.058"	1-10
1831	C-22	22	7/30	.016"	.064"	1-10
1832	C-20	20	7/28	.016"	.072"	1-10
1833	C-18	18	7/26	.016"	.082"	1-10
1834	C-16	16	19/29	.016"	.091"	1
1835	C-14	14	19/27	.016"	.105"	1
1836	C-12	12	19/25	.016"	.124"	1

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED



TYPE C — NYLON JACKET

DESCRIPTION: Stranded tinned copper, color coded .016" polyvinylchloride insulation, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating —55°C to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICK.	NOMINAL O.D.	* STOCK COLORS
1841	C-22	22	7/30	.016"	.003"	.072"	
1842	C-20	20	7/28	.016"	.003"	.079"	1
1843	C-18	18	7/26	.016"	.003"	.090"	1
1844	C-16	16	19/29	.016"	.004"	.099"	1
1845	C-14	14	19/27	.016"	.004"	.114"	1

*STOCK COLORS

1—White	6—Light Blue	11—White/Black	16—White/Brown
2—Black	7—Brown	12—White/Red	17—White/Orange
3—Red	8—Orange	13—White/Green	18—White/Gray
4—Green	9—Gray (slate)	14—White/Yellow	19—White/Violet
5—Yellow	10—Violet (purple)	15—White/Blue	

* Other solid colors and striped combinations available to order.

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, MARKED AND STRIPPED



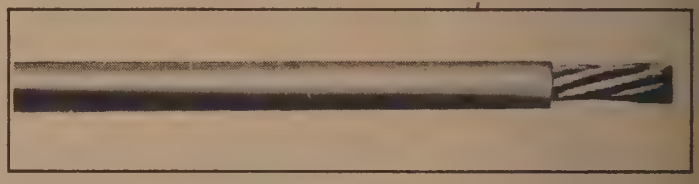
TYPE C — SHIELDED — NYLON JACKET

DESCRIPTION: Stranded tinned copper, **white** .016" polyvinylchloride insulation, braided tinned copper shield, 90% coverage, clear nylon (polyamide) jacket overall (which can be striped to order for color identification).

CHARACTERISTICS: Temperature rating —55°C. to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL JKT. THICKNESS	NOMINAL O.D.
1470	C-24	24	7/32	.016"	.005"	.091"
1471	C-22	22	7/30	.016"	.005"	.098"
1472	C-20	20	7/28	.016"	.005"	.105"
1473	C-18	18	19/30	.016"	.005"	.115"
1474	C-16	16	19/29	.016"	.005"	.125"
1475	C-14	14	19/27	.016"	.005"	.142"
1476	C-12	12	19/25	.016"	.005"	.156"

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED



TYPE D — UNCOVERED PLASTIC

DESCRIPTION: Stranded tinned copper, color coded polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating —55°C to +105°C. Voltage rating 3000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
1870	D-24	24	7/32	.029"	.082"	Wh.
1871	D-22	22	7/30	.029"	.088"	Wh.
1872	D-20	20	7/28	.029"	.096"	Wh.
1873	D-18	18	7/26	.029"	.106"	Wh.
1874	D-16	16	19/29	.029"	.115"	Wh.
1875	D-14	14	19/27	.029"	.129"	Wh.
1876	D-12	12	19/25	.034"	.158"	Wh.
1877	D-10	10	37/26	.037"	.185"	White

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED

* Other solid colors and striped combinations available to order.

Machine Tool Wire

UL-LISTED – TYPE MTW

DESCRIPTION: Stranded bare copper conductor insulated with thermoplastic insulation. Manufactured in accordance with the latest NEC code. UL listed.

TEMPERATURE: 90 C in air
60 C in oil

VOLTAGE RATING: 600 Volts

APPLICATION: Machine tools and appliances where temperatures do not exceed 90 C in dry locations; 60°C where exposed to moisture, oil, or coolants; 600 Volts.

ALPHA NO.	CONDUCTOR SIZE	CONDUCTOR STRANDING	NOM. WALL THICKNESS	NOM. O.D.	STOCK COLORS
3090	16	26 X 30	2/64	.122	1-10 *
3091	14	19 X .0147	2/64	.138	1-10 *
3092	14	19 X .0147	3/64	.170	1-10 *
3093	12	19 X .0185	3/64	.189	1-10 *
3094	10	19 X .0234	3/64	.214	1-10 *
3095	8	19 X .0295	4/64	.277	1-10 *
3096	6	19 X .0372	4/64	.320	1-10 *
3097	4	19 X .0469	4/64	.365	1-10 *

STANDARD SPOOL PUT-UP: 500 FT., 1000 FT.

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Mil-W-16878D Shielded Teflon† Cables

alpha



NO OUTER COVERING OVER SHIELD

DESCRIPTION: Each conductor stranded silver plated copper, Type E extruded TFE .010" insulation, braided silver plated copper shield over conductor(s), 90% coverage.

CHARACTERISTICS: Temperature rating −65°C to +200°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. O.D.	NOM. CAP. IN MMF SHIELD TO COND.	NOM. CAP. IN MMF COND. TO COND.
2809	1	24	19/36	.069"	45	—
2809/2	2	24	19/36	.112"	35	25
2809/3	3	24	19/36	.120"	35	20
2809/4	4	24	19/36	.132"	35	20
2812	1	22	19/34	.075"	55	—
2812/2	2	22	19/34	.124"	45	25
2812/3	3	22	19/34	.132"	35	25
2812/4	4	22	19/34	.146"	35	25
2815	1	20	19/32	.083"	55	—
2815/2	2	20	19/32	.142"	95	25
2815/3	3	20	19/32	.151"	85	25
2815/4	4	20	19/32	.168"	140	30
2818	1	18	19/30	.093"	70	—
2818/2	2	18	19/30	.162"	60	35
2818/3	3	18	19/30	.172"	60	35
2818/4	4	18	19/30	.192"	55	35
2807	1	16	19/29	.103"	107	—
2807/2	2	16	19/29	.184"	67	35

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

COLOR CODE OF CONDUCTORS
1—White 2—Black 3—Red 4—Green



TEFLON TAPE WRAP JACKET OVER SHIELD

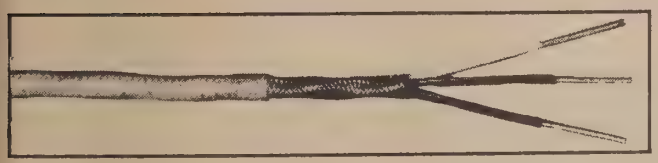
DESCRIPTION: Each conductor stranded silver plated copper, Type E extruded .010" TFE Teflon insulation, color coded, cabled, braided silver plated copper shield 90% coverage, sintered wrapped white Teflon tape jacketed overall.

CHARACTERISTICS: Temperature rating −65°C to +200°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. JKT. THICKNESS	NOM. O.D. AT HIGH POINT	NOM. CAP. IN MMF SHIELD TO COND.	NOM. CAP. IN MMF COND. TO COND.
2821	1	24	19/36	.010"	.095"	45	—
2821/2	2	24	19/36	.010"	.140"	35	25
2821/3	3	24	19/36	.010"	.147"	35	20
2821/4	4	24	19/36	.014"	.159"	35	20
2824	1	22	19/34	.010"	.102"	55	—
2824/2	2	22	19/34	.014"	.154"	45	25
2824/3	3	22	19/34	.014"	.162"	35	25
2824/4	4	22	19/34	.014"	.176"	35	25
2827	1	20	19/32	.010"	.110"	55	—
2827/2	2	20	19/32	.014"	.170"	95	25
2827/3	3	20	19/32	.014"	.175"	85	25
2827/4	4	20	19/32	.018"	.213"	140	30
2829	1	18	19/30	.010"	.120"	70	—
2829/2	2	18	19/30	.014"	.190"	60	35
2829/3	3	18	19/30	.018"	.219"	60	35
2829/4	4	18	19/30	.018"	.237"	55	35
2826	1	16	19/29	.010"	.130"	107	—
2826/2	2	16	19/29	.018"	.230"	67	25

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

COLOR CODE OF CONDUCTORS
1—White, 2—Black, 3—Red, 4—Green



TEFLON IMPREGNATED BRAID OVER SHIELD

DESCRIPTION: Each conductor stranded silver plated copper, Type E extruded .010" TFE Teflon insulation, color coded, cabled, braided silver plated copper shield, 90% coverage, braided white fused Teflon impregnated, fiberglass braid overall.

CHARACTERISTICS: Temperature rating −65°C to +200°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. O.D.	NOM. CAP. IN MMF SHIELD TO COND.	NOM. CAP. IN MMF COND. TO COND.
2811	1	24	19/36	.081"	45	—
2811/2	2	24	19/36	.126"	35	25
2811/3	3	24	19/36	.133"	35	20
2811/4	4	24	19/36	.144"	35	20
2814	1	22	19/34	.088"	55	—
2814/2	2	22	19/34	.137"	45	25
2814/3	3	22	19/34	.144"	35	25
2814/4	4	22	19/34	.158"	35	25
2817	1	20	19/32	.097"	55	—
2817/2	2	20	19/32	.154"	95	25
2817/3	3	20	19/32	.163"	85	25
2817/4	4	20	19/32	.180"	140	30
2819	1	18	19/30	.106"	70	—
2819/2	2	18	19/30	.174"	60	35
2819/3	3	18	19/30	.185"	60	35
2819/4	4	18	19/30	.205"	55	35
2820	1	16	19/29	.117"	107	—
2820/2	2	16	19/29	.196"	67	35

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

COLOR CODE OF CONDUCTORS
1—White 2—Black 3—Red 4—Green

†T.M. DuPont



TEFLON FEP EXTRUDED JACKET OVER SHIELD

DESCRIPTION: Each conductor stranded silver plated copper, Type E extruded TFE insulation color coded, cabled, braided silver plated copper shield 90% coverage, extruded FEP white Teflon jacket overall.

CHARACTERISTICS: Temperature rating −65°C to +200°C. Voltage rating 600 volts. Resistant to acids, alkalais, oil, flame, moisture, solvents and fungus. Extruded FEP Teflon jacket is tough and abrasion resistant.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	NOM. CAP. IN MMF SHIELD TO COND.	NOM. CAP. IN MMF COND. TO COND.
2831	1	24	19/36	.010"	.010"	.085"	45	—
2831/2	2	24	19/36	.010"	.010"	.130"	35	25
2831/3	3	24	19/36	.010"	.010"	.135"	35	20
2834	1	22	19/34	.010"	.010"	.091"	55	—
2834/2	2	22	19/34	.010"	.014"	.150"	45	25
2834/3	3	22	19/34	.010"	.014"	.158"	35	25
2837	1	20	19/32	.010"	.010"	.100"	55	—
2837/2	2	20	19/32	.010"	.014"	.168"	95	25
2837/3	3	20	19/32	.010"	.014"	.178"	85	25

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

COLOR CODE OF CONDUCTORS
1—White, 2—Black, 3—Red

† T.M. DuPont

© United Technical Publications

Mil-W-16878D Teflon† Wire

TYPE E — EXTRUDED (600 VOLTS)



DESCRIPTION: Single conductor stranded silver plated copper, TFE extruded Teflon insulation.

CHARACTERISTICS: Temperature rating: −65°C to +200°C. Voltage rating: 600 volts. Resistant to acid, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
2850	E-32	32	7/40	.010″	.029″	1-19 as listed
2851	E-30	30	7/38	.010″	.032″	1-19 as listed
2852	E-28	28	7/36	.010″	.036″	1-19 as listed
2853	E-26	26	7/34	.010″	.040″	1-19 as listed
2854	E-24	24	19/36	.010″	.045″	1-19 as listed
2854/7	E-24	24	7/32	.010″	.044″	1-19 as listed
2855	E-22	22	19/34	.010″	.051″	1-19 as listed
2855/7	E-22	22	7/30	.010″	.050″	1-19 as listed
2856	E-20	20	19/32	.010″	.059″	1-19 as listed
2856/7	E-20	20	7/28	.010″	.058″	1-19 as listed
2857	E-18	18	19/30	.010″	.070″	1-19 as listed
2858	E-16	16	19/29	.010″	.077″	1-19 as listed
2859	E-14	14	19/27	.012″	.094″	1-6 6 11-19
2859/12	E-12	12	19/25	.012″	.113″	1 & 11-19
2859/10	E-10	10	37/26	.012″	.134″	1 & 11-19

TYPE EE — EXTRUDED (1000 VOLTS)



DESCRIPTION: Single conductor stranded silver plated copper, extruded TFE Teflon insulation.

CHARACTERISTICS: Temperature rating: −65°C to +200°C. Voltage rating: 1000 volts. Resistant to acid, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
2874	EE-24	24	19/36	.014″	.055″	1-19
2875	EE-22	22	19/34	.014″	.062″	1-19
2876	EE-20	20	19/32	.014″	.070″	1-19
2877	EE-18	18	19/30	.014″	.080″	1-19
2878	EE-16	16	19/29	.014″	.089″	1 & 11-19
2879	EE-14	14	19/27	.017″	.106″	1 & 11-19
2879/12	EE-12	12	19/25	.017″	.124″	1 & 11-19
2879/10	EE-10	10	37/26	.017″	.145″	1 & 11-19
2879/8	EE-8	8	133/29	.020″	.210″	White only

*** STOCK COLORS**

1—White	5—Yellow	9—Gray (slate	13—White/Green	17—White/Orange
2—Black	6—Light Blue	10—Violet (purple)	14—White/Yellow	18—White/Gray
3—Red	7—Brown	11—White/Black	15—White/Blue	19—White/Violet
4—Green	8—Orange	12—White/Red	16—White/Brown	

*Other solid colors and striped combinations available to order. † T.M. DuPont

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, MARKET AND STRIPPED.

Mil-W-5086A

UNSHIELDED AIRCRAFT WIRE FOR ELECTRICAL SYSTEMS

DESCRITPTION

MIL-W-5086A — Type I — AN-22 thru AN-12 — Single conductor stranded tinned copper, white polyvinylchloride insulation, clear nylon, (polyamide) jacket overall.

MIL-W-5086A — Type II — AN-22 thru AN-12 — Single conductor stranded tinned copper, white polyvinylchloride insulation, white glass braid, clear nylon (polyamide) jacket overall.

MIL-W-5086A — Type II — AN-10 thru AN-0000 — Single conductor stranded tinned copper, white polyvinylchloride insulation, white glass braid, flame retardant nylon lacquered nylon braid overall.

CHARACTERISTICS: Temperature rating: −55°C. to +105°C. Voltage rating: 600 volts. Resists effects of water, oil, aircraft fuels, hydraulic fluid, skydral, ethyleneglycol, alcohol, dilute acids, alkalis, fungus and abrasion.



UNSHIELDED (MIL-W-5086A) TYPE I

ALPHA NO.	MIL TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOMINAL O.D.	NOM. WGT LBS. PER M/FT.
1381	AN-22	22	19/34	.068″	4.0
1382	AN-20	20	19/32	.078″	5.7
1383	AN-18	18	19/30	.088″	8.3
1384	AN-16	16	19/29	.098″	18.4
1385	AN-14	14	19/27	.117″	15.9
1386	AN-12	12	19/25	.137″	23.7

UNSHIELDED (MIL-W-5086A) TYPE II

1341	AN-22	22	19/34	.075″	4.6
1342	AN-20	20	19/32	.085″	6.3
1343	AN-18	18	19/30	.095″	8.9
1344	AN-16	16	19/29	.105″	10.9
1345	AN-14	14	19/27	.125″	16.3
1346	AN-12	12	19/25	.143″	24.2
1387	AN-10	10	49/27	.189″	39.2
1388	AN-8	8	133/29	.240″	66.2
1389	AN-6	6	133/27	.293″	102.8
1389/4	AN-4	4	133/25	.355″	158.2
1389/2	AN-2	2	665/30	.425″	244.1
1389/0	AN-0	0	1045/30	.525″	381.0
1389/00	AN-00	00	1330/30	.590″	485.0

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, MARKET AND STRIPPED.

© United Technical Publications

Flat Ribbon Cable

MULTI-CONDUCTOR — PLASTIC INSULATION CONDUCTORS PER MIL-W-16878D, Type C



DESCRIPTION: Each conductor stranded tinned copper, color coded .016" polyvinyl chloride insulation, conductors bonded together to form flat ribbon cable.

CHARACTERISTICS: Temperature rating −55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

APPLICATIONS: Saves time, weight, and space on circuit connections, interconnecting assemblies and systems, wiring harnesses for racks, sliding drawer and drop panels. Conductors fully color coded and easily separated for neat terminations.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.
3504	4	22	7/30	.016"	.065" x .260"
3508	8	22	7/30	.016"	.065" x .520"
3512	12	22	7/30	.016"	.065" x .780"
3516	16	22	7/30	.016"	.065" x 1.040"
3520	20	22	7/30	.016"	.065" x 1.300"

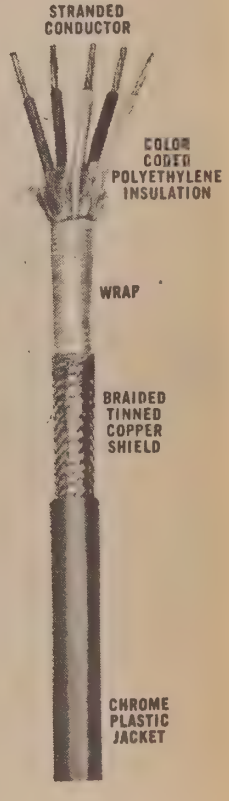
STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

1—White	11—White/Black
2—Black	12—White/Red
3—Red	13—White/Green
4—Green	14—White/Yellow
5—Yellow	15—White/Blue
6—Light Blue	16—White/Brown
7—Brown	17—White/Orange
8—Orange	18—White/Gray
9—Gray (slate)	19—White/Violet
10—Violet (purple)	20—White/Black/Red

Shielded Control Cable

GENERAL PURPOSE MULTI-CONDUCTOR PLASTIC JACKETED CABLE



DESCRIPTION: Each conductor, stranded tinned copper, color coded, polyethylene insulation, cabled with fillers where necessary, rayon wrap, braided tinned copper shield, chrome gray polyvinylchloride jacket overall.

CHARACTERISTICS: Suggested Operating Temperature: −20°C to +60°C. Suggested Operating Voltage: 600 Volts.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1712	2	20	26/34	.014"	.030"	.230"
1713	3	20	26/34	.014"	.035"	.250"
1715	4	20	26/34	.014"	.035"	.260"
1716	5	20	26/34	.014"	.035"	.275"
1717	6	20	26/34	.014"	.035"	.300"
1719	8	20	26/34	.014"	.035"	.330"
1721	10	20	26/34	.014"	.035"	.375"
1723	12	20	26/34	.014"	.035"	.380"
1726	15	20	26/34	.014"	.035"	.410"
1728	20	20	26/34	.014"	.035"	.455"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

1—Black	5—Yellow	9—Slate	13—White/Green	17—White/Purple
2—White	6—Blue	10—Purple	14—White/Yellow	18—White/Slate
3—Red	7—Brown	11—White/Black	15—White/Blue	19—Black/Red
4—Green	8—Orange	12—White/Red	16—White/Brown	20—Black/Yellow

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Net

Alpha RG Cable Types

POLYETHYLENE DIELECTRIC

All Illustrations — Actual Size

ALPHA PART NO.	RG CABLE TYPE	INNER CONDUCTOR MAT.	INNER CONDUCTOR STRAND	INNER CONDUCTOR NOM. O.D.	DIELECTRIC MAT.	DIELECTRIC O.D.	SHIELDS Inner	SHIELDS Outer	SHIELDS O.D.	JACKET MAT	JACKET O.D.	ARMOR (.0126 ALUM. WIRE)	OPR VOLTS RMS	LBS. PER M/FT.	NOM. IMPED. OHMS	NOM. CAP MMF/ FT.
9006A	6A/U	CW	1	.0285	PE	.189	SC	C	.264	NCV	.336		2700	74	75	20
9008	8/U	C	7/.0285	.086	PE	.295	C	–	.340	V	.415		5000	105	52	29.5
9008A	8A/U	C	7/.0285	.086	PE	.295	C	–	.340	NCV	.415		5000	99	52	29.5
9009B	9B/U	SC	7/.0285	.086	PE	.285	SC	SC	.355	NCV	.430		5000	126	50	30
9010A	10A/U	C	7/.0285	.086	PE	.295	C	–	.340	NCV	.415	.475	5000	125	52	29.5
9011	11/U	TC	7/.0159	.048	PE	.295	C	–	.340	V	.415		5000	94	75	20.5
9011A	11A/U	TC	7/.0159	.048	PE	.292	C	–	.340	NCV	.412		5000	89	75	20.5
9012A	12A/U	TC	7/.0159	.048	PE	.292	C	–	.340	NCV	.412	.475	5000	113	75	20.5
9014A	14A/U	C	1	.102	PE	.383	C	C	.463	NCV	.558		7000	201	52	29.5
9017A	17A/U	C	1	.188	PE	.695	C	–	.760	NCV	.885		11000	462	52	29.5
9019A	19A/U	C	1	.250	PE	.925	C	–	.990	NCV	1.135		14000	720	52	29.5
9022B	22B/U	C	Two7/.0152	.047	PE	.291	TC	TC	.355	NCV	.430		1000	124	95	16
9055	55/U	C	1	.032	PE	.121	TC	TC	.176	NP	.206		1900	31	53.5	28.5
9055B	55B/U	SC	1	.032	PE	.121	TC	TC	.176	BP	.206		1900	32	53.5	28.5
9058	58/U	C	1	.032	PE	.121	TC	–	.150	V	.200		1900	24	53.5	28.5
9058A	58A/U	TC	19/.0071	.0375	PE	.120	TC	–	.150	V	.199		1900	25	50	29.5
9058C	58C/U	TC	19/.0071	.0375	PE	.120	TC	–	.150	NCV	.199		1900	25	50	29.5
9059	59/U	CW	1	.0253	PE	.150	C	–	.191	V	.250		2300	36	73	21
9059B	59B/U	CW	1	.023	PE	.150	C	–	.191	NCV	.246		2300	36	75	20.5
9062	62/U	CW	1	.025	SSP	.151	C	–	.191	V	.250		750	34	93	13.5
9062A	62A/U	CW	1	.025	SSP	.151	C	–	.191	NCV	.249		750	34	93	13.5
9063B	63B/U	CW	1	.0253	SSP	.295	C	–	.340	NCV	.415		1000	78	125	10
9071B	71B/U	CW	1	.025	SSP	.151	C	TC	.208	BP	.250		750	42	93	13.5
9174	174/U	CW	7/.0063	.019	PE	.060	TC	–	.088	V	.105		1500	7	50	30
9212	212/U	SC	1	.056	PE	.189	SC	SC	.265	NCV	.336		3000	85	50	29.5
9213	213/U	C	7/.0296	.090	PE	.292	C	–	.340	NCV	.412		5000	100	50	30.5
9214	214/U	SC	7/.0296	.090	PE	.292	SC	SC	.360	NCV	.432		5000	129	50	30.5
9215	215/U	C	7/.0296	.090	PE	.292	C	–	.340	NCV	.412	.475	5000	122	50	30.5
9217	217/U	C	1	.106	PE	.380	C	C	.463	NCV	.555		7000	202	50	30
9218	218/U	C	1	.195	PE	.690	C	–	.760	NCV	.880		11000	457	50	30
9219	219/U	C	1	.195	PE	.690	C	–	.760	NCV	.880	.945	11000	507	50	30
9223	223/U	SC	1	.036	PE	.120	SC	SC	.176	NCV	.216		1900	36	50	30

ALL TYPES LISTED CONFORM TO LATEST REVISION MIL-C-17.

ALL DIMENSIONS ARE MAXIMUM EXCEPT WHERE INDICATED

C—Bare Copper
TC—Tinned Copper
SC—Silver Covered Copper
CW—Copper Covered Steel
PE—Solid Polyethylene
SSP—Semi Solid Polyethylene
BP—Black Polyethylene—Type IIIA
NP—Natural Polyethylene—Type III
V—Polyvinylchloride—Type I
NCV—Non-Contaminating Polyvinylchloride—Type IIA

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Shielded Microphone Cable



PLASTIC JACKET

DESCRIPTION: 1702-1706: Single conductor, stranded tinned copper, white polyethylene insulation, braided or spiral wrapped tinned copper shield, gray polyvinylchloride jacket overall.

1709-1712: Each conductor stranded tinned copper, color coded polyethylene insulation, cabled with fillers, textile wrap, braided or spiral wrapped tinned copper shield, gray polyvinylchloride jacket overall.

APPLICATIONS: 1702-1706: All high impedance microphones, lapel, ribbon, velocity, crystal contact, hi-fi interconnecting cables.

1709-1712: All low impedance microphones—carbon, condenser, dynamic.

CHARACTERISTICS: Suggested operating temperature: −20°C to +60°C.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	*CAPACITY NOM./FT.	SUG. WORK. VOLTAGE	TYPE OF SHIELD	NOM. JKT THICKNESS	NOM. O.D.
1702	1	26	3/34† 4/34†	.016″	38 mmf.	1000	Spiral Wrapped	.020″	.110″
1703	1	24	10/34	.020″	35 mmf.	3500	Braided	.030″	.145″
1704	1	24	10/34	.040″	23 mmf.	5000	Braided	.030″	.190″
1705	1	24	10/34	.016″	45 mmf.	1000	Spiral Wrapped	.020″	.110″
1706	1	20	26/34	.030″	36 mmf.	4000	Braided	.030″	.175″
1709	2	24	10/34	.016″	38 mmf.	1000	Spiral Wrapped	.030″	.190″
1710	2	22	16/34	.025″	31 mmf.	1000	Braided	.025″	.230″
1712	2	20	26/34	.014″	45 mmf.	600	Braided	.030″	.245″

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

*Between one conductor and remaining conductors connected to shield.
†Three strands of tinned copper and four strands of tinned copperweld.

COLOR CODE OF CONDUCTORS
1—White 2—Black



RUBBER AND NEOPRENE JACKETS

DESCRIPTION: Each conductor stranded tinned copper, color coded rubber insulation, cotton wrap, braided tinned copper shield, cotton wrap, tough black rubber or neoprene jacket overall.

APPLICATIONS: 1248-1449: All high impedance microphone, broadcast and heavy duty studio use, communication and audio systems.

1250-1450/16: All low impedance microphone, broadcast and heavy duty studio use. Can also be used for control circuits, video and audio interconnection cable, and as electronic power cables.

CHARACTERISTICS: Suggested operating temperature: −20°C to +60°C.

Rubber jacketed cable suited for standard duty indoor use.

Neoprene jacketed cable suited for heavy duty outdoor use and direct burial. Will resist oil, acid, sunlight, ageing and abrasion.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	TYPE OF JKT.	*NOM. CAP. MMF/FT.	NOM. O.D.
1248†	1	20	26 34	.025″	.030″	Rubber	97	.190″
1249	1	20	26 34	.040″	.035″	Rubber	60	.230″
1249/18	1	18	41 34	.040″	.035″	Rubber	69	.240″
1449	1	18	41 34	.040″	.035″	Neoprene	69	.240″
1250	2	20	26 34	.020″	.035″	Rubber	68	.270″
1250/18	2	18	41 34	.020″	.035″	Rubber	78	.295″
1450	2	18	41 34	.020″	.035″	Neoprene	78	.295″
1450/16	2	16	65 34	.025″	.035″	Neoprene	82	.335″

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

*Between one conductor and remaining conductors (if any) connected to shield.
†Mylar wrap under tinned copper shield.

COLOR CODE OF CONDUCTORS
1—Black 2—White

Low Capacitance Shielded Microphone Cable



CELLULAR FOAM POLYETHYLENE INSULATION — PLASTIC JACKET

DESCRIPTION: Single conductor, stranded tinned copper, white foam polyethylene insulation, braided tinned copper shield, chrome gray polyvinylchloride jacket.

Two conductors, stranded tinned copper, color coded foam polyethylene insulation, 1 white and 1 black, cabled with fillers, textile wrap, braided tinned copper shield, chrome gray polyvinylchloride jacket.

CHARACTERISTICS: Suggested operating temperature: −20°C to +60°C. Low loss foam polyethylene provides lower capacitance and attenuation than standard solid polyethylene microphone cables, thereby increasing the effective length of usable cable without loss of signal.

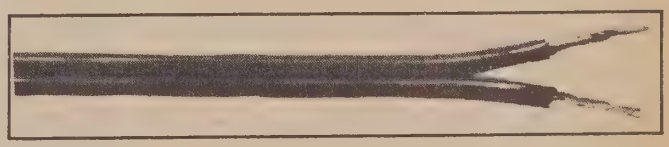
ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	*CAPACITY NOM./FT.	NOM. JKT. THICKNESS	NOM. O.D.
2310	1	26	3/34† 4/34†	.016″	30 mmf	.020″	.115″
2311	1	24	10/34	.035″	20 mmf	.030″	.180″
2312	1	24	10/34	.055″	15 mmf	.030″	.225″
2323	2	22	16/34	.035″	11 mmf	.030″	.300″

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

*Between one conductor and remaining conductors connected to shield.
†Three strands of tinned copper and four strands of tinned copperweld.

COLOR CODE OF CONDUCTORS
1— White 2— Black

E-Z-Strip Lamp Cord



U.L. APPROVED

DESCRIPTION: Conductors parallel, stranded extra flexible bare copper, rubber or polyvinylchloride jacket overall. Slit in jacket to permit "E-Z" separation.

APPLICATIONS: For line cord on radios, lamps, electric clocks, food mixers and other small instruments and appliances.

CHARACTERISTICS: Suggested operating temperature: −20°C to +60°C. Suggested operating voltage: 300 volts.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	INSUL. TYPE	NOM. WALL THICKNESS	U/L TYPE	NOMINAL O.D.	STOCK COLORS
1967	2	18	41/34	Rubber	.032″	SP-1(POSJ)	.220″ x .120″	Brown, Black, White
1977	2	18	41/34	Plastic	.032″	SPT-1(POT)	.215″ x .115″	Brn., Blk., Wh., Gray, Tan
1978	2	18	41/34	Plastic	.045″	SPT-2(POT)	.285″ x .150″	Brown
1979	2	18	41/34	Plastic	.032″	SPT-1(POT)	.215″ x .115″	Clear
1982	2	16	65/34	Plastic	.045″	SPT-2(POT)	.300″ x .160″	Brown

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Shielded Plastic Jacketed Cable

alpha





SPIRAL WRAPPED COPPER SHIELD

DESCRIPTION: Each conductor stranded or solid tinned copper, color coded polyvinylchloride insulation, conductors twisted, spiral wrapped copper shield, gray polyvinylchloride jacket overall. **Nominal jacket thickness .020".**

CHARACTERISTICS: Use of spiral shield makes pigtailing off extremely simple and fast. Excellent for production line work. Provides close to 100% shielded coverage for audio and RF frequencies. Suggested operating temperature: −20°C to +60°C.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	SUGG. WORKING VOLTAGE
2254/1	1	22	7/30	.016"	.115"	350V
2254	2	22	7/30	.016"	.175"	350V
2254/3	3	22	7/30	.016"	.190"	350V
2254/4	4	22	7/30	.016"	.200"	350V
2254/6	6	22	7/30	.016"	.235"	350V
2256/1	1	20	10/30	.016"	.130"	350V
2256	2	20	10/30	.016"	.195"	350V
2256/3	3	20	10/30	.016"	.210"	350V
2256/4	4	20	10/30	.016"	.225"	350V
2256/6	6	20	10/30	.016"	.265"	350V
2258/1	1	18	16/30	.016"	.135"	350V
2258	2	18	16/30	.016"	.230"	350V
2258/3	3	18	16/30	.016"	.235"	350V
2258/4	4	18	16/30	.016"	.245"	350V
2260	2	16	26/30	.016"	.240"	350V
2260/3	3	16	26/30	.016"	.245"	350V
2265	2	14	41/30	.020"	.285"	450V

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS
1—Black 2—Red 3—White 4—Green 5—Yellow 6—Blue

BRAIDED COPPER SHIELD

DESCRIPTION: Each conductor tinned copper, color coded polyvinylchloride insulation, conductors twisted, braided copper shield, gray polyvinylchloride jacket overall. Suitable for outdoor installations.

CHARACTERISTICS: A conventional type of braided shield providing approximately 75% coverage is particularly desirable where flexibility is required. The copper shield allows ease of pigtail soldering. Shield construction provides additional cable strength. Operating temperature: −20°C to +60°C. **Nominal jacket thickness .020".**

APPLICATIONS: For public address and sound systems, ideal for recording studios, amateur radio transmitters, shielded power or electronic circuits, wherever an economical shielded cable is required.

STRANDED

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	SUGG. WORKING VOLTAGE
1736	2	22	7/30	.016"	.185"	350V
1737	3	22	7/30	.016"	.200"	350V
1738	4	22	7/30	.016"	.210"	350V
1741	2	20	10/30	.016"	.200"	350V
1742	3	20	10/30	.016"	.220"	350V
1746	2	18	16/30	.016"	.235"	350V
1747	3	18	16/30	.016"	.245"	350V
1748	2	16	26/30	.016"	.250"	350V
1750	2	14	41/30	.020"	.290"	450V
1751	3	14	41/30	.020"	.295"	450V
1760	2	12	65/30	.020"	.335"	450V

SOLID

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	SUGG. WORKING VOLTAGE
1775*	2	22	1	.016"	.175"	350V

*With 22 AWG solid tinned copper ground wire under braided copper shield.

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

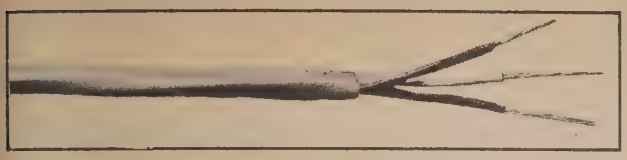
COLOR CODE OF CONDUCTORS 1—Black 2—Red 3—White 4—Green

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Unshielded Audio Cable



MULTI-CONDUCTOR — PLASTIC JACKET

DESCRIPTION: Each conductor stranded tinned copper, color coded polyvinylchloride insulation, conductors twisted, gray polyvinylchloride jacket overall. Suitable for outdoor installations.

APPLICATIONS: Unbalanced intercom systems. Low voltage relay control cable. P.A. systems. Electronic computer cable. Interconnecting cables. Remote control circuits. Telephones. Telemetering connecting cable. "Baby Sitter" intercom.

CHARACTERISTICS: Suggested Operating Temperature: −20°C to +60°C.

200 VOLTS — **STRANDED CONDUCTORS**

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1172	2	22	7/30	.010″	.020″	.140″
1173	3	22	7/30	.010″	.020″	.145″
1174	4	22	7/30	.010″	.020″	.170″
1175	5	22	7/30	.010″	.020″	.175″
1176	6	22	7/30	.010″	.020″	.185″
1177	7	22	7/30	.010″	.020″	.190″
1178	8	22	7/30	.010″	.020″	.200″
1179	9	22	7/30	.010″	.020″	.225″
1180	10	22	7/30	.010″	.020″	.235″
1181	12	22	7/30	.010″	.020″	.255″
1181/15	15	22	7/30	.010″	.020″	.280″
1181/20	20	22	7/30	.010″	.020″	.310″
1181/25	25	22	7/30	.010″	.020″	.340″
1181/30	30	22	7/30	.010″	.020″	.365″
1181/40	40	22	7/30	.010″	.025″	.425″
1181/50	50	22	7/30	.010″	.035″	.500″
1181/60	60	22	7/30	.010″	.035″	.530″

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

1—Black
2—Red
3—White
4—Green
5—Orange
6—Blue
7—Brown
8—Yellow
9—Purple
10—Slate
11—Pink
12—Tan
13—Red/Green
14—Red/Yellow
15—Red/Black
16—White/Black
17—White/Red
18—White/Green
19—White/Yellow
20—White/Blue
21—White/Brown
22—White/Orange
23—White/Gray
24—White/Violet
25—White/Black/Red
26—White/Black/Green
27—White/Black/Yellow
28—White/Black/Blue
29—White/Black/Brown
30—White/Black/Orange
31—White/Black/Slate
32—White/Black/Purple
33—White/Black/Black
34—White/Red/Black
35—White/Red/Red
36—White/Red/Green
37—White/Red/Blue
38—White/Red/Brown
39—White/Red/Purple
40—White/Green/Black
41—White/Green/Red
42—White/Green/Green
43—White/Green/Blue
44—White/Green/Brown
45—White/Green/Purple
46—White/Blue/Black
47—White/Blue/Red
48—White/Blue/Green
49—White/Blue/Blue
50—White/Blue/Brown
51—White/Blue/Purple
52—White/Brown/Black
53—White/Brown/Red
54—White/Brown/Green
55—White/Brown/Blue
56—White/Brown/Brown
57—White/Brown/Purple
58—White/Purple/Red
59—White/Purple/Green
60—White/Purple/Blue



MULTI-CONDUCTOR — PLASTIC JACKET

DESCRIPTION: Each conductor tinned copper, color coded polyvinylchloride insulation, conductors twisted, gray polyvinylchloride jacket overall. Suitable for outdoor installations.

APPLICATIONS: Intercoms. Interconnecting cables. Remote control circuits. Telephones. Telemetering connecting cable. "Baby Sitter" intercom.

CHARACTERISTICS: Suggested Operating Temperature: −20°C to +60°C

SOLID

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL JACKET	NOMINAL O.D.	SUGG. OPER. VOLTAGE
1793	2	22	1	.010″	.020″	.130″	200 V
1794	3	22	1	.010″	.020″	.140″	200 V
1794/4	4	22	1	.010″	.020″	.160″	200 V
1795	2	20	1	.016″	.020″	.170″	350 V
1796	3	20	1	.016″	.020″	.180″	350 V
1796/4	4	20	1	.016″	.020″	.200″	350 V
1797	2	18	1	.016″	.020″	.190″	350 V

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS: 1—Black 2—Red 3—White 4—Green

STRANDED

1893	2	22	7/30	.010″	.020″	.135″	200 V
1894	3	22	7/30	.010″	.020″	.145″	200 V
1894/4	4	22	7/30	.010″	.020″	.170″	200 V
1895	2	20	10/30	.016″	.020″	.180″	350 V
1896	3	20	10/30	.016″	.020″	.190″	350 V
1896/4	4	20	10/30	.016″	.020″	.215″	350 V
1897	2	18	16/30	.016″	.020″	.200″	350 V
1898	3	18	16/30	.016″	.020″	.210″	350 V
1898/4	4	18	16/30	.016″	.020″	.240″	350 V
1899	2	16	26/30	.016″	.020″	.225″	350 V
1891	2	14	41/30	.016″	.020″	.260″	350 V
1891/3	3	14	41/30	.016″	.020″	.280″	350 V

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS: 1—Black 2—Red 3—White 4—Green

MIL-W-16878D Miniature Teflon Wire

TYPE ET – EXTRUDED (250 VOLTS)

DESCRIPTION: Single Conductor stranded Silver Plated Copper, extruded TFE Teflon insulation.

CHARACTERISTICS: Temperature rating −65°C to + 200°C. Voltage rating 250 Volts. Resistant to acid, alkalis, oil, flame moisture, solvents and fungus.

APPLICATION: Type ET Wire is intended for limited use in low-voltage and high temperature applications (suitable for ultra-high frequency use).

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
2840/7	ET-32	32	7/40	.006	.021	1-10
2841/7	ET-30	30	7/38	.006	.024	1-10
2842/7	ET-28	28	7/36	.006	.027	1-10
2842/19	ET-28	28	19/40	.006	.027	1-10
2843/7	ET-26	26	7/34	.006	.031	1-10
2843/19	ET-26	26	19/38	.006	.032	1-10
2844/7	ET-24	24	7/32	.006	.036	1-10
2844/19	ET-24	24	19/36	.006	.037	1-10
2845/7	ET-22	22	7/30	.006	.042	1-10
2845/19	ET-22	22	19/34	.006	.044	1-10

STANDARD SPOOL PUT-UP ; 100 FT., 1000 FT.

ET TEFLON SOLID SILVER PLATED COPPER CONDUCTOR

ALPHA NO.	CONDUCTOR AWG	NOM. WALL THICKNESS	NOM. O.D.	STOCK COLORS
2841/1	30	.006	.022	1-10
2842/1	28	.006	.025	1-10
2843/1	26	.006	.028	1-10
2844/1	24	.006	.032	1-10

STANDARD SPOOL PUT-UP ; 100 FT., 1000 FT.

SOLID CONDUCTOR

Extruded TFE Teflon Insulation

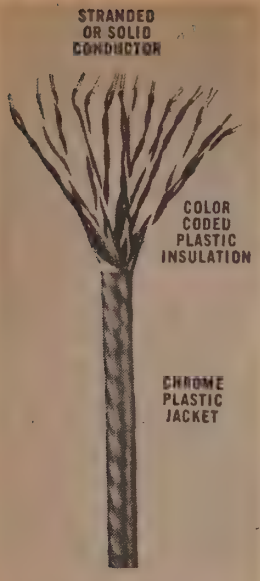
DESCRIPTION: Single Conductor Solid Silver Plated Copper, extruded TFE teflon insulation.

CHARACTERISTICS: Temperature rating −65°C to 200°C. Voltage rating 600 Volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	NOM. O.D.	STOCK COLORS
5853/1	E-26	26	.036	1-10
5854/1	E-24	24	.040	1-10
5855/1	E-22	22	.045	1-10
5856/1	E-20	20	.052	1-10
5857/1	E-18	18	.060	1-10

STANDARD SPOOL PUT-UP ; 100 FT., 1000 FT.

© United Technical Publications



Unshielded Intercom Cable

PAIRED CONDUCTORS — PLASTIC JACKET

DESCRIPTION: Each conductor tinned copper, color coded polyvinylchloride insulation, conductors twisted into pairs, gray polyvinylchloride jacket overall. Suitable for outdoor installations.

APPLICATIONS: Balanced intercom systems. Annunciators. Telephones. Nurses call systems. Control circuit cable. Electronic computer cable. Multiple speaker cable. Signal systems. Alarm systems.

CHARACTERISTICS: Suggested operating temperature: −20°C to +60°C. Suggested operating voltage: 200 volts.

SOLID CONDUCTORS

ALPHA NO.	NO. OF PAIRS	NO. OF COND.	COND. SIZE	COND. STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1300	1	2	22 Solid	1	.010″	.020″	.130″
1302	2	4	22 Solid	1	.010″	.020″	.195″
1304	3	6	22 Solid	1	.010″	.020″	.220″
1307	6	12	22 Solid	1	.010″	.020″	.275″
1307/9	9	18	22 Solid	1	.010″	.020″	.310″
1309	13	26	22 Solid	1	.010″	.025″	.380″
1309/15	15	30	22 Solid	1	.010″	.025″	.400″
1310	16	32	22 Solid	1	.010″	.025″	.420″
1313	27	54	22 Solid	1	.010″	.035″	.510″



STRANDED CONDUCTORS

1316	1	2	22	7/30	.010″	.020″	.145″
1317	2	4	22	7/30	.010″	.020″	.210″
1318	3	6	22	7/30	.010″	.020″	.225″
1319	4	8	22	7/30	.010″	.020″	.240″
1320	5	10	22	7/30	.010″	.020″	.265″
1322	6	12	22	7/30	.010″	.020″	.290″
1323	9	18	22	7/30	.010″	.020″	.355″
1324	11	22	22	7/30	.010″	.020″	.365″
1327	15	30	22	7/30	.010″	.025″	.450″
1327/19	19	38	22	7/30	.010″	.025″	.480″
1329	27	54	22	7/30	.010″	.035″	.570″
1329/41	41	82	22	7/30	.010″	.040″	.710″

STANDARD SPOOL PUT-UP: 50 FT., 100 FT., 500 FT., 1000 FT.

PAIR NO.	COLOR COMBINATION
1	Black paired with Red
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue
5	Black paired with Brown
6	Black paired with Yellow
7	Black paired with Orange
8	Red paired with Green
9	Red paired with White
10	Red paired with Blue
11	Red paired with Yellow
12	Red paired with Brown
13	Red paired with Orange
14	Green paired with Blue
15	Green paired with White
16	Green paired with Brown
17	Green paired with Orange
18	Green paired with Yellow
19	White paired with Blue
20	White paired with Brown
21	White paired with Orange
22	White paired with Yellow
23	Blue paired with Brown
24	Blue paired with Orange
25	Blue paired with Yellow
26	Brown paired with Orange
27	Brown paired with Yellow
28	Purple paired with Red
29	Purple paired with White
30	Purple paired with Green
31	Purple paired with Blue
32	Purple paired with Brown
33	Purple paired with Yellow
34	Purple paired with Orange
35	Purple paired with Slate
36	Purple paired with Black
37	Slate paired with Red
38	Slate paired with White
39	Slate paired with Green
40	Slate paired with Blue
41	Slate paired with Brown
42	Slate paired with Yellow
43	Slate paired with Orange
44	Slate paired with Black
45	White/Black paired w. Red
46	White/Black paired w. Green
47	White/Black paired w. Blue
48	White/Black paired w. Brown
49	White/Black paired w. Yellow
50	White/Black paired w. Orange
51	White/Black paired w. Purple

alpha **ALPHA WIRE**

© United Technical Publications

Shielded Audio & Data Cable

INDIVIDUALLY SHIELDED MULTIPLE PAIRS — PLASTIC JACKET

NEW

DESCRIPTION: Each conductor, tinned copper, color coded, high density polyethylene, conductors twisted into pairs. 22 gauge tinned copper drain wire. Mylar-supported aluminum foil shield, aluminum facing inward. Chrome Grey PVC jacket overall.

CHARACTERISTICS: Mutual conductance between conductors of a pair, 25 pf/ft. Capacitance of a single conductor to shield, 45 pf/ft.

APPLICATIONS: For audio, R.F. and pulse applications requiring superior circuit isolation.



#22 — SOLID

ALPHA NO.	NO. OF PAIRS	NO. OF COND.	COND. STRAND	NOM. WALL THICK. (Inches)	NOM. JKT. THICK. (Inches)	NOM. O.D. (Inches)
6002	6	12	1	.010	.030	.318
6004	9	18	1	.010	.030	.371

#22 — STRANDED

ALPHA NO.	NO. OF PAIRS	NO. OF COND.	COND. STRAND	NOM. WALL THICK. (Inches)	NOM. JKT. THICK. (Inches)	NOM. O.D. (Inches)
6010	3	6	7/30	.010	.025	.252
6012	6	12	7/30	.010	.030	.342
6014	9	18	7/30	.010	.035	.410
6016	11	22	7/30	.010	.040	.457
6018	15	30	7/30	.010	.040	.523
6020	19	38	7/30	.010	.050	.570
6022	27	54	7/30	.010	.055	.687

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

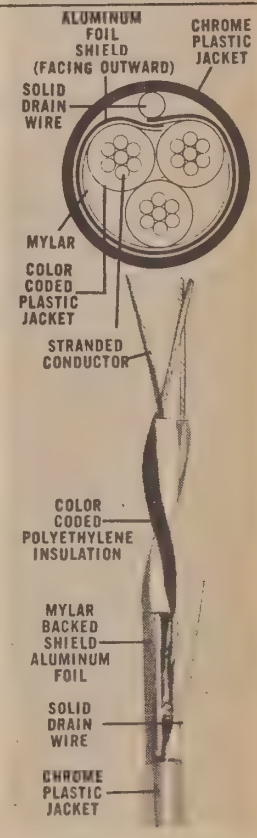
PAIR NO.	COLOR COMBINATION OF PAIRS	
1	Black paired with Red	10—Red paired with Blue
2	Black paired with White	11—Red paired with Yellow
3	Black paired with Green	12—Red paired with Brown
4	Black paired with Blue	13—Red paired with Orange
5	Black paired with Brown	14—Green paired with Blue
6	Black paired with Yellow	15—Green paired with White
7	Black paired with Orange	16—Green paired with Brown
8	Red paired with Green	17—Green paired with Orange
9	Red paired with White	18—Green paired with Yellow
19	White paired with Blue	
20	White paired with Brown	
21	White paired with Orange	
22	White paired with Yellow	
23	Blue paired with Brown	
24	Blue paired with Orange	
25	Blue paired with Yellow	
26	Brown paired with Orange	
27	Brown paired with Yellow	

Shielded Plastic Jacketed Cable

MYLAR SUPPORTED ALUMINUM FOIL SHIELD

DESCRIPTION: Each conductor stranded tinned copper, color coded polyethylene insulation, conductors cabled, wrapped mylar supported aluminum foil shield, 100% coverage with drain wire laid parallel, aluminum foil facing outward to provide maximum ground, gray pvc jacket overall.

CHARACTERISTICS: Operating temperature: −20°C to +60°C. Operating voltage: 400 volts. Light weight, reduces cable diameter, and provides 100% shield coverage.



ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
2402	2	22	7/30	.016″	.020″	.195″
2403	3	22	7/30	.016″	.020″	.210″
2404	4	22	7/30	.016″	.020″	.225″
2412	2	20	10/30	.016″	.020″	.210″
2413	3	20	10/30	.016″	.020″	.225″
2414	4	20	10/30	.016″	.020″	.240″
2422	2	18	16/30	.016″	.020″	.230″
2423	3	18	16/30	.016″	.020″	.245″
2424	4	18	16/30	.016″	.020″	.265″
2432	2	16	26/30	.016″	.020″	.255″
2433	3	16	26/30	.016″	.020″	.275″

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS: 1—Black 2—Red 3—White 4—Green

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by: Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications



RETRACTILE COIL CORDS

POWER CORDS—NEOPRENE JACKET U.L. APPROVED

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Long-lasting service is assured with this quality multi-conductor power cord. Each conductor is stranded copper, with rubber installation, and a rugged weather and oil resistant neoprene jacket overall.

APPLICATION: Used on electric tools, portable drills, soldering wires, electrical appliances, household appliances, etc., to eliminate loose hanging wires and to prevent wires from tangling and twisting.

CHARACTERISTICS: Suggested operating temperature: 20 C to 60 C.

ALPHA NO 2 FT. LGTHS	4 FT. LGTHS	† 1 FT. LGTHS.	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	U.L. TYPE	AMP RATING	VOLT RATING	NOM. COIL O.D.	NOM. O.D CORD
660 2	660 4	660 1	2	18	41 34	SVO	7	300	7 8″	.260″
760 2	760 4		3	18	41 34	SVO	7	300	1″	.275″
661 2	661 4	661 1	2	18	41 34	SJO	7	300	1-3 16″	.320″
662 2	662 4	662 1	3	18	41 34	SJO	7	300	1-3 8″	.350″
663 2	663 4		4*	18	41 34	SJO	5 6	300	1-7 16″	.385″
664 2	664 4	664 1	2	16	65 34	SJO	10	300	1 3 8″	.360″
665 2	665 4	665 1	3	16	65 34	SJO	10	300	1-7 16″	.390″
666 2	666 4		4*	16	65 34	SJO	8	300	1-1 2″	.425″
670 2	670 4		3	16	41 34	SO	10	600	1-13 16″	.470″
671 2	671 4		4*	16	65 34	SO	8	600	1-7 8″	.500″
673 2	673 4		3	14	41 30	SO	15	600	2-1 8″	.560″
674 2	674 4		4*	14	41 30	SO	12	600	2-1 4″	.605″

COLOR CODE OF CONDUCTORS
1—Black 2—White
3—Green 4—Red

*If all four conductors normally carry current, amp rating is as shown. If one lead is used as a ground, amp rating is the same as 2 and 3 conductor cords.

†A 12″ retracted length with a 12″ straight lead on each end for easy stripping and termination. Cord extends to approximately 6 feet.

RETRACTILE TEST LEAD WIRE

RETRACTED LENGTH 12″—EXTENDED LENGTH 6 FEET

DESCRIPTION: A high grade quality rubber insulation for maximum flex life extruded over a single conductor of extra flexible tinned copper which gives long life to this retractile test lead wire. Available in a 12″ retracted length with a 6″ straight lead on each end, the cord extends to approximately 6 feet.

ALPHA NO.	CONDUCTOR SIZE	CONDUCTOR STRAND	AMP. RATED	VOLT RATING	NOM. COIL O.D.	NOM. O.D. CORD	COLOR CODE
850	20	41 36	4	5,000	¾″	.165″	Black-Red

COLOR CODE
SPECIFY BLACK OR RED.

RETRACTILE POWER CORD SETS U.L. APPROVED

RETRACTED LENGTH 18″—EXTENDED LENGTH 7½ FEET

DESCRIPTION: Coiled power cord with a sturdy molded male plug on one end. On the other end we have removed a portion of the neoprene jacket, exposed the conductors and stripped them for easy termination. Operating voltage, 300 volts.

APPLICATION: Same as power cords, but with a plug on one end.

ALPHA NO	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	U.L. TYPE	NOM. COIL O.D.	NOM. O.D CORD
654	2	18	41 34	SVO	7 8″	.260″
656	3	18	41 34	SJO	1-3 8″	.350″
657	2	16	65 34	SJO	1-3 8″	.360″
658	3	16	65 34	SJO	1-7 16″	.390″

COLOR CODE OF CONDUCTORS
1—Black 2—White 3—Green

RETRACTILE COIL CORDS

RETRACTILE COMMUNICATION COIL CORDS

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Multi-conductor communication cord manufactured with extra flexible #23 AWG-21 36 tinned soft cadmium copper for maximum flex life. Insulated with rubber, for communication circuits of maximum 120 working volts. The overall jacket is a specially compounded cured neoprene jacket giving long life to the retractile cord.

APPLICATION: Used in communication equipment, such as telephone car carriers, mobile radio equipment, ham operations, head sets, citizen band units and radio transmitter to receiver head sets, communication cords eliminate hazards and inconveniences caused by tangled straight cords.

ALPHA NO. 2 FT. LGTHS	4 FT. LGTHS	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	AMP RATING	VOLTAGE RATING	NOM. COIL O.D.	CORD O.D.
680 2	680 4	2	23	21 36	1	120	3 4″	.215″
681 2	681 4	3	23	21 36	1	120	13 16″	.220″
682 2	682 4	4	23	21 36	1	120	15 16″	.250″
683 2	683 4	5	23	21 36	1	120	1-1 16″	.285″
684 2	684 4	6	23	21 36	1	120	1-1 8″	.305″
685 2	685 4	7	23	21 36	1	120	1-1 4″	.320″

COLOR CODE OF CONDUCTORS
1—Black
2—White
3—Red
4—Green
5—Blue
6—Yellow
7—Brown

RETRACTILE COMMUNICATION CORDS (SHIELDED)

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Same as above, except that shielded conductors are individually shielded with a cadmium copper shield to eliminate external electrical interference. Shield can be pigtailed for direct soldering connections.

APPLICATION: When shielded communication cords are needed.

ALPHA NO. 2 FT. LGTHS	4 FT. LGTHS	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	VOLTAGE RATING	SHIELDING	NOM. COIL O.D.	NOM. O D CORD	COLOR CODE OF CONDUCTORS
690 2	690 4	1	24	41 40	75	Shielded	5/16″	.160″	White
692 2	692 4	2	1-23 1-24	21 36 41 40	120 75	Unshielded Shielded	7/16″	.240″	Black White
694 2	694 4	3	2-23 1-24	21 36 41 40	120 75	Unshielded Shielded	7/16″	.240″	Black & Red White
696 2	696 4	4	2-23 2-24	21 36 41 40	120 75	Unshielded Individually Shielded	1″	.270″	Red & Black White & Green

MINIATURE RETRACTILE COMMUNICATIONS CORDS

RETRACTED LENGTH 2 FEET—EXTENDED LENGTH 10 FEET

DESCRIPTION: A small diameter plastic cord with stranded tinned copper conductors for maximum flexibility, insulated and jacketed with polyvinylchloride. Each cord is available in a 2 ft. retracted length with a 6″ straight lead on each end and extends to approximately 10 feet.

APPLICATION: For low voltage power and communication equipment where miniaturization is required due to space and weight limitations.

ALPHA NO	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	AMP RATING	VOLT RATING	NOM. COIL O.D	NOM. CORD O.D
651 [3]	2	28	19 40	0 5	100	½″	.135″
652	4	28	19 40	0 5	100	½″	.150″

For 3 conductor, use 4 conductor with one lead unused

COLOR CODE OF CONDUCTORS
1—Black 2—White
3—Green 4—Red

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Flat Braid



DESCRIPTION: A woven braid, composed of tinned copper strands, which is rolled flat at time of manufacture to a specific width depending upon construction.

ALPHA NO.	NOM. FLAT WIDTH	NOM. THICKNESS	BRAID CONSTRUCTION AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AWG EQUIV.	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAP. (Amps)	PUT-UP CODE
1221	.025	.015″	36	8	8	27	200	4.0	1 thru 5
1222	1/32″	.020″	36	16	16	24	400	6.0	1 thru 5
1223	3/64″	.020″	36	24	24	22	600	7.0	1 thru 5
1224	3/32″	.020″	36	16	48	19	1200	11.0	1 thru 5
1229	1/8″	.020″	36	24	72	18	1800	16.0	1 thru 5
1230	3/16″	.020″	36	24	120	15	3000	25.0	1 thru 5
1231	1/4″	.030″	36	24	168	14	4200	32.0	1 thru 5
1232	3/8″	.030″	36	48	288	12	7200	46.0	1 thru 5
1233/2	1/2″	.030″	36	48	384	10	9600	53.0	1 thru 5
1233	5/8″	.030″	36	48	384	10	9600	53.0	1 thru 5
1234	3/4″	.040″	36	48	832	7	20800	85.0	1 thru 5
1235	1″	.045″	36	48	832	7	20800	85.0	1 thru 5
1239	1 3/8″	.050″	30	48	336	5	33700	100.0	1 thru 5
1240	1 1/2″	.060″	30	48	528	3	53064	150.0	1 thru 3
1241	1 3/4″	.080″	30	48	1248	00	125424	280.0	1 thru 3
1242	2″	.120″	30	48	1536	000	154368	310.0	1 thru 3
1242/4	3″	.200″	30	48	2256	0000	225000	390.0	1 & 2

PUT-UP CODE: 2—100 Ft. 4—500 Ft. 5—1000 Ft.

Oval Commercial Braid



DESCRIPTION: A woven tinned copper braid which is left in the tubular configuration as it leaves the braiding equipment. It is manufactured to a specific inside diameter but because of its extreme flexibility cannot maintain its completely round shape and becomes oval.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	BRAID CONSTRUCTION AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AWG. EQUIV.	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY (Amps)	PUT-UP CODE
2132	1/16″	34	16	32	19	1192	11.0	1 thru 5
2138	11/64″	34	24	120	14	4770	32.0	1 thru 5
2140	3/16″	34	24	144	13	5724	38.0	1 thru 4
2142	1/4″	34	24	168	12	6678	41.0	1 thru 4
2144	3/8″	34	24	192	11	7632	46.0	1 thru 4
2146	1/2″	34	48	336	9	13356	62.0	1 thru 3
2148	5/8″	34	48	384	8	14264	64.0	1 thru 3
2150	11/16″	34	48	480	7	19080	81.0	1 thru 3
2152	25/32″	34	48	528	7	20988	85.0	1 thru 3

PUT-UP CODE: 2—100 Ft. 4—500 Ft. 5—1000 Ft.

* Values shown are for bare cable in free air at 30°C (86°F) and intended as a reference guide only. Actual values will depend on permissible temperature rise, permissible voltage drop and other conditions of service.

alpha **ALPHA WIRE**

© United Technical Publications

Tinned Copper Tubular Braid To MIL Spec QQ-B-575



DESCRIPTION: A woven tinned copper braid which is manufactured completely round as outlined in Mil Spec QQ-B-575. Each strand of the braid is soft drawn tinned copper wire. The braid is self-supporting and maintains its round configuration. The percentage of shielding coverage is 95% or more when placed over a mandrel of an equivalent diameter to the inside braid diameter.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	BRAID CONSTRUCTION AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AWG. EQUIV.	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY (Amps)	PUT-UP CODE
2160	1/32"	36	24	24	22	600	7.0	1-3
2162	1/16"	36	24	48	19	1200	11.0	1-3
2163	3/64"	36	24	72	18	1800	16.0	1-3
2164	7/64"	36	24	96	16	2400	19.0	1-3
2166	1/8"	36	24	120	15	3000	25.0	1-3
2167	5/32"	36	24	240	12	6000	40.0	1-3
2168	11/64"	36	24	168	14	4200	32.0	1-3
2170	13/64"	34	24	192	11	7630	46.0	1-2
2171	1/4"	36	24	384	10	9600	53.0	1-2
2171/1	9/32"	30	24	120	9	12060	60.0	1-2
2172	3/8"	36	48	384	10	9600	53.0	1-2
2173	7/16"	30	24	240	6	24120	90.0	1-2
2174	1/2"	36	48	528	9	13200	62.0	1-2
2175	9/16"	30	48	480	3	48240	145.0	1-2
2175/1	21/32"	30	48	768	1	77180	190.0	1-2
2176	25/32"	36	48	864	7	21600	88.0	1-2

PUT-UP CODE: 2—100 Ft. 3—250 Ft.



EXTRA LARGE TINNED COPPER TUBULAR BRAID

DESCRIPTION: These tubular braids manufactured to standards of QQ-B-575 although these sizes are not listed in the specification.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	BRAID CONSTRUCTION AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AWG. EQUIV.	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY (Amps)	PUT-UP CODE
2177	7/8"	30	48	336	5	33700	100.0	1 & 2
2178	1"	30	48	384	4	38600	120.0	1 & 2
2179	1 1/8"	30	48	432	4	43330	130.0	1 & 2
2180	1 1/4"	30	48	480	3	48150	145.0	1 & 2
2181	1 3/8"	30	48	528	3	53000	150.0	1 & 2
2182	1 1/2"	30	48	576	2	57775	165.0	1 & 2

PUT-UP CODE: 1—50 Ft. 2—100 Ft.



SILVER PLATED TUBULAR BRAID CONSTRUCTION TO MIL SPEC QQ-B-575

DESCRIPTION: A woven silver plated copper braid which is manufactured completely round as outlined in Mil Spec QQ-B-575. Each strand of the braid is soft drawn silver plated copper wire. The braid is self-supporting and maintains its round configuration. The percentage of shielding coverage is 95% or more when placed over a mandrel of an equivalent diameter to the inside braid diameter.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	BRAID CONSTRUCTION AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AWG. EQUIV.	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY (Amps)	PUT-UP CODE
2191	1/16"	36	24	48	19	1200	11.0	1-3
2192	3/64"	36	24	72	18	1800	16.0	1-3
2193	7/64"	36	24	96	16	2400	19.0	1-3
2194	1/8"	36	24	120	15	3000	25.0	1-3
2195	5/32"	36	24	240	12	6000	40.0	1-3
2196	11/64"	36	24	168	14	4200	32.0	1-3
2197	13/64"	34	24	192	11	7640	46.0	1 & 2
2198	1/4"	36	24	384	10	9600	53.0	1 & 2

PUT-UP CODE: 1—50 Ft. 2—100 Ft.

* Values shown are for bare cable in free air at 30°C (86°F) and intended as a reference guide only. Actual values will depend on permissible temperature rise, permissible voltage drop and other conditions of service.

alpha **ALPHA WIRE**

© United Technical Publications

FIT® SOLDERING SLEEVES

Solders – Insulates – Encapsulates for Wire Splicing and Shield Grounding

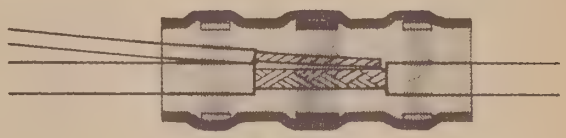
Meets Performance Requirements for MIL-F-21608A, MIL-T-7928

A new pre-packaged soldering device that insulates, encapsulates and prepares a reliable, uniform solder joint.

The sleeve consists of an irradiated, heat-shrinkable, polyolefin sleeve containing a preform of fluxed solder at the center and a thermoplastic sealing ring on each end. When placed over a cable shield and ground lead, or splice, and briefly heated, the outer sleeve shrinks and the solder and thermoplastic inserts melt forming an insulated, encapsulated, soldered termination.

Soldering sleeves offer many advantages over crimped and other forms of connection including; the proper type and quantity of solder for each joint; easy observation of solder flow, and inspection of completed joint: built-in stress relief by shrinkage of sleeving over ends of insulated wire, giving longer life and greater flexibility at connection points. Cost savings are gained by eliminating braid cutting; space saving; and excellent moisture and environmental resistance characteristics.

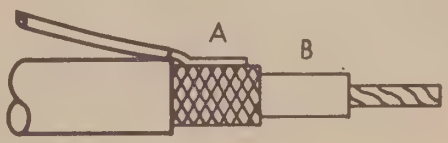
Soldering sleeves may be used in shield ground applications, as junctions or as a stub splice. The FG-1 heat gun with soldering sleeve reflector is recommended. Heating time is from three to five seconds. Heat should be maintained on sleeve until solder ring changes from dull grey to bright silver and flows toward dam on both ends of sleeve.



Sleeve Types

FSL sleeves contain a solder alloy of 51.2% tin, 30.6% lead, 18.2% cadmium to MIL-F-14256. Solder melting temperature is 293°F. Application includes use on vinyl, vinyl-nylon and other thermoplastic insulations.

FSH sleeves contain an Sn63 solder preform to QQ-S-571 and are coated with activated resin to MIL-F-14256. Solder melting temperature is 361°F. Applications include use on teflon, high temperature and irradiated insulations.



Alpha No.	For Use as Shield Termination: Max. Dia (A)	Min. Dia. (B)	2 Wires Min.	2 Wires Max.	For Use as Lap Splice *CMA of Conductors 3-4 Wires Min.	3-4 Wires Max.	5-6 Wires Min.	5-6 Wires Max.	Standard† Putup
FSL-1 FSH-1	.125	.055	2000 **	4000	1400	2800	1500	2000	25, 100, 1000 Sleeves
FSL-2 FSH-2	.200	.100	4000	5000	2800	7700	2000	7200	25, 100, 1000 Sleeves
FSL-3 FSH-3	.300	.160			For Use as Shield Termination Only				25, 100, 1000 Sleeves

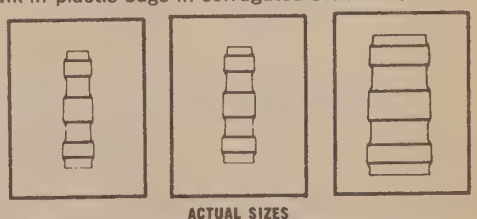
†25 and 100 piece putups in reuseable plastic vials. 1000 pieces bulk in plastic bags in corrugated container.

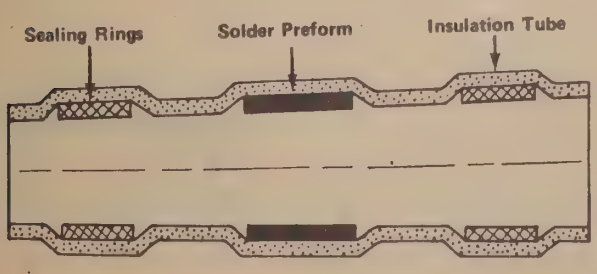
*CMA Range not to be exceeded. Figures based on total surface area to be soldered and total mass of conductors to provide optimum solder flow.

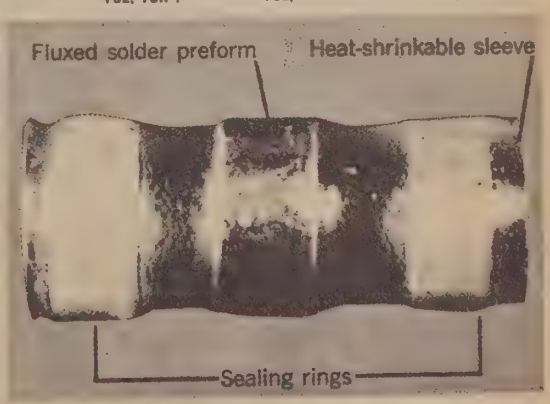
Wire Size	26	24	22	20	18	6
(CMA) Circular Mill Area	304	475	754	1216	1900	2413

**Will splice two #26 conductors or larger.

How to Order: Measure maximum & minimum diameters of wire with shield to be terminated or wires to be lap spliced. Select soldering sleeve that falls in range shown on chart.







alpha ALPHA WIRE

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

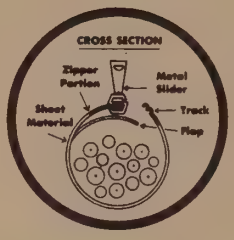
ALPHLEX® ZIPPER TUBING

DESCRIPTION Alphlex Zipper Tubing is the all purpose modern way to harness, cover and protect cables. Just zip to close — and zip to reopen. If you wish, it may be permanently sealed with PB-200 Special Compound Liquid Sealer. Alphlex Zipper Tubing is strong, flexible, durable, and offers new freedom in design, production and repair.

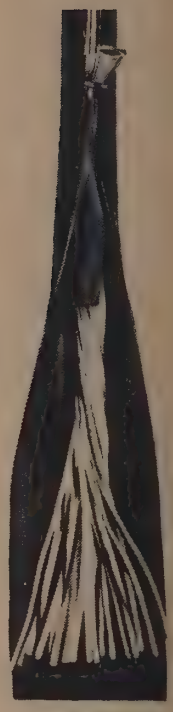
APPLICATIONS To shield, to harness wire, to custom-cable to any length, to enclose, to encase, to identify (such as cable markers), to protect, to replace worn jackets.

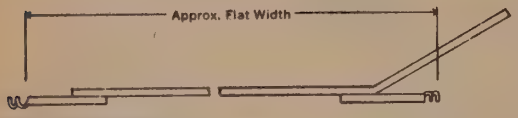
TYPES OF ZIPPER TUBING

TYPE	MATERIAL	WALL THICKNESS (Inches)	OPER. TEMP.	APPLICATIONS	STOCK COLORS	STANDARD PUT-UPS
ZIP-31	Polyvinyl-chloride made from MIL-I-631 D, GRADE C Materials	.020	−20° C to 105 C	All Purpose Type	Clear Black Yellow	25' 50' 100' 25' 50' 100' 25' 50' 100'
ZIP-31M	Polyvinyl-chloride made from MIL-I-631 D, GRADE C Materials	.040	−20° C to 105° C	Heavy Duty Constructions	Clear Black	100' 100'
ZIP-44	Polyvinyl-chloride made from MIL-I-7444 B Materials	.020	−67° C to 70° C	Extreme Flexibility, Low Temperature & Aircraft industry	Clear Black	100' 100'
ZIP-50	Polyvinyl-chloride "sandwich" of aluminum foil laminated between two sheets of polyvinyl	.040	−20° C to 105° C	100% RF shielding	Silver-Grey	100'



Because of small Inside Diameter, these sizes cannot be closed by using the slider. The tracks must be closed by manual pressure.





ZIPPER SPECIFICATIONS FOR ALL TYPES OF ALPHLEX ZIPPER TUBING

Material	Polyvinylchloride	Cold Brittleness	−86° C
Track Thickness (when closed)	.095"	Fungus-proof	will not support fungus
Dielectric Strength, V/mil	759	Flammability	self-extinguishing
Tensile Strength-P.S.I.	3810	Lateral Pull Strength (unsealed)	42.7 pounds/inch
Ultimate Elongation	255%	Lateral Pull Strength (permanently sealed)	59.8 pounds/inch
Operating Temperature, Upper Limit	106° C	Standard Colors	Black, Clear, Yellow

Contrasting color combinations of zipper and body are available to order. The zipper portion can be supplied in any of the following colors: Black, Yellow, Clear, Blue, White, Brown, Purple, Red, Orange, Green, Slate.

STANDARD SIZES FOR ALL ZIPPER TUBING

Zipper Tubing Inside Diameter	Approx. Flat Width (From track to track — excluding flap)
*¼"	1 5/16"
*¾"	1 5/8"
½"	2"
5/8"	2 3/8"
¾"	2 3/4"
⅞"	3 1/8"
1"	3 1/16"
1⅛"	3 15/16"
1¼"	4 1/8"
1½"	4 7/8"
1¾"	5 5/8"
2"	6 3/8"

HOW TO ORDER
Select the type of Zipper Tubing desired from the chart and the required Inside Diameter. When ordering, request as follows: For example, ZIP-31 Tubing in 5/8" Inside Diameter order — ZIP-31 — 5/8.

ALPHLEX® ELECTRONIC LACING CORDS AND TAPES

MIL-T-713A NYLON TWISTED CORD

ALPHA NO.	CLASS	TYPE	BREAKING STRENGTH	FINISH	NOMINAL DIAMETER	STOCK COLORS	YARDS PER POUND	STANDARD PUT-UP
LC-113	I	P Twine	70 lbs.	MW	.050"	Wh., Blk.	560	8 oz. spls.
LC-114	II	P Twine	48 lbs.	MW	.035"	Wh., Blk.	750	8 oz. spls.
LC-115	III	P Twine	32 lbs.	MW	.030"	Wh., Blk.	1180	8 oz. spls.

MIL-T-713A NYLON FLAT BRAIDED TAPE

ALPHA NO.	CLASS	TYPE	BREAKING STRENGTH	NOMINAL WIDTH	NOMINAL THICKNESS	FINISH	STOCK COLORS	STANDARD PUT-UP
LC-136	II	P Tape	50 lbs.	.090" (3/32")	.014"	MW	Wh., Blk.	500 yd. spls.

NYLON FLAT BRAIDED TAPE

ALPHA NO.	WIDTH	THICKNESS	TENSILE STRENGTH	FINISH	STOCK COLORS	STANDARD PUT-UP
LC-132	3/32"	.014"	50 lbs.	GE	Wh., Blk.	500 yd. tubes
LC-134	1/16"	.010"	30 lbs.	MW	Wh., Blk.	500 yd. spls.
LC-136	3/32"	.014"	50 lbs.	MW	Wh., Blk.	500 yd. spls.
LC-140	3/32"	.014"	50 lbs.	SR	Wh., Blk.	500 yd. spls.
LC-143	3/32"	.014"	50 lbs.	AM	Wh., Blk.	500 yd. spls.

alpha
ALPHA WIRE

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Alphlex® Polyvinylchloride Plastic Tubing (PVC-105)

CONFORMS TO MIL-I-631D †

DESCRIPTION: The superior mechanical, thermal, and electrical properties of Alphlex PVC-105, coupled with its economical cost have led to an ever increasing use of this all-purpose insulating material. Another major advantage of Alphlex PVC-105 is its high degree of flexibility, which is maintained even under severe environmental conditions.

Rated for temperatures as high as 105°C, PVC-105 has a high dielectric strength that remains unaffected by increasing temperature throughout its range. PVC-105 maintains a high resistance to the agents of heat, oil, chemical corrosion and fungi with no loss in tensile strength, or flexibility. Other features include an exceptional resistance to abrasion and indefinite shelf life.

Alphlex PVC-105 is compounded with first quality, non-migratory resinous type plasticizers. Carefully selected stabilizers and modifiers added in the manufacturing process, counteract chemical and environmental degradation. Under adverse conditions Alphlex PVC-105 retains its flexibility which permits it to cling to and protect irregular shapes. An unusually simple to handle insulating material, PVC-105 "snakes" well under all environmental conditions.

APPLICATIONS: Designed and manufactured for general electronic, aircraft and electrical applications involving temperatures as high as 105°C. Especially useful to protect wires and cables subject to abrasion or where a flexible tubing with a high degree of resistivity to oil, chemicals or solvents is necessary.



DIMENSIONS CHART

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	*STOCK COLORS	STANDARD PUT-UPS
PVC-105/24	24	.022	.013	1 - 3	100′, — 1000′ Spools
PVC-105/22	22	.027	.012	1 - 3	100′, — 1000′ Spools
PVC-105/20	20	.034	.016	1 - 3	100′, — 1000′ Spools
PVC-105/19	19	.038	.016	1 - 3	100′, — 1000′ Spools
PVC-105/18	18	.042	.016	1 - 3	100′, — 1000′ Spools
PVC-105/17	17	.047	.016	1 - 3	100′, — 1000′ Spools
PVC-105/16	16	.053	.016	1 - 3	100′, — 1000′ Spools
PVC-105/15	15	.059	.016	1 - 3	100′, — 1000′ Spools
PVC-105/14	14	.066	.016	1 - 3	100′, 500′, — Spools
PVC-105/13	13	.076	.016	1 - 3	100′, 500′, — Spools
PVC-105/12	12	.085	.016	1 - 3	100′, 500′, — Spools
PVC-105/11	11	.095	.016	1 - 3	100′, 500′, — Spools
PVC-105/10	10	.106	.016	1 - 3	100′, 500′, — Spools
PVC-105/9	9	.118	.020	1 - 3	100′, 500′, — Spools
PVC-105/8	8	.133	.020	1 - 3	100′, 500′, — Spools
PVC-105/7	7	.148	.020	1 - 3	100′, 500′, — Spools
PVC-105/6	6	.166	.020	1 - 3	100′, 500′, — Spools
PVC-105/5	5	.186	.020	1 - 3	100′, 500′, — Spools
PVC-105/4	4	.208	.020	1 - 3	100′, 250′, — Coils
PVC-105/3	3	.234	.020	1 - 3	100′, 250′, — Coils

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	*STOCK COLORS	STANDARD PUT-UPS
PVC-105/2	2	.263	.020	1, 2, 3	100′, 250′ Coils
PVC-105/1	1	.294	.020	1,2,3	100′, 250′ Coils
PVC-105/0	0	.330	.020	1,2,3	100′, 250′ Coils
PVC-105/5/16″	5/16″	.312	.025	1,2,3	100′, 250′ Coils
PVC-105/3/8″	3/8″	.375	.025	1,2,3	100′, 250′ Coils
PVC-105/7/16″	7/16″	.438	.025	1,2,3	100′, — Coils
PVC-105/1/2″	1/2″	.500	.025	1,2,3	100′, — Coils
PVC-105/9/16″	9/16″	.562	.030	1,2,3	100′, — Coils
PVC-105/5/8″	5/8″	.625	.030	1,2,3	100′, — Coils
PVC-105/3/4″	3/4″	.750	.035	1,2,3	50′, — Coils
PVC-105/7/8″	7/8″	.875	.035	1,2,3	50′, — Coils
PVC-105/1″	1″	1.000	.035	1,2,3	50′, — Coils
PVC-105/1 1/8″	1 1/8″	1.125	.035	1,2	50′, — Coils
PVC-105/1 1/4″	1 1/4″	1.250	.040	1,2	50′, — Coils
PVC-105/1 3/8″	1 3/8″	1.375	.040	1,2	50′, — Coils
PVC-105/1 1/2″	1 1/2″	1.500	.045	1,2	50′, — Coils
PVC-105/1 3/4″	1 3/4″	1.750	.055	1,2	50′, — Coils
PVC-105/2″	2″	2.000	.060	1,2	50′, — Coils
PVC-105/2 1/4″	2 1/4″	2.250	.065	1,2	50′, — Coils
PVC-105/2 1/2″	2 1/2″	2.500	.070	1,2	50′, — Coils

*** STOCK COLORS 1—Clear 2—Black 3—White**

† MIL-I-631D, Type F, Form U, Grade C, Class I, Category 1

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Alphlex® Teflon Extruded Tubing

CONFORMS TO MIL-I-22129B

DESCRIPTION: Alphlex Teflon Tubing is unmatched by any other type of tubing for use in electrical applications at high frequencies and temperatures. Teflon is rated for continuous operation at 250°C, and retains an exceptional toughness and its flexibility throughout its temperature range.

Alphlex Teflon Tubing has the further advantage of a high degree of resistance to flexural fatigue and repetitive stresses; coefficient of friction lower than that of any other known solid; and a dielectric constant and power factor lower than that of any other known solid. This tubing will not crack or become brittle during aging.

Because of its resistance to soldering iron temperature, Alphlex Teflon Tubing will not shrink back during the soldering process. Alphlex Teflon Tubing will not melt and flow as do conventional thermoplastic materials. At high frequencies, its dielectric strength is many times that of other insulating materials.

Alphlex Teflon Tubing is chemically inert, has zero moisture absorption and its insulation resistance properties are unaffected by heat aging or temperature use up to 250°c.



APPLICATIONS: A thin flexible insulation, Alphlex Teflon Tubing permits a miniaturization and compactness of design never before possible. Invaluable in any application where a high heat resistant, flexible, non-flammable, chemical solvent and corrosion-resistant material is required.

ALPHLEX® THIN WALL TEFLON TUBING (TFT-200)

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	STOCK COLORS	STANDARD PUT-UPS
TFT-200/30	30	.012	.009	Nat., Yel., Blk., Red	100′ Spools
TFT-200/28	28	.015	.009	Nat., Yel., Blk., Red	100′ Spools
TFT-200/26	26	.018	.010	Nat., Yel., Blk., Red	100′ Spools
TFT-200/24	24	.022	.010	Nat., Yel., Blk., Red	100′ Spools
TFT-200/22	22	.027	.010	Nat., Yel., Blk., Red	100′ Spools
TFT-200/20	20	.034	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/19	19	.038	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/18	18	.042	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/17	17	.047	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/16	16	.053	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/15	15	.059	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/14	14	.066	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/13	13	.076	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/12	12	.085	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/11	11	.095	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/10	10	.106	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/9	9	.118	.015	Nat., Yel., Blk., Red	100′ Coils*
TFT-200/8	8	.133	.015	Nat., Yel., Blk., Red	100′ Coils*
TFT-200/7	7	.148	.015	Natural Only	100′ Coils*
TFT-200/6	6	.166	.015	Natural Only	100′ Coils*
TFT-200/5	5	.186	.015	Natural Only	100′ Coils*
TFT-200/4	4	.208	.015	Natural Only	100′ Coils*
TFT-200/3	3	.234	.015	Natural Only	100′ Coils*
TFT-200/2	2	.263	.015	Natural Only	100′ Coils*
TFT-200/1	1	.294	.015	Natural Only	100′ Coils*
TFT-200/0	0	.330	.015	Natural Only	100′ Coils*

* RANDOM LENGTHS PACKED IN 100′ COILS

ALPHLEX® STANDARD WALL TEFLON TUBING (TFT-250)

Similar in characteristics to TFT-200 (Thin Wall Tubing), but for use in application where additional dielectric values and mechanical strength are necessary

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	STOCK COLORS	STANDARD PUT-UPS
TFT-250/24	24	.022	.012	Natural Only	100′ Spools
TFT-250/22	22	.027	.012	Natural Only	100′ Spools
TFT-250/20	20	.034	.016	Natural Only	100′ Spools
TFT-250/19	19	.038	.016	Natural Only	100′ Spools
TFT-250/18	18	.042	.016	Natural Only	100′ Spools
TFT-250/17	17	.047	.016	Natural Only	100′ Spools
TFT-250/16	16	.053	.016	Natural Only	100′ Spools
TFT-250/15	15	.059	.016	Natural Only	100′ Spools
TFT-250/14	14	.066	.016	Natural Only	100′ Spools
TFT-250/13	13	.076	.016	Natural Only	100′ Spools
TFT-250/12	12	.085	.016	Natural Only	100′ Spools
TFT-250/11	11	.095	.016	Natural Only	100′ Spools
TFT-250/10	10	.106	.016	Natural Only	100′ Spools
TFT-250/9	9	.118	.020	Natural Only	100′ Coils*
TFT-250/8	8	.133	.020	Natural Only	100′ Coils*
TFT-250/7	7	.148	.020	Natural Only	100′ Coils*
TFT-250/6	6	.166	.020	Natural Only	100′ Coils*
TFT-250/5	5	.186	.020	Natural Only	100′ Coils*
TFT-250/4	4	.208	.020	Natural Only	100′ Coils*
TFT-250/3	3	.234	.020	Natural Only	100′ Coils*
TFT-250/2	2	.263	.020	Natural Only	100′ Coils*
TFT-250/1	1	.294	.020	Natural Only	100′ Coils*
TFT-250/0	0	.330	.020	Natural Only	100′ Coils*

* RANDOM LENGTHS PACKED IN 100′ COILS

alpha

ALPHA

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Irradiated Polyolefin Tubing

NEW ALL-PURPOSE SHRINKABLE TUBING — FIT-221

- SHRINKS 50% (2:1 RATIO) WITH ONLY 5% LONGITUDINAL SHRINKAGE
- FEWER SIZES COVERING MORE APPLICATIONS
- AVAILABLE TO MEET U.L. SPECIFICATIONS
- MEETS MIL-1-23053A (WEP)
- AMS SPECIFICATIONS 3636A (COLOR), 3637 (CLEAR)

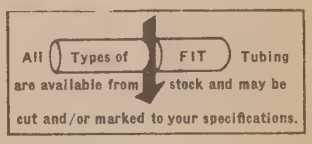
DESCRIPTION: Alphlex FIT-221 Shrinkable Tubing, when heated, forms a tight-mechanical bond, even over irregularly shaped materials. FIT-221 is available in a range of colors and in clear.

FIT-221 is an all-purpose polyolefin extruded tubing that is simple to use and provides a tight mechanical bond. FIT-221 is an irradiated, thermally stable, modified polyolefin base product. FIT-221 Clear may be used so that jacketed, printed components or cable data is clearly visible and inspection of insulated components, cables or terminations is simplified.

The tubing is supplied in an expanded form and easily slips over the object to be covered. When a temperature of approximately 275°F (135°C) is applied, it immediately returns to its predetermined size (approximately one-half smaller) and forms a permanent tight-fitting mechanical bond. FIT-221 Tubing will not cold-flow or melt but retains form stability throughout its temperature range. No radioactivity exists in or on the material and it will not emit radiation. Longitudinal shrinkage is 5% maximum when completely recovered.

Controlled shrinkage to the correct predetermined size takes place within seven seconds at 225°F to 255°F. Shrinkage will begin at 235°F, but at a somewhat slower rate. When using an oven, temperature may range from 235°F to 300°F. Prolonged exposure to these temperatures will not affect the physical or electrical properties of FIT-221 Shrinkable Tubing. FIT-221 Clear Tubing remains transparent over its entire operating range of −55°C to 135°C.

FLAMMABILITY: Although FIT-221 Clear is a high temperature material, it is flammable and will burn. However, when the tubing is shrunk over non-flammable or flame-resistant components, such as connectors, terminals and wire, the entire assembly will not support combustion.



DIMENSIONS CHART

ALPHLEX NO. FIT-221	EQUIVALENT TO FIT-275/270	SIZE	MIN. I.D. BEFORE SHRINKAGE (Inches)	RECOVERED I.D. AFTER SHRINKAGE (Inches)	RECOVERED NOM. WALL THICKNESS (Inches)	STANDARD PACKAGE* 4′ LENGTHS		STANDARD PACKAGE* 6″ LENGTHS	
						TOT. FTG.	NO. OF LGTHS.	TOT. FTG.	NO. OF LGTHS.
FIT-221-3/64″	FIT-275-24	3/64	.046	.023	.016	100′	25	20′	40
FIT-221-1/16″	FIT-275-22, 20	1/16	.063	.031	.017	100′	25	18′	36
FIT-221-3/32″	FIT-275-18, 16	3/32	.093	.046	.020	100′	25	16′	32
FIT-221-1/8″	FIT-275-14	1/8	.125	.062	.020	100′	25	14′	28
FIT-221-3/16″	FIT-275-12, 10	3/16	.187	.093	.020	100′	25	12′	24
FIT-221-1/4″	FIT-275-8	1/4	.250	.125	.025	100′	25	10′	20
FIT-221-3/8″	FIT-275-6, 4	3/8	.375	.187	.025	100′	25	8′	16
FIT-221-1/2″	FIT-275-2, 5/16″	1/2	.500	.250	.025	20′	5	7′	14
FIT-221-3/4″	FIT-275-3/8″, 1/16″	3/4	.750	.375	.030	20′	5	6′	12
FIT-221-1″	FIT-275-1/2″, 5/8″	1	1.000	.500	.035	20′	5	4′	8
FIT-221-1 1/2″	FIT-275-3/4″, 7/8″	1 1/2	1.500	.750	.040	20′	5	2.5′	5
FIT-221-2″	FIT-275-1″, 1 1/4″	2	2.000	1.000	.045	20′	5	1.5′	3
FIT-221-3″	FIT-275-1 1/2″, 1 3/4″	3	3.000	1.500	.050	8′	2	1′	2
FIT-221-4″	FIT-275-2″	4	4.000	2.000	.055	8′	2	.5′	1

STOCK COLORS — Black White, Red, Yellow, Blue, and Clear

*STANDARD PACKAGE FIT-221 Tubing is available ONLY in the specified packages. When ordering, indicate package desired (6 inches or 4 foot).

For Details On Alpha's Complete Line Of Shrinkable Tubing – Write For Alpha Catalog.

alpha **ALPHA WIRE**

Sold Nationally to Electronic Parts Distributors by; Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

Irradiated Polyvinylchloride Tubing FIT-105

All Types of FIT Tubing are available from stock and may be cut and/or marked to your specifications.

HIGHLY FLEXIBLE — IDEAL FOR CABLE JACKETING

Conforms to MIL-1-631D, Type F, Form U, Grade C, Class 1, Cat. 1

SHRINKAGE RATIO 2:1 (50% Shrinkage)

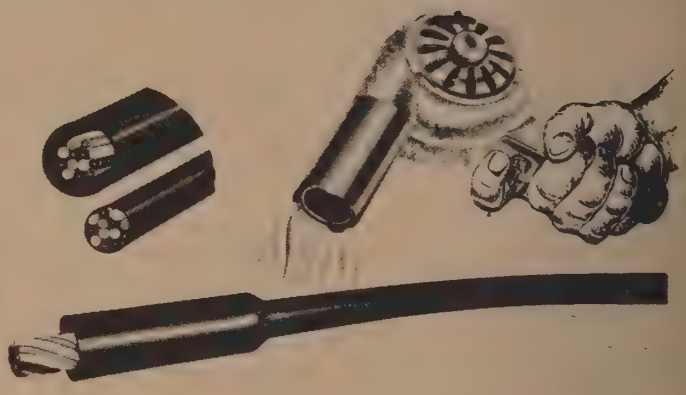
DESCRIPTION: Alphlex FIT-105 is an easy-to-use modified polyvinylchloride that provides a snug, extremely flexible insulation.

Because of its flexibility, strength and its ability to shrink 50% on application of heat, FIT-105 is ideally suited for insulating components and cables with a wide variation in shape and diameter.

Because of the 50% expanded diameter of FIT-105 Tubing, it is an extremely useful cable jacketing material. Cable cores may be pulled through FIT-105 Tubing with comparative ease and shrunk down to form a jacket with all the qualities of the finest extruded plastic jackets.

The tubing is supplied in expanded form and in continuous lengths. When a temperature of approximately 347°F (175°C) is applied, Alphlex FIT-105 Tubing immediately returns to its predetermined size (approximately 50% smaller), and forms a permanent, tight-fitting mechanical bond. FIT-105 Tubing will not cold-flow or melt but retains form stability within its temperature range. No radioactivity exists in or on the material and it will not emit radiation. Longitudinal shrinkage is less than 10%.

Controlled shrinkage to the correct predetermined size takes place within seven seconds at 325°F, or above. When using an oven, temperature may range from 325°F to 350°F.



DIMENSIONS CHART

ALPHLEX NO. (BLACK ONLY)	SIZE (Inches)	MINIMUM I.D. BEFORE SHRINKING (Inches)	RECOVERED I.D. AFTER SHRINKING (Inches)	NOMINAL WALL THICKNESS (Inches)	STANDARD PUT-UP (Feet)
FIT-105-3/64	3/64	.046	.023	.020	25, 100, 500
FIT-105-1/16	1/16	.062	.031	.020	25, 100, 500
FIT-105-3/32	3/32	.093	.046	.020	25, 100, 200
FIT-105-1/8	1/8	.125	.062	.025	25, 100, 200
FIT-105-3/16	3/16	.187	.093	.025	25, 100, 200
FIT-105-1/4	1/4	.250	.125	.025	25, 100, 200
FIT-105-3/8	3/8	.375	.187	.030	25, 100, 200
FIT-105-1/2	1/2	.500	.250	.030	25, 100
FIT-105-3/4	3/4	.775	.375	.035	25, 100
FIT-105-1	1	1.000	.500	.040	25, 100
FIT-105-1 1/2	1 1/2	1.500	.750	.045	25, 100
FIT-105-2	2	2.000	1.000	.050	10, 25, 50

STOCK COLOR — BLACK

LONG LENGTHS — MAXIMUM THREE LENGTHS PER PUT-UP.

ALPHA WIRE

Sold Nationally to Electronic Parts Distributors by: Loral Distributor Products, a Division of Loral Corporation

© United Technical Publications

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **The Year and Edition of This MASTER.**
2. **Manufacturer's Catalog Numbers and Page Numbers.**

This will avoid confusion and expedite delivery.

Thank you!

The
RADIO-ELECTRONIC
MASTER
A United Technical Publication

BELDEN • PRICE LIST

Trade Number	Length in ft.		Suggested Trade Price Each
8205-100			3.83
8205-500			14.10
8205-1000			28.20
8208-100			9.90
8208-500			43.90
8208-1000			87.80
8211-500			(OBS.)
8211-1000			(Use 8212 or 8228)
8211-2000			
8212-500			27.60
8212-1000			55.20
8212-2000			110.40
8213-500			70.95
8213-1000			141.90
8213-2000			283.80
8214-50			10.20
8214-100			17.70
8214-250			40.50
8214-500			77.25
8214-1000			154.50
8215-100			13.85
8215-500			62.60
8215-1000			125.20
8216-100		(RG-174/U)	4.56
8216-500		(RG-174/U)	16.80
8216-1000		(RG-174/U)	33.60
8217-100		TBO (Use	5.70
8217-500		8221)	22.05
8217-1000			44.10
8218-100			6.20
8218-500			22.80
8218-1000			45.60
8219-100			7.20
8219-500			27.30
8219-1000†			54.60
8221-100†			7.80
8221-500†			26.00
8221-1000†			52.00
*8228-100			6.75
*8228-500†			22.40
*8228-1000†			44.80
8232-500			57.40
8232-1000			114.80
8232-2000			229.60
8233-500			101.25
8233-1000			202.50
8233-2000			405.00
8237-50		(RG-8/U)	8.70
8237-100		(RG-8/U)	16.30
8237-250		(RG-8/U)	34.80
8237-500		(RG-8/U)	64.80
8237-1000		(RG-8/U)	129.60
8238-100		(RG-11/U)	14.10
8238-250		(RG-11/U)	33.00
8238-500		(RG-11/U)	55.65
8238-1000		(RG-11/U)	111.30
8239-500		(RG-54A/U)	42.70
8239-1000		(RG-54A/U)	85.40
8240-25		(RG-58/U)	2.07
8240-50		(RG-58/U)	3.21
8240-100		(RG-58/U)	5.64
8240-250		(RG-58/U)	12.15
8240-500		(RG-58/U)	20.70
8240-1000		(RG-58/U)	41.40
8241-25		(RG-59/U)	2.43
8241-50		(RG-59/U)	3.90
8241-100		(RG-59/U)	6.90
8241-250		(RG-59/U)	15.45
8241-500		(RG-59/U)	23.90
8241-1000		(RG-59/U)	47.80
8242-100		(RG-9/U)	41.70
8242-1000		(RG-9/U)	397.50
8243-500		(RG-9B/U)	253.80
8243-1000		(RG-9B/U)	507.60
8245-500		(RG-55/U)	40.75
8245-1000		(RG-55/U)	81.50
8254-100		(RG-62/U)	7.35
8254-500		(RG-62/U)	27.40
8254-1000		(RG-62/U)	54.80
8255-500		(RG-62B/U)	34.50
8255-1000		(RG-62B/U)	69.00
8257-500		(RG-71/U)	43.05
8257-1000		(RG-71/U)	86.10
8258-500		(RG-71B/U)	46.65
8258-1000		(RG-71B/U)	93.30
8259-25		(RG-58A/U)	2.25
8259-50		(RG-58A/U)	3.51
8259-100		(RG-58A/U)	6.60
8259-500		(RG-58A/U)	23.70
8259-1000		(RG-58A/U)	47.40
8261-100		(RG-11A/U)	14.70
8261-500		(RG-11A/U)	65.25
8261-1000		(RG-11A/U)	130.50
8262-500		(RG-58C/U)	26.55
8262-1000		(RG-58C/U)	53.10
8263-500		(RG-59B/U)	28.90
8263-1000		(RG-59B/U)	57.80
8264-500		(RG-5A/U)	146.10
8264-1000		(RG-5A/U)	292.20
TEFLON RG/U CABLE 8265-8266 SEE TEFLON SECTION			
8267-500		(RG-213/U)	70.50
8267-1000		(RG-213/U)	141.00
8268-500		(RG-214/U)	238.50
8268-1000		(RG-214/U)	477.00
TEFLON RG/U CABLE 8269-8270 SEE TEFLON SECTION			
8279-100			11.10
8279-250			24.75
8279-500			49.50
8280§		(Cut to customer's specified length Maximum 1500')	978.00M'
8281-500			105.00
8281-1000			210.00
8282§		(Cut to customer's specified length Maximum 2000')	429.00M'
8283§		(Cut to customer's specified length Maximum 1000')	3450.00M'
8284§		(Cut to customer's specified length Maximum 1000')	1194.00M'
8286§		(Cut to customer's specified length Maximum 1000')	979.50M'
TEFLON HIGH TEMPERATURE WIRES SEE TEFLON SECTION			
8401-15			1.44
8401-25			1.92
8401-50			3.39
8401-100			6.30
8401-250			13.20
8401-500			26.40
8401-1000			52.80
8402-100			14.40
8402-250			34.35
8402-500			68.70
8403-15			2.61
8403-50			6.75
8403-100			12.60
8403-250			28.30
8403-500			56.60
8403-1000			113.20
8404-15			2.82
8404-100			13.65
8404-250			31.15
8404-500			62.30
8404-1000			124.60
8405-250			36.40
8405-500			72.80
8405-1000			145.60
8406-100			16.35
8406-250			39.00
8406-500			78.00
8407-100			30.45
8407-250			73.50
8408-100			24.75
8408-250			60.00
8408-500			120.00
8409			1.35
8410-25			3.60
8410-50			6.39
8410-100			11.90
8410-250			27.45
8410-500			54.90
8411-15			1.17
8411-25			1.65
8411-50			2.61
8411-100			4.95
8411-250			10.45
8411-500			20.90
8411-1000			41.80
8412-25			3.87
8412-50			7.05
8412-100			13.35
8412-250			30.60
8412-500			61.20
8412-1000			122.40
8413-15			2.46
8413-25			3.69
8413-50			6.90
8413-100			12.75
8413-250			30.60
8413-500			61.20
8415-1			1.64
8415-50			1.48
8416-15			1.70
8416-25			2.16
8416-50			3.96
8416-100			7.05
8416-250			16.28
8417-15			1.23
8417-25			1.65
8417-50			2.70
8417-100			5.03
8417-250			10.95
8418-100			31.50
8418-250			76.50
8420-15			2.04
8420-25			3.06
8420-50			4.65
8420-100			8.85
8420-250			20.50
8420-500			41.00
8421-15			1.50
8421-25			2.01
8421-50			3.66
8421-100			6.00
8421-250			13.20
8422-15			1.80
8422-25			2.76
8422-50			5.10
8422-100			8.95
8422-250			19.75
8422-500			39.40
8422-1000			78.80
8423-15			3.00
8423-50			6.00
8423-100			15.00
8423-250			35.25
8423-500			70.50
8423-1000			141.00
8424-15			3.39
8424-50			8.90
8424-100			16.70
8424-250			39.35
8424-500			78.75
8424-1000			157.50
8425-100			20.80
8425-250			50.70
8426-100			25.50
8426-250			62.70
8427-100			28.05
8427-250			69.00
8428-100			17.25
8428-500			81.00
8428-1000			162.00
8434-100			6.90
8434-500			31.15
8434-1000			62.30
8437-500			27.40
8437-1000			54.80
8441-100			6.90
8441-500			30.75
8441-1000			61.50
8442-500			12.00
8442-1000			24.00
8443-25			1.40
8443-100			3.66
8443-250			7.31
8443-500			14.65
8443-1000			29.30
8444-25			1.59
8444-100			4.83
8444-250			9.98
8444-500			19.95
8444-1000			39.90
8445-25			1.83
8445-100			5.58
8445-250			11.90
8445-500			23.85
8445-1000			47.70
8446-15			1.83
8446-100			8.30
8446-250			18.30
8446-500			36.60
8446-1000			73.20
8447-100			9.60
8447-250			21.20
8447-500			42.45
8447-1000			85.20
8448-15			2.07
8448-100			10.26
8448-250			23.25
8448-500			46.50
8448-1000			93.00
8449-15			2.25
8449-100			10.95
8449-250			25.10
8449-500			50.25
8449-1000			100.50
8450-100			4.50
8450-250			8.35
8450-500			16.70
8450-1000			33.45
8451-100			4.74
8451-250			9.75
8451-500			19.50
8451-1000			39.00
8452-25			2.46
8452-50			4.20
8452-100			7.35
8452-250			17.45
8452-500			34.95
8452-1000			66.90
8453-50			5.25
8453-100			9.90
8453-500			48.45
8454-50			6.00
8454-100			11.45
8454-500			52.95
8454-1000			105.90
8455-100			11.40
8455-250			28.50
8456-100			10.80
8456-500			49.50
8456-1000			99.00
8457-100			12.15
8457-500			56.25
8457-1000			112.50
8458-100			20.55
8458-500			92.25
8458-1000			184.50
8459-100			31.50
8459-500			145.50
8459-1000			291.00
8460-100			4.29
8460-500			16.90
8460-1000			33.80
8461-100			5.07
8461-500			20.85
8461-1000			41.70
8462-25 †			1.59
8462-100 †			4.74
8462-250 †			11.40

See Pages 1323 thru 1353 for complete BELDEN Catalog Pages.

© United Technical Publications

BELDEN • PRICE LIST

Trade Number Length in ft.	Suggested Trade Price Each
8465-100	10.85
8465-250	24.90
8465-500	49.90
8465-1000	99.80
8466-100	26.25
8466-250	64.10
8466-500	128.25
8466-1000	256.50
8467-100	14.95
8467-250	32.80
8467-500	65.60
8467-1000	131.20
8468-100	36.45
8468-500	172.50
8468-1000	345.00
8469-100	19.50
8469-250	45.75
8469-500	91.50
8469-1000	183.00
8470-500	21.55
8470-1000	43.10
8471-500	28.35
8471-1000	56.70
8472-25	3.18
8472-100	11.10
8472-250	26.70
8473-500	45.00
8473-1000	90.00
8474-100	14.35
8474-250	34.50
8477-500	63.00
8477-1000	126.00
8478-100	8.19
8478-250	19.50
8478-1000	78.00
8479-100	16.65
8479-250	40.80
8481-100	2.25
8481-500	7.35
8481-1000	14.70
8482-100	2.94
8482-500	10.95
8482-1000	21.90
8483-100	3.90
8483-500	15.75
8483-1000	31.50
8486-500	13.50
8486-1000	27.00
8487-500	19.50
8487-1000	39.00
8490	1.77
8491	2.04
8492-1000	25.95
8494	2.04
8495	1.65
8497-1	1.77
8497-50	1.50
8499	1.20
8500-100 † Solid Color	2.76
8500-1000† Solid Color	21.60
8500-100 † Striped ¶	2.88
8500-1000† Striped ¶	22.75
8501-100 † Solid Color	2.13
8501-1000† Solid Color	16.20
8501-100 † Striped ¶	2.25
8501-1000† Striped ¶	17.35
8502-100 † Solid Color	1.95
8502-1000† Solid Color	12.75
8502-100 † Striped ¶	2.07
8502-1000† Striped ¶	13.90
8503-100 † Solid Color	1.61
8503-1000† Solid Color	10.60
8503-100 † Striped ¶	1.73
8503-1000† Striped ¶	11.70
8504-100 † Solid Color	1.47
8504-1000† Solid Color	9.70
8504-100 † Striped ¶	1.59
8504-1000† Striped ¶	10.85
8505-100 † Solid Color	1.47
8505-1000† Solid Color	10.40
8505-100 † Striped ¶	1.59
8505-1000† Striped ¶	11.55
8507-100 † Solid Color	2.12
8507-1000† Solid Color	15.15
8507-100 † Striped ¶	2.24
8507-1000† Striped ¶	16.30
8508-100 † Solid Color	2.00
8508-1000† Solid Color	12.70
8508-100 † Striped ¶	2.12
8508-1000† Striped ¶	13.85
8509-100 † Solid Color	1.86
8509-1000† Solid Color	11.70
8509-100 † Striped ¶	1.98
8509-1000† Striped ¶	12.85
8510-100 † Solid Color	3.30
8510-1000† Solid Color	27.75
8511-100 † Solid Color	2.85
8511-1000† Solid Color	21.75
8512-100 † Solid Color	2.33
8512-1000† Solid Color	17.40
8513-100 † Solid Color	2.13
8513-1000† Solid Color	15.45
8514-100 † Solid Color	1.97
8514-1000† Solid Color	13.65
8515-100 † Solid Color	2.00
8515-1000† Solid Color	14.35
8516-100 † Solid Color	3.21
8516-1000† Solid Color	25.20
8517-100 † Solid Color	2.58
8517-1000† Solid Color	19.80
8518-100 † Solid Color	2.43
8518-1000† Solid Color	18.45
8519-100 † Solid Color	2.16
8519-1000† Solid Color	16.15
8520-100 † Solid Color	4.35
8520-1000† Solid Color	37.50
8520-100 † Striped ¶	4.47
8520-1000† Striped ¶	38.65
8521-100 † Solid Color	3.09
8521-1000† Solid Color	24.00
8521-100 † Striped ¶	3.21
8521-1000† Striped ¶	25.15
8522-25 † Solid Color	.90
8522-100 † Solid Color	2.25
8522-1000† Solid Color	16.75
8522-100 † Striped ¶	2.37
8522-1000† Striped ¶	17.90
8523-25 † Solid Color	.84
8523-100 † Solid Color	1.85
8523-1000† Solid Color	12.45
8523-100 † Striped ¶	1.97
8523-1000† Striped ¶	13.60
8524-25 † Solid Color	.72
8524-100 † Solid Color	1.61
8524-1000† Solid Color	10.95
8524-100 † Striped ¶	1.73
8524-1000† Striped ¶	12.10
8525-100 † Solid Color	1.44
8525-1000† Solid Color	9.30
8525-100 † Striped ¶	1.56
8525-1000† Striped ¶	10.45
8527-100 † Solid Color	6.60
8527-1000† Solid Color	54.00
8528-100 † Solid Color	2.07
8528-1000† Solid Color	14.70
8529-25 † Solid Color	.74
8529-100 † Solid Color	1.62
8529-1000† Solid Color	10.80
8529-100 † Striped ¶	1.74
8529-1000† Striped ¶	11.95
8530-25 † Solid Color	.66
8530-100 † Solid Color	1.35
8530-1000† Solid Color	8.55
8530-100 † Striped ¶	1.47
8530-1000† Striped ¶	9.70
8531-100 † Solid Color	2.61
8531-1000† Solid Color	20.85
8535-100 † Solid Color	3.51
8535-1000† Solid Color	25.05
8536-100 † Solid Color	2.52
8536-1000† Solid Color	19.05
8537-100 † Solid Color	2.37
8537-1000† Solid Color	16.35
8538-100 † Solid Color	1.38
8538-1000† Solid Color	7.50
8538-100 † Striped ¶	1.50
8538-1000† Striped ¶	8.65
8541-100	3.21
8541-1000	23.10
8542-100	3.40
8542-1000	25.05
8543-100	4.00
8543-1000	30.45
8544-100	4.65
8544-1000	37.50
8545-100	6.10
8545-1000	52.95
8546-100	8.30
8546-1000	72.30
8547-100	147.00
8548-100	126.00
8549-100	86.25
8550-100	60.00
8550-500	283.50
8551-100	44.25
8551-500	213.00
8552-100	33.60
8552-500	159.75
8553-100	16.95
8553-1000	153.00
8554-100	9.90
8554-1000	86.25
8555-100	7.80
8555-1000	66.00
8556-100	6.45
8556-1000	50.40
8557-100	5.40
8557-1000	44.10
8558-100	4.80
8558-1000	36.30
8559-100	4.28
8559-1000	31.05
8561-100†	10.20
8561-1000†	86.25
8562-100†	6.08
8562-1000†	52.20
8563-100†	5.43
8563-1000†	45.00
8564-100†	4.35
8564-1000†	36.75
8565-100 †	3.75
8565-1000†	30.30
8566-100 †	2.93
8566-1000†	25.05
8567-100 †	1.76
8567-1000†	11.85
8568-100 †	1.41
8568-1000†	9.15
8569-100 †	1.38
8569-1000†	8.40
8570-100 †	1.29
8570-1000†	7.80
8571-100 †	1.28
8571-1000†	7.65
8580-100 †	38.85
8581-100 †	29.50
8582-100 †	13.05
8582-1000†	119.55
8583-100 †	8.55
8583-1000†	78.40
8584-100 †	6.36
8584-1000†	50.50
8585-100 †	3.72
8585-1000†	29.05
8586-100 †	3.11
8586-1000†	22.50
8597-100 †	1.47
8597-1000†	9.45
8598-100 †	1.50
8598-1000†	10.35
8599-100 †	1.80
8599-1000†	13.20
8601	1.35
8602	2.07
8603	2.10
8604	3.23
8605	1.80
8618-500	54.00
8618-1000	108.00
8619-500	199.50
8619-1000	399.00
8620-100	13.80
8620-500	64.50
8620-1000	129.00
8621-100	25.35
8621-500	114.00
8621-1000	228.00
8622-100	41.25
8622-500	192.00
8622-1000	384.00
8623-100	57.75
8623-500	276.00
8623-1000	552.00
8624-100	71.25
8624-500	334.50
8624-1000	669.00
8627-100	24.60
8627-500	113.25
8627-1000	226.50
8628-100	41.70
8628-500	193.50
8628-1000	387.00
8629-100	70.20
8629-500	337.00
8629-1000	678.00
8640-250	7.20
8640-500	14.40
8641-100	4.29
8641-500	17.25
8641-1000	34.50
8642-250	20.35
8642-500	40.70
8643-25	2.67
8643-50	4.50
8643-100	7.95
8643-250	18.75
8649-100	2.88
8649-500	10.50
8649-1000	21.00
8652-10	.95
8652-50	2.46
8652-250	10.15
8653-10	.98
8653-50	2.64
8653-250	11.25
8654-10	1.02
8654-50	2.91
8654-250	12.60
8655-10	3.66
8655-50	16.75
8655-250	83.55
8656-10	6.09
8656-50	27.45
8656-250	132.60
8657-10	8.22
8657-50	37.50
8658-10	10.95
8658-50	50.70
8659-10	16.50
8659-50	77.40
8660-10	.96
8660-50	2.88
8660-250	13.05
8661-10	1.32
8661-50	4.56
8661-250•	21.45
8662-10	3.15
8662-50	13.90
8662-250•	67.50
8663-10	1.44
8663-50	4.89
8663-250	23.10
8864-10	1.13
8864-50	3.30
8864-250	14.50
8668-10	1.34
8668-50	3.96
8668-250	17.25

© United Technical Publications

See Pages 1323 thru 1353 for complete BELDEN Catalog Pages.

BELDEN • PRICE LIST

Trade Number Length in ft.	Suggested Trade Price Each
8669-10	2.31
8669-50	9.84
8669-250•	46.95
8670-10	4.88
8670-50	22.05
8670-250•	105.75
8671-10	3.51
8671-50	16.10
8671-250•	78.30
8672-10	2.54
8672-50	11.25
8672-250•	51.00
8674-10	.81
8674-50	2.00
8674-250	9.10
8676-10	.77
8676-50	1.44
8676-250	6.68
8690-100	13.95
8690-500	63.00
8690-1000	126.00
8691-100	28.80
8691-500	131.25
8691-1000	262.50
8692-100	40.50
8692-500	192.75
8692-1000	385.75
8700-25	2.13
8700-50	3.60
8700-100	6.15
8700-250	14.40
8701-100	2.88
8701-500	10.65
8701-1000	21.30
8718-500	89.65
8718-1000	179.30
8719-500	39.30
8719-1000	78.60
8720-500	59.65
8720-1000	119.30
8722-500	37.50
8722-1000	75.00
8723-100	6.90
8723-500	30.60
8723-1000	61.20
8724-250	14.95
8724-500	29.85
8724-1000	59.70
8725-500	126.75
8725-1000	253.50
8726-100	22.50
8726-500	103.50
8726-1000	207.00
8727-100	45.90
8727-500	230.25
8727-1000	460.50
8728-500	46.15
8728-1000	92.30
8729-500	49.75
8729-1000	99.50
8730-500	37.50
8730-1000	75.00
8731-500	22.75
8731-1000	45.50
8732-100	7.73
8732-500	32.65
8732-1000	65.30
8733-100	7.35
8733-500	31.15
8733-1000	62.30
8734-100	6.15
8734-500	25.75
8734-1000	51.50
8735-15	1.47
8735-50	3.90
8735-100	6.75
8735-500	28.90
8735-1000	57.80
8737-100	4.80
8737-250	10.65
8737-500	21.25
8737-1000	44.50
8738-1000	37.20
8739-100	4.56
8739-500	19.35
8739-1000	38.70
8740-100	2.82
8740-250	5.05
8740-500	10.05
8740-1000	20.10
8741-100	4.68
8741-250	10.35
8741-500	18.85
8741-1000	37.70
8742-100	6.12
8742-250	13.20
8742-500	26.25
8742-1000	52.50
8743-100	10.05
8743-250	23.10
8743-500	46.15
8743-1000	92.30
8744-100	14.85
8744-250	34.50
8744-500	69.00
8744-1000	138.00
8745-100	25.80
8745-250	59.65
8745-500	119.30
8745-1000	238.60
8746§ (Cut to customer's specified length maximum 1500')	412.50M'
8747-100	12.15
8747-250	27.90
8747-500	55.90
8747-1000	111.80
8748-100	18.15
8748-250	43.20
8748-500	86.65
8748-1000	173.30
8749-100	30.75
8749-250	72.75
8749-500	145.50
8749-1000	291.00
8750§ (Cut to customer's specified length maximum 1500')	564.00M'
8751§ (Cut to customer's specified length maximum 1500')	1083.00M'
8752§ (Cut to customer's specified length maximum 1500')	963.00M'
8753-100	18.75
8753-250	44.65
8753-500	89.30
8753-1000	178.60
8754-100	21.00
8754-250	50.25
8754-500	100.50
8754-1000	201.00
8755-500	149.25
8755-1000	289.50
8756-500	180.75
8756-1000	361.50
8757-500	34.75
8757-1000	69.50
8758-100	5.85
8758-500	23.80
8758-1000	47.60
8759-100	6.00
8759-500	25.00
8759-1000	50.00
8760-250	13.30
8760-500	26.60
8760-1000	53.20
8761-500	17.55
8761-1000	35.10
8762-100	5.33
8762-250	11.05
8762-500	22.10
8762-1000	44.25
8763-500	28.90
8763-1000	57.80
8764-100	31.80
8764-250	77.25
8764-500	154.50
8764-1000	309.00
8765-100	38.25
8765-250	92.25
8765-500	184.50
8765-1000	369.00
8766-100	52.80
8766-250	126.00
8766-500	252.00
8766-1000	504.00
8767-100	11.40
8767-250	26.10
8767-500	52.20
8767-1000	104.40
8768-100	23.25
8768-250	54.55
8768-500	109.10
8768-1000	218.20
8769-100	82.50
8769-250	196.10
8769-500	392.25
8769-1000	784.50
8770-500	35.50
8770-1000	71.00
8771-250	11.05
8771-500	22.15
8771-1000	44.30
8772-500	27.90
8772-1000	55.80
8773§ (Cut to customer's specified length maximum 1000')	1137.00M'
8774-100	39.60
8774-250	93.40
8774-500	186.80
8774-1000	373.60
8775-100	46.35
8775-250	111.00
8775-500	222.00
8775-1000	444.00
8776-100	61.05
8776-250	147.00
8776-500	294.00
8776-1000	588.00
8777-100	12.85
8777-250	30.40
8777-500	60.80
8777-1000	121.60
8778-100	26.10
8778-250	63.75
8778-500	127.50
8778-1000	255.00
8779-500	44.65
8779-1000	89.30
8780-100	9.60
8780-500	42.75
8780-1000	85.50
8781-100	2.07
8781-500	6.25
8781-1000	12.50
8782-25†	.86
8782-50†	1.28
8782-100†	1.89
8782-500†	6.30
8782-1000†	12.60
8783-100	7.95
8783-500	35.25
8784-500	72.00
8786-100	8.70
8786-500	39.90
8787-500	77.40
8788-500	51.75
8789-500	34.65
8789-1000	69.30
8790-100	7.65
8790-250	16.50
8790-500	33.00
8790-1000	66.00
8791-100	9.36
8791-500	41.80
8791-1000	83.60
8794-500	14.50
8794-1000	29.00
8795-500	11.50
8795-1000	23.00
8800	1.13
8850-100	12.75
8851-100	10.40
8852-100	7.95
8852-500	36.75
8853-100	7.40
8853-1000	64.50
8854-100	6.40
8854-1000	56.55
8855-100	6.30
8855-1000	52.50
8858-100	13.50
8858-1000	122.55
8859-100	9.45
8859-1000	86.25
8860-100	9.15
8860-1000	79.50
8861-100	6.68
8861-1000	57.45
8862-100	6.70
8862-1000	59.40
8863-100	6.38
8863-1000	52.80
8866-25	2.31
8866-100	6.53
8866-500	27.90
8868-25	1.44
8868-100	3.63
8868-500	13.80
8869-25	1.22
8869-100	3.00
8869-500	11.35
8870-100	38.85
8871-25	43.85
8871-100	175.50
8878	3.72 pr
8879	1.59 pr
8880-100 †	10.80
8880-1000†	98.70
8881-100 †	6.48
8881-1000†	75.60
8882-100 †	5.40
8882-1000†	47.10
8883-100 †	4.13
8883-1000†	36.75
8884-100 †	6.98
8884-1000†	61.50
8886-100 †	5.03
8886-1000†	43.50
8887-100 †	4.17
8887-1000†	35.55
8888-25 †	1.56
8888-100 †	4.28
8888-250 †	9.30
8890-25 †	1.14
8890-100 †	2.85
8890-500 †	12.00
8892-100	6.70
8892-500	26.05
8892-1000	54.60
8893-100	5.90
8893-500	22.50
8893-1000	47.25
8894-100	8.43
8894-1000	74.25
8896-100	5.85
8896-500	24.85
8896-1000	51.75
8897-500	18.60
8897-1000	37.20
8898-10 †	1.23
8898-25 †	2.28

See Pages 1323 thru 1353 for complete BELDEN Catalog Pages.

© United Technical Publications

BELDEN • PRICE LIST

Trade Number Length in ft.	Suggested Trade Price Each	Trade Number Length in ft.	Suggested Trade Price Each	Trade Number Length in ft.	Suggested Trade Price Each	Trade Number Length in ft.	Suggested Trade Price Each
8898-100 †	5.97	8920-1000†	12.60	8953-100 †	2.22	8963-500	174.00
8898-500 †	25.00	8933-100 †	6.40	8953-1000†	17.10	8964-100	28.80
8899-10 †	.87	8933-500 †	27.60	8954-100 †	1.92	8964-500	138.00
8899-14	.95	8934-100 †	4.20	8954-1000†	14.05	8965-100	10.95
8899-25 †	1.38	8934-500 †	17.50	8955-100	1.77	8965-1000	108.75
8899-100 †	4.41	8935-100 †	3.36	8955-1000	12.75	8966-100	8.20
8899-500 †	16.20	8935-1000†	24.75	8956-100	5.25	8966-1000	81.75
8899-1000†	32.40	8936-100 †	2.52	8956-1000	47.25	8967-100	5.13
8916-100 †	4.73	8936-1000†	19.50	8957-100	3.78	8967-1000	50.40
8916-500 †	20.10	8937-100 †	2.43	8957-1000	34.50	8968-100	4.95
8917-100 †	3.51	8937-1000†	17.35	8958-100 †	3.18	8968-1000	45.75
8917-500 †	14.70	8950-100	5.05	8958-1000†	26.25	8969-100 †	3.51
8918-100 †	2.64	8950-1000	40.50	8959-100 †	2.82	8969-1000†	30.90
8918-1000†	20.25	8951-100	3.30	8959-1000†	22.65	8970-100 †	3.18
8919-100 †	2.13	8951-1000	27.60	8960-100 †	2.58	8970-1000†	25.35
8919-1000†	16.00	8952-100 †	2.67	8960-1000†	18.70	8971-100 †	2.70
8920-100 †	1.82	8952-1000†	20.85	8963-100	36.30	8971-1000†	21.15

* New Item † Specify Color

ALL SPOOLS ARE ONE PIECE EXACT LENGTH. (EXCEPT SPOOLS WITH (•) FOOTNOTE)

• Spools may contain more than one piece, minimum length of any one piece is 25 ft.

When priced per M ft. length may vary ±10% from length shown; all other lengths are exact.

§ Cut to Customer's Specified Length subject to available stock lengths—minimum length 25'; 25' to 199', plus 25', minus 0; 200' or over, plus 50', minus 0.

¶ (Vinyl Hook-up Wire) Prices apply to standard stock colors as listed in our current catalog and to non-stock striped colors over stock solid colors in quantities of 10,000' or more. Non-stock striped colors over stock solid colors in quantities of 1000' to 9,999', add pro-rata set-up charge of $4.50 per color combination. Minimum order 1000' per special stripe combination. Special stripe colors in any quantity will be subject to 2 piece put-up and plus or minus 10% per spool.

COMPLETE CORDS

Trade Number	Single Lot Price Each	Trade Number	Single Lot Price Each	Trade Number	Single Lot Price Each	Trade Number	Single Lot Price Each
17106B †	.32	17238B	.88	17407B	.83	17491S	2.61
17106S †	.42	17238S	1.02	17407S	.96	17492S	4.88
17109B §	.38	17239B	.77	17408B	.91	17493S	8.53
17109S †	.53	17239S	.91	17408S	1.09	17494S	3.25
17112S †	.62	17249S	1.42	17409B	.99	17495S	6.32
17126B	.37	17258S	1.23	17410B	.80	17497S	11.22
17126S	.51	17259S	1.06	17412B	1.34	17555S	3.73
17129S	.64	17260S	.91	17412S	1.52	17556S	6.61
17156S †	.45	17275C †	2.10	17419B	1.28	17629B	2.34
17159S †	.58	17308B	.69	17419S	1.47	17629S	2.66
17162S †	.72	17308S	.86	17420B	1.20	17635S	4.11
17165S †	.78	17310B	.78	17422B	1.62	17664S	8.96
17177S TBO	.85	17310S	.94	17422S	1.82	17665S	16.29
17194S	3.12	17328B	.82	17425S	2.22	17675S	9.12
17195S	5.20	17328S	.99	17430B	1.55	17676S	16.10
17205B †	.48	17330B	.99	17447S	1.89	17694S	6.64
17205S ■	.62	17330S	1.17	17448S	2.00	17695S	12.22
17206B	.58	17359B	1.04	17449S	2.82	17697S	21.41
17206S	.75	17361S	1.26	17460S	1.52	17925S	3.52
17230C †	1.65	17370S	1.50	17461S	1.76	17950S	5.34
17231C †	1.78	17405B	.69	17462S	2.13	17995S	7.52
17236B	.77	17405S	.85	17475S	4.59	17996S	9.92
17236S	.91	17406B	.78	17476S	7.60	17998S	9.92
17237B	.66	17406S	.94	17477S	14.10	17999S	14.40
17237S	.82						

† Specify Color ■ Black Only § Brown ‡ Gray Only □ Black/White Only

(TBO) to be obsoleted

PORTABLE CORDAGE

Trade Number & Standard Pkg. In Ft. 2S-250=2-250 Spls. 4S-250=4-250 Spls. C=Coil	Suggested Trade Net Per M Feet 250 to 999	Trade Number & Standard Pkg. In Ft. 2S-250=2-250 Spls. 4S-250=4-250 Spls. C=Coil	Suggested Trade Net Per M Feet 250 to 999	Trade Number & Standard Pkg. In Ft. 2S-250=2-250 Spls. 4S-250=4-250 Spls. C=Coil	Suggested Trade Net Per M Feet 250 to 999	Trade Number & Standard Pkg. In Ft. 2S-250=2-250 Spls. 4S-250=4-250 Spls. C=Coil	Suggested Trade Net Per M Feet 250 to 999
18100 C-250 (TBO)	324.80	18123 2S-250 †	41.45	18205 C-250	588.80	18216 C-200	539.20
18101 C-250	264.00	18124 2S-250	143.20	18206 C-250	446.40	18217 C-50	392.00
18102 C-250	189.60	18125 2S-250	112.80	18207 C-250	336.00	18217 C-200	392.00
18103 2S-250	122.95	18126 2S-250 †	55.10	18208 C-250	201.60	18227 2S-250	88.65
18104 2S-250	108.40	18127 2S-250	71.85	18209 C-250	163.70	18228 2S-250	107.70
18105 C-250	473.60	18128 2S-250	92.00	18210 C-50	889.60	18229 2S-250	110.00
18106 C-250	348.00	18129 2S-250	94.40	18210 C-200	889.60	18230 2S-250	141.45
18107 C-250 †	260.40	18130 2S-250	121.60	18211 C-50	1180.80	18314 2S-250	150.30
18108 C-250	160.80	18140 2S-250	52.80	18211 C-200	1180.80	18316 2S-250	106.70
18109 C-250	128.80	18141 2S-250 †	69.20	18213 C-25	1616.00	18318 2S-250	90.25
18110 2S-250	92.00	18142 2S-250 †	84.80	18213 C-100	1616.00	18326 2S-250	77.70
18111 2S-250	77.30	18200 C-250	474.40	18214 C-25	1145.60	18328 2S-250	58.40
18115 4S-250 †	43.10	18201 C-250	365.60	18214 C-100	1145.60	18336 2S-250	96.40
18120 2S-250 †	67.60	18202 C-250	261.60	18215 C-50	736.00	18338 2S-250	79.20
18121 2S-250 †	51.45	18203 2S-250	166.40	18215 C-200	736.00		
18122 4S-250 †	31.75	18204 2S-250	143.20	18216 C-50	539.20		

† Specify Color (TBO) To be obsoleted

Shipped only in standard packages as listed. Production quantities of special wires quoted on request.

Prices Subject to Change Without Notice

© United Technical Publications

See Pages 1323 thru 1353 for complete BELDEN Catalog Pages.

BELDEN · PRICE LIST—TEFLON® WIRES

Trade Number and Length in Ft.	Old Trade Number	Suggested Trade Price Ea.
83000-25†	8300	1.75
83000-100†●	8300	4.50
83000-500†●▲	8300	26.85M′
83000-1000†●▲	8300	25.35M′
83001-25†	8301	1.80
83001-100†●	8301	4.75
83001-500†●▲	8301	28.20M′
83001-1000†●▲	8301	26.70M′
83002-25†	8302	1.95
83002-100†●	8302	5.10
83002-500†●▲	8302	31.90M′
83002-1000†●▲	8302	30.40M′
83003-25†	8303	2.18
83003-100†●	8303	6.25
83003-500†●▲	8303	40.90M′
83004-25†	8304	2.03
83004-100†●	8304	5.40
83004-500†●▲	8304	33.60M′
83004-1000†●▲	8304	32.10M′
83005-25†	8305	2.18
83005-100†●	8305	6.25
83005-500†●▲	8305	40.95M′
83005-1000†●▲	8305	39.45M′
83006-25†	8306	2.33
83006-100†●	8306	6.85
83006-500†●▲	8306	45.90M′
83006-1000†●▲	8306	44.40M′
83007-25†	8307	2.63
83007-100†●	8307	7.90
83007-500†●▲	8307	54.60M′
83007-1000†●▲	8307	53.10M′
83008-25†	8308	2.48
83008-100†●	8308	7.45
83008-500†●▲	8308	51.15M′
83009-25†	8309	3.25
83009-100†●	8309	10.60
83009-500†●▲	8309	77.65M′
83009-1000†●▲	8309	76.15M′
83010-25†	8310	3.85
83010-100†●	8310	12.90
83010-500†●▲	8310	97.05M′
83010-1000†●▲	8310	95.55M′
83023-25†	8323	2.65
83023-100†●	8323	8.10
83023-500†●▲	8323	56.25M′
83025-25†	8325	2.70
83025-100●†	8325	8.40
83025-500†●▲	8325	58.80M′
83026-25†	8326	2.85
83026-100†●	8326	9.10
83026-500†●▲	8326	64.95M′
83026-1000†●▲	8326	63.45M′
83027-25†	8327	3.23
83027-100†●	8327	10.50
83027-500†●▲	8327	77.25M′
83027-1000†●▲	8327	75.75M′
83028-25†	8328	3.08
83028-100†●	8328	10.00
83028-500†●▲	8328	72.15M′
83029-25†	8329	4.15
83029-100†●	8329	14.05
83029-500†●▲	8329	106.35M′
83029-1000†●▲	8329	104.85M′
83030-25†	8330	4.50
83030-100†●	8330	15.60
83030-500†●▲	8330	119.25M′
83030-1000†●▲	8330	117.75M′
83041-100†●	—	4.50
83041-1000†●▲	—	24.90M′
83043-100†●	—	4.60
83043-1000†●▲	—	25.15M′
83045-100†●	—	4.75
83045-1000†●▲	—	26.40M′
83046-100†●	—	5.05
83046-1000†●▲	—	28.65M′
83047-100†●	—	5.20
83047-1000†●▲	—	30.45M′
83048-100†●	—	5.80
83048-1000†●▲	—	35.25M′
83049-100†●	—	5.70
83049-1000†●▲	—	34.65M′
83050-100†●	—	6.00
83050-1000†●▲	—	37.30M′
83241-100● (RG-141A/U)	—	48.75
83241-500● (RG-141A/U)	—	456.00M′
83241-1000● (RG-141A/U)	—	450.00M′
83242-100● (RG-142B/U)	—	60.00
83242-500● (RG-142B/U)	—	570.00M′
83242-1000● (RG-142B/U)	—	564.00M′
83264-100● (RG-179B/U)	—	24.00
83264-500● (RG-179B/U)	—	208.50M′
83264-1000● (RG-179B/U)	—	204.00M′
83265-100● (RG-178B/U)	8265	13.90
83265-500● (RG-178B/U)	8265	120.00M′
83266-100● (RG-180B/U)	8266	31.50
83266-500● (RG-180B/U)	8266	291.00M′
83267-100● (RG-187A/U)	—	22.50
83267-500● (RG-187A/U)	—	204.00M′
83267-1000● (RG-187A/U)	—	195.00M′
83269-100● (RG-188A/U)	8269	22.50
83269-500● (RG-188A/U)	8269	204.00M′
83270-100● (RG-196A/U)	8270	16.80
83370-500● (RG-196A/U)	8270	142.50M′
83282-100● (RG-303/U)	—	43.50
83282-500● (RG-303/U)	—	417.00M′
83282-1000● (RG-303/U)	—	411.75M′
83284-100● (RG-316/U)	—	22.50
83284-500● (RG-316/U)	—	199.50M′
83284-1000●	—	195.00M′
83301-100●	—	27.60
83301-500●	—	223.50M′
83301-1000●	—	223.50M′
83302-100●	—	28.65
83302-500●	—	232.50M′
83302-1000●	—	232.50M′
83303-100●	—	33.30
83303-500●	—	271.50M′
83303-1000●	—	271.50M′
83304-100●	—	37.20
83304-500●	—	300.00M′
83304-1000●	—	300.00M′
83305-100●	—	40.50
83305-500●	—	330.00M′
83305-1000●	—	330.00M′
83306-100●	—	45.45
83306-500●	—	372.00M′
83306-1000●	—	372.00M′
83307-100●	—	53.85
83307-500●	—	442.50M′
83307-1000●	—	442.50M′
83308-100●	—	73.20
83308-500●	—	600.00M′
83308-1000●	—	600.00M′
83315-100●	—	51.90
83315-500●	—	426.00M′
83315-1000●	—	426.00M′
83316-100●	—	54.75
83316-500●	—	450.00M′
83316-1000●	—	450.00M′
83317-100●	—	59.25
83317-500●	—	487.50M′
83317-1000●	—	487.50M′
83318-100●	—	63.00
83318-500●	—	517.50M′
83318-1000●	—	517.50M′
83319-100●	—	75.45
83319-500●	—	622.50M′
83319-1000●	—	622.50M′
83320-100●	—	85.50
83320-500●	—	705.00M′
83320-1000●	—	705.00M′
83321-100●	—	101.55
83321-500●	—	840.00M′
83321-1000●	—	840.00M′
83322-100●	—	135.00
83322-500●	—	1110.00M′
83322-1000●	—	1110.00M′
83330-100●	—	65.50
83330-500●	—	540.00M′
83330-1000●	—	540.00M′
83331-100●	—	70.50
83331-500●	—	577.50M′
83331-1000●	—	577.50M′
83332-100●	—	75.00
83332-500●	—	615.00M′
83332-1000●	—	615.00M′
83333-100●	—	84.75
83333-500●	—	697.50M′
83333-1000●	—	697.50M′
83334-100●	—	93.00
83334-500●	—	765.00M′
83334-1000●	—	765.00M′
83335-100●	—	108.75
83335-500●	—	900.00M′
83335-1000●	—	900.00M′
83336-100●	—	126.75
83336-500●	—	1050.00M′
83336-1000●	—	1050.00M′
83337-100●	—	163.50
83337-500●	—	1350.00M′
83337-1000●	—	1350.00M′
83345-100●	—	77.55
83345-500●	—	639.00M′
83345-1000●	—	639.00M′
83346-100●	—	82.50
83346-500●	—	682.50M′
83346-1000●	—	682.50M′
83347-100●	—	91.50
83347-500●	—	757.50M′
83347-1000●	—	757.50M′
83348-100●	—	99.75
83348-500●	—	825.00M′
83348-1000●	—	825.00M′
83349-100●	—	117.75
83349-500●	—	975.00M′
83349-1000●	—	975.00M′
83350-100●	—	138.75
83350-500●	—	1147.50M′
83350-1000●	—	1147.50M′
83351-100●	—	149.25
83351-500●	—	1237.50M′
83351-1000●	—	1237.50M′
83352-100●	—	204.00
83352-500●	—	1695.00M′
83352-1000●	—	1695.00M′
83390-25	8390	8.85
83390-100●	8390	33.00
83390-500●	8390	322.50M′
83391-25	8391	11.05
83391-100●	8391	42.00
83391-500●	8391	411.00M′
83392-25	8392	13.20
83392-100●	8392	51.00
83392-500●	8392	498.00M′
83393-25	8393	10.50
83393-100●	8393	43.50
83393-500●	8393	420.00M′

† Specify Color ■ Trademark of Du Pont

● Spools may contain more than one piece, minimum length of any one piece is 25 feet. When priced per M feet, length may vary ±10% from length shown; all other lengths are exact.

▲ STRIPING ADDERS FOR TYPES E, EE, and ET: 1, 2 or 3 stripes. Minimum order 1,000 feet per stripe combination.
1,000′ to 4,999′ add $10.50/M′ 5,000′ to 24,999′ add $7.50/M′ 25,000′ to 49,999′ add $6.00/M′ 50,000′ and Over add $4.50/M′
AGGREGATION: Sizes, types and colors may be aggregated per order for striping adder quantity price. Prices Subject To Change Without Notice.

See Pages 1323 thru 1353 for complete BELDEN Catalog Pages.

© United Technical Publications

BELDEN

index

	PAGE
Aircraft Wire	22
Audio Cables	4-11
Bonding & Shielding Cables	22
Broadcast Audio Cables	4, 5
Cathode Ray Tube Cables	18
Citizens Band Antenna Cable	16
Coaxial Cables	16-18
Coiled Cords	13
Coin Operated Phonograph Cables	7
Community TV Antenna System Cables	16-18
Control Cables	11
Cords:	
Cordlites	29
Extension Cords	27,28
Power Supply Cords	26,27
Retractile Cords	13
Data Process Cables	8
Hi-Fi Connector Cable	14
High Voltage Cables	18
Hook-up Wire	19-23
Instrumentation Cable	4-8, 12, 15
Intercom Cables	4-11
Language Lab Cable	14
Microphone Cables	12, 13
Military Specifications:	
Mil-C-17	16-18, 24
Mil-W-76, Type LW, MW & HW	20, 21
Mil-W-16878, Type B	19
Mil-W-16878, Type E & EE	23
Mil-W-5086	22
Mil-W-7078	22
Jan-C-17	16-18
Multiple Conductor Cables	5-11
Multiple Set Antenna Cable	17
Parallel Lamp Cordage, SP-1 & SPT-1	14, 31
Phonograph Cable	7
Portable Cordage	14, 30, 31
Public Address Cables	4, 5, 7, 8
Quads & Multiple Quads	6, 7
Retractile (Coiled) Mike Cables	13
Retractile (Coiled) Power Supply & Control Cables	13
Retractile (Coiled) Telephone Cords	13
RG/U Transmission Line Cables	16-18
Shielded Intercom System Cables	4-8
Shielded Power Supply Cordage	12, 13
Shielding	22
Sound System Cables	4-11
SJ & SV Cord	14, 30, 31
SP-1 & SPT-1	14, 31
Strain Gauge Cables	6
Teflon Hook-up Wire	23
Teflon Cables	23-25
Telephone Cables	9, 11, 13
Test Prod Wire	14
TV Camera Cables	15
UL Type Cordage	14, 30, 31
UL Type Lead Wire	22
Video Cable	15

© United Technical Publications

BELDEN TODAY

BELDEN

new ideas for moving electrical energy

FOREWORD

The purpose of this catalog is to make the selection, purchase and overall usage of Belden Electronic Wire and Cable products easier for you, the customer.

Many of the products listed in this catalog have enjoyed wide acceptance over the years. Some of the newer items are on the way to earning their own reputations for excellence and reliability in the field. They are the recent products of Belden's product development engineering group which starts with the electrical, physical and thermal needs of the applications. Working from the ground up they design and develop a wire, cable or cord that will meet or exceed these requirements.

INNOVATIONS

Over the years, Belden has pioneered the development of a number of significant design breakthroughs and new engineering techniques which have provided remarkable new products to meet the challenging and ever-changing technology.

Whatever your specialized problems . . . . whatever your needs for wire and cable, you can count on Belden's experienced design and engineering talents and resources to help you develop the best solution to your wire and cable application problems.

Belden is constantly reviewing new materials, insulations, compounds and shielding applications to develop products to satisfy customer's needs.

TESTING

Belden's products must meet the highest standards of quality control in the industry. High-performance test equipment can simulate practically every known environmental or electrical condition to assure positive, reliable ratings for the most trouble-free operation under known and predictable conditions. Belden's rigid test program assures consistent product reliability from design through packaging.

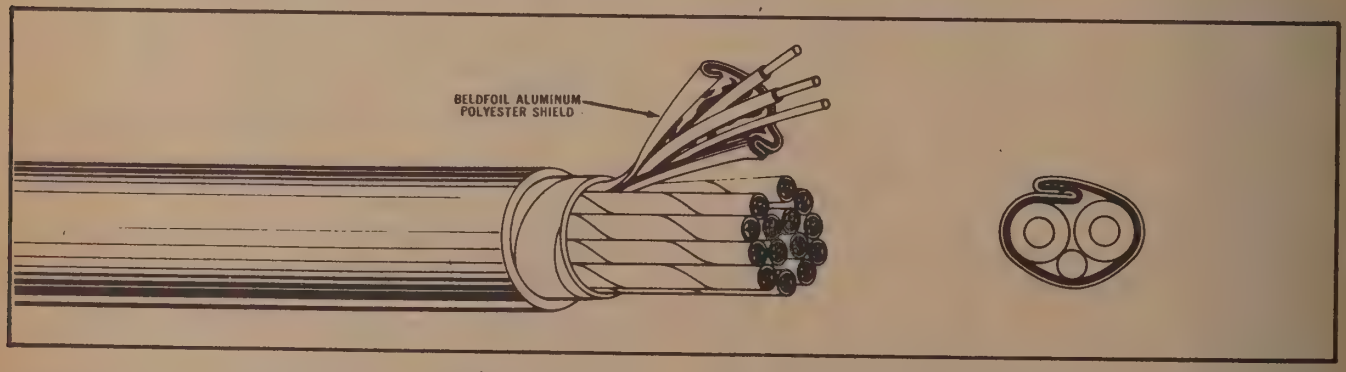
MANUFACTURING

Belden designs and builds much of its own specialized manufacturing equipment. To the customer, this means only one thing: scrupulous and uncompromising supervision of the entire manufacturing process that starts with the equipment used to make the product and assures complete, beginning to end, manufacturing integrity.

SALES ENGINEERING

The total experience and capability of Belden's engineering department is available to you at any time to assist in specifying or developing wiring products that can provide the best and most practical solutions to your specific application requirements.

The Beldfoil® ISO-Shield Story



Much of today's miniaturized, high-gain electronic equipment calls for small diameter cables that are lightweight, flexible and has total electrostatic shielding.

Wire braid and serve type shields have a practical range up to 97 percent maximum coverage. While they provide sufficient electrostatic shielding for many applications, they do not furnish the full-coverage shielding required by many high-gain electronic systems.

Beldfoil ISO-Shield provides 100 percent coverage and adds greater effectiveness to all major shielding functions: excluding external signals, confining the transmitted signal and minimizing crosstalk.

Beldfoil ISO-Shield uses a thin layer of aluminum bonded to a polyester film. The aluminum provides the necessary electrostatic shielding while the polyester film adds a bonus insulation and increased mechanical strength. The 100% shielding is accomplished by an exclusive method of folding back both edges of the tape in such a way as to provide metal-to-metal contact between adjacent wraps, thus providing the same shielding effect as a continuous aluminum tube. As a direct result of using this thin layer of aluminum-polyester shielding, Beldfoil ISO-Shield is lightweight, flexible and small in diameter. Depending on the cable type the polyester film may be used to increase the dielectric strength between the conductors and the shield, or to provide insulation between adjacent shields.

Applications for Beldfoil ISO-Shield range from a single conductor audio and sound cable to complex multi-conductor multi-shield cables. They include cables for data processing systems, telemetering equipment, strain gauge applications, hi-fi systems, instrumentation, TV cameras and receivers, microphones and communications equipment plus many special constructions for both military and commercial use.

© United Technical Publications

cable finder

BELDEN

●INDICATES SOLID CONDUCTORS, ALL OTHERS STRANDED CONDUCTORS

HOW TO USE THE CABLE FINDER CHART

Match the desired "Number of Conductors" column with the required "Conductor Size" to find the applicable Belden Trade Number and its catalog page.

For cables with more than 8 conductors, see Multiple pair and unpaired unshielded cables on page 9 & 11, Multiple pair individually shielded on pages 6, 7 & 8. For cables combining shielded and unshielded conductors, see Special Audio and Communication cables on page 7.



No. of Conductors	2 Condr.		3 Condr.		4 Condr.		5 Condr.		6 Condr.		7 Condr.		8 Condr.	
CONDUCTOR SIZE	Belden No.	Page No.	Belden No.	Page No.	Belden No.	Page No.	Belden No.	Page No.	Belden No.	Page No.	Belden No.	Page No.	Belden No.	Page No.
25 AWG or Smaller	8476	14	8643	5										
	●8340	7			8434	6			●8642	7				
24 AWG	8782	10												
Shielded	8413	12	8406	12										
	8420	12												
	8641	4												
22 AWG	●8481	10	8443	10 & 11	●8741	9	8445	11	●8742	9	8447*	11	●8757	9
	●8740	9 & 10	●8794	11	8444	11			8446*	11			8488	
	8442	10	●8701	10	8494	13								
	●8781	10												
	●8795	11												
Shielded	8390	5 & 41	8391	5	8392	6								
	8422	12	8735	5	8732§	6								
	●8437	4	8734	7										
	8441	4												
	●8738	5												
	●8739	4	●8731	5										
	8737	4												
	●8450	4	8771	5	8723	6	8788§	7	●8767	8				
	8451	4	8733	7	8729	6			8777	8				
	8761	4			8724§	6			8786§	7				
					8728	6								
					8730§	6								
20 AWG	8649	10	8783§	7										
	8205	10					8455*	14						
Shielded	8412	12	8423	12	8424	6 & 12	8425	12	8426	12	8427	12	8418	12
	8758	12	8403	12	8404	6 & 12	8405	12						
	8402	5												
	8759	4												
	8762	4	8772	5	8722§	6							8725	8
	8393	5, 8 & 41	8763§	7										
18 AWG	8462	14	8453	14	8454	14	8465	11	8690	9	8467	11		
	8888	14												
	8452	14	●8483†	10										
	8478	14	●8487†	10										
	8460	10												
	8461	10												
	●8482†	10												
	●8492†	10												
	●8486†	10												
Shielded	8428	12												
	8208	4												
	8789	5												
	8790	4	8791	5										
	8760	4	8770	5										
16 AWG	8470	10									8621	11		
	8471	10			8620	11								
	8472	14												
Shielded	8779	5			8407	12								
	8408	12												
	8780	4												
	8719	4	8618	5										
14 AWG	8473	10	8479	14	8627	11					8628	11		
	8474	14												
Shielded	8720	4												
12 AWG	8477	10												
	8718	4												

*2 Conductors are 18 AWG †19 AWG §Not all pairs are shielded, or conductors are more than one size.

© United Technical Publications

shielded sound and broadcast audio cables

BELDEN

COMMUNICATIONS CABLE

Belden offers a complete line of Communications Cables to provide customers with the best all-around cable for every application requirement. Cables are available in a wide range of sizes, dimensions, shielding constructions and types of insulation. All Communications Cables are designed to protect the desired signal by eliminating or minimizing the interference of hum, noise and crosstalk.

SHIELDING: Because it affords such excellent protection, Beldfoil ISO-Shield is now being specified for many critical applications such as instrumentation systems, tracking station equipment, computer and data processing systems, audio, sound, strain gauge and control cables.

No other type of shield on the market surpasses Beldfoil Shield for full coverage and protection against radiation and penetration at audio and radio frequencies. Beldfoil's unique polyester-aluminum shielding provides 100% coverage.

Braided Copper Shields have high tensile strength and are very effective at audio and radio frequencies in flexing applications. Served Copper Shields usually provide more coverage than Braided Copper Shields; they're also easier to terminate. Both Braided and Served Copper Shields are recommended at audio frequencies.

INSULATIONS: Belden's Communications Cables are available in a variety of insulation materials, each having its own advantages depending upon the size requirements, environmental and electrical conditions dictated by the application.

Vinyl insulation resists flame, most solvents, oil, ozone and sunlight. It has a higher dielectric constant and capacitance than polyethylene. Therefore it is recommended for audio frequency applications. It is easy to strip.

Polyethylene insulation is lightweight and resists ozone. It has a low dielectric constant for low capacitance and provides low electrical loss and is recommended for audio and radio frequency applications. Like vinyl, polyethylene is easy to strip.

Polypropylene insulation provides excellent heat and abrasion resistance. It has a low dielectric constant with equally low capacitance. It is less flexible than polyethylene. Because it has excellent dielectric strength and mechanical ruggedness, polypropylene insulations are widely used for miniaturization applications. Even with low overall diameters, they permit very low loss. Recommended for audio and radio frequencies.

TWO CONDUCTOR SHIELDED CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	Standard Spool Lengths in ft.
With JACKET BELDFOIL®	8640	26 (Solid)	.002	.020	.089	Red, Clear	100	80	140	100	250, 500
		*Solid Copper, BELDSOL® (solderable—no stripping required) insulated BELDFOIL aluminum-polyester shield, 30 AWG solid tinned Copperweld▲ ground drain wire, **WHITE** vinyl jacket. Maximum operating temperature 105°C.* **Ideal for Instrumentation and Audio Console Work where Subminiaturization is Required.**									
	8450•	22 (Solid)	.006	.018	.118	Blk, Red	100	40	76	200	100, 250, 500, 1000
	8451•	22 (7x30)	.008	.020	.135	Blk, Red	100	34	67	200	100, 250, 500, 1000
BELDFOIL® Miniature Broadcast Audio Cable		*Tinned copper, polypropylene insulated, conductors cabled, stranded tinned copper ground drain wire, BELDFOIL aluminum-polyester shield, paper wrap,* ***BLACK*** *or* ***GRAY*** *vinyl jacket.* **Belden's Miniature Type Broadcast Audio Cable occupies ½ to ⅔ less space than required by Standard Broadcast Audio Cables. The Beldfoil Shield combines high cable reliability with ease of termination.**									
	8437	22 (Solid)	.015	.025	.200	Blk, Red	88	48	85	200	500, 1000
	8441	22 (16x34)	.015	.025	.210	Blk, Red	88	49	86	200	100, 500, 1000
Broadcast Audio Cable		*Tinned copper, vinyl insulated, conductors cabled, 8437 solid tinned copper drain wire, 8441 stranded tinned copper drain wire, tinned copper braid shield, black vinyl jacket.*									
	8641•	24 (7x32)	.014	.025	.160	Blk, Clear	100	22	42	350	100, 500, 1000
	8761•	22 (7x30)	.014	.025	.167	Blk, Clear	100	24	47	350	500, 1000
	8762•	20 (7x28)	.014	.028	.196	Blk, Clear	100	27	49	350	100, 250, 500, 1000
BELDFOIL®	8760•	18 (16x30)	.018	.028	.222	Blk, Clear	100	24	44	450	250, 500, 1000
	8719	16 (19x29)	.025	.030	.274	Blk, Clear	100	24	47	600	500, 1000
	8720	14 (19x27)	.032	.035	.340	Blk, Clear	100	24	47	750	500, 1000
	8718	12 (19x25)	.037	.040	.400	Blk, Clear	100	25	49	1000	500, 1000
BELDFOIL®		*Tinned copper polyethylene insulated, BELDFOIL aluminum-polyester shield, stranded tinned copper ground drain wire, (24 AWG for 8641, 22 AWG for 8761, and 20 AWG for 8760 and 8762, 18 AWG for 8719, 16 AWG for 8720, 14 AWG for 8718), chrome vinyl jacket.*									
	8739	22 (Solid)	.015	.025	.160	Blk, Red	94.0	38	66	350	100, 500, 1000
	8737	22 (7x30)	.015	.025	.170	Blk, Red	89.3	40	70	350	100, 250, 500, 1000
	8759	20 (7x28)	.015	.025	.195	Blk, Red	81.0	47	79	350	100, 500, 1000
	8790	18 (7x26)	.020	.028	.231	Red, Wht	76.5	53	92	450	100, 250, 500, 1000
	8780	16 (19x29)	.023	.030	.266	Blk, Wht	84.1	57	98	450	100, 500, 1000
		Tinned copper, vinyl insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.									
	8208	18 (16x30)	.020	.025	.255	Red, Wht	69	46	77	200	100, 500, 1000
		Tinned copper, rubber insulated, braided tinned copper shield, chrome vinyl jacket.									

** Capacitance between conductors. ** Capacitance between 1 conductor and other conductor connected to shield. ▲Trademark of Copperweld Steel Co.*

•Belden U.S. Patent 3,032,604.

For underground burial recommendations of all types of vinyl, polyethylene, Hypalon and neoprene jacketed cables, please write for Bulletin #6 Electronic Wire Section.

BELDEN PAGE 4

© United Technical Publications

TWO CONDUCTOR SHIELDED CABLES (Cont'd)

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
 High Temperature	8390 TEFLON	22 (19x34)	.015	.015	.180	Blk, Wht	90	23	40	1000	25, 100, 500
		Stranded tinned copper, FEP teflon■ insulated, cabled tinned copper braid shield, white FEP teflon jacket. +200° C maximum, −70° C minimum operating temperature. Ideal where chemical resistance is needed and/ or extremely high or low temperatures are required.									
	8393	20 (7x28)	.020	.030	.245	Blk, Red	100	22	42	1000	25, 100, 500
		Tinned copper FEP Teflon insulated, noise reducing tape, 20AWG (10x30) nickel coated copper drain wire, special Beldfoil shield, Silicone rubber jacket. +150°C maximum, —70°C minimum operating temperature. Jacket working voltage, 1000V DC, shield to ground.									
Without JACKET 	8738	22 (Solid)	.015	—	.130	Blk, Red	72.8	35	61	350	1000
	8758	20 (7x28)	.015	—	.165	Blk, Red	63.8	42	72	350	100, 500, 1000
	8789	18 (7x26)	.020	—	.204	Blk, Wht	74	50	89	450	500, 1000
	8779	16 (19x29)	.023	—	.225	Blk, Wht	83	63	112	600	500, 1000
		Tinned copper, vinyl insulated, braided tinned copper shield.									

INSTRUMENTATION CABLES

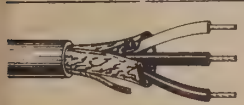
Instrumentation cable provides the vital communications link between sensing devices and read-out equipment. Because of the many and diverse conditions of environment and stress under which instrumentation cables must transmit information — in usable form, without distortion or change — cable characteristics should always be carefully matched with the specific requirements of the particular application.

The scientific, medical and industrial uses of instrumentation cable are vast and ever growing. Some of the common uses for instrumentation cable are such things as measuring pressure, speed, resistance and temperature.

Belden manufactures a wide variety of precision instrumentation wire using several types of insulating materials for conductors and shields to meet a wide variety of electrical, physical and thermal requirements.

Many Belden Instrumentation Cables are unique in the field and have been engineered for specific application problems.

THREE CONDUCTOR SHIELDED

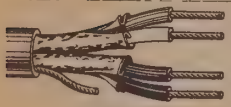
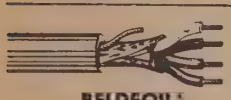
Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
	8731	22 (Solid)	.015	.025	.178	Blk, Red, Wht	76.2	36	63	350	500, 1000
	8791	18 (7x26)	.020	.028	.236	Blk, Red, Wht	78.2	47	84	450	100, 500, 1000
		Tinned copper, vinyl insulated, conductors cabled, tinned copper spiral wrapped shield, chrome vinyl jacket.									
 BELDFOIL®	8618•	16 (19x29)	.025	.030	.300	Blk, Red, Wht	100	26	50	600	500, 1000
	8771•	22 (7x30)	.014	.025	.175	Blk, Red, Clear	100	23	41	350	250, 500, 1000
	8772•	20 (7x28)	.014	.028	.200	Blk, Red, Clear	100	27	51	350	500, 1000
	8770•	18 (16x30)	.018	.028	.236	Blk, Red, Clear	100	24	48	450	500, 1000
		Tinned copper, polyethylene insulated, conductors cabled, BELDFOIL® aluminum-polyester shield, stranded tinned copper ground drain wire (22 AWG for 8771, 20 AWG for 8770 and 8772, and 18 AWG for 8618), chrome vinyl jacket.									
	8735	22 (7x30)	.015	.025	.199	Blk, Red, Wht	70	34	60	350	15, 50, 100, 500, 1000
		Tinned copper, vinyl insulated, conductors cabled, tinned copper braid shield, chrome vinyl jacket.									
High Temperature	8391 TEFLON	22 (19x34)	.015	.015	.190	Blk, Red, Wht	90	20	35	1000	25, 100, 500
		Stranded tinned copper, FEP teflon■ insulated, cabled tinned copper braid shield, white FEP teflon jacket. +200° C maximum, −70° C minimum operating temperature. Ideal where chemical resistance is needed and/or extremely high or low temperatures are required.									
	8643	30 (7x38)	.005	.010	.086	Blk, Red, Wht	95	25	43	200	25, 50, 100, 250
		Tinned copper, polypropylene insulated conductors cabled around textile strength member, tinned copper braid shield, chrome vinyl jacket. 105° C max. operating temperature.									

*Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.

■Trademark of DuPont.
•Belden U.S. Patent 3,032,604.

© United Technical Publications

STRAIN GAUGE QUAD CABLES

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	Standard Spool Lengths in ft
 BELDFOIL®	8434•	4	25 (7x33) 3 copper 4 copper-weld	.013	.020	.179	Red, Blk, Grn, Clear	100	25	40	400	100, 500, 1000
	Tinned copper, polyethylene insulated, black and red conductors under BELDFOIL aluminum-polyester shield, stranded ground wire, green and clear conductors under over-all BELDFOIL aluminum-polyester shield, chrome vinyl jacket. Pairs cabled on common axis to reduce diameter. ⊖											
 BELDFOIL®	8723•	4	22 (7x30) copper	.008	.019	.165	Red, Blk, Grn, Wht	100	35	62	400	100, 500, 1000
	Tinned copper, polypropylene insulated, black and red under a BELDFOIL aluminum-polyester shield. Green and white under a BELDFOIL aluminum-polyester shield, stranded tinned copper drain wire, chrome vinyl jacket. Pairs cabled on common axis to reduce diameter. ⊖											
 BELDFOIL®	8728•	4	22 (7x30)	.008	.021	.188	Red, Blk, Grn, Wht	100	35	62	400	500, 1000
	Tinned copper, polypropylene insulated, cabled in pairs each pair BELDFOIL aluminum-polyester shielded with stranded copper drain wire, polyester film over each shield, overall BELDFOIL aluminum-polyester shield and stranded tinned copper drain wire, chrome vinyl jacket. Pairs cabled on common axis to reduce diameter. ⊖											
 BELDFOIL®	8729•	4	22 (19x34)	.015	.050	.265	Clear, Blk, Red, Grn	100	22	42	600	500, 1000
	Tinned copper, polyethylene insulated, cabled BELDFOIL aluminum-polyester shield. 18 AWG stranded tinned copperweld ground drain wire, white vinyl jacket.											
	8404	4	20 (26x34)	.015	.033	.255	Red, Blk, Grn, Clear	87	25	45	600	15, 100, 250, 500, 1000
	Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.											
	8407	4	16 (65x34)	.032	.043	.422	Red, Blk, Grn, Wht	84	37	65	600	100, 250
	Tinned copper, separator, rubber insulated, cabled, rayon braid, tinned copper braid shield, cotton wrap, black neoprene jacket.											
	8424	4	20 (26x34)	.020	.040	.295	Red, Blk, Grn, Wht	83.5	55	95	600	15, 50, 100, 250, 500, 1000
	Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.											
	8392 TEFLON	4	22 (19x34)	.015	.015	.205	Red, Blk, Grn, Wht	90	20	35	1000	25, 100, 500
	Stranded tinned copper, FEP teflon■ insulated, cabled tinned copper braid shield, white FEP teflon jacket. **HIGH TEMPERATURE +200° C maximum, −70° C minimum operating temperature. Ideal where chemical resistance is needed and/or extremely high or low temperatures are required.**											
 BELDFOIL®	8724•	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.008 .008	.019	.165	Red, Blk, Grn, Wht	100	34	67	200	250, 500, 1000
	8722•	2 shielded 2 unshielded	20 (7x28) 20 (7x28)	.015 .015	.028	.260	Red, Blk, Grn, Wht	100	60	99	350	500, 1000
	Tinned copper, 8722 vinyl insulated, 8724 polypropylene insulated, BELDFOIL aluminum-polyester shield over 2 conductors, stranded tinned copper ground drain wire (22 AWG for 8722 and 24 AWG for 8724), chrome vinyl jacket. Pairs cabled on common axis to reduce diameter. ⊖											
	8732	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.015 .015	.030	.188x .296	Blk, Clear Blk, Clear	62	21	37	350	100, 500, 1000
	Tinned copper, polyethylene insulated, tinned copper braid shield over 1 pair, chrome vinyl jacket.											
 BELDFOIL®	8730•	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.008 .008	.030	.250	Red, Blk, Grn, Wht	100	34	67	200	500, 1000
	Tinned copper, polypropylene insulated, BELDFOIL aluminum-polyester shield over 1 pair with stranded tinned copper drain wire, chrome vinyl jacket. Pairs cabled on separate axes for reduced magnetic coupling.											

*Capacitance between conductors.

**Capacitance between 1 conductor and other conductor connected to shield.

⊖Request information before planning high and low level circuits in same cable.

•Belden U.S. Patent 3,032,604.

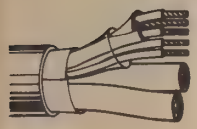
■Trademark of DuPont

© United Technical Publications

multi-purpose and special communication cables

BELDEN

MULTIPLE QUADS AUDIO AND COMMUNICATION CABLES

Description	Trade Number	No. of *Cond.	AWG & (Stranding)	Cond. Color Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Standard Spool Lengths in ft
 BELDFOIL®	8726*	12 3 (QUADS)	22 (7x30)	Red, Blk, Grn, Wht	.008	.035	.330	100	200	34	67	100, 500, 1000
		Cabled around common axis-request information before planning high and low level circuits in same cable										
	8727*	28 (7 QUADS)	22 (7x30)	Red, Blk, Grn, Wht	.008	.040	.450	100	200	34	67	100, 500, 1000
		Cabled around common axis-request information before planning high and low level circuits in same cable										
		22 AWG tinned copper, polypropylene insulation, cabled in quads, BELDFOIL shield over black and red conductors, 24 AWG stranded tinned copper drain wire. Each quad is 8724 (on page 6) except for tape shield folding and a clear polyester tape instead of a vinyl jacket. Shields color coded, overall chrome vinyl jacket.										

SPECIAL AUDIO AND COMMUNICATION CABLES

	8734	3 Conductors 1 shielded 2 unshielded	 22 (7x30) 22 (7x30)	 Wht Blk, Red	 .015 .015	.025	.194	82	350	—	79	100, 500, 1000
		Tinned copper, vinyl insulated, tinned copper braid shield over 1 conductor, 3 conductors cabled, chrome vinyl jacket.										
 BELDFOIL®	8763*	3 Conductors 2 shielded 1 unshielded	 20 (7x28) 20 (7x28)	 Blk, Red Clear	 .014 .014	.028	.210	100	350	26	48	500, 1000
		Tinned copper, polyethylene insulated, BELDFOIL aluminum-polyester shield over 2 conductors, #20 stranded tinned copper ground drain wire, chrome vinyl jacket.										
 BELDFOIL®	8733*	3 Conductors shielded	22 (7x30)	Blk, Red, Clear	.014	.030	.205	100	350	—	51	100, 500, 1000
		Tinned copper, polyethylene insulated, each conductor separately BELDFOIL aluminum-polyester shielded. Ground wire for each conductor is tinned cadmium bronze ribbon under BELDFOIL chrome vinyl jacket.										
 BELDFOIL®	8788*	5 Conductors 3 shielded 2 unshielded	 22 (7x30)	Blk, Red, Grn, Yel, Blue	.015	.028	.236	100	350	—	125	500
		Tinned copper, vinyl insulated 3 conductors each separately BELDFOIL shielded, ground drain wire for each conductor is tinned cadmium bronze ribbon under BELDFOIL 2 conductors unshielded, cabled around a vinyl filler, chrome vinyl jacket.										
	8783	3 Conductors 3 unshielded	1-20 (10x30) 2-16 (26x30)	Blue, Grn, Org	.020 .020	.025	.250	—	450	—	—	100, 500
		Tinned copper, vinyl insulated, conductors cabled, chrome vinyl jacket.										
 BELDFOIL®	8786*	6 Conductors 2 unshielded 4 shielded	 22 (7x30) 24 (7x32)	 Blu, Wht Blk, Grn, Red, Yel	 .015 .015	.028	.256	100	350	—	—	100, 500
		Tinned copper, vinyl insulated, 4 conductors twisted under BELDFOIL aluminum-polyester shield, 2 conductors unshielded, 22 AWG drain wire, chrome vinyl jacket.										
 BELDFOIL®	8787*	10 Conductors 4 shielded 4 shielded 2 unshielded	 24 (7x32) 24 (7x32) 22 (7x30)	 Gry, Wht, Blu, Grn Red, Brn, Yel, Org Wht, Blu	 .012 .012 .015	.030	.290	100	350	—	—	500
		Tinned copper, 22 AWG conductors vinyl insulated, 24 AWG conductors polyethylene insulated, cabled in 2 quads, each with transparent polyester tape wrap, 24 AWG tinned copper ground wire. Red BELDFOIL shield over one quad, green BELDFOIL shield over the other quad; plus 2 unshielded conductors, chrome vinyl jacket.										

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Cond. Color Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Standard Spool Lengths in ft
	8784	10 un-shielded	2-16 (26x30) 1-20 (10x30) 7-22 (7x30)	Blk, Wht Gray Red, Grn, Org, Yel, Blu, Purple Brown	.016 .018 .013	.040	.295	—	300	—	—	500
		Tinned copper, vinyl insulated, conductors cabled, chrome vinyl jacket.										
 BELDFOIL®	8640	2	26 (Solid) 1 Pair	Red, Clear	.002	.020	.089	100	100	80	140	250, 500
	8642	6	26 (Solid) 3 Pair	Red, Clear	.002	.025	.140	100	100	80	140	250, 500

Solid copper, BELDSOL® (solderable—no stripping required), BELDFOIL aluminum-polyester shield on each pair, red, brown, orange textile marker and isolating polyester tape for each pair on 8642, Copperweld ground drain wire, WHITE vinyl jacket.

Ideal for instrumentation and audio console work where subminiaturization is required.
105°C maximum operating temperature.

*Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.

•Belden U.S. Patent 3,032,604.

© United Technical Publications

miniature coaxial and shielded paired instrumentation and sound cables

BELDEN

COLOR CODING FOR PAIRED CABLES

Pair Number	Color Combination	Pair Number	Color Combination	Pair Number	Color Combination
1	Black paired with Red	10	Red paired with Blue	19	White paired with Blue
2	Black paired with White	11	Red paired with Yellow	20	White paired with Yellow
3	Black paired with Green	12	Red paired with Brown	21	White paired with Brown
4	Black paired with Blue	13	Red paired with Orange	22	White paired with Orange
5	Black paired with Yellow	14	Green paired with White	23	Blue paired with Yellow
6	Black paired with Brown	15	Green paired with Blue	24	Blue paired with Brown
7	Black paired with Orange	16	Green paired with Yellow	25	Blue paired with Orange
8	Red paired with White	17	Green paired with Brown	26	Brown paired with Yellow
9	Red paired with Green	18	Green paired with Orange	27	Brown paired with Orange

MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO AND SOUND CABLES

Description	Trade Number	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Cap. (mmf/ft)	Nom. Cap. (mmf/ft)	Standard Spool Lengths in Ft.
22 GAUGE VINYL INSULATION	8767*	3	Solid	.013	.030	.270	40	77	100, 250, 500, 1000
	8768*	6	Solid	.013	.037	.394	40	77	100, 250, 500, 1000
	8764*	9	Solid	.013	.040	.440	40	77	100, 250, 500, 1000
	8765*	11	Solid	.013	.040	.485	40	77	100, 250, 500, 1000
	8766*	15	Solid	.013	.045	.540	40	77	100, 250, 500, 1000



BELDFOIL®

#22 tinned copper, vinyl insulated, cabled in pairs, each pair and its ground wire under BELDFOIL® aluminum-polyester shield, over-all chrome vinyl jacket. 300 Volts suggested working voltage.

Insulation resistance between shields . . . . . 100 megohms/M'
Capacitance between adjacent shields . . . . . 115 mmf/ft
Voltage breakdown between adjacent shields . . . . . 1500 volts
Working voltage between adjacent shields . . . . . 50 volts

Vinyl insulation is used for ease of stripping and soldering. Recommended for audio frequency applications requiring excellent circuit isolation. Maximum operating temperature 80°C.

MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO AND DATA CABLES

Description	Trade Number	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Cap. (mmf/ft)	Nom. Cap. (mmf/ft)	Standard Spool Lengths in Ft.
22 GAUGE POLYPROPYLENE INSULATION	8777*	3	(7x30)	.010	.030	.270	30	55	100, 250, 500, 1000
	8778*	6	(7x30)	.010	.037	.394	30	55	100, 250, 500, 1000
	8774*	9	(7x30)	.010	.040	.440	30	55	100, 250, 500, 1000
	8775*	11	(7x30)	.010	.040	.485	30	55	100, 250, 500, 1000
	8776*	15	(7x30)	.010	.045	.540	30	55	100, 250, 500, 1000
	8769*	19	(7x30)	.010	.055	.620	30	55	100, 250, 500, 1000
	8773*	27	(7x30)	.010	.070	.760	30	55	§Cut to customer's specified length. Maximum length 1000'



BELDFOIL®

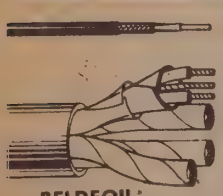
#22 gauge tinned copper, polypropylene insulated, cabled in pairs, each pair and its ground wire under BELDFOIL® aluminum-polyester shield, over-all chrome vinyl jacket. 300 volts suggested working voltage.

Insulation resistance between shields . . . . . 100 megohms/M'
Capacitance between adjacent shields . . . . . 115 mmf/ft
Voltage breakdown between adjacent shields . . . . . 1500 volts
Working voltage between adjacent shields . . . . . 50 volts

Recommended for audio, pulse, and radio frequency applications requiring superior circuit isolation. Polypropylene insulation is used for excellent high frequency properties and mechanical toughness. Maximum operating temperature 105°C.

SPECIAL INSTRUMENTATION CABLES

Description	Trade Number	AWG & Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf/ft)	Nom. Cap. (mmf/ft)	Suggested Working Voltage	Standard Spool Lengths in Ft.
	8700	28 (Solid) Coaxial	.005	.008	.054	Black	80	48	—	100	25,50,100,250
		Solid tinned copper, polypropylene insulation, copper braid, black vinyl jacket. May be steam sterilized for medical research.									
	8725†○	4 pairs 20 (7x28)	.015	.030	.360	Red, Blk Grn, Wht Wht/Red Wht/Blk Wht/Grn Wht/Yel	100	27	49	400	500 1000



BELDFOIL®

Tinned copper conductors, polypropylene insulated, four groups of two conductors with #22 AWG drain wire. Each group individually BELDFOIL® shielded with polyester tape wrap, chrome vinyl jacket. 105° C Maximum operating temperature.

**Capacitance between conductors.*
***Capacitance between 1 conductor and other conductor connected to shield.*
•Belden U.S. Patent 3,032,604.
§Minimum length 25'
25' to 199', plus 25', minus 0.
200' or over, plus 50', minus 0.
†Cabled around common axis request information before planning high and low level circuits in same cable.
○Color code is Western Regional Strain Gauge Committee.

© United Technical Publications

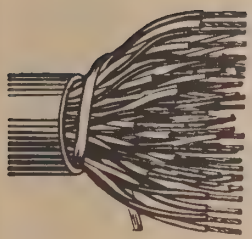
MULTIPLE PAIR UNSHIELDED SOUND CABLES

TYPICAL APPLICATIONS: Balanced line sound systems.

Made with 80°C vinyl plastic compounds for high dielectric strength, and the best physical properties, such as free stripping, small diameter, and tear resistance. It also resists the effects of water, sun, oil, grease, and ozone. The conductors are paired with a short-lay twist for conductor balance, providing a quiet circuit, free from cross talk.

ALL CONSTRUCTIONS:
Tinned copper, vinyl insulated cabled in pairs, chrome vinyl jacket.





1 to 27 Pairs	Trade Number	No. of Pairs	AWG & Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
	8740	1	22 Solid	.015	.025	.150	200	100, 250, 500, 1000
	8741	2	22 Solid	.015	.028	.201	200	100, 250, 500, 1000
	8742	3	22 Solid	.015	.030	.240	200	100, 250, 500, 1000
	8690	3	18 (16x30)	.018	.037	.362	400	100, 500, 1000
	8757	4	22 Solid	.015	.030	.255	200	500, 1000
	8743	6	22 Solid	.010	.035	.305	200	100, 250, 500, 1000
	8747	6	22 (7x30)	.010	.035	.340	200	100, 250, 500, 1000
	8691	6	18 (16x30)	.018	.045	.550	400	100, 500, 1000
	8744	9	22 Solid	.010	.037	.354	200	100, 250, 500, 1000
	8748	9	22 (7x30)	.010	.037	.389	200	100, 250, 500, 1000
	8692	9	18 (16x30)	.018	.055	.638	400	100, 500, 1000
	8753	11	22 Solid	.010	.037	.384	200	100, 250, 500, 1000
	8754	13	22 Solid	.010	.037	.409	200	100, 250, 500, 1000
	8745	15	22 Solid	.010	.040	.420	200	100, 250, 500, 1000
	8749	15	22 (7x30)	.010	.040	.425	200	100, 250, 500, 1000
	8755	19	22 Solid	.010	.040	.480	200	500, 1000
	8756	23	22 Solid	.010	.040	.510	200	500, 1000
	8746	27	22 Solid	.010	.045	.550	200	§Cut to customer's specified length. Maximum length 1500'
	8750	27	22 (7x30)	.010	.045	.595	200	§Cut to customer's specified length. Maximum length 1500'

For color coding please refer to page 8

Description	Trade Number	No. of Pairs	Conductors	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
	**8752**	18	Solid Tinned Copper	.008	.045	.600	§Cut to customer's specified length. Maximum length 1500'
	8751	51	Solid Tinned Copper	.010	.050	.725	

#22 tinned copper, 8751 vinyl insulated, 8752 polypropylene insulated, cabled in pairs, BELDFOIL® aluminum-polyester shield over cabled pairs, #22 (7x30) stranded drain wire, chrome vinyl jacket. 200 Volts suggested working voltage. Color coding available on request.

§Minimum length 25'.
25' to 199', plus 25', minus 0.
200' or over, plus 50', minus 0.

For color coding information on 8751 and 8752 write for Technical Data

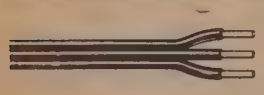
© United Technical Publications

TWO CONDUCTOR UNSHIELDED CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Conductor Color Coding	Available Jacket Colors	Nominal O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
 Copper, vinyl insulated, PARALLEL	8781	22 (Solid)	.016	—	1 condr. tinned	Chrome	.060x .120	100	100, 500, 1000
	8782	24 (7x32)	.017	—	1 condr. tinned	Chrome, Sand, White, Clear	.058x .115	300	25, 50, 100, 500, 1000
	8649	20 (7x28)	.020	—	1 condr. tinned	Chrome, Clear	.073x .146	300	100, 500, 1000
Without JACKET  Copper, vinyl insulated, TWISTED.	8481	22 (Solid) bare	.015	—	Brn, Tan	—	.112	350	100, 500, 1000
	8482	19 (Solid) bare	.015	—	Brn, Tan	—	.130	350	100, 500, 1000
	8492	19 (Solid)	.025	—	Brown or White 1 condr. tinned	—	.170	600	1000
	8460	18 (7x26) tinned	.020	—	Blk, Wht	—	.175	450	100, 500, 1000
	8470	16 (19x29) tinned	.023	—	Blk, Wht	—	.195	600	500, 1000
With JACKET  SOLID	8740	22 (Solid) tinned	.015	.025	Blk, Red	Chrome	.150	200	100, 250, 500, 1000
	8442	22 (7x30) tinned	.015	.025	Blk, Red	Chrome	.165	350	500, 1000
	8205	20 (10x30) tinned	.018	.025	Blk, Red	Chrome	.190	350	100, 500, 1000
	8486	19 (Solid) bare	.015	.025	Brn, Tan	Chrome	.162	350	500, 1000
 STRANDED	8461	18 (7x26) tinned	.020	.028	Blk, Wht	Chrome	.226	450	100, 500, 1000
	8471	16 (19x29) tinned	.023	.030	Blk, Wht	Chrome	.256	600	500, 1000
Copper, vinyl insulated, CABLED, vinyl jacket	8473	14 (19x27) tinned	.031	.035	Blk, Wht	Chrome	.332	600	500, 1000
	8477	12 (19x25) tinned	.031	.040	Blk, Wht	Chrome	.384	600	500, 1000

For additional 2 conductor cables see PORTABLE CORDAGE on page 14, 30 and 31.

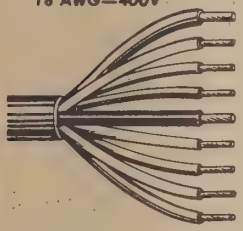
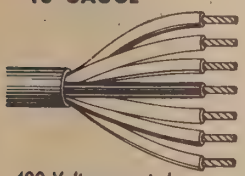
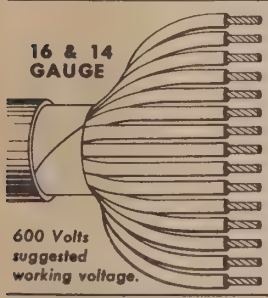
THREE CONDUCTOR UNSHIELDED CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Conductor Color Coding	Nominal O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
 Copper, vinyl insulated, PARALLEL	8701	22 (Solid)	.016	—	Chrome 1 condr. tinned	.060x .190	100	100, 500, 1000
	8475	16 (19x29) bare	.023	—	Wht, Brn, Red	.102x .295	300	100, 500
Without JACKET  Bare copper, vinyl insulated, CABLED	8483	19 (Solid)	.015	—	Brn, Gray, Tan	.132	350	100, 500, 1000
With JACKET  Copper, vinyl insulated, CABLED, chrome vinyl jacket.	8443	22 (7x30) tinned	.010	.025	Blk, Grn, Red	.150	200	25, 100, 250, 500, 1000
	8487	19 (Solid) bare	.015	.025	Brn, Gray, Tan	.180	350	500, 1000

For additional 3 conductor cables see PORTABLE CORDAGE on page 14, 30 and 31.

© United Technical Publications

MULTIPLE CONDUCTOR CONTROL AND AUDIO CABLES (NOT PAIRED)

Description and Gauge	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Color Code or Chart No.	Standard Spool Lengths in ft.
 **Telephone Cable** *Bare copper, polyethylene insulated, cabled, rose gray vinyl jacket.*	8795	2	22 (Solid)	.016	.022	.160	Red, Grn	500, 1000
	8794	3	22 (Solid)	.016	.022	.168	Red, Grn, Yel	500, 1000
All Constructions: *Tinned copper, vinyl plastic insulated, cabled, chrome vinyl jacket.* **22 GAUGE** 	8443	3	22 (7x30)	.010	.025	.150	1	25, 100, 250, 500, 1000
	8444	4	22 (7x30)	.010	.025	.168	1	25, 100, 250, 500, 1000
	8445	5	22 (7x30)	.010	.025	.180	1	25, 100, 250, 500, 1000
	8456	10	22 (7x30)	.010	.030	.260	1	100, 500, 1000
COMBINATION GAUGES **Suggested working voltage** *22 AWG—200V* *18 AWG—400V* 	8457	12	22 (7x30)	.010	.030	.260	1	100, 500, 1000
	8458	15	22 (7x30)	.010	.040	.320	2	100, 500, 1000
	8459	25	22 (7x30)	.010	.040	.370	2	100, 500, 1000
	8446	6	4-22 (7x30) 2-18 (16x30)	.010 .018	.025	.222	1	15, 100, 250, 500, 1000
	8447	7	5-22 (7x30) 2-18 (16x30)	.010 .018	.028	.246	1	100, 250, 500, 1000
	8448	8	6-22 (7x30) 2-18 (16x30)	.010 .018	.028	.250	1	15, 100, 250, 500, 1000
	8449	9	7-22 (7x30) 2-18 (16x30)	.010 .018	.028	.261	1	15, 100, 250, 500, 1000
18 GAUGE  *400 Volts suggested working voltage.*	8489	4	18 (16x30)	.018	.030	.250	1	100, 250, 500, 1000
	8465	5	18 (16x30)	.018	.037	.286	1	100, 250, 500, 1000
	8467	7	18 (16x30)	.018	.037	.324	1	100, 250, 500, 1000
	8469	9	18 (16x30)	.018	.037	.379	1	100, 250, 500, 1000
	8466	12	18 (16x30)	.018	.040	.412	2	100, 250, 500, 1000
	8468	15	18 (16x30)	.018	.045	.490	2	100, 500, 1000
	8619	19	18 (16x30)	.018	.045	.505	2	500, 1000
16 & 14 GAUGE  *600 Volts suggested working voltage.*	8620	4	16 (19x29)	.030	.045	.375	2	100, 500, 1000
	8621	7	16 (19x29)	.030	.045	.455	2	100, 500, 1000
	8622	12	16 (19x29)	.030	.060	.600	2	100, 500, 1000
	8623	15	16 (19x29)	.030	.060	.650	2	100, 500, 1000
	8624	19	16 (19x29)	.030	.065	.715	2	100, 500, 1000
	8627	4	14 (19x27)	.045	.045	.495	2	100, 500, 1000
	8628	7	14 (19x27)	.045	.060	.630	2	100, 500, 1000
	8629	12	14 (19x27)	.045	.065	.770	2	100, 500, 1000

COLOR CODE
Chart No. 1

Conductor	Color
1st	Black
2nd	Red
3rd	Green
4th	White
5th	Brown
6th	Blue
7th	Orange
8th	Yellow
9th	Purple
10th	Gray
11th	Pink
12th	Tan

18 Gauge conductors in cables 8446 through 8449 are Black and Red.

IPCEA COLOR CODE (Insulated Power Cable Engineers Association)
Chart No. 2

Conductor	Color	Conductor	Color	Conductor	Color
1st	Black	9th	Green/Black	17th	White/Red
2nd	White	10th	Orange/Black	18th	Orange/Red
3rd	Red	11th	Blue/Black	19th	Blue/Red
4th	Green	12th	Black/White	20th	Red/Green
5th	Orange	13th	Red/White	21st	Orange/Green
6th	Blue	14th	Green/White	22nd	Blk/Wht/Red
7th	White/Black	15th	Blue/White	23rd	Wht/Blk/Red
8th	Red/Black	16th	Black/Red	24th	Red/Blk/Wht
				25th	Grn/Blk/Wht

© United Technical Publications

MICROPHONE CABLES

Belden Microphone Cables are designed for flexible service at audio frequencies. They are used not only for microphones, but also for home entertainment equipment, instruments, tape recorders and shielded power supplies.

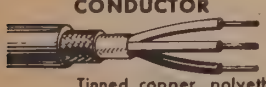
Shielded single conductor cables are used in high impedance systems, while multiple conductor cables are used in low impedance applications.

All cables are precision-engineered and manufactured to transmit clear signals and to cancel out hum pick-up and crosstalk interference. They are designed to withstand the flexing and normal abuse of studio, laboratory and home usage.

RUBBER, HYPALON AND NEOPRENE MICROPHONE AND SHIELDED POWER SUPPLY CABLES

Description	Trade Number	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D (Inch)	Percent Shield Coverage	Suggested Working Voltage	Impedance (Ohms)	Nom. Cap. (mmf/ft)	Nom. Cap. (mmf/ft)	Standard Spool Lengths in ft
SINGLE CONDUCTOR 	**8410**	1	25 (7x33)	.063	.025	.245	80	3000 DC	52	—	33	25, 50, 100, 250, 500
		3 strands copper, 4 strands Copperweld tinned, cellulose yarn braid, rubber insulated, rayon braid, tinned copper braid shield, cellulose yarn wrap, black rubber jacket.										
MINIATURE 	**8413**	2	24 (45x40)	.019	.025	.190	100	300	—	38	71	15, 25, 50, 100, 250, 500
	8406	3	24 (45x40)	.019	.025	.223	100	300	—	43	76	100, 250, 500
		Tinned cadmium bronze, cotton serve, rubber insulated, cabled with fillers, conductive textile serve, tinned copper braid shield, cotton serve, black rubber jacket.										
MULTIPLE CONDUCTOR 	**8412**	2	20 (26x34)	.020	.043	.268	84	600	—	42	68	25, 50, 100, 250, 500, 1000
	8402	2	20 (26x34)	.020	.040	.268	84	600	—	42	68	100, 250, 500
		Brown Hypalon jacket.—Heavy Duty.										
	8428	2	18 (41x34)	.022	.038	.295	91	600	—	47	80	100, 500, 1000
		Black neoprene jacket—Heavy Duty										
	8408	2	16 (65x34)	.032	.040	.385	84	600	—	32	56	100, 250, 500
		Brown Hypalon jacket.—Heavy Duty										
	8423	3	20 (26x34)	.020	.040	.277	84	600	—	50	85	15, 50, 100, 250, 500, 1000
	8424	4	20 (26x34)	.020	.040	.295	83.5	600	—	55	95	15, 50, 100, 250, 500, 1000
Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.	**8407**	4	16 (65x34)	.032	.043	.422	84	600	—	37	65	100, 250
		Black neoprene jacket—Heavy Duty										
	8425	5	20 (26x34)	.020	.040	.323	76	600	—	44	80	100, 250
	8426	6	20 (26x34)	.020	.040	.349	90	600	—	40	78	100, 250
	8427	7	20 (26x34)	.020	.043	.360	90	600	—	40	75	100, 250
	8418	8	20 (26x34)	.020	.043	.386	92	600	—	42	75	100, 250

VINYL MICROPHONE AND SHIELDED POWER SUPPLY CABLES

SINGLE CONDUCTOR 	**8411**	1	25 (7x33)	.020	.020	.144	72	3500	52	—	37	15, 25, 50, 100, 250, 500, 1000
	8401▲	1	25 (7x33)	.043	.025	.200	74	5000	57	—	25	15, 25, 50, 100, 250, 500, 1000
		3 strands copper, 4 strands Copperweld, tinned, cellulose yarn braid, polyethylene insulated, tinned copper braid shield, chrome vinyl jacket. See 8421 page 22 for spiral wrapped shield version of these cables. Recommended for Hi-Fi use.										
MINIATURE 	**8420**	2	24 (45x40)	.015	.020	.185	77	500	—	22	40	15, 25, 50, 100, 250, 500
		Tinned cadmium bronze, cotton wrap, polyethylene insulated, cabled with fillers, rayon braid, tinned copper braid shield, chrome vinyl jacket.										
MULTIPLE CONDUCTOR 	**8422**	2	22 (16x34)	.023	.023	.231	87	1000	—	18	32	15, 25, 50, 100, 250, 500, 1000
	8403	3	20 (26x34)	.015	.033	.244	89	600	—	25	45	15, 50, 100, 250, 500, 1000
Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.	**8404**	4	20 (26x34)	.015	.033	.255	87	600	—	25	45	15, 100, 250, 500, 1000
	8405	5	20 (26x34)	.015	.035	.275	83	600	—	25	45	250, 500 ,1000

RUBBER—HYPALON—NEOPRENE—PLASTIC

See page 13 for conductor color coding

▲See 8421 Page 14 for spiral wrapped shield version of 8401—Recommended for Hi-Fi use.

†Capacitance between conductors. ***Capacitance between 1 conductor and remaining conductors (if any) connected to shield.*

PLASTIC CABLES RECOMMENDED FOR: Lower capacitance, lower loss, greater ozone and oil resistance, lighter weight, smaller diameter.
RUBBER CABLES RECOMMENDED FOR: Greater abrasion and impact resistance, and extra limpness so cable will lie flat on stage or studio floor.
NEOPRENE AND HYPALON CABLES RECOMMENDED FOR: Outside use, cold weather applications. Resistant to effects of sun, oil, and ozone.

© United Technical Publications

COILED CORDS

Retractile cords keep telephone and microphone cables from tangling and cluttering desk tops, communications consoles and the front seats of motor vehicles. Belden manufactures a full line of high quality retractile coiled cord products for a wide number of applications.

Belden retractile cables and cords are used for telephone equipment; ham and citizen band radios; hand and desktop microphones; language lab equipment; musical instruments; mobile controls and mobile communications equipment and for a variety of assorted industrial applications.

The specially designed conductors and shields of Belden retractile cords are constructed to withstand rugged use and to minimize replacement frequency.

RETRACTILE (COILED) MICROPHONE CABLES



Description	Trade Number	No. of Cond.	AWG & Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Percent Shield Coverage	Nom. Cap. (mmf/cord)	Retracted Length (Inch)	Practical Extended Length (Feet)	Standard Put-Up
	8409	4 unshielded	28 (7x36)	.005	.050	.165	5/16	No shield	—	12	6	1
		Tinned copper, nylon insulated, neoprene jacket.										
	8415	4 unshielded	23 (21x36)	.020	.055	.250	3/8	No shield	—	11½	6	1, 50
		5 strands TCW, 16 strands TC rubber insulated, paper tape, neoprene jacket.										
	8499	1 shielded	24 (45x40)	.019	.043	.160	11/16	80	285	7½	4	1
		Tinned cadmium bronze, rubber insulated, spiral TC shield, cotton wrap, neoprene jacket.										
	8605	1 shielded	24 (19x36)	.021	.042	.160	11/16	87	550	21½	12	1
		Tinned copper, polypropylene insulated, spiraled TC shield, Gray PVC jacket.										
	8497	3 1 shielded 2 unshielded	23 (21x36)	.020	.046	.250	3/8	100	480	11½	6	1, 50
		5 strands TCW, 16 strands TC, rubber insulated double BELDFOIL® aluminum polyester shield with drain wire same as conductors, paper tape, neoprene jacket.										
	8491	4 2 individually shielded 2 unshielded	23 (21x36)	.020	.050	.300	1 1/16	100	480	12	6	1
		5 strands, TCW, 16 strands TC, rubber insulated, double BELDFOIL® aluminum polyester shield with drain wire same as conductors, paper tape, neoprene jacket.										
	8490	5 unshielded	23 (21x36)	.020	.045	.265	3/8	No shield	—	11½	6	1
		5 strands TCW, 16 strands TC, rubber insulated, paper tape, neoprene jacket.										

NEOPRENE RETRACTILE (COILED) POWER CONTROL CABLES

Longer lengths are available on request.



Trade Number	No. of Cond.	UL Type	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Retracted Length (Inch)	Practical Extended Length (Feet)	Standard Put-Up
8601	2	SVO	18 (41x34)	.016	.045	.270	1	12	6	1
8602	3	SJO	18 (41x34)	.031	.045	.360	1 3/8	12	6	1
8603	3	SJO	16 (65x34)	.031	.045	.370	1½	12	6	1
8604	3	SJO	16 (65x34)	.031	.045	.370	1½	22	12	1

Bare copper, paper wrap, rubber insulation, cabled with fillers, paper tape wrap, black neoprene jacket. 6" straight portion each end. Jacket removed 1½" each end.

VINYL RETRACTILE (COILED) TELEPHONE CORDS



Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Retracted Length (Inch)	Practical Extended Length (Feet)	Standard Put-Up
	8495	3	23 (21x36)	.020	.041	.220	3/8	10	4½	1
	8494	4	23 (21x36)	.020	.043	.245	3/8	10	4½	1

Bare cadmium bronze, vinyl insulated, cabled, paper wrapped, black vinyl jacket. 8494 one end stripped 7¾", spade terminals attached and hook strain relief clamped over jacket. Other end stripped 6¼" and spade terminals attached. 8495 one end stripped 2¾", spade terminals attached and hook strain relief clamped over jacket. Other end stripped 3 7/16" and spade terminals attached.

CONDUCTOR COLOR CODING

Color coding of individual conductors for cables on this page and microphone cables on page 12.

(1) White, (2) Black, (3) Red, (4) Green, (5) Blue, (6) Brown, (7) Yellow, (8) Orange.

****Capacitance of shielded conductor.*

© United Technical Publications

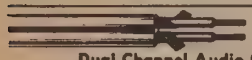
hi-fi and stereo cables, language lab cable, portable cordage and test prod wire

BELDEN

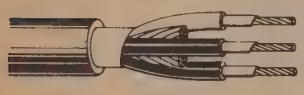
HI-FI AND STEREO CABLES

Description	Trade Number	No. of Cond	AWG & (Stranding)	Insulation Thickness (inch)	Jacket Thickness (inch)	Nom. O.D. (inch)	Cond. Color Coding	Nom. Cap between condrs. (mmf/ft)	Nom. Cap cond. to other condr. & Shield (mmf/ft)	Standard Spool Lengths in ft.
 Hi-Fi Connecting Cable	8421	1	25 (7x33)	.050	.025	.180	—	18	—	15, 25, 50, 100, 250
			3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.							
 BELDFOIL® Miniature Audio Connecting Cable totally shielded	8417•	1	25 (7x33)	.020	.026	.140	—	25	—	15, 25, 50, 100, 250
			3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated, double BELDFOIL aluminum-polyester shield, inner shield folded 26 AWG stranded tinned copper, ground drain wire, chrome vinyl jacket.							

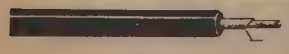
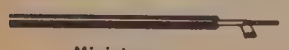
LANGUAGE LAB CABLE

Description	Trade Number	No. of Cond	AWG & (Stranding)	Insulation Thickness (inch)	Jacket Thickness (inch)	Nom. O.D. (inch)	Cond. Color Coding	Nom. Cap between condrs. (mmf/ft)	Nom. Cap cond. to other condr. & Shield (mmf/ft)	Standard Spool Lengths in ft.
 Dual Channel Audio Cable for head set, stereo and language labs	8416	2	25 (7x33)	.018	.020	.106 x .213	1 Clear 1 Red	35 each channel	—	15, 25, 50, 100, 250
			3 strands tinned copper and 4 tinned Copperweld, polyethylene insulated, individual tinned copper spiral wrapped shield, chrome vinyl jacket, polarity rib on red conductor.							

RUBBER-VINYL MULTI-CONDUCTOR PORTABLE CORDAGE

Description	Trade Number	U.L. Type	Insulation	No. of Conductors	AWG & (Stranding)	Insulation Thickness (inch)	Conductor Coding	Jacket Thickness (inch)	Nominal O.D. (inch)	Color	Standard Spool Lengths in ft.
	8462	SP-1	Rubber	2	18 (41x34) Tinned	.031	Polarity Ribbed	—	.123 x .223	Brown or Ivory	25, 100, 250
	8888	SPT-1	Vinyl	2	18 (41x34)	.031	Polarity Ribbed	—	.110 x .207	Brn, Ivory, or Gray	25, 100, 250
			Two conductors, stranded copper, parallel, insulated with one conductor polarity ribbed.								
 *Stranded copper, rubber insulated, cabled with fillers, rubber jacket.*	8452	SV	Rubber	2	18 (41x34)	.016	Blk, Wht	.031	.245	Black	25, 50, 100, 250, 500, 1000
	8478	SJ	Rubber	2	18 (41x34)	.031	Blk, Wht	.031	.298	Black	100, 250, 1000
	8472	SJ	Rubber	2	16 (65x34)	.031	Blk, Wht	.031	.325	Black	25, 100, 250
	8474	—	Rubber	2	14 (41x30)	.031	Blk, Wht	.035	.360	Black	100, 250
	8453	SV	Rubber	3	18 (41x34) Tinned	.016	Blk, Wht, Green	.031	.265	Black	50, 100, 500
	8479	—	Rubber	3	14 (41x30)	.031	Blk, Wht, Green	.035	.380	Black	100, 250
	8454	—	Rubber	4	18 (41x34) Tinned	.016	Blk, Wht, Brn, Red	.031	.265	Black	50, 100, 500, 1000
	8455	—	Rubber	5	3—20 (26x34) 2—18 (41x34) Tinned	.015 .015	Brn, Grn, White Blk, Red	.031	.280	Black	100, 250

TEST PROD WIRE

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (inch)	Nom. O.D. (inch)	Breakdown Voltage	Suggested Working Voltage	Standard Package	Standard Spool Lengths in ft.
 *Tinned copper, separator, rubber insulated, red or black.*	8899	18 (65x36)	.045	.144	20,000	5,000	—	10, 14*, 25**, 100**, 500**, 1000
		*7' of red and 7' of black. **Also available in blue, white, gray, green or yellow.*						
	8897	18 (65x36)	.045	.144	20,000	5,000	—	500, 1000
		Manufactured per MIL-W-13169						
 Miniature	8898	18 (65x36)	.088	.230	29,000	10,000	—	10, 25, 100, 500
	8890	24 (45x40)	.019	.066	10,000	1,000	—	25, 100, 500
	8878 With Prods	20 (42x36)	.063	.173	20,000	5,000	1 pair Red and Black	—
		Stranded tinned copper rubber insulated with 4" long solderless threaded plastic "phone tip" test prod 3/8" diameter on one end and 1" long solderless threaded plastic "phone tip" test prod 3/8" diameter on the other end. 5 ft. in length retracts to 8 inches. Is recommended for use with multimeters.						
	8879 Without Prods	20 (42x36)	.063	.173	20,000	5,000	1 pair Red and Black	—
		Tinned copper, rubber insulated, 5 ft. in length retracts to 8 inches.						

‡For intermittent duty only ⊖U.L. Type rating only: 300V-60°C •Belden U.S. Patent 3,032,604.

All breakdown voltages and suggested working voltages are AC RMS values.

© United Technical Publications

tv camera cable and 75 ohm video cables

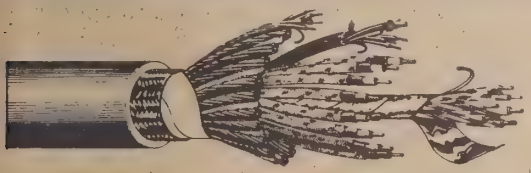
TV CAMERA CABLES

Belden TV Broadcast and Closed Circuit TV Camera Cables assure reliable circuit isolation thereby reducing a-c hum and minimizing crosstalk between circuits. They are made to withstand rugged service and to maintain high conductor insulation resistance regardless of ambient temperature changes.

Major uses for these cables are for controlling, powering and transmitting sound and picture information for monochrome and color TV cameras as well as for remote control, monitor and cue line systems.

Belden TV Camera Cables are engineered to be lightweight, flexible and easy to terminate. They are manufactured and tested in accordance with Belden's own rigid and time-proven quality control standards in order to assure outstanding reliability, performance and service life.

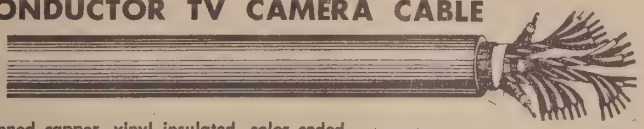
8283-82 CONDUCTOR TV COLOR CAMERA CABLE



Designed to meet the critical electrical and physical requirements necessary for color television broadcast applications.

4-14 AWG (19x27) tinned copper, vinyl plastic insulated, color coded.
3-16 AWG (26x30) tinned copper, vinyl plastic insulated, color coded. BELDFOIL® aluminum-polyester wrapped shield around the 7 conductors cabled with stranded tinned copper drain wire.
8 coaxial cables. Nom. Impedance 53.5 ohms, color coded.
67-22 AWG (7x30) tinned copper, vinyl plastic insulated, color coded, 7 under conductive textile shield with stranded ground wire.
Tinned copper braid shield.
Chrome vinyl plastic jacket. 1.22" Nom. O.D.
§Cut to customer's specified length. Maximum length 1000'.

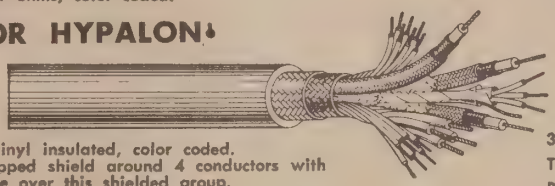
8280-28 CONDUCTOR TV CAMERA CABLE



A smaller, lighter weight cable designed to make long runs easier. For black and white (Monochrome) systems.

4-18 AWG (16x30) tinned capper, vinyl insulated, color coded.
21-22 AWG (7x30) tinned copper, vinyl insulated, cabled in 3 groups of 7, color coded.
3 coaxial cables. Nom. impedance 51 ohms, color coded.
Tinned copper braid shield.
Chrome vinyl jacket. .750" Nom. O.D.
§Cut to customer's specified length.
Maximum length 1500'.

8286-28 CONDUCTOR HYPALON♦ TV CAMERA CABLE



A 75 ohm cable designed to remain flexible in cold weather. Recommended for transistorized TV cameras.

4-18 AWG (16x30) tinned copper, vinyl insulated, color coded. BELDFOIL aluminum-polyester wrapped shield around 4 conductors with stranded drain wire, polyester tape over this shielded group.
21-22 AWG (7x30) tinned copper vinyl insulated, cabled in 3 groups of 7, color coded, one group of 7 has a BELDFOIL aluminum-polyester wrapped shield overall with a stranded drain wire, polyester tape over this shielded group.
3 coaxial cables. Nom. impedance 75 ohms.
Tinned copper braid shield.
Black Hypalon jacket. .730" O.D.
§Cut to customer's specified length.
Maximum length 1000'.

8284-24 CONDUCTOR TV CAMERA CABLE



Designed specifically for color TV transmission. This cable incorporates circuit isolation assuring the reduction in AC hum level and cross talk essential for color TV broadcasting.

17-22 AWG (7x30) tinned copper, vinyl insulated, color coded.
3 under BELDFOIL shield with stranded drain wire.
4-16 AWG (26x30) tinned copper, vinyl insulated, color coded.
3 coaxial cables. Nom. impedance 53.5 ohms, color coded.
Tinned copper braid shield. Heavy cotton braid.
Chrome vinyl plastic jacket. .800" Nom. O.D.
§Cut to customer's specified length. Maximum length 1000'.

8282-13 CONDUCTOR TV EYE CABLE



Especially engineered for TV Eye Cameras. Recommended for remote control, monitor and cue line applications.

8-22 AWG (7x30) tinned copper vinyl insulated, color coded.
1-22 AWG (7x30) polyethylene insulated conductor.
2-18 AWG (16x30) tinned copper conductor vinyl insulated.
Black and Red.
1-RG-58A/U cable 50-ohm coax.
1-72-ohm coax, stranded conductor, polyester tape wrapped.
Chrome vinyl jacket. .470" Nom. O.D.
§Cut to customer's specified length. Maximum length 2000'.

§Minimum length 25'. 25' to 99', plus 25' minus 0. 200' or over, plus 50', minus 0.
♦ DuPont trademark.

75 OHM PRECISION VIDEO CABLE

TYPICAL APPLICATIONS: Video signal transmission in Color and Monochrome TV studios. Provides high quality carrier of video signal with superior picture definition and eliminates problems of periodicity. Cable is manufactured with rigid control of concentricity and all dimensional tolerances. The black polyethylene jacket is inherently a non-contaminating, non-migratory compound. 100% SWEEP TESTED.

Description	Type Number	AWG & (Stranding) Material	Nom. O.D. (Inch)	Percent Shield Coverage	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf/ft)	Nom. Attenuation per 100' kc or mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft.
	8281	20 (Solid) bare copper	.304	96.4	75	66%	21.	10 KC 100 KC 1 MC 10 MC 100 MC	.06 .08 .25 .78 2.70	500, 1000
		Conductor, polyethylene insulated, tinned copper double braid shield, black polyethylene jacket.								
 Miniature	8279	23 (7x31)	.220	96	75	66%	21.	10 KC 100 KC 1 MC 10 MC 100 MC	.14 .15 .35 1.30 4.90	100, 250 500
		Tinned compacted conductor, polyethylene insulated, tinned copper braid shield, black polyethylene jacket. Fit RG59/U connectors.								

Compacted conductor combines impedance uniformity of solid conductor and "nick-resistance" of stranded conductor.

© United Technical Publications

RG/U transmission line cables

BELDEN

COAXIAL CABLES***

Description	Trade Number	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf/ft.)	Nom. Attenuation per 100' m	Nom. Attenuation per 100' db	Standard Spool Lengths in ft.
	8264	5A/U JAN-C-17A	16 (Solid) silver coated copper	Polyethylene	2 silver-coated copper	Gray non-contaminating vinyl	.328	50	66%	30.8	100 200 400	2.40 3.50 5.25	500 1000
	8215	6A/U Type	21 (Solid) bare Copperweld	Polyethylene	2 bare copper	Black polyethylene	.332	75	66%	20.5	50 100 200 300 400	2.0 2.9 4.3 5.4 6.5	100, 500, 1000
			100% SWEEP TESTED										
	8237	8/U JAN-C-17A	13 (7x21) bare copper	Polyethylene	1 bare copper	Black vinyl	.405	52	66%	29.5	100 200 400	2.10 3.30 4.50	50, 100, 250, 500 1000
	8214	8/U Type	11 (7x19) bare copper	Cellular Polyethylene	1 bare copper	Black vinyl	.403	50	78%	26	50 100 200 300 400	1.20 1.80 2.60 3.30 3.80	50, 100 250 500 1000
	8242	9/U JAN-C-17A	13 (7x21) silver coated copper	Polyethylene	2 inner-silver-coated outer-bare copper	Gray non-contaminating vinyl	.420	51	66%	30.0	100 200 400	2.10 3.30 4.50	100 1000
	8243‡	9B/U MIL-C-17D	13 (7x21) silver coated copper	Polyethylene	2 silver coated copper	Black non-contaminating vinyl	.420	50	66%	30.8	100 200 400	2.10 3.30 4.50	500 1000
	8238	11/U JAN-C-17A	18 (7x26) tinned copper	Polyethylene	1 bare copper	Black vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 250, 500 1000
	8213	11/U Type	14 (Solid) bare copper	Cellular Polyethylene	1 bare copper	Black polyethylene	.405	75	78%	17.3	50 100 200 300 400	1.0 1.5 2.3 2.9 3.4	500, 1000, 2000
			100% SWEEP TESTED										
	8261‡	11A/U MIL-C-17D	18 (7x26) tinned copper	Polyethylene	1 bare copper	Black non-contaminating vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 500 1000
	8239	54A/U JAN-C-17A	18 (7x.0152) bare copper	Polyethylene	1 tinned copper	Clear polyethylene	.245	58	66%	26.5	100 200 400	3.10 4.40 6.70	500 1000
	8245	55/U JAN-C-17A	20 (Solid) bare copper	Polyethylene	2 tinned copper	Clear polyethylene	.201	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	500 1000
	8240	58/U JAN-C-17A	20 (Solid) bare copper	Polyethylene	1 tinned copper	Black vinyl	.195	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	25, 50, 100 250, 500 1000
	8219	58/AU Type	20 (19x32) tinned copper	Cellular Polyethylene	1 tinned copper	Black vinyl	.195	50	78%	26	50 100 200 300 400	3.6 4.8 7.6 8.5 10.1	100 500 1000

‡ Manufactured to current Government specifications and subsequent revisions.

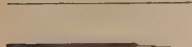
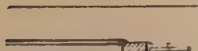
***RG/U cables combine low capacitance and low attenuation. The virgin polyethylene insulation assures constant electrical characteristics regardless of changes in frequency or temperature. Note: Max. rating of polyethylene is 80°C (176°F).

© United Technical Publications

RG/U transmission line cables

BELDEN

COAXIAL CABLES (Cont'd)

Description	Trade Number	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom O.D (inch)	Nom imp. (Ohms)	Nom Vel. of Prop.	Nom Cap. (mmf ft.)	Nom. Attenuation per 100 mc	Nom. Attenuation per 100 db	Standard Spool Lengths in ft.
	**8259**	58A, U JAN-C-17A	20 (19x.0071) tinned copper	Poly-ethylene	1 tinned copper	Black vinyl	.195	50	66%	30.8	100 200 400	5.30 8.20 12.60	25,50 100, 500 1000
	8262‡	58C U MIL-C-17D	20 (19x.0071) tinned copper	Poly-ethylene	1 tinned copper	Black non-contaminating vinyl	.195	50	66%	30.8	100 200 400	5.30 8.20 12.60	500 1000
	8241	59 U JAN-C-17A	22 (Solid) bare Copperweld	Poly-ethylene	1 bare copper	Black vinyl	.242	73	66%	21.0	100 200 400	3.75 5.60 8.30	25, 50, 100, 250, 500,1000
	**8211**	59/U Type	22 (Solid) bare Copperweld 100% SWEEP TESTED	Cellular Poly-ethylene	1 bare copper	Black Poly-ethylene	.242	75	78%	16.3	50 100 200 300 400	2.4 3.4 4.8 5.8 6.7	500,1000, 2000
	8212	59/U Type	20 (Solid) bare Copperweld 100% SWEEP TESTED	Cellular Poly-ethylene	1 bare copper	Black Poly-ethylene	.242	75	78%	17.3	50 100 200 300 400	2.3 3.2 4.5 5.5 6.3	500,1000, 2000
	8221	59/U Type	22 (Solid) bare Copperweld 100% SWEEP TESTED	Cellular Poly-ethylene	1 bare copper	Gray, White, Black vinyl	.242	75	78%	16.3	50 100 200 300 400	2.4 3.4 4.8 5.8 6.7	100, 500, 1000
	**8263‡**	59B/U MIL-C-17D	.023 (Solid) bare Copperweld	Poly-ethylene	1 bare copper	Black non-contaminating vinyl	.242	75	66%	20.5	100 200 400	3.75 5.60 8.30	500 1000
	**8254**	62/U JAN-C-17A	22 (Solid) bare Copperweld	Semi-solid Poly-ethylene	1 bare copper	Black vinyl	.242	93	84%	13.5	100 200 400	3.10 4.40 6.30	100 500 1000
	8255	62B/U MIL-C-17D	24 (7x32) bare Copperweld	Semi-solid Poly-ethylene	1 bare copper	Black non-contaminating vinyl	.242	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	**8257**	71/U JAN-C-17A	22 (Solid) bare Copperweld	Semi-solid Poly-ethylene	2 tinned copper	Clear Poly-ethylene	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	8258‡	71B/U MIL-C-17D	22 (Solid) bare Copperweld	Semi-solid Poly-ethylene	2 tinned copper	Black poly-ethylene	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	**8216**	174/U MIL-C-17D	26 (7x34) bare Copperweld	Poly-ethylene	1 tinned copper	Black vinyl	.100	50	66%	30.8	100 200 400	8.8 13.0 20.0	100 500 1000
	**8265‡**	178B, U MIL-C-17D	30 (7x38) Silver coated Copperweld	TFE TEFLON	1 Silver coated copper	Brown FEP TEFLON■	.072	50	69.5%	29	400	29.0 Max.	100 500
	**8266‡**	180B/U MIL-C-17D	30 (7x38) Silver coated Copperweld	TFE TEFLON	1 Silver coated copper	Brown FEP TEFLON	.142	95	69.5%	15	400	17.0 Max.	100 500
	**8269‡**	188A/U MIL-C-17D	26 (7x.0067) Silver coated Copperweld	TFE TEFLON	1 Silver coated copper	White TFE TEFLON	.106	50	69.5%	29	400	20.0 Max.	100 500

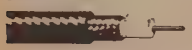
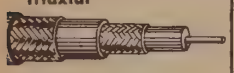
■*Trademark of DuPont*

‡Manufactured to current Government specifications and subsequent revisions.

REQUEST QUOTATIONS ON PRODUCTION QUANTITIES OF RG/U CABLES NOT LISTED.

© United Technical Publications

COAXIAL CABLES (Cont'd)

Description	Trade Number	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf/ft)	Nom. Attenuation per 100' mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft.
	8270‡	196A/U MIL-C-17D	30 (7x38) Silver coated Copperweld	TFE TEFLON■	1 Silver coated copper	White TFE TEFLON■	.076	50	69.5%	29	400	29.0 Max.	100 500
	8267‡	213/U MIL-C-17D	13 (7x21) bare copper	Polyethylene	1 bare copper	Black non-contaminating vinyl	.405	50	66%	30.8	100 200 400	2.10 3.30 4.50	500 1000
	8268	214/U MIL-C-17D	13 (7x.0296) Silver coated copper	Polyethylene	2 Silver coated copper	Black non-contaminating vinyl	.425	50	66%	30.8	100 200 400	2.10 3.30 4.50	500 1000
	8218	—	27 (7x35) bare Copperweld	Polyethylene	1 tinned copper	Black vinyl	.150	75	66%	20.5	100 200 400	5.7 8.4 12.5	100 500 1000
Triaxial  *Conductor, cellular polyethylene insulated, bare copper braid shield, polyethylene insulated, bare copper braid shield, black polyethylene jacket.*	8232	59/U Type Double Shield *100% SWEEP TESTED*	20 (Solid) bare Copperweld	Cellular Polyethylene	2 bare copper	Black Polyethylene	.315	75	78%	17.3	50 100 200 300 400	2.3 3.2 4.5 5.5 6.3	500,1000, 2000
	8233	11/U Type Double Shield *100% SWEEP TESTED*	14 (Solid) bare copper	Cellular Polyethylene	2 bare copper	Black Polyethylene	.475	75	78%	17.3	50 100 200 300 400	1.0 1.5 2.3 2.9 3.4	500, 1000, 2000
	8700•	—	28 (Solid) tinned copper	Polypropylene	1 bare copper	Black vinyl	.054	32	66%	48	400	5.5	25, 50, 100, 250

■*Trademark of DuPont* •*80 Percent shield coverage suggested working voltage 100*

‡Manufactured to current Government specifications and subsequent revisions.

REQUEST QUOTATIONS ON PRODUCTION QUANTITIES OF RG/U CABLES NOT LISTED.

HIGH VOLTAGE CABLES

Belden High Voltage Cables are designed for use by public utilities and laboratories in testing high voltage equipment and apparatus. Through their use, potentially dangerous conditions can be detected both before installation and at intervals during service.

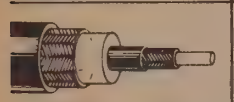
Belden High Voltage Test Cables are engineered to achieve the best possible performance at continual rated voltages. Their special design incorporates the use of conductive polyethylene over the center conductor, bonded to the polyethylene dielectric material. This provides uniform voltage stress distribution around the center conductor and results in an increased elimination of degradation due to internal corona.

For special cables up to 600 KVDC ratings, please ask for individual quotation.

HIGH VOLTAGE CATHODE-RAY TUBE LEAD

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (inch)	Jacket Thickness (inch)	Nom. O.D. (inch)	Jacket Color	Breakdown Voltage	Suggested Working Voltage	Standard Spool Lengths in ft
	8866	18 (41x34)	.057	.015	.208	Red	110,000	40,000	25, 100, 500
	8868	22 (7x30)	.045	.015	.150	Red	50,000	25,000	25, 100, 500
Tinned copper, conductive polyethylene, polyethylene insulated, vinyl jacket.	8869	22 (7x30)	.030	.015	.120	Black	35,000	17,000	25, 100, 500

HIGH VOLTAGE CABLE

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (inch)	Jacket Thickness (inch)	Nom O.D. (inch)	Jacket Color	Breakdown Voltage	Suggested Working Voltage	Standard Spool Lengths in ft
	8870	22 (Solid) Copperweld	.142	.020	.440	Black	160,000 D.C.	80,000 D.C.	100
		Solid Copperweld, conductive polyethylene, polyethylene insulation, tinned copper braid equipotential sheath, black polyethylene jacket.							
	8871	16 (Braided)	.270	.025	.830	Black	400,000 D.C.	200,000 D.C.	25, 100
		Tinned copper braid (CMA equivalent to 16 AWG) over solid polyethylene rod, black conductive polyethylene, clear polyethylene insulation, tinned copper braid, black polyethylene jacket.							

Conductive polyethylene over inner conductor combined with a copper wire braid over the dielectric provides uniform distribution of voltage stress. Very high-voltage DC cable applied from 200 KVDC to 600 KVDC is available from Belden on special order. Consult Belden Engineering Department for AC or pulse applications.

© United Technical Publications

MILITARY SPECIFICATIONS PERTAINING TO BELDEN HOOK-UP WIRE

Belden's outstanding line of Hook-Up Wire represents a broad selection of quality products that meets the Military Specifications indicated on this and on the following pages.

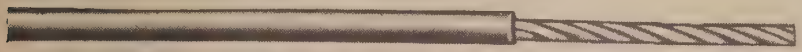
Basically, from the customer's point of view, Military Specifications can be a helpful guide in determining specific information about cable construction, electrical limits and test data as an aid in comparing and selecting wiring products to meet the needs of specific applications.

The following Military Specifications cover the Belden Hook-Up Wire Products to be found in this catalog:

MIL-W-16878—Wire, Electrical, Insulated, High Temperature. Covers insulated wire for the internal wiring of meters, panels, and electrical and electronic equipment at temperatures ranging from 105°C to 200°C. The many types available in different voltages and thermal ratings are listed on the following pages to meet your individual requirements.

MIL-W-76—Wire and Cable, Hook-Up, Electrical, Insulated. Covers single conductor, plastic-insulated Hook-Up wire for the internal wiring of electrical and electronic equipment. The many types available in different voltages and outer covering are listed on the following pages to meet your individual requirements.

TYPE B—MIL-W-16878—VINYL—600V-105°C



Tinned copper, vinyl insulated.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100'	500'	1000'
8599	B-32	32 (7x40)	.010	.029	1 thru 10	—	1 thru 10
8598	B-30	30 (7x38)	.010	.032	1 thru 10	—	1 thru 10
8597	B-28	28 (7x36)	.010	.035	1 thru 10	—	1 thru 10
8505	B-26	26 (7x34)	.010	.039	1 thru 10 14 thru 22	— —	1 thru 10 14 thru 22
8509	B-24	24 (19x36)	.010	.045	9, 14 thru 22	—	9, 14 thru 22
8504	B-24	24 (7x32)	.010	.044	1 thru 10 14 thru 22	— —	1 thru 10 14 thru 22
8508	B-22	22 (19x34)	.010	.051	9, 14 thru 22	—	9, 14 thru 22
8503	B-22	22 (7x30)	.010	.050	1 thru 10 14 thru 22	— —	1 thru 10 14 thru 22
8507	B-20	20 (19x32)	.010	.059	9, 14 thru 22	—	9, 14 thru 22
8502	B-20	20 (7x28)	.010	.058	1 thru 10 14 thru 22	— —	1 thru 10 14 thru 22
8501	B-18	18 (7x26)	.010	.068	1 thru 10 14 thru 22	— —	1 thru 10 14 thru 22
8500	B-16	16 (19x29)	.010	.077	1 thru 10 14 thru 22	— —	1 thru 10 14 thru 22

First color in stripe combination is body color and second or third colors are stripes. (EXAMPLE: White/Black/Red.)

TYPE B—MIL-W-16878—VINYL-NYLON JACKET—600V-115°C



Tinned copper, vinyl insulated, nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100'	1000'
8515	B-26	26 (7x34)	.010	.045	1 thru 10	1 thru 10
8519	B-24	24 (19x36)	.010	.051	1 thru 10	1 thru 10
8514	B-24	24 (7x32)	.010	.050	1 thru 10 —	1 thru 10 —
8518	B-22	22 (19x34)	.010	.057	1 thru 10	1 thru 10
8513	B-22	22 (7x30)	.010	.056	1 thru 10 —	1 thru 10 —
8517	B-20	20 (19x32)	.010	.065	1 thru 10 —	1 thru 10 —
8512	B-20	20 (7x28)	.010	.064	1 thru 10 —	1 thru 10 —
8516	B-18	18 (19x30)	.010	.075	—	—
8511	B-18	18 (7x26)	.010	.074	1 thru 10 —	1 thru 10 —
8510	B-16	16 (19x29)	.010	.083	1 thru 10 —	1 thru 10 —

STOCK COLORS

1 Brown, 2 Red, 3 Orange, 4 Yellow, 5 Green, 6 Light Blue, 7 Violet (purple), 8 Gray (slate), 9 White, 10 Black, 11 Tan, 12 Pink, 13 Dark Blue, 14 White/Black, 15 White/Red, 16 White/Green, 17 White/Yellow, 18 White/Blue, 19 White/Brown, 20 White/Orange, 21 White/Gray, 22 White/Violet, 23 White/Black/Red, 24 White/Black/Green, 25 White/Black/Yellow, 26 White/Black/Blue, 27 White/Black/Brown, 28 White/Black/Orange, 29 White/Black/Gray, 30 White/Black/Violet

Manufactured to current Government specifications and subsequent revisions.

First color in stripe combination is body color and second or third colors are stripes. (EXAMPLE: White/Black/Red.)

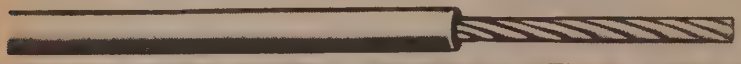
© United Technical Publications

mil-w-76 vinyl plastic

MIL-W-76

Covers single conductor, plastic-insulated Hook-Up wire for the internal wiring of electrical and electronic equipment. The many types available in different voltages and outer covering are listed on the following pages to meet your individual requirements.

TYPE MW—MIL-W-76—VINYL—1000V-80°C

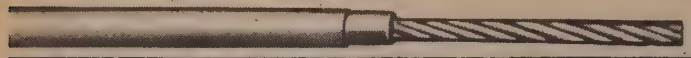


Tinned copper, vinyl insulated, medium wall. The extruded vinyl insulation is flame and ozone-resistant and is inert to most chemicals, oils, and solvents.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 25'	100'	500'	1000'
8525	MW-C 24 (7) U	24 (7x32)	.017	.058	—	1 thru 22	—	1 thru 22
8538	MW-C 24 (1) U	24 (Solid	.017	.054	—	1 thru 22	—	1 thru 22
8524	MW-C 22 (7) U	22 (7x30)	.017	.064	1 thru 13	1 thru 30	—	1 thru 30
8530	MW-C 22 (1) U	22 (Solid)	.017	.059	1 thru 13	1 thru 30	—	1 thru 30
8523	MW-C 20 (10) U	20 (10x30)	.017	.070	1 thru 13	1 thru 30	—	1 thru 30
8529	MW-C 20 (1) U	20 (Solid)	.017	.066	1 thru 13	1 thru 22	—	1 thru 22
8522	MW-C 18 (16) U	18 (16x30)	.017	.080	1 thru 13	1 thru 30	—	1 thru 30
8528	MW-C 18 (1) U	18 (Solid)	.017	.074	—	1 thru 13	—	1 thru 13
8521	MW-C 16 (26) U	16 (26x30)	.019	.098	—	1 thru 22	—	1 thru 22
8531	MW-C 16 (1) U	16 (Solid)	.017	.085	—	1 thru 10	—	1 thru 10
8520	MW-C 14 (41) U	14 (41x30)	.020	.111	—	1 thru 22	—	1 thru 22
8527	MW-C 12 (65) U	12 (65x30)	.020	.130	—	1 thru 10	—	1 thru 10

First color in stripe combination is body color and second or third colors are stripes. (EXAMPLE: White/Black/Red.)

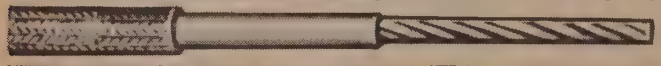
TYPE MW—MIL-W-76 VINYL-NYLON—1000V-90°C



Tinned copper, vinyl insulated. Medium wall, clear nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 25'	100'	500'	1000'
8537	MW-C 22 (7) J	22 (7x30)	.017	.069	—	1 thru 10	—	1 thru 10
8536	MW-C 20 (10) J	20 (10x30)	.017	.076	—	1 thru 10	—	1 thru 10
8535	MW-C 18 (16) J	18 (16x30)	.017	.086	—	1 thru 10	—	1 thru 10

TYPE MW—MIL-W-76—SHIELDED WITH NYLON JACKET—1000V-80°C



Tinned copper, vinyl insulated. Medium wall, tinned copper shield, nylon jacket.

Number Trade	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inches)	Stock Colors on Standard Spools 100'	500'	1000'
8893	MW-C 22 (7) SJ	22 (7x30)	.017	.096	9	9	9
8896	MW-C 20 (10) SJ	20 (10x30)	.017	.105	9	9	9
8892	MW-C 18 (16) SJ	18 (16x30)	.017	.114	9	9	9
8894	MW-C 16 (26) SJ	16 (26x30)	.019	.132	9	—	9

TYPE MW—MIL-W-76—SHIELDED WITHOUT NYLON JACKET—1000V-80°C



Tinned copper, vinyl insulated. Medium wall, tinned copper shield overall.

8887	MW-C 24 (7) S	24 (7x32)	.017	.082	1 thru 10	—	1 thru 10
8883	MW-C 22 (7) S	22 (7x30)	.017	.088	1 thru 10	—	1 thru 10
8886	MW-C 20 (10) S	20 (10x30)	.017	.096	1 thru 10	—	1 thru 10
8882	MW-C 18 (16) S	18 (16x30)	.017	.105	1 thru 10	—	1 thru 10
8884	MW-C 16 (26) S	16 (26x30)	.019	.122	1 thru 10	—	1 thru 10
8881	MW-C 14 (41) S	14 (41x30)	.020	.135	9, 10	—	9, 10
8880	MW-C 12 (65) S	12 (65x30)	.020	.154	9, 10	—	9, 10

TYPE MW-MIL-W-76—GLASS BRAID—SHIELDED— 1000V-80°C



Tinned copper, vinyl insulated. Medium wall, lacquered glass braid, tinned copper shield overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100'	1000'
8863	MW-C 22 (7) BS	22 (7x30)	.017	.102	9	9
8862	MW-C 20 (10) BS	20 (10x30)	.017	.110	9	9
8861	MW-C 18 (16) BS	18 (16x30)	.017	.119	9	9
8860	MW-C 16 (26) BS	16 (26x30)	.019	.136	9	9
8859	MW-C 14 (41) BS	14 (41x30)	.020	.149	9	9
8858	MW-C 12 (65) BS	12 (65x30)	.020	.168	9	9

For miniature shielded hook-up wire see 8700 on page 8

Manufactured to current Government specifications and subsequent revisions.

STOCK COLORS

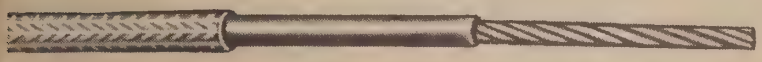
1 Brown	6 Light Blue	11 Tan	16 White/Green	21 White/Gray	26 White/Black/Blue
2 Red	7 Violet (purple)	12 Pink	17 White/Yellow	22 White/Violet	27 White/Black/Brown
3 Orange	8 Gray (slate)	13 Dark Blue	18 White/Blue	23 White/Black/Red	28 White/Black/Orange
4 Yellow	9 White	14 White/Black	19 White/Brown	24 White/Black/Green	29 White/Black/Gray
5 Green	10 Black	15 White/Red	20 White/Orange	25 White/Black/Yellow	30 White/Black/Violet

© United Technical Publications

BELDEN

mil-w-76 vinyl plastic

TYPE MW—MIL-W-76—VINYL-GLASS BRAID (OVERALL)— 1000V—80°C



Tinned copper, vinyl insulated. Medium wall, lacquered glass braid overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Voltage Rating	Stock Colors on Standard Spools		
						100'	500'	1000'
8566	MW-C 22 (7) B	22 (7x30)	.017	.078	1000V	1 thru 10	—	1 thru 10
8565	MW-C 20 (10) B	20 (10x30)	.017	.086	1000V	1 thru 10	—	1 thru 10
8564	MW-C 18 (16) B	18 (16x30)	.017	.095	1000V	1 thru 10	—	1 thru 10
8563	MW-C 16 (26) B	16 (26x30)	.019	.112	1000V	1 thru 10	—	1 thru 10
8562	MW-C 14 (41) B	14 (41x30)	.020	.125	1000V	9	—	9
8561	MW-C 12 (65) B	12 (65x30)	.020	.144	1000V	9	—	9

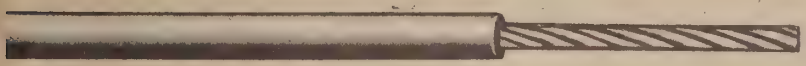
TYPE LW—MIL-W-76—VINYL—300V-80°C



Tinned copper, vinyl insulated. Light wall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Temperature Rating	Stock Colors on Standard Spools	
							100'	1000'
8571	LW-C 28 (7) U	28 (7x36)	Vinyl	.011	.037	80C	1 thru 10	1 thru 10
8570	LW-C 26 (7) U	26 (7x34)	Vinyl	.011	.041	80C	1 thru 10	1 thru 10
8569	LW-C 24 (7) U	24 (7x32)	Vinyl	.011	.046	80C	1 thru 10	1 thru 10
8568	LW-C 22 (7) U	22 (7x30)	Vinyl	.012	.054	80C	1 thru 10	1 thru 10
8567	LW-C 20 (10) U	20 (10x30)	Vinyl	.012	.060	80C	1 thru 10	1 thru 10

TYPE HW—MIL-W-76—VINYL— Gauges 16-18, 2500V—80°C, Gauges 6-14 600V—80°C



Tinned copper, vinyl insulated. Heavy wall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
8586	HW-C 18 (16) U	18 (16x30)	.034	.115	1 thru 10	—	1 thru 10
8585	HW-C 16 (19) U	16 (26x30)	.034	.128	2, 9, 10	—	2, 9, 10
8584	HW-C 14 (19) U	14 (41x30)	.048	.171	2, 9, 10	—	2, 9, 10
8583	HW-C 12 (19) U	12 (65x30)	.048	.191	2, 9, 10	—	2, 9, 10
8582	HW-C 10 (37) U	10 (105x30)	.048	.220	2, 9, 10	—	2, 9, 10
8581	HW-C 8 (127) U	8 (133x29)	.048	.261	2, 9, 10	—	—
8580	HW-C 6 (127) U	6 (133x27)	.048	.310	2, 9, 10	—	—

Manufactured to current Government specifications and subsequent revisions.
First color in stripe combination is body color and second or third colors are stripes. (EXAMPLE: White/Black/Red.)

STOCK COLORS

1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Light Blue
7 Violet (purple)
8 Gray (slate)
9 White
10 Black
124 White/Brown
125 White/Red
126 White/Orange
127 White/Yellow
128 White/Green
129 White/Blue
130 White/Violet
131 White/Gray
132 White/Black

© United Technical Publications

mil-w-5086 & mil-w-7078 aircraft wire

BELDEN

MIL-W-5086—TYPES 1 & 2—600V-105°C



Trade Number	MIL Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Spec. Type	Stock Colors on Standard Spools 100′	500′	1000′
8541	AN-22	22 (19x34)	.068	No. 1	9	—	9
8542	AN-20	20 (19x32)	.078	No. 1	9	—	9
8543	AN-18	18 (19x30)	.088	No. 1	9	—	9
8544	AN-16	16 (19x29)	.098	No. 1	9	—	9
8545	AN-14	14 (19x27)	.117	No. 1	9	—	9
8546	AN-12	12 (19x25)	.137	No. 1	9	—	9
8559	AN-22	22 (19x34)	.075	No. 2	9	—	9
8558	AN-20	20 (19x32)	.085	No. 2	9	—	9
8557	AN-18	18 (19x30)	.095	No. 2	9	—	9
8556	AN-16	16 (19x29)	.105	No. 2	9	—	9
8555	AN-14	14 (19x27)	.125	No. 2	9	—	9
8554	AN-12	12 (19x25)	.143	No. 2	9	—	9
8553	AN-10	10 (49x27)	.190	No. 2	9	—	9
8552	AN-8	8 (133x29)	.240	No. 2	9	9	—
8551	AN-6	6 (133x27)	.293	No. 2	9	9	—
8550	AN-4	4 (133x25)	.355	No. 2	9	9	—
8549	AN-2	2 (665x30)	.425	No. 2	9	—	—
8548	AN-0	0 (1045x30)	.525	No. 2	9	—	—
8547	AN-00	00 (1330x30)	.590	No. 2	9	—	—

Stock Color

White only (9)

Additional Description
MIL-W-5086A-Type I
AN-22 thru AN-12.
Stranded tinned copper, white vinyl, clear nylon jacket.

MIL-W-5086A-Type II
AN-22 thru AN-12.
Stranded tinned copper, white vinyl insulation, saturated glass braid, clear nylon jacket.

MIL-W-5086A-Type II
AN-12 thru AN-00
Stranded tinned copper, white vinyl insulation, saturated glass braid, nylon braid, nylon lacquer.

MIL-C-7078—TYPE 1—600V-105°C (MIL-W-5086 Type I Conductor Braided Tinned Copper Shield)



Trade Number	MIL Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Spec. Type	Stock Colors on Standard Spools 100′	500′	1000′
8855	AN-22	22 (19x34)	.092	No. 1	9	—	9
8854	AN-20	20 (19x32)	.102	No. 1	9	—	9
8853	AN-18	18 (19x30)	.112	No. 1	9	—	9
8852	AN-16	16 (19x29)	.122	No. 1	9	9	—
8851	AN-14	14 (19x27)	.141	No. 1	9	—	—
8850	AN-12	12 (19x25)	.156	No. 1	9	—	—

Not certifiable to the latest revision of this specification.

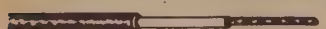
Stock Color

White only (9)

Additional Description
Stranded tinned copper, white vinyl insulation, nylon jacket, braided tinned copper shield.

hook-up and lead wires, grid wire, shielding and bonding cable

UL-600V-90°C (CSA-TYPE TRB)



Tinned cooper, vinyl insulated, cotton braid, lacquered.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft.
8937	22 (7x30)	.016	.091	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8936	20 (10x30)	.017	.098	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8935	18 (16x30)	.017	.113	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8934	16 (26x30)	.017	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8933	14 (41x30)	.031	.177	1, 2, 3, 4, 5, 9, 10, 13	100, 500

For color coding see Page 20.

UL rated 600V for electronic circuits only—300V for other applications.

UL-600V-105°C (CSA-600V-TYPE TEW)



Tinned copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft.
8920	22 (7x30)	.031	.095	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8919	20 (10x30)	.031	.102	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8918	18 (16x30)	.031	.112	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8917	16 (26x30)	.031	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8916	14 (41x30)	.031	.141	1, 2, 3, 4, 5, 9, 10, 13	100, 500

For color coding see Page 20.

UL rated 2500 volts peak for electronic circuits.



SHIELDING AND BONDING CABLES

Cables conforming to QQB575 can be manufactured on a special order basis.
Braided tinned copper. Standard Spool: 10, 50, 250 feet.°

Trade Number	Stranding	Approx. CMA	Recommended Current (Amps.)	Oval Max. I.D. (Inch)	Flat Width (Inch)
8676	16x36	400	5.5	1/32	3/64
8674	24x36	600	7.5	3/64	1/16
8652	96x40	920	10.0	1/16	3/32
8653	48x36	1200	12.0	3/32	1/64
8654	72x36	1800	16.0	1/64	1/8
8664	96x36	2400	20.0	1/8	5/32
8660	96x34	3800	27.0	5/32	1/32
8668	120x34	4700	30.0	3/16	5/16
8663	168x34	6700	38.0	5/16	7/16
8661	192x34	7600	42.0	1/2	9/16

Trade Number	Stranding	Approx. CMA	Recommended Current (Amps.)	Oval Max. I.D. (Inch)	Flat Width (Inch)
8669	336x34	13300	61.5	5/8	11/16
8672	528x36	13200	61.0	—	5/16
8671	864x36	21600	84.0	—	13/16
8662	576x34	22900	88.0	—	15/32
8655	360x30	36000	120.0	—	5/8
8670	480x30	48000	145.0	—	3/4
8656	576x30	57600	165.0	—	7/8
8657	768x30	76800	195.0	—	1 1/16
8658	1056x30	105600	235.0	—	1 3/8
8659	1680x30	168000	320.0	—	1 1/2

°8657, 8658, 8659 Available only in 10′ & 50′ put-ups.

For additional sizes, see current BRAIDED AND STRANDED COPPER CABLE CATALOG.

© United Technical Publications

teflon wire

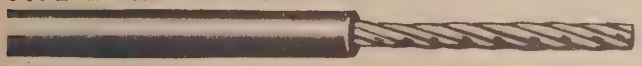
BELDEN

Teflon■ is a fluorinated thermoplastic with outstanding thermal physical and electrical properties. However, because the basic resin and processing costs are relatively high, Teflon is generally restricted to applications requiring its special characteristics.

Belden Teflon wire products are highly recommended for miniature cable applications, because of their superior thermal and electrical properties. Teflon is especially suitable for internal wiring soldering applications where insulation melt back is a specific problem. Belden Teflon wiring products are outstanding in their resistance to oil, oxidation, heat, sunlight, flame and their ability to remain flexible at low temperatures. They all have excellent resistance to ozone, water, alcohol, gasoline, acids, alkalis, aromatic carbon and solvents.

teflon hook-up wire

TYPE E — MIL-W-16878 TEFLON — 600V — 200°C



Stock Colors 1 thru 10

Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated

Trade Number	Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Insulation Thickness (Inch)	Standard Spool Lengths in ft.
83000	E-30	30 (7x38)	.033	.010	25, 100, 500, 1000
83001	E-28	28 (7x36)	.036	.010	25, 100, 500, 1000
83002	E-26	26 (7x34)	.041	.010	25, 100, 500, 1000
83003	E-24	24 (19x36)	.046	.010	25, 100, 500
83004	E-24	24 (7x32)	.045	.010	25, 100, 500, 1000
83005	E-22	22 (7x30)	.051	.010	25, 100, 500, 1000
83006	E-22	22 (19x34)	.052	.010	25, 100, 500, 1000
83007	E-20	20 (19x32)	.060	.010	25, 100, 500, 1000
83008	E-20	20 (7x28)	.059	.010	25, 100, 500
83009	E-18	18 (19x30)	.071	.010	25, 100, 500, 1000
83010	E-16	16 (19x29)	.080	.010	25, 100, 500, 1000

TYPE EE — MIL-W-16878 TEFLON — 1000V — 200°C



Stock Colors 1 thru 10

Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated

Trade Number	Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Insulation Thickness (Inch)	Standard Spool Lengths in ft.
83023	EE-24	24 (19x36)	.053	.014	25, 100, 500
83025	EE-22	22 (7x30)	.058	.014	25, 100, 500
83026	EE-22	22 (19x34)	.060	.014	25, 100, 500, 1000
83027	EE-20	20 (19x32)	.068	.014	25, 100, 500, 1000
83028	EE-20	20 (7x28)	.066	.014	25, 100, 500
83029	EE-18	18 (19x30)	.079	.014	25, 100, 500, 1000
83030	EE-16	16 (19x29)	.086	.014	25, 100, 500, 1000

Stock Colors

1. Brown
2. Red
3. Orange
4. Yellow
5. Green
6. Light Blue
7. Violet (purple)
8. Gray (slate)
9. White
10. Black

Color striping available on 1,000 ft. minimum per item each color on 500' and 1000' spools.
Manufactured to current Government specifications and subsequent revisions.

NEW miniature teflon hook-up wire

TYPE ET — MIL-W-16878 TEFLON — 250V — 200°C



Stock Colors 1 thru 10

Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated

Trade Number	Type Designation	AWG (Stranding)	Nom. O.D. (Inch)	Insulation Thickness (Inch)	Standard Spool Lengths in ft.
83041	ET-32	32 (7x40)	.021	.006	100, 1000
83043	ET-30	30 (7x38)	.024	.006	100, 1000
83045	ET-28	28 (7x36)	.027	.006	100, 1000
83046	ET-26	26 (7x34)	.031	.006	100, 1000
83047	ET-24	24 (7x32)	.036	.006	100, 1000
83048	ET-24	24 (19x36)	.037	.006	100, 1000
83049	ET-22	22 (7x30)	.042	.006	100, 1000
83050	ET-22	22 (19x34)	.044	.006	100, 1000

■ *Trade mark of DuPont*

Color striping available on 1000 foot minimum per item each color on 1000 foot spools.
Manufactured to current Government specifications and subsequent revisions.

Stock Colors

1. Brown
2. Red
3. Orange
4. Yellow
5. Green
6. Light Blue
7. Violet (purple)
8. Gray (slate)
9. White
10. Black

© United Technical Publications

RG/U transmission line cables

BELDEN



RG/U CABLES

Trade Number	RG No.	AWG (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf ft.)	Nom. Attenuation Per 100' mc	Nom. Attenuation Per 100' db	Standard Spool Lengths in Ft.
83241	141A/U MIL-C-17D	18 (Solid) Silver Coated Copperweld ▲	TFE Teflon	1 Silver Coated Copper	Brown Fiberglass	.190	50	69.5	29.0	400	9.0 Max.	100, 500, 1000
83242	142B/U MIL-C-17D	18 (Solid) Silver Coated Copperweld	TFE Teflon	2 Silver Coated Copper	Tinted Brown FEP	.195	50	69.5	29.0	400	9.0 Max.	100, 500, 1000
83265	178B/U MIL-C-17D	30 (7x38) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	Tinted Brown FEP	.070	50	69.5	29.0	400	29.0 Max.	100, 500
83264	179B/U MIL-C-17D	30 (7x38) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	Tinted Brown FEP	.100	75	69.5	19.5	400	21.0 Max.	100, 500, 1000
83266	180B/U MIL-C-17D	30 (7x38) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	Tinted Brown FEP	.140	95	69.5	15.0	400	17.0 Max.	100, 500
83267	187A/U MIL-C-17D	30 (7x38) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	White Teflon Tape	.105	75	69.5	19.5	400	21.0 Max.	100, 500, 1000
83269	188A/U MIL-C-17D	26 (7x.0067) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	White Teflon Tape	.102	50	69.5	29.0	400	20.0 Max.	100, 500
83270	196A/U MIL-C-17D	30 (7x38) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	White Teflon Tape	.076	50	69.5	29.0	400	29.0 Max.	100, 500
83282	303/U MIL-C-17D	18 (Solid) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	Tinted Brown FEP	.170	50	69.5	29.0	400	9.0 Max.	100, 500, 1000
83284	316/U MIL-C-17D	26 (7x.0067) Silver Coated Copperweld	TFE Teflon	1 Silver Coated Copper	Tinted Brown FEP	.098	50	69.5	29.0	400	20.0 Max.	100, 500, 1000

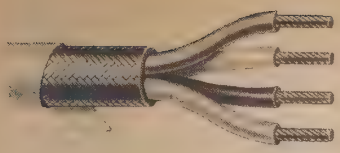
SPECIAL FEP TEFLON INSULATED INSTRUMENTATION CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
 High Temperature	**83390** (2 condr.)	22 (19x34)	.015	.015	.180	Blk, Wht	90	23	40	1000	25, 100, 500
	83391 (3 condr.)	22 (19x34)	.015	.015	.190	Blk, Red Wht	90	20	35	1000	25, 100, 500
	83392 (4 condr.)	22 (19x34)	.015	.015	.205	Red, Blk, Grn, Wht	90	20	35	1000	25, 100, 500
		Stranded tinned copper, FEP teflon■ insulated, cabled, tinned copper braid shield, white FEP teflon jacket. **HIGH TEMPERATURE +200° C maximum, −70° C minimum operating temperature. Ideal where chemical resistance is needed and/or extremely high or low temperatures are required.**									
	**83393** (2 condr.)	20 (7x28)	.020	.030	.245	Blk, Red	100	22	42	1000	25, 100, 500
		Tinned copper, FEP Teflon insulated, noise reducing tape, 20 AWG (10x30) nickel coated copper drain wire, special Beldfoil shield, Silicone rubber jacket. +150° C maximum −70° C minimum operating temperature. Jacket working voltage 1000V DC, shield to ground.									

*Capacitance between conductors. **Capacitance between one conductor and other conductor connected to shield.

▲ *Trademark of Copperweld Steel Co.* ■ *Trademark of DuPont*

© United Technical Publications



mil-w-16878-type E shielded teflon cables

BELDEN

DESCRIPTION: Stranded silver coated copper conductors, type E extruded TFE Teflon insulation, color coded, cabled, braided silver plated copper shield, white TFE Teflon tape wrapped jacket.

MIL-SPEC: MIL-W-16878 Type E
TEMPERATURE RATING: —65°C to 200°C
VOLTAGE: 600Volts (RMS)

TYPE E—TEFLON, SHIELDED, TEFLON JACKETED CABLES

Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. Inch	Conductor Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf ft.)	Nom. **Cap. (mmf ft.)	Suggested Working Voltage	Standard Spool Lengths (Feet)
SINGLE CONDUCTOR											
83301	1	30 (7x38)	.010	.010	.074	White	90	30	—	600	100, 500, 1000
83302	1	28 (7x36)	.010	.010	.078	White	90	35	—	600	100, 500, 1000
83303	1	26 (7x34)	.010	.010	.082	White	90	40	—	600	100, 500, 1000
83304	1	24 (19x36)	.010	.010	.088	White	90	51	—	600	100, 500, 1000
83305	1	22 (19x34)	.010	.010	.094	White	90	60	—	600	100, 500, 1000
83306	1	20 (19x32)	.010	.010	.103	White	90	67	—	600	100, 500, 1000
83307	1	18 (19x30)	.010	.010	.113	White	90	75	—	600	100, 500, 1000
83308	1	16 (19x29)	.011	.012	.123	White	90	89	—	600	100, 500, 1000
TWO CONDUCTOR											
83315	2	30 (7x38)	.010	.010	.106	White, Black	90	15	27	600	100, 500, 1000
83316	2	28 (7x36)	.010	.010	.112	White, Black	90	18	32	600	100, 500, 1000
83317	2	26 (7x34)	.010	.010	.120	White, Black	90	20	36	600	100, 500, 1000
83318	2	24 (19x36)	.010	.010	.132	White, Black	90	22	40	600	100, 500, 1000
83319	2	22 (19x34)	.010	.010	.144	White, Black	90	26	46	600	100, 500, 1000
83320	2	20 (19x32)	.010	.012	.162	White, Black	90	28	52	600	100, 500, 1000
83321	2	18 (19x30)	.010	.012	.188	White, Black	90	30	55	600	100, 500, 1000
83322	2	16 (19x29)	.011	.012	.200	White, Black	90	33	59	600	100, 500, 1000
THREE CONDUCTOR											
83330	3	30 (7x38)	.010	.010	.111	White, Black, Red	90	14	25	600	100, 500, 1000
83331	3	28 (7x36)	.010	.010	.117	White, Black, Red	90	17	30	600	100, 500, 1000
83332	3	26 (7x34)	.010	.010	.126	White, Black, Red	90	19	33	600	100, 500, 1000
83333	3	24 (19x36)	.010	.010	.136	White, Black, Red	90	22	38	600	100, 500, 1000
83334	3	22 (19x34)	.010	.012	.156	White, Black, Red	90	24	41	600	100, 500, 1000
83335	3	20 (19x32)	.010	.012	.175	White, Black, Red	90	27	45	600	100, 500, 1000
83336	3	18 (19x30)	.010	.012	.196	White, Black, Red	90	28	52	600	100, 500, 1000
83337	3	16 (19x29)	.011	.012	.218	White, Black, Red	90	30	56	600	100, 500, 1000
FOUR CONDUCTOR											
83345	4	30 (7x38)	.010	.010	.119	White, Black, Red, Green	90	13	24	600	100, 500, 1000
83346	4	28 (7x36)	.010	.010	.126	White, Black, Red, Green	90	16	28	600	100, 500, 1000
83347	4	26 (7x34)	.010	.010	.135	White, Black, Red, Green	90	18	32	600	100, 500, 1000
83348	4	24 (19x36)	.010	.012	.151	White, Black, Red, Green	90	20	36	600	100, 500, 1000
83349	4	22 (19x34)	.010	.012	.166	White, Black, Red, Green	90	23	40	600	100, 500, 1000
83350	4	20 (19x32)	.010	.012	.185	White, Black, Red, Green	90	25	44	600	100, 500, 1000
83351	4	18 (19x30)	.010	.012	.214	White, Black, Red, Green	90	27	50	600	100, 500, 1000
83352	4	16 (19x29)	.011	.014	.235	White, Black, Red, Green	90	29	54	600	100, 500, 1000

*Capacitance Between Conductors. **Capacitance Between One Conductor and Other Conductor Connected to Shield.
Manufactured to Current Government Specifications and Subsequent Revisions.

© United Technical Publications

cords

TWO CONDUCTOR POWER SUPPLY CORDS

BELDEN

PARALLEL LAMP CORDS



MOLDED VINYL PLUG

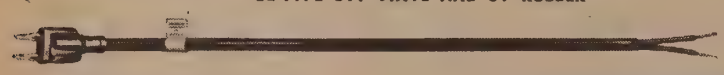
CONDUCTORS SPLIT 1" STRIPPED AND TWISTED 5/8"

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17106	6	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, Gray or Ivory
17109	9	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, White
17112	12	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, White
17126	6	18 (41x34)	.110 x .213	SP-1 Rubber	Brown
17129	9	18 (41x34)	.110 x .213	SP-1 Rubber	Brown

Information and Application

For Lamps, Radios, Desk Fans and Small Appliances. Long life plastic resists cracking and aging. Popular lengths and colors. UL Tan Flag Label.

UL-TYPE SVT VINYL AND SV RUBBER



MOLDED VINYL CORD-HOLDER PLUG

OUTER JACKET STRIPPED 1½" CONDUCTORS STRIPPED AND TWISTED 5/8"

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17205	6	18 (41x34)	.243	SVT Vinyl	Black, Gray
17206	6	18 (41x34)	.245	SV Rubber	Gray

For Food Mixers, Blenders and Small Appliances. UL Tan Flag Label.

UL-TYPE SJ RUBBER



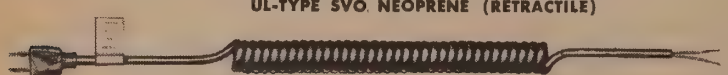
MOLDED VINYL CORD-HOLDER PLUG

OUTER JACKET STRIPPED 1½" CONDUCTORS STRIPPED AND TWISTED 5/8"

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17308	8	18 (16x30)	.298	SJ Rubber	Black
17310	10	18 (16x30)	.298	SJ Rubber	Black
17328	8	16 (26x30)	.323	SJ Rubber	Black
17330	10	16 (26x30)	.323	SJ Rubber	Black

For Mixers, Blenders, Washing Machines and Appliances using fractional horse power motors that do not require a three conductor grounding cord. UL Tan Flag Label.

UL-TYPE SVO NEOPRENE (RETRACTILE)



MOLDED VINYL PLUG

OUTER JACKET STRIPPED 1½", CONDUCTORS STRIPPED ½" AND TINNED

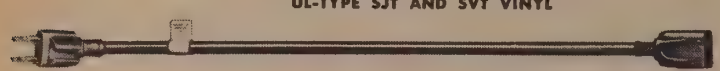
Trade Number	Retracted Length (in.)	Practical Extended Length (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17249	12	6	18 (41x34)	.270	SVO Neoprene	Black

Retractile (coiled)

CONVENIENCE AND SAFETY. Dangling cords can be messy, troublesome and unsafe. Retractile cords stay neat, allow free movement of the appliance or tool, and prevent accidents. Rubber insulation and neoprene jackets meet UL requirements and retain full retracting memory through thousands of stretching cycles. UL Tan Flag Label.

BUSINESS MACHINE CORDS

UL-TYPE SJT AND SVT VINYL



MOLDED VINYL CORD-HOLDER PLUG

MOLDED VINYL CONNECTOR WITH DUMMY CENTER CONTACT

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17359	10	18 (16x30)	.298	SJT Vinyl	Gray
17260	8	18 (41x34)	.243	SVT Vinyl	Gray

17359 fits Burroughs, Monroe and Victor 10 key Adding machines as well as late Friden models and the Burroughs Sensimatic Bookkeeping Machine and Pentron Tape Recorder (Triumph model). 17260 fits Revere Projectors and many business machines. UL Blue Flag Label.

UL-TYPE SJ RUBBER



MOLDED VINYL CORD-HOLDER PLUG

MOLDED RUBBER CONNECTOR

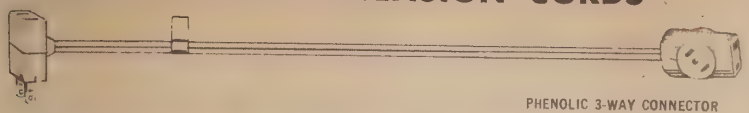
Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17370	10	16 (26x30)	.323	SJ Rubber	Black

Fits R. C. Allen Adding Machine and Mimeograph models 100 and 92. Fits following 16MM Motion Picture Projectors: All RCA senior models, all Victor Kalart models, Bell and Howell models 185 through 399. Can also be used as an extension cord where a round connector is required. UL Blue Flag Label.

© United Technical Publications

cords

TWO CONDUCTOR EXTENSION CORDS



VINYL ADAPTER PLUG — PHENOLIC 3-WAY CONNECTOR

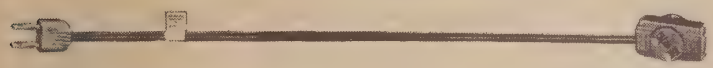
Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
NEW 17178	6	18 (41 x 34)	.110 x .207	SPT-1 Vinyl	Ivory

Information and Application

UL-TYPE SPT VINYL ADD-A-LINE

This new idea in convenience adds a 6′ extension cord and you still have an outlet to plug in another cord. UL Blue Flag Label.

CUBE TAP EXTENSION CORD SETS

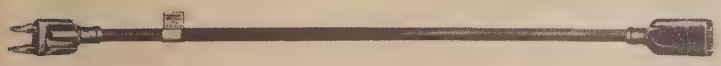


MOLDED VINYL PLUG — PHENOLIC 3-WAY CONNECTORS

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17156	6	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, Ivory
17159	9	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, Ivory
17162	12	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, Ivory
17165	15	18 (41x34)	.110 x .207	SPT-1 Vinyl	Brown, Ivory

Manufactured in Brown and Ivory in all popular lengths. The molded three way connector is particularly sturdy and will last long in steady service. UL Blue Flag Label.

UL-TYPE SV AND SJ RUBBER



MOLDED VINYL CORD-HOLDER PLUG — MOLDED VINYL CONNECTOR

Trade Number	Length of Cord (ft.)	AWG Stranding	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17259	9	18 (41x34)	.245	SV Rubber	Gray
17361	10	16 (26x30)	.323	SJ Rubber	Black

The molded plugs and connectors give long service life. The CORD-HOLDER plug provides easier storage. It can also be used as cord shortener. For longer extension cords of this type, see Lawnmower and Vacuum Cleaner cords. UL Blue Flag Label.

UL-TYPE SJ AND S RUBBER



MOLDED PLUG — MOLDED RUBBER CONNECTOR

Trade Number	Length of Cord (ft.)	AWG Stranding	Nom. O.D. (Inches)	UL Type of Cordage	Color
17370	10	16 (26x30)	.323	SJ Rubber	Black
17555	25	16 (65x34)	.401	S Rubber	Black
17556	50	16 (65x34)	.401	S Rubber	Black

For use where a round connector is required. Also used as a power supply cord for some appliances. For longer extensions where a heavier duty type cord is needed for added insulation and abrasion protection use 17555 or 17556. 17370 features cord-holder plug. UL Blue Flag Label.

THREE CONDUCTOR POWER SUPPLY CORDS

UL-TYPE SJ RUBBER, SJT VINYL AND SJO NEOPRENE



MOLDED VINYL GROUNDING PLUG — OUTER JACKET STRIPPED 2″ CONDUCTORS STRIPPED AND TWISTED 5/8″

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17406	6	18 (16x30)	.328	SJ Rubber	Black
17405	6	18 (16x30)	.328	SJT Vinyl	Gray
17408	8	18 (16x30)	.328	SJ Rubber	Black
17407	8	18 (16x30)	.328	SJT Vinyl	Gray
17409	8	18 (16x30)	.328	SJO Neoprene	Black
17412	12	18 (41x34)	.328	SJ Rubber	Black
17419	9	16 (65x34)	.353	SJ Rubber	Black
17422	12	16 (65x34)	.353	SJ Rubber	Black
17425	15	16 (65x34)	.353	SJ Rubber	Black

Information and Application

For all tools such as sanders, saws, grinders and polishers requiring grounding. Three conductor Cord now listed by UL as mandatory for drills 1/8″ and larger. UL Tan Flag Label.

© United Technical Publications

BELDEN

THREE CONDUCTOR POWER SUPPLY CORDS

UL-TYPE SV RUBBER AND SVT VINYL



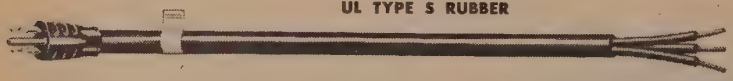
MOLDED VINYL GROUNDING PLUG

OUTER JACKET STRIPPED 1½"
CONDUCTORS STRIPPED AND TWISTED ⅝"

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17236	6	18 (41x34)	.265	SV Rubber	Black
17238	8	18 (41x34)	.265	SV Rubber	Black
17237	6	18 (41x34)	.253	SVT Vinyl	Gray
17239	8	18 (41x34)	.253	SVT Vinyl	Gray

Three conductor SV and SVT cords now recognized as a UL Standard for some small tools, business machines and instruments which previously required a three conductor SJ Cord. UL Tan Flag Label.

UL TYPE S RUBBER



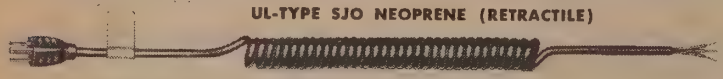
MOLDED VINYL GROUNDING PLUG

OUTER JACKET STRIPPED 2"
CONDUCTORS STRIPPED AND TWISTED ¾"

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Colors
17629	9	14 (41x30)	.558	S Rubber	Black
17635	15	14 (41x30)	.558	S Rubber	Black

For heavy duty power tools and equipment. UL Tan Flag Label.

UL-TYPE SJO NEOPRENE (RETRACTILE)



MOLDED VINYL GROUNDING PLUG OUTER JACKET STRIPPED 1½", CONDUCTORS STRIPPED ½" AND TINNED

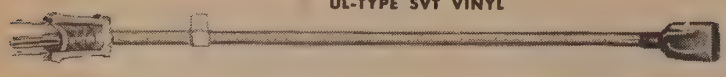
Trade Number	Retracted Length (in.)	Practical Extended Length (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17447	12	6	18 (41x34)	.360	SJO Neoprene	Black
17448	12	6	16 (65x34)	.370	SJO Neoprene	Black
17449	24	12	16 (65x34)	.370	SJO Neoprene	Black

Retractile (coiled)

CONVENIENCE AND SAFETY. Dangling cords can be messy, troublesome and unsafe. Retractile cords stay neat, allow free movement of the appliance or tool, and prevent accidents. Rubber insulation and neoprene jackets meet UL requirements and retain full retracting memory through thousands of stretching cycles. UL Tan Flag Label.

THREE CONDUCTOR PROJECTOR AND BUSINESS MACHINE CORD

UL-TYPE SVT VINYL



MOLDED VINYL GROUNDING PLUG

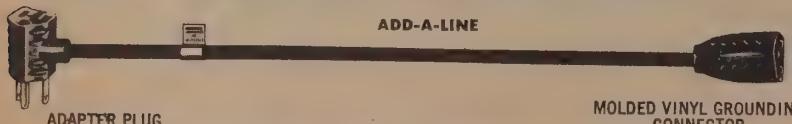
MOLDED VINYL 3-CONTACT CONNECTOR

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17258	8	18 (41x34)	.253	SVT Vinyl	Gray

Can be used for Revere and Eastman Kodak projectors, Friden, Victor, Hewlett-Packard, Marchant business machines, and DuKane audio equipment. UL Blue Flag Label.

THREE CONDUCTOR EXTENSION CORDS

ADD-A-LINE



ADAPTER PLUG

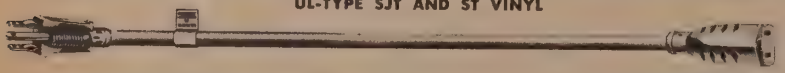
MOLDED VINYL GROUNDING CONNECTOR

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17462	8	18 (16x30)	.328	SJT Vinyl	Black

Information and Application

This new idea in convenience adds an 8' extension cord and you still have an outlet to plug in another cord. UL Blue Flag Label.

UL-TYPE SJT AND ST VINYL



MOLDED VINYL GROUNDING PLUG

MOLDED VINYL GROUNDING CONNECTOR

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17491	25	18 (16x30)	.328	SJT Vinyl	Yellow
17492	50	18 (16x30)	.328	SJT Vinyl	Yellow
17493	100	18 (16x30)	.328	SJT Vinyl	Yellow
17494	25	16 (26x30)	.353	SJT Vinyl	Yellow
17495	50	16 (26x30)	.353	SJT Vinyl	Yellow
17497	100	16 (26x30)	.353	SJT Vinyl	Yellow
17694	25	14 (41x30)	.558	ST Vinyl	Yellow
17695	50	14 (41x30)	.558	ST Vinyl	Yellow
17697	100	14 (41x30)	.558	ST Vinyl	Yellow

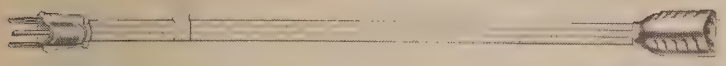
YELLOW CORDAGE stands out against green or brown backgrounds and thus reduces hazard of accidental cutting.
These extension cord sets are for lawnmowers and hedge clippers using three conductor power supply cordage. UL Blue Flag Label.

© United Technical Publications

BELDEN

THREE CONDUCTOR EXTENSION CORDS

UL-TYPE SPT-2 VINYL



MOLDED VINYL GROUNDING PLUG

MOLDED VINYL GROUNDING CONNECTOR

FLAT YELLOW 3 conductor extension cords for most light duty purposes. Particularly popular with the marine trade. UL Blue Flag Label.

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17194	25	16 (65x34)	.152 .360	SPT-2	Yellow
17195	50	16 (65x34)	.152 .360	SPT-2	Yellow

UL-TYPE SJ RUBBER



MOLDED VINYL GROUNDING PLUG

MOLDED VINYL GROUNDING CONNECTOR

Power Supply Cord for business, mailing machines and electrical equipment that have a built in receptacle with blades and grounding pin for cord attachment. These can also be used as extension cords for equipment requiring grounding. UL Blue Flag Label.

Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17460	10	18 (16x30)	.328	SJ Rubber	Black
17461	10	16 (26x30)	.353	SJ Rubber	Black

UL-TYPE SJO AND SO NEOPRENE



MOLDED VINYL GROUNDING PLUG

MOLDED VINYL HEAVY DUTY GROUNDING DUPLEX CONNECTOR

These three conductor extension cords are for use with power tools and other appliances requiring grounding. These extension cords with the rugged Belden duplex connectors will give years of safe, reliable service. UL Blue Flag Label.

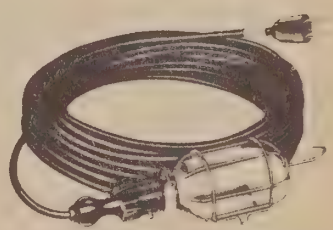
Trade Number	Length of Cord (ft.)	AWG (Stranding)	Nom. O.D. (Inches)	UL Type of Cordage	Color
17475	25	16 (26x30)	.353	SJO Neoprene	Black
17476	50	16 (26x30)	.353	SJO Neoprene	Black
17477	100	16 (26x30)	.353	SJO Neoprene	Black
17675	25	14 (41x30)	.558	SO Neoprene	Black
17676	50	14 (41x30)	.558	SO Neoprene	Black

CORDLITES®

TWO CONDUCTOR UL-TYPE SJT VINYL CORDLITES

Trade Number	Length of Cord (ft.)	AWG & No. of Conductors	Nom. O.D. (Inches)	UL Type of Cordage	Color
17925	25	18-2	.298	SJT Vinyl	Black
17950	50	18-2	.298	SJT Vinyl	Black

These Cordlites are oil and ozone resistant. The handle has a feed through switch and one tool tap. 17923 lamp guard included.

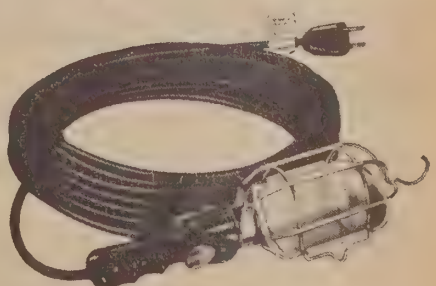


Vinyl Cordlites UL Blue Flag Label

TWO AND THREE CONDUCTOR UL-TYPE SJO NEOPRENE CORDLITES

Trade Number	Length of Cord (ft.)	AWG & No. of Conductors	Nom. O.D. (Inches)	UL Type of Cordage	Color
17995	25	18-2	.298	SJO Neoprene	Black
17996	50	18-2	.298	SJO Neoprene	Black
17998	25	16-3	.353	SJO Neoprene	Black
17999	50	16-3	.353	SJO Neoprene	Black

These Cordlites are oil and ozone resistant. The tool taps on the 3 conductor cords are of the 3-contact 15A - 125V grounding type. 17923 lamp guard included.



Neoprene Cordlites UL Blue Flag Label

© United Technical Publications

portable cordage

LISTED BY UNDERWRITERS' LABORATORIES, INC.

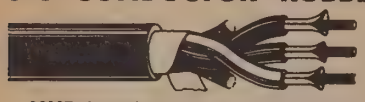
BELDEN

S-2 CONDUCTOR—RUBBER JACKET 600V-60°C



Description	Trade Number & Standard Pkg. In Ft. 25 — 250 2 — 250 Spls. 45 — 250 4 — 250 Spls. C = Coil	Size AWG & Stranding	Nom. O.D. (inches)	Weight Std. Pkg. in (lbs.)	Colors
	18104 2S-250	18 (41x34)	.386	43	Black
	18103 2S-250	16 (65x34)	.401	48	Black
	18102 C-250	14 (41x30)	.528	36	Black
	18101 C-250	12 (65x30)	.599	46	Black
	18100 C-250	10 (105x30)	.643	56	Black

S-3 CONDUCTOR—RUBBER JACKET 600V-60°C



18107—Lateral separator wrap under jacket

18109	C-250	18 (41x34)	.401	22	Black
18108	C-250	16 (65x34)	.426	27	Black
18107	C-250	14 (41x30)	.558	45	Black, Nickel Gray
18106	C-250	12 (65x30)	.634	57	Black
18105	C-250	10 (105x30)	.689	74	Black

SO-2 CONDUCTOR—NEOPRENE JACKET 600V-60°C



18204	2S-250	18 (41x34)	.386	46	Black
18203	2S-250	16 (65x34)	.401	51	Black
18202	C-250	14 (41x30)	.528	39	Black
18201	C-250	12 (65x30)	.599	50	Black
18200	C-250	10 (105x30)	.643	60	Black

SO-3 CONDUCTOR—NEOPRENE JACKET 600V-60°C



18207—Lateral separator wrap under jacket

18209	C-250	18 (41x34)	.401	23	Black
18208	C-250	16 (65x34)	.426	28	Black
18207	C-250	14 (41x30)	.558	48	Black
18206	C-250	12 (65x30)	.634	60	Black
18205	C-250	10 (105x30)	.689	77	Black
18210	C-50	8 (132x29)	.872	30	Black
18210	C-200	8 (132x29)	.872	89	Black
18211	C-50	6 (133x27)	.961	38	Black
18211	C-200	6 (133x27)	.961	120	Black

SO-4 CONDUCTOR—NEOPRENE JACKET 600V-60°C



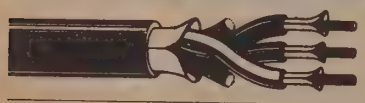
18217	C-50	14 (41x30)	.603	16	Black
18217	C-200	14 (41x30)	.603	50	Black
18216	C-50	12 (65x30)	.690	22	Black
18216	C-200	12 (65x30)	.690	66	Black
18215	C-50	10 (105x30)	.770	27	Black
18215	C-200	10 (105x30)	.770	85	Black
18214	C-25	8 (132x29)	.970	22	Black
18214	C-100	8 (132x29)	.970	67	Black
18213	C-25	6 (133x27)	1.090	27	Black
18213	C-100	6 (133x27)	1.090	88	Black

SJ-2 CONDUCTOR—RUBBER JACKET 300V-60°C



18127	2S-250	18 (16x30) Flex	.298	26	Black
18111	2S-250	18 (41x34) X flex.	.298	26	Black
18128	2S-250	16 (26x30) Flex	.323	32	Black
18110	2S-250	16 (65x34) X flex.	.323	33	Black

SJ-3 CONDUCTOR—RUBBER JACKET 300V-60°C



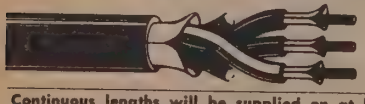
18129	2S-250	18 (16x30) Flex	.328	35	Black
18125	2S-250	18 (41x34) X flex.	.328	35	Black
18130	2S-250	16 (26x30) Flex	.353	42	Black
18124	2S-250	16 (65x34) X flex.	.353	43	Black

SJO-2 CONDUCTOR—NEOPRENE JACKET 300V-60°C



18227	2S-250	18 (16x30) Flex	.298	27	Black
18228	2S-250	16 (26x30) Flex	.323	35	Black

SJO-3 CONDUCTOR—NEOPRENE JACKET 300V-60°C



18229	2S-250	18 (16x30) Flex	.328	36	Black
18230	2S-250	16 (26x30) Flex	.353	42	Black

Continuous lengths will be supplied on at least 85% of each shipment. When 2 lengths are supplied, 50 ft. will be minimum. Shipped only in standard packages as listed above. See current carrying capacity tables on page 31.

BELDEN PAGE 30

© United Technical Publications

portable cordage

LISTED BY UNDERWRITERS' LABORATORIES, INC.

BELDEN

SJT-2 CONDUCTOR—PLASTIC JACKET 300V-60°C



Description	Trade Number & Standard Pkg. In Ft. 25 — 250 — 2 — 250 Spls. 45 — 250 — 4 — 250 Spls. C = Coil	Size AWG & Stranding	Nom. O.D. (inches)	Weight Std. Pkg. in (lbs.)	Colors
	18141 2S-250	18 (41x34) X flex.	.298	26	Black, Red
	18142 2S-250	16 (65x34) X flex.	.323	32	

SV-2 CONDUCTOR—RUBBER JACKET 300V-60°C



18120	2S-250	18 (41x34)	.245	20	Black, Nickel Gray

SVT-2 CONDUCTOR—PLASTIC JACKET 300V-60°C



18140	2S-250	18 (41x34)	.243	19	Black

SPT-1, SPT-2 PLASTIC PARALLEL LAMP CORD 300V-60°C



18122	4S-250	18 SPT-1 (41x34)	.110 x .207	24	Black, Brown, Silver Gray White on 18122 only
18123	2S-250	18 SPT-2 (41x34)	.144 x .277	17	
18126	2S-250	16 SPT-2 (65x34)	.155 x .299	21	

SP-1, SP-2 RUBBER PARALLEL LAMP CORD 300V-60°C



18115	4S-250	18 SP-1 (41x34)	.110 x .213	25	Black, Brown
18121	2S-250	18 SP-2 (41x34)	.140 x .276	17	Black, Brown

HPN-2 CONDUCTOR—NEOPRENE HEATER CORD 300V-90°C



18328	2S-250	18 (41x34)	.140 x .276	18	Black
18326	2S-250	16 (65x34)	.152 x .300	23	Black

HPD-2 CONDUCTOR—GLAZED COTTON HEATER CORD 300V-90°C



18318	2S-250	18 (41x34)	.265	18	Black, 1 White Tracer
18316	2S-250	16 (65x34)	.285	22	
18314	2S-250	14 (104x34)	.320	35	

HPD-2 CONDUCTOR—SOFT COTTON HEATER CORD 300V-90°C



18338	2S-250	18 (41x34)	.265	18	Black 2 White Tracers
18336	2S-250	16 (65x34)	.285	22	

Continuous lengths will be supplied on at least 85% of each shipment. When 2 lengths are supplied, 50 ft. will be minimum. Shipped only in standard packages as listed above. See current carrying capacity tables below.

SUGGESTED AWG SIZE FOR LONG POWER SUPPLY CORDS*

Cord Length**	Current (amperes)** 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
25	18	18	18	18	18	18	18	16	16	16	14	14	14	14	14	12	12	12	12	12	10	10	10	10	10
50	18	18	18	18	18	18	18	16	16	16	14	14	14	14	14	12	12	12	12	12	10	10	10	10	10
75	18	18	18	18	18	18	18	16	16	16	14	14	14	14	14	12	12	12	12	12	10	10	10	10	10
100	18	18	18	18	18	18	18	16	16	16	14	14	14	14	14	12	12	12	12	12	10	10	10	10	10
125	18	18	18	18	18	18	16	16	16	16	14	14	14	14	14	12	12	12	12	12	10	10	10	10	10
150	18	18	18	18	18	16	16	16	14	14	14	14	14	12	12	12	12	12	12	12	10	10	10	10	10

**Rubber and plastic cords, but not including heater cords. Based on a line voltage of 115 and maximum voltage drop (loss) of 10 volts when cord carries rated current.*

***To determine correct AWG, refer to cord length in table, and current nearest the current rating on the name plate of the appliance.*

CURRENT CARRYING CAPACITY OF FLEXIBLE CORDAGE (amperes)*

AWG	Tinsel Cords	Rubber and Plastic Cords	Heater Cords
27	0.5	—	—
18	—	7	10
17	—	—	12
16	—	10	15
15	—	—	17
14	—	15	20
12	—	20	30
10	—	25	—
8	—	35	—
6	—	45	—
4	—	60	—

** Underwriters' laboratories Inc. and National Electrical Code Standard for 2 and 3 conductor cords. For cords with 4 to 6 conductors, the current rating is 80% of the values shown.*

© United Technical Publications

HEAT SHRINKABLE TUBING

PVC | TEFLON AND POLYOLEFIN TUBING

BIRNBACH NUMBER NEW NUMBER	FORMER NUMBER	SIZE EXPANDED	SIZE RECOVERED	MIN. EXPANDED I.D.	MAX. RECOVERED I.D.	NOM. WALL RECOVERED
SK-105 Formerly SK-265	**VINYL**		**105°C**		MIL-I-23053 A - GRADE 5	MIL-I-631 GRADE C
SK105-1/16"	SK265-1/32"	1/16"	1/32"	.062	.031	.020
SK105-3/32"	SK265-3/64"	3/32"	3/64"	.094	.047	.025
SK105-1/8"	SK265-1/16"	1/8"	1/16"	.125	.063	.025
SK105-3/16"	SK265-3/32"	3/16"	3/32"	.184	.094	.025
SK105-1/4"	SK265-1/8"	1/4"	1/8"	.250	.125	.025
SK105-3/8"	SK265-3/16"	3/8"	3/16"	.375	.188	.025
SK105-1/2"	SK265-1/4"	1/2"	1/4"	.500	.250	.025
SK105-3/4"	SK265 3/8"	3/4"	3/8"	.750	.375	.025
SK105-1"	SK265-1/2"	1"	1/2"	1.00	.500	.030
SK105-1 1/2"	SK265-3/4"	1 1/2"	3/4"	1.50	.750	.035
SK105-2"	SK 265 1"	2"	1"	2.00	1.00	.040
SK-221 Formerly SK-275	**IRRADIATED POLYOLEFIN**		**135°C**		MIL-I-23053 (WEP) CLASS 1	
SK221-1/16"	SK275-1/32"	1/16"	1/32"	.062	.031	.020
SK221-3/32"	SK275-3/64"	3/32"	3/64"	.094	.047	.025
SK221-1/8"	SK275 1/16"	1/8"	1/16"	.125	.063	.025
SK221-3/16"	SK275-3/32"	3/16"	3/32"	.184	.094	.025
SK221-1/4"	SK275-1/8"	1/4"	1/8"	.250	.125	.025
SK221-3/8"	SK275-3/16"	3/8"	3/16"	.375	.188	.025
SK221-1/2"	SK275 1/4"	1/2"	1/4"	.500	.250	.025
SK221-3/4"	SK275 3/8"	3/4"	3/8"	.750	.375	.025
SK221-1"	SK275-1/2"	1"	1/2"	1.00	.500	.030
SK221-1 1/2"	SK275-3/4"	1 1/2"	3/4"	1.50	.750	.035
SK221-2"	SK275-1"	2"	1"	2.00	1.00	.040

SK-221 - SK-105 TUBING PROPERTIES CHART

	RATING	TEST
TENSILE STRENGTH	2960 PSI	ASTM D-876-59-T
ULTIMATE ELONGATION	200%	ASTM D-876-59-T
BRITTLENESS TEMPERATURE	—34° C.	ASTM D-746-57-T
SPECIFIC GRAVITY	1.34	MIL-I-631 D, 4. 6. 12
WATER ABSORPTION	0.06% 24 Hours	ASTM D-570-57-T Proc. A
DIELECTRIC STRENGTH	1050 Volts/Mil	ASTM D-149-55-T
VOLUME RESISTIVITY	5.2 x 10^{14} Ohm-cm	ASTM D-257-58 MIL-I-631 D 4. 6. 13
FUNGUS RESISTIVITY	0-1	MIL-I-631 D 3. 5. 7 and 4. 6. 16
FLAMMABILITY	Self-Extinguishing	ASTM D-876-60-T MIL-I-631 D, 4. 6. 13
FLEXIBILITY AFTER HEAT AGING 200 Hrs. a 100° C. BEND OVER 1/8" MANDREL	GOOD	
CORROSION ON COPPER, BRASS AND ALUMINUM AFTER 14 DAYS a 100° C.	EXCELLENT	MIL-I-7444 B

CHEMICAL RESISTANCE CHART

FUEL JP-4 MIL-J-5624	EXCELLENT
AVIATION GASOLINE 100/130	EXCELLENT
HYDRAULIC OIL MIL-O-5606	EXCELLENT
HYDROCHLORIC ACID 35%	EXCELLENT
WATER	EXCELLENT
SODIUM CHLORIDE 5%	EXCELLENT
ALKALIS	EXCELLENT

*NOTE: SK-105 PVC tubing is unsuitable in contact with organic solvents.
SK-105 PVC tubing has a higher resistance to oils than low density Polythylene.

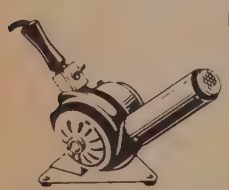
All SK-221 available in 4 foot lengths & spools.

STOCK COLORS: BLACK, WHITE, CLEAR

1/32" Thru 1/8" 500' — 250' — 100' — 50' — 25'
5/32" Thru 1/4" 250' — 100' — 50' — 25'
3/8" Thru 1" 100' — 50' — 25'

SK-621	TEFLON*		250°C	MIL-I-23053 (WEP) CLASS 11
SK-621-22	22*	.055"	.032"	.010"
SK-621-20	20*	.060"	.039"	.012"
SK-621-19	19	.065"	.043"	.012"
SK-621-18	18*	.076"	.049"	.012"
SK-621-17	17	.085"	.054"	.012"
SK-621-16	16*	.093"	.061"	.012"
SK-621-15	15	.110"	.067"	.012"
SK-621-14	14*	.120"	.072"	.012"
SK-621-13	13	.140"	.080"	.012"
SK-621-12	12*	.150"	.089"	.012"
SK-621-11	11	.170"	.101"	.012"
SK-621-10	10*	.191"	.112"	.012"
SK-621-9	9	.205"	.124"	.015"
SK-621-8	8*	.240"	.141"	.015"
SK-621-7	7	.270"	.158"	.015"
SK-621-6	6*	.302"	.178"	.015"
SK-621-5	5	.320"	.198"	.015"
SK-621-4	4*	.348"	.224"	.015"
SK-621-3	3	.360"	.249"	.015"
SK-621-2	2*	.375"	.278"	.015"
SK-621-1	1	.385"	.311"	.015"
SK-621-0	0*	.400"	.347"	.015"
SK-621-3/8	3/8"*	.560"	.399"	.020"
SK-621-7/16	7/16"*	.655"	.462"	.020"
SK-621-1/2	1/2"*	.750"	.524"	.020"

Standard Put-up—36" Straight Lengths; *Stock Sizes



HAG-12 500/750°F Hot Air Gun For PVC Series
HAG-13 750/1000°F Hot Air Gun For TE Series

The quickest and most versatile method for applying heat is the hot air gun noted herein. Also, use of an oven, radiant heat, dipping in hot liquids, or using a soldering iron or the flame of a match.

BIRFLON SHRINK SERIES TE TUBING

HEAT SHRINKABLE TEFLON* TUBING

Is a Class C material modified from polytetrafluorethylene. The tubing will shrink when heated to 621 F. (It should be heated until it turns semi-transparent, then the heating process immediately stopped. Overheating can cause splitting, therefore trial and error testing is recommended to establish the proper time and temperature for each application.) Correct procedure will result in a snug-fitting insulating wrap possessing hi-heat resistance, superior chemical resistance and excellent electrical characteristics. The tubing is available in a full range of colors. Stock colors: black, white, natural.

* Dupont Polytetrafluoroethelene

SK621 TEFLON*TUBING PROPERTIES CHART

	TE SERIES Shrinkable "Teflon"*
DIELECTRIC STRENGTH (20 Mil Wall)	850 Volts/Mil
DIELECTRIC CONSTANT	2.2
POWER FACTOR	.00
VOLUME RESISTIVITY	10^{17} Ohms/CM
FUNGUS RESISTANCE	Inert
FLAMMABILITY	Will Not Support Combustion
FUEL and OIL RESISTANCE	Superior
HYDRAULIC FLUID RESISTANCE	Superior
SOLVENT RESISTANCE	Superior
ACID and ALKALI RESISTANCE	Superior
CORROSION RESISTANCE	Excellent
TENSILE STRENGTH	5000-7500 PSI
ULTIMATE ELONGATION	300-500%
WATER ABSORPTION	Nil
LOW TEMPERATURE BRITTLE POINT	—66°F
HARDNESS	98 Shore A
SPECIFIC GRAVITY	2.2

BIRNBACH COMPANY INC

FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

B-105 EXTRUDED PLASTIC TUBING



APPROVED FOR 105°C.-OPERATION — MEETS MIL-1-631D SPECS — A quality plastic Vinyl tubing designed for electronic and electrical insulation work. Has high dielectric strength, extreme flexibility, non-flammabiltiy, abrasion resistance, impervious to oil, water, alkalies, alcohol, solvents, etc., high heat stability and resistance to aging. Meets all A.S.T.M. specifications, Mil. Spec. (Type F, Form U, Grades A and C, Class 2, Category 1). U.L. Approved

B&S Gauge Size No.	Birnbach No.	Old Part No.	Nom. I.D.	Nom. Wall
24	B105-24	308	.022	.012
22	B105-22	311	.027	.012
20	B105-20	313	.034	.016
19	B105-19	—	.038	.016
18	B105-18	314	.042	.016
17	B105-17	—	.047	.016
16	B105-16	315	.053	.016
15	B105-15	—	.059	.016
14	B105-14	316	.066	.016
13	B105-13	—	.076	.016
12	B105-12	317	.085	.016
11	B105-11	—	.095	.016
10	B105-10	325	.106	.016
9	B105-9	—	.118	.020
8	B105-8	318	.133	.020
7	B105-7	—	.148	.020
6	B105-6	326	.166	.020
5	B105-5	—	.186	.020
4	B105-4	319	.208	.020
3	B105-3	—	.234	.020
2	B105-2	320	.263	.020
1	B105-1	—	.294	.020
0	B105-0	—	.330	.020
5/16"	B105-5/16"	321	.312	.025
3/8"	B105-3/8"	322	.375	.025
7/16"	B105-7/16"	—	.438	.025
1/2"	B105-1/2"	323	.500	.025
9/16"	B105-9/16"	—	.562	.030
5/8"	B105-5/8"	324	.625	.030
3/4"	B105-3/4"	327	.750	.035
7/8"	B105-7/8"	360	.875	.035
1"	B105-1"	361	1.000	.035
1 1/8"	B105-1 1/8"	—	1.125	.040
1 1/4"	B105-1 1/4"	362	1.250	.040
1 3/8"	B105-1 3/8"	—	1.375	.040
1 1/2"	B105-1 1/2"	363	1.500	.045
1 3/4"	B105-1 3/4"	328	1.750	.055
2"	B105-2"	329	2.000	.060
2 1/4"	B105-2 1/4"	364	2.250	.065
2 1/2"	B105-2 1/2"	365	2.500	.070

STANDARD COLORS

EVEN NUMBERS — #24, 22, 20, 18, 16 — Clear Black, Yellow, Red, Green, Brown, Orange, Blue, White, Violet and Gray; #14, 12, 10, 8, 6, 4, 2, 3/16", 1/4", 1/2", 5/8" — Clear, Black, Yellow, Red, Green, Brown, Orange, Blue and White.

ODD NUMBERS — #19, 17, 15, 13, 11, 9, 7, 5, 3, 1, 0 — Clear, Black White; #3/4" thru 2 1/2" — Clear, Black, White.

STANDARD PUT-UPS

#24 thru #15	1,000' - 500' - 100' - 50' - 25' spools
#14 thru #8	500' - 100' - 50' - 25' spools
#4 thru 1/2"	250' - 100' - 50' - 25' coils
9/16" thru 7/8"	100' - 50' - 25' coils
1" & larger	50 coils

SIZES #24 THRU #15 AVAILABLE IN 36" LENGTHS

TABLE OF PHYSICAL & ELECTRICAL PROPERTIES—B-105 TUBING

Tensile Strength—2500 Psi. (Minimum Average)
Flammability—Non-Flammable
Ultimate Elongation—340%
Recommended for Temperatures to—105° C
Cold Bend— —40° C
Dielectric Strength .020" Wall—800 V/Mil
Varnish Baking—Good
Water Absorption
Weight Increase (1 Week)—0.1%—Fungi Resistance—Yes
Oil Resistance—Indefinitely flexible when immersed in oil.
Insulation Resistance—over 1,000,000 megohms.

IN STOCK

The Birnbach Line of insulated sleeving and tubing is the basic quality line designed for the rigid performance requirements of the Aircraft, Electrical and Electronic Industries.

Meets or exceeds the required MIL Specifications and ASTM and NEMA standards. We invite your inquiries on special problems and requirements.

B-65 — EXTRUDED PLASTIC TUBING LOW TEMPERATURE — Per MIL-I-7444B to —94° F.

No. B-65 meets Air Force spec. Mil-I-7444 specifically designed for operation at sub-zero temperatures. It is fungus resistant and has excellent dielectric strength.

B&S Gauge Size No.	Birnbach No.	Nom. I.D.	Nom. Wall
24	B65-24	.022	.012
22	B65-22	.027	.012
20	B65-20	.034	.016
19	B65-19	.038	.016
18	B65-18	.042	.016
17	B65-17	.047	.016
16	B65-16	.053	.016
15	B65-15	.059	.016
14	B65-14	.066	.016
13	B65-13	.076	.016
12	B65-12	.085	.016
11	B65-11	.095	.016
10	B65-10	.106	.016
9	B65-9	.118	.020
8	B65-8	.133	.020
7	B65-7	.148	.020
6	B65-6	.166	.020
5	B65-5	.186	.020
4	B65-4	.208	.020
3	B65-3	.234	.020
2	B65-2	.263	.020
1	B65-1	.294	.020
0	B65-0	.330	.020
5/16"	B65-5/16"	.312	.025
3/8"	B65-3/8"	.375	.025
7/16"	B65-7/16"	.438	.025
1/2"	B65-1/2"	.500	.025
9/16"	B65-9/16"	.562	.030
5/8"	B65-5/8"	.625	.030
3/4"	B65-3/4"	.750	.035
7/8"	B65-7/8"	.875	.035
1"	B65-1	1.000	.035
1 1/4"	B65-1 1/4"	1.250	.040
1 3/8"	B65-1 3/8"	1.375	.040
1 1/2"	B65-1 1/2"	1.500	.045
1 3/4"	B65-1 3/4"	1.750	.055
2"	B65-2"	2.000	.060
2 1/4"	B65-2 1/4"	2.250	.065
2 1/2"	B65-2 1/2"	2.500	.070

STANDARD COLOR—Clear (Amber)
STANDARD PUT-UPS SAME AS BIRACO 105 EXCEPT OMIT 36" LENGTHS

Applicable Specifications	Dielectric Strength	Temp. Rating	Low Temp. Flexibility	Flame Resistance	Elongation	Tensile Strength
Air Force Spec. MIL-1-7444	750 v/mil	60°C	—65°C	Good	360%	2200 PSI

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

B-130 — VINYL COATED/FIBERGLASS SLEEVING Per MIL-I-3190B and NEMA Standards to 130° C.



(ASTM, NEMA Grade B-B-1) MEETS MIL-I-3190 SPECS. — Quality Electronic and Electrical Tubing. It is Class B Insulation that combines the best features of the inorganic fiberglass base sleeving with heat resistant, flexible plastic insulation. The plastic compound provides the highest electrical properties, heat stability (130° C.), flexibility and toughness. Meets performance requirements of specs. MIL-I-3190 A, NEMA VSI, ASTM D 372.

Birnbach No.	B&S Ga. Size No.	Old No.	Nom. I.D.
B130-24	24	289	.022
B130-22	22	290	.027
B130-20	20	291	.037
B130-19	19	—	.038
B130-18	18	293	.042
B130-17	17	—	.047
B130-16	16	294	.053
B130-15	15	—	.059
B130-14	14	295	.066
B130-13	13	—	.076
B130-12	12	300	.085
B130-11	11	—	.095
B130-10	10	307	.106
B130-9	9	—	.118
B130-8	8	301	.133
B130-7	7	—	.148
B130-6	6	302	.166
B130-5	5	—	.186
B130-4	4	305	.208
B130-3	3	—	.234
B130-2	2	306	.263
B130-1	1	—	.294
B130-0	0	303	.330
B130-3/8	3/8"	304	.387
B130-7/16	7/16"	—	.450
B130-1/2	1/2"	299	.512
B130-5/8	5/8"	296	.640
B130-3/4	3/4"	—	.768
B130-7/8	7/8"	—	.893
B130-1	1"	—	1.018

SIZES	STANDARD COLORS
#24, 22, 20, 18, 14, 12, 10, 8, 6, 4, 2	Black, Red, White, Yellow, Brown, Orange, Green, Blue, Gray, Purple
3/16", 1/8", 1/4", 3/8"	Black, Red, White, Yellow, Orange, Green, Blue
#19, 17, 15, 13, 11, 9, 7, 5, 3	Black, Red, Yellow, Green
#1, 0, 7/16"	Black, Yellow
3/4", 7/8", 1", 1 1/4", 1 1/2", 1 3/4", 2", 2 1/4", 2 1/2"	Black

OTHER COLORS AVAILABLE TO ORDER

DIMENSIONAL TOLERANCES OF VINYL COATED FIBERGLASS

Size	Apx. I.D.	N.E.M.A. Tolerances Inches
24	.022	.020-.027
22	.027	.025-.032
20	.034	.032-.039
18	.042	.040-.049
16	.053	.051-.061
14	.066	.064-.072
12	.085	.081-.089
10	.106	.102-.112
8	.133	.129-.141
6	.166	.162-.178
4	.208	.204-.224
1/4, 2	.263	.258-.278
5/16, 0	.3125	.312-.328
3/8	.375	.375-.399
1/2	.500	.500-.524
5/8	.625	.625-.655

PHYSICAL & ELECTRICAL PROPERTIES
B130 VINYL COATED FIBERGLASS

Class B
Grade B-1
Dielectric Strength ____ 4000 V.
Temperature Rating ____ 130° C.
Low Temp. Flexibility ____ —30° C.
Non-Flammable
Ins. Resistance Over 1,000,000 MEGS.
Corrosion Resistance ____ Excellent
Oil Resistance ____ Good

COLORS:
Black, Red, White, Yellow, Brown, Orange, Green, Blue, Gray, Purple

STANDARD PUT-UPS

#24 thru #15 ____ 1000' - 500' - 250' - 100' - 50' - 25' - 30"
#14 thru #6 ____ 500' - 250' - 100' - 50' - 25' - 30"
#5 thru #2 ____ 250' - 100' - 50' - 25' - 30"
#1 thru 1/2" ____ 250' - 100' - 50' - 25' - 36"
5/16" to 7/8" ____ 100' - 50' - 25' - 36"
1" thru 2 1/2" ____ 50' - 25'

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS

B-1200 — FLEXIBLE FIBERGLASS SLEEVING for Hi-Temperature — applications for 1200° F.

HIGH TEMPERATURE FIBERGLASS SLEEVING — Sleeving of tightly braided 100% fiberglass intended for temperatures as high as 1200° F. It provides maximum mechanical strength consistent with the ultimate in flexibility. It is treated to remove all organic matter as well as keeping the glass braid fray resistant. We can provide special construction to 1/16" double wall construction. It can be colored for coding purposes.

Birnbach No.	B & S Gauge Size	I.D. Nom.
B1200-24	24	.022
B1200-22	22	.027
B1200-20	20	.034
B1200-19	19	.038
B1200-18	18	.042
B1200-17	17	.047
B1200-16	16	.053
B1200-15	15	.059
B1200-14	14	.066
B1200-13	13	.076
B1200-12	12	.085
B1200-11	11	.095
B1200-10	10	.106
B1200-9	9	.118
B1200-8	8	.133
B1200-7	7	.148
B1200-6	6	.166
B1200-5	5	.186
B1200-4	4	.208
B1200-3	3	.234
B1200-2	2	.263
B1200-1	1	.294
B1200-0	0	.330
B1200-3/8	3/8	.387
B1200-7/16	7/16	.450
B1200-1/2	1/2	.512
B1200-5/8	5/8	.640
B1200-3/4	3/4	.768
B1200-7/8	7/8	.893
B1200-1"	1"	1.018

STANDARD COLOR: NATURAL OTHER COLORS AVAILABLE TO ORDER

STANDARD PUT-UPS

SIZES #24 thru #15 . . . 1000' - 100'
SIZES #14 thru #2 . . . 500' - 100'
SIZES #1 thru 1/2" . . . 250' - 100'
SIZES 5/8" thru 1" . . . 100'

Applicable Specifications	Class	Grade	Dielectric Strength	Temp. Rating	Low Temp. Flexibility	Flame Resistance
Nema VSI	H	—	Determined by Space Factor	1200°F.	—	Non-Flam.

BIRNBACH COMPANY INC. **FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.**

© United Technical Publications

Birflon — TEFLON* SPAGHETTI TFE EXTRUDED TUBING

T-500 & T-550 Tubing is extruded from DuPont Tetrafluoroethylene Resin. Used in electronic and electrical equipment for connection of components. Its flexibility, ease of handling has established it as the best and most popular insulation sheathing. This high temperature Class C insulation does not melt and flow as the conventional thermoplastic materials. Birflon T-500 Teflon has unique electrical, chemical and mechanical properties unmatched by any other type tubing for use in applications requiring high frequencies and high temperatures.

Because of Teflon's continuous service temperature of 250° C., which is more than 100° C. above other materials, the soldering technique is simplified since "Teflon" is not harmed by the hot barrel of the soldering iron — therefore, the assembly of aircraft, missile and electronic communication equipment is greatly speeded up. Thin Wall flexible Teflon Tubing can be processed easily into flexible and rigid printed circuits. As a thin, flexible insulation, it permits miniaturization and compactness of design never before possible.

TABLE OF PROPERTIES

Test	ASTM Method	Result
Tensile Strength, 73°F.	D638-52T	1500-3000 Lb/Sq. In.
Elongation, 73°F.	D638-52T	100-200%
Deformation Under Load—122°F.		
1200 Lb/Sq. In., 24 Hrs.	D621-51	4-8%
2000 Lb/Sq. In., 24 Hrs.	D621-51	25%
Hardness Durometer	D676-49T	D50-D65
Heat Distortion Temp, 66 Lb/Sq. In.	D648B-45T	250°F.
Dielectric Strength, .180"	D149-44	400-500 V/MIL
Surface Arc-Resistance	D495-48T	Sec.
Volume Resistivity	D257-52T	10^{15} Ohm-CM
Surface Resistivity, 100% R.H.	D257-52T	3.6×10^{6} Megohms
Dielectric Constant, 60 to 10^{8} Cycles	D150-54T	2.00
Power Factor, 60 to 10^{8} Cycles	D150-54T	0.0003
Specific Gravity	D792-50	2.1-2.2

SMALL PIECE CUTTING AVAILABLE TO ORDER

STOCK COLORS: Natural, Red, Black, Blue, Brown, Green, Orange, Yellow, Gray, Violet, White.

Nos. T-500-3/8 thru T-500-1¼ available in Natural. Additional Colors. Sizes Made to Order.

Teflon Tubing can be ordered cut to your specifications.

Tracer Colors Available—We Invite Your Inquiries For Your Special Requirements

ADDITIONAL ADVANTAGES OF BIRFLON T-500 TEFLON*

- **ELECTRICAL:** Low power factor, low dielectric constant, high volume and surface resistivity, good dielectric strength (500 to 1000 volts/MIL) constant over wide ranges of temperatures and frequencies. Dielectric constant of 2.0 and dissipation factor of 0.0002 are lowest of any solid dielectric.
- **THERMAL:** No change of electrical properties with temperature (25°C. to 250°C.) or frequency (60 CPS to 100 MC). Class C insulation — capable of continuous service at temperatures to 250°C. Has color stability.
- **TOUGHNESS AND FLEXIBILITY:** Has high impact strength. Is tough and flexible over the broad temperature range of —90°C. to 250°C. Service range —320°F. to 500°F.
- **CHEMICAL INERTNESS:** Completely inert to all chemicals and solvents except molten alkali metals and fluorine at elevated temperatures and pressures. Non-corrosive to all metals.
- **MOISTURE ABSORPTION:** Zero moisture absorption. Completely sun and weather resistant.
- **NON-FLAMMABLE** ● **LOWEST COEFFICIENT OF FRICTION**
- **FUNGI RESISTANCE:** Inert to all fungi growths.
- **SIZES:** Birflon T-500 Teflon Tubing available in sizes to fit B & S gauge wires. Thin wall available from stock, in sizes No. 32 thru 1¼" I.D. Additional sizes and wall thicknesses made to order.
  Birflon T-500 is made from high molecular weight virgin "Teflon" and meets AMS 3651B, 3653B, 3654, 3655, MIL-C-17B and MIL-I-22129C.

NOTE: When cutting Teflon Tubing, use single edge razor blade for clean unpinched cut.

"Teflon"* DuPont Trade Name for Tetrafluoroethylene Resin

T-500 — Thin Wall (.0085" — .030")

Birnbach No.	B&S Gauge Size No.	Old No.	Nom. I.D.	Nom. Wall
T500-32	32	8013	.011	.0085
T500-30	30	8014	.012	.009
T500-28	28	8015	.015	.009
T500-26	26	8016	.018	.010
T500-24	24	8000	.022	.010
T500-22	22	8001	.027	.010
T500-20	20	8002	.034	.012
T500-19	19	—	.038	.012
T500-18	18	8003	.042	.012
T500-17	17	—	.047	.012
T500-16	16	8004	.053	.012
T500-15	15	—	.059	.012
T500-14	14	8005	.066	.012
T500-13	13	—	.076	.012
T500-12	12	8006	.085	.012
T500-11	11	—	.095	.012
T500-10	10	8007	.106	.012
T500-9	9	—	.118	.015
T500-1/8	1/8	—	.125	.015
T500-8	8	8008	.133	.015
T500-7	7	—	.148	.015
T500-6*	6	8009	.166	.015
T500-5*	5	—	.186	.015
T500-4*	4	8010	.208	.015
T500-3*	3	—	.234	.015
T500-¼*	¼	—	.250	.015
T500-2*	2	8011	.263	.015
T500-1*	1	—	.294	.015
T500-5/16*	5/16	—	.312	.015
T500-0*	0	8012	.330	.015
T500-3/8*	3/8	8020	.390	.020
T500-7/16*	7/16	8021	.453	.020
T500-½*	½	8022	.515	.025
T500-9/16*	9/16	8023	.583	.025
T500-5/8*	5/8	8024	.640	.030
T500-¾*	¾	8025	.765	.030
T500-7/8*	7/8	8026	.895	.030
T500-1*	1	8027	1.025	.030
T500-1⅛*	1⅛	8028	1.150	.030
T500-1¼*	1¼	8029	1.275	.030

* In random lengths.

STANDARD PUT-UPS

SIZES #32 thru 26 _____ 1000' - 500' - 250' - 100'

SIZES #24 thru 1¼" _____ 1000' - 500' - 250' - 100'

Tolerance — Nos. 32 thru 0 — ±.003" on Wall

Tolerance — Nos. 3/8" thru 1¼" — .020" on I.D., .006" on Wall

T-550 — Standard Wall (.012" — .020")

Birnbach No.	B&S Gauge Size No.	Nom. I.D.	Nom. Wall
T550-24	24	.022	.012
T550-22	22	.027	.012
T550-20	20	.034	.016
T550-19	19	.038	.016
T550-18	18	.042	.016
T550-17	17	.047	.016
T550-16	16	.053	.016
T550-15	15	.059	.016
T550-14	14	.066	.016
T550-13	13	.076	.016
T550-12	12	.085	.016
T550-11	11	.095	.016
T550-10	10	.106	.016
T550-9	9	.118	.020
T550-1/8	1/8	.125	.020
T550-8	8	.133	.020
T550-7	7	.148	.020
T550-6	6	.166	.020
T550-5	5	.186	.020
T550-4	4	.208	.020
T550-3	3	.234	.020
T550-¼	¼	.250	.020
T550-2	2	.263	.020
T550-1	1	.294	.020
T550-5/16	5/16	.312	.020
T550-0	0	.330	.020

STANDARD PUT-UPS

1000' - 500' - 250' - 100'

SMALL PIECE CUTTING AVAILABLE TO ORDER

STOCK COLORS: Natural, Red, Black, Blue, Brown, Green, Orange, Yellow, Gray, Violet, White.

OTHER COLORS AVAILABLE TO ORDER

BIRNBACH COMPANY INC. **FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.**

© United Technical Publications

BUSS BAR, TINNED AND UNTINNED
MAGNET WIRE PER MIL-W-583B

SOLID TINNED (SOFT DRAWN) SYMBOL TC

Specification MIL-W-3861 Type S, QQ-W-343 Type S, ASTM-B-33

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BST-10	10	8	10	16	10	32	.103"
BST-12	12	12	12	25	12	50	.082"
BST-14	14	20	14	40	14	80	.065"
BST-16	16	32	16	63	16	126	.051"
BST-18	18	50	18	100	18	201	.040"
BST-20	20	80	20	160	20	320	.033"
BST-22	22	127	22	254	22	508	.025"
BST-24	24	201	24	403	24	806	.020"
BST-26	26	320	26	640	26	1280	.016"
BST-28	28	507	28	1015	28	2030	.013"
BST-30	30	805	30	1610	30	3220	.010"
BST-32	32	1282	32	2564	32	5128	.008"
BST-34	34	2037	34	4075	34	8150	.006"
BST-36	36	3221	36	6443	36	12887	.005"
BST-38	38	5132	38	10246	38	20492	.004"
BST-40					40	32573	.003"

ALL SOLID TINNED COPPER AVAILABLE IN 1000 FT. SPOOLS
BARE COPPER — SOFT DRAWN AVAILABLE FROM STOCK
(See Rest of Page)

TINNED COPPER WIRE — SOLID SOFT BRAND

Pure Electrolytic, Copper, annealed, tinned for quick soldering MIL-W-3861 Type S, ASTM-B-33 specifications, QQ-W-343 Type S

Cat. No.	Size AWG	Area Circular Mils	O.D.
1433/4	4	41,704	.204"
1433/6	6	26,250	.162"
1433	8	16,510	.129"
1402	10	10,380	.103"
1406	12	6,530	.082"
1410	14	4,107	.065"
1414	16	2,583	.051"
1418	18	1,624	.040"
1422	20	1,022	.033"
1434	22	624.4	.025"
1424	24	404.0	.020"
1426	26	254.1	.016"
1428	28	159.8	.013"
1430	30	100.5	.010"
1430/32	32	63.21	.008"
1430/34	34	39.75	.006"
1430/36	36	25.00	.005"
1430/38	38	15.72	.004"

PUT-UPS — 100′ and 1000′ Spools

HEAVY FORMVAR (HF) TYPE T2—MILC-583C

Single conductor round bare copper, baked film insulation from a varnish based on a vinyl acetal resin. 105°C.

Has new tough abrasion resisting film. Replaces enamel and fabric insulations for certain applications requiring exceptional abrasion resistance. Stable under heat. High dielectric strength. Infinite resistance to water and moisture. Does not fail after two hours at 105°C. Takes up less winding space.

ALL MAGNET WIRE AVAILABLE IN LARGER PUT-UPS

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BHF-10	10	8	10	16	10	32	.1056"
BHF-12	12	12	12	25	12	50	.0842"
BHF-14	14	20	14	39	14	78	.0673"
BHF-16	16	31	16	62	16	124	.0539"
BHF-18	18	49	18	99	18	198	.0432"
BHF-20	20	78	20	156	20	313	.0346"
BHF-22	22	125	22	250	22	501	.0277"
BHF-24	24	200	24	399	24	798	.0224"
BHF-26	26	300	26	600	26	1200	.0180"
BHF-28	28	500	28	1000	28	1999	.0144"
BHF-30	30	800	30	1600	30	3200	.0116"
BHF-32	32	1225	32	2450	32	4900	.0095"
BHF-34	34	1988	34	3975	34	7950	.0075"
BHF-36	36	3200	36	6400	36	12800	.0060"
BHF-38	38	5050	38	10100	38	20200	.0049"
BHF-40					40	31700	.0038"
BHF-42					42	49500	.0032"
BHF-44					44	58000	.0026"

UNINSULATED COPPER WIRE

SILICON BRONZE AERIAL WIRE

Especially designed for ships, airports, short wave and transmitting antennas where high tensile strength and resistance to the elements are important.



Cat. No.	Size AWG	Strand	Breaking Strength/Lbs.	Nom. O.D.
529	4	7/12	3670	.240"
528	6	7/14	2140	.190"
527	8	7/16	1600	.150"
499	10	7/18	1000	.122"
524	12	7/20	650	.100"
526	14	7/22	420	.075"

#528 & #499 meets MIL-W-13074; #524 meets MIL-W-13276
STANDARD PUT-UPS: 100′ — 500′ — 1000′

BUS BAR WIRE (Hard Drawn)

QQ-W-343 type S—MIL-W-3861 type S, ASTM-B-33, ASTM-B-246-51 specifications

For hooking up all types of transmitters, especially ultra short wave equipment. All bus wire is made of hard drawn copper, tinned, straightened, and cut in 2 ft. lengths.

STANDARD PACKAGE: 100 pieces of 2 Ft. each.



SOLID

Cat. No.	No.		
2010	10	Round	Tinned
2013	12	Round	Tinned
2015	14	Round	Tinned
2016	16	Round	Tinned
2018	18	Round	Tinned
2020	20	Round	Tinned
2022	22	Round	Tinned

STRANDED TINNED COPPER WIRE

Cat. No.	Size AWG	Strand	Nom. O.D.
495	12	7/20	.102"
1671	14	7/22	.076"
1674	15	7/23	.069"
1628	16	7/24	.062"

#1671 meets H4.4—1940 type W—1
Also available in stranded bare.

JUMPER CABLE
PURE ELECTROLYTIC COPPER, annealed, tinned for quick soldering MIL-W-3861 Type B, ASTM-B-33 Specifications

Cat. No.	Class Descr.	Size AWG	Strand	Nom. O.D.
1622	K	22	7/30	.030"
1620	K	20	10/30	.037"
1618	K	18	16/30	.045"
1616	K	16	26/30	.059"
1614	K	14	41/30	.073"
1612	K	12	65/30	.091"

STANDARD PUT-UPS:
100′ — 500′ — 1000′

STRANDED BARE COPPER WIRE

Cat. No.	Size AWG	Strand	Nom. O.D.
493	12	7/20	.100"
1670	14	7/22	.075"
1673	15	7/23	.068"
1680	16	7/24	.060"
681	18	7/26	.050"
700	19	7/27	.041"

STANDARD PUT-UPS:
100′ — 500′ — 1000′

SOLID ENAMEL COPPER WIRE

Cat. No.	Size AWG	Nom. O.D.
497	10	.103"
492	12	.083"
490	14	.066"

STANDARD PUT-UPS:
100′ — 250′ — 500′ — 1000′

BARE COPPER WIRE (Soft Drawn)
QQ—W—341A specifications
SOLID

Cat. No.	Size AWG	Area Circular Mills	Nom. O.D.
1560	8	16,510	.1285"
1562	10	10,380	.102"
1566	12	6,530	.081"
1570	14	4,107	.064"
1574	16	2,583	.051"

STANDARD PUT-UPS: 100′ — 500′ — 1000′

PLAIN ENAMEL (PE) TYPE E, MIC-W-583C

Single conductor round bare copper covered with a continuous insulating film of enamel. 105°C.

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BPE-10	10	8	10	16	10	32	.1037"
BPE-12	12	12	12	25	12	50	.0825"
BPE-14	14	20	14	40	14	80	.0657"
BPE-16	16	32	16	63	16	126	.0522"
BPE-18	18	50	18	100	18	201	.0416"
BPE-20	20	80	20	160	20	320	.0332"
BPE-22	22	127	22	254	22	508	.0266"
BPE-24	24	201	24	403	24	806	.0212"
BPE-26	26	320	26	640	26	1280	.0169"
BPE-28	28	507	28	1015	28	2030	.0135"
BPE-30	30	805	30	1610	30	3220	.0108"
BPE-32	32	1282	32	2564	32	5128	.0087"
BPE-34	34	2037	34	4075	34	8150	.0069"
BPE-36	36	3221	36	6443	36	12887	.0055"
BPE-38	38	5132	38	10246	38	20492	.0044"
BPE-40					40	32573	.0034"
BPE-42					42	51211	.0028"
BPE-44					44	81819	.0023"

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

Shielding Braid, Insulated Copper Wire, Braiding

FLAT TINNED COPPER SHIELDING



Used for shielding and bonding on aircraft, marine and auto radio wires and cables. Shields speaker leads, lead-ins, amplifier wires. Extremely flexible, slides over wires and cables.

DESCRIPTION:

No. 853 thru 856/7—Composed of extremely flexible fine soft annealed copper tinned wires closely woven, braided and **Rolled Flat.**

No. 860—Composed of extremely flexible fine soft annealed copper wires closely woven, braided and **Rolled Flat.**

TINNED

Cat. No.	Size & No. of Wires	Inside Diam. Flat.	Approx. O.D. Flat.	Approx. AWG Equiv.	Nom. Circ. Mills	Current Carrying Cap./Amps.
853	12x 2/36	1/32"	3/64"	24	400	6.0
854	12x 2/36	3/64"	1/16"	22	600	7.0
855	16x 3/36	1/16"	5/64"	20	1200	11.00
858	24x 5/36	1/8"	3/32"	18	1800	16.00
859	24x 5/36	3/16"	7/32"	15	3000	25.00
863	24x 7/36	1/4"	9/32"	14	4200	32.00
864	48x 4/36	3/16"	13/32"	12	7200	46.00
868	48x 7/36	1/2"	15/32"	10	9600	53.00
865	48x 8/36	3/16"	23/32"	10	9600	53.00
865/1	48x11/36	3/4"	13/16"	7	20,800	85.00
857	48x19/36	25/32"	27/32"	7	20,800	85.00
856	48x19/36	1"	1 1/16"	7	20,800	85.00
856/1	48x19/36	1 3/16"	1 7/16"	7	53,064	85.00
856/2	48x19/36	1 1/2"	1 3/16"	3	125,425	150.00
856/3	48x27/30	1 3/4"	1 7/8"	001	154,368	280.00
856/4	48x32/30	2"	2 1/4"	000	192,000	310.00
856/6	48x45/30	2 1/2"	2 3/4"	000	216,000	340.00
856/7	48x64/30	3"	3 1/4"	0000	225,000	390.00

SPECIAL CONSTRUCTIONS AVAILABLE TO ORDER

STANDARD PUT-UPS:

#853 thru #856/1 — 50′ — 100′ — 250′ — 500′ — 1000′
#856/2 thru #856/7 — 50′ — 100′ — 250′
#860 — 50′ — 100′ — 250′ — 500′ — 1000′

TUBULAR BRAID PER MIL SPEC. QQ-B-575



Manufactured completely round as noted in MIL Spec. QQ-B-575, this tinned copper shielded braid has self-supporting characteristics which enables it to maintain its round shape. The shielding coverage percentage is 95% or more. This tubular braid is used in military applications where maximum shielding against electrostatic interference is indicated. In addition, it is used as a protective covering against mechanical abrasion and stresses for the wires, cables and other components.

Cat. No.	Nom. Inside Diam. When Rounded	Construction: Total No. of Wires	Construction: Carriers	AWG of Indiv. Wires	Approx. AWG Equiv.	Nom. Circular Circular Mills	*Current Carrying Capacity Amps
2250-1/32	1/32"	24	24	36	22	640	7.0
2250-1/16	1/16"	48	24	36	19	1,290	11.0
2250-5/64	5/64"	72	24	36	17	1,900	18.0
2250-7/64	7/64"	96	24	36	16	2,500	22.0
2250-1/8	1/8"	120	24	36	15	3,260	28.0
2250-5/32	5/32"	240	24	36	12	6,200	39.0
2250-11/64	11/64"	168	24	36	14	4,500	32.0
2250-3/16	3/16"	192	24	36	13	5,100	35.0
2250-13/64	13/64"	312	24	36	11	8,200	46.0
2250-1/4	1/4"	384	24	36	10	10,400	53.0
2250-3/8	3/8"	384	48	36	10	10,400	53.0
2250-1/2	1/2"	528	48	36	9	13,200	70.0
2250-9/16	9/16"	528	48	36	9	13,200	70.0
2250-11/16	11/16"	720	48	36	7	19,000	82.0
2250-25/32	25/32"	864	48	36	7	21,750	85.0
2250-13/16	13/16"	864	48	36	7	21,750	85.0
2250-1"	1"	864	48	36	4	38,600	120.0

STANDARD SPOOL PUT-UPS: 50′ — 100′ — 250′, 500′ — 1000′

*Values based on copper in free air at 65°F.
Additional constructions and variations made to order. Also available in silver plated copper, bare copper and stainless steel.

SILVER PLATED TUBULAR BRAID AVAILABLE IN ALL SIZES: 1/32", 1/16", 5/64", 7/64", 1/8", 5/32", 11/64", 13/64", 1/4" and more.

MEASURING MACHINE.

Sturdy and compact construction. Has a precision quality built counter with large numbers for easy reading and will register wire up to .9,999 feet for direct accurate reading. Can be easily reset to zero position.

Wire passes through two rollers, the upper roller being self-adjusting and the tension of the upper roller can be set by a thumb screw to provide the proper grip for very fine as well as for heavy wire.

Two hardened lead bushings with an opening of 1/8" diameter will guide the wire properly through the rollers. Bushings are removable to allow cables up to 1" dia. to pass through. Will measure accurately all electric wires, cables, coaxial cables, rope, tape, etc.

WIRE WINDER

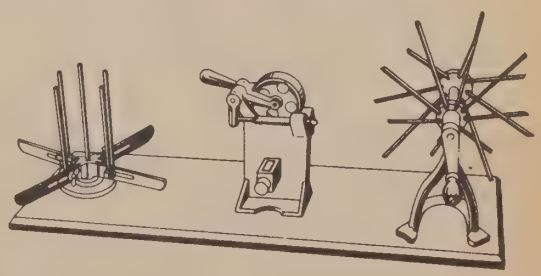
Has adjustable arms to be set to the desired coil size and the arms will open to a flat position for easy removal of the coil. Simply open thumb screw which holds the front collar tight on the shaft, push the collar in any direction to the desired position and tighten the thumb screw again.

HOLDING REEL

Compact, adjustable to size of coil and folding. Will hold spools or coils of wire.

NEW — COMPLETE WIRE MEASURING OUTFIT

ACCURATE • COMPACT • NOISELESS



MEASURES IN INCHES AND FEET
CERTIFICATE OF APPROVAL NO. 498-61
DEPARTMENT OF AGRICULTURE STATE OF CALIFORNIA

	Model No.
Complete:	
Wire Measuring Outfit	7389A
Separately:	
Holding Reel	7398-1M
Measuring Machine	7398-2MA
Wire Winder	7398-3M

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

MIL-W-76B PLASTIC WIRE

*** STOCK COLORS**

1—White	16—White/Brown
2—Black	17—White/Orange
3—Red	18—White/Gray
4—Green	19—White/Violet
5—Yellow	20—White/Black/Red
6—Light Blue	21—White/Black/Green
7—Brown	22—White/Black/Yellow
8—Orange	23—White/Black/Blue
9—Gray (state)	24—White/Black/Brown
10—Violet (purple)	25—White/Black/Orange
11—White/Black	26—White/Black/Gray
12—White/Red	27—White/Black/Violet
13—White/Green	28—Tan
14—White/Yellow	29—Pink
15—White/Blue	30—Dark Blue

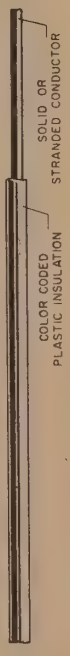
*Other striped color combinations available to order.

MW	C	22	(7)	j
Type OF WIRE	CONDUCTOR MATERIAL	CONDUCTOR SIZE (AWG)	STRANDING	CONSTRUCTION
LW 300 Volt Light Wall	TINNED COPPER	30 thru 20	SOLID 7 STRAND 16 STRAND 26 STRAND 41 STRAND 65 STRAND 105 STRAND 133 STRAND	Symbol — Covering Over Insulated Wire U — None J — Jacket B — Braid S — Shield JS — Jacket and Shield BS — Braid and Shield SJ — Shield & Outer Jacket JSJ — Jacket, Shield and Outer Jacket BSJ — Braid, Shield and Outer Jacket
MW 1,000 Volt Medium Wall	TINNED COPPER	24 thru 12		
HW 2500 Volt Heavy Wall	TINNED COPPER	22 thru 12		
HW 600 Volt Heavy Wall	TINNED COPPER	10 thru 6		

TYPE MW—UNCOVERED PLASTIC 1,000 V

DESCRIPTION: Solid or extra flexible tinned copper, color coded **medium wall** polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating —40° to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.



STRANDED

Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7024	24	MW-C 24(7)U	7/32	015"	1000	059"
7001	22	MW-C 22(7)U	7/30	017"	1000	066"
7003	20	MW-C 20(10)U	10/30	017"	1000	074"
7005	18	MW-C 18(16)U	16/30	017"	1000	085"
7007	16	MW-C 16(26)U	26/30	017"	1000	098"
7009	14	MW-C 14(41)U	41/30	017"	1000	114"
7011	12	MW-C 12(65)U	65/30	017"	1000	132"

SOLID

7025	24	MW-C 24(1)U	1	017"	1000	056"
7000	22	MW-C 22(1)U	1	017"	1000	061"
7002	20	MW-C 20(1)U	1	017"	1000	068"
7004	18	MW-C 18(1)U	1	017"	1000	075"
7026	16	MW-C 16(1)U	1	017"	1000	084"

STANDARD PUT-UPS: 100' - 500' - 1000'
STOCK COLORS — 1 thru 30

MIL-W-76B — TYPE MW — SHIELDED — VINYL JACKET

DESCRIPTION: One conductor stranded tinned copper, **WHITE** medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, black PVC (polyvinylchloride) jacket overall. Temperature rating —40° to +90°C. Resistant to acids, alkalis, oil, flame, moisture, fungus.



Cat. No.	Size AWG	Mil-W-76B Type Designation	Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074VJ	24	MW-C 24(7)SJ	7/32	.015"	1000	.095"
7072VJ	22	MW-C 22(7)SJ	7/30	.017"	1000	.105"
7070VJ	20	MW-C 20(10)SJ	10/30	.017"	1000	.112"
7068VJ	18	MW-C 18(16)SJ	16/30	.017"	1000	.120"
7067VJ	16	MW-C 16(26)SJ	26/30	.017"	1000	.133"
7066VJ	14	MW-C 14(41)SJ	41/30	.017"	1000	.148"
7065VJ	12	MW-C 12(65)SJ	65/30	.017"	1000	.170"

Additional colors available to order.
STANDARD PUT-UPS: 100' - 500' - 1000'

SHIELDED PLASTIC HOOK-UP WIRE

SPECIFICATIONS MIL-W-76B
TEMPERATURE RATING: —40°C TO +80°C
TYPE MW (Medium Wall) — SHIELDED



DESCRIPTION: One conductor stranded tinned copper with **WHITE** thermoplastic insulation and tinned copper shielded braid overall.

Cat. No.	Size AWG	Mil-W-76B Type Designation	Minimum Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074	24	MW-C 24(7)S	7/32	.015"	1000	.074"
7072	22	MW-C 22(7)S	7/30	.017"	1000	.084"
7070	20	MW-C 20(10)S	10/30	.017"	1000	.094"
7068	18	MW-C 18(16)S	16/30	.017"	1000	.106"
7067	16	MW-C 16(26)S	26/30	.017"	1000	.121"
*7066	14	MW-C 14(41)S	41/30	.017"	1000	.137"
*7065	12	MW-C 12(65)S	65/30	.017"	1000	.155"

STANDARD PUT-UPS: 100' - 500' - 1000'

SPECIFICATION MIL-W-76B TYPE MW (Med. Wall)—NYLON JACKET 1000 V (Fungus Proof)



DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and extruded nylon jacket overall.

Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.	Stock Colors
7224	24	MW-C 24(7)J	7/32	.015"	1000	.068"	1-10
7222	22	MW-C 22(7)J	7/30	.017"	1000	.075"	1-10
7220	20	MW-C 20(10)J	10/30	.017"	1000	.087"	1-10
7218	18	MW-C 18(16)J	16/30	.017"	1000	.100"	1-10
7216	16	MW-C 16(26)J	26/30	.017"	1000	.112"	1-10
7214	14	MW-C 14(41)J	41/30	.017"	1000	.122"	1-10
7212	12	MW-C 12(65)J	65/30	.017"	1000	.140"	1-3
7210	10	MW-C 10(105)J	105/30	.017"	1000	.150"	1-3

STANDARD PUT-UPS: 100' - 500' - 1000'

MIL-W-76B — TYPE MW — SHIELDED — NYLON JACKET



DESCRIPTION: One conductor stranded tinned copper, **WHITE** medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, clear nylon (polymide) jacket overall. Temperature rating —40° to +90°C. Resistant to acids, alkalis, oil, flame, moisture, fungus.

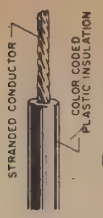
Cat. No.	Size AWG	MIL-W-76B Type Designation	Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074J	24	MW-C 24(7)SJ	7/32	.016"	1000	.087"
7072J	22	MW-C 22(7)SJ	7/30	.017"	1000	.094"
7070J	20	MW-C 20(10)SJ	10/30	.017"	1000	.100"
7068J	18	MW-C 18(16)SJ	16/30	.017"	1000	.110"
7067J	16	MW-C 16(26)SJ	26/30	.017"	1000	.125"
7066J	14	MW-C 14(41)SJ	41/30	.017"	1000	.138"
7065J	12	MW-C 12(65)SJ	65/30	.017"	1000	.160"

Additional colors available to order.
STANDARD PUT-UPS: 100' - 500' - 1000'

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

MIL-W-76B PLASTIC WIRE



MIL-W-76B TYPE HW (Heavy Wall) 2500 VOLTS (Fungus Proof)

DESCRIPTION: Similar to type MW. One conductor stranded tinned copper with larger wall of primary thermoplastic insulation.

CHARACTERISTICS: Temperature rating —40°C to +80°C. Resistant to acids, alkalis, oil, flame, moisture and fungus.

Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.	Stock Colors As Listed
7322	22	HW-C 22(7)U	7/30	.033"	2500	.094"	1-10
7320	20	HW-C 20(10)U	10/30	.033"	2500	.102"	1-10
7318	18	HW-C 18(16)U	16/30	.033"	2500	.114"	1-10
7316	16	HW-C 16(26)U	26/30	.033"	2500	.128"	1-10
7314	14	HW-C 14(41)U	41/30	.045"	600	.175"	1-10
7312	12	HW-C 12(65)U	65/30	.045"	600	.188"	1-10
*7013	10	HW-C 10(105)U	105/30	.045"	600	.217"	1-3
*7015	8	HW-C 8(133)U	133/29	.045"	600	.268"	1-3
*7017	6	HW-C 6(133)U	133/27	.045"	600	.315"	1-3

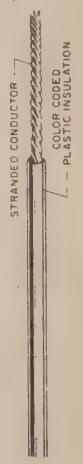
STANDARD PUT-UPS: 100' - 500' - 1000'

MIL-W-76B — TYPE LW (Light Wall) TYPE LW — LW — VINYL — 300 VOLTS

TEMP. RATING —40°C TO 80°+°C

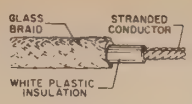
DESCRIPTION: One conductor stranded tinned copper with light wall of primary thermoplastic insulation. Nom. Wall .010".

CHARACTERISTICS: Temperature rating —40°C to +80°C. Voltage rating 300 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.



Cat. No.	Size AWG	MIL-W-76B Type Designation	Conductor Strand	Nom. O.D.	Standard Colors
7330	30	LW-C 30(7)U	7/38	.033"	1-19
7328	28	LW-C 28(7)U	7/36	.035"	1-19
7326	26	LW-C 26(10)U	10/36	.040"	1-19
7324	24	LW-C 24(7)U	7/32	.044"	1-19
7324/22	22	LW-C 22(7)U	7/30	.050"	1-19
7324/20	20	LW-C 20(7)U	7/28	.060"	1-19

STANDARD PUT-UPS: 100' - 500' - 1000'



MIL-W-76B — PLASTIC WIRE TYPE HW (Glass Braid)

Cat. No.	Size AWG	Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7010	10	HW-C 10(105)B	105/30	.045"	600	.237"
7008	8	HW-C 8(133)B	133/29	.045"	600	.293"
7006	6	HW-C 6(133)B	133/27	.045"	600	.340"

STOCK COLOR: White. **STANDARD PUT-UPS:** 100' - 500 - 1000'

MIL-W-76B — TYPE LW (Light Wall) NYLON — 300 VOLTS

DESCRIPTION: Stranded tinned copper, color coded light wall polyvinylchloride insulation, clear nylon (polyamide) jacket overall. Nominal Jacket Thickness, .002".

CHARACTERISTICS: Temperature rating —40°C to +90°C. Voltage rating 300 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.



Cat. No.	Size AWG	MIL-W-76B Type Designation	Conductor Strand	Nom. O.D.	Standard Colors
7330N	30	LW-C 30(7)J	7/38	.036"	1-10
7328N	28	LW-C 28(7)J	7/36	.039"	1-10
7326N	26	LW-C 26(7)J	7/34	.042"	1-10
7324N	24	LW-C 24(7)J	7/32	.047"	1-19
7324/22N	22	LW-C 22(7)J	7/30	.053"	1-19
7324/20N	20	LW-C 20(7)J	7/28	.065"	1-19

STANDARD PUT-UPS: 100' - 500' - 1000'

STOCK COLORS

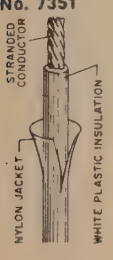
1—White	4—Green	7—Brown	10—Violet (purple)	13—White/Green	16—White/Brown	19—White/Violet
2—Black	5—Yellow	8—Orange	11—White/Black	14—White/Yellow	17—White/Orange	
3—Red	6—Light Blue	9—Gray (slate)	12—White/Red	15—White/Blue	18—White/Gray	

AIRCRAFT PLASTIC HOOK-UP WIRE — MIL-W-5086A and MIL-C-7078A (105°C Rating)

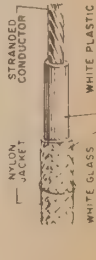
DESCRIPTION: MIL-W-5086A—**Type I**—AN-22 thru AN-12—Single conductor stranded tinned copper, white polyvinylchloride insulation, clear nylon (polyamide) jacket overall. MIL-W-5086A—**Type II**—AN-22 thru AN-12—Single conductor stranded tinned copper, white polyvinylchloride insulation, white glass braid, clear nylon (polyamide) jacket overall. MIL-W-5086A—**Type III**—AN-10 thru AN-00—Single conductor stranded tinned copper, white polyvinylchloride insulation, white glass braid, flame retardant nylon lacquered nylon braid overall. MIL-C-7078A—**Type I**—Single conductor stranded tinned copper, white polyvinylchloride insulation, clear nylon jacket, braided tinned copper shield overall, 85% coverage. MS Numbers by special order.

CHARACTERISTICS: Temperature rating: —55°C. to +105°C. Voltage Rating: 600 volts. Resists effects of water, oil, aircraft fuels, hydraulic fluid, skydral, ethyleneglycol, alcohol, dilute acids, alkalis, fungus and abrasion.

No. 7351



No. 7363



MIL-W-5086A — UNSHIELDED — 600 Volt Rating

Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand	Nom. O.D.
7351	22	AN-22	No. 1	19/34	.100"
7353	20	AN-20	No. 1	19/32	.080"
7355	18	AN-18	No. 1	19/30	.090"
7357	16	AN-16	No. 1	19/29	.100"
7359	14	AN-14	No. 1	19/27	.125"
7361	12	AN-12	No. 1	19/25	.140"
7363	8	AN-8	No. 2	133/29	.240"
7364	6	AN-6	No. 2	133/27	.297"
7365	4	AN-4	No. 2	133/25	.355"

Cat. No.	Size AWG	Mil. Type	Type Cond.	Conds. Strand	Nom. O.D.
7365/2	2	AN-2	No. 2	665/30	.412"
7365/0	0	AN-0	No. 2	1045/30	.518"
7365/00	00	AN-00	No. 2	1330/30	.588"
7351 NB	22	AN-22	No. 2	19/34	.068"
7353 NB	20	AN-20	No. 2	19/32	.078"
7355 NB	18	AN-18	No. 2	19/30	.088"
7357 NB	16	AN-16	No. 2	19/29	.098"
7359 NB	14	AN-14	No. 2	19/27	.117"
7361 NB	12	AN-12	No. 2	19/25	.137"
7362 NB	10	AN-10	No. 2	49/27	.189"

MIL-C-SHIELDED ALSO AVAILABLE

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

PLASTIC HOOK-UP WIRE — MIL-W-16878D

PLASTIC HOOK-UP WIRE — MIL-W-16878D — Type B — High Temperature Vinyl — 600 Volt



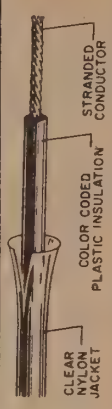
Suitable for general purpose wiring for miniature high temperature hook-ups in aircraft, electronic instruments, devices, etc., where excellent resistance to moisture and solvents may be required. .010" Wall Vinyl

DESCRIPTION: One conductor stranded tinned copper with rated —55°C to +105°C high temperature thermoplastic light wall insulation. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus. Nominal wall: 0.010.

Cat. No.	MIL-W-16878D Type Designation	Size AWG	Conductor Strand	Wall Thick.	Nom. O.D.
7190	B-32	32	7/40	.010"	.028"
7191	B-30	30	7/38	.010"	.030"
7192	B-28	28	7/36	.010"	.033"
7193	B-26	26	7/34	.010"	.037"
7194	B-24	24	7/32	.010"	.043"
7194/19	B-24	24	19/36	.010"	.043"
7195	B-22	22	7/30	.010"	.048"
7195/19	B-22	22	19/34	.010"	.048"
7196	B-20	20	7/28	.010"	.057"
7196/19	B-20	20	19/32	.010"	.057"
7197	B-18	18	7/26	.010"	.067"
7197/19	B-18	18	19/30	.010"	.067"
7198	B-16	16	19/29	.010"	.077"
7199	B-14	14	19/27	.010"	.091"

***STOCK COLORS:** 1 thru 19, as listed.
STANDARD PUT-UPS: 100' - 500' - 1000'

PLASTIC HOOK-UP WIRE — MIL-W-16878D — Type B — Nylon Jacket — 600 Volt



Suitable for general purpose wiring for miniature high temperature hook-ups in aircraft, electronic instruments, devices, etc., where excellent resistance to moisture and solvents may be required.

DESCRIPTION: Stranded tinned copper, color coded. .010" polyvinylchloride insulation, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating —55°C to +115°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
7190N	B-32	32	7/40	.034"
7191N	B-30	30	7/38	.038"
7192N	B-28	28	7/36	.040"
7193N	B-26	26	7/34	.043"
7194N	B-24	24	7/32	.048"
7194N/19	B-24	24	19/36	.048"
7195N	B-22	22	7/30	.055"
7195N/19	B-22	22	19/34	.055"
7196N	B-20	20	7/28	.065"
7196N/19	B-20	20	19/32	.065"
7197N	B-18	18	7/26	.075"
7197N/19	B-18	18	19/30	.075"
7198N	B-16	16	19/29	.085"
7199N	B-14	14	19/27	.099"

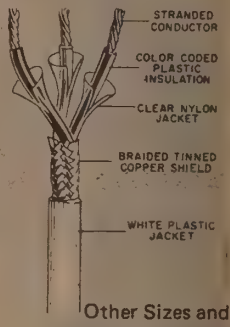
STANDARD PUT-UPS: 100' - 500' - 1000'
***STOCK COLORS:** 1 thru 19, as listed.

MIL-W-16878D — MULTI-CONDUCTOR CABLE — Type B — Nylon Shielded-Plastic Jacket

DESCRIPTION: Each conductor stranded tinned copper, .010" polyvinylchloride insulation, color coded, clear nylon .003 (polyamide) jacket, conductors cabled, braided tinned copper shield 90% coverage, with polyvinylchloride jacket overall.

CHARACTERISTICS: Temperature rating —55°C to +105°C. Voltage rating 600 volts, resistant to acids, alkalis, oil, flame, moisture, fungus, solvents.

Birnbach No.	No. of Cond.	Conductor Size	Conductor Strand	Nom. Overall Jacket	Volt Rating	Nom. O.D.
7366-1	1	24	19/36	.010"	600 volts	.092"
7366-2	2	24	19/36	.016"	600 volts	.152"
7366-3	3	24	19/36	.016"	600 volts	.161"
7366-4	4	24	19/36	.017"	600 volts	.166"
7367-1	1	22	19/34	.010"	600 volts	.100"
7367-2	2	22	19/34	.016"	600 volts	.168"
7367-3	3	22	19/34	.017"	600 volts	.178"
7367-4	4	22	19/34	.019"	600 volts	.174"
7368-1	1	20	19/32	.010"	600 volts	.106"
7368-2	2	20	19/32	.019"	600 volts	.186"
7368-3	3	20	19/32	.019"	600 volts	.196"
7368-4	4	20	19/32	.021"	600 volts	.193"
7369-1	1	18	19/30	.012"	600 volts	.120"
7369-2	2	18	19/30	.021"	600 volts	.210"
7369-3	3	18	19/30	.022"	600 volts	.227"
7369-4	4	18	19/30	.023"	600 volts	.231"
7370-1	1	16	19/29	.016"	600 volts	.137"
7370-2	2	16	19/29	.023"	600 volts	.236"
7370-3	3	16	19/29	.024"	600 volts	.240"
7370-4	4	16	19/29	.025"	600 volts	.274"



Other Sizes and Colors Available

STANDARD PUT-UP: 100' - 500' - 1000' **COLOR CODE OF CONDUCTORS:** 1—White 2—Black 3—Red 4—Green

MIL-W-16878D — Type C — High Temperature — Vinyl — 1000 Volt (.016")



DESCRIPTION: One Conductor Similar to Type B — Heavier Wall Hi-Temp. Thermoplastic Insulation. Nom. Wall .016".

CHARACTERISTICS: Temperature rating —55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

Cat. No.	MIL-W-16878C Type Designation	Size AWG	Minimum Strand	Nom. O.D.
7170	C-24	24	7/32	.058"
7171	C-22	22	7/30	.064"
7172	C-20	20	7/28	.073"
7173	C-18	18	7/26	.085"
7174	C-16	16	19/29	.095"
7175	C-14	14	19/27	.109"
7176	C-12	12	19/25	.124"

***STOCK COLORS:** 1 thru 19, as listed.
STANDARD PUT-UPS: 100' - 500' - 1000'

MIL-W-16878D — Type C — Shielded — Nylon Jacket



DESCRIPTION: Stranded tinned copper, white .016" polyvinylchloride insulation, braided tinned copper shield, 90% coverage, clear nylon (polyamide) jacket (which can be striped to order for color identification) overall.

CHARACTERISTICS: Temperature rating —55°C to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

Cat. No.	Conductor Size	Conductor Strand	Nom. Wall Thickness	Nom. Jacket Thickness	Nom. O.D.
7180/24	24	7/32	.016"	.005"	.091"
7180/22	22	7/30	.016"	.005"	.098"
7180/20	20	7/28	.016"	.005"	.105"
7180/18	18	16/30	.016"	.005"	.115"
7180/16	16	19/29	.016"	.005"	.125"
7180/14	14	19/27	.016"	.005"	.138"
7180/12	12	19/25	.016"	.005"	.159"

STANDARD PUT-UPS: 100' - 500' - 1000'

MIL-W-16878D — Type C — High Temperature Nylon Jacket — 1000 Volt (.016")

NYLON JACKET THICKNESS: 24 .002, 22, 20. 18 .003, 16-14 .004

Cat. No.	MIL-W-16878C Type Designation	Size AWG	Minimum Strand	Nom. O.D.
7170N	C-24	24	7/32	.065"
7171N	C-22	22	7/30	.072"
7172N	C-20	20	7/28	.079"
7173N	C-18	18	7/26	.090"
7174N	C-16	16	19/29	.099"
7175N	C-14	14	19/27	.114"
7176N	C-12	12	19/25	.125"

STOCK COLORS: 1 thru 19, as listed.
STANDARD PUT-UPS: 100' - 500' - 1000'

MIL-W-16878D — Type C — Nylon — Shielded — Nylon Jacket 1000 Volts

DESCRIPTION: Stranded tinned copper, **WHITE** .016" polyvinylchloride insulation, .003 clear nylon (polyamide), braided tinned copper shield, 90% coverage, clear nylon (polyamide) jacket (which can be striped to order for color identification) overall.

CHARACTERISTICS: Temperature rating —55°C to +115°C. Voltage rating 1000 volts. Resistance to acids, alkalis, oil, flame, moisture, solvents and fungus.

Cat. No.	Size AWG	Strand	Nom. Wall Thickness	Nylon Jkt.	Nom. O.D.
7180N/24	24	7/32	.016"	.005"	.098"
7180N/22	22	7/30	.016"	.005"	.105"
7180N/20	20	7/28	.016"	.005"	.112"
7180N/18	18	19/30	.016"	.005"	.122"
7180N/16	16	19/29	.016"	.005"	.132"
7180N/14	14	19/27	.016"	.005"	.145"
7180N/12	12	19/25	.016"	.005"	.166"

BIRNBACH COMPANY INC. **FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.**

© United Technical Publications

TEST LEAD WIRES

KINKLESS TEST LEAD WIRE

Used with portable test equipment; as tested, leads in analyzers, oscillators, instruments; wherever extreme flexibility and limpness is required. Has excellent dielectric properties.

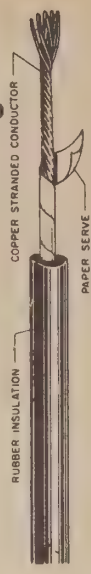
DESCRIPTION: **RUBBER INSULATED**

No. 61—#20—41/36 extra flexible annealed tinned copper, stranded.

No. 66—#18—65/36 extra flexible annealed tinned copper stranded; paper serve; 3/64" special low capacity rubber, wax finish.

Colors: Red, Black.

Types WS-16/U Black, WS-17/U Red; No. 70 per MIL-W-13169 Specification available same construction as Birnbach #66 except compound per specification.



Cat. No.	Size AWG	Strand	Ins.	Puncture Voltage	Nom. O.D.
61	20	41/36	3/64"	20,000 V	.137"
66	18	65/36	3/64"	22,000 V	.145"
70*	18	65/36	3/64"	22,000 V	.145"

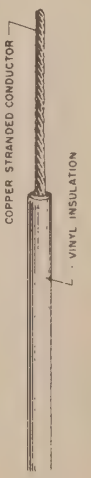
* MILITARY TYPE SPECIFICATION MIL-W-13169B
WS-16/U Black WS-17/U Red
STANDARD PUT-UPS: 100' - 250' - 500' - 1000'

NEW PLASTIC KINKLESS TEST LEAD WIRE

New formulation vinyl compound insulation allows maximum flexibility; rough treatment; extreme variation in climatic conditions; excellent abrasion resistance; greater temperature stability from —80°C to +115°C; fungus resistant; self extinguishing-flame proof; smooth surface. Resists exposure to gasoline and oil. 5000 volts.

DESCRIPTION: One conductor tinned copper stranded, special formulation vinyl insulation.

Colors: Black, Red, Yellow, Green, White, Blue.



Cat. No.	Size AWG	Strand	Ins.	Nom. O.D.
1922	22	26/36	.032"	.100"
1920	20	26/34	.032"	.104"
1918	18	65/36	.032"	.112"
1916	16	65/34	.032"	.129"

For portable test equipment; as test leads for instrumentation exceeds the requirements for MIL-I-3930A type JP (PVC). It is superior to synthetic rubber spec MIL-R-6855 Class II Grade 60.

STANDARD PUT-UPS: 100' - 250' - 500' - 1000'

HEAVY DUTY HI-VOLTAGE TYPE

DESCRIPTION:

No. 68—#18—65/36 extra flexible annealed tinned copper; stranded; paper serve; 3/64" special low capacity rubber, wax finish.

COLORS: RED, BLACK. **RUBBER INSULATED**

Used for oscillators, analyzers, TV, therapeutic instruments, etc.; wherever an extremely flexible high voltage lead is indicated.



Cat. No.	Size AWG	Strand	Ins.	Puncture Voltage	Nom. O.D.
68	18	65/36	5/64"	29,000 V	.210"

STANDARD PUT-UPS: 100' - 250' - 500' - 1000'

U.L. HOOK-UP WIRES

KYNAR® "WIRE WRAP" WIRE — UL APPROVED (POLYVINYLDENE FLUORIDE) INSULATED, 130°C 300V

Description: Solid silver plated copper, Kynar insulation

Applications: Especially designed for use on computer back panel wiring in conjunction with "wire wrap" systems. Kynar insulation is particularly suited for this application because of its cut through resistance, high temperature rating and because it can be made available in long lengths

Part No.	Conductor	Nom. Insulation Thickness	O.D.	U.L. Style	Stock *Colors
BK-2130	#30 Solid Copper	.0045"	.0195" ±.001"	#1422	1-6
BK-2128	#28 Solid Copper	.005"	.020" ±.001"	#1423	1-4
BK-2126	#26 Solid Copper	.0055"	.027" ±.0015"	#1422	1,2
BK-2124	#24 Solid Copper	.011"	.042" ±.0015"	#1327	1,2

® PENNSALT CHEMICAL COMPANY
*Stock Colors: 1. White 2. Black 3. Red 4. Yellow 5. Blue 6. Brown

U.L. Plastic Insulated Hook-Up Wire



Designed for the chassis, sub-chassis wiring of radio and television receivers and transmitters inside or outside the chassis. UL type for 105°C. (221°F.) operating temp.
105°C.—600 Volt Rating UL Type (CSA 600V-90°C)
DESCRIPTION: One Conductor stranded annealed copper tinned, plastic insulation.

UL Style 1015, CSA TR-32

Cat. No.	AWG	Stranding	Nom. Wall	Volt. Breakdown	DC Ins. Res. Megs./Ft.	Max. O.D.
7201	22	7/30	.032"	18000	5000	.100"
7203	20	10/30	.032"	18000	5000	.104"
7205	18	16/30	.032"	18000	5000	.112"
7207	16	26/30	.032"	18000	5000	.129"
7202	22	Solid	.032"	18000	5000	.095"
7204	20	Solid	.032"	18000	5000	.102"

STOCK COLORS: 1 thru 10, as listed
STANDARD PUT-UPS: 100' - 500' - 1000'

U.L. Approved Hook-Up Wire 300V — 80°C

UL Style 1007, CSA TR-64

Stranded tinned copper, polyvinylchloride insulation —10°C to +80°C — 300 v.

Birnbach No.	Size	Strand	Nom. Wall	Nom. O.D.
7230	24	7/32	.016"	.057"
7231	22	7/30	.016"	.065"
7233	20	10/30	.016"	.071"
7234	18	16/30	.016"	.080"
7235	16	26/30	.016"	.095"

STOCK COLORS: 1-10 as listed
STANDARD PUT-UPS: 100'-500'-1,000'

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

RETRACTILE CORDS

This series of Birnbach Coiled Kinkless Retractile Cords are permanently coiled into a spring-like shape without the use of metal springs or elastic bands. They have inherent "Recovery" properties. These Retractile cords extend approximately six times its retracted length, returning to its original shape and length when released. Always as long as you need them and no longer, they will not kink, tangle, trail, knot or dangle on the floor or bench and cause accidents. Useful wherever cords or cables must change length or position.

RETRACTILE TEST LEAD WIRE



Stretch coiled kinkless test lead wire description. 12" coil—stretches to approx. 6 feet. One conductor #20 stranded copper rubber insulation .165 O.D. Coil O.D. ¾".
100 Volts Maximum Working

Cat. No.		Pkge. Std.
64	12" Retracted - Approx. 6' Extended	6
65	24" Retracted - Approx. 12' Extended	6

BIRNBACH MINIATURE RETRACTILE CORD



This small size is suitable where compact equipment is required. 2 ft. retracted, approximately 10 ft. extended. Black plastic jacket overall.
Tinsel Cordage
Nom. Cond. resistance:
.07 OHMS per linear foot (approx. .6 OHMS per retracted ft.)
Maximum working voltage: 100; current capacity ½ amp.

Cat. No.	Cond.	Size AWG	Strand	Coil O.D.	Cond. O.D.	Std. Pkg.
875/28	2	28	19/40TC	½"	.135	10
877/28	4	28	19/40TC	½"	.150	10

CONDUCTOR COLOR CODE: 1-Black, 2-White, 3-Red, 4-Green. For 3 conductors, use 4 cond. and cut one dead.

RETRACTILE COILED COMMUNICATION CORD

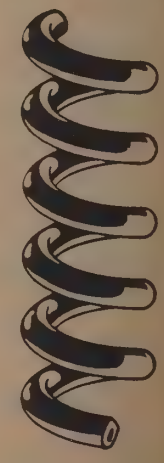


Multi-conductors stranded communication cord No. 23 AWG. Tinned copper wire neoprene or Geon plastic jacketed. Long lengths can be cut to exact requirement. Adds product reliability. Useful wherever cords must change length or position. Nom. cond. resistance .022 ohms per linear foot, .185 ohms per retracted foot. Maximum working voltage 120 volts. Current carrying capacity 1 ampere.

Cat. No.	Retracted Length	Approx. Length Extended	Cond.	Size AWG	Strand	Coil O.D.	Nom. O.D.
875-2	24"	12 Ft.	2	23	21/36	¾"	.200"
875	36"	18 Ft.	2	23	21/36	¾"	.200"
875-4	48"	25 Ft.	2	23	21/36	¾"	.200"
876-2	24"	12 Ft.	3	23	21/36	¾"	.210"
876	36"	18 Ft.	3	23	21/36	¾"	.210"
876-4	48"	25 Ft.	3	23	21/36	¾"	.210"
877-2	24"	12 Ft.	4	23	21/36	13/16"	.240"
877	36"	18 Ft.	4	23	21/36	13/16"	.240"
877-4	48"	25 Ft.	4	23	21/36	13/16"	.240"
878-2	24"	12 Ft.	5	23	21/36	1"	.285"
878	36"	18 Ft.	5	23	21/36	1"	.285"
878-4	48"	25 Ft.	5	23	21/36	1"	.285"
878/6-2	24"	12 Ft.	6	23	21/36	1⅛"	.305"
878/6	36"	18 Ft.	6	23	21/36	1⅛"	.305"
878/6-4	48"	25 Ft.	6	23	21/36	1⅛"	.305"
878/7-2	24"	12 Ft.	7	23	21/36	1¼"	.320"
878/7	36"	18 Ft.	7	23	21/36	1¼"	.320"
878/7-4	48"	25 Ft.	7	23	21/36	1¼"	.320"
878/8	48"	25 Ft.	8	23	21/36	1⅜"	.360"
878/10	48"	25 Ft.	10	23	21/36	1⅜"	.380"
878/12	48"	25 Ft.	12	23	21/36	1⅜"	.410"
878/15	48"	25 Ft.	15	23	21/36	1½"	.470"
878/37	48"	25 Ft.	37	23	21/36	2½"	.680"

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Red, 4-Green, 5-Blue, 6-Yellow, 7-Brown, 8-Orange, 9-White/Black Tracer, 10-White/Red Tracer, 11-White/Green Tracer, 12-White/Blue Tracer, 13-White/Yellow Tracer, 14-White/Brown Tracer, 15-White/Orange Tracer. Also available in retracted lengths of 12", 24" and 48".

RETRACTILE (KINKLESS) COILED SHIELDED COMMUNICATION CORDS



DESCRIPTION: Single and multi-conductor shielded microphone cable neoprene or geon plastic jacketed. This cable remains neat and compact with no danger of tripping or of the wire becoming entangled in equipment. Also suitable for stereo and additional speaker extensions. Shield can be pigtailed for soldering. No. 24 AWG Str. is 41/40 tinned soft cad. copper: No. 23 has 21/36 tinned soft cad. copper. Spiral wrapped tinned soft copper shielding.

Cat. No.	Retr. Length	Approx. Length Extended	Cond.	Size AWG	Coil O.D.	Nom. O.D.	Maximum Working Voltage	Capacitance MMF Lin. Ft.	Capacitance MMF Retr. Ft.	Std. Pkg.
895	48"	25 Ft.	1	No. 24 Shielded	5/8"	.160"	75	56	440	10
895A	12"	6 Ft.	1	No. 24 Shielded	5/8"	.160"	75	56	440	10
895B	6"	3 Ft.	1	No. 24 Shielded	5/8"	.160"	75	56	440	10
896	48"	25 Ft.	2	1-No. 23 1-No. 24 Shielded	7/8"	.200"	#23-120 #24- 75	56	450	10
896A	12"	6 Ft.	2	1-No. 23 1-No. 24 Shielded	7/8"	.200"	#23-120 #24- 75	56	450	10
897	48"	25 Ft.	3	2-No. 23 1-No. 24 Shielded	7/8"	.240"	#23-120 #24- 75	56	450	10
897A	12"	6 Ft.	3	2-No. 23 1-No. 24 Shielded	7/8"	.240"	#23-120 #24- 75	56	450	10
899	48"	25 Ft.	2	2-No. 24 Shielded	7/8"	.210"	75	56	450	10
899A	12"	6 Ft.	2	2-No. 24 Shielded	7/8"	.210"	75	56	450	10
898	48"	25 Ft.	4	2-No. 23 2-No. 24 Shielded	1"	.270"	#23-120 #24- 75	56	460	10
898A	12"	6 Ft.	4	2-No. 23 2-No. 24 Shielded	1"	.270"	#23-120 #24- 75	56	460	10

Additional conductors and sizes available. CONDUCTORS ARE COLOR CODED.

RETRACTILE COMMUNICATION CORDS

PREPARED FOR EASY INSTALLATION AND REPLACEMENT

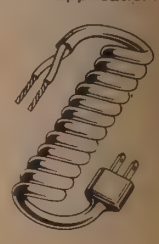
RETRACTED LENGTH 12" — EXTENDED LENGTH 6 FEET

DESCRIPTION: Same as communication cords except each end is prepared as indicated. Tinsel Cordage

Cat. No.	Cond.	Size AWG	Nom. Coil O.D.	Nom. Cord O.D.	Preparation
883	3	23-21/36	13/16"	.220"	**1 end:** total length 1½". Conductors stripped and tinned. **Other end:** total length 1½" jacket removed.
884	4	23-21/36	13/16"	.250"	**1 end:** total length 1". Conductors stripped and tinned. **Other end:** total length 1½" jacket removed.
885	5	23-21/36	1⅛"	.285"	**1 end:** total length 4⅛". Conductors stripped and tinned. **Other end:** total length 4⅛" conductors stripped and tinned.

RETRACTILE POWER CORD SETS

Excellent for portable use. All mobile equipment and office equipment wherever the device application is synonymous with repetitive movement. The "Answer" to most tough hazard problems. 2 and 3 conductors SVO and SJO Retractile Kinkless Neoprene Service Cord Sets with Molded Male Plug one end, other end stripped for application. Adds reliability, compactness and portability.



Cat. No.	Retracted Length	Ext.	Cond.	Size AWG	UL Type	Strand	Coil O.D.
880	18"	9 Ft.	2	18	SVO	41/34	1"
880/3	18"	9 Ft.	3	18	SVO	41/34	1⅛"
881	18"	9 Ft.	2	18	SJO	41/34	1¼"
881/3	18"	9 Ft.	3	18	SJO	41/34	1½"
882	18"	9 Ft.	2	16	SJO	65/34	1½"
882/3	18"	9 Ft.	3	16	SJO	65/34	1½"

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Green.

BIRNBACH COMPANY INC. **FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.**

© United Technical Publications

RETRACTILE HEAVY DUTY AND POWER CORD SETS

RETRACTILE Super Heavy Duty POWER CORDS

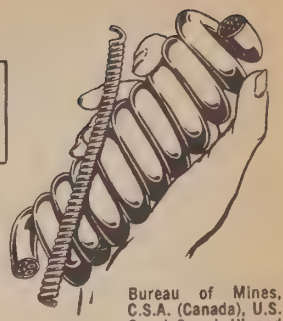
GUARANTEED TO RETRACT FOR 4 YEARS MILITARY INDUSTRIAL. AWG SIZES — 12, 14, 16, 3 and 4 COND.

Especially desirable in the maintenance of **industrial automation** equipment, refrigerated trucks and trailers, mass assembly and production equipment, plane maintenance, control cable for cherry pickers, magnetic cranes, standby power distribution, heavy duty machinery.

Useful whenever and wherever a tougher, more rugged heavy duty power cable is indicated as in foundries, aboard ships, reelins on overhead cranes and hoists, tanks, plug-in power for refrigeration and immersion heaters, etc. Usable around salt water, chemicals and many other areas which makes the use of reels undesirable . . . 48" retracted — 25' extended.

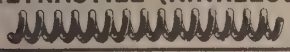
NEW! All Birnbach Retractiles Available in One Foot Lengths.

BB Cat. No.	Conds.	Size AWG	Strand.	Nom. JKT. Thkns.	Nom. O.D.
1300	3	16	65/34	7/64"	.505"
1300/4	4	16	65/34	7/64"	.535"
1301	3	14	41/30	7/64"	.620"
1301/4	4	14	41/30	7/64"	.660"
1302	3	12	65/30	8/64"	.715"
1302/4	4	12	65/30	8/64"	.770"



Bureau of Mines, C.S.A. (Canada), U.S. Coast Guard, UL and Armv/Navy approved

RETRACTILE (KINKLESS) POWER CORDS RUBBER, NEOPRENE AND PLASTIC — UL AND CSA APPROVED



DESCRIPTION: Multi-conductor power cords, each conductor stranded copper, tough rubber, neoprene or geon plastic jacket overall UL and CSA approved. Available from stock in indicated lengths, can be cut to desired length.

Cat. No.	Retracted Length	Approx. Length Ext.	No. Cond.	Size AWG	Strand	UL Type	Amp. Rating	Volt Rating	Cord. Nom. O.D.
886-2	24"	12'	2	18	41/34	SVO	7	300	7/8" .250
886	36"	18'	2	18	41/34	SVO	7	300	7/8" .250
886-4	48"	25'	2	18	41/34	SVO	7	300	7/8" .250
886/3-2	24"	12'	3	18	41/34	SVO	7	300	1" .275
886/3-3	36"	18'	3	18	41/34	SVO	7	300	1" .275
886/3	48"	25'	3	18	41/34	SVO	7	300	1" .275
887-2	24"	12'	2	18	41/34	SVO	7	300	7/8" .250
887	36"	18'	2	18	41/34	SVO	7	300	7/8" .250
887-4	48"	25'	2	18	41/34	SVO	7	300	7/8" .250
889-2	24"	12'	2	18	41/34	SJO	7	300	1 3/16" .310
889	36"	18'	2	18	41/34	SJO	7	300	1 3/16" .310
889-4	48"	25'	2	18	41/34	SJO	7	300	1 3/16" .310
890-2	24"	12'	2	18	41/34	SJO	7	300	1 3/16" .310
890	36"	18'	2	18	41/34	SJO	7	300	1 3/16" .310
890-4	48"	25'	2	18	41/34	SJO	7	300	1 3/16" .310
889/3-2	24"	12'	3	18	41/34	SJO	7	300	1 3/8" .330
889/3	36"	18'	3	18	41/34	SJO	7	300	1 3/8" .330
889/3-4	48"	25'	3	18	41/34	SJO	7	300	1 3/8" .330
889/4-2	24"	12'	4	18	41/34	SJO	5.6	300	1 7/16" .360
889/4	36"	18'	4	18	41/34	SJO	5.6	300	1 7/16" .360
889/4-4	48"	25'	4	18	41/34	SJO	5.6	300	1 7/16" .360
889/5-2	24"	12'	5	18	41/34	—	5.6	300	1 3/4" .440
889/5	48"	25'	5	18	41/34	—	5.6	300	1 3/4" .440
889/7-2	24"	12'	7	18	41/34	—	5.6	300	1 7/8" .500
889/7	48"	25'	7	18	41/34	—	5.6	300	1 7/8" .500
891-2	24"	12'	2	16	65/34	SJO	10	300	1 3/8" .330
891	36"	18'	2	16	65/34	SJO	10	300	1 3/8" .330
891-4	48"	25'	2	16	65/34	SJO	10	300	1 3/8" .330
891/3-2	24"	12'	3	16	65/34	SJO	10	300	1 7/16" .365
891/3	36"	18'	3	16	65/34	SJO	10	300	1 7/16" .365
891/3-4	48"	25'	3	16	65/34	SJO	10	300	1 7/16" .365
891/4-2	24"	12'	4	16	65/34	SJO	8	300	1 5/8" .395
891/4	36"	18'	4	16	65/34	SJO	8	300	1 5/8" .395
891/4-4	48"	25'	4	16	65/34	SJO	8	300	1 5/8" .395
891/5-2	24"	12'	5	16	65/34	—	8	600	2" .540
891/5	48"	25'	5	16	65/34	—	8	600	2" .540
891/6-2	24"	12'	6	16	65/34	—	8	600	2 1/8" .550
891/6	48"	25'	6	16	65/34	—	8	600	2 1/8" .550
891/7-2	24"	12'	7	6/16 1/14	#16-65/34 #14-41/30	—	#16-8 #14-12	600	2 1/4" .600
891/7	48"	25'	7	6/16 1/14	#16-65/34 #14-41/30	—	#16-8 #14-12	600	2 1/4" .600
893-2	24"	12'	2	14	41/30	SO	15	600	2" .535
893	36"	18'	2	14	41/30	SO	15	600	2" .535
893-4	48"	25'	2	14	41/30	SO	15	600	2" .535
893/3-2	24"	12'	3	14	41/30	SO	15	600	2 1/8" .560
893/3	36"	18'	3	14	41/30	SO	15	600	2 1/8" .560
893/3-4	48"	25'	3	14	41/30	SO	15	600	2 1/8" .560
893/4-2	24"	12'	4	14	41/30	SO	12	600	2 1/4" .605
893/4	36"	18'	4	14	41/30	SO	12	600	2 1/4" .605
893/4-4	48"	25'	4	14	41/30	SO	12	600	2 1/4" .605
894-2	24"	12'	2	12	65/30	SO	20	600	2 1/4" .605
894	36"	18'	2	12	65/30	SO	20	600	2 1/4" .605
894-4	48"	25'	2	12	65/30	SO	20	600	2 1/4" .605
894/3-2	24"	12'	3	12	65/30	SO	20	600	2 3/8" .635
894/3	36"	18'	3	12	65/30	SO	20	600	2 3/8" .635
894/3-4	48"	25'	3	12	65/30	SO	20	600	2 3/8" .635
894/4-2	24"	12'	4	12	65/30	SO	16	600	2 1/2" .665
894/4	36"	18'	4	12	65/30	SO	16	600	2 1/2" .665
894/4-4	48"	25'	4	12	65/30	SO	16	600	2 1/2" .665
894/6-2	24"	12'	6	2-12 4-18	#12-65/30 #18-41/34	—	#12-17 #18-6	600	2 1/4" .605
894/6	48"	25'	6	2-12 4-18	#12-65/30 #18-41/34	—	#12-17 #18-6	600	2 1/4" .605
894/7-2	24"	12'	7	12	65/30	—	16	600	2 5/8" .775
894/7	48"	25'	7	12	65/30	—	16	600	2 5/8" .775

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Green, 4-Red, 5-Blue, 6-Brown, 7-Yellow

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

CORD SETS

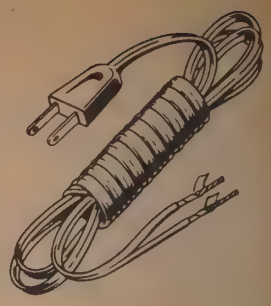
SERVICE LINE CORDS
UL Approved

An all purpose approved power supply cord for radios, record players, lamps, & small appliances.

DESCRIPTION: Two Conductors Rubber Parallel SP-1 (POSJ) **with Molded-on Male Plug,** double brass blades, conductor end striped and tinned, hanked. Available in Black and Brown. 7 AMPS, 300 Volts.

Cat. No.	Length Ft.	Cond.	Size AWG	Strand	Nom. O.D.
1-816	6	2	18	41/34	.130x.235
1-817	7½	2	18	41/34	.130x.235
1-819	10	2	18	41/34	.130x.235
1-820	12	2	18	41/34	.130x.235
1-821	15	2	18	41/34	.130x.235
1-822	20	2	18	41/34	.130x.235

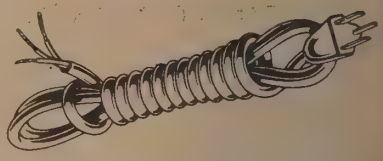
All cords available in SPT-1



HEAVY DUTY SERVICE CORD
CSA APPROVED — (HEAVY DUTY) — UL APPROVED

Used for heavy duty replacement on refrigerators, washing machines, machinery, tools and electronic devices.

DESCRIPTION: Two and Three Conductors, Stranded Bare Copper, cotton serve, rubber insulation, jute filler, cotton wrap, tough rubber jacket overall, molded plug one end, free end stripped and tinned for easy attachment — Hankd.

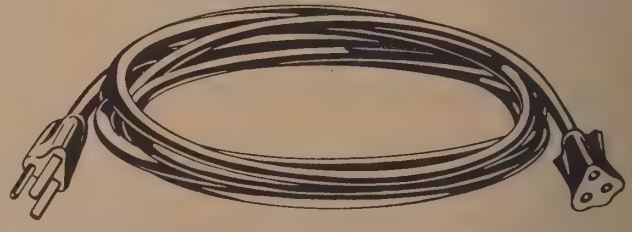


Cat. No.	Length Ft.	Cond.	Size AWG	AMPS	UL Type	Volts	Strand	O.D.
1-301	6	2	18	7 AMPS	SV	300V	41/34	.250
1-309	9	2	18	7 AMPS	SV	300V	41/34	.250
1-312	12	2	18	7 AMPS	SV	300V	41/34	.250
1-304	20	2	18	7 AMPS	SV	300V	41/34	.250
1-309/3	9	3	18	7 AMPS	SV	300V	41/34	.265
1-306	8	2	18	7 AMPS	SJ	300V	16/30	.300
1-307	10	2	18	7 AMPS	SJ	300V	16/30	.300
1-308	12	2	18	7 AMPS	SJ	300V	16/30	.300
1-347	8	3	18	7 AMPS	SJ	300V	16/30	.330
1-310	10	3	18	7 AMPS	SJ	300V	16/30	.330
1-311	12	3	18	7 AMPS	SJ	300V	16/30	.330
1-348	8	2	16	10 AMPS	SJ	300V	26/30	.325
1-313	10	2	16	10 AMPS	SJ	300V	26/30	.325
1-314	12	2	16	10 AMPS	SJ	300V	26/30	.325
1-346	8	3	16	10 AMPS	SJ	300V	26/30	.355
1-316	10	3	16	10 AMPS	SJ	300V	26/30	.355
1-317	12	3	16	10 AMPS	SJ	300V	26/30	.355

HEAVY DUTY EXTENSION CORD SETS
(UL & CSA APPROVED)

DESCRIPTION: Extension cord sets manufactured for lasting service with a flexible 2 or 3 conductor quality black rubber cord. This rugged cord has a black molded plastic male and female plug on either end to fit conventional sockets and plugs.

APPLICATION: Small business machines, vacuum cleaners, lamps, movie projectors, or any other home appliance. 3 conductor cord used when 1 conductor requires grounding.

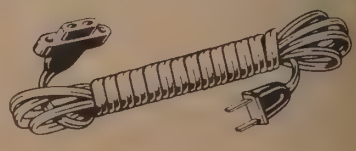


Cat. No.	Lenght Ft.	Cond.	Size AWG	AMPS	UL Type	Volts	Strand	O.D.
1-401	6	2	18	7 AMPS	SV	300V	41/34	.250
1-402	9	2	18	7 AMPS	SV	300V	41/34	.250
1-403	12	2	18	7 AMPS	SJ	300V	16/30	.300
1-404	25	2	18	7 AMPS	SJ	300V	16/30	.300
1-405	50	2	18	7 AMPS	SJ	300V	16/30	.300
1-406	12	2	16	10 AMPS	SJ	300V	26/30	.330
1-407	25	2	16	10 AMPS	SJ	300V	26/30	.330
1-408	50	2	16	10 AMPS	SJ	300V	26/30	.330
1-409	100	2	16	10 AMPS	SJ	300V	26/30	.330
1-410	15	3	18	7 AMPS	SJ	300V	16/30	.330
1-411	25	3	18	7 AMPS	SJ	300V	16/30	.330
1-412	50	3	18	7 AMPS	SJ	300V	16/30	.330
1-413	15	3	16	10 AMPS	SJ	300V	26/30	.360
1-414	25	3	16	10 AMPS	SJ	300V	26/30	.360
1-415	50	3	16	10 AMPS	SJ	300V	26/30	.360
1-416	100	3	16	10 AMPS	SJ	300V	26/30	.360

TV POWER SUPPLY CORD—UL APPROVED

Used extensively as replacement of damaged or worn out TV cords.

DESCRIPTION: Six Foot Rip Strip TV U.L. Approved Safety Cord, 2-cond. No. 18 SP-1 (POSJ) brown rubber cord with molded male plug and TV molded-on connector on other end.



Cat. No. 1-815 Television Power Supply Cord — 6 Feet — 7 AMPS
Also Available SPT-1 — 300 Volts

BIRNBACH COMPANY INC.

FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

© United Technical Publications

MULTI-CONDUCTOR, INTERCOM & AUDIO CABLES

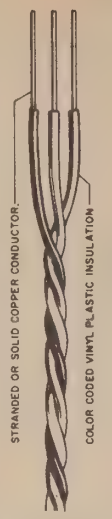
UNSHIELDED AUDIO CABLE STRANDED AND SOLID COND. (2 & 3)

Widely used for connecting sound and inter-com systems, audio hookups, indoors — outdoors. Telephones, telemetering connections. For Baby Sitter Intercoms.

FOR INDOOR USE Without Outer Jacket

DESCRIPTION: Stranded and Solid Tinned Copper Conductors, vinyl plastic insulation, color coded, conductors twisted.

Cat. No.	Cond.	Size AWG		Nom. Insul.	Nom. O.D.
931	2	22 Solid		.016"	.100"
933	3	22 Solid		.016"	.115"
981	2	20 Solid		.016"	.120"
983	3	20 Solid		.016"	.140"
985	2	18 Solid		.016"	.145"
987	3	18 Solid		.016"	.155"
989	2	16 Solid		.016"	.175"
989/3	3	16 Solid		.016"	.190"
990	2	22 Stranded	7/30	.016"	.125"
990/3	3	22 Stranded	7/30	.016"	.140"
991	2	20 Stranded	10/30	.016"	.145"
991/3	3	20 Stranded	10/30	.016"	.160"
992	2	18 Stranded	16/30	.016"	.165"
992/3	3	18 Stranded	16/30	.016"	.180"
993	2	16 Stranded	26/30	.016"	.190"
993/3	3	16 Stranded	26/30	.016"	.210"
994	2	14 Stranded	41/30	.016"	.220"
994/3	3	14 Stranded	41/30	.016"	.240"
995	2	12 Stranded	65/30	.016"	.250"
995/3	3	12 Stranded	65/30	.016"	.275"



CONDUCTOR COLOR CODE: 1-Brown, 2-Tan, 3-Gray
STANDARD PUT-UPS: 100' - 250' - 500' - 1000'

PLASTIC INTERCOMMUNICATING CABLES

TWISTED PAIRS — SOLID CONDUCTORS

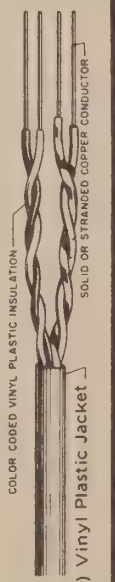
DESCRIPTION: Each Conductor #22 Solid Copper Tinned, .010" Wall Vinyl Plastic Insulation, conductors color coded, twisted pairs cabled, tubed gray Vinyl plastic jacket overall. Suitable for outdoor installations.

Cat. No.	Pairs	Cond.	Size AWG	Nom. Jkt.	Nom. O.D.
4701	1	2	22 Solid	.020"	.145"
4702	2	4	22 Solid	.020"	.205"
4703	3	6	22 Solid	.020"	.215"
4706	6	12	22 Solid	.020"	.250"
4709	9	18	22 Solid	.020"	.310"
4711	11	22	22 Solid	.020"	.350"
4711/13	13	26	22 Solid	.025"	.385"
4715	15	30	22 Solid	.025"	.390"
4716	16	32	22 Solid	.025"	.405"
4727	27	54	22 Solid	.035"	.495"
4727/31	31	62	22 Solid	.035"	.555"
4727/41	41	82	22 Solid	.035"	.630"
4729	51	102	22 Solid	.045"	.750"
4729/76	76	152	22 Solid	.070"	.970"
4729/101	101	202	22 Solid	.080"	1.140"

TWISTED PAIRS — STRANDED CONDUCTORS

DESCRIPTION: Each Conductor #22 7/30 Stranded Tinned Copper, .010" Vinyl plastic insulation, twisted pairs cabled, conductors color coded, tubed gray Vinyl plastic jacket overall.

Cat. No.	Pairs	Cond.	Size AWG	Strand	JKT. Thkns.	Nom. O.D.
4731	1	2	22	7/30	.020"	.145"
4732	2	4	22	7/30	.020"	.210"
4733	3	6	22	7/30	.020"	.225"
4734	4	8	22	7/30	.020"	.235"
4735	5	10	22	7/30	.020"	.245"
4736	6	12	22	7/30	.020"	.270"
4739	9	18	22	7/30	.020"	.325"
4740	11	22	22	7/30	.020"	.365"
4745	15	30	22	7/30	.025"	.455"
4745/19	19	38	22	7/30	.025"	.480"
4746	23	46	22	7/30	.030"	.530"
4747	27	54	22	7/30	.035"	.570"
4748	31	62	22	7/30	.040"	.635"
4749	41	82	22	7/30	.040"	.710"
4750	51	102	22	7/30	.045"	.800"



STANDARD PUT-UPS: 50' - 100' - 250' - 1000'

Pair No.	Color Combo.	Pair No.	Color Combo.	Pair No.	Color Combo.
1	Black p. w. Red	18	Green p. w. Yellow	35	Purple p. w. Slate
2	Black p. w. White	19	White p. w. Blue	36	Purple p. w. Black
3	Black p. w. Green	20	White p. w. Brown	37	Slate p. w. Red
4	Black p. w. Blue	21	White p. w. Orange	38	Slate p. w. White
5	Black p. w. Brown	22	White p. w. Yellow	39	Slate p. w. Green
6	Black p. w. Yellow	23	Blue p. w. Brown	40	Slate p. w. Blue
7	Black p. w. Orange	24	Blue p. w. Orange	41	Slate p. w. Brown
8	Red p. w. Green	25	Blue p. w. Yellow	42	Slate p. w. Yellow
9	Red p. w. White	26	Brown p. w. Orange	43	Slate p. w. Orange
10	Red p. w. Blue	27	Brown p. w. Yellow	44	Slate p. w. Black
11	Red p. w. Yellow	28	Purple p. w. Red	45	White/Black p. w. Red
12	Red p. w. Brown	29	Purple p. w. White	46	White/Black p. w. Green
13	Red p. w. Orange	30	Purple p. w. Green	47	White/Black p. w. Blue
14	Green p. w. Blue	31	Purple p. w. Blue	48	White/Black p. w. Brown
15	Green p. w. White	32	Purple p. w. Brown	49	White/Black p. w. Yellow
16	Green p. w. Brown	33	Purple p. w. Yellow	50	White/Black p. w. Orange
17	Green p. w. Orange	34	Purple p. w. Orange	51	White/Black p. w. Purple

— p. w. = paired with —

SPIRAL WRAPPED SHIELDED AUDIO and MULTI-CONDUCTOR CABLE

Plastic Jacketed — with Spiral wrapped copper shield

Designed for P.A. and sound systems, installations in schools, hospitals, and institutions, recording studios, transmitters, paging and call systems.

DESCRIPTION: Each conductor copper tinned, ¼ plastic insulation, color coded, twisted, spiral wrapped tinned copper shield. gray plastic jacket overall.

Cat. No.	Cond.	Size AWG.	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
941	2	22	7/30	.017"	.020"	.171"
941/1	1	22	7/30	.017"	.020"	.120"
941/3	3	22	7/30	.017"	.020"	.190"
941/4	4	22	7/30	.017"	.020"	.205"
941/6	6	22	7/30	.017"	.020"	.240"
950	2	22	1	.017"	.020"	.169"
942	2	20	10/30	.017"	.020"	.190"
942/1	1	20	10/30	.017"	.020"	.129"
943	3	20	10/30	.017"	.020"	.208"
944	4	20	10/30	.017"	.020"	.222"
945	6	20	10/30	.017"	.020"	.260"
946	1	18	16/30	.017"	.020"	.139"
947	2	18	16/30	.017"	.020"	.230"
947/3	3	18	16/30	.017"	.020"	.228"
947/4	4	18	16/30	.017"	.020"	.243"
948	2	16	26/30	.017"	.020"	.250"
949	3	16	26/30	.017"	.020"	.249"



CONDUCTOR COLOR CODE: 1-Black, 2-Red, 3-White, 4-Green
STANDARD PUT-UP: 100' - 250' - 500' - 1000'

SHIELDED PLASTIC JACKETED CABLE with ALUMINUM MYLAR* FOIL SHIELD

This cable is extremely light in weight and provides 100% shield coverage at audio and radio frequencies.

DESCRIPTION: Each conductor tinned copper, color coded polyethylene insulation, twisted with #22 7/30 stranded tinned copper drain wire, aluminum Mylar* foil shield, gray polyvinylchloride jacket overall.

Cat. No.	Cond.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
1890	2	22	7/30	.015"	.020"	.165"
1890/3	3	22	7/30	.015"	.020"	.175"
1890/4	4	22	7/30	.015"	.020"	.190"
1891	2	20	10/30	.015"	.020"	.180"
1891/3	3	20	10/30	.015"	.020"	.190"
1891/4	4	20	10/30	.015"	.020"	.200"
1892	2	18	16/30	.017"	.020"	.220"
1892/3	3	18	16/30	.017"	.020"	.230"
1892/4	4	18	16/30	.017"	.020"	.240"



CONDUCTOR COLOR CODE: 1-Black, 2-Red, 3-White, 4-Green
STANDARD PUT-UP: 100' - 500' - 1000'

MULTI-CONDUCTOR FLEXIBLE CABLE

DESCRIPTION: Each conductor #22 7/30 tinned copper stranded .010" thermoplastic insulation, color coded, conductors twisted, gray vinyl plastic jacket overall. Used for signal, P.A. systems. Electronic computer cable, suitable for outdoor use. GRAY JACKET

Cat. No.	Cond.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
156	2	22	7/30	.010"	.020"	.140"
157	3	22	7/30	.010"	.020"	.145"
158	4	22	7/30	.010"	.020"	.170"
159	5	22	7/30	.010"	.020"	.175"
160	6	22	7/30	.010"	.020"	.185"
161	7	22	7/30	.010"	.020"	.190"
162	8	22	7/30	.010"	.020"	.200"
163	9	22	7/30	.010"	.020"	.225"
164	10	22	7/30	.010"	.020"	.235"
165	12	22	7/30	.010"	.020"	.255"
165/15	15	22	7/30	.010"	.020"	.280"
165/20	20	22	7/30	.010"	.020"	.310"
165/25	25	22	7/30	.010"	.020"	.340"
165/30	30	22	7/30	.010"	.020"	.365"
165/40	40	22	7/30	.010"	.020"	.425"
165/50	50	22	7/30	.010"	.020"	.500"
165/60	60	22	7/30	.010"	.020"	.530"



STANDARD PUT-UPS: 100' - 250' - 500' - 1000'

COLOR CODE OF CONDUCTORS

1-Black	21-White/Brown	41-White/Green/Red
2-Red	22-White/Orange	42-White/Green/Green
3-White	23-White/Gray	43-White/Green/Blue
4-Green	24-White/Violet	44-White/Green/Brown
5-Orange	25-White/Black/Red	45-White/Green/Purple
6-Blue	26-White/Black/Green	46-White/Blue/Black
7-Brown	27-White/Black/Yellow	47-White/Blue/Red
8-Yellow	28-White/Black/Blue	48-White/Blue/Green
9-Purple	29-White/Black/Brown	49-White/Blue/Blue
10-Slate	30-White/Black/Orange	50-White/Blue/Brown
11-Pink	31-White/Black/Slate	51-White/Blue/Purple
12-Tan	32-White/Black/Purple	52-White/Brown/Black
13-Red/Green	33-White/Black/Black	53-White/Brown/Red
14-Red/Yellow	34-White/Red/Black	54-White/Brown/Green
15-Red/Black	35-White/Red/Red	55-White/Brown/Blue
16-White/Black	36-White/Red/Green	56-White/Brown/Brown
17-White/Red	37-White/Red/Blue	57-White/Brown/Purple
18-White/Green	38-White/Red/Brown	58-White/Purple/Red
19-White/Yellow	39-White/Red/Purple	59-White/Purple/Green
20-White/Blue	40-White/Green/Black	60-White/Purple/Blue

BIRNBACH COMPANY INC. FOR MORE INFORMATION ON COMPLETE LINES, WRITE FOR NEW CATALOG.

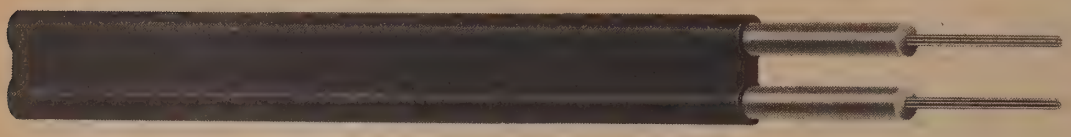
© United Technical Publications

COLUMBIA

COLUMBIA ELECTRONIC CABLES

DURAFOAM®

The outstanding success of Durafoam can be attributed to Durafoam's superior performance over the full spectrum of VHF, UHF and FM channels. The increasing popularity of UHF channels make mandatory the use of a low attenuation cable. Durafoam has been used to improve reception under the most adverse conditions such as moisture, ice, heavy snow, chemical fumes, salt air and other factors that seriously affect most transmission lines.



JACKET SURFACE PRINTED:
COLUMBIA 5790 DURAFOAM *VHF – UHF* TV TRANSMISSION LINE U. S. PAT. #3,219,752, CANADIAN PAT. #736,090

VHF • UHF • COLOR • FM Transmission Line

Durafoam installs as easily as flat ribbon line, requiring no special stand-off insulators. Columbia's time proven high molecular weight black polyethylene PERMALINE jacket is so durable that we unconditionally guarantee that Durafoam will not deteriorate for a period of 15 years when used under normal atmospheric conditions. Durafoam's patented design of isolating the 2 foam polyethylene dielectric tubes from each other reduces attenuation. All other types of transmission lines available today have a common dielectric surrounding the copper conductors so that both conductors are affected simultaneously by any combination or other factors in the dielectric which cause increased attenuation.

OVER 100,000,000 FT.
NOW IN USE!

U. S. PATENT NUMBER 3,219,752
CANADIAN PATENT NUMBER 736,090



UNCONDITIONALLY GUARANTEED
FOR 15 YEARS!

CATALOG NUMBER	LENGTH	TYPE PKG.
5790-21	1000′	Spool
5790-18	500′	Spool
5790-65	100′	Flat Pack
5790-76	75′	Flat Pack
5790-64	50′	Flat Pack

Cable size is .410 inches O.D. width and .150 inches O.D. of cellular polyethylene tubes. Flat packs are display boxed with factory attached terminals on one end and 2 extra terminals are included to assure perfect connections at the antenna and receiver.

An antenna can function no better than the lead-in that connects it to the receiver. For the best reception be sure to specify COLUMBIA DURAFOAM.

Only a partial listing. Ask your local distributor for the complete COLUMBIA CATALOG.

© United Technical Publications

COLUMBIA ELECTRONIC CABLES

THRIFTFOAM®



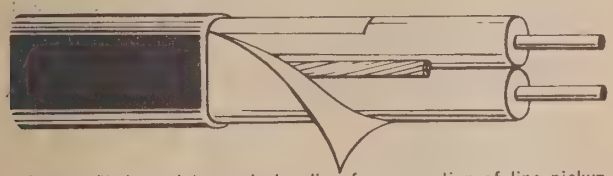
Columbia's answer to a growing need for a quality-built, low cost foam transmission line. THRIFTFOAM will deliver clear, sharp reception under adverse conditions. Features a cellular foam polyethylene inner dielectric, providing lower capacitance and lower attenuation losses. Two stranded copper conductors. Jacket: weather-resistant black polyethylene for durability and line protection. THRIFTFOAM is easy to install . . . requires no special stand-off insulators or expensive matching transformers and connectors.

CAT. NO. 5740-21 — 1000′ spool • CAT NO. 5740-18 — 500′ spool • CAT. NO. 5740-75 — 100′ flat pack • CAT. NO. 5740-79 — 75′ flat pack • CAT. NO. 5740-74 — 50′ flat pack

SHIELDED PERMAFOAM®

TV TRANSMISSION LINE

UHF — VHF — COLOR — FM



- A new all-channel transmission line for prevention of line pickup interference especially in areas of high interference.
- Aluminum/Mylar shield for 100% effective coverage.
- Tinned copper ground wire attaches to set.
- High molecular weight PERMALINE® jacket for superior weathering.
- No stand-off insulators or matching transformers necessary . . . can be taped directly to the antenna mast and led through gutters.
- Copperweld conductors for maximum conductivity and high tensile strength.

CABLE SIZE: .275 x .455 — CAT. NO. 5720-21 (1000′ reel), 5720-18 (500′ spool), 5720-65 (100′ coil*), 5720-76 (75′ coil*), 5720-64 (50′ coil*)

*** Have factory-attached terminals plus 2 add'l. terminals. Each packed 12 pieces in a floor display carton.**

ANTENNA ROTOR CABLES

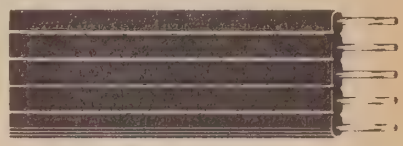
One outside conductor tinned for polarity. Virgin polyethylene insulation.

FLAT — 4 CONDUCTOR



Cat. No.	Gauge	Approx. Size	Stranding	Put up*
1114-21	20	.080 x .335	7/28	1000′
1114-18	20	.080 x .335	7/28	500′
1114-65	20	.080 x .335	7/28	100′
1114-76	20	.080 x .335	7/28	75′
1114-64	20	.080 x .335	7/28	50′

FLAT — 5 CONDUCTOR



Cat. No.	Gauge	Approx. Size	Stranding	Put up*
1115-21	20	.080 x .450	7/28	1000′
1115-18	20	.080 x .450	7/28	500′
1115-65	20	.080 x .450	7/28	100′
1115-76	20	.080 x .450	7/28	75′
1115-64	20	.080 x .450	7/28	50′

* 1000′ and 500′ on spools. Shorter lengths flat pack.

TV WIRE - VHF, FM

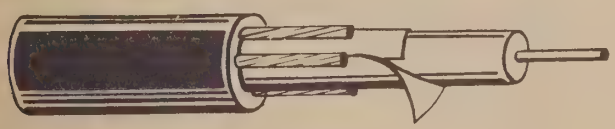
Flat, twin lead, 300 OHM Brown Poly . . . for finest reception in black & white or color.



Cat. No.	Gauge	Approx. Size	Stranding	Put up
1004-21	20	.100 x .430	7/28	1000′
1004-18	20	.100 x .430	7/28	500′
1080-21	20	.080 x .395	7/28	1000′
1080-18	20	.080 x .395	7/28	500′
1080-65	20	.080 x .395	7/28	100′*
1080-76	20	.080 x .395	7/28	75′*
1055-21	20	.055 x .385	7/28	1000′
1010-21	22	.045 x .350	7/30	1000′
1005-21	22	.100 x .415	7/30	1000′
1005-18	22	.100 x .415	7/30	500′
1053-68	22	.055 x .350	7/30	50′**
1054-69	22	.055 x .350	7/30	100′**

* Flat packed ** Skin packed . . . brown or clear

DURA-COLOR® UHF-VHF 82 Channel RG-59 Type Coaxial Cable



- Lowest loss RG 59U type cable for color TV
- 100% shielding – 100% swept tested
- Black or white jacket
- Uses standard PL259 fittings

Shield is laminated high tensile strength aluminum/Mylar foil totally covering and overlapping a virgin polyethylene core. Four equally spaced tinned copper drain wires are positioned around the shield, providing extra strength and electrical conductivity.

Attenuation (DB loss/100′)

VHF 55 MC = 2.0, 200 MC = 3.8

UHF 500 MC = 6.3, 650 MC = 6.9, 800 MC = 8.3

Cat. No.	Put Up	Jacket Color
5750-21	1000′ Spool	Black or White
5750-18	500′ Spool	Black or White

DURA-COLOR KITS



5751 — For UHF and VHF – contains BALUN, matching transformer, grounding clamp, and 5750 cable – attractively boxed.

5752 — For UHF and VHF – contains BALUN, grounding clamp, 5750 cable, special band separator with 75 OHM input, and 2 (two) 300 OHM outputs (one UHF, the other VHF) – attractively boxed.

Cat. No.	Length
5751-65 & 5752-65	100′
5751-76 & 5752-76	75′
5751-64 & 5752-64	50′

Ask your local distributor for illustrated Columbia Electronic Cables Catalog showing complete selection of 4, 5, 7, and 8 conductor ROUND rotor cables . . . as well as full details on the full range of Colombia products.

© United Technical Publications

COLUMBIA ELECTRONIC CABLES

SUPER-FLEX® COAXIAL CABLES

Finest coaxial cables available – not only because of appearance and flexibility, but because they actually outperform similar cables now on the market. Cables feature high gloss jackets and have foam polyethylene primary insulation to reduce attenuation as much as 25% below regular coaxial cables. Super-Flex cables stay flexible in severe cold. They use standard connectors. Ideal for citizens band and amateur use. Perfect for MATV. Standard stock colors are Black-white-silver and Beige. Other colors to special order with a minimum of 10,000′ of a color.

RG 8U Super-Flex



52 Ohm impedance (19/.020 conductor). Cap. 22.1 MMFD per ft. Attenuation 1.50 DB per 100′ at 100 MC. Overall size .405. Cat. No. 1198-41-1000′. Cat. No. 1198-38-500′. Cat. No. 1198-12-100′. Cat. No 1198-79-75′*. Cat. No. 1198-74-50′*.

RG 58 A/U Super-Flex



50 Ohm impedance (19/.0068 conductor). Cap. 22.9 MMFD per ft. Attenuation 4.25 DB per 100′ at 100 MC. Overall size .195. Cat. No. 1188-21-1000′. Cat. No. 1188-18-500′. Cat. No. 1188-12-100′. Cat. No 1188-79-75′*. Cat. No. 1188-74-50′*.

RG 59/U Super-Flex



73 Ohm impedance (22 solid Copperweld conductor). Cap. 16.6 MMFD per ft. Attenuation 2.95 DB per 100′ at 100 MC. Overall size .242. Cat. No. 1135-21-100′. Cat. No. 1135-18-500′. Cat. No. 1135-12-100′. Cat. No. 1135-79-75′*. Cat. No. 1135-74-50′

*Flat packs

PERMAFOAM® LOW LOSS COAXIAL CABLES



A foam polyethylene dielectric replaces the conventional solid polyethylene thus providing far lower capacitance and attenuation. Overall jacket is our PERMALINE® high molecular weight polyethylene. This non-contaminating jacket is unaffected by salt air, chemical fumes, damp rot, fungus, acids, alkalis, etc., and is immune to the deteriorating effects of sunlight and other ultra-violet.

72-75 OHM PERMAFOAM COAXIAL CABLE

Cat. No.	R.G. No.	Nom. Imp.	Atten. 100′ 100 MC	Wire Size	O.D.	Spool Size
5035-21	59U	73	2.95 DB	22 cpwld	.240	1000′
5035-18	59U	73	2.95 DB	22 cpwld	.240	500′
5025-41	11U	75	1.50 DB	14 Solid	.405	1000′
5025-38	11U	75	1.50 DB	14 Solid	.405	500′

52-53 OHM PERMAFOAM COAXIAL CABLE

Cat. No.	R.G. No.	Nom. Imp.	Atten. 100′ 100 MC	Wire Size	O.D.	Spool Size
5045-21	58U	53	3.10 DB	20 Solid	.195	1000′
5045-18	58U	53	3.10 DB	20 Solid	.195	500′
5045-12	58U	53	3.10 DB	20 Solid	.195	100′
5015-41	8U	52	1.50 DB	7/.034	.405	1000′
5015-38	8U	52	1.50 DB	7/.034	.405	500′
5015-12	8U	52	1.50 DB	7/.034	.405	100′
5090-41	17U	52	.712 DB	5 Solid	.870	1000′
5090-38	17U	52	.712 DB	5 Solid	.870	500′
5090-33	17U	52	.712 DB	5 Solid	.870	100′

DOUBLE SHIELDED COAXIAL CABLE



Low radiation double shielded PERMALINE coaxial cable for MATV and CATV systems. CAT. NO. 5027-41 — RG 11U — Double Shield/Double Jacket **Permafoam** 1000′ spool.

RG 11U SELF-SUPPORTING MESSENGER TYPE



Low loss weatherproof coaxial cable for CATV systems and other applications requiring steel messenger cables for long runs. Eliminates need for stringing separate messenger cables. 3/16″ seven strand glv. steel messenger has tensile strength of well over 3000 lbs. . . . cannot rust . . . is protected by the same insulation used on all Columbia PERMAFOAM coaxial cables. Unique cable design allows for easy removal of outer insulation at terminating points. Overall dimensions: width .760″, coaxial cable .405″, messenger .300″. Available cut to length. CAT. NO. 5020 – RG 11U, Conductor 14 Solid, 75 OHMS, 66% V.P., MMF/FT. 16.2.

COLUMBIA COAXIAL CABLES



Premium quality coaxial cables.

CATALOG NO. 1000′	500′	100′	R.G. No.	Nom. Imp.	Nom. MMFD/ Ft.	Approx. Size	Wire Size
SOLID POLY DIELECTRIC PREMIUM TYPE							
1104-21	1104-18	1104-12	59U*	73	21	.240	22 cpwld.
5005-21	5005-18	5005-12	59U†	73	21	.240	22 cpwld.
1154-41	1154-38		8U*	52	29.5	.405	7/21
5017-41	5017-38	5017-12	8U†	52	29.5	.405	7/21
1160-41	1160-38	1160-12	11U*	75	20.5	.405	7/26
5011-41	5011-38	5011-12	11U†	75	20.5	.405	7/26
1166-21	1166-18	1166-12	58U*	53.5	28.5	.195	20 ga.
5023-21	5023-18	5023-12	58U†	53.5	28.5	.195	20 ga.
1178-21	1178-18	1178-12	58A/U*	50	29	.159	19/.0068
COMMERCIAL TYPE FOAM POLY DIELECTRIC							
1112-21	1112-18		59U*	73	21	.240	22 cpwld.
5135-21	5135-18		59U†	73	21	.240	22 cpwld.
5013-41	5013-38		8U‡	52	29.5	.405	7/21
5043-21	5043-18		58U‡	53	26.0	.195	20 solid
COMMERCIAL TYPE SOLID POLY DIELECTRIC							
1110-21	1110-18		59U*	73	21	.240	22 cpwld.
S1154-41	S1154-38		8U*	52	29.5	.405	7/21
S1162-21	S1166-18		58U*	53.5	28.5	.195	20 ga.

*Vinyl jacket †Black permaline jacket ‡Black polyethylene jacket

Long lengths of any Columbia coaxial cable available on request.

Only a partial listing. Ask your local distributor for the complete COLUMBIA CATALOG.

© United Technical Publications

COLUMBIA ELECTRONIC CABLES

MICROPHONE/SHIELDED Power Supply and Control Cables

ALL TYPES STRANDED

COLUMBIA EXCLUSIVE FLEXFOAM® MICROPHONE CABLES

Flexfoam Cables offer up to 35% lower capacitance than the best regular microphone cables available today . . . made possible by the use of foamed polyethylene inner dielectric instead of the solid polyethylene normally used. This low capacitance means cable runs can be increased as much as 50% over standard cables. Flexfoam cables are also ideal for Hi-Fi and high quality sound work because of their extremely low attenuation, particularly at the higher audio-frequencies. A special flexible vinyl outer jacket provides flexibility almost as good as rubber plus a big increase in abrasion resistance.

Color: Silver gray.

BRAIDED SHIELD 25 Ga.



Cat. No.	Type	Approx. Size	Cap. Per ft.	Put up
1398-18	crystal size	.190	16 MMF	500′
1399-15	crystal size	.190	16 MMF	250′
1379-18	lapel size	.140	19 MMF	500′
1379-18	lapel size	.140	19 MMF	250′

SPIRAL SHIELD 25 Ga.



Cat. No.	Type	Approx. Size	Cap. Per ft.	Put up
1395-18	crystal size	.250	11 MMF	500′
1395-15	crystal size	.250	11 MMF	250′
1395-12	crystal size	.250	11 MMF	100′
1389-18	crystal size	.190	16 MMF	500′
1389-15	crystal size	.190	16 MMF	250′
1389-12	crystal size	.190	16 MMF	100′
1314-18	crystal size*	.160	25 MMF	500′
1314-15	crystal size*	.160	25 MMF	250′
1369-21	lapel size	.140	19 MMF	1000′
1369-18	lapel size	.140	19 MMF	500′
1369-15	lapel size	.140	19 MMF	250′
1369-12	lapel size	.140	19 MMF	100′
1366-21	lapel size*	.125	33 MMF*	1000′
1366-15	lapel size*	.125	33 MMF*	250′
1359-21	miniature	.085	39 MMF	1000′
1359-18	miniature	.085	39 MMF	500′
1359-15	miniature	.085	39 MMF	250′
1359-12	miniature	.085	39 MMF	100′

* Solid polyethylene dielectric

COLUMBIA FLEXLIFE® MICROPHONE CABLES

Extra flexible vinyl jacket with superior abrasion resistance and high gloss finish.

BRAIDED SHIELD (Tinned Copper) 2 CONDUCTOR 22 Ga.



Cat. No.	Type	Approx. Size	Cap. Per ft.	Put up
1322-18	Low	.230	30 MMF	500′
1322-15	imped-	.230	30 MMF	250′
1322-12	ance	.230	30 MMF	100′

FLEXLIFE (Cont'd)

BRAIDED SHIELD HEAVY DUTY 18 Ga.

Heavy duty studio type microphone cable plastic jacketed (black or red) to withstand abrasion and rough usage. Tinned copper conductors and shield. Jute fillers. Approx. size .295. Cap. per ft. 75 MMF. Cat. No. 3302-18-500′. Cat. No. 3302-12-100′

SPIRAL SHIELD 2 CONDUCTOR 22 Ga.



Tinned copper shield. Low impedance. Approx. size .230. Cap. per ft. 30 MMF. Cat. No. 1323-18-500′. Cat. No. 1323-15-250′. Cat. No. 1323-12-100′.

LOW-IMPEDANCE NOISE-RESISTANT 2 CONDUCTOR 22 Ga.



Here is a newly designed Microphone Cable that will withstand the severe abuse that has been a problem with microphone cables used in theaters, night clubs, etc. Cable can be handled roughly without danger of copper strands in shield breaking to cause noise. In this new cable a heavy duty spiral tinned copper shield is applied over a primary shield of conductive vinyl. Repeated tests have shown that this will far outlast conventional shielded two conductor microphone cables. Remarkable flexibility is obtained by use of a Columbia Flexlife Silver Gray Jacket that also imparts an excellent appearance. Silver-gray only. Approx. size .235. Cap. per ft. 35 MMF. Cat. No. 1324-18-500′. Cat. No. 1324-15-250′. Cat. No. 1324-12-100′.

RUBBER, VINYL, NEOPRENE



Cables have low loss insulation over extra-flexible copper conductors. Closely woven tinned copper shield is covered with tough wear resistant jacket.

RUBBER JACKET & INSULATION 20 Ga. 26/34 Stranded

CAT. NO.		Approx. Size	Cap. per ft.	No. Cond.
1300	Specify	.260	30 MMF	1
1302	1000′	.280	70 MMF	2
1304	500′	.285	65 MMF	3
1306	250′	.300	65 MMF	4
1308	or	.330	60 MMF	5
1310	100′	.350	60 MMF	6
1312		.365	60 MMF	7

VINYL JACKET 20 Ga. 26/34 Stranded

1643	Specify	.250	600	3
1644	1000′	.260	VOLT	4
1645	500′	.275	RATING	5
1646	250′	.300	POLY.	6
1648	or	.330	INS.	8
1650	100′	.375		10

Only a partial listing. Ask your local distributor for the complete COLUMBIA CATALOG.

© United Technical Publications

COLUMBIA ELECTRONIC CABLES

MICROPHONE/SHIELDED
POWER SUPPLY and CONTROL CABLES (Cont'd)

NEOPRENE JACKET RUBBER INSULATION



Available in 100', 500', and 1000' spools. After catalog number, specify "C" for 100', "D" for 500', and "M" for 1000'. Black neoprene jacketed.

Cat. No.	No. Cond.	Ga.	Stranding	Nom. Wall Thick.	Nom. Jkt. Thick.	Approx. Size
1201	1	18	41/34	.040	.035	.240
1202	2	18	41/34	.020	.035	.295
1203	3	18	41/34	.020	.035	.305
1204	4	18	41/34	.020	.035	.330
1206	6	18	41/34	.020	.035	.370
1208	8	18	41/34	.020	.035	.420
1210	10	18	41/34	.020	.035	.480
1212	12	18	41/34	.020	.065	.555
1215	15	18	41/34	.020	.065	.640
1220	20	18	41/34	.020	.065	.730
1602	2	16	65/34	.025	.035	.335
1603	3	16	65/34	.025	.035	.355
1604	4	16	65/34	.025	.035	.385
1606	6	16	65/34	.025	.040	.445
1608	8	16	65/34	.025	.040	.510
1610	10	16	65/34	.025	.040	.575
1612	2	14	41/30	.030	.040	.395
1613	3	14	41/30	.030	.040	.425
1614	4	14	41/30	.030	.040	.455
1616	6	14	41/30	.030	.040	.515
1622	2	12	65/30	.030	.040	.440
1623	3	12	65/30	.030	.040	.465
1624	4	12	65/30	.030	.040	.505
1632	2	10	105/30	.030	.040	.495
1633	3	10	105/30	.030	.040	.520

UNSHIELDED MULTI-CONDUCTOR
PLASTIC INTERCOM CABLES — PAIRED

For use in intercom systems as station-to-station wiring, these cables have 22 ga. solid or stranded conductors with .010 durable color-coded plastic insulation. Conductors twisted in pairs. Jacket is .025 gray vinyl. (Other types of paired cables for indoor or outdoor use can be made to your specifications.)



CAT. NO. 500' Spools	CAT. NO. 100' Spools	No. of Pairs	Type	O.D.
4010-18	4010-12	2 Pair	22 Ga. Solid	.200
6010-18	6010-12	2 Pair	22 Ga. Stranded	.205
4014-18	4014-12	3 Pair	22 Ga. Solid	.225
6014-18	6014-12	3 Pair	22 Ga. Stranded	.245
4016-18	4016-12	5 Pair	22 Ga. Solid	.260
6016-18	6016-12	5 Pair	22 Ga. Stranded	.285
4018-18	4018-12	7 Pair	22 Ga. Solid	.310
6018-18	6018-12	7 Pair	22 Ga. Stranded	.345
4022-18	4022-12	11 Pair	22 Ga. Solid	.365
6022-18	6022-12	11 Pair	22 Ga. Stranded	.410
4026-38	4026-12	15 Pair	22 Ga. Solid	.395
6026-38	6026-12	15 Pair	22 Ga. Stranded	.465
4030-38	4030-12	27 Pair	22 Ga. Solid	.500
6030-38	6030-12	27 Pair	22 Ga. Stranded	.570
4038-38	4038-12	51 Pair	22 Ga. Solid	.750

UNSHIELDED MULTI-CONDUCTOR
PLASTIC INTERCOM CABLES (Cont'd)

UNPAIRED



22 ga. stranded conductors with bright .010 vinyl insulation . . . and black .020 vinyl jacket (except No. 4062, 4067, 4069 have gray jackets). All cables spooled.

Cat. No. 1000'	500'	250'	100'	No. Cond.
4062-21		4062-15		3
4063-21		4063-15		4
4064-21		4064-15		5
4065-21		4065-15		8
	4067-18	4067-15		12
	4069-18		4069-12	18
				4*
4080-21		4080-15		8**

* 2 – 22 ga. and 2 – 18 ga. cond. ** 6 – 22 ga. and 2 – 18 ga. cond.

TWO CONDUCTOR SHIELDED
INTERCOM CABLES
TINNED COPPER SPIRAL SHIELD



.020 gray vinyl jacket.

Cat. No. 1000'	250'	Approx. Size	Ga.	Stranding
2884-21	2884-15	.160	22	solid
2882-21	2882-15	.160	22	7/30
2888-21	2888-15	.190	20	10/30

ALUMINUM/POLYESTER SHIELDED



Shielding gives 100% coverage. Cables have stranded tinned copper drain wire and .020 gray vinyl jacket.

Cat. No. 1000'	250'	Approx. Size	Ga.	Stranding
2514-21	2514-15	.175	22	7/30
2524-21	2524-15	.190	20	10/30
2534-21	2534-15	.210	18	16/30

TINNED COPPER BRAIDED SHIELDED



.020 black vinyl jacket.

Cat. No. 1000'	250'	Approx. Size	Ga.	Stranding
2679-21	2679-15	.175	22	7/30
2681-21	2681-15	.198	20	10/30
2686-21	2686-15	.225	18	16/30

CORD SETS

Columbia offers a complete line of UL-listed Cord Sets in plastic, rubber, and neoprene – cheater cords, line cords, extension cords, air conditioner cords, flat yellow cords, range and dryer cords.

Only a partial listing. Ask your local distributor for the complete COLUMBIA CATALOG.

© United Technical Publications

INVENTORY

While most distributors maintain a large and varied stock, they do not represent that they stock all manufacturers' products shown in this MASTER catalog.

ORDERING

It is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

PRICES

INQUIRE ABOUT LATEST PRICES AND DELIVERY. Prices in this MASTER should not be considered as final.

DISCOUNTS

Trade discounts apply in most cases where LIST PRICES are shown.

Consolidated Number	Length Feet	Suggested Trade Price
801*	25	.30
801*	100	1.20
801	500	4.65
801	1000	7.20
803	100	1.28
803	500	3.83
803	1000	6.45
811*	25	.35
811*	100	1.43
811	500	5.25
811	1000	8.25
819	100	1.20
819	500	3.98
819	1000	6.45
821*	25	.35
821*	100	1.43
821	500	5.25
821	1000	7.88
823	100	1.43
823	500	6.38
823	1000	8.33
827	100	1.58
827	500	6.38
827	1000	8.63
831*	25	.38
831*	100	1.65
831	500	5.63
831	1000	9.75
833	100	1.65
833	500	6.30
833	1000	10.95
837	100	1.88
837	500	6.60
837	1000	11.55
841*	25	.68
841*	100	2.48
841	500	6.83
841	1000	11.85
843	100	2.25
843	500	9.68
843	1000	17.25
846*	25	.68
846*	100	1.95
846	500	9.45
846	1000	15.23
847	100	2.48
847	500	10.05
847	1000	17.85
851*	25	.53
851*	100	1.58
851	500	5.03
851	1000	8.93
856*	25	.68
856*	100	2.25
856	500	9.38
856	1000	18.00
861*	25	.75
861*	100	2.63
861	500	11.85
861	1000	22.88
865	100	1.88
865	500	7.43
865	1000	10.58
866*	25	.68
866*	100	1.73
866	500	6.75
866	1000	10.28
869	100	2.03
869	500	7.58
869	1000	11.03
871*	25	.80
871*	100	1.95
871	500	8.55
871	1000	12.15
875	100	2.18
875	500	9.00
875	1000	13.43
876*	25	.83
876*	100	2.33
876	500	9.75
876	1000	15.60
879	100	2.33
879	500	9.38
879	1000	14.03
881	100	3.45
881	500	16.50
881	1000	31.50
885	100	2.55
885	500	10.50
885	1000	17.25
889	100	2.78
889	500	11.03
889	1000	17.93
1001*	10	.38
1001	100	2.40
1001	250	6.00
1001	500	10.73
1001	1000	21.00
1002	100	3.38
1002	250	7.13
1002	500	14.25
1002	1000	26.25
1006*	10	.68
1006	100	5.40
1006	250	12.75
1006	500	23.25
1006	1000	43.88
1007	100	3.60
1007	250	7.50
1007	500	13.73
1007	1000	26.25
1310	100	2.70
1310	250	6.00
1311	100	5.25
1311	250	11.70
1312	100	6.00
1312	250	13.50
1314	100	8.18
1314	250	19.13
1315	100	8.85
1315	250	19.80
1316	100	13.80
1316	250	37.50
1317	100	10.88
1317	250	25.50
1318	100	16.73
1318	250	41.25
1319	100	21.75
1319	250	54.38
1320	100	23.25
1320	250	55.73
1321	100	22.13
1321	250	52.43
1322	100	36.75
1322	250	89.63
1323	100	31.88
1323	250	78.15
1324	100	55.20
1324	250	134.25
1325	100	86.85
1325	250	214.50
1326	100	43.20
1326	250	110.46
1340	100	2.70
1340	500	12.38
1341	100	3.60
1341	500	16.73
1342	100	5.63
1342	500	25.50
1343	100	6.75
1343	500	31.05
1344	100	8.85
1344	500	40.65
1345	100	9.68
1345	500	45.00
1345	1000	88.50
1346	100	11.40
1346	500	54.00
1346	1000	106.50
1347	100	13.05
1347	500	61.80
1347	1000	123.00
1348	100	24.60
1348	500	120.00
1348	1000	235.50
1349	100	26.85
1349	500	133.50
1349	1000	262.50
1350	100	33.00
1350	500	167.33
1350	1000	325.50
1351	100	36.15
1351	500	180.00
1351	1000	345.00
1386	50	2.03
1386	100	3.75
1386	250	8.25
1386	500	16.13
1386	1000	31.50
1387	50	2.33
1387	100	4.05
1387	250	9.38
1387	500	18.00
1387	1000	33.00
1388	50	2.70
1388	100	4.73
1388	250	10.88
1388	500	19.50
1388	1000	37.50
1389	50	3.15
1389	100	4.80
1389	250	11.63
1389	500	20.63
1389	1000	39.75
1390	50	3.00
1390	100	4.95
1390	250	12.75
1390	500	25.13
1390	1000	47.25
1391	50	3.23
1391	100	6.00
1391	250	13.50
1391	500	26.25
1391	1000	50.25
1392	50	3.98
1392	100	7.50
1392	250	18.00
1392	500	34.88
1392	1000	66.25
1393	50	6.75
1393	100	12.75
1393	250	27.75
1393	500	50.63
1393	1000	93.75
1394	50	8.25
1394	100	15.75
1394	250	36.75
1394	500	69.00
1394	1000	135.00
1395	50	8.63
1395	100	16.13
1395	250	40.50
1395	500	75.75
1395	1000	150.00
1396	50	18.75
1396	100	36.75
1396	250	91.13
1396	500	168.75
1396	1000	330.00
1397	50	15.75
1397	100	26.23
1397	250	62.25
1397	500	117.75
1397	1000	232.50
1398	50	19.88
1398	100	38.25
1398	250	91.50
1398	500	176.25
1398	1000	337.50
1399	50	21.75
1399	100	42.75
1399	250	101.25
1399	500	195.00
1399	1000	375.00
1455	100	25.50
1455	250	60.00
1455	500	117.00
1455	1000	232.50
1456	15	2.21
1456	25	3.53
1456	50	6.90
1456	100	13.73
1456	250	31.50
1456	500	60.00
1456	1000	118.13
1457*	9	.53
1457	10	.75
1457	25	1.28
1457	50	2.48
1457	100	4.65
1457	250	41.63 M'
1457	500	41.63 M'
1457	1000	41.63 M'
1458*	8	.60
1458	15	1.20
1458	25	1.80
1458	50	3.45
1458	100	6.68
1458	250	64.88 M'
1458	500	60.75 M'
1458	1000	60.38 M'
1459	25	1.49
1459	50	2.78
1459	100	5.40
1459	250	52.13 M'
1459	500	50.63 M'
1459	1000	50.63 M'
1460	15	1.50
1460	25	2.48
1460	50	4.28
1460	100	7.88
1460	250	78.00 M'
1460	500	75.00 M'
1460	1000	75.00 M'
1461*	10	.45
1461*	15	.68
1461*	25	1.05
1461	50	1.95
1461	100	3.75
1461	250	8.63
1461	500	16.88
1461	1000	32.25
1462	25	2.93
1462	50	5.48
1462	100	10.35
1462	250	24.38
1462	500	48.38
1462	1000	90.00
1463	15	2.75
1463	25	3.23
1463	50	6.23
1463	100	11.33
1463	250	27.75
1463	500	108.75
1463	1000	108.75
1464	15	2.40
1464	25	4.13
1464	50	7.50
1464	100	13.88
1464	250	33.75
1464	500	65.25
1464	1000	129.75
1465	50	9.00
1465	100	16.35
1465	250	43.50
1465	500	75.00
1465	1000	150.00
1466	100	20.63
1466	250	51.38
1466	500	100.50
1466	1000	200.25
1467	100	21.75
1467	250	52.50
1467	500	103.50
1467	1000	205.50
1469	100	6.23
1469	250	14.63
1469	500	26.25
1469	1000	52.50
1701	100	12.00
1701	250	30.00
1701	500	60.00
1701	1000	120.00
1702	100	13.50
1702	250	33.75
1702	500	71.25
1702	1000	127.50
1703	100	22.05
1703	250	51.75
1703	500	100.50
1703	1000	198.00
1704	100	26.25
1704	250	63.75
1704	500	124.50
1704	1000	247.50
1705	100	21.75
1705	250	54.38
1705	500	105.00
1705	1000	207.00
1706	100	26.25
1706	250	65.25
1706	500	127.50
1706	1000	253.50
1707	100	26.33
1707	250	61.50
1707	500	122.25
1707	1000	243.75
1708	100	38.55
1708	250	89.55
1708	500	175.50
1708	1000	349.50
1709	100	51.75
1709	250	119.25
1709	500	235.50
1709	1000	468.00
1721	100	4.35
1721	250	9.23
1721	500	18.38
1721	1000	35.63
1722	100	9.23
1722	250	21.90
1722	500	42.00
1722	1000	78.75
1723	100	9.53
1723	250	24.00
1723	500	45.00
1723	1000	88.50
1724	100	11.40
1724	250	26.25
1724	500	52.50
1724	1000	103.88
1725	100	13.35
1725	250	30.90
1725	500	61.80
1725	1000	123.30
1726	100	15.75
1726	250	38.25
1726	500	74.25
1726	1000	146.25
1727	100	20.55
1727	250	49.50
1727	500	93.75
1727	1000	181.50
1728	100	20.25
1728	250	49.50
1728	500	96.00
1728	1000	189.00
1732	100	6.75
1732	250	16.50
1732	500	30.25
1732	1000	58.95
1733	100	7.13
1733	250	20.25
1733	500	33.75
1733	1000	64.88
1734	100	8.33
1734	250	20.63
1734	500	38.25
1734	1000	73.65
1735	100	10.73
1735	250	27.75
1735	500	52.05
1735	1000	99.75
1736	100	12.75
1736	250	32.25
1736	500	60.38
1736	1000	118.50
1737	100	18.00
1737	250	42.75
1737	500	81.00
1737	1000	157.50
1738	100	18.25
1738	250	43.35
1738	500	81.75
1738	1000	159.75
2000		25%
3815	100	1.73
3815	1000	12.75
3816	100	1.43
3816	1000	10.88
3817	100	.83
3817	1000	6.38
3818	100	.68
3818	1000	4.43
3819	100	.65
3819	1000	3.75
3821	100	2.10
3821	1000	20.93
3831	100	3.23
3831	1000	32.18
3841	100	5.93
3841	1000	55.13
3845	100	8.48
3845	1000	80.25
3846	100	.66
3846	1000	3.53
3847	100	.63
3847	1000	3.23
3848	100	.53
3848	1000	2.85
4401	100	5.76
4401	500	39.90 M'
4401	1000	39.90 M'
4402	100	6.08
4402	500	47.63 M'
4402	1000	46.88 M'
4403	100	6.08
4403	500	47.63 M'
4403	1000	46.88 M'
4404	500	691.58 M'
4404	1000	675.00 M'
4405	100	4.95
4405	500	43.13 M'
4405	1000	42.38 M'
4406	500	1611.00 M'
4406	1000	1573.50 M'
4407	500	567.00 M'
4407	1000	551.25 M'
4408	500	1077.75 M'
4408	1000	1041.38 M'
4409	500	1482.00 M'
4409	1000	1414.13 M'
4410	500	174.38 M'
4410	1000	168.60 M'
4411	500	513.23 M'
4411	1000	502.50 M'
4412	500	89.25 M'
4412	1000	82.05 M'
4415	100	13.73
4415	500	110.25 M'
4415	1000	108.00 M'
4419	100	11.85
4419	500	95.03 M'
4419	1000	95.03 M'
4422	500	377.25 M'
4422	1000	367.13 M'
4423	500	377.25 M'
4423	1000	367.13 M'
4426	500	180.38 M'
4426	1000	175.13 M'
4427	500	209.25 M'
4427	1000	199.43 M'
4428	500	407.63 M'
4428	1000	396.38 M'
4429	500	536.63 M'
4429	1000	523.35 M'
4430	500	133.88 M'
4430	1000	129.00 M'
4431	100	26.25 M'
4431	500	247.50 M'
4431	1000	247.50 M'
4432	100	26.25
4432	500	247.50 M'
4432	1000	247.50 M'
4433	100	15.75
4433	500	149.25 M'
4433	1000	146.63 M'
4434	100	19.50
4434	500	147.00 M'
4434	1000	132.00 M'
4435	100	14.63
4435	500	121.50 M'
4435	1000	121.50 M'
4436	100	35.35
4436	500	318.75 M'
4436	1000	318.75 M'
4437	100	45.00
4437	500	390.00 M'
4437	1000	390.00 M'
4438	100	45.00
4438	500	390.00 M'
4438	1000	390.00 M'
4439	100	38.85
4439	500	330.00 M'
4439	1000	259.50 M'
4440	100	12.98
4440	500	110.25 M'
4440	1000	110.25 M'
4441	100	37.50
4441	500	300.00 M'
4441	1000	250.50 M'
4442	100	22.50
4442	500	210.00 M'
4442	1000	204.38 M'
4443	100	19.50
4443	500	158.25 M'
4443	1000	157.13 M'

* Spools fit our self service spool "O" wire display stand.

© United Technical Publications

Consolidated Number	Length Feet	Suggested Trade Price
4444	100	35.25
4444	500	297.00 M'
4444	1000	297.00 M'
4445	100	35.35
4445	500	297.00 M'
4445	1000	297.00 M'
4446	100	7.50
4446	500	66.00 M'
4446	1000	66.00 M'
4447	100	9.15
4447	500	82.50 M'
4447	1000	81.38 M'
4448	100	18.00
4448	500	157.50 M'
4448	1000	150.00 M'
4449	100	5.85
4449	500	42.60 M'
4449	1000	42.60 M'
4450	100	6.00
4450	500	50.63 M'
4450	1000	49.88 M'
4451	100	6.38
4451	500	51.30 M'
4451	1000	51.30 M'
4452	100	6.15
4452	500	48.00 M'
4452	1000	48.00 M'
4453	100	6.38
4453	500	51.38 M'
4453	1000	50.63 M'
4454	100	10.73
4454	500	96.75 M'
4454	1000	96.00 M'
4455	100	11.55
4455	500	100.50 M'
4455	1000	99.75 M'
4456	100	9.60
4456	500	83.63 M'
4456	1000	82.88 M'
4457	100	6.98
4457	500	57.00 M'
4457	1000	56.25 M'
4458	500	232.50 M'
4458	1000	223.88 M'
4459	100	4.50
4459	500	34.50 M'
4459	1000	34.50 M'
4460	100	15.00
4460	500	132.75 M'
4460	1000	131.25 M'
4461	100	27.75
4461	500	231.00 M'
4461	1000	228.75 M'
4462	100	31.50
4462	500	285.00 M'
4462	1000	283.13 M'
4463	100	12.75
4463	500	114.00 M'
4463	1000	112.50 M'
4464	100	7.88
4464	500	68.63 M'
4464	1000	67.88 M'
4465	100	7.83
4465	500	68.63 M'
4465	1000	67.88 M'
4466	100	10.80
4466	500	93.38 M'
4466	1000	92.63 M'
4467	100	40.50
4467	500	306.00 M'
4467	1000	303.75 M'
4468	100	40.50
4468	500	306.00 M'
4468	1000	303.75 M'
4469	100	10.58
4469	500	101.25 M'
4469	1000	99.83 M'
4470	100	7.50
4470	500	51.30 M'
4470	1000	51.30 M'
4471	100	23.25
4471	500	187.50 M'
4471	1000	185.00 M'
4472	100	6.45
4472	500	55.05 M'
4472	1000	55.05 M'
4473	100	600.00
4473	500	5625.00 M'
4473	1000	5625.00 M'
4474	100	6.38
4474	500	57.00 M'
4474	1000	56.25 M'
4475	100	24.75
4475	500	202.50 M'
4475	1000	201.75 M'
4476	100	15.00
4476	500	115.50 M'
4476	1000	112.50 M'
4477	100	15.00
4477	500	120.75 M'
4477	1000	120.75 M'
4478	100	7.80
4478	500	44.63 M'
4478	1000	42.98 M'
4479	100	13.50
4479	500	132.00 M'
4479	1000	132.00 M'
4480	100	27.00
4480	500	232.50 M'
4480	1000	232.50 M'
4481	100	15.00
4481	500	138.75 M'
4481	1000	138.75 M'
4482	100	60.00
4482	500	540.00 M'
4482	1000	540.00 M'
4483	500	975.00 M'
4483	1000	975.00 M'
4484	500	90.00 M'
4484	1000	86.25 M'
4485	500	84.60 M'
4485	1000	83.85 M'
4486	500	562.50 M'
4486	1000	548.63 M'
4487	500	300.00 M'
4487	1000	247.50 M'
4488	500	390.00 M'
4488	1000	315.00 M'
4489	500	118.50 M'
4489	1000	118.50 M'
4490	500	405.00 M'
4490	1000	397.50 M'
4491	500	225.00 M'
4491	1000	210.75 M'
4492	500	412.50 M'
4492	1000	393.75 M'
4493	500	900.00 M'
4493	1000	735.00 M'
4494	500	1200.00 M'
4494	1000	1005.00 M'
4495	500	337.50 M'
4495	1000	328.13 M'
4496	500	142.50 M'
4496	1000	142.50 M'
4497	500	285.00 M'
4497	1000	281.25 M'
4498	100	7.13
4498	500	46.50 M'
4498	1000	46.50 M'
4499	500	294.75 M'
4499	1000	280.50 M'
4601	25	.65
4601	100	1.95
4601	500	8.75
4601	1000	17.00
4611	25	1.28
4611	100	4.50
4611	500	21.75
4611	1000	40.50
4616	25	.75
4616	100	2.33
4616	500	10.88
4616	1000	21.00
4621	25	1.35
4621	100	4.13
4621	500	20.25
4621	1000	39.75
4622	100	4.50
4622	500	20.63
4622	1000	41.25
4623	100	1.88
4623	500	7.50
4623	1000	15.00
4700	100	1087.50 M'
4700	250	3350.00 M'
4700	500	921.00 M'
4700	1000	885.00 M'
4701	100	3610.88 M'
4701	250	3075.00 M'
4701	500	2563.50 M'
4701	1000	2160.00 M'
4702	100	2190.00 M'
4702	250	2085.00 M'
4702	500	1825.20 M'
4702	1000	1747.50 M'
4703	100	3053.25 M'
4703	250	2911.43 M'
4703	500	2547.45 M'
4703	1000	2441.25 M'
4704	100	1860.38 M'
4704	250	1771.95 M'
4704	500	1650.00 M'
4704	1000	1612.50 M'
4705	100	2007.00 M'
4705	250	1911.53 M'
4705	500	1687.50 M'
4705	1000	1627.50 M'
4706	100	3151.50 M'
4706	250	2865.00 M'
4706	500	2681.25 M'
4706	1000	2574.00 M'
4707	100	9487.50 M'
4707	250	9215.63 M'
4707	500	8625.00 M'
4707	1000	8280.00 M'
4708	100	9487.50 M'
4708	250	9215.63 M'
4708	500	8625.00 M'
4708	1000	8280.00 M'
4709	100	10,620.30 M'
4709	250	9735.00 M'
4709	500	8850.00 M'
4709	1000	8280.00 M'
4710	100	10,620.30 M'
4710	250	9735.00 M'
4710	500	8850.00 M'
4710	1000	8280.00 M'
4711	100	3526.05 M'
4711	250	3205.50 M'
4711	500	3168.00 M'
4711	1000	2880.00 M'
4712	100	3786.75 M'
4712	250	3606.75 M'
4712	500	3306.00 M'
4712	1000	3006.00 M'
4713	100	2700.75 M'
4713	250	2455.13 M'
4713	500	2343.75 M'
4713	1000	2232.00 M'
4714	100	868.88 M'
4714	250	789.75 M'
4714	500	718.20 M'
4714	1000	684.00 M'
4715	100	571.50 M'
4715	250	519.75 M'
4715	500	472.50 M'
4715	1000	450.00 M'
4716	100	599.63 M'
4716	250	544.95 M'
4716	500	499.50 M'
4716	1000	475.88 M'
4717	100	708.75 M'
4717	250	644.25 M'
4717	500	585.75 M'
4717	1000	558.00 M'
4718	100	753.00 M'
4718	250	686.03 M'
4718	500	623.63 M'
4718	1000	567.00 M'
4719	100	777.53 M'
4719	250	706.87 M'
4719	500	642.60 M'
4719	1000	612.00 M'
4720	100	2137.88 M'
4720	250	1943.70 M'
4720	500	1767.00 M'
4720	1000	1683.00 M'
4721	100	2137.88 M'
4721	250	1943.70 M'
4721	500	1767.00 M'
4721	1000	1683.00 M'
4722	100	2880.00 M'
4722	250	2619.39 M'
4722	500	2231.40 M'
4722	1000	2272.50 M'
4723	100	8505.75 M'
4723	250	8107.50 M'
4723	500	7371.00 M'
4723	1000	7020.00 M'
4724	100	163.58 M'
4724	250	148.73 M'
4724	500	135.15 M'
4724	1000	128.70 M'
4725	100	2881.13 M'
4725	250	2619.38 M'
4725	500	2381.25 M'
4725	1000	2268.00 M'
4726	100	3087.00 M'
4726	250	2806.50 M'
4726	500	2551.50 M'
4726	1000	2430.00 M'
4727	100	152.13 M'
4727	250	138.75 M'
4727	500	126.00 M'
4727	1000	120.00 M'
4728	100	149.63 M'
4728	250	136.13 M'
4728	500	123.75 M'
4728	1000	117.75 M'
4729	100	153.75 M'
4729	250	139.88 M'
4729	500	127.13 M'
4729	1000	119.63 M'
4730	100	237.90 M'
4730	250	216.23 M'
4730	500	196.58 M'
4730	1000	187.20 M'
4731	100	254.20 M'
4731	250	231.00 M'
4731	500	210.00 M'
4731	1000	190.88 M'
4732	100	407.03 M'
4732	250	370.05 M'
4732	500	336.38 M'
4732	1000	320.25 M'
4733	100	411.75 M'
4733	250	374.25 M'
4733	500	340.13 M'
4733	1000	324.00 M'
4734	100	416.63 M'
4734	250	378.75 M'
4734	500	344.25 M'
4734	1000	327.75 M'
4735	100	263.25 M'
4735	250	239.25 M'
4735	500	217.50 M'
4735	1000	207.00 M'
4736	100	263.25 M'
4736	250	239.25 M'
4736	500	217.50 M'
4736	1000	207.00 M'
4737	100	255.45 M'
4737	250	232.20 M'
4737	500	211.13 M'
4737	1000	201.75 M'
4738	100	255.45 M'
4738	250	232.20 M'
4738	500	211.13 M'
4738	1000	201.75 M'
4739	100	465.00 M'
4739	250	436.50 M'
4739	500	396.75 M'
4739	1000	378.00 M'
4740	100	465.00 M'
4740	250	436.50 M'
4740	500	396.75 M'
4740	1000	378.00 M'
4741	100	165.00 M'
4741	250	150.00 M'
4741	500	136.50 M'
4741	1000	124.13 M'
4742	100	165.00 M'
4742	250	150.00 M'
4742	500	136.50 M'
4742	1000	124.13 M'
4743	100	1292.10 M'
4743	250	1174.65 M'
4743	500	1067.85 M'
4743	1000	1017.00 M'
4744	100	933.75 M'
4744	250	849.00 M'
4744	500	771.75 M'
4744	1000	734.40 M'
4745	100	10,159.50 M'
4745	250	9563.25 M'
4745	500	8694.00 M'
4745	1000	8280.00 M'
4746	100	10,159.50 M'
4746	250	9563.25 M'
4746	500	8694.00 M'
4746	1000	8250.00 M'
4747	100	2950.13 M'
4747	250	2682.00 M'
4747	500	2438.25 M'
4747	1000	2322.00 M'
4748	100	3018.75 M'
4748	250	2744.25 M'
4748	500	2494.88 M'
4748	1000	2376.00 M'
4749	100	3407.63 M'
4749	250	3093.75 M'
4749	500	2816.25 M'
4749	1000	2682.00 M'
4750	100	11,892.00 M'
4750	250	10,810.88 M'
4750	500	9828.00 M'
4750	1000	9360.00 M'
4751	100	11,892.00 M'
4751	250	10,810.88 M'
4751	500	9828.00 M'
4751	1000	9360.00 M'
4752	100	3041.25 M'
4752	250	2764.88 M'
4752	500	2633.25 M'
4752	1000	2394.00 M'
4753	100	7180.88 M'
4753	250	6528.00 M'
4753	500	5934.75 M'
4753	1000	5652.00 M'
4754	100	18,499.88 M'
4754	250	16,818.00 M'
4754	500	15,024.00 M'
4754	1000	14,580.00 M'
4755	100	6238.35 M'
4755	250	2016.68 M'
4755	500	1833.38 M'
4755	1000	1746.00 M'
4756	100	770.42 M'
4756	250	725.00 M'
4756	500	713.63 M'
4756	1000	680.40 M'
4757	100	667.73 M'
4757	250	607.05 M'
4757	500	551.85 M'
4757	1000	525.60 M'
4758	100	2046.75 M'
4758	250	1860.75 M'
4758	500	1691.55 M'
4758	1000	1611.00 M'
4759	100	235.58 M'
4759	250	214.13 M'
4759	500	181.20 M'
4759	1000	185.40 M'
4761	100	210.00 M'
4761	250	195.75 M'
4761	500	174.75 M'
4761	1000	159.38 M'
4762	100	376.80 M'
4762	250	348.00 M'
4762	500	318.60 M'
4762	1000	290.18 M'
5151	100	2.33
5151	500	10.20
5151	1000	19.50
5152	100	4.35
5152	500	20.63
5152	1000	39.60
5153	100	5.55
5153	500	26.93
5153	1000	51.30
5155	100	10.43
5155	500	51.00
5155	1000	98.25
5156	100	11.85
5156	500	57.00
5156	1000	112.13
5157	100	13.35
5157	500	64.65
5157	1000	127.43
5158	100	14.85
5158	500	72.30
5158	1000	143.25
5159	100	17.25
5159	500	76.88
5159	1000	153.75
5161	100	21.38
5161	500	99.38
5161	1000	195.68
5165	100	25.35
5165	500	120.75
5165	1000	241.50
5167	100	45.75
5167	500	225.00
5167	1000	450.00
5171	100	64.50
5171	500	307.50
5171	1000	607.50
5181	100	88.50
5181	500	427.50
5181	1000	847.50
5191	100	102.00
5191	500	982.50
5191	1000	982.50
5201	100	2.40
5201	500	8.55
5201	1000	17.10
5205	100	3.90
5205	500	15.90
5205	1000	32.03
5211	100	5.63
5211	500	22.50
5211	1000	43.88
5221	100	9.75
5221	500	43.50
5221	1000	86.25
5226	100	10.28
5226	500	46.80
5226	1000	90.23
5231	100	13.50
5231	500	58.50
5231	1000	116.25
5236	100	15.00
5236	500	65.25
5236	1000	128.25
5241	100	16.50
5241	500	71.25
5241	1000	140.63
5251	100	17.25
5251	500	77.25
5251	1000	150.00
5271	100	20.63
5271	500	95.25
5271	1000	190.50
5286	100	36.00
5286	500	174.75
5286	1000	349.50
5289	100	44.85
5289	500	215.25
5289	1000	426.00
5292	100	63.00
5292	500	307.50
5292	1000	607.50
5297	100	81.00
5297	500	390.00
5297	1000	772.50
5303	100	22.58
5303	500	45.75
5303	1000	90.53
5306	100	45.75
5306	500	91.50
5306	1000	183.00
5309	100	30.00
5309	500	142.50
5309	1000	271.88
5311	100	31.50
5311	500	158.25
5311	1000	312.75
5315	100	45.00
5315	500	211.50
5315	1000	418.50
5323	100	11.18
5323	500	53.25
5323	1000	106.50
5326	100	22.28
5326	500	110.25
5326	1000	219.75
5329	100	78.15
5329	500	156.00
5329	1000	310.50
5331	100	37.88
5331	500	186.00
5331	1000	369.75
5335	100	51.00
5335	500	247.50
5335	1000	490.88
5339	100	69.00
5339	500	328.50
5339	1000	852.50

Consolidated Number	Length Feet	Suggested Trade Price
5347	100	49.50
5347	500	493.50
5347	1000	976.88
5400	100	2.40
5400	500	9.75
5400	1000	18.75
5401	10	.38
5401	25	1.05
5401	100	3.08
5401	500	12.15
5401	1000	24.23
5406	25	1.65
5406	100	3.98
5406	500	16.13
5406	1000	31.13
5411	25	1.88
5411	100	4.65
5411	500	20.25
5411	1000	39.30
5416	15	1.28
5416	100	6.38
5416	500	27.00
5416	1000	52.88
5421	100	7.88
5421	500	31.50
5421	1000	62.25
5426	15	1.50
5426	100	7.50
5426	500	30.75
5426	1000	59.25
5431	15	1.88
5431	100	8.63
5431	500	39.00
5431	1000	76.88
5434	100	9.90
5434	500	46.50
5434	1000	92.25
5438	100	16.13
5438	500	74.25
5438	1000	138.75
5440	100	22.13
5440	500	101.63
5440	1000	198.75
5442	100	32.40
5442	500	93.00
5442	1000	186.00
5446	100	32.25
5446	500	161.25
5446	1000	315.00
5448	100	57.00
5448	500	255.00
5448	1000	495.00
5450	100	69.00
5450	500	311.25
5450	1000	615.00
5460	100	81.75
5460	500	375.00
5460	1000	742.50
5470	100	71.25
5470	500	31.50
5470	1000	63.00
5471	100	8.78
5471	500	40.05
5471	1000	80.10
5472	100	11.70
5472	500	53.63
5472	1000	107.25
5473	100	15.68
5473	500	73.50
5473	1000	147.00
5474	100	21.90
5474	500	107.25
5474	1000	214.50
5475	100	29.70
5475	500	140.25
5475	1000	280.50
5476	100	33.75
5476	500	157.50
5476	1000	315.00
5480	100	11.50
5480	500	53.63
5480	1000	107.25
5481	100	19.65
5481	500	87.75
5481	1000	175.50
5482	100	33.00
5482	500	153.00
5482	1000	306.00
5483	100	46.50
5483	500	222.75
5483	1000	445.50
5484	100	56.10
5484	500	264.00
5484	1000	528.00
5485	100	19.80
5485	500	90.75
5485	1000	181.50
5486	100	34.65
5486	500	160.88
5486	1000	321.75
5487	100	56.10
5487	500	272.25
5487	1000	544.50
5501	100	3.75
5501	500	17.25
5501	1000	34.50
5506	100	5.48
5506	500	24.75
5506	1000	49.50
5511	100	4.13
5511	500	18.00
5511	1000	32.25
5516	100	7.58
5516	500	33.00
5516	1000	63.75
5521	100	6.75
5521	500	24.00
5521	1000	46.50
5526	100	5.25
5526	500	21.00
5526	1000	41.25
5531	100	7.88
5531	500	36.00
5531	1000	71.25
5536	100	8.25
5536	500	33.00
5536	1000	66.00
5538	100	6.23
5538	500	26.70
5538	1000	53.40
5541	100	7.65
5541	500	36.00
5541	1000	70.88
5543	100	5.03
5543	500	21.00
5543	1000	42.00
5547	25	.38
5547	50	.68
5547	100	1.13
5547	250	3.00
5547	500	9.75
5547	1000	9.38
5551	10	.45
5551	25	1.05
5551	50	1.95
5551	100	3.75
5551	500	16.88
5551	1000	32.25
5556	100	2.43
5556	500	8.78
5556	1000	17.55
5557	500	21.75
5557	1000	21.45
5561	100	3.15
5561	500	12.45
5561	1000	24.90
5566	500	20.25
5566	1000	39.00
5568	100	4.58
5568	500	20.25
5568	1000	39.38
5569	100	7.13
5569	500	27.38
5569	1000	53.25
5570	100	4.13
5570	500	16.88
5570	1000	32.63
5571	500	26.25
5571	1000	49.50
5572	500	15.60
5572	1000	31.20
5573	500	19.88
5573	1000	39.75
5574	500	24.00
5574	1000	47.25
5575	500	33.60
5575	1000	67.20
5576	500	19.65
5576	1000	39.30
5577	500	24.75
5577	1000	49.50
5578	500	30.38
5578	1000	60.75
5579	500	10.05
5579	1000	19.95
5580	500	12.75
5580	1000	24.75
5581	500	17.85
5581	1000	35.55
5582	500	26.55
5582	1000	52.05
5583	500	36.75
5583	1000	73.50
5584	500	8.63
5584	1000	16.50
5585	500	16.50
5585	1000	31.50
5586	500	19.80
5586	1000	38.63
5587	500	24.75
5587	1000	48.75
5588	100	3.75
5588	500	14.03
5588	1000	28.05
5589	100	10.65
5589	500	51.60
5589	1000	99.38
5590	100	9.23
5590	500	43.50
5590	1000	87.00
5591	100	12.75
5591	500	61.05
5591	1000	120.60
5594	100	8.08
5594	500	41.63
5594	1000	81.75

Consolidated Number	Length Feet	Suggested Trade Price
To Customers Specified Length		
6006		290.40 M'
6012		415.80 M'
6018		496.65 M'
6025		584.55 M'
6050		1009.80 M'
6075		1423.95 M'
6100		1762.50 M'
6106		450.00 M'
6110		3135.00 M'
6112		687.75 M'
6118		907.50 M'
6125		1215.00 M'
6150		2479.95 M'
6170		2137.50 M'
6175		2820.00 M'
6200		3255.45 M'
6220		6037.50 M'
6250		4462.50 M'
6300		4950.00 M'
6400		6375.00 M'
6606		247.50 M'
6610		1620.00 M'
6612		337.50 M'
6615		2437.50 M'
6618		420.00 M'
6620		3150.00 M'
6625		533.25 M'
6630		4822.50 M'
6640		5985.75 M'
6650		915.38 M'
6675		1312.50 M'
6706		307.50 M'
6710		2775.75 M'
6712		472.50 M'
6715		3886.05 M'
6718		539.25 M'
6720		6152.50 M'
6725		791.25 M'
6750		1498.13 M'
6775		2182.50 M'
7502		142.50 M'
7503		300.00 M'
7505		457.50 M'
7506		487.50 M'
7507		540.00 M'
7508		600.00 M'
7510		667.50 M'
7512		787.50 M'
7514		960.00 M'
7516		1057.50 M'
7518		1192.50 M'
7521		1372.50 M'
7522		1477.50 M'
7524		1530.00 M'
7526		1620.00 M'
7530		1815.00 M'
7537		2130.00 M'
7540		2287.50 M'
7550		2850.00 M'
7560		3255.00 M'
7602		175.00 M'
7603		285.00 M'
7604		322.50 M'
7605		426.00 M'
7606		457.50 M'
7607		517.50 M'
7608		600.00 M'
7609		637.50 M'
7610		757.50 M'
7612		885.00 M'
7614		1135.50 M'
7616		1297.50 M'
7619		1785.00 M'
7624		2505.00 M'
7627		2640.00 M'
7630		2872.50 M'
7634		3360.75 M'
7637		3607.50 M'
7640		4725.00 M'
7702		322.50 M'
7703		517.50 M'
7704		645.00 M'
7705		907.50 M'
7706		1020.00 M'
7707		1087.50 M'
7708		1245.00 M'
7709		1360.50 M'
7710		1492.50 M'
7712		1815.00 M'
7714		1942.50 M'
7715		2115.00 M'
7716		2362.50 M'
7718		2655.00 M'
7719		2835.00 M'
7720		3262.50 M'
7722		3450.00 M'
7725		3727.50 M'
7727		3885.00 M'
7730		4492.50 M'
7734		4612.50 M'
7737		5235.00 M'
7802		405.00 M'
7803		622.50 M'
7804		885.00 M'
7805		1057.50 M'

Consolidated Number	Length Feet	Suggested Trade Price
7806		1185.00 M'
7807		1320.00 M'
7808		1537.50 M'
7809		1725.00 M'
7810		1822.50 M'
7812		2160.00 M'
7815		2242.50 M'
7816		2805.00 M'
7820		3480.00 M'
7902		585.00 M'
7903		786.00 M'
7904		1035.00 M'
7905		1200.00 M'
7906		1474.50 M'
7907		1593.00 M'
7908		1768.50 M'
7909		1882.50 M'
7910		2079.00 M'
7912		2220.00 M'
7915		2865.00 M'
7916		3292.50 M'
7920		3711.00 M'
8006		241.50 M'
8012		329.25 M'
8016		298.13 M'
8018		410.25 M'
8025		524.40 M'
8050		904.43 M'
8100		1602.00 M'
8110		2756.25 M'
8112		462.00 M'
8118		576.75 M'
8125		777.60 M'
8150		1472.85 M'
8200		3127.50 M'
8220		5085.00 M'
8306		286.88 M'
8310		1743.75 M'
8312		483.50 M'
8316		486.08 M'
8320		3188.25 M'
8325		560.63 M'
8350		988.43 M'
8406		438.90 M'
8410		3068.25 M'
7412		659.10 M'
8418		885.00 M'
8420		5873.63 M'
8425		1196.25 M'
8450		2078.85 M'
9001	100	1.20
9001	500	4.05
9001	1000	6.75
9002	100	1.20
9002	500	4.43
9002	1000	7.73
9003	100	1.35
9003	500	5.25
9003	1000	9.68
9004	100	1.95
9004	500	8.03
9004	1000	14.18
9005	100	2.73
9005	500	11.03
9005	1000	21.00
9006	100	3.98
9006	500	18.00
9006	1000	31.20
9007	100	5.70
9007	500	24.60
9007	1000	47.10
9010	100	1.13
9010	500	3.90
9010	1000	6.08
9011	100	1.28
9011	500	5.10
9011	1000	8.33
9012	100	1.80
9012	500	6.75
9012	1000	11.93
9013	100	2.25
9013	500	9.30
9013	1000	18.08
9014	100	2.93
9014	500	13.50
9014	1000	22.95
9015	100	3.23
9015	500	15.00
9015	1000	24.90
9016	100	3.45
9016	500	16.65
9016	1000	29.55
9017	100	3.90
9017	500	19.35
9017	1000	34.65
9018	100	5.40
9018	500	25.80
9018	1000	46.80
9019	100	6.75
9019	500	31.05
9019	1000	57.23
9020	100	8.85
9020	500	39.23
9020	1000	72.00
9021	100	4.50
9021	500	20.63
9021	1000	37.05

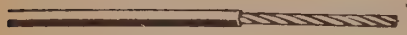
Consolidated Number	Length Feet	Suggested Trade Price
9022	100	4.55
9022	500	22.65
9022	1000	40.73
9023	100	5.55
9023	500	24.75
9023	1000	45.00
9024	100	6.75
9024	500	32.85
9024	1000	58.80
9025	100	2.63
9025	500	11.03
9025	1000	19.50
9026	100	2.85
9026	500	13.50
9026	1000	23.48
9027	100	3.30
9027	500	16.35
9027	1000	28.80
9028	100	4.28
9028	500	19.65
9028	1000	35.25
9029	100	4.65
9029	500	22.35
9029	1000	40.73
9030	100	7.95
9030	500	36.75
9030	1000	65.55
9031	100	4.50
9031	500	21.30
9031	1000	40.80
9032	100	4.95
9032	500	24.30
9032	1000	46.50
9033	100	5.70
9033	500	26.55
9033	1000	49.65
9034	100	6.75
9034	500	33.60
9034	1000	61.95
9035	100	8.25
9035	500	39.00
9035	1000	74.25
9036	100	9.60
9036	500	46.95
9036	1000	93.30
9037	100	2.03
9037	500	8.10
9037	1000	14.25
9038	100	2.18
9038	500	9.75
9038	1000	17.10
9039	100	2.93
9039	500	12.23
9039	1000	22.35
9040	100	3.90
9040	500	18.23
9040	1000	31.88
9041	100	5.33
9041	500	24.15
9041	1000	43.20
9042	100	7.20
9042	500	34.35
9042	1000	66.75
9100	100	1.35
9100	500	5.93
9100	1000	10.73
9101	100	1.47
9101	500	7.05
9101	1000	12.38
9102	100	2.55
9102	500	9.08
9102	1000	16.65
9103	100	3.15
9103	500	12.15
9103	1000	23.63
9104	100	4.77
9104	500	22.88
9104	1000	43.80
9105	100	6.08
9105	500	28.80
9105	1000	54.60
9106	100	10.73
9106	500	51.75
9106	1000	93.30
9107	100	24.00
9107	500	117.00
9107	1000	221.25
9108	100	28.13
9108	500	132.38
9108	1000	240.00
9110	100	11.40
9110	500	55.80
9110	1000	103.73
9111	100	23.40
9111	500	112.05
9111	1000	214.50
9112	100	29.70
9112	500	142.50
9112	1000	279.38
9200	100	1.65
9200	500	8.00
9200	1000	9.00
9201	100	1.10
9201	500	4.80
9201	1000	6.53

© United Technical Publications

Consolidated Number	Length Feet	Suggested Trade Price
9202	100	1.10
9202	500	4.58
9202	1000	6.60
9203	100	1.05
9203	500	3.90
9203	1000	6.30
9204	100	1.20
9204	500	4.73
9204	1000	7.20
9205	100	1.43
9205	500	6.30
9205	1000	9.25
9210	100	2.03
9210	500	8.63
9210	1000	12.75
9211	100	1.58
9211	500	7.35
9211	1000	10.50
9212	100	1.88
9212	500	7.58
9212	1000	11.03
9213	100	2.03
9213	500	8.85
9213	1000	11.33
9214	100	1.50
9214	500	7.35
9214	1000	11.93
9215	100	2.03
9215	500	8.55
9215	1000	14.70
9300	100	1.62
9300	500	7.13
9300	1000	11.70
9301	100	1.37
9301	500	7.05
9301	1000	9.30
9302	100	1.35
9302	500	5.63
9302	1000	8.48
9303	100	1.40
9303	500	5.25
9303	1000	8.78
9304	100	1.73
9304	500	7.20
9304	1000	10.80
9305	100	1.20
9305	500	4.73
9305	1000	7.95
9306	100	1.73
9306	500	7.20
9306	1000	11.18
9307	100	1.28
9307	500	5.10
9307	1000	8.63
9308	100	1.88
9308	500	8.10
9308	1000	13.50
9309	100	1.65
9309	500	6.00
9309	1000	10.88
9310	100	2.18
9310	500	8.70
9310	1000	14.10
9311	100	2.10
9311	500	8.55
9311	1000	13.95
9312	100	2.25
9312	500	9.30
9312	1000	17.40
9313	100	1.88
9313	500	8.25
9313	1000	14.40
9314	100	1.80
9314	500	8.85
9314	1000	13.20
9315	100	1.73
9315	500	7.43
9315	1000	12.60
9316	100	1.95
9316	500	8.93
9316	1000	13.28
9317	100	1.88
9317	500	8.85
9317	1000	14.25
9318	100	1.50
9318	500	7.35
9318	1000	11.85
9319	100	2.18
9319	500	9.45
9319	1000	15.75
9320	100	1.35
9320	500	6.30
9320	1000	10.65
9321	100	1.95
9321	500	8.85
9321	1000	14.10
9322	100	1.95
9322	500	8.55
9322	1000	14.70
9323	100	2.33
9323	500	10.58
9323	1000	17.55
9324	100	2.25
9324	500	10.50
9324	1000	17.40
9325	100	2.78
9325	500	12.15
9325	1000	21.60
9400	100	1.47
9400	500	5.55
9400	1000	8.78
9401	100	1.58
9401	500	6.00
9401	1000	9.25
9402	100	1.62
9402	500	7.13
9402	1000	11.63
9403	100	2.03
9403	500	9.23
9403	1000	16.05
9404	100	2.40
9404	500	11.85
9404	1000	22.13
9405	100	4.05
9405	500	16.95
9405	1000	32.85
9410	100	2.10
9410	500	8.55
9410	1000	15.33
9411	100	2.27
9411	500	8.78
9411	1000	15.60
9412	100	2.28
9412	500	10.65
9412	1000	19.43
9413	100	2 58
9413	500	11.85
9413	1000	21.00
9414	100	3.06
9414	500	15.23
9414	1000	28.88
9415	100	4.73
9415	500	22.20
9415	1000	38.55
9500	100	2.01
9500	500	9.15
9500	1000	16.50
9501	100	1.88
9501	500	9.00
9501	1000	15.60
9502	100	2.33
9502	500	10.13
9502	1000	17.85
9503	100	2.55
9503	500	12.30
9503	1000	21.75
9504	100	4.79
9504	500	20.63
9504	1000	39.38
9505	100	5.45
9505	500	23.10
9505	1000	44.55
9506	100	7.88
9506	500	36.30
9506	1000	70.95
9507	100	11.18
9507	500	52.65
9507	1000	99.15
9508	100	20.25
9508	500	96.75
9508	1000	160.88
9509	100	26.25
9509	500	122.55
9509	1000	210.00
9600	100	4.08
9600	500	20.25
9600	1000	39.00
9601	100	3.98
9601	500	19.20
9601	1000	37.95
9602	100	4.23
9602	500	20.85
9602	1000	40.50
9603	100	5.70
9603	500	27.00
9603	1000	50.10
9604	100	4.35
9604	500	21.60
9604	1000	42.00
9605	100	4.88
9605	500	24.00
9605	1000	47.85
9606	100	4.35
9606	500	21.30
9606	1000	41.85
9607	100	5.40
9607	500	26.25
9607	1000	50.85
9608	100	5.10
9608	500	25.13
9608	1000	47.93
9609	100	6.83
9609	500	33.23
9609	1000	64.80
9610	100	6.23
9610	500	30.60
9610	1000	59.10
9611	100	8.33
9611	500	40.73
9611	1000	78.75
9612	100	8.18
9612	500	40.50
9612	1000	78.80
9613	100	10.80
9613	500	53.55
9613	1000	104.85
9614	100	14.40
9614	500	71.25
9614	1000	139.88
9615	100	21.38
9615	500	99.15
9615	1000	203.25
9616	100	36.00
9616	500	177.00
9616	1000	350.55
9620	100	7.05
9620	500	31.20
9620	1000	60.23
9621	100	7.20
9621	500	31.50
9621	1000	60.75
9622	100	7.50
9622	500	31.88
9622	1000	52.55
9623	100	7.95
9623	500	36.23
9623	1000	70.35
9624	100	6.68
9624	500	31.05
9624	1000	58.35
9625	100	5.63
9625	500	27.30
9625	1000	51.68
9626	100	5.48
9626	500	26.25
9626	1000	50.93
9627	100	6.75
9627	500	32.63
9627	1000	60.38
9628	100	6.38
9628	500	31.20
9628	1000	59.63
9629	100	8.03
9629	500	39.30
9629	1000	76.80
9630	100	7.95
9630	500	39.38
9630	1000	75.23
9631	100	9.75
9631	500	48.00
9631	1000	90.00
9632	100	9.68
9632	500	47.55
9632	1000	89.25
9633	100	12.75
9633	500	63.30
9633	1000	121.50
9634	100	18.75
9634	500	90.00
9634	1000	165.00
9635	100	27.75
9635	500	128.55
9635	1000	225.00
9636	100	45.00
9636	500	217.50
9636	1000	420.00
9700	100	2.13
9700	500	8.63
9700	1000	15.23
9701	100	2.63
9701	500	10.50
9701	1000	18.23
9702	100	3.15
9702	500	12.30
9702	1000	22.13
9703	100	3.08
9703	500	13.65
9703	1000	25.35
9704	100	4.05
9704	500	19.50
9704	1000	34.13
9705	100	5.55
9705	500	25.80
9705	1000	49.05
9706	100	2.63
9706	500	11.55
9706	1000	19.13
9707	100	2.78
9707	500	11.63
9707	1000	21.75
9708	100	3.30
9708	500	16.20
9708	1000	26.78
9709	100	3.60
9709	500	16.80
9709	1000	31.05
9710	100	4.50
9710	500	21.00
9710	1000	41.63
9711	100	6.98
9711	500	33.60
9711	1000	61.13
9713	100	12.75
9713	500	56.85
9713	1000	106.13
9714	100	20.70
9714	500	97.50
9714	1000	168.75
9715	100	27.00
9715	500	127.50
9715	1000	240.75
9716	100	36.75
9716	500	177.30
9716	1000	341.25
9717	100	63.00
9717	500	256.50
9717	1000	540.38
9718	100	102.00
9718	500	457.50
9718	1000	787.88
9719	100	120.00
9719	500	555.00
9719	1000	1057.50
9720	100	6.15
9720	500	28.73
9720	1000	52.80
9721	100	6.38
9721	500	30.30
9721	1000	54.75
9722	100	6.83
9722	500	32.63
9722	1000	59.55
9723	100	7.58
9723	500	34.80
9723	1000	64.88
9724	100	9.08
9724	500	42.23
9724	1000	80.25
9725	100	10.65
9725	500	52.35
9725	1000	99.30
9800	100	10.05
9800	500	49.73
9800	1000	96.75
9801	100	21.30
9801	500	103.35
9801	1000	197.78
9802	100	31.05
9802	500	152.25
9802	1000	288.98
9803	100	35.10
9803	500	174.00
9803	1000	340.28
9804	100	10.88
9804	500	53.55
9804	1000	102.45
9805	100	23.70
9805	500	114.75
9805	1000	221.63
9806	100	44.55
9806	500	162.90
9806	1000	314.25
9807	100	39.75
9807	500	190.73
9807	1000	361.80
9808	100	13.58
9808	500	66.23
9808	1000	121.35
9809	100	30.15
9809	500	142.80
9809	1000	276.60
9810	100	38.55
9810	500	182.40
9810	1000	359.63
9811	100	60.75
9811	500	295.20
9811	1000	464.25
9812	100	16.20
9812	500	78.23
9812	1000	146.18
9813	100	45.15
9813	500	214.50
9813	1000	328.80
9814	100	43.35
9814	500	213.75
9814	1000	417.38
9815	100	56.25
9815	500	274.35
9815	1000	537.75
9820	100	21.98
9820	500	105.15
9820	1000	202.88
9821	100	35.63
9821	500	172.50
9821	1000	330.98
9822	100	51.30
9822	500	177.00
9822	1000	493.50
9823	100	72.30
9823	500	311.40
9823	1000	581.33
9824	100	23.85
9824	500	113.55
9824	1000	220.73
9825	100	43.35
9825	500	210.00
9825	1000	409.88
9826	100	57.75
9826	500	277.73
9826	1000	547.20
9827	100	74.25
9827	500	363.75
9827	1000	712.50
9828	100	28.43
9828	500	135.01
9828	1000	267.60
9829	100	49.73
9829	500	242.55
9829	1000	473.25
9830	100	66.30
9830	500	328.05
9830	1000	641.25
9831	100	84.38
9831	500	417.30
9831	1000	824.85
9832	100	33.38
9832	500	164.25
9832	1000	315.88
9833	100	72.75
9833	500	316.05
9833	1000	596.25
9834	100	87.75
9834	500	397.50
9834	1000	768.68
9835	100	104.63
9835	500	472.80
9835	1000	914.55
9840	100	18.60
9840	500	83.55
9840	1000	153.30
9841	100	38.40
9841	500	165.38
9841	1000	201.75
9842	100	42.75
9842	500	166.35
9842	1000	319.80
9843	100	39.30
9843	500	195.23
9843	1000	382.88
9844	100	28.35
9844	500	86.55
9844	1000	167.18
9845	100	27.53
9845	500	136.35
9845	1000	266.25
9846	100	36.00
9846	500	178.28
9846	1000	347.55
9847	100	43.80
9847	500	218.48
9847	1000	431.40
9848	100	19.43
9848	500	94.73
9848	1000	181.50
9849	100	34.28
9849	500	160.13
9849	1000	302.55
9850	100	47.85
9850	500	232.20
9850	1000	437.03
9851	100	60.23
9851	500	296.25
9851	1000	580.13
9852	100	23.85
9852	500	113.55
9852	1000	211.43
9853	100	42.00
9853	500	191.25
9853	1000	366.60
9854	100	57.75
9854	500	252.00
9854	1000	493.65
9855	100	75.75
9855	500	326.85
9855	1000	643.78
9901	100	9.38
9901	500	45.00
9901	1000	76.50
9902	100	10.58
9902	500	50.25
9902	1000	91.05
9903	100	12.90
9903	500	60.15
9903	1000	112.73
9904	100	15.23
9904	500	73.05
9904	1000	136.13
9905	100	19.05
9905	500	90.23
9905	1000	170.10
9906	100	21.75
9906	500	105.30
9906	1000	198.75
9907	100	39.38
9907	500	191.40
9907	1000	360.75
9941	100	18.75
9941	500	87.23
9941	1000	157.50
9942	100	20.63
9942	500	96.23
9942	1000	183.95
9943	100	23.33
9943	500	110.63
9943	1000	210.00
9944	100	30.68
9944	500	150.30
9944	1000	287.75
9945	100	33.15
9945	500	160.13
9945	1000	311.25
9946	100	37.43
9946	500	181.73
9946	1000	356.25
9947	100	49.58
9947	500	243.00
9947	1000	472.88

MIL-W-76

TYPE MW — VINYL — 1000V — 80C



Tinned copper, vinyl insulated, medium wall. The polyvinylchloride insulation is flame and ozone resistant and is inert to most chemicals, oils, and solvents.

STRANDED CONDUCTOR

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9001	MW-C-24-(7)-U	24(7x32)	.017	.058	As Listed	As Listed	As Listed
9002	MW-C-22-(7)-U	22(7x30)	.017	.064	As Listed	As Listed	As Listed
9003	MW-C-20-(10)-U	20(10x30)	.017	.070	As Listed	As Listed	As Listed
9004	MW-C-18-(16)-U	18(16x30)	.017	.080	As Listed	As Listed	As Listed
9005	MW-C-16-(26)-U	16(26x30)	.019	.098	As Listed	As Listed	As Listed
9006	MW-C-14-(41)-U	14(41x30)	.020	.111	As Listed	As Listed	As Listed
9007	MW-C-12-(65)-U	12(65x30)	.020	.130	As Listed	As Listed	As Listed

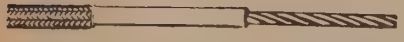
SOLID CONDUCTOR

9010	MW-C-22-(1)-U	22 (Solid)	.017	.059	As Listed	As Listed	As Listed
9011	MW-C-20-(1)-U	20 (Solid)	.017	.066	As Listed	As Listed	As Listed
9012	MW-C-18-(1)-U	18 (Solid)	.017	.074	As Listed	As Listed	As Listed
9013	MW-C-16-(1)-U	16 (Solid)	.017	.085	As Listed	As Listed	As Listed

Stock Colors*

0	Black	92	White/Red
1	Brown	93	White/Orange
2	Red	94	White/Yellow
3	Orange	95	White/Green
4	Yellow	96	White/Blue
5	Green	97	White/Violet
6	Dark Blue	98	White/Gray
7	Violet (Purple)	901	White/Black/Brown
8	Gray (Slate)	902	White/Black/Red
9	White	903	White/Black/Orange
11	Tan	904	White/Black/Yellow
12	Pink	905	White/Black/Green
13	Light Blue	906	White/Black/Blue
90	White/Black	907	White/Black/Violet
91	White/Brown	908	White/Black/Gray

TYPE MW — SHIELDED — 1000V — 80C



Tinned copper, polyvinylchloride insulation. Medium wall, tinned copper shield overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9014	MW-C-24-(7)-S	24(7x32)	.017	.082	As Listed	As Listed	As Listed
9015	MW-C-22-(7)-S	22(7x30)	.017	.088	As Listed	As Listed	As Listed
9016	MW-C-20-(10)-S	20(10x30)	.017	.094	As Listed	As Listed	As Listed
9017	MW-C-18-(16)-S	18(16x30)	.017	.104	As Listed	As Listed	As Listed
9018	MW-C-16-(26)-S	16(26x30)	.019	.122	As Listed	As Listed	As Listed
9019	MW-C-14-(41)-S	14(41x30)	.020	.135	0, 2, 9	0, 2, 9	0, 2, 9
9020	MW-C-12-(65)-S	12(65x30)	.020	.154	0, 2, 9	0, 2, 9	0, 2, 9

Stock Colors*

0	Black	5	Green
1	Brown	6	Dark Blue
2	Red	7	Violet (Purple)
3	Orange	8	Gray (Slate)
4	Yellow	9	White

TYPE MW — SHIELDED — NYLON JACKET — 1000V — 80C



Tinned copper, polyvinylchloride insulation. Medium wall, tinned copper shield, nylon jacket.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9021	MW-C-22-(7)-SJ	22(7x30)	.017	.095	9	9	9
9022	MW-C-20-(7)-SJ	20(10x30)	.017	.101	9	9	9
9023	MW-C-18-(16)-SJ	18(16x30)	.017	.112	9	9	9
9024	MW-C-16-(19)-SJ	16(26x30)	.019	.131	9	9	9

Stock Color*

9 Vinyl insulation. **White** only.

TYPE MW — GLASS BRAID — 1000V — 80C



Tinned copper, polyvinylchloride insulated. Medium wall, lacquered glass braid overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9025	MW-C-22(7)-B	22(7x30)	.017	.076	As Listed	As Listed	As Listed
9026	MW-C-20(10)-B	20(10x30)	.017	.084	As Listed	As Listed	As Listed
9027	MW-C-18(16)-B	18(16x30)	.017	.094	As Listed	As Listed	As Listed
9028	MW-C-16(26)-B	16(26x30)	.019	.112	As Listed	As Listed	As Listed
9029	MW-C-14(41)-B	14(41x30)	.020	.125	9,90 thru 98	9,90 thru 98	9,90 thru 98
9030	MW-C-12(65)-B	12(65x30)	.020	.144	9, 90, 92	9, 90, 92	9, 90, 92

Stock Colors*

0	Black	90	White/Black
1	Brown	91	White/Brown
2	Red	92	White/Red
3	Orange	93	White/Orange
4	Yellow	94	White/Yellow
5	Green	95	White/Green
6	Dark Blue	96	White/Blue
7	Violet (Purple)	97	White/Violet
8	Gray (Slate)	98	White/Gray
9	White		

TYPE MW — GLASS BRAID — SHIELDED — 1000V — 80C



Tinned copper, polyvinylchloride insulated. Medium wall, lacquered glass braid, tinned copper shield overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9031	MW-C-22(7)-BS	22(7x30)	.017	.102	9	9	9
9032	MW-C-20(7)-BS	20(10x30)	.017	.108	9	9	9
9033	MW-C-18(16)-BS	18(16x30)	.017	.118	9	9	9
9034	MW-C-16(19)-BS	16(26x30)	.019	.136	9	9	9
9035	MW-C-14(19)-BS	14(41x30)	.020	.149	9	9	9
9036	MW-C-12(19)-BS	12(65x30)	.020	.168	9	9	9

Stock Color*

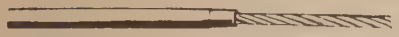
9 Vinyl insulation. **White** only.

* Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

© United Technical Publications

MIL-W-76

TYPE MW — NYLON JACKET — 1000V — 90C



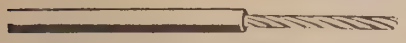
Tinned copper, polyvinylchloride insulated. Medium wall, clear nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100′	500′	1000′
9037	MW-C-22(7)-J	22(7x30)	.017	.069	As Listed	As Listed	As Listed
9038	MW-C-20(10)-J	20(10x30)	.017	.075	As Listed	As Listed	As Listed
9039	MW-C-18(16)-J	18(16x30)	.017	.086	As Listed	As Listed	As Listed
9040	MW-C-16(26)-J	16(26x30)	.019	.106	As Listed	As Listed	As Listed
9041	MW-C-14(41)-J	14(41x30)	.020	.118	0,1,3,4,5,9	0,1,3,4,5,9	0,1,3,4,5,9
9042	MW-C-12(65)-J	12(65x30)	.020	.139	0,1,3,4,5,9	0,1,3,4,5,9	0,1,3,4,5,9

Stock Colors*

0 Black
1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Dark Blue
7 Violet (Purple)
8 Gray (Slate)
9 White
90 White/Black
91 White/Brown
92 White/Red
93 White/Orange
94 White/Yellow
95 White/Green
96 White/Blue
97 White/Violet
98 White/Gray

TYPE HW — VINYL — Gauges 16-22 2500V, Gauges 6-14 600V — 80C



Tinned copper, polyvinylchloride insulated. Heavy wall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100′	500′	1000′
9100	HW-C-22(7)-U	22(7x30)	.034	.098	As Listed	As Listed	As Listed
9101	HW-C-20(10)-U	20(10x30)	.034	.104	As Listed	As Listed	As Listed
9102	HW-C-18(16)-U	18(16x30)	.034	.114	As Listed	As Listed	As Listed
9103	HW-C-16(26)-U	16(26x30)	.034	.128	0, 2, 9	0, 2, 9	0, 2, 9
9104	HW-C-14(41)-U	14(41x30)	.048	.171	0, 2, 9	0, 2, 9	0, 2, 9
9105	HW-C-12(65)-U	12(65x30)	.048	.191	0, 2, 9	0, 2, 9	0, 2, 9
9106	HW-C-10(105)-U	10(105x30)	.048	.214	0, 2, 9	0, 2, 9	0, 2, 9
9107	HW-C-8(133)-U	8(133x29)	.048	.261	0, 2, 9	0, 2, 9	0, 2, 9
9108	HW-C-6(133)-U	6(133x27)	.048	.296	0, 2, 9	0, 2, 9	0, 2, 9

Stock Colors*

0 Black
1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Dark Blue
7 Violet (Purple)
8 Gray (Slate)
9 White

TYPE HW — GLASS BRAID — 600V — 80C



Tinned copper, polyvinylchloride insulated. Heavy wall, lacquered glass braid.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100′	500′	1000′
9110	HW-C-10(105)-B	10(105x30)	.048	.235	As Listed	As Listed	As Listed
9111	HW-C-8(133)-B	8(133x29)	.048	.279	As Listed	As Listed	As Listed
9112	HW-C-6(133)-B	6(133x27)	.048	.314	As Listed	As Listed	As Listed

Stock Colors*

9 White
90 White/Black
92 White/Red

TYPE LW — VINYL — 300V — 80C



Tinned copper, polyvinylchloride insulated. Light wall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100′	500′	1000′
9200	LW-C-30(7)-U	30(7x38)	.011	.034	0 thru 9	0 thru 9	0 thru 9
9201	LW-C-28(7)-U	28(7x36)	.011	.037	As Listed	As Listed	As Listed
9202	LW-C-26(7)-U	26(7x34)	.011	.041	As Listed	As Listed	As Listed
9203	LW-C-24(7)-U	24(7x32)	.011	.046	As Listed	As Listed	As Listed
9204	LW-C-22(7)-U	22(7x30)	.012	.054	As Listed	As Listed	As Listed
9205	LW-C-20(10)-U	20(10x30)	.012	.060	As Listed	As Listed	As Listed

Stock Colors*

0 Black
1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Dark Blue
7 Violet (Purple)
8 Gray (Slate)
9 White
90 White/Black
91 White/Brown
92 White/Red
93 White/Orange
94 White/Yellow
95 White/Green
96 White/Blue
97 White/Violet
98 White/Gray

TYPE LW — NYLON JACKET — 300V — 90C



Tinned copper, polyvinylchloride insulated. Light wall, clear nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100′	500′	1000′
9210	LW-C-30(7)-J	30(7x38)	.011	.039	0 thru 9	0 thru 9	0 thru 9
9211	LW-C-28(7)-J	28(7x36)	.011	.042	As Listed	As Listed	As Listed
9212	LW-C-26(7)-J	26(7x34)	.011	.046	As Listed	As Listed	As Listed
9213	LW-C-24(7)-J	24(7x32)	.011	.051	As Listed	As Listed	As Listed
9214	LW-C-22(7)-J	22(7x30)	.012	.059	As Listed	As Listed	As Listed
9215	LW-C-20(10)-J	20(10x30)	.012	.065	As Listed	As Listed	As Listed

Stock Colors*

0 Black
1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Dark Blue
7 Violet (Purple)
8 Gray (Slate)
9 White
90 White/Black
91 White/Brown
92 White/Red
93 White/Orange
94 White/Yellow
95 White/Green
96 White/Blue
97 White/Violet
98 White/Gray

* Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

© United Technical Publications

MIL-W-16878

TYPE B — VINYL — 600V — 105C



Tinned copper, polyvinylchloride insulated.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9300	B-32	32(7x40)	.010	.029	0 thru 9	0 thru 9	0 thru 9
9301	B-30	30(7x38)	.010	.032	0 thru 9	0 thru 9	0 thru 9
9302	B-28	28(7x36)	.010	.035	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98
9303	B-26	26(7x34)	.010	.039	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98
9304	B-24	24(19x36)	.010	.045	9,90 thru 98	9,90 thru 98	9,90 thru 98
9305	B-24	24(7x32)	.010	.044	As Listed	As Listed	As Listed
9306	B-22	22(19x34)	.010	.051	9,90 thru 98	9,90 thru 98	9,90 thru 98
9307	B-22	22(7x30)	.010	.050	As Listed	As Listed	As Listed
9308	B-20	20(19x32)	.010	.059	9,90 thru 98	9,90 thru 98	9,90 thru 98
9309	B-20	20(7x28)	.010	.058	As Listed	As Listed	As Listed
9310	B-18	18(19x30)	.010	.069	9,90 thru 98	9,90 thru 98	9,90 thru 98
9311	B-18	18(7x26)	.010	.068	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98
9312	B-16	16(19x29)	.010	.077	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98

Stock Colors*

0	Black	90	White/Black
2	Brown	91	White/Brown
2	Red	92	White/Red
3	Orange	93	White/Orange
4	Yellow	94	White/Yellow
5	Green	95	White/Green
6	Dark Blue	96	White/Blue
7	Violet (Purple)	97	White/Violet
8	Gray (Slate)	98	White/Gray
9	White		
11	Tan		
12	Pink		
13	Light Blue		

TYPE B — VINYL-NYLON JACKET — 600V — 115C



Tinned copper, polyvinylchloride insulated, nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9313	B-32	32(7x40)	.010	.035	0 thru 9	0 thru 9	0 thru 9
9314	B-30	30(7x38)	.010	.038	0 thru 9	0 thru 9	0 thru 9
9315	B-28	28(7x36)	.010	.041	As Listed	As Listed	As Listed
9316	B-26	26(7x34)	.010	.045	As Listed	As Listed	As Listed
9317	B-24	24(19x36)	.010	.051	As Listed	As Listed	As Listed
9318	B-24	24(7x32)	.010	.050	As Listed	As Listed	As Listed
9319	B-22	22(19x34)	.010	.057	As Listed	As Listed	As Listed
9320	B-22	22(7x30)	.010	.056	As Listed	As Listed	As Listed
9321	B-20	20(19x32)	.010	.065	As Listed	As Listed	As Listed
9322	B-20	20(7x28)	.010	.064	As Listed	As Listed	As Listed
9323	B-18	18(19x30)	.010	.075	9,90 thru 98	9,90 thru 98	9,90 thru 98
9324	B-18	18(7x26)	.010	.074	As Listed	As Listed	As Listed
9325	B-16	16(19x29)	.010	.083	As Listed	As Listed	As Listed

Stock Colors*

0	Black	90	White/Black
1	Brown	91	White/Brown
2	Red	92	White/Red
3	Orange	93	White/Orange
4	Yellow	94	White/Yellow
5	Green	95	White/Green
6	Dark Blue	96	White/Blue
7	Violet (Purple)	97	White/Violet
8	Gray (Slate)	98	White/Gray
9	White		

TYPE C — VINYL — 1000V — 105C



Tinned copper, polyvinylchloride insulated.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9400	C-24	24(7x32)	.018	.060	9,90 thru 98	9,90 thru 98	9,90 thru 98
9401	C-22	22(7x30)	.018	.066	As Listed	As Listed	As Listed
9402	C-20	20(7x28)	.018	.074	As Listed	As Listed	As Listed
9403	C-18	18(7x26)	.018	.084	As Listed	As Listed	As Listed
9404	C-16	16(19x29)	.018	.093	9,90 thru 98	9,90 thru 98	9,90 thru 98
9405	C-14	14(19x27)	.018	.107	9,90 thru 98	9,90 thru 98	9,90 thru 98

Stock Colors*

0	Black	90	White/Black
1	Brown	91	White/Brown
2	Red	92	White/Red
3	Orange	93	White/Orange
4	Yellow	94	White/Yellow
5	Green	95	White/Green
6	Dark Blue	96	White/Blue
7	Violet (Purple)	97	White/Violet
8	Gray (Slate)	98	White/Gray
9	White		

TYPE C — VINYL-NYLON JACKET — 1000V — 115C



Tinned copper, polyvinylchloride insulated, nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9410	C-24	24(7x32)	.018	.066	9,90 thru 98	9,90 thru 98	9,90 thru 98
9411	C-22	22(7x30)	.018	.072	As Listed	As Listed	As Listed
9412	C-20	20(7x28)	.018	.080	As Listed	As Listed	As Listed
9413	C-18	18(7x26)	.018	.091	As Listed	As Listed	As Listed
9414	C-16	16(19x29)	.018	.100	9,90 thru 98	9,90 thru 98	9,90 thru 98
9415	C-14	14(19x27)	.018	.114	9,90 thru 98	9,90 thru 98	9,90 thru 98

Stock Colors*

0	Black	90	White/Black
1	Brown	91	White/Brown
2	Red	92	White/Red
3	Orange	93	White/Orange
4	Yellow	94	White/Yellow
5	Green	95	White/Green
6	Dark Blue	96	White/Blue
7	Violet (Purple)	97	White/Violet
8	(Gray (Slate)	98	White/Gray
9	White		

* Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

© United Technical Publications

MIL-W-16878

TYPE D — VINYL — 3000V — 105C



Tinned copper, polyvinylchloride insulated.

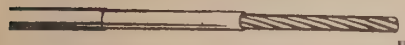
Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9500	D-24	24(7x32)	.030	.084	9,90thru98	9,90thru98	9,90thru98
9501	D-22	22(7x30)	.030	.090	As Listed	As Listed	As Listed
9502	D-20	20(7x28)	.030	.098	As Listed	As Listed	As Listed
9503	D-18	18(7x26)	.030	.108	As Listed	As Listed	As Listed
9504	D-16	16(19x29)	.030	.117	9,90thru98	9,90thru98	9,90thru98
9505	D-14	14(19x27)	.030	.131	9,90thru98	9,90thru98	9,90thru98
9506	D-12	12(19x25)	.035	.160	9,90thru98	9,90thru98	9,90thru98
9507	D-10	10(37x26)	.035	.181	9,90thru98	9,90thru98	9,90thru98
9508	D- 8	8(133x29)	.040	.245	9,90thru98	9,90thru98	9,90thru98
9509	D- 6	6(133x27	.040	.290	9,90thru98	9,90thru98	9,90thru98

Stock Colors*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	98 White/Gray
8 Gray (Slate)	
9 White	

MIL-W-5086A

AIRCRAFT WIRE & CABLE TYPES 1 & 2 — 600V



UNSHIELDED

Catalog Number	MIL Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9700	AN-22	22(19x34)	.068	No.1	9	9	9
9701	AN-20	20(19x32)	.078	No.1	9	9	9
9702	AN-18	18(19x30)	.088	No.1	9	9	9
9703	AN-16	16(19x29)	.098	No.1	9	9	9
9704	AN-14	14(19x27)	.117	No.1	9	9	9
9705	AN-12	12(19x25)	.137	No.1	9	9	9
9706	AN-22	22(19x34)	.075	No.2	9	9	9
9707	AN-20	20(19x32)	.085	No.2	9	9	9
9708	AN-18	18(19x30)	.095	No.2	9	9	9
9709	AN-16	16(19x29)	.105	No.2	9	9	9
9710	AN-14	14(19x27)	.125	No.2	9	9	9
9711	AN-12	12(19x25)	.143	No.2	9	9	9
9713	AN-10	10(49x27)	.189	No.2	9	9	9
9714	AN-8	8(133x29)	.240	No.2	9	9	9
9715	AN-6	6(133x27)	.293	No.2	9	9	9
9716	AN-4	4(133x25)	.355	No.2	9	9	9
9717	AN-2	2(665x30)	.425	No.2	9	9	9
9718	AN-0	0(1045x30)	.525	No.2	9	9	9
9719	AN-00	00(1330x30)	.590	No.2	9	9	9

Stock Color*

White only (9)

Additional Description

MIL-W-5086A-Type I
AN-22 thru AN-12.

Stranded tinned copper, white polyvinylchloride clear nylon jacket insulation.

MIL-W-5086A-Type II
AN-22 thru AN-12

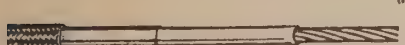
Stranded tinned copper, white polyvinylinsulation, saturated glass braid, clear nylon jacket.

MIL-W-5086A-Type II
AN-10 thru AN-00

Stranded tinned copper, white polyvinylchloride insulation, saturated glass braid, nylon braid, nylon lacquer.

MIL-C-7078A — TYPE 1 — 600 VOLT

(MIL-W-5086A Type I Conductor Braided Tinned Copper Shield)



SHIELDED

Catalog Number	MIL Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100′	500′	1000′
9720	AN-22	22(19x34)	.092	No.1	9	9	9
9721	AN-20	20(19x32)	.102	No.1	9	9	9
9722	AN-18	18(19x30)	.112	No.1	9	9	9
9723	AN-16	16(19x29)	.122	No.1	9	9	9
9724	AN-14	14(19x27)	.141	No.1	9	9	9
9725	AN-12	12(19x25)	.161	No.1	9	9	9

Stock Color*

White only (9)

Additional Description

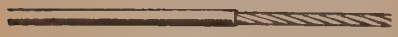
Stranded tinned copper, white polyvinylchloride insulation, nylon jacket, braided tinned copper shield.

* Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

© United Technical Publications

MIL-W-16878-D

TYPE E — TFE TEFLON — 600V — 200C



Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated.

Catalog Number	Type Designation	Size & (Stranding)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
				100′	500′	1000′
9600	E-32	32(7x40)	.032	As Listed	As Listed	As Listed
9601	E-30	30(7x38)	.032	As Listed	As Listed	As Listed
9602	E-28	28(7x36)	.035	As Listed	As Listed	As Listed
9603	E-26	26(19x38)	.039	As Listed	As Listed	As Listed
9604	E-26	26(7x34)	.039	As Listed	As Listed	As Listed
9605	E-24	24(19x36)	.044	As Listed	As Listed	As Listed
9606	E-24	24(7x32)	.044	As Listed	As Listed	As Listed
9607	E-22	22(19x34)	.050	As Listed	As Listed	As Listed
9608	E-22	22(7x30)	.050	As Listed	As Listed	As Listed
9609	E-20	20(19x32)	.058	As Listed	As Listed	As Listed
9610	E-20	20(7x28)	.058	As Listed	As Listed	As Listed
9611	E-18	18(19x30)	.069	As Listed	As Listed	As Listed
9612	E-18	18(7x26)	.069	As Listed	As Listed	As Listed
9613	E-16	16(19x29)	.080	As Listed	As Listed	As Listed
9614	E-14	14(19x27)	.095	As Listed	As Listed	As Listed
9615	E-12	12(19x25)	.115	As Listed	As Listed	As Listed
9616	E-10	10(37x26)	.131	As Listed	As Listed	As Listed

Stock Colors*

0 Black	5 Green
1 Brown	6 Dark Blue
2 Red	7 Violet (Purple)
3 Orange	8 Gray (Slate)
4 Yellow	9 White

NOTE: Tracer colors available upon customer request. Minimum quantity 500 feet.

TYPE EE — TFE TEFLON — 1000V — 200C



Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated.

Catalog Number	Type Designation	Size & (Stranding)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
				100′	500′	1000′
9620	EE-32	32(7x40)	.042	As Listed	As Listed	As Listed
9621	EE-30	30(7x38)	.042	As Listed	As Listed	As Listed
9622	EE-28	28(7x36)	.045	As Listed	As Listed	As Listed
9623	EE-26	26(19x38)	.049	As Listed	As Listed	As Listed
9624	EE-26	26(7x34)	.049	As Listed	As Listed	As Listed
9625	EE-24	24(19x36)	.054	As Listed	As Listed	As Listed
9626	EE-24	24(7x32)	.054	As Listed	As Listed	As Listed
9627	EE-22	22(19x34)	.060	As Listed	As Listed	As Listed
9628	EE-22	22(7x30)	.060	As Listed	As Listed	As Listed
9629	EE-20	20(19x32)	.068	As Listed	As Listed	As Listed
9630	EE-20	20(7x28)	.068	As Listed	As Listed	As Listed
9631	EE-18	18(19x30)	.079	As Listed	As Listed	As Listed
9632	EE-18	18(7x26)	.079	As Listed	As Listed	As Listed
9633	EE-16	16(19x29)	.089	As Listed	As Listed	As Listed
9634	EE-14	14(19x27)	.110	As Listed	As Listed	As Listed
9635	EE-12	12(19x25)	.129	As Listed	As Listed	As Listed
9636	EE-10	10(37x26)	.149	As Listed	As Listed	As Listed

Stock Colors*

0 Black	5 Green
1 Brown	6 Dark Blue
2 Red	7 Violet (Purple)
3 Orange	8 Gray (Slate)
4 Yellow	9 White

NOTE: Tracer colors available upon customer request. Minimum quantity 500 feet.

MIL-W-8777B — MS25471
SILICONE RUBBER AIRCRAFT WIRE

Silver plated copper, silicone rubber insulation, impregnated, lacquered glass and dacron braid overall −55°C to +150°C.

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Nominal O.D.
9901	22	19x34	.014	600	.084
9902	20	19x32	.016	600	.095
9903	18	19x30	.018	600	.110
9904	16	19x29	.022	600	.125
9905	14	19x27	.025	600	.140
9906	12	19x25	.025	600	.160
9907	10	49x27	.025	600	.195

STANDARD SPOOL PUT UP 100 FT., 500 FT., 1000 FT.
NOTE: MINIMUM PURCHASE PER ITEM 1000 FT.

MIL-W-7139B — CLASS 1
TEFLON AIRFRAME CABLE

Silver plated copper, teflon tape wrap and teflon impregnated fiberglass braid overall −65°C to +200°C.

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Nominal O.D.
9941	22	19x34	.014	600	.087
9942	20	19x32	.014	600	.098
9943	18	19x30	.014	600	.112
9944	16	19x29	.014	600	.132
9945	14	19x27	.014	600	.147
9946	12	19x25	.015	600	.167
9947	10	49x27	.018	600	.200

© United Technical Publications

SHIELDED TEFLON CABLES — MIL-W-16878

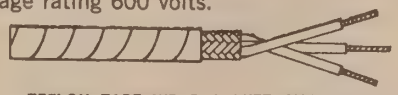
Each conductor stranded silver plated copper Type E extruded Teflon .010" insulation — 90% braided silver copper shield, also supplied with either a Teflon impregnated Fiberglass braid or Teflon fused tape overall jacket.

Temperature rating −65°C to +260°C. Voltage rating 600 volts.



NO OUTER COVERING OVER SHIELD

Catalog Number	Number of Conductors	Size & (Stranding)	Nom. O.D. (Inch)
9800	1	24(19x36)	.069
9801	2	24(19x36)	.112
9802	3	24(19x36)	.120
9803	4	24(19x36)	.132
9804	1	22(19x34)	.075
9805	2	22(19x34)	.124
9806	3	22(19x34)	.132
9807	4	22(19x34)	.146
9808	1	20(19x32)	.083
9809	2	20(19x32)	.142
9810	3	20(19x32)	.151
9811	4	20(19x32)	.168
9812	1	18(19x30)	.093
9813	2	18(19x30)	.162
9814	3	18(19x30)	.172
9815	4	18(19x30)	.192



TEFLON TAPE WRAP JACKET OVER SHIELD

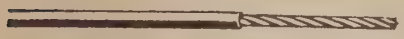
Number Catalog	Conductors Number of	(Stranding) Size &	(Inch) Nom. O.D.
9820	1	24(19x36)	.084
9821	2	24(19x36)	.128
9822	3	24(19x36)	.135
9823	4	24(19x36)	.148
9824	1	22(19x34)	.090
9825	2	22(19x34)	.140
9826	3	22(19x34)	.148
9827	4	22(19x34)	.162
9828	1	20(19x32)	.099
9829	2	20(19x32)	.158
9830	3	20(19x32)	.167
9831	4	20(19x32)	.184
9832	1	18(19x30)	.109
9833	2	18(19x30)	.178
9834	3	18(19x30)	.189
9835	4	18(19x30)	.208



TEFLON IMPREGNATED BRAID OVER SHIELD

Number Catalog	Conductors Number of	(Stranding) Size &	(Inch) Nom. O.D.
9840	1	24(19x36)	.081
9841	2	24(19x36)	.126
9842	3	24(19x36)	.133
9843	4	24(19x36)	.144
9844	1	22(19x34)	.088
9845	2	22(19x34)	.137
9846	3	22(19x34)	.144
9847	4	22(19x34)	.158
9848	1	20(19x32)	.097
9849	2	20(19x32)	.154
9850	3	20(19x32)	.163
9851	4	20(19x32)	.180
9852	1	18(19x30)	.106
9853	2	18(19x30)	.174
9854	3	18(19x30)	.185
9855	4	18(19x30)	.205

Stock Colors* Catalog Numbers 9800 thru 9855 specify color coding when ordering.
Standard spool put up Catalog Numbers 9800 thru 9855: 100 Ft., 500 Ft., 1000 Ft.
* Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.



U/L APPROVED HOOK-UP WIRE

UL — 300V — 80C

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Max. Dia. Inches
803	24	Solid	1/64	300	.055
801	22	Solid	1/64	300	.065
811	20	Solid	1/64	300	.071
841	18	Solid	1/64	300	.080
819	24	7 x No. 32	1/64	300	.059
821	22	7 x No. 30	1/64	300	.069
831	20	10 x No. 30	1/64	300	.078
846	18	16 x No. 30	1/64	300	.085
881	20 2/Condr.	10 x No. 30	.025	300	.170

ROME SYNTHINOL — UL TYPE HOOK-UP AND LEAD WIRES

TINNED COPPER

UL — 600V — 105C (CSA-TEW)

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Max. Dia. Inches
851	22	Solid	1/32	600	.097
856	20	Solid	1/32	600	.104
861	18	Solid	1/32	600	.112
866	22	7 x No. 30	1/32	600	.102
871	20	10 x No. 30	1/32	600	.110
876	18	16 x No. 30	1/32	600	.119

† "TOPCOAT" COPPER CONDUCTOR

† Stranded copper conductor passed through molten tin bath bonding individual strands together.

UL — 300V — 80C

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Max. Dia. Inches
823	22	7 x No. 30	1/64	300	.069
833	20	10 x No. 30	1/64	300	.078
843	18	16 x No. 30	1/64	300	.085

UL — 600V — 105C (CSA-TEW)

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Max. Dia. Inches
865	22	7 x No. 30	1/32	600	.102
875	20	10 x No. 30	1/32	600	.110
885	18	16 x No. 30	1/32	600	.119

‡ "HEAVY TIN" COPPER CONDUCTOR

‡ Stranded "Double" Tin Copper Conductor — Tinning sufficiently thick to allow fusing of strands during induction heating.

UL — 300V — 80C

Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Max. Dia. Inches
827	22	7 x No. 30	1/64	300	.069
837	20	10 x No. 30	1/64	300	.078
847	18	16 x No. 30	1/64	300	.085

UL — 600V — 105C (CSA-TEW)

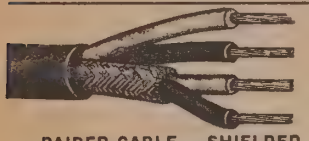
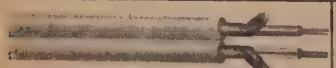
Catalog Number	Size AWG	Stranding	Nominal Ins. Thickness	Volts	Max. Dia. Inches
869	22	7 x No. 30	1/32	600	.102
879	20	10 x No. 30	1/32	600	.110
889	18	16 x No. 30	1/32	600	.119

Stock Colors: Black, Blue, Brown, Green, Orange, Pink, Red, Slate, White, Yellow.
Spool Put-Up: 25 Ft., 100 Ft., 500 Ft., 1,000 Ft., 5,000 Ft., 7,500 Ft., 10,000 Ft.

© United Technical Publications

INTERCOMMUNICATION AND SOUND SYSTEM CABLES

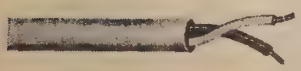
STANDARD SPOOL PUT-UP — 10 FT., 25 FT., 50 FT., 100 FT., 500 FT. and 1000 FT.

	No.	Type	Size & Stranding	Insulation Thickness (Inches)	SPECIFICATIONS AND GENERAL APPLICATIONS	Nominal Diameter (Inches)
 STATION-TO-STATION EXTENSION WIRING SHIELDED	5501	2 Condr.	22 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—closely woven braided tinned copper shield.	.110
	5506	3 Condr.	22 Solid	.015	Same as 5501—1 condr. red—1 condr. black—1 condr. blue.	.145
	5521	2 Condr.	20 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—closely woven braided tinned copper shield.	.155
 EXTENSION WIRING SHIELDED — PLASTIC JACKET	5511	2 Condr.	22 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—and a spiral tinned copper shield with .020" tubed gray vinyl plastic jacket.	.170
 PAIRED CABLE — SHIELDED PLASTIC JACKET	5516	2 Pair 4 Condr.	22(7x30)	.015	Stranded tinned copper vinyl plastic insulation. 2 pair cabled (4 conductors)—1 pair black & white with braided tinned copper shield mylar tape—1 pair black & brown unshielded—both pair bunched and .020" gray vinyl plastic jacket overall.	.168x.276
 EXTENSION-SPEAKERS SHIELDED FOR LONG RUNS	5526	2 Condr.	20(10x30)	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—closely woven braided tinned copper shield.	.215
	5531	3 Condr.	20(10x30)	.015	Same as 5526—1 condr. red—1 condr. black—1 condr. blue.	.230
	5536	2 Condr.	18(16x30)	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together. 1 condr. red—1 condr. white, closely woven braided tinned copper shield.	.235
 EXTENSION-SPEAKERS SHIELDED — PLASTIC JACKET	5568	2 Condr.	22(7x30)	.015	Tinned copper vinyl plastic insulation, 2 condrs.—cabled black and red—tinned copper **spiral** wrapped shield .023" chrome vinyl plastic jacket.	.166
	5569	3 Condr.	22(7x30)	.015	Tinned copper vinyl plastic insulation, 3 condrs.—cabled black, red, white—tinned copper **spiral** shield—chrome vinyl plastic jacket.	.193
	5538	2 Condr.	18(16x30)	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together. 1 condr. red, 1 condr. white. **Spiral** tinned copper shield and .020" gray vinyl plastic jacket overall.	.225
	5543	2 Condr.	20(10x30)	.015	Same as 5538—1 condr. red—1 condr. black.	.185
	5541	2 Condr.	18(16x30)	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together. 1 condr red—1 condr. white, closley woven braided tinned copper shield and .020" gray vinyl plastic jacket overall.	.260
 JUKE BOX SPEAKER CABLE	5547	2 Condr.	24(7x32)	.015	Stranded 1 condr. bare copper—1 condr. tinned copper—2 condrs. parallel vinyl plastic insulation. Colors: gray, white, brown, clear.	.058x.115
 DUAL CHANNEL AUDIO CABLE For Stereo & Language Laboratories	5587	2 Condr.	24(7x32)	.018	Tinned copper conductor. **Spiral** tinned copper individual shield; .020" gray vinyl jacket.	.106x.213
 ELECTRIC GUITARS High Impedance Lapel Microphones	5551	1 Condr.	22(16x34)	.020	Stranded tinned copper polyethylene insulation closely spiral tinned. copper shield with .020" gray vinyl jacket.	.135
 INTER COMMUNICATING SOUND SYSTEM	5556	2 Condr.	19 Solid	.015	Bare copper vinyl plastic insulation, wires twisted together—1 condr. brown—1 condr. tan.	.115
	5561	3 Condr.	19 Solid	.015	Same as 5556—1 condr. brown—1 condr. tan—1 condr. gray.	.132
 INTER COMMUNICATING SOUND SYSTEM — JACKETED	5557	2 Condr.	19 Solid	.015	Same as 5556 except .025" outer gray PVC jacket.	.162
 INTER COMMUNICATING SOUND SYSTEM - WEATHER-PROOF	5566	2 Condr.	22 Solid	.015	Bare copper .015 rubber insulation with a black cotton braid weatherproof finish. Conductors coded for easy identification. Ideal for exterior or interior communication installations.	.131x.203

© United Technical Publications

INTERCOMMUNICATION AND SOUND SYSTEM CABLES

STANDARD SPOOL PUT-UP — 100 FT., 500 FT., 1000 FT.

	No.	Type	Size & Stranding	Nom. Jacket Thickness (Inches)	SPECIFICATIONS AND GENERAL APPLICATIONS	Nominal Diameter (Inches)
 SHIELDED 2 AND 3 CONDUCTOR	5572	2 Condr.	22(7x30)	.025	Tinned copper conductors. .012" polyethylene insulation. Mylar aluminum shield stranded tinned copper drain wire vinyl jacket.	.170
	5573	2 Condr.	20(10-30)	.025	Same as 5572	.200
	5574	2 Condr.	18(16x30)	.030	Same as 5572	.225
	5575	2 Condr.	16(26x30)	.030	Same as 5572	.250
	5589	2 Condr.	14(41x30)	.030	Same as 5572	.320
	5576	3 Condr.	22(7x30)	.025	Same as 5572	.210
	5577	3 Condr.	20(10x30)	.025	Same as 5572	.235
	5578	3 Condr.	18(16x30)	.025	Same as 5572	.260
	5590	3 Condr.	16(26x30)	.030	Same as 5572	.290
	5591	3 Condr.	14(41x30)	.030	Same as 5572	.340
 UNSHIELDED WITH JACKET	5579	2 Condr.	22(7x30)	.025	Tinned copper conductors .015". Vinyl insulation.	.165
	5580	2 Condr.	20(10x30)	.025	Same as 5579	.190
	5581	2 Condr.	18(16x30)	.030	Same as 5579	.225
	5582	2 Condr.	16(26x30)	.030	Same as 5579	.245
	5583	2 Condr.	14(41x30)	.030	Same as 5579	.310
 UNSHIELDED WITHOUT JACKET	5584	2 Condr.	22 Solid		Tinned copper conductors .015" Vinyl insulation twisted.	.115
	5585	2 Condr.	18(16x30)		.020" insulation. Same as 5584.	.175
	5586	2 Condr.	16(26x30)		Same as 5585	.195
 MINIATURE BROADCAST AUDIO CABLE	5570	2 Condr.	22(7x30)	.020	Tinned copper .010" Polyethylene insulation Mylar aluminum shield stranded tinned copper drain wire vinyl jacket.	.140
	5588	2 Condr.	22 Solid	.020	Same as 5570	.120
 2 PAIR MINIATURE AUDIO AND SOUND CABLE	5594	2 Pair	22(7x30)	.019	Tinned copper polypropylene insulation. Each pair shielded. Mylar aluminum shield and drain wire. Color coded same as 5571.	.165
	5571	2 Pair	22(7x30	.019	Tinned copper .009" Polyethylene insulation. 1 pair black and red with Mylar aluminum shield. 1 pair white and green. Both pairs twisted with standed tinned copper ground wire. Vinyl jacket.	.165

© United Technical Publications

CONSOLIDATED

SHIELDED CONTROL AND MICROPHONE CABLES

SHIELDED RUBBER JACKET

CONDUCTOR COLOR CHART: 1—Black; 2—White; 3—Red; 4—Green; 5—Yellow; 6—Blue; 7—Brown; 8—Orange.

STANDARD SPOOL PUT-UP: 9 FT., 10 FT., 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.



SHIELDED: Weatherproof rubber and Neoprene jacket for all microphone Electronic Power, Control Circuits, or weatherproof extension work. (Longer continuous lengths if desired).

No.	No. of Condr.	Size & Stranding	Special Use	Specifications	Finished O.D. (Inches)	Nominal Capacity per ft. (mmf)
1460	1	20 (26x34)	Crystal microphone	Tinned copper, yarn serve; wall of live rubber; cotton fillers and wrap; tinned copper braid shield; cotton wrap rubber jacket overall.	.240	33.
1462	2	20 (26x34)	Low impedance microphones	Same as 1460; color coded	.268	68.
1456	2	18 (41x34)	Heavy duty studio cable	Same as 1460; color coded	.295	80.
1463	3	20 (26x34)	Low impedance microphones	Same as 1460; color coded	.277	85.
1464	4	20 (26x34)	Low impedance microphones	Same as 1460; color coded	.295	95.
1465	5	20 (26x34)	Interconnecting power cable for all electronic uses	Same as 1460; color coded	.323	
1466	6	20 (26x34)	Same as 1465	Same as 1460; color coded	.349	
1467	7	20 (26x34)	Same as 1465	Same as 1460; color coded	.360	
1455	8	20 (26x34)	Same as 1465	Same as 1460; color coded	.386	

SHIELDED NEOPRENE JACKET

No.	No. of Condr.	Size & Stranding	Specifications	Finished O.D. (Inches)
1701	1	18 (41x34)	Tinned copper, yarn serve; wall of live rubber; cotton fillers and wrap; tinned copper braid shield; cotton wrap neoprene jacket overall.	.250
1702	2	18 (41x34)	Same as 1701, color coded	.305
1703	3	18 (41x34)	Same as 1701, color coded	.325
1704	4	18 (41x34)	Same as 1701, color coded	.335
1705	2	16 (65x34)	Same as 1701, color coded	.345
1706	3	16 (65x34)	Same as 1701, color coded	.365
1707	4	16 (65x34)	Same as 1701, color coded	.390
1708	6	18 (41x34)	Same as 1701, color coded	.430
1709	8	18 (41x34)	Same as 1701, color coded	.465

SHIELDED PLASTIC JACKET



No.	No. of Condr.	Size & Stranding	Special Use	Specifications	Finished O.D. (Inches)	Nominal Capacity per ft. (mmf)
1721	1	24 (7x32)	Low capacitance	Tinned copper polyethylene insulation with a close spiral tinned copper shield. Grey plastic jacket.	.132	29.
1461	1	22 (16x34)	Lapel microphone	Same as 1721	.125	36.
1457	1	22 (16x34)	Crystal, Ribbon and other high impedance microphones	Same as 1721 except heavier polyethylene insulation on conductor.	.200	25.
1458	2	22 (16x34)	Low impedance microphones	Tinned copper polyethylne insulation; black and clear. Cabled with fillers rayon braid spiral tinned copper shield. Gray vinyl plastic jacket.	.231	32.
1459	1	20 (26x34)	Lapel microphone	Tinned copper wire, with polyethylene to .087" O.D. with a closely tinned copper shielded braid, and a heavy black plastic jacket overall.	.175	40.
1722	2	20 (26x34)	Same as 1458	Same as 1458 except braided tinned copper shield.	.245	32.
1723	3	20 (26x34)	Same as 1458	Same as 1722	.250	45.
1724	4	20 (26x34)	Same as 1458	Same as 1722	.255	45.
1725	5	20 (26x34)	Same as 1458	Same as 1722	.275	45.
1726	6	20 (26x34)	Same as 1458	Same as 1722	.300	
1727	7	20 (26x34)	Same as 1458	Same as 1722	.330	
1728	8	20 (26x34)	Same as 1458	Same as 1722	.375	

© United Technical Publications

MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO & SOUND CABLE

Standard Spool Put-up: 100 ft., 200 ft., 500 ft., 1000 ft.

Specifications: Tinned copper conductor .013". Semi rigid vinyl insulation. Mylar aluminum shield and tinned copper drain wire, each pair. Overall Gray vinyl jacket.



No.	Type	Size & Stranding	Nominal Jacket Thickness (Inches)	Nominal Diameter (Inches)
5303	3 pair	22 (Solid)	.050	.340
5306	6 pair	22 (Solid)	.057	.435
5309	9 pair	22 (Solid)	.060	.540
5311	11 pair	22 (Solid)	.060	.575
5315	15 pair	22 (Solid)	.065	.660

MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO & DATA CABLE

Specifications: Tinned copper .010" polypropylene insulation. Mylar aluminum shield and tinned copper drain wire each pair. Overall gray vinyl jacket.



No.	Type	Size & Stranding	Nominal Jacket Thickness (Inches)	Nominal Diameter (Inches)
5323	3 pair	22 (7x30) overall	.030	.275
5326	6 pair	22 (7x30)	.037	.400
5329	9 pair	22 (7x30)	.040	.440
5331	11 pair	22 (7x30)	.040	.485
5335	15 pair	22 (7x30)	.045	.540
5339	19 pair	22 (7x30)	.055	.620
5347	27 pair	22 (7x30)	.070	.760

COLOR CODING FOR PAIRED INTERCOM CABLES

Identification is simple with Consolidated Intercom Cables because they are all color coded. See chart below.

1 Black paired with Red
2 Black paired with White
3 Black paired with Green
4 Black paired with Blue
5 Black paired with Yellow
6 Black paired with Brown
7 Black paired with Orange
8 Red paired with White
9 Red paired with Green
10 Red paired with Blue
11 Red paired with Yellow
12 Red paired with Brown
13 Red paired with Orange
14 Green paired with White
15 Green paired with Blue
16 Green paired with Yellow
17 Green paired with Brown
18 Green paired with Orange
19 White paired with Blue
20 White paired with Yellow
21 White paired with Brown
22 White paired with Orange
23 Blue paired with Yellow
24 Blue paired with Brown
25 Blue paired with Orange
26 Brown paired with Yellow
27 Brown paired with Orange

MULTIPLE CONDUCTOR RUBBER CABLE UNSHIELDED



Standard Spool Put-up: 25 ft., 50 ft., 100 ft., 250 ft., 500 ft., 1000 ft.

Specifications: Stranded Tinned Copper Rubber Insulation, Conductor Color Coded Twisted Fillers Wrap. Black Rubber Jacket.

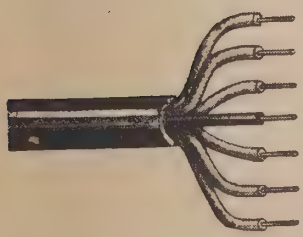
No.	No. of Condr.	Size & Stranding	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Finished O.D. (Inches)
1732	2	20 (26x34)	.020	.035	.240
1733	3	20 (26x34)	.020	.035	.255
1734	4	20 (26x34)	.020	.035	.275
1735	5	20 (26x34)	.020	.035	.300
1736	6	20 (26x34)	.020	.035	.315
1737	7	20 (26x34)	.020	.035	.325
1738	8	20 (26x34)	.020	.035	.360

Color Code Conductors: 1 Black — 2 White — 3 Red — 4 Green — 5 Yellow — 6 Blue — 7 Brown — 8 Orange

UNSHIELDED AUDIO CABLE MULTICONDUCTOR — PLASTIC JACKET

300 VOLTS — STRANDED CONDUCTORS

Specifications: Tinned copper conductor .010" vinyl plastic insulated cabled .020" gray vinyl plastic jacket overall.



No.	No. of Condr.	Size & Stranding	Nominal Diameter (Inches)
5400	2	22(7x30)	.130
5401	3	22(7x30)	.145
5406	4	22(7x30)	.175
5411	5	22(7x30)	.180
5416	6	22(7x30)	.205
5421	7	22(7x30)	.215
5426	8	22(7x30)	.225
5431	9	22(7x30)	.245
5434	12	22(7x30)	.275
5438	15	22(7x30)	.295
5440	20	22(7x30)	.320
5442	25	22(7x30)	.350
5446	30	22(7x30)	.375
5448	40	22(7x30)	.425
5450	50	22(7x30)	.500
5460	60	22(7x30)	.530

400 VOLTS — STRANDED CONDUCTORS

Specifications: Tinned copper condr. PVC cabled. Gray outer PVC Jacket.

.018" PVC cabled.

No.	No. of Condr.	Size & Stranding	Jacket Thickness	Nominal Diameter (Inches)
5470	4	18(16x30)	.030	.250
5471	5	18(16x30)	.037	.286
5472	7	18(16x30)	.037	.324
5473	9	18(16x30)	.037	.379
5474	12	18(16x30)	.040	.412
5475	15	18(16x30)	.045	.440
5476	19	18(16x30)	.045	.505

600 VOLTS — STRANDED CONDUCTORS



.030" PVC cabled.

No.	No. of Condr.	Size & Stranding	Jacket Thickness	Nominal Diameter (Inches)
5480	4	16(19x29)	.045	.375
5481	7	16(19x29)	.045	.455
5482	12	16(19x29)	.060	.600
5483	15	16(19x29)	.060	.650
5484	19	16(19x29)	.065	.715

.045" PVC cabled.

No.	No. of Condr.	Size & Stranding	Jacket Thickness	Nominal Diameter (Inches)
5485	4	14(19x27)	.045	.495
5486	7	14(19x27)	.060	.630
5487	12	14(19x27)	.065	.770

COLOR CODING CHART 1 — For Catalog Numbers 5400 thru 5473.

1 Black
2 Red
3 White
4 Green
5 Orange
6 Blue
7 Brown
8 Yellow
9 Purple
10 Slate
11 Pink
12 Tan
13 Red/Green
14 Red/Yellow
15 Red/Black
16 White/Black
17 White/Red
18 White/Green
19 White/Yellow
20 White/Blue
21 White/Brown
22 White/Orange
23 White/Gray
24 White/Violet
25 White/Black/Red
26 White/Black/Green
27 White/Black/Yellow
28 White/Black/Blue
29 White/BlackBrown
30 White/Black/Orange
31 White/Black/Slate
32 White/Black/Purple
33 White/Black/Black
34 White/Red/Black
35 White/Red/Red
36 White/Red/Green
37 White/Red/Blue
38 White/Red/Brown
39 White/Red/Purple
40 White/Green/Black
41 White/Green/Red
42 White/Green/Green
43 White/Green/Blue
44 White/Green/Brown
45 White/Green/Purple
46 White/Blue/Black
47 White/Blue/Red
48 White/Blue/Green
49 White/Blue/Blue
50 White/Blue/Brown
51 White/Blue/Purple
52 White/Brown/Black
53 White/Brown/Red
54 White/Brown/Green
55 White/Brown/Blue
56 White/Brown/Brown
57 White/Brown/Purple
58 White/Purple/Red
59 White/Purple/Green
60 White/Purple/Blue

COLOR CODING CHART 2 — For Catalog Numbers 5474 thru 5487.

1 Black
2 White
3 Red
4 Green
5 Orange
6 Blue
7 White/Black
8 Red/Black
9 Green/Black
10 Orange/Black
11 Blue/Black
12 Black/White
13 Red/White
14 Green/White
15 Blue/White
16 Black/Red
17 White/Red
18 Orange/Red
19 Blue/Red

© United Technical Publications

UNSHIELDED INTERCOM CABLE — PAIRED CONDUCTORS SOLID AND STRANDED PLASTIC JACKET

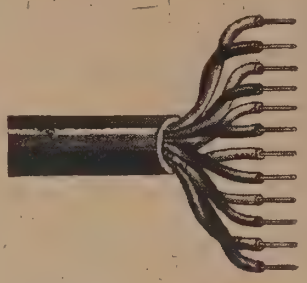
STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

Specifications: Tinned copper conductor .010" vinyl plastic insulation. Cabled .020" gray vinyl plastic jacket overall.



SOLID

No.	Type	Size & Stranding	Nom. Dia. (Ins.)
5201	1 Pr. 2 Condr.	22 Solid	.130
5205	2 Pr. 4 Condr.	22 Solid	.190
5211	3 Pr. 6 Condr.	22 Solid	.220
5221	5 Pr. 10 Condr.	22 Solid	.250
5226	6 Pr. 12 Condr.	22 Solid	.275
5231	7 Pr. 14 Condr.	22 Solid	.280
5236	8 Pr. 16 Condr.	22 Solid	.300
5241	9 Pr. 18 Condr.	22 Solid	.320
5251	11 Pr. 22 Condr.	22 Solid	.340
5271	15 Pr. 30 Condr.	22 Solid	.400
5286	27 Pr. 54 Condr.	22 Solid	.510
5289	31 Pr. 62 Condr.	22 Solid	.555
5292	41 Pr. 82 Condr.	22 Solid	.630
5297	51 Pr. 102 Condr.	22 Solid	.735



STRANDED

No.	Type	Size & Stranding	Nom. Dia. (Ins.)
5151	1 Pr. 2 Condr.	22(7x30)	.145
5152	2 Pr. 4 Condr.	22(7x30)	.210
5153	3 Pr. 6 Condr.	22(7x30)	.230
5155	5 Pr. 10 Condr.	22(7x30)	.265
5156	6 Pr. 12 Condr.	22(7x30)	.290
5157	7 Pr. 14 Condr.	22(7x30)	.300
5158	8 Pr. 16 Condr.	22(7x30)	.320
5159	9 Pr. 18 Condr.	22(7x30)	.355
5161	11 Pr. 22 Condr.	22(7x30)	.370
5165	15 Pr. 30 Condr.	22(7x30)	.450
5167	27 Pr. 54 Condr.	22(7x30)	.570
5171	31 Pr. 62 Condr.	22(7x30)	.635
5181	41 Pr. 82 Condr.	22(7x30)	.710
5191	51 Pr. 102 Condr.	22(7x30)	.800

COLOR CODING FOR PAIRED INTERCOM CABLES

Identification is simple with Consolidated Intercom Cables because they are all color coded. See chart below.

1 Black paired with Red
2 Black paired with White
3 Black paired with Green
4 Black paired with Blue
5 Black paired with Brown
6 Black paired with Yellow
7 Black paired with Orange
8 Red paired with Green
9 Red paired with White
10 Red paired with Blue
11 Red paired with Yellow
12 Red paired with Brown
13 Red paired with Orange
14 Green paired with Blue
15 Green paired with White
16 Green paired with Brown
17 Green paired with Orange
18 Green paired with Yellow
19 White paired with Blue
20 White paired with Brown
21 White paired with Orange
22 White paired with Yellow
23 Blue paired with Brown
24 Blue paired with Orange
25 Blue paired with Yellow
26 Brown paired with Oronge
27 Brown paired with Yellow
28 Purple paired with Red
29 Purple paired with White
30 Purple paired with Green
31 Purple paired with Blue
32 Purple paired with Brown
33 Purple paired with Yellow
34 Purple paired with Orange
35 Purple paired with Slate
36 Purple paired with Black
37 Slate paired with Red
38 Slate paired with White
39 Slate paired with Green
40 Slate paired with Blue
41 Slate paired with Brown
42 Slate paired with Yellow
43 Slate paired with Orange
44 Slate paired with Black
45 White/Black paired with Red
46 White/Black paired with Green
47 White/Black paired with Blue
48 White/Black paired with Brown
49 White/Black paired with Yellow
50 White/Black paired with Orange
51 White/Black paired with Purple

TELEPHONE AND COMMUNICATION CABLE

AERIAL & DUCT INSTALLATION — MEETS REA-PE-22



Description: Each conductor bare solid copper, color coded polyethylene insulation, insulated conductors paired, pairs cabled with non-hygroscopic tape wrap, .008" corrugated aluminum shield, black polyethylene jacket overall.

Characteristics: Average mutual capacitance — .083 microfarads/mile. Minimal cross talk.

Applications: A tough, long lasting communication cable that can withstand moisture, ultra-violet and weathering.

#22 AWG — SOLID

Catalog Number	No. of Pairs	Nom. Jacket Thickness (Inches)	Nom. O.D. (Inches)	Ship. Wt. Lbs. M/Ft.
6606	6	.060	.420	95
6612	12	.060	.490	137
6618	18	.060	.560	201
6625	25	.060	.630	245
6650	50	.060	.800	420
6675	75	.060	.980	596
6610	100	.070	1.120	807
6615	150	.070	1.320	1,083
6620	200	.070	1.500	1,485
6630	300	.080	1.810	2,160
6640	400	.090	2.050	2,705

#19 AWG — SOLID

6706	6	.060	.500	136
6712	12	.060	.630	235
6718	18	.060	.730	318
6725	25	.060	.820	419
6750	50	.070	1.120	753
6775	75	.070	1.320	1,070
6710	100	.080	1.520	1,455
6715	150	.080	1.790	2,051
6720	200	.090	2.090	2,657

DIRECT BURIAL INSTALLATION — MEETS REA-PE-23



Description: Each conductor bare solid copper, color coded polyethylene insulation, insulated conductors paired, pairs cabled with non-hygroscopic tape wrap, polyethylene inner jacket, .005" corrugated copper shield, black polyethylene jacket overall.

Characteristics: Average mutual capacitance — .166 microfarads/mile. Minimal cross talk.

Applications: Impervious to moisture, abrasion resistant, suitable for direct burial.

#22 AWG — SOLID

Catalog Number	No. of Pairs	Nom. Outer Jacket Thickness (Inches)	Nom. O.D. (Inches)	Ship. Wt. Lbs. M/Ft.
6006	6	.040	.480	150
6012	12	.040	.550	170
6018	18	.040	.620	241
6025	25	.040	.690	302
6050	50	.040	.860	478
6075	75	.040	1.040	680
6100	100	.040	1.180	886
6150	150	.050	1.400	1,258
6200	200	.050	1.560	1,557
6300	300	.060	1.890	2,173
6400	400	.060	2.130	2,853

#19 AWG — SOLID

6106	6	.040	.560	168
6112	12	.040	.690	290
6118	18	.040	.790	367
6125	25	.040	.880	480
6170	50	.050	1.180	871
6175	75	.050	1.400	1,246
6110	100	.050	1.580	1,568
6250	150	.060	1.890	2,236
6220	200	.060	2.170	2,986

STANDARD PUT-UP: CUT TO SPECIFICATIONS — MIN. 25 FT. — COLOR CODE — PER IPCEA.

© United Technical Publications

TELEMETERING & DATA SHIELDED CONTROL CABLE

STANDARD PUT-UP: CUT TO SPECIFICATION — MIN. 25 FT.

Description: Each conductor bare solid copper, high molecular weight polyethylene insulation, color coded, twisted into pairs, cabled with a non-hygroscopic binder tape .008" aluminum shield, black polyethylene jacket overall. Operating voltage 300 volts.

Double jacketed types, (8306-8420 below) same except for additional inner black polyethylene jacket over binder, and .005" copper shield.

Applications: Remote control of rocket recording data and test-firing control, transmission of signals which telemeter temperature, voltage, pressure, etc., control of multiple circuits, measuring devices, quality control equipment, radar antenna. For aerial, duct and conduit installations. Double jacketed types have higher dielectric strength and suited for direct burial installations.





#22 AWG — SOLID

Catalog Number	No. of Pairs	Nom. Insul. Thickness (Inches)	Nom. Jacket Thickness (Inches)	Nom. O.D. (Inches)	Approx. Lbs./M'
8006	6	.012	.060	.420	95
8012	12	.012	.060	.490	137
8018	18	.012	.060	.560	201
8025	25	.012	.060	.630	245
8050	50	.012	.060	.800	420
8100	100	.012	.060	1.120	807
8200	200	.012	.060	1.500	1,485

#19 AWG — SOLID

8016	6	.015	.060	.500	136
8112	12	.015	.060	.630	235
8118	18	.015	.060	.730	318
8125	25	.015	.060	.820	419
8150	50	.015	.060	1.120	753
8110	100	.015	.060	1.520	1,455
8220	200	.015	.060	2.090	2,657

DOUBLE JACKET — HEAVY DUTY #22 AWG — SOLID

Catalog Number	No. of Pairs	Nom. Insul. Thickness (Inches)	Nom. Jacket Thickness Inner (Inches)	Nom. Jacket Thickness Outer (Inches)	Nom. O.D. (Inches)	Approx. Lbs./M'
8306	6	.012	.047	.040	.480	150
8312	12	.012	.047	.040	.550	170
8318	18	.012	.047	.040	.620	241
8325	25	.012	.047	.040	.690	302
8350	50	.012	.047	.040	.860	478
8310	100	.012	.047	.050	1.180	886
8320	200	.012	.047	.050	1.560	1,597

#19 AWG — SOLID

8406	6	.015	.047	.040	.560	168
8412	12	.015	.047	.040	.690	290
8418	18	.015	.047	.040	.790	367
8425	25	.015	.047	.040	.880	480
8450	50	.015	.047	.040	1.180	871
8410	100	.015	.047	.050	1.580	1,568
8420	200	.015	.047	.050	2.220	2,986

UNSHIELDED STATION CONTROL CABLE

HEAVY DUTY MULTI-CONDUCTOR PLASTIC JACKET — TYPE CT-B CONTROL CABLE — 600 VOLTS

Description: Each conductor, stranded bare copper, .020" polyethylene insulation, .010" polyvinylchloride jacket over each conductor, color coded, cabled with fillers where necessary, moisture resistant tape, black polyvinylchloride jacket overall. 600 volt operating voltage. Approved per IPCEA-NEMA standards.

16 GAUGE — 26x30 BARE COPPER

Catalog Number	No. of Conductors	Nom. Jacket Thickness (Inches)	Nominal O.D. (Inches)
7502	2	.045	.330
7503	3	.045	.350
7505	5	.045	.410
7506	6	.045	.440
7507	7	.045	.440
7508	8	.045	.480
7510	10	.045	.580
7512	12	.045	.600
7514	14	.045	.630
7516	16	.045	.660
7519	19	.060	.690
7521	21	.060	.730
7522	22	.060	.760
7524	24	.060	.810
7526	26	.060	.820
7530	30	.060	.900
7537	37	.060	.960
7540	40	.060	1.00
7550	50	.080	1.10
7560	60	.080	1.19

14 GAUGE — 7x22 BARE COPPER

Catalog Number	No. of Conductors	Nom. Jacket Thickness (Inches)	Nominal O.D. (Inches)
7602	2 Twin	.045	*
7603	3 Rd.	.045	.419
7604	4	.045	.425
7605	5	.045	.462
7606	6	.045	.481
7607	7	.045	.502
7608	8	.060	.556
7609	9	.060	.622
7610	10	.060	.657
7612	12	.060	.696
7614	14	.060	.744
7616	16	.060	.798
7619	19	.060	.808
7624	24	.080	.947
7627	27	.080	1.002
7630	30	.080	1.110
7634	34	.080	1.118
7637	37	.080	1.124
7640	40	.080	1.290



12 GAUGE — 7x20 BARE COPPER

Catalog Number	No. of Conductors	Nom. Jacket Thickness (Inches)	Nominal O.D. (Inches)
7702	2 Twin	.045	**
7703	3 Rd.	.045	.460
7704	4	.045	.471
7705	5	.045	.523
7706	6	.045	.564
7707	7	.060	.599
7708	8	.060	.644
7709	9	.060	.690
7710	10	.060	.727
7712	12	.060	.775
7714	14	.060	.807
7715	15	.060	.832
7716	16	.060	.901
7718	18	.080	.928
7719	19	.080	.943
7720	20	.080	.966
7722	22	.080	1.01
7725	25	.080	1.09
7727	27	.080	1.129
7730	30	.080	1.168
7734	34	.080	1.201
7737	37	.080	1.257

* Flat Dimension .233" x .366"

** Flat Dimension .252" x .404"

10 GAUGE — 7x18 BARE COPPER

Catalog Number	No. of Conductors	Nom. Jacket Thickness (Inches)	Nominal O.D. (Inches)
7802	2	.045	.27x.45
7803	3	.045	.483
7804	4	.060	.569
7805	5	.060	.618
7806	6	.060	.640
7807	7	.060	.671
7808	8	.060	.700
7809	9	.060	.777
7810	10	.060	.830
7812	12	.080	.915
7815	15	.080	.93
7816	16	.080	.99
7820	20	.080	1.11

9 GAUGE — 19x22 BARE COPPER

Catalog Number	No. of Conductors	Nom. Jacket Thickness (Inches)	Nominal O.D. (Inches)
7902	2	.045	.29x.48
7903	3	.045	.526
7904	4	.060	.604
7905	5	.060	.659
7906	6	.060	.670
7907	7	.060	.716
7908	8	.060	.760
7909	9	.060	.831
7910	10	.060	.900
7912	12	.080	.978
7915	15	.080	.99
7916	16	.080	1.10
7920	20	.080	1.70

© United Technical Publications

RG TYPE COAXIAL CABLES



Non-Contaminating Low Temp. Black Jacket		Vinyl & Poly. Jackets					Shields							
Number RG-/U	Catalog Number	Number RG-/U	Catalog Number	Armor O.D.	Jacket O.D.	Vinyl Jacket	Outer	Inner	Dielectric O.D.	Center Conductor	V.P. %	Cap. Mmfd./Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms
		5	4431		.332	Black	C	C	.185	16	65.9	28.5	3000	52.5
5B	4432				.332	Black	S	S	.185	.053S	65.9	29.5	3000	50
6A	4433				.332	Black	C	S	.185	21CW	65.9	20	2700	75
		7	4434		.370	Black	—	C	.250†	19	84	12.5	1000	97
		8	4415		.405	Black	—	C	.285	7/21	65.9	29.5	4000	52
8A	4435				.405	Black	—	C	.285	7/.0296	65.9	30.5	4000	52
		9	4436		.420	Grey	C	S	.280	7/21S	65.9	30	4000	51
9A	4437				.420	Grey	S	S	.285	7/21S	65.9	30	4000	51
9B	4438				.425	Black	S	S	.280	7/.0296S	65.9	30.5	4000	50
10A	4439			.475	.405	Black	—	C	.285	7/.0296	65.9	30.5	4000	50
		11	4419		.405	Black	—	C	.285	7/26T	65.9	20.5	4000	75
11A	4440				.405	Black	—	C	.285	7/26T	65.9	20.5	4000	75
12A	4441			.475	.405	Black	—	C	.285	7/26T	65.9	20.5	4000	75
		13	4442		.425	Black	C	C	.285	7/26T	65.9	20.5	4000	75
13A	4443				.425	Black	C	C	.285	7/26T	65.9	20.5	4000	75
14A	4467				.545	Grey	C	C	.370	10	65.9	29.5	5500	52
14A	4468				.545	Black	C	C	.370	.106	65.9	30	5500	52
17A	4482				.870	Black	—	C	.680	188C	65.9	29.5	11000	52
18A	4483			.945	.870	Black	—	C	.680	188C	65.9	29.5	11000	52
		21	4444		.322	Grey	S	S	.185	16N	65.9	29	2700	53
21A	4445				.332	Black	S	S	.185	.053N	65.9	30	2700	50
		22	4471		.405	Black	—	T	.285	Two 7/.0152	65.9	16	1000	95
22B	4475				.420	Black	T	T	.285	Two 7/.0152	65.9	16	1000	95
		29	4446		.184	Poly	—	T	.116	20	65.9	28.5	1900	53.5
		54A	4469		.250	Poly	—	T	.178	7/.0152	65.9	26.5	3000	58
		55	4447		.206	Poly	T	T	.116	20	65.9	28.5	1900	53.5
55A	4448				.216	Black	S	S	.116	.035S	65.9	29.5	1900	50
55B	4484				.206	Black	T	T	.116	20S	65.9	28.5	1900	53.5
		58	4405		.195	Black	—	T	.116	20	65.9	28.5	1900	53.5
58A	4449				.195	Black	—	T	.116	19/.0071T	65.9	29.5	1900	50
58B	4474				.195	Black	—	T	.116	20	65.9	28.5	1900	53.5
58C	4450				.195	Black	—	T	.116	19/.0071T	65.9	29.5	1900	50
		59	4401		.242	Black	—	C	.146	22CW	65.9	21	2300	73
		59	4402		.242	Grey	—	C	.146	22CW	65.9	21	2300	73
59	4403				.242	White	—	C	.146	22CW	65.9	21	2300	73
59A	4451				.242	Black	—	C	.146	.023CW	65.9	20.5	2300	75
59B	4470				.242	Black	—	C	.146	.023CW	65.9	20.5	2300	75
		62	4452		.242	Black	—	C	.146†	22CW	84	13.5	750	93
62A	4453				.242	Black	—	C	.146†	22CW	84	13.5	750	93
62B	4472				.242	Black	—	C	.146	7x32CW	84	13.5	750	93
		63	4454		.405	Black	—	C	.285†	22CW	84	10	1000	125
63B	4455				.405	Black	—	C	.285†	22CW	84	10	1000	125
65A	4473				.405	Black	—	C	.340	32F	65	44	3000	950
		71	4456		.250	Poly	T	T or C	.146†	22CW	84	13.5	750	93
71A	4466				.245	Black	T	T or C	.146†	22CW	84	13.5	750	93
71B	4485				.250	Black	T	C	.146	22CW	84	13.5	750	93
74A	4486			.615	.545	Black	C	C	.370	10C	65.9	29.5	7000	52
79B	4487			.475	.405	Black	—	C	.285	22CW	84	10	1000	125
		83	4410		.405	Black	—	C	.240	10C	65.9	44	2000	35
		100	4412		.242	Black	—	C	.146	19/.0147C	65.9	44	2000	35
		108	4464		.235	Black	—	T	.079 ea.	Two 7/28T	68	23.5	1000	78
108A	4465				.235	Black	—	T	.079 ea.	Two .7/28T	65.9	23.5	1000	78
		111	4422	.480	.420	Gray	T	T	.285	Two 7/.152T	65.9	16	1000	95
111A	4423			.490	.420	Gray	T	T	.285	Two 7/.152T	65.9	16	1000	95
		114	4426		.405	Black	—	C	.285	.007CW	—	6.8	1000	185
114A	4427				.405	Black	—	C	.285	.007CW	—	6.8	1000	185
122	4457				.160	Black	—	T	.096	27/36T	65.9	29.5	1900	50
130	4428				.625	Black	—	T	.472	Two 7/21C	65.9	17	3000	95

† Semi-Solid Dielectric N — Nichrome C — Copper S — Silvered Copper CW — Copperweld T — Tinned Copper F — Formvar

© United Technical Publications

RG TYPE COAXIAL CABLES



Non-Contaminating Low Temp. Black Jacket		Vinyl & Poly. Jackets		Armor O.D.	Jacket O.D.	Vinyl Jacket	Shields		Dielectric O.D.	Center Conductor	V.P. %	Cap. Mmfd./Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms
Number RG-/U	Catalog Number	Number RG-/U	Catalog Number				Outer	Inner						
131	4429			.710	.625	Black	—	T	.472	Two 7/21C	65.9	17	3000	95
133	4430				.405	Black	—	C	.285	21C	65.9	16.2	1000	95
149	4458				.405	Black	—	C		7/26T	—	—	—	75
150	4499			.470	.405	Black	—	C		7/26T	—	—	—	75
		164	4404		.870	Black	—	C	.680	.1045C	—	—	10000	75
		177	4406		.895	Black	S	S	.680	.195C	—	—	11000	50
		181	4407		.640	Black	—	C	.210	Two 7/26C	—	12	3500	125
212	4488				.332	Black	S	S	.185	.0556S	65.9	29.5	3000	50
213	4489				.405	Black	—	C	.285	7X.0296C	65.9	29.5	5000	50
214	4490				.425	Black	S	S	.285	7X.0296C	65.9	29.5	5000	50
215	4497				.475	Black	—	C	.285	7/.029C	65.9	29.5	4000	50
216	4491				.425	Black	C	C	.285	7X26TC	65.9	20.5	5000	75
217	4492				.545	Black	C	C	.370	.106C	65.9	29.5	7000	50
218	4493				.870	Black	—	C	.680	.195C	65.9	29.5	11000	50
219	4494			.945	.870	Black	—	C	.680	.195C	65.9	29.5	11000	50
		220	4408		1.120	Black	—	C	.910	.260C	65.9	29.5	14000	50
		221	4409	1.195	1.120	Black	—	C	.910	.260C	65.9	29.5	14000	50
222	4495				.332	Black	S	S	.185	.0556N	65.9	29.0	2700	50
223	4496				.216	Black	S	S	.116	.035S	65.9	29.5	1900	50
		224	4411	.615	.545	Gray	C	C	.370	.106C	65.9	29.5	5500	52

† Semi-Solid Dielectric N — Nichrome C — Copper S — Silvered Copper CW — Copperweld T — Tinned Copper F — Formvar

MINIATURE COAXIAL CABLE

Non-Contaminating Low Temp. Black Jacket		Vinyl & Poly. Jackets		Armor O.D.	Jacket O.D.	Vinyl Jacket	Shields		Dielectric O.D.	Center Conductor	V.P. %	Cap. Mmfd./Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms
Number RG-/U	Catalog Number	Number RG-/U	Catalog Number				Outer	Inner						
		174	4459		.105	Black	—		.060†	7/.0063CW		30		50

† Semi-Solid Dielectric N — Nichrome C — Copper S — Silvered Copper CW — Copperweld T — Tinned Copper F — Formvar

FOAM POLYETHYLENE COAXIAL CABLE

		8	4477		.405	Black	—	C	.285	7/19C	80	24.5	1500	50
11	4476				.405	Black	—	C	.285	14C	80	16.5	3000	75
		58	4498		.195	Black	—	T	.116	20C	80	28.5	1900	53.5
		59	4478		.195	Black	—	C	.107	22CW	80	17	500	72
62	4479				.242	Black	—	C	.146	.023CW	80	14.5	700	93

† Semi-Solid Dielectric N — Nichrome C — Copper S — Silvered Copper CW — Copperweld T — Tinned Copper F — Formvar

FOAM POLYETHYLENE TRIAXIAL CABLE DOUBLE SHIELD DOUBLE JACKET

11	4480				.406	Black	—	C	.285	14C	80	16.5	3000	75
59	4481				.242	Black	—	C	.107	.107	80	17	500	72

† Semi-Solid Dielectric N — Nichrome C — Copper S — Silvered Copper CW — Copperweld T — Tinned Copper F — Formvar

TRIAXIAL CABLE DOUBLE SHIELD DOUBLE JACKET

RG/U Type	Catalog Number	Impedance in Ohms	Jacket Diameter	Vinyl Jacket	Shields		O.D. Dielectric	Inner Conductor	V.P. %	Cap. Mmfd./Ft.	Max. Oper. Volts-RMS
					1st	2nd					
Triaxial 58A	4463	50	.285	Black	T	T	.116	19 .0071T	65.9	28.5	1,900
Triaxial 59	4460	73	.242	Black	C	C	.146	22CW	65.9	21.0	2,300
Triaxial 11	4461	75	.460	Black	C	C	.285	7 26T	65.9	20.5	4,000
Triaxial 8	4462	52	.490	Black	C	C	.285	7 21C	65.9	29.5	4,000

† Semi-Solid Dielectric N — Nichrome C — Copper S — Silvered Copper CW — Copperweld T — Tinned Copper F — Formvar

© United Technical Publications

TEFLON COAXIAL CABLE



Number RG/U	Catalog Number	Inner Conductor	Dielectric Material	Nominal Diameter of Dielectric (Inch)	Type of Shielding Braids	Protective Covering	Nominal Over-all Diameter (Inch)	Nominal Capacitance (Mmfd./Ft.)	Maximum Operating Voltage (Volts rms)	Nominal Impedance (Ohms)
62C	4700	.0253 Silver Covered Copper Steel	F-3	.146	Silver Covered Copper Single Braid	V	.242	14.5	750	93
87A	4701	7/.032 Silver Covered Copper	F-1	.280	Silver Coated Copper Double Braid	V	.425	29.5	5000	50
94	4702	19/.0225 Silver Covered Copper	F-2	.292	Copper Double Braid	V	.445	29.0	7000	50
94A	4703	19/.0254 Silver Plated Copper	F-2	.370	Copper Double Braid	V	.500	27.0	7000	50
115	4704	7/.028 Silver Covered Copper	F-2	.250	Silver Coated Copper Double Braid	V	.375	29.5	5000	50
115A	4705	7/.028 Silver Covered Copper	F-2	.255	Silver Coated Copper Double Braid	V	.415	29.5	4000	50
116	4706	7/.032 Silver Covered Copper	F-1	.280	Silver Coated Copper Double Braid	V with armor	.490	29.5	5000	50
117	4707	.188 Copper	F-1	.620	Copper Single Braid	V	.730	29.0	7000	50
117A	4708	.188 Copper	F-1	.620	Copper Single Braid	V	.730	—	7000	50
118	4709	.188 Copper	F-1	.620	Copper Single Braid	V with armor	.795	29.0	7000	50
118A	4710	.188 Copper	F-1	.620	Copper Single Braid	V with armor	.780	—	7000	50
119	4711	.102 Copper	F-1	.332	Copper Double Braid	V	.465	29.0	6000	50
120	4712	.102 Copper	F-1	.332	Copper Double Braid	V with armor	.525	29.0	6000	50
126	4713	7/.0203 Karma or Equal	F-1	.185	Karma or Equal Single Braid	V	.280	29.0	3000	50
140	4714	.025 Silver Coated Copper Steel	F-1	.146	Silver Coated Copper Single Braid	V	.233	21.0	2300	75
141	4715	.0359 Silver Plated Copper Weld	F-1	.116	Silver Coated Copper Single Braid	V	.190	28.5	1900	50
141A	4716	.039 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Single Braid	V	.190	28.5	1900	50
142	4717	.0359 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Double Braid	V	.206	28.5	1900	50
142A	4718	.039 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Double Braid	V	.206	28.5	1900	50
142B	4719	.039 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Double Braid	FEP	.195	28.5	1900	50
143	4720	.057 Silver Plated Copper Weld	F-1	.185	Silver Coated Copper Double Braid	V	.325	28.5	3000	50
143A	4721	.059 Silver Covered Copper Steel	F-1	.185	Silver Coated Copper Double Braid	V	.325	28.5	3000	50
144	4722	7/.0179 Silver Covered Copper Steel	F-1	.285	Silver Coated Copper Single Braid	V	.410	20.5	5000	75
146	4723	.007 Copper Covered Steel	F-3	.285	Copper Single Braid	V	.375	6.0	1000	190
161	4724	7/38 Silver Plated Cadmium Bronze	F-1	.057	Single Silver Copper	Extruded Black Nylon	.090	20.0	1000	70
165	4725	7/.032 Silver Covered Copper	F-1	.285	Silver Covered Copper Single Braid	V	.410	—	5000	50
166	4726	7/.032 Silver Covered Copper	F-1	.285	Silver Covered Copper Single Braid	V with armor	.460	—	5000	50
178	4727	7/.0039 Silver Plated Copper Weld	F-1	.036	Silver Plated Copper Single Braid	KEL-F	.079	27.9	1000	50
178A	4728	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Plated Copper Single Braid	KEL-F	.075	27.9	1000	50
178B	4729	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Covered Copper Single Braid	FEP	.075	—	1000	50
179	4761	7/.004 Silver Covered Copper Steel	F-1	.063	Silver Covered Copper Single Braid	KEL-F	.100	—	1200	75
179A	4730	7/.004 Silver Covered Copper Steel	F-1	.063	Silver Plated Copper Single Braid	KEL-F	.105	20.0	1200	75

Continued on following page

F-1 — Solid Teflon F-2 — Taped Teflon F-3 — Air Spaced Teflon
V — High Temperature Lacquer Impregnated Fiberglass Braid with Teflon Tape Between Shield and Jacket
VI — Polyester Fiber Impregnated with High Temperature Lacquer over Wrapped or Extruded Silicone Impregnated Fiberglass
IIA — Low Temperature Black Polyvinylchloride Non-Contaminating
FEP — Fluorinated Ethylene Propylene Copolymar, 200°C Teflon
TFE — Tetrafluoride Ethylene Propylene Copolymar, 250°C Teflon

© United Technical Publications

TEFLON COAXIAL CABLE



Number RG/U	Catalog Number	Inner Conductor	Dielectric Material	Nominal Diameter of Dielectric (Inch)	Type of Shielding Braids	Protective Covering	Nominal Over-all Diameter (Inch)	Nominal Capacitance (Mmfd./Ft.)	Maximum Operating Voltage (Volts rms)	Nominal Impedance (Ohms)
179B	4731	7/.004 Silver Covered Copper Steel	F-1	.063	Silver Covered Copper Single Braid	FEP	.105	—	1200	75
180	4732	7/.0039 Silver Plated Copper Weld	F-1	.103	Silver Plated Copper Single Braid	KEL-F	.141	15.3	1500	93
180A	4733	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Plated Copper Single Braid	KEL-F	.145	14.5	1500	95
180B	4734	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Covered Copper Single Braid	FEP	.145	—	1500	95
187	4735	7/.004 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	Teflon	.110	—	1200	75
187A	4736	7/.004 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	TFE	.110	—	1200	75
188	4737	7/.004 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	Teflon	.110	—	1200	50
188A	4738	7/.004 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	TFE	.110	—	1200	50
195	4739	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Covered Copper Single Braid	Teflon	.155	—	1500	95
195A	4740	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Covered Copper Single Braid	TFE	.155	—	1500	95
196	4741	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Covered Copper Single Braid	Teflon	.080	—	1000	50
196A	4742	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Covered Copper Single Braid	TFE	.080	—	1000	50
209	4743	19/.037 Silver Covered Copper	F-3	.500	Silver Covered Copper Double Braid	VI	.750	—	3200	50
210	4744	.0253 Silver Covered Copper Steel	F-3	.146	Silver Covered Copper Single Braid	V	.242	14.5	750	93
211	4745	.190 Copper	F-1	.620	Copper Single Braid	V	.730	—	7000	50
211A	4746	.190 Copper	F-1	.620	Copper Single Braid	V	.730	—	7000	50
225	4747	7/.0312 Silver Covered Copper	F-1	.285	Silver Covered Copper Double Braid	V	.430	—	5000	50
226	4748	19/.0254 Silver Covered Copper	F-2	.370	Copper Double Braid	V	.500	—	7000	50
227	4749	7/.0312 Silver Covered Copper	F-1	.285	Silver Covered Copper Double Braid	V with armor	.490	—	5000	50
228	4750	.190 Copper	F-1	.620	Copper Single Braid	V with armor	.795	—	7000	50
228A	4751	.190 Copper	F-1	.620	Copper Single Braid	V with armor	.795	—	7000	50
235	4752	7/.028 Copper	F-2	.255	Silver Covered Copper Double Braid	VI	.490	—	5000	50
279	4762	19/.005 Silver Covered Copper Steel	F-1	.110	Silver Covered Copper Single Braid	V	.145	17.3	1500	75
280	4753	.1144 Copper	F-2	.327	Silver Covered Copper Double Braid	IIA	.480	27.5	4000	50
281	4754	19/.0378 Silver Covered Copper	F-2	.500	Silver Covered Copper Double Braid	VI	.750	29.5	4000	50
301	4755	7/.0203 Karma	F-1	.185	Karma Single Braid	FEP	.245	29.0	3000	50
302	4756	.025 Silver Covered Copper Steel	F-1	.146	Silver Covered Copper Single Braid	FEP	.206	21.0	2300	75
303	4757	.039 Silver Covered Copper Steel	F-1	.146	Silver Covered Copper Single Braid	FEP	.170	28.5	1900	50
304	4758	.059 Silver Covered Copper Steel	F-1	.185	Silver Covered Copper Double Braid	FEP	.280	28.5	3000	50
316	4759	7/.0067 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	FEP	.102	—	1200	50

F-1 — Solid Teflon F-2 — Taped Teflon F-3 — Air Spaced Teflon
V — High Temperature Lacquer Impregnated Fiberglass Braid with Teflon Tape Between Shield and Jacket
VI — Polyester Fiber Impregnated with High Temperature Lacquer over Wrapped or Extruded Silicone Impregnated Fiberglass
IIA — Low Temperature Black Polyvinylchloride Non-Contaminating
FEP — Fluorinated Ethylene Propylene Copolymar, 200°C Teflon
TFE — Tetrafluoride Ethylene Propylene Copolymar, 250°C Teflon

© United Technical Publications

PROTECTA-METAL SPOOLS



Popular, profitable specialty wire packaged for easy selling in radio-electrical, scientific, specialty and hardware.
Wide variety of sizes and insulations.
Keeps stock in perfect order, always saleable.
Supplied on Spools as Shown and in Heavier Weights.
Here is a handy and convenient way to stock small quantities of wire. It prevents wire from matting or tangling.

MAGNET WIRE #2000

The correct wire for practically any application. Magnet wire is indispensible in the manufacture and repair of both radio and audio frequency coils, transformers, chokes, speaker field coils, short wave coils, tuners, transmitters, etc. Also widely used in the construction and repair of motors, generators, dynamos, etc.

Larger Quantities At Same Per Pound List

SPECIAL MAGNET WIRES

In addition to the standard listing shown here, we maintain an extensive stock of all other sizes in round, rectangular and square magnet wire.

VARIOUS OTHER INSULATONS

Film Technical Classification

ENAMEL — oleoresinous
FORMVAR — poly vinyl acetal
POLY THERMALEZE
SODEREZE — polyurethane
THERMALEZE — epoxide polyester
NYFORM — formvar, nylon sheath
NYLEZE — polyurethane nylon sheath
NYLON
BONDEZE
GRIPEZE
LECTRON — acrylic
ISONSEL — terephthalic polyester
ALKANVAR — terephthalic polyester
SYLKYD ENAMELED
COTTON & COMBINATIONS
SILK AND COMBINATIONS
CELANESE AND COMBINATIONS
GLASS AND COMBINATIONS
PAPER AND COMBINATIONS

	Plain Enamel			Single Formvar			Heavy Formvar			
Size	¼ Lb.	½ Lb.	1 Lb.	¼ Lb.	½ Lb.	1 Lb.	¼ Lb.	½ Lb.	1 Lb.	Size
14	$0.43	$0.72	$1.28	$0.57	$0.96	$1.73	$0.61	$1.04	$1.86	14
15	.44	.75	1.29	.58	1.02	1.76	.62	1.10	1.90	15
16	.46	.77	1.30	.62	1.05	1.78	.67	1.13	1.92	16
17	.47	.80	1.31	.63	1.08	1.79	.68	1.17	1.93	17
18	.48	.81	1.32	.65	1.10	1.80	.70	1.19	1.94	18
19	.49	.83	1.34	.68	1.14	1.84	.73	1.22	1.99	19
20	.50	.84	1.36	.69	1.15	1.86	.74	1.23	2.01	20
21	.51	.85	1.42	.70	1.16	1.93	.76	1.24	2.09	21
22	.52	.86	1.49	.71	1.18	2.05	.77	1.28	2.22	22
23	.54	.87	1.53	.72	1.20	2.10	.78	1.30	2.26	23
24	.55	.88	1.60	.73	1.21	2.22	.79	1.31	2.39	24
25	.56	.95	1.66	.77	1.31	2.28	.88	1.52	2.68	25
26	.57	.96	1.71	.78	1.32	2.38	.91	1.53	2.78	26
27	.59	.98	1.78	.82	1.37	2.48	.95	1.58	2.90	27
28	.61	1.02	1.86	.85	1.40	2.59	1.01	1.64	3.01	28
29	.62	1.06	1.89	.88	1.46	2.65	1.03	1.70	3.08	29
30	.66	1.08	1.92	.92	1.51	2.69	1.07	1.76	3.15	30
31	.71	1.11	1.99	1.01	1.55	2.79	1.23	1.88	3.40	31
32	.72	1.15	2.02	1.02	1.61	2.85	1.24	1.95	3.45	32
33	.76	1.21	2.11	1.06	1.71	2.97	1.29	2.06	3.63	33
34	.79	1.35	2.19	1.12	1.93	3.09	1.36	2.32	3.77	34
35	.84	1.47	2.44	1.21	2.08	3.47	1.47	2.43	4.24	35
36	.97	1.54	2.68	1.39	2.20	3.83	1.70	2.70	4.70	36
37	1.09	1.71	3.01	1.56	2.45	4.33	1.92	2.99	5.32	37
38	1.25	1.87	3.34	1.80	2.70	4.82	2.22	3.21	5.93	38
39	1.36	2.20	3.67	1.98	3.19	5.32	2.43	3.94	6.35	39
40	1.78	2.70	4.33	2.60	3.94	6.30	3.22	4.86	7.80	40
41	2.00	3.75	5.65	2.50	4.50	8.40	3.45	5.06	9.10	41
42	2.32	4.40	8.59	2.85	4.93	8.95	3.85	5.43	9.81	42
43	2.90	5.00	10.50	3.45	5.25	9.50	4.00	5.75	10.05	43
44	3.25	6.25	12.30	4.40	7.80	15.05	4.45	8.60	15.55	44

	Double Cotton Covered			Single Nyleze			Heavy Nyleze			
Size	¼ Lb.	½ Lb.	1 Lb.	¼ Lb.	½ Lb.	1 Lb.	¼ Lb.	½ Lb.	1 Lb.	Size
14	$0.64	$1.10	$2.08	$0.62	$1.06	$1.90	$0.67	$1.14	$2.05	14
15	.66	1.13	2.10	.64	1.12	1.93	.68	1.21	2.09	15
16	.67	1.14	2.15	.68	1.15	1.96	.74	1.24	2.11	16
17	.69	1.18	2.20	.69	1.19	1.97	.76	1.28	2.13	17
18	.70	1.24	2.24	.71	1.21	1.98	.77	1.31	2.14	18
19	.72	1.27	2.43	.75	1.25	2.02	.80	1.34	2.19	19
20	.73	1.35	2.48	.76	1.27	2.05	.81	1.35	2.21	20
21	.82	1.43	2.63	.77	1.28	2.12	.84	1.36	2.30	21
22	.86	1.48	2.73	.78	1.30	2.25	.85	1.41	2.44	22
23	.92	1.57	2.85	.79	1.32	2.32	.86	1.43	2.49	23
24	.96	1.65	3.05	.80	1.33	2.44	.87	1.44	2.63	24
25	.99	1.70	3.17	.85	1.44	2.51	.97	1.67	2.95	25
26	1.01	1.79	3.38	.86	1.45	2.62	1.00	1.68	2.96	26
27	1.14	1.90	3.59	.90	1.51	2.73	1.04	1.74	3.19	27
28	1.20	2.12	3.91	.94	1.54	2.84	1.11	1.80	3.31	28
29	1.27	2.32	4.34	.97	1.61	2.92	1.13	1.87	3.39	29
30	1.28	2.43	4.55	1.01	1.66	2.96	1.18	1.94	3.46	30
31	1.46	2.64	4.78	1.11	1.71	3.07	1.35	2.07	3.73	31
32	1.66	2.86	5.30	1.13	1.77	3.17	1.36	2.15	3.80	32
33	1.78	3.17	5.84	1.17	1.88	3.27	1.42	2.26	3.99	33
34	1.99	3.61	6.49	1.23	2.13	3.39	1.49	2.55	4.15	34
35	2.21	3.94	6.92	1.33	2.28	3.82	1.61	2.67	4.66	35
36	2.52	4.47	7.88	1.53	2.42	4.21	1.87	2.97	5.17	36
37	2.95	5.66	10.24	1.71	2.69	4.76	2.11	3.30	5.84	37
38	4.24	7.70	14.62	1.98	3.00	5.35	2.44	3.53	6.51	38
39	5.19	10.15	17.64	2.18	3.52	5.85	2.67	4.31	6.99	39
40	5.73	13.16	24.61	4.85	8.58	16.60	3.56	5.35	8.58	40

AERIAL WIRE

STANDARD PUT-UP: 50 FT., 75 FT., 100 FT., 1000 FT.

COPPER — AERIAL AND BUS BAR SOLID TINNED

No.	Stranding	Size	Breaking Strength (Pounds)	Type	Nom. Dia. (Inches)
3848	Solid	30	—	Tinned Copper	.010
3847	Solid	28	—	Tinned Copper	.013
3846	Solid	26	—	Tinned Copper	.016
3819	Solid	24	12 Lbs.	Tinned Copper	.020
3818	Solid	22	20 Lbs.	Tinned Copper	.025
3817	Solid	20	31 Lbs.	Tinned Copper	.032
3816	Solid	18	49 Lbs.	Tinned Copper	.040
3815	Solid	16	73 Lbs.	Tinned Copper	.051
3821	Solid	14	124 Lbs.	Tinned Copper	.064
3831	Solid	12	197 Lbs.	Tinned Copper	.081
3841	Solid	10	314 Lbs.	Tinned Copper	.102
3845	Solid	8	480 Lbs.	Tinned Copper	.128

RESISTANCE WIRE #2000

ON PROTECTA-METAL SPOOLS

Recommended for electrical heating appliances and other devices where the hghest quality in performance is required, whose operating temperatures do not exceed 1850°F. Particularly suited for heavy duty rheostats and controls which require compact resistance.

BARE NICKEL CHROMIUM

Size	1 Oz.	¼ Lb.	1 Lb.
14	—	$1.52	$5.56
15	—	1.56	5.65
16	—	1.58	5.73
17	—	1.63	5.80
18	—	1.67	5.87
19	—	1.71	6.02
20	$0.67	1.76	6.17
21	.71	1.85	6.49
22	.72	1.93	6.79
23	.74	2.08	7.44
24	.76	2.22	8.09
25	.82	2.37	8.74
26	.87	2.53	9.39
27	.89	2.57	9.96
28	.92	2.84	10.53
29	1.00	2.98	11.18
30	1.09	3.11	11.83
31	1.14	3.28	12.28
32	1.18	3.43	12.73
33	1.31	3.79	14.73
34	1.44	4.16	16.73
35	1.58	4.55	17.71
36	1.71	4.94	18.69
37	2.22	6.50	23.86
38	2.74	8.05	29.03
39	2.86	8.39	31.62
40	2.98	8.95	34.20

BUS BAR WIRE #2000

BARE COPPER WIRE

Size	¼ Lb.	½ Lb.	1 Lb.
14	$0.48	$0.86	$1.38
15	.50	.88	1.42
16	.51	.94	1.58
17	.52	.96	1.60
18	.54	.97	1.62
19	.55	.99	1.65
20	.56	1.01	1.69
21	.57	1.02	1.73
22	.59	1.03	1.77
23	.60	1.05	1.80
24	.61	1.08	1.82
25	.62	1.08	1.83
26	.63	1.10	1.86
27	.64	1.12	1.88
28	.65	1.14	1.95
29	.66	1.15	1.99
30	.67	1.16	2.00
31	.68	1.18	2.04
32	.70	1.19	2.08
33	.71	1.20	2.14
34	.72	1.21	2.19
35	.73	1.24	2.28
36	.74	1.27	2.37
37	.75	1.37	2.49
38	.78	1.47	2.61
39	.79	1.52	2.64
40	.81	2.53	2.68

TINNED COPPER WIRE

Size	¼ Lb.	½ Lb.	1 Lb.
14	$0.56	$0.97	$1.52
15	.61	1.05	1.63
16	.65	1.14	1.69
17	.67	1.16	1.71
18	.70	1.19	1.73
19	.72	1.21	1.76
20	.74	1.23	1.80
21	.75	1.24	1.84
22	.76	1.25	1.88
23	.77	1.26	1.91
24	.78	1.27	1.93
25	.79	1.29	1.94
26	.81	1.30	1.95
27	.82	1.32	2.10
28	.85	1.37	2.28
29	.87	1.43	2.30
30	.89	1.48	2.32
31	.92	1.54	2.37
32	.94	1.59	2.41
33	.96	1.65	2.47
34	.98	1.70	2.52
35	.99	1.74	2.61
36	1.00	1.76	2.70
37	1.01	1.81	2.82
38	1.03	1.87	2.94
39	1.04	1.92	2.97
40	1.05	1.98	3.01

© United Technical Publications

TINNED COPPER SHIELDING

SHIELDING AND BONDING TYPE CABLE

STANDARD SPOOL PUT-UP: 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.







FLAT BRAID

No.	Approx. I.D.	Size & Number of Wires	Approx. AWG	Carrying Capacity (Amperes)
1386	1/32"	16x36	24	7
1387	3/64"	24x36	23	7
1388	3/32"	48x36	19	12
1389	7/64"	72x36	18	14
1390	1/8"	96x36	18	15
1391	3/16"	120x36	15	23
1392	1/4"	168x36	14	30
1393	3/8"	288x36	11	50
1394	1/2"	386x36	10	55
1395	5/8"	528x36	10	61
1396	3/4"	832x36	7	80
1397	25/32"	832x36	7	80
1398	1"	912x36	7	84
1399	1 3/8"	336x30	7	105

TUBULAR BRAID PER QQ-B-575

1310	1/32"	24x36	22	7
1311	1/16"	48x36	19	11
1312	3/64"	72x36	18	16
1314	7/64"	96x36	16	19
1315	1/8"	120x36	15	25
1316	5/32"	240x36	12	40
1317	11/64"	168x36	14	32
1318	13/16"	192x34	11	46
1319	1/4"	384x36	10	53
1320	5/32"	120x30	9	60
1321	3/8"	384x36	10	53
1322	7/16"	240x30	6	90
1323	1/2"	528x36	9	62
1324	9/16"	480x30	3	145
1325	21/32"	768x30	1	190
1326	25/32"	864x36	7	88

OVAL COMMERCIAL BRAID

1340	1/32"	24x34	20	9
1341	1/16"	32x34	19	11
1342	7/64"	64x34	16	20
1343	1/8"	72x34	15	25
1344	11/64"	120x34	14	32
1345	3/16"	144x34	13	38
1346	1/4"	168x34	12	41
1347	3/8"	192x34	11	46
1348	1/2"	336x34	9	62
1349	5/8"	384x34	8	64
1350	11/16"	480x34	7	81
1351	25/32"	528x34	7	85

TEST PROD WIRE

STANDARD SPOOL PUT-UP: 10 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

Single conductor, extra flexible stranded tinned soft annealed copper, wrap, color coded rubber insulation.



No.	Size	Stranding	Nom. Wall Thickness	Voltage Breakdown	Nominal O.D.
1001	20	41x36	.043	10,000	.140
1002	18	65x36	.045	12,000	.140
1006	18	65x36	.088	25,000	.230

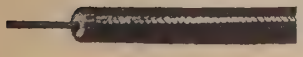
MILITARY TYPE MIL-W-13169B

1007	18	65x36	.047	12,000	.150

HIGH VOLTAGE AND ANODE LEAD CABLE

STANDARD SPOOL PUT-UP: 25 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

Flame Retardant Polyethylene Plastic Insulation for high voltage leads to cathode-ray tubes in television receivers, oscilloscopes, power supplies and other uses requiring a high-voltage cable. Special features: minimum surface leakage, corona resistance and high dielectric strength.



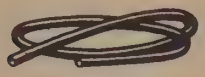
No.	Size	Description	Stranding	Inches	Working Volts	Nom. O.D.
4601	20	Extra flexible tinned copper wire; Flame retardent Polyethylene Plastic Insulation; red cellulose acetate yard braid with 2 white tracers; lacquer coating.	7x28	.035	10,000	.136
4611	20	Same as No. 4601 except heavier insulation; solid red braid.	7x28	.065	20,000	.198
4616	20	Extra flexible tinned copper flame retardant polyethylene insulation, White.	10x30	.035	10,000	.108
4621	20	Same as No. 4616 except heavier insulation, White & Red.	10x30	.065	20,000	.168
4622	18	Same as No. 4621 except .015" red PVC outer jacket.	41x34	.057	40,000	.209
4623	22	Same as No. 4622 except outer .020" PVC jacket. Colors black, red and blue.	7x30	.030	17,000	.130

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE



DAFLEX 105 PLASTIC TUBING



105°C POLYVINYLCHLORIDE (PVC) MEETS MIL-I-631D SPECS

Specifically compounded vinyl resins for superior all around performance. UL approved for 105°C, conforms to Spec MIL-I-631D Type F, Form U, Grades A and C. Class 1 and 2, Category 1. Resistant to heat, oil, water, chemical corrosion, fungi and aging. Very hi abrasion resistance. Will retain its flexibility. Suitable for covering and protecting wires and cables. Designed for electrical, electronic and aircraft applications. Non-flammable. Meets ASTM—D876, ASTM—D922.

D105 compounded with non-migratory resin type plasticizors. Retains its flexibility, permitting it to cling and protect irregular shapes. D105 snakes well under practically all conditions.

DIMENSIONAL TOLERANCES OF DAFLEX 105

DAFLEX No.	Size	Old Daburn No.	Nom. I.D.	Nom. Wall	Specify Std. Put-Up Spool or Coil	ASTM Tolerance, Inches		Wall Thickness Inches
D105-24	24	808	.022″	.012″	25′, 100′, 1000′	.020	.027	.012 ± .002
D105-22	22	811	.027″	.012″	25′, 100′, 1000′	.025	.032	.012 ± .002
D105-20	20	813	.034″	.016″	25′, 100′, 1000′	.032	.039	.016 ± .003
D105-19	19	—	.038″	.016″	100′, 1000′	.044	.036	.016 ± .003
D105-18	18	814	.042″	.016″	25′, 100′, 1000′	.040	.049	.016 ± .003
D105-17	17	—	.047″	.016″	100′, 1000′	.054	.045	.016 ± .003
D105-16	16	815	.053″	.016″	25′, 100′, 1000′	.051	.061	.016 ± .003
D105-15	15	—	.059″	.016″	100′, 500′	.067	.057	.016 ± .003
D105-14	14	816	.066″	.016″	25′, 100′, 500′	.064	.072	.016 ± .003
D105-13	13	—	.076″	.016″	100′, 500′	.080	.072	.016 ± .003
D105-12	12	817	.085″	.016″	25′, 100′, 500′	.081	.089	.016 ± .003
D105-11	11	—	.095″	.016″	100′, 500′	.101	.091	.016 ± .003
D105-10	10	825	.106″	.016″	25′, 100′, 500′	.102	.112	.016 ± .003
D105-9	9	—	.118″	.020″	100′, 500′	.124	.114	.020 ± .003
D105-8	8	818	.135″	.020″	25′, 100′, 500′	.129	.141	.020 ± .003
D105-7	7	—	.148″	.020″	100′, 500′	.158	.144	.020 ± .003
D105-6	6	826	.166″	.020″	25′, 100′, 250′	.162	.178	.020 ± .003
D105-5	5	—	.186″	.020″	100′, 250′	.198	.182	.020 ± .003
D105-4	4	819	.208″	.020″	25′, 100′, 250′	.204	.224	.020 ± .003
D105-3	3	—	.234″	.020″	100′, 250′	.249	.229	.020 ± .003
D105-2	2	820	.263″	.020″	100′, 250′	.258	.278	.020 ± .003
D105-1	1	—	.295	.020″	100′, 250′	.311	.289	.020 ± .003
D105-0	0	—	.330″	.020″	100′, 250′	.347	.325	.020 ± .003
D105-3/16″	3/16″	821	.312″	.025″	100′, 250′	.3125	.334	.025 ± .003
D105-3/8″	3/8″	822	.375″	.025″	100′, 250′	.375	.399	.025 ± .003
D105-7/16″	7/16″	—	.438″	.025″	100′, 250′	.462	.438	.025 ± .003
D105-1/2″	1/2″	823	.500″	.025″	100′, 250′	.500	.524	.025 ± .003
D105-9/16″	9/16″	—	.562″	.030″	50′, 100′	.592	.562	.030 ± .003
D105-5/8″	5/8″	824	.625″	.030″	50′, 100′	.625	.655	.030 ± .005
D105-3/4″	3/4″	827	.750″	.035″	50′, 100′	.750	.786	.035 ± .005
D105-7/8″	7/8″	860	.875″	.035″	50′, 100′	.875	.911	.035 ± .005
D105-1″	1″	861	1.000″	.035″	50′	1.000	1.036	.035 ± .005
D105-1 1/8″	1 1/8″	—	1.125″	.040″	50′	1.125	1.161	.035 ± .005
D105-1 1/4″	1 1/4″	862	1.250″	.040″	50′	1.250	1.286	.040 ± .005
D105-1 3/8″	1 3/8″	—	1.375″	.040″	50′	1.375	1.411	.040 ± .005
D105-1 1/2″	1 1/2″	863	1.500″	.045″	50′	1.500	1.536	.045 ± .005
D105-1 3/4″	1 3/4″	863	1.750″	.055″	50′	1.812	1.750	.055 ± .008
D105-2″	2″	829	2.000″	.060″	50′	2.000	2.070	.060 ± .010
D105-2 1/4″	2 1/4″	864	2.250″	.065″	50′	2.250	2.330	.065 ± .010
D105-2 1/2″	2 1/2″	865	2.500″	.070″	50′	2.500	2.590	.070 ± .010

IN STOCK

PROPERTIES OF DAFLEX-105 TUBING

Recommended for Temperatures to
105°C (220°F)

•

Low Temperature Flexibility to
−30°C

•

Dielectric Strength — .020″ Wall
800 V/MIL

•

Dielectric Constant
6.0

•

Tensile Strength — Min. (PSI)
2700

•

Ultimate Elongation
300%

•

Oil Resistance
Excellent

•

Fungus Resistance
Excellent

•

Flammability
Self-Extinguishing

•

Corrosion and Abrasion Resistance
Excellent

COLORS AVAILABLE FROM STOCK:
All sizes 24 thru 2½″: Clear, black, white.

ALSO STOCKED—Sizes 2 thru 7: Clear, black, white, yellow.
Sizes 8 thru 14: All above plus green, red.
Sizes 15 thru 24: All above plus blue. **Additional Colors to Order**

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS

DAFLEX AND DAFLON TUBING

PLASTIC - FIBERGLASS - TEFLON TUBING COMPARATIVE PROPERTIES CHART

DAFLEX AND DAFLON TUBING	D105	D74	D130	D1200	DTT500 DTT550
Maximum Operating Temperature	105°C	80°C	130°C	1200°F	Continuous Service 250°C
Maximum Low Temperature Flexibility	−20°C	−94°C	−20°C	—	−90°C
Dielectric Strength Dry-V/MIL	1000 @ .015 Wall 900 @ .030 Wall	650 @ .015 Wall 300 @ .030 Wall	4000	Determined by Space Factor	1400 @ .010 Wall 850 @ .020 Wall
Dielectric Constant	6.0	4.5	7.0	—	2.2
Flammability	Self-Extinguishing	Self Extinguishing	Self Extinguishing	Will not burn	Non-flammable
Tensile Strength (PSI)	2700-3300	2200	1500-2000 (coating material only)	—	5000 - 7500
Ultimate Elongation	300 - 400%	375 - 450%	300 - 400%	—	300 - 500%
Minimum Volume Resistance Ohm-CM	10^{13}	10^{9}	10^{7}	—	10^{17}
Fungus Resistance	Excellent	Excellent	Good	Excellent	Completely Inert
Oil Resistance	Excellent	Excellent	Excellent	Excellent	Superior
Abrasion Resistance	Excellent	Fair	Excellent	—	Fair
Chemical Corrosion Resistance	Excellent	Good	Excellent	Excellent	Completely Inert
Applicable Specs	MIL-I-631D ULE-20344 Grade A & C Type F, Form U Class 1 & 2 Category 1 ASTM-D876 ASTM-D922 MIL-T-5438	MIL-I-7444B MIL-I-22076B	MIL-I-3190B Class B, Grade B ASTM-D372 NEMA-VS-1 MIL-I-21557 MIL-T-5438 UL E-20344	NEMA VSI	MIL-T-22129C MIL-P-14078A AMS-3651B AMS-3653 AMS-3654 AMS-3655 MIL-C-17D UL E-20344
Gamma Radiation Dosage to 25% Degradation Ergs/Gram	10^{10}	10^{9}	10^{9}	—	10^{7}
Corona Resistance	Excellent	Good	Excellent	—	Good

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

DAFLON TEFLON® SPAGHETTI TUBING

Daflon 500 and 550 tubing is extruded from Dupont Tetrafluoroethylene resin and is unmatched by any other tubing for use in applications for hi frequencies and hi temperatures. Rated for continuous operation of 250°C it retains its toughness and flexibility thruout. Has high resistance to fatigue and stresses. Will not shrink back during soldering operation. Non-flammable, flexible, it permits miniaturization of design and compactness. Lowest coefficient of friction. Inert to all fungus growth. Conforms to **MIL-I-22129C Spec.** AMS 3651B, 3653B, 3654, 3655.

TABLE OF PROPERTIES

Test	ASTM Method	Result
Tensile Strength, 73°F.	D638-52T	1500-300 Lb/Sq. In.
Elongation, 73°F.	D638-52T	100-200%
Deformation Under Load—122°F.		
1200 Lb/Sq. In., 24 Hrs.	D621-51	4-8%
2000 Lb/Sq. In., 24 Hrs.	D621-51	25%
Hardness Durometer	D676-49T	D50-D65
Heat Distortion Temp., 6 Lb/Sq. In.	D648B-45T	250°C
Dielectric Strength, .080"	D149-44	400-500 V/MIL
Surface Arc-Resistance	D495-48T	Sec.
Volume Resistivity	D257-52T	10^{15} Ohm-CM
Surface Resistivity, 100% R.H.	D257-52T	3.6×10^{6} Megohms
Dielectric Constant, 60 to 10^{6} Cycles	D150-54T	2.00
Power Factor, 60 to 10^{6} Cycles	D150-54T	0.0003
Specific Gravity	D792-50	2.1-2.2

DAFLON THIN WALL TEFLON® TUBING (DTT-500)
MIL-I-22129C

DAFLON No.	Size	Nom. I.D.	Nom. Wall Thickness	Specify Std. Put-Up Spool or Coil
DTT500-32	32	.011"	.0085"	100', 500', 1000'
DTT500-30	30	.012"	.009"	100', 500', 1000'
DTT500-28	28	.015"	.009"	100', 500', 1000'
DTT500-26	26	.018"	.010"	100', 500', 1000'
DTT500-24	24	.022"	.010"	25', 50', 100', 500', 1000'
DTT500-22	22	.027"	.010"	25', 50', 100', 500', 1000'
DTT500-20	20	.034"	.012"	25', 50', 100', 500', 1000'
DTT500-19	19	.038"	.012"	100', 500', 1000'
DTT500-18	18	.042"	.012"	25', 50', 100', 500', 1000'
DTT500-17	17	.047"	.012"	100', 500', 1000'
DTT500-16	16	.053"	.012"	25', 50', 100', 500', 1000'
DTT500-15	15	.059"	.012"	100', 500', 1000'
DTT500-14	14	.066"	.012"	25', 50', 100', 500', 1000'
DTT500-13	13	.076"	.012"	100', 500', 1000'
DTT500-12	12	.085"	.012"	25', 50', 100', 500', 1000'
DTT500-11	11	.095"	.012"	100', 500', 1000'
DTT500-10	10	.106"	.012"	25', 50', 100', 500', 1000'
DTT500-9	9	.118"	.015"	100', 500', 1000'*
DTT500-⅛	⅛	.125"	.015"	25', 50', 100', 500', 1000'
DTT500-8	8	.133"	.015"	25', 50', 100', 500', 1000'*
DTT500-7	7	.148"	.015"	100', 500', 1000'*
DTT500-6	6	.166"	.015"	25', 50', 100', 500', 1000'*
DTT500-5	5	.186"	.015"	100', 500', 1000'*
DTT500-4	4	.208"	.015"	25', 50', 100', 500', 1000'*
DTT500-3	3	.234"	.015"	100', 500', 1000'*
DTT500-¼	¼	.250"	.015"	25', 50', 100', 500', 1000'
DTT500-2	2	.263"	.015"	25', 50', 100', 500', 1000'*
DTT500-1	1	.294"	.015"	100', 500', 1000'*
DTT500-5/16	5/16	.312"	.015"	25', 50', 100', 500', 1000'
DTT500-0	0	.330"	.015"	25', 50', 100', 500', 1000'*
DTT500-3/8	3/8	.390"	.020"	50', 100'*
DTT500-7/16	7/16	.453"	.020"	50', 100'*
DTT500-½	½	.515"	.025"	25', 50', 100'*
DTT500-9/16	9/16	.583"	.025"	25', 50', 100'*
DTT500-5/8	5/8	.640"	.030"	25', 50', 100'*
DTT500-¾	¾	.765"	.030"	25', 50', 100'*
DTT500-⅞	⅞	.895"	.030"	25', 50', 100'*
DTT500-1"	1"	1.025"	.030"	25', 50', 100'*
DTT500-1⅛"	1⅛"	1.150"	.030"	25', 50', 100'*
DTT500-1¼"	1¼"	1.275"	.030"	25', 50', 100'*

*Random Lengths in Coils.

STOCK COLORS AVAILABLE:
Natural, Red, Black, Yellow, Blue, Brown, Green, Orange, Gray, Violet, White.
If No Color Is Specified, Natural Will Be Supplied

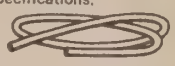
SMALL PIECE CUTTING AVAILABLE TO ORDER

STOCK COLORS: Natural, Red, Black, Blue, Brown, Green, Orange, Yellow, Gray, Violet, White.

Nos. **DTT500-⅜** thru **1¼"** available in Natural. Additional Colors, Sizes Made to Order.

Teflon Tubing can be ordered cut to your specifications.

Tracer Colors Available



We Invite Your Inquiries For Your Special Requirements

WIRE — CABLE — TUBING DIVISION

PROPERTIES OF DAFLON 500 & 550 TEFLON TUBING

Continuous Service to	250°C
Low Temperature Flexibility	—90°C
Color Stability	
Dielectric Constant	2.0
Dielectric Strength	500 to 1000 V/MIL
Fungus, Oil, Chemical Corrosion	Completely Inert

DAFLON STANDARD WALL TEFLON® TUBING
(DTT-550) MIL-I-22129C Spec.

FOR USE WHERE GREATER MECHANICAL STRENGTH IS INDICATED

DAFLON No.	Nom. Size	Nom. I.D.	Nom. Wall Thickness	Spool or Coil Std. Put-Up
DTT550-24	24	.022"	.012"	100'
DTT550-22	22	.027"	.012"	100'
DTT550-20	20	.034"	.016"	100'
DTT550-19	19	.038"	.016"	100'
DTT550-18	18	.042"	.016"	100'
DTT550-17	17	.047"	.016"	100'
DTT550-16	16	.053"	.016"	100'
DTT550-15	15	.059"	.016"	100'
DTT550-14	14	.066"	.016"	100'
DTT550-13	13	.076"	.016"	100'
DTT550-12	12	.085"	.016"	100'
DTT550-11	11	.095"	.016"	100'
DTT550-10	10	.106"	.016"	100'
DTT550-9	9	.118"	.020"	100'*
DTT550-⅛	⅛	.125"	.020"	100'
DTT550-8	8	.133"	.020"	100'*
DTT550-7	7	.148"	.020"	100'*
DTT550-6	6	.166"	.020"	100'*
DTT550-5	5	.186"	.020"	100'*
DTT550-4	4	.208"	.020"	100'*
DTT550-3	3	.234"	.020"	100'*
DTT550¼	¼	.250"	.020"	100'
DTT550-2	2	.263"	.020"	100'*
DTT550-1	1	.294"	.020"	100'*
DTT550-5/16	5/16	.312"	.020"	100'
DTT550-0	0	.330"	.020"	100'*

STOCK COLORS: Natural
Available All Other Colors.

*Random Lengths in Coils.
Made from Hi Molecular Weight Virgin "TEFLON." TFE-Dupont.



DAFLEX VINYL COATED FIBERGLASS TUBING 130°C
MEETS MIL-I-3190B SPECS (ASTM, NEMA GRADE B-B-1)

DAFLEX 130, Class B, Grade B-1 is recommended for continuous temperatures up to 130°C. Constructed to provide a tough, flexible, heat resistant tubing. Made from an inorganic fiberglass base sleeving with heat resistant coating, extremely flexible tough plastic insulation. Will not support combustion. Meets MIL-I-3190B, NEMA VSI ASTM D372. MIL-1-21557.

DAFLEX No.	Size	Old Daburn No.	Nom. I.D.	Specify Std. Put-Up Spool or Coil*
D130-24	24	889	.022"	100', 1000'
D130-22	22	890	.027"	100', 1000'
D130-20	20	891	.034"	25', 100', 1000'
D130-19	19	—	.038"	100', 1000'
D130-18	18	893	.042"	25', 100', 1000'
D130-17	17	—	.047"	100', 1000'
D130-16	16	894	.053"	25', 100', 1000'
D130-15	15	—	.059"	100', 1000'
D130-14	14	895	.066"	25', 100', 500'
D130-13	13	—	.076"	100', 500'
D130-12	12	800	.085"	25', 100', 500'
D130-11	11	—	.095"	100', 500'
D130-10	10	807	.106"	25', 100', 500'
D130-9	9	—	.118"	100', 500'
D130-8	8	801	.133"	25', 100', 500'

DAFLEX No.	Size	Old Daburn No.	Nom. I.D.	Specify Std. Put-Up Spool or Coil
D130-7	7	—	.148"	100', 250'
D130-6	6	802	.166"	100', 250'
D130-5	5	—	.186"	100', 250'
D130-4	4	805	.208"	100', 250'
D130-3	3	—	.234"	100', 250'
D130-2	2	806	.263"	100', 250'
D130-1	1	—	.294"	100' 250'
D130-0	0	803	.330"	100' 250'
D130-3/8"	3/8"	804	.375"	100' 250'
D130-7/16"	7/16"	—	.438"	100' 250'
D130-½"	½"	899	.500"	100' 250'
D130-5/8"	5/8"	896	.625"	100' 250'
D130-¾"	¾"	—	.750"	100' 250'
D130-⅞"	⅞"	—	.875"	100' 250'
D130-1"	1"	—	1.018"	100' 250'

*The above Cat. No.'s also available in 250' put-up.

DIMENSIONAL TOLERANCES OF VINYL COATED FIBERGLASS

24	.022	.020-.027
22	.027	.025-.032
20	.034	.032-.039
19	.038	.044-.036
18	.042	.040-.049
17	.047	.054-.045
16	.053	.051-.061
15	.059	.067-.057
14	.066	.064-.072
13	.076	.080-.072
12	.085	.081-.089
11	.095	.101-.091
10	.106	.102-.112
9	.118	.124-.114
8	.133	.129-.141
7	.148	.158-.144
6	.166	.162-.178
5	.186	.198-.182
4	.208	.204-.224
3	.234	.249-.229
2	.263	.258-.278
1	.294	.311-.289
0	.330	.347-.325
3/8	.375	.399-.375
7/16	.4375	.462-.438
½	.500	.500-.524
5/8	.625	.625-.655
¾	.750	.786-.750
⅞	.875	.911-.078
1"	1.000	1.036-1.000

All the Above Tubing Can Be Ordered Cut to Your Specifications

Your Inquiries Invited

COLORS AVAILABLE FROM STOCK

#24 thru #15: Black, Red, Green, Yellow, Brown, Blue
#14 thru #2: Black, Red, Green, Yellow
#1 thru 1½": Black, Yellow
#1⅝" thru 1": Black



PROPERTIES OF DAFLEX 130 VINYL COATED FIBERGLASS

Recommended for Temperatures to 130°C

Ins. Resistance
Max. Low Temperature Flexibility
—20°C
Over 1,000,000 Megs.
Dielectric Strength
4000 V/MIL
Dielectric Constant
7.0
Oil Resistance — Excellent
Tensile Strength — Min. (PSI)
1500
Ultimate Elongation
350%
Non-Flammable
Will not support Combustion, Abrasion, Oil, Chemical Corrosion Resistance
Excellent
Fungus Resistance
Good
Gamma Radiation Dosage to 25%
10^{9}
Degradation ERGS/GRAM
Color Stability even on Prolonged Baking at Elevated Temperatures



Hot Air Gun
FOR DAFLEX SHRINKABLE TUBING

DABURN No.

HG1—For SH265, SH275, SH290 & SH160 Series
HG2—For SH400 & SH621 Series

A flameless heat source; light in weight; portable and/or permanent mounting.

An oven, hot liquids, radiant heat, open flame or soldering iron may also be used for all types of shrinkable tubing with excellent results.

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

LOW TEMPERATURE TUBING

DAFLEX 74 EXTRUDED PLASTIC TUBING

LOW TEMPERATURE PER MIL-SPEC MIL-I-7444B MIL-I-22076B TO −94°C



Low temperature applications at sub-zero. Meets Mil spec. Fungus resistant. 750 V/Mil dielectric strength. Tensile strength 2200 ps. Elongation — 360%

DAFLEX No.	Size	Nom. I.D.	Nom. Wall
D74-24	24	.022″	.012″
D74-22	22	.027″	.012″
D74-20	20	.034″	.016″
D74-19	19	.038″	.016″
D74-18	18	.042″	.016″
D74-17	17	.047″	.016″
D74-16	16	.053″	.016″
D74-15	15	.059″	.016″
D74-14	14	.066″	.016″
D74-13	13	.076″	.016″
D74-12	12	.085″	.016″
D74-11	11	.095″	.016″
D74-10	10	.106″	.016″
D74-9	9	.118″	.020″
D74-8	8	.133″	.020″
D74-7	7	.148″	.020″
D74-6	6	.166″	.020″
D74-5	5	.186″	.020″
D74-4	4	.208″	.020″
D74-3	3	.234″	.020″
D74-2	2	.263″	.020″
D74-1	1	.294″	.020″
D74-0	0	.330″	.020″
D74-5/16	5/16	.312″	.025″
D74-3/8	3/8	.375″	.025″
D74-7/16	7/16	.438″	.025″
D74-1/2	1/2	.500″	.025″
D74-9/16	9/16	.562″	.030″
D74-5/8	5/8	.625″	.030″
D74-3/4	3/4	.750″	.035″
D74-7/8	7/8	.875″	.035″
D74-1″	1″	1.000″	.035″
D74-1¼″	1¼″	1.250″	.040″
D74-1⅜″	1⅜″	1.375″	.040″
D74-1½″	1½″	1.500″	.045″
D74-1¾″	1¾″	1.750″	.055″
D74-2″	2″	2.000″	.060″
D74-2¼″	2¼″	2.250″	.065″
D74-2½″	2½″	2.500″	.070″

STNDARD COLOR: CLEAR (NATURAL) ADDITIONAL COLORS AVAILABLE TO ORDER.
STD. PUT-UP: 100 FT., 500 FT., 1000 FT.

FIBERGLASS SLEEVING

DAFLEX 1200–FOR HIGH TEMPERATURE APPLICATIONS TO 1200°F FLEXIBLE FIBERGLASS SLEEVING



Extremely flexible class H, it is non-flammable and treated for removal of all organic matter. Glass braid is fray resistant. Will provide maximum mechanical strength. Tightly braided. Applicable specs—Nema VSI. Dielectric strength determined by space factor.

DAFLEX No.	Size	Nom. I.D.
D1200-24	24	.022″
D1200-22	22	.027″
D1200-20	20	.034″
D1200-19	19	.038″
D1200-18	18	.042″
D1200-17	17	.047″
D1200-16	16	.053″
D1200-15	15	.059″
D1200-14	14	.066″
D1200-13	13	.076″
D1200-12	12	.085″
D1200-11	11	.095″
D1200-10	10	.106″
D1200-9	9	.118″
D1200-8	8	.133″
D1200-7	7	.148″
D1200-6	6	.166″
D1200-5	5	.186″
D1200-4	4	.208″
D1200-3	3	.234″
D1200-2	2	.263″
D1200-1	1	.294″
D1200-0	0	.330″
D1200-3/8″	3/8″	.387″
D1200-7/16″	7/16″	.450″
D1200-1/2″	1/2″	.512″
D1200-5/8″	5/8″	.640″
D1200-3/4″	3/4″	.768″
D1200-7/8″	7/8″	.893″
D1200-1″	1″	1.018″

STANDARD COLOR: NATURAL. ADDITIONAL COLORS AVAILABLE TO ORDER.
STD. PUT-UP: 100 FT., 500 FT., 1000 FT.

ALL THE ABOVE CAN BE CUT AND MARKED TO YOUR SPECIFICATIONS.

DAFLEX AND DAFLON SHRINKABLE TUBING COMPARATIVE PROPERTIES CHART

DAFLEX AND DAFLON HEAT SHRINKABLE TUBING	Shrinkable Irradiated Polyolefin SH-275	Shrinkable Semi-Rigid Polyolefin SH-290	Shrinkable Vinyl (PVC) In Colors SH-265	Shrinkable Teflon* FEP SH-400	Shrinkable Teflon* TFE SH-621	Shrinkable Neoprene* SH-160
Continuous Operating Temperature	135°C 275°F	135°C 275°C	105°C 220°F	200°C 400°F	250°C 480°F	212°F
Shrinkage Temperature	120°C 250°F	120°C 250°F	95°C 200°F	300°F	327°C 621°F	160°F
Shrinkage Ratio Minimum	2:1 (50%)	2:1 (50%)	2:1 (50%)	1¼:1	1½:1	3:1 (66⅔%)
Longitudinal Change	5%	5%	10%	10 - 20%	10 - 20%	50%
Tensile Strength, PSI Minimum	2400	2600	2000	3000	3000	1500
Ultimate Elongation %	400	400	200	20	200	400
Low Temperature Flexibility	−55°C −67°F	−55°C −67°F	−10°C +14°F	−67°C −85°F	−67°C −85°F	−55°C −67°F
Specific Gravity (ASTM D792)	1.30 Color Tubing 1.0 Clear Tubing	1.26 Color 1.0 Clear	1.40	2.16	2.20	1.40
V/MIL. Minimum Dielectric Strength (ASTM D149)	500	500	700	500	500	400
Water Absorption Maximum (MIL-I-23053)	.1%	.1%	1%	.01%	.01%	1.0%
Fungus Resistance (MIL-I-7444)	Excellent	Excellent	Excellent	Excellent	Excellent	Good
Corrosion (MIL-I-23053)	Non-corrosive	Non-corrosive	2.0% Max. Per MIL-I-631	Non-corrosive	Non-corrosive	Good
Flammability (MIL-I-23053)	Self-Ext.†	Self-Ext.†	Self-Ext.	Non-flammable	Non-flammable	Self-Ext.
Resistance to Soldering Iron	Good	Good	Poor	Excellent	Excellent	Poor
Applicable Specs	MIL-I-23053B MIL-I-7444B ASTM-D-792 ASTM-D-149 ASTM-D-638 ASTM-D-150 ASTM-14-53T ASTM-150-54T MIL. STD. 104 L-P 406 UL E-20344	MIL-I-2353B MIL-I-7444B ASTM-D-792 ASTM-D-149 ASTM-D-638 ASTM-D-150 MIL. STD. 104 UL E-20344	MIL-I-20353B MIL-I-631 ASTM-D-792 ASTM-D-149 ASTM-D-638 ASTM-D-150 MIL. STD. 104 UL E-20344	SH-400	MIL-I-20353B MIL-I-22129C MIL-I-7444B ASTM-D-638 ASTM-D-149 ASTM-D-792 ASTM-D-150 MIL. Std. 104 L-P 406	MIL-I-23053B
Temperature Limits	−67 to +275°F	−67 to +275°F	−25 to +221°F	−275 to +400°F	−275 to +500°F	−67 to 212°F

* Dupont. † Clear tubing is not flame retardant.

© United Technical Publications

DABURN ELECTRONICS & CABLE CORP.
96 PRINCE ST., N. Y., N. Y. 10012 • 212 226-4079 — 5833
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

HEAT SHRINKABLE TUBING

SHRINKABLE IRRADIATED POLYOLEFIN TUBING

This series is designed for maximum mechanical strength at stress or points of connection. It is strong and abrasion resistant and is supplied in expanded sizes. It insulates, jackets, splices, encapsulates, weatherproofs components, connectors, cables and irregular shaped objects. When exposed to heat (300°F) the tubing shrinks 50% in diameter, 5% longitudinal contraction. Controlled shrinkage to exact requirement takes place. Meets or exceeds MIL-I-23053B/5 Class 1 and 2. Available with UL approval. AMS 3636B 3637A.



Cat. Nos. Indicate EXPANDED Size. Shrinkage Ratio: 2:1 (50%)

DAFLEX SH-275 All Purpose	DAFLEX SH-290 Semi-Rigid	Equiv. I.D. AWG	Before Shrinkage As Supplied Expand. I.D.	Recovered I.D.	Recovered Nom. Wall*	Standard Package
SH-275-1/16"	SH-290-1/16"	22-20	.063"	.031"	.016"	100', 250'
SH-275-3/32"	SH-290-3/32"	18-16	.093"	.046"	.020"	100', 250'
SH-275-1/8"	SH-290-1/8"	14	.125"	.062"	.020"	100', 250'
SH-275-3/16"	SH-290-3/16"	12-10	.187"	.093"	.020"	100', 250'
SH-275-1/4"	SH-290-1/4"	8	.250"	.125"	.025"	100', 250'
SH-275-5/16"	SH-290-5/16"	6	.312"	.156"	.025"	100', 250'
SH-275-3/8"	SH-290-3/8"	4	.375"	.187"	.025"	100', 250'
SH-275-1/2"	SH-290-1/2"	2	.500"	.250"	.025"	100'
SH-275-3/4"	SH-290-3/4"	3/8	.750"	.375"	.030"	100'
SH-275-1"	SH-290-1"	1/2	1.000"	.500"	.035"	100'
SH275-1 1/2"	SH290-1 1/2"	3/4"	1.500"	.750"	.040"	12'*, 24'**
SH275-2"	SH290-2"	1"	2.000"	1.000"	.045"	12'**, 24'**
SH275-3"	SH290-3"	1 1/2"	3.000"	1.500"	.050"	12'**, 24'**
SH275-4"	SH290-4"	2"	4.000"	2.000"	.055"	12'**, 24'**

STOCK COLORS: Black, White, Red, Clear. Additional colors available.
Although processed by hi-energy radiation the **Daflex SH-275** and **SH-290** shrinkable tubings **do not** at any time become radioactive or possess any residual radioactivity. *Wall thickness will be less if recovery is restricted.
**4' lengths.

SPECIFICATIONS—All Tests Made on Tubing in Recovered Dimension

Continuous Operating Temp: 135°C	Shrinkage Ratio: 2:1 (50%)
Longitudinal Change: 5% Max.	Dielectric Strength: 500 V/MIL Min.
Tensile Strength: 1500 PSI Min.	Dielectric Constant: 2.87 Max.
Ultimate Elongation: 200% Min.	Corrosive Resistance: Non-Corrosive
Special Gravity: 1.29 Max.	Resistance to Soldering Iron: Excellent
Low Temp. Flexibility (—54°C): No Cracking	Fuel, Oil, Solvent, Acid, Alkali, Hydraulic Fluid Resistance: Excellent

DABURN SHRINKABLE POLYVINYLCHLORIDE ALL PURPOSE

Shrinkage Ratio: 2:1 (50%)

Flexible, shrinks 50% on heat application, less than 10% longitudinal contraction. Suitable for insulating components and cables in varying shapes and diameters. Has a higher resistance to oils than low density polyethylene. Conforms to MIL-I-631D, Type F, Form U, Grade A and C, Class 1 and 2, Cat. 1. Controlled shrinkage on application of heat to predetermined size takes place at temperatures below 200°F (one minute or less). Meets or exceeds MIL-I-23053B/2 Class 2.
OPERATING TEMPERATURE: —20° to +105°C.



CAT. NOS. INDICATE EXPANDED SIZE

DAFLEX SH-265	Equiv. I.D. AWG	Before Shrinking As Supplied Expanded I.D.	Max. Recovered I.D.	Recovered Nom. Wall†	Standard Package
SH-265-1/16"	22-20	.063"	.031"	.020"	100', 250'
SH-265-3/32"	18-16	.093"	.046"	.025"	100', 250'
SH-265-1/8"	14	.125"	.062"	.025"	100', 250'
SH-265-3/16"	12-10	.187"	.093"	.025"	100', 250'
SH-265-1/4"	8	.250"	.125"	.025"	100', 250'
SH-265-5/16"	6	.312"	.156"	.025"	100', 250'
SH-265-3/8"	4	.375"	.187"	.025"	100', 250'
SH-265-1/2"	2	.500"	.250"	.025"	25', 100'
SH-265-3/4"		.750"	.375"	.025"	25', 100'
SH-265-1"		1.000"	.500"	.030"	25', 50'
SH-265-1 1/2"		1.500"	.750"	.035"	25', 50'
SH-265-2"		2.000"	1.000"	.040"	25', 50'

COLORS: Black, White, Clear, Red. Additional Colors Available.

PACK ASSORTMENTS

DAFLEX Cat. No.	Lengths Per Pack	Tubing Size
SH-275-PA1	30	1/16" thru 3/16"
SH-275-PA2	16	1/4" thru 3/4"
SH-275-PA3	10	1"

COLORS: Black, White, Clear, Red. Each pack contains an assortment of 6" lengths in mixed sizes and colors (specify).

HEAT SHRINKABLE TEFLON‡ TUBING

DAFLON SH-400 (FEP)

Made with Modified TEFLON* FEP will shrink over inserted objects upon exposure to moderate heat. Heretofore, many joints, parts, components, devices could not be protected because of hi temperature required for shrinkage. FEP TEFLON*, which has a continuous service temperature of 400°F., will shrink at 300°F. Supplied in natural (transparent) color. Complete shrinkage at 350°F. Now, many heat sensitive products can use the permanent protection of TEFLON.* Will not burn or support flame, long lengths available. Will not split, melt, or cold flow. Extruded.

DABURN No.	Size	I.D.	Min. Exp. I.D.	Recovered Max. I.D.	Recovered Wall Thickness
SH-400-24	24	.023"	.031"	.027"	.008"
SH-400-22	22	.028"	.036"	.032"	.008"
SH-400-20	20	.034"	.045"	.039"	.008"
SH-400-18	18	.042"	.060"	.049"	.008"
SH-400-16	16	.053"	.075"	.061"	.009"
SH-400-14	14	.066"	.092"	.072"	.009"
SH-400-12	12	.085"	.115"	.089"	.009"
SH-400-10	10	.108"	.141"	.114"	.010"
SH-400-9	9	.118"	.158"	.124"	.010"
SH-400-8	8	.136"	.180"	.143"	.010"
SH-400-7	7	.148"	.197"	.158"	.011"
SH-400-6	6	.170"	.225"	.180"	.011"
SH-400-5	5	.186"	.248"	.198"	.011"
SH-400-4	4	.214"	.290"	.226"	.011"
SH-400-3	3	.234"	.310"	.249"	.011"
SH-400-2	2	.268"	.365"	.280"	.012"
SH-400-1	1	.294"	.400"	.311"	.012"
SH-400-0	0	.336"	.440"	.349"	.012"
SH-400-3/8	3/8"	.375"	.500"	.383"	.015"
SH-400-7/16	7/16"	.437"	.580"	.448"	.020"
SH-400-1/2	1/2"	.500"	.666"	.510"	.020"
SH-400-5/8	5/8"	.625"	.830"	.637"	.025"
SH-400-3/4	3/4"	.750"	1.000"	.764"	.030"
SH-400-7/8	7/8"	.875"	1.170"	.891"	.035"
SH-400-1	1"	1.000"	1.330"	1.020"	.035"

STANDARD PACKAGE: 100 Ft. ‡ DUPONT

Daburn No. HG1 — Heat Gun for **SH-265, SH-275, SH-290, SH-160 Series.**

DAFLON SHRINK SERIES SH-621

TFE TUBING MIL-I-23053A CLASS 6

Made of modified TEFLON‡ polytetrafluorethylene will shrink when heated to 621°F. Suitable where hi temp protection is required. Extruded. Will not support combustion, dielectric strength (20 Mil Wall) 850 V/M, low temp. brittle point —66°F, superior chemical resistance.

DAFLON No.	Nominal Tubing Size	Minimum Expanded ID	Recovered Dimensions Maximum ID (1)	Recovered Dimensions Wall Thickness (2)
SH-621-26	26	.046"	.022"	.009"
SH-621-24	24*	.050"	.027"	.010"
SH-621-22	22*	.055"	.032"	.010"
SH-621-20	20*	.060"	.039"	.012"
SH-621-19	19	.065"	.043"	.012"
SH-621-18	18*	.076"	.049"	.012"
SH-621-17	17	.085"	.054"	.012"
SH-621-16	16*	.093"	.061"	.012"
SH-621-15	15	.110"	.067"	.012"
SH-621-14	14*	.120"	.072"	.012"
SH-621-13	13	.140"	.080"	.012"
SH-621-12	12*	.150"	.089"	.012"
SH-621-11	11	.170"	.101"	.012"
SH-621-10	10*	.191"	.112"	.012"
SH-621-9	9	.205"	.124"	.015"
SH-621-8	8*	.240"	.141"	.015"
SH-621-7	7	.270"	.158"	.015"
SH-621-6	6*	.302"	.178"	.015"
SH-621-5	5	.320"	.198"	.015"
SH-621-4	4*	.348"	.224"	.015"
SH-621-3	3	.360"	.249"	.015"
SH-621-2	2*	.375"	.278"	.015"
SH-621-1	1	.385"	.311"	.015"
SH-621-0	0*	.400"	.347"	.015"
SH-621-3/8	3/8"*	.560"	.399"	.020"
SH-621-7/16	7/16"*	.655"	.462"	.020"
SH-621-1/2	1/2"*	.750"	.524"	.020"

STANDARD PACKAGE: 100 Feet.
STANDARD PUT-UP: 36" Straight Lengths — One Foot Minimums.
WALL TOLERANCES: 26 thru 22 ± .002; 20 thru 10 ± .003; 9 thru 0 ± .004.
(*) Stock Sizes.

Daburn No. HG2 — Heat Gun for **SH-400** and **SH-621** Series

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

TUBULAR BRAID PER MIL SPEC QQ-B-575

Tinned copper shielded braid mf'd completely round per Mil Spec QQ-B-575. Maintains its round configuration. Shielding coverage is 95% or more. Used in military applications where maximum shielding is required against electrostatic interference. Useful against mechanical abrasion and stresses for cables — as grounding cable.

DABURN No.	Nom. Inside Diam. When Rounded	Construction Total No. of Wires	Carriers	AWG of Indiv. Wires	Approx. AWG Equiv.	Nom. Circular Mils	*Current Carrying Cap.
2350-1/32	1/32"	24	24	#36	#22	640	7.0 amps.
2350-1/16	1/16"	48	24	#36	#19	1,290	11.0 amps.
2350-5/64	5/64"	72	24	#36	#17	1,900	18.0 amps.
2350-7/64	7/64"	96	24	#36	#16	2,500	22.0 amps.
2350-1/8	1/8"	120	24	#36	#15	3,260	28.0 amps.
2350-5/32	5/32"	240	24	#36	#12	6,200	39.0 amps.
2350-11/64	11/64"	168	24	#36	#14	4,500	32.0 amps.
2350-3/16	3/16"	192	24	#36	#13	5,100	35.0 amps.
2350-13/64	13/64"	312	24	#36	#11	8,200	46.0 amps.
2350-1/4	1/4"	384	24	#36	#10	10,400	53.0 amps.
2350-9/32	9/32"	120	24	#30	# 9	12,060	60.0 amps.
2350-3/8	3/8"	384	48	#36	#10	10,400	53.0 amps.
2350-7/16	7/16"	240	24	#30	# 6	24,120	90.0 amps.
2350-1/2	1/2"	528	48	#36	# 9	13,200	70.0 amps.
2350-9/16	9/16"	528	48	#36	# 9	13,200	70.0 amps.
2351-9/16	9/16"	480	48	#30	# 3	48,240	145.0 amps.
2350-11/16	11/16"	720	48	#36	# 7	19,000	82.0 amps.
2350-25/32	25/32"	864	48	#36	# 7	21,750	85.0 amps.
2350-13/16	13/16"	864	48	#36	# 7	21,750	85.0 amps.
2350-7/8†	7/8"	336	48	#30	# 5	33,700	100.0 amps.
2350-1†	1"	384	48	#30	# 4	38,600	120.0 amps.
2350-1 1/8†	1 1/8"	432	48	#30	# 4	43,330	130.0 amps.
2350-1 1/4†	1 1/4"	480	48	#30	# 3	48,150	145.0 amps.
2350-1 3/8†	1 3/8"	528	48	#30	# 3	53,000	150.0 amps.
2350-1 1/2†	1 1/2"	576	48	#30	# 2	57,775	165.0 amps.

STANDARD SPOOL PUT-UP: 50 Ft., 100 Ft., 250 Ft.
Larger Spools Available — Advise.

*Values based on copper in free air at 65°F.

†These sizes are mfg. to standards of QQ-B-575 although they are not listed in the specification.

Additional constructions and variations made to order. Also available in **silver plated copper,** bare copper, stainless steel, and nickel plated copper.

TINNED COPPER SHIELDING — FLAT BRAID



Soft annealed tinned copper woven braid, rolled flat at time of manufacture. It is extremely flexible. Used as battery grounding, bonding strap for aircraft, vehicles, marine equipment. Eliminates ignition interference and moving parts. Slides over wire and cables.

DABURN No.	Size and No. of Wires	I.D. Flat	O.D. Flat	Approx. AWG Equiv.	Nom. Circular Mils	*Current Carrying Cap.
2355-1/32	12 x 2 x 36	1/32"	3/64"	24	400	6.0
2355-3/64	12 x 2 x 36	3/64"	1/16"	22	600	7.0
2355-1/16	16 x 3 x 36	1/16"	5/64"	20	1,200	11.0
2355-1/8	24 x 5 x 36	1/8"	5/32"	18	1,800	16.0
2355-3/16	24 x 5 x 36	3/16"	7/32"	15	3,000	25.0
2355-1/4	24 x 7 x 36	1/4"	9/32"	14	4,200	32.0
2355-3/8	48 x 4 x 36	3/8"	13/32"	12	7,200	46.0
2355-1/2	48 x 7 x 36	1/2"	17/32"	10	9,600	53.0
2355-5/8	48 x 8 x 36	5/8"	21/32"	10	9,600	53.0
2355-3/4	48 x 11 x 36	3/4"	13/16"	7	20,800	85.0
2355-25/32	48 x 19 x 36	25/32"	27/32"	7	20,800	85.0
2355-1	48 x 19 x 36	1"	1 1/16"	7	20,800	85.0
2355-1 3/8	48 x 19 x 36	1 3/8"	1 7/16"	7	33,700	85.0
2355-1 1/2	48 x 19 x 36	1 1/2"	1 5/8"	3	53,064	150.0
2355-1 3/4	48 x 27 x 30	1 3/4"	1 7/8"	00	125,425	280.0
2355-2	48 x 32 x 30	2"	2 1/4"	000	154,368	310.0
2355-2 1/4	48 x 35 x 30	2 1/4"	2 1/2"	000	168,840	320.0
2355-2 1/2	48 x 45 x 30	2 1/2"	2 3/4"	000	192,000	340.0
2355-3	48 x 64 x 30	3"	3 1/4"	0000	225,000	390.0

STANDARD SPOOL PUT-UP: 50 Ft., 100 Ft., 500 Ft., 1000 Ft.

ADDITIONAL CONSTRUCTION AND VARIATIONS MADE TO ORDER.

OVAL COMMERCIAL BRAID AVAILABLE TO ORDER

DAPRENE™ HEAT SHRINKABLE NEOPRENE* TUBING

This unique tubing meets or exceeds MIL-T-23053B specs. Shrinks down to under 33% of its supplied inside diameter. Upon exposure to heat of 160°F — will remain elastomeric — with no cracks (longitudinal shrinkage 50%). Will protect components, solder joints, terminals, fittings, harnessing and jacketing of wires, medical equipment, etc. Resistant to abrasion, flame, chemicals. Suitable electrical and mechanical properties. Has continuous range of −67° to +212°F. Tubing is self extinguishing when flame is removed. Variety of intermediate recovered sizes. Available expanded sizes: 1/2", 1", 1 1/2", 2". **COLOR:** Black. Tubing must be stored below 100°F.



PROPERTIES:

ELECTRICAL
Dielectric Strength: V/M, 400 Min.
Volume Resistivity: OHM/CM, 1×10^{14} Min.

CHEMICAL
Solvent Resistance: Excellent
Corrosion: Good.
Water Absorption: 1.0 Max.
Flammability: Self-Extinguishing in 15 Seconds

PHYSICAL
Elongation: 400% Min.
Temperature Range: −67° to +212°F
Tensile Strength: 1500 PSI Min.
Dielectric Strength: 360 V/M Min.
Heat Resistance: 212°F for 96 Hours — No cracking.
Specific Gravity: 1.40 Max.

HARDNESS
Shore A Durometer: 85 ±5.

HEAT SHOCK
302°F for 4 Hours — No cracking, flowing or dripping.

DAPRENE™ SH160 HEAT SHRINKABLE NEOPRENE* TUBING COLOR: BLACK

DABURN No.	Size	Before Shrinking As Supplied Expanded I.D.	RECOVERED DIMENSIONS (After Heating) I.D. Maximum	Wall Thickness
SH160-1/2"	1/2"	.500"	.165"	.035" ±.010"
SH160-1"	1"	1.00"	.330"	.048" ±.010"
SH160-1 1/2"	1 1/2"	1.500"	.495"	.057" ±.010"
SH160-2"	2"	2.00"	.660"	.070" ±.010"

STD. PKGE.: 100 ft. (random lengths — 10 ft. minimum). * Neoprene—Dupont.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

TINNED COPPER WIRE



Pure Electrolytic, Copper, annealed, tinned for quick soldering—Solid Soft Drawn MIL—W—3861 Type S, ASTM—B—33 Specifications, QQ—W—343 Type S

DABURN No.	Size AWG	Area Circ. Mils	O.D.	DABURN No.	Size AWG	Area Circ. Mils	O.D.
2360/4	4	41,704	.204″	2360/18	18	1,624	.040″
2360/6	6	26,250	.162″	2360/20	20	1,022	.033″
2360/8	8	16,510	.129″	2360/22	22	624.4	.025″
2360/10	10	10,380	.103″	2360/24	24	404.0	.020″
2360/12	12	6,530	.082″	2360/26	26	254.1	.016″
2360/14	14	4,107	.065″	2360/28	28	159.8	.013″
2360/16	16	2,583	.051″	2360/30	30	100.5	.010″

STANDARD PUT-UP: 100 Ft., 1000 Ft. See Magnet Wire Section For Additional Sizes

BARE COPPER WIRE (Soft Drawn)

QQ—W—341A SPECIFICATIONS SOLID

DABURN No.	Size AWG	Area Circular Mils	O.D.
2375/8	8	16,510	.1285″
2375/10	10	10,380	.102″
2375/12	12	6,530	.081″
2375/14	14	4,107	.064″
2375/16	16	2,583	.051″

STANDARD PUT-UP: 100 Ft., 1000 Ft.

SOLID FORMVAR COPPER WIRE

DABURN No.	Size AWG	O.D.
2380/10	10	.103″
2380/12	12	.083″
2380/14	14	.066″

STANDARD PUT-UP: 100 Ft., 150 Ft., 200 Ft., 1000 Ft.

DABURN COPPERWELD WIRE

Bare Copper Welded to Core. 40% Conductivity. Hard Drawn; will not stretch. Used for hi tensile strength.

DABURN No.	Size AWG	Nom. O.D.	DABURN No.	Size AWG	Nom. O.D.
2386/20	20	.033″	2386/12	12	.080″
2386/18	18	.040″	2386/10	10	.102″
2386/16	16	.050″	2386/8	8	.129″
2386/14	14	.064″	2386/6	6	.162″

STANDARD PUT-UP: 500 Ft., 1000 Ft.

BUS BAR WIRE (Hard Drawn)



QQ—W—343 Type S

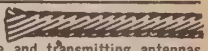
For hooking up all types of transmitters, especially ultra short wave equipment. All bus wire is made of hard drawn copper, tinned, straightened, and cut in 2 ft. lengths.

MIL—W—3861 Types S, ASTM—B—33, ASTM—B—246—51 Specifications

DABURN No.	Nom. Circ. Mil Area	Size	Nom. O.D.
2362/10	10,380	10	.103″
2362/12	6,530	12	.082″
2362/14	4,107	14	.065″
2362/16	2,583	16	.051″
2362/18	1,642	18	.040″
2362/20	1,022	20	.033″
2362/22	624	22	.025″

STANDARD PUT-UP: 100 Per Package in two foot lengths.

SILICON BRONZE AERIAL WIRE



Especially designed for ships, airports, short wave and transmitting antennas where high tensile strength and resistance to the elements are important.

DABURN No.	Size AWG	Strand	Breaking Strength	O.D.
2364/4	4	7/12	3670 lbs.	.240″
2364/6	6	7/14	2140 lbs.	.190″
2364/8	8	7/16	1600 lbs.	.150″
2364/10	10	7/18	1000 lbs.	.122″
2364/12	12	7/20	650 lbs.	.100″.
2364/14	14	7/22	420 lbs.	.075″

STANDARD PUT-UP: 100 Ft., 500 Ft., 1000 Ft.
2364/10 and 2364/6 meets MIL-W-13074, 2364/12 meets MIL-W-13276 Specs.



COPPERWELD ANTENNA WIRE

Used where high tensile strength is required as for short wave and transmitting aerials. Has low R.F. resistance and is ideal for transmitting doublet and directional antennas. Will maintain frequency characteristics because of its stretchless qualities. 40% conductivity.

DABURN No.	Size AWG	Tensile Strength	O.D.
2382/10	10	1130 lbs.	.103″
2382/12	12	720 lbs.	.082″
2382/14	14	400 lbs.	.065″

STANDARD PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft., 2500 Ft.

STRANDED BARE COPPER WIRE

DABURN No.	Size AWG	Strand	O.D.
2366/12	12	7/20	.100″
2366/14	14	7/22	.075″
2366/16	16	7/24	.060″
2366/18	18	7/26	.050″
2366/19	19	7/27	.041″

PUT-UP: 100 Ft., 1000 Ft. Spool.

DABURN MAGNET WIRE — Per MIL-W-583C Spec.

DESCRIPTION: Plain Enamel — Single conductor round bare copper covered with a continuous insulating film of enamel. 105°C, Type T per MIL-W-583B.

DESCRIPTION: Heavy Formvar: — Single conductor round baked copper, baked film insulation from varnish base on a vinyl acetal resin. 105°C. Type T2 per MIL-W-583B.

DESCRIPTION: Single conductor soft drawn annealed copper tinned per Spec MIL-W-3861 Type S, QQ-W-343 Type S, ASTM-B-33.

PLAIN ENAMEL (PE)

DABURN No.	Size	Nom. O.D.
DPE-10	10	.1037″
DPE-12	12	.0825″
DPE-14	14	.0657″
DPE-16	16	.0522″
DPE-18	18	.0416″
DPE-20	20	.0332″
DPE-22	22	.0266″
DPE-24	24	.0212″
DPE-26	26	.0169″
DPE-28	28	.0135″
DPE-30	30	.0108″
DPE-32	32	.0087″
DPE-34	34	.0069″
DPE-36	36	.0055″
DPE-38	38	.0044″
DPE-40	40	.0034″
DPE-42	42	.0028″
DPE-44	44	.0023″

HEAVY FORMVAR (HF)

DABURN No.	Size	Nom. O.D.
DHF-10	10	.1056″
DHF-12	12	.0842″
DHF-14	14	.0673″
DHF-16	16	.0539″
DHF-18	18	.0432″
DHF-20	20	.0346″
DHF-22	22	.0277″
DHF-24	24	.0224″
DHF-26	26	.0180″
DHF-28	28	.0144″
DHF-30	30	.0116″
DHF-32	32	.0095″
DHF-34	34	.0075″
DHF-36	36	.0060″
DHF-38	38	.0049″
DHF-40	40	.0038″
DHF-42	42	.0032″
DHF-44	44	.0026″

TINNED COPPER (TC)

DABURN No.	Size	Nom. O.D.
DTC-10	10	.103″
DTC-12	12	.082″
DTC-14	14	.065″
DTC-16	16	.051″
DTC-18	18	.040″
DTC-20	20	.033″
DTC-22	22	.025″
DTC-24	24	.020″
DTC-26	26	.016″
DTC-28	28	.013″
DTC-30	30	.010″
DTC-32	32	.008″
DTC-34	34	.006″
DTC-36	36	.005″
DTC-38	38	.004″
DTC-40	40	.003″

STANDARD PUT-UP: ¼ lb., ½ lb., 1 lb., 5 lbs., 10 lbs. **SIZES:** 34, 36. Largest Put-up 5 lbs

SIZES: 38, 40, 42, 44. Largest Put-up 1 lb.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

PER MIL-W-76B PLASTIC HOOK-UP WIRE

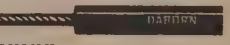
300 VOLTS — TYPE LW (Light Wall)
SPEC. MIL-W-76B

CONDUCTOR COLOR CODE PER MIL-W-76B SPEC.

0-Black	1-Brown	2-Red	3-Orange	4-Yellow	5-Green	6-Blue	7-Violet	8-Gray	9-White

DESCRIPTION: One conductor stranded tinned copper with light wall of primary thermoplastic insulation. Nom. Wall .010".

TEMPERATURE RATING: —40°C to +80°C.



TYPE LW — UNCOVERED VINYL

DABURN Cat. No.	Size AWG	MIL-W-76B Type Designation	Conductor Strand	Nom. O.D.
2585/30	30	LW-C 30(7)U	7/38	.033"
2585/28	28	LW-C 28(7)U	7/36	.035"
2585/26	26	LW-C 26(7)U	7/34	.040"
2585/24	24	LW-C 24(7)U	7/32	.044"
2585/22	22	LW-C 22(7)U	7/30	.050"
2585/20	20	LW-C 20(7)U	7/28	.060"

TEMPERATURE RATING: —40°C to +90°C.
Nominal Nylon Jacket Thickness, .002".



TYPE LW — NYLON JACKET

DABURN Cat. No.	AWG Size	MIL-W-76B Type Designation	Conductor Strand	Nom. O.D.
2590/30	30	LW-C 30(7)J	7/38	.036"
2590/28	28	LW-C 28(7)J	7/36	.039"
2590/26	26	LW-C 26(7)J	7/34	.042"
2590/24	24	LW-C 24(7)J	7/32	.047"
2590/22	22	LW-C 22(7)J	7/30	.053"
2590/20	20	LW-C 20(7)J	7/28	.065"

1000 VOLTS — TYPE MW (Medium Wall) — Fungus Proof
SPEC. MIL-W-76B

DESCRIPTION: One conductor tinned copper with thermoplastic insulation.

TEMP. RATING: —40°C to +80°C.

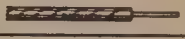


TYPE MW — UNCOVERED VINYL STRANDED

DABURN Cat. No.	Spool	Size AWG	MIL-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
2555/24	1000'	24	MW-C 24(7)U	7/32	.015"	.059"
*2555/22	1000'	22	MW-C 22(7)U	7/30	.017"	.065"
*2555/20	1000'	20	MW-C 20(10)U	10/30	.017"	.074"
*2555/18	1000'	18	MW-C 18(16)U	16/30	.017"	.085"
2555/16	1000'	16	MW-C 16(26)U	26/30	.017"	.096"
2555/14	1000'	14	MW-C 14(41)U	41/30	.017"	.110"
2555/12	1000'	12	MW-C 12(65)U	65/30	.017"	.130"

*Single and Double Tracers Available.

SOLID



2560/24	1000'	24	MW-C 24(1)U	1	.015"	.056"
2560/22	1000'	22	MW-C 22(1)U	1	.017"	.060"
2560/20	1000'	20	MW-C 20(1)U	1	.017"	.066"
2560/18	1000'	18	MW-C 18(1)U	1	.017"	.074"

TEMPERATURE RATING: —40°C to +90°C.



TYPE MW — NYLON JACKET STRANDED

DABURN Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
2565/24	24	MW-C 24(16)J	16/36	.015"	.068"
2565/22	22	MW-C 22(7)J	7/30	.017"	.075"
2565/20	20	MW-C 20(10)J	10/30	.017"	.087"
2565/18	18	MW-C 18(16)J	16/30	.017"	.100"
2565/16	16	MW-C 16(26)J	26/30	.017"	.122"
2565/14	14	MW-C 14(41)J	41/30	.017"	.122"
2565/12	12	MW-C 12(65)J	65/30	.017"	.140"
2565/10	10	MW-C 10(105)J	105/30	.045"	.240"

STD. PUT-UP 2555 & 2560 SERIES: 100 Ft., 500 Ft., 1000 Ft.
STD. PUT-UP 2565 SERIES: 100 Ft.-1000 Ft.

NYLON JACKET THICKNESS: #24 .002; 22, 20, 18 .003; 16, 14 .004; 12 .005; 10 .007.

STOCK COLORS, Type MW: White, Orange, Purple, Black, Yellow, Gray, Brown, Green, Red, Blue, Tan, Pink, Lt. Blue, Lt. Green. Spiral tracer combinations available to order.

Nos. 2565/12 and /10 available from stock, solid colors only.

GLASS BRAID PER SPEC. MIL-W-76B

DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and lacquered glass braid overall.

GLASS BRAID — TYPE HW (Heavy Wall)

TEMPERATURE RATING: —40°C to +80°. **NOM WALL: .045"**

DABURN Cat. No.	Spool	Size AWG	MIL-W-76B Type Designation	Conductor Strand	Nom. O.D.
2575/10	100'-1000'	10	HW-C 10(105)B	105/30	.237"
2575/8	100'-1000'	8	HW-C 8(133)B	133/29	.293"
2575/6	100'-1000'	6	HW-C 6(133)B	133/27	.340"

STOCK COLORS: White, Black.
ALSO multi-conductors can be formed to order twisted, shielded, with or without plastic jacket overall.

GLASS BRAID — 1000 VOLTS — TYPE MW (Medium Wall)

TEMPERATURE RATING: —40°C to +80°C. **NOM. WALL: .017"**

DABURN Cat. No.	Spool	Size AWG	MIL-W-76B Type Designation	Conductor Strand	Nom. O.D.
2570/22	100'-1000'	22	MW-C 22(7)B	7/30	.079"
2570/20	100'-1000'	20	MW-C 20(10)B	10/30	.084"
2570/18	100'-1000'	18	MW-C 18(16)B	16/30	.100"
2570/16	100'-1000'	16	MW-C 16(26)B	26/30	.116"
*2570/14	100'-1000'	14	MW-C 14(41)B	41/30	.129"
*2570/12	100'-1000'	12	MW-C 12(65)B	65/30	.149"

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray. Tracer colors available to order.
*Nos. 2570/14 and /12, available stock in solid colors.

2500 VOLTS (Fungus Proof) — TYPE HW (Heavy Wall)
SPEC MIL-W-76B

600 VOLTS: Sizes 14 through 6 — (Supersedes Jan-C-76 Type SRHV).
TEMP. RATING: —40°C to 80°C. NOM. WALL SIZE: 22 through 16 .033: Size 14 through 6 .045



DESCRIPTION: Similar to type MW. One conductor stranded tinned copper with larger walls of primary thermoplastic insulation to take 2500 V RMS.

DABURN No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2580/22	22	HW-C 22(7)U	7/30	.092"
2580/20	20	HW-C 20(10)U	10/30	.100"
2580/18	18	HW-C 18(16)U	16/30	.112"
2580/16	16	HW-C 16(26)U	26/30	.126"
2580/14	14	HW-C 14(41)U	41/30	.170"

No. DABURN	AWG Size	Type Designation Mil-W-76B	Strand Conductor	O.D. Nom.
2580/12	12	HW-C 12(65)U	65/30	.186"
2580/10	10	HW-C 10(105)U	105/30	.210"
2580/8	8	HW-C 8(133)U	133/29	.260"
2580/6	6	HW-C 6(133)U	133/27	.305"

STD. PUT-UP: 100-1000 Ft.

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, Additional sizes, colors available to order.

© United Technical Publications

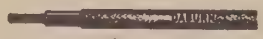
DABURN

DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

SHIELDED PLASTIC HOOK-UP WIRE

1000 VOLT — TYPE MW (Medium Wall) SHIELDED — SPEC. MIL-W-76B
TEMPERATURE RATING —40°C TO +80°C

DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and tinned copper shielded braid overall.

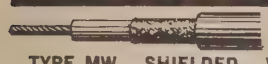


DABURN Cat. No.	Size AWG	MIL-W-76B Type Designation	Strand	Nom. Wall	Nom. O.D.
2592/24	24	MW-C24(7)S	7/32	.015″	.074″
2593	24	MW-C24(16)S	16/36	.015″	.075″
2592/22	22	MW-C22(7)S	7/30	.017″	.084″
2592/20	20	MW-C20(10)S	10/30	.017″	.094″
2592/18	18	MW-C18(16)S	16/30	.017″	.106″
2592/16	16	MW-C16(26)S	26/30	.017″	.121″
2592/14	14	MW-C14(41)S	41/30	.017″	.137″
2592/12	12	MW-C12(65)S	65/30	.017″	.155″

STOCK COLORS: (Underneath Shield) Black, White, Red, Yellow, Brown, Green, Blue, Gray. Nos. 2592/14 and /12, available from stock in Black, White or Red.
STANDARD PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

Also multiconductors can be formed to order twisted shielded, with or without plastic Jacket overall.

SHIELDED PLASTIC HOOK-UP WIRE





TYPE MW — SHIELDED — VINYL JACKET — 1000 V SPEC. MIL-W-76B

DESCRIPTION: One conductor stranded tinned copper, white medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, PVC (polyvinylchloride) jacket overall. Resistant to acids, alkalis, oil, flame, moisture, fungus.
TEMPERATURE RATING: —40°C to +90°C.

DABURN Cat. No.	Size AWG	MIL-W-76A Type Designation	Min. Strand	Nom. Wall	Nom. O.D.
2597/24	24	MW-C24(7)SJ	7/32	.015″	.095″
2597/22	22	MW-C22(7)SJ	7/30	.017″	.105″
2597/20	20	MW-C20(7)SJ	7/28	.017″	.112″
2597/18	18	MW-C18(19)SJ	19/30	.017″	.120″
2597/16	16	MW-C16(19)SJ	19/29	.017″	.133″
2597/14	14	MW-C14(19)SJ	19/27	.017″	.148″
2597/12	12	MW-C12(19)SJ	19/25	.017″	.170″

Additional colors available to order.
STANDARD PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

TYPE MW — SHIELDED — NYLON JACKET — 1000 V SPEC. MIL-W-76B

DESCRIPTION: One conductor stranded tinned copper, white medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, clear nylon (polymide) jacket overall. Resistant to acids, alkalis, oil, flame, moisture, fungus.
TEMPERATURE RATING: —40°C to +90°C.

DABURN Cat. No.	Size AWG	MIL-W-76A Type Designation	Min. Strand	Nom. Wall	Nom. O.D.
2595/24	24	MW-C24(7)SJ	7/32	.015″	.091″
2595/22	22	MW-C22(7)SJ	7/30	.017″	.100″
2595/20	20	MW-C20(7)SJ	7/28	.017″	.105″
2595/18	18	MW-C18(19)SJ	19/30	.017″	.115″
2595/16	16	MW-C16(19)SJ	19/29	.017″	.125″
2595/14	14	MW-C14(19)SJ	19/29	.017″	.138″
2595/12	12	MW-C12(19)SJ	19/25	.017″	.160″

Additional colors available to order.
STANDARD PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

MIL-W-16878D — SHIELDED PLASTIC HOOK-UP WIRE

1000 VOLTS — TYPE C — SHIELDED SPEC. MIL-W-16878D



DESCRIPTION: Stranded tinned copper, .016″ wall white polyvinylchloride insulation, braided tinned copper shield overall temp. rating —55°C to +105°C 1000 volts.

DABURN Cat. No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
2530/24	24	7/32	.016″	.075″
2530/22	22	7/30	.016″	.085″
2530/20	20	7/28	.016″	.095″
2530/18	18	7/26	.016″	.105″
2530/16	16	19/26	.016″	.115″
2530/14	14	19/27	.016″	.140″
2530/12	12	19/25	.016″	.152″

STD. PUT-UP: 1000 Ft. Additional Colors Available.

1000 VOLTS — TYPE C SHIELDED WITH VINYL JACKET — SPEC. MIL-W-16878D

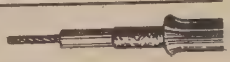


DESCRIPTION: Stranded tinned copper, .016″ wall white with polyvinylchloride insulation braided tinned copper shield with polyvinylchloride jacket overall. Resistant to acids, oils, alkalies, flame, fungus, solvents, moisture.
TEMPERATURE RATING: —55°C to +105°C.

DABURN No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
2535/24	24	7/32	.016″	.094″
2535/22	22	7/30	.016″	.104″
2535/20	20	7/28	.016″	.112″
2535/18	18	7/26	.016″	.120″
2535/16	16	19/29	.016″	.133″
2535/14	14	19/27	.016″	.150″
2535/12	12	19/25	.016″	.165″

STD. PUT-UP: 1000 Ft. Additional Colors Available.

1000 VOLTS — TYPE C SHIELDED NYLON JACKET SPEC. MIL-W-16878D



DESCRIPTION Stranded tinned copper .016″ wall polyvinylchloride insulation, braided tinned copper shield, 90% coverage, clear nylon (polyamide) jacket overall. Nylon nominal jacket thickness .005″.
TEMPERATURE RATING: —55°C to +115°C.

DABURN No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
2533/24	24	7/32	.016″	.090″
2533/22	22	7/30	.016″	.096″
2533/20	20	7/28	.016″	.105″
2533/18	18	7/26	.016″	.115″
2533/16	16	19/29	.016″	.125″
2533/14	14	19/27	.016″	.145″
2533/12	12	19/25	.016″	.157″

STD. PUT-UP: 1000 Ft. Additional Colors Available.

MULTI-CONDUCTOR CABLE TYPE B NYLON SHIELDED-PLASTIC JACKET PER MIL-W-16878D — 600 V



DESCRIPTION: One or more conductors stranded tinned copper, PVC insulation, color coded, clear nylon (polyamide) jacket, cabled conductors, 90% coverage braided tinned copper, white polyvinylchloride jacket overall.

TEMPERATURE RATING: —55°C to +105°C. Voltage rating 600 volts. Resistant to acids, alkalis, flame, fungus, oil, moisture, solvents.

DABURN Cat. No.	No. of Cond.	Size	Strand	Nom. Wall	Nom. Nylon Wall	Nom. Overall Jacket	Nom. O.D.
2540	1	26	7/34	.010″	.003″	.010″	.087″
2540/2	2	26	7/34	.010″	.003″	.014″	.138″
2540/3	3	26	7/34	.010″	.003″	.014″	.142″
2540/4	4	26	7/34	.010″	.003″	.016″	.162″
2541	1	24	19/36	.010″	.003″	.010″	.092″
2541/2	2	24	19/36	.010″	.003″	.016″	.152″
2541/3	3	24	19/36	.010″	.003″	.016″	.161″
2541/4	4	24	19/36	.010″	.003″	.017″	.162″
2542	1	22	19/34	.010″	.003″	.010″	.100″
2542/2	2	22	19/34	.010″	.003″	.016″	.168″
2542/3	3	22	19/34	.010″	.003″	.017″	.178″
2542/4	4	22	19/34	.010″	.003″	.019″	.174″
2543	1	20	19/32	.010″	.003″	.010″	.106″
2543/2	2	20	19/32	.010″	.003″	0.19″	.186″
2543/3	3	20	19/32	.010″	.003″	.019″	.196″
2543/4	4	20	19/32	.010″	.003″	.021″	.193″
2544	1	18	19/30	.010″	.003″	.012″	.120″
2544/2	2	18	19/30	.010″	.003″	.021″	.210″
2544/3	3	18	19/30	.010″	.003″	.022″	.227″
2544/4	4	18	19/30	.010″	.003″	.023″	.218″
2545	1	16	19/29	.010″	.003″	.016″	.137″
2545/2	2	16	19/29	.010″	.003″	.023″	.236″
2545/3	3	16	19/29	.010″	.003″	.023″	.240″
2545/4	4	16	19/29	.010″	.003″	.025″	.275″

STD. PUT-UP: 500 Ft., 1000 Ft. **CONDUCTOR COLOR CODE:** 1-White, 2-Black, 3-Red, 4-Green. Additional sizes, conductors - variations - available to order.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

PLASTIC HOOK-UP WIRE

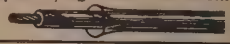
TYPE B — HIGH TEMPERATURE VINYL 600 VOLT — PER MIL-W-16878D

DESCRIPTION: One conductor stranded tinned copper, with −55°C to +105°C rated high temperature thermoplastic, light wall insulation.

TYPE B — UNCOVERED VINYL

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2500/32	B-32	32	7/40	.028″
2500/30	B-30	30	7/38	.030″
2500/28	B-28	28	7/36	.033″
2500/26	B-26	26	7/34	.037″
2500/24	B-24	24	7/32	.043″
2501/24	B-24	24	19/36	.043″
2500/22	B-22	22	7/30	.048″
2501/22	B-22	22	19/34	.048″
2500/20	B-20	20	7/28	.057″
2501/20	B-20	20	19/32	.057″
2500/18	B-18	18	7/26	.067″
2501/18	B-18	18	19/30	.067″
2500/16	B-16	16	19/29	.077″
2500/14	B-14	14	19/27	.091″

STD. PUT-UP: 100 Ft.-1000 Ft. Available with Braided Shield Overall.



TYPE B — NYLON JACKET

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2510/32	B-32	32	7/40	.032″
2510/30	B-30	30	7/38	.036″
2510/28	B-28	28	7/36	.039″
2510/26	B-26	26	7/34	.042″
2510/24	B-24	24	7/32	.047″
2511/24	B-24	24	19/36	.047″
2510/22	B-22	22	7/30	.053″
2511/22	B-22	22	19/34	.053″
2510/20	B-20	20	7/28	.065″
2511/20	B-20	20	19/32	.065″
2510/18	B-18	18	7/26	.075″
2511/18	B-18	18	19/30	.075″
2510/16	B-16	16	19/29	.085″
2510/14	B-14	14	19/27	.099″

STD. PUT-UP: 100 Ft., 1000 Ft. **NYLON JACKET THICKNESS:** 32-20 .002, 18-16 .003

STOCK COLORS: Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple, White/Black, White/Red, White/Green, White/Yellow, White/Blue, White/Brown, White/Orange, White/Gray, White/Violet.

TYPE C — HIGH TEMPERATURE VINYL 1000 VOLT

SPECIFICATION MIL-W-16878D

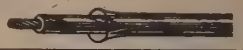
DESCRIPTION: One conductor similar to Type B — Heavier wall Hi-Temp. Thermoplastic insulation. Nom. wall .016″.



TYPE C — UNCOVERED VINYL

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Minimum Strand	Nom. O.D.
2515/24	C-24	24	7/32	.058″
2515/22	C-22	22	7/30	.064″
2515/20	C-20	20	7/28	.072″
2515/18	C-18	18	7/26	.082″
2515/16	C-16	16	19/29	.091″
2515/14	C-14	14	19/27	.105″
2515/12	C-12	12	19/25	.135″

STD. PUT-UP: 100 Ft.-1000 Ft. Available with Braided Shield Overall.



TYPE C — NYLON JACKET

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2520/24	C-24	24	7/32	.061″
2520/22	C-22	22	7/30	.070″
2520/20	C-20	20	7/28	.079″
2520/18	C-18	18	7/26	.090″
2520/16	C-16	16	19/29	.099″
2520/14	C-14	14	19/27	.114″
2520/12	C-12	12	19/25	.135″

STD. PUT-UP: 100 Ft., 1000 Ft. **NYLON JACKET THICKNESS:** 24 .002, 22-18, .003, 16-14 .004

STOCK COLORS: Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple. Also available in tracer colors.

TYPE D — HIGH TEMPERATURE VINYL 3000 VOLT

SPECIFICATION MIL-W-16878D

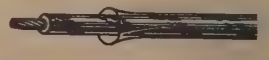
DESCRIPTION: One conductor stranded tinned copper similar to Type C — Heavier wall Hi-Temp. thermoplastic insulation. Nom. wall: 24 thru 14 .032″, 12 thru 6 .040″, 4 thru 2 .045″.



TYPE D — UNCOVERED VINYL

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2525/24	D-24	24	7/32	.084″
2525/22	D-22	22	7/32	.089″
2525/20	D-20	20	10/30	.097″
2525/18	D-18	18	16/30	.107″
2525/16	D-16	16	26/30	.116″
2525/14	D-14	14	41/30	.130″
2525/12	D-12	12	65/30	.163″
2525/10	D-10	10	105/30	.182″
2525/8	D- 8	8	133/29	.247″
2525/6	D- 6	6	133/27	.291″
2525/4	D- 4	4	133/25	.355″
2525/2	D- 2	2	665/30	.425″

STD. PUT-UP: 100 Ft.-1000 Ft.

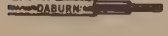


TYPE D — NYLON JACKET

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2525N/24	D-24	24	7/32	.090″
2525N/22	D-22	22	7/30	.096″
2525N/20	D-20	20	10/30	.104″
2525N/18	D-18	18	16/30	.114″
2525N/16	D-16	16	26/30	.125″
2525N/14	D-14	14	41/30	.139″
2525N/12	D-12	12	65/30	.168″
2525N/10	D-10	10	105/30	.197″
2525N/8	D- 8	8	133/29	.265″
2525N/6	D- 6	6	133/27	.310″

STD. PUT-UP: 100 Ft., 1000 Ft. Nylon Jacket; Clear Polymide.

ALL THE ABOVE CAN BE ORDERED CUT AND STRIPPED TO YOUR SPECIFICATIONS.



AIRCRAFT PLASTIC HOOK-UP WIRE

SPECIFICATIONS MIL-W-5086A and MIL-C-7078A (105°C Rating)

DESCRIPTION: Type 1 MIL-W-5086A — one conductor stranded tinned copper with plastic insulation nylon jacket overall. **Type 2 Mil-W-5086A** — one conductor stranded tinned copper, plastic insulation, nylon lacquered glass braid. Color: White. Additional colors available to order.

MIL-W-5086A UNSHIELDED (Supersedes) AN-J-C-48A) — 600 V RATING

DABURN Cat. No.	Mil. Type	Type	Conductor Strand.	Nom. O.D.
2601/22	AN-22	No. 1	19/34	.070″
2601/20	AN-20	No. 1	19/32	.080″
2601/18	AN-18	No. 1	19/30	.090″
2601/16	AN-16	No. 1	19/29	.100″
2601/14	AN-14	No. 1	19/27	.120″
2601/12	AN-12	No. 1	19/25	.140″
2602/22	AN-22	No. 2	19/34	.068″
2602/20	AN-20	No. 2	19/32	.078″
2602/18	AN-18	No. 2	19/30	.088″
2602/16	AN-16	No. 2	19/29	.098″

DABURN Cat. No.	Mil. Type	Type	Conductor Strand.	Nom. O.D.
2602/14	AN-14	No. 2	19/27	.117″
2602/12	AN-12	No. 2	19/25	.137″
2602/10	AN-10	No. 2	49/27	.189″
2602/8	AN-8	No. 2	133/29	.240″
2602/6	AN-6	No. 2	133/27	.297″
2602/4	AN-4	No. 2	133/25	.355″
2602/2	AN-2	No. 2	665/30	.412″
2602/0	AN-0	No. 2	1045/30	.518″
2602/00	AN-00	No. 2	1330/30	.588″

STANDARD PUT-UP: 100 Ft., 1000 Ft.

MIL-C-7078A SHIELDED (Supersedes AN-C-168) 600 V RATING

DESCRIPTION: One conductor stranded tinned copper with plastic insulation, nylon jacket with tinned copper shielded braid overall. Color: White under shield. Additional types to order.

DABURN Cat. No.	Size AWG	Mil. Type	Type	Conductor Strand.	Nom. O.D.
2605/22	22	AN-22	No. 1	19/34	.100″
2605/20	20	AN-20	No. 1	19/32	.110″
2605/18	18	AN-18	No. 1	19/30	.124″

DABURN Cat. No.	Size AWG	Mil. Type	Type	Conductor Strand.	Nom. O.D.
2605/16	16	AN-16	No. 1	19/29	.139″
2605/14	14	AN-14	No. 1	19/27	.158″
2605/12	12	AN-12	No. 1	19/25	.177″

STANDARD PUT-UP: 100 Ft., 1000 Ft. ALL WIRE ON THIS PAGE CAN BE CUT AND STRIPPED TO YOUR SPECIFICATION.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

TEFLON* WIRE
TYPE E — 600 VOLTS
SPEC. MIL-W-16878D
High Temperature Rating −90°C to +250°C



Single conductor, stranded silver plated copper, .010" TFE Teflon® insulation. Acid, alkalis, oil, flame, moisture, fungus, solvent resistant.

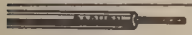
DABURN Extruded Cat. No.	DABURN Wrapped Cat. No.	Size MIL Type Designation	Strand	Max. Dia. Over Insul.
2401	—	E-32	7/40	.033"
2402	—	E-30	7/38	.036"
2403	2415/28	E-28	7/36	.039"
2404	2415/26	E-26	7/34	.043"
2405	2415/24	E-24	19/36	.048"
2405-7	—	E-24	7/32	.048"
2406	2415/22	E-22	19/34	.054"
2406-7	—	E-22	7/30	.054"
2407	2415/20	E-20	19/32	.062"
2407-7	—	E-20	7/28	.062"
2408	2415/18	E-18	19/30	.074"
2409	2415/16	E-16	19/29	.079"
2409/14	—	E-14	19/27	.097"
2409/12	—	E-12	19/25	.120"
2409/10	—	E-10	37/26	.139"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft. **Solid conductors available.**

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White, White/Black, White/Red, White/Green, White/Yellow, White/Blue, White/Brown, White/Orange, White/Gray, White/Violet.

Additional special custom construction available to order.

TEFLON* WIRE
MIL-W-16878D — TYPE EE
Extruded (1000 Volts) MIL-W-16878D



DESCRIPTION: Single conductor silver plated copper wire concentrically stranded and insulated with .016 TFE extruded TEFLON* insulation.

TEMPERATURE RATING: −90°C to +260°C, 1000 volts.

DABURN Cat. No.	Mil Type Designation	Size AWG	Strand	Nom. O.D.
2428/24	EE-24	24	19/36	.055"
2428/22	EE-22	22	19/34	.062"
2428/20	EE-20	20	19/32	.070"
2428/18	EE-18	18	19/30	.080"
2428/16	EE-16	16	19/29	.089"
2428/14	EE-14	14	19/27	.106"
2428/12	EE-12	12	19/25	.124"
2428/10	EE-10	10	37/26	.145"
2428/8 (wrapped)	EE-8	8	133/29	.210"

STANDARD SPOOL PUT-UP: 250 Ft., 500 Ft., 1000 Ft. Solid conductors available.

STOCK COLORS: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow, 6—Blue, 7—Brown, 8—Orange, 9—Gray (Slate), 10—Violet (Purple).

SUBMINIATURE TEFLON* HOOK-UP WIRE
PER MIL-W-16878D — TYPE ET — 250 VOLTS, 200°C



Thin miniature hook-up wire is suitable in miniature slip ring assemblies, as interconnecting wire between wafers in microminiature electronic circuitry, instrument wire, medical wire, subminiature thermo-couple lead wire, strain gauge wire, etc. Provides lighter weight, greater flexibility and hi temperature resistance. Size Nos. 32 thru 20 conform to MIL-W-16878D type ET 250 volts, 200°C. Silver plated copper conductor.

DABURN Cat. No.	Mil Type	AWG Size	Min. Strand	Nom. O.D.
2427/36	—	36	7/44	.018"
2427/34	—	34	7/42	.020"
2427/32	ET-32	32	7/40	.021"
2427/30	ET-30	30	7/38	.024"
2427/28	ET-28	28	7/36	.027"
2427/26	ET-26	26	7/34	.031"
2427/24	ET-24	24	7/32	.036"
2427/22	ET-22	22	7/30	.042"
2427/20	ET-20	20	7/28	.049"

STANDARD SPOOL PUT-UPS: 500 Ft., 1000 Ft.

TEFLON* TFE AIRFRAME LEAD WIRE MIL-W-7139B

CLASS 1: 600V Silver Coated Copper Conductor for −65 to +200°C Operation.

CLASS 2: 600V Nickel Coated Copper Conductor for +260°C Operation.

DABURN Cat. No. Class 1	DABURN Cat. No. Class 2	Size AWG	Strand	Nom. O.D.
2426-22	2425-22	22	19/34	.085"
2426-20	2425-20	20	19/32	.095"
2426-18	2425-18	18	19/30	.110"
2426-16	2425-16	16	19/29	.130"
2426-14	2425-14	14	19/27	.143"
2426-12	2425-12	12	19/25	.163"

STANDARD SPOOL PUT-UPS: 500 Ft., 1000 Ft.

STANDARD COLOR: Class: 1 — White/Blue Tracer; Class 2 — White/Orange Tracer. ADDITIONAL SIZES AVAILABLE.

*TEFLON—Dupont

INSTRUMENTATION CABLES
TEFLON* CABLES — Shielded and Unshielded
TO MIL-W-16878D

DESCRIPTION: One or more conductors, each conductor silver plated concentrically stranded copper wire, Type E Extruded TFE .010" insulation. When shielded, braided silver plated copper shield over conductor(s), 90% shield coverage. When covered, either a TEFLON* impregnated fiberglass braid or a .010" TEFLON* fused, double reversed tape jacket overall. Fungus, solvent, moisture, flame, acid, alkali and oil resistant Multiconductors are twisted.

TEMPERATURE RATING: −65°C to +260°C. **VOLTAGE RATING:** 600 Volts

TEFLON* IMPREGNATED BRAID OVER SHIELD



Daburn No.	Conds.	AWG Size	Strand	Nom. O.D.
2444	1	26	7/34	.075"
2444/2	2	26	7/34	.119"
2445	1	24	19/36	.081"
2445/2	2	24	19/36	.126"
2445/3	3	24	19/36	.133"
2445/4	4	24	19/36	.144"
2445/5	5	24	19/36	.156"
2446	1	22	19/34	.088"
2446/2	2	22	19/34	.137"
2446/3	3	22	19/34	.144"
2446/4	4	22	19/34	.158"
2446/5	5	22	19/34	.172"
2447	1	20	19/32	.093"
2447/2	2	20	19/32	.154"
2447/3	3	20	19/32	.163"
2447/4	4	20	19/32	.180"
2447/5	5	20	19/32	.195"
2448	1	18	19/30	.097"
2448/2	2	18	19/30	.162"
2448/3	3	18	19/30	.172"
2448/4	4	18	19/30	.192"
2448/5	5	18	19/30	.207"
2449	1	16	19/29	.117"
2449/2	2	16	19/29	.196"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow.

TEFLON* TAPE WRAP JACKET OVER SHIELD



Daburn No.	Conds.	AWG Size	Strand	Nom. O.D.
2454	1	26	7/34	.078"
2454/2	2	26	7/34	.125"
2455	1	24	19/36	.084"
2455/2	2	24	19/36	.128"
2455/3	3	24	19/36	.135"
2455/4	4	24	19/36	.148"
2455/5	5	24	19/36	.162"
2456	1	22	19/34	.090"
2456/2	2	22	19/34	.140"
2456/3	3	22	19/34	.148"
2456/4	4	22	19/34	.162"
2456/5	5	22	19/34	.183"
2457	1	20	19/32	.099"
2457/2	2	20	19/32	.158"
2457/3	3	20	19/32	.167"
2457/4	4	20	19/32	.184"
2457/5	5	20	19/32	.204"
2458	1	18	19/30	.109"
2458/2	2	18	19/30	.178"
2458/3	3	18	19/30	.189"
2458/4	4	18	19/30	.208"
2458/5	5	18	19/30	.230"
2459	1	16	19/29	.130"
2459/2	2	16	19/29	.230"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red. 4—Green, 5—Yellow.

SHIELDED BRAID OVERALL



Daburn Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
2434	1	26	7/34	.066"
2434/2	2	26	7/34	.104"
2435	1	24	19/36	.068"
2435/2	2	24	19/36	.112"
2435/3	3	24	19/36	.120"
2435/4	4	24	19/36	.132"
2435/5	5	24	19/36	.140"
2436	1	22	19/34	.075"
2436/2	2	22	19/34	.124"
2436/3	3	22	19/34	.132"
2436/4	4	22	19/34	.146"
2436/5	5	22	19/34	.154"
2437	1	20	19/32	.082"
2437/2	2	20	19/32	.142"
2437/3	3	20	19/32	.151"
2437/4	4	20	19/32	.168"
2437/5	5	20	19/32	.180"
2438	1	18	19/30	.093"
2438/2	2	18	19/30	.162"
2438/3	3	18	19/30	.172"
2438/4	4	18	19/30	.191"
2438/5	5	18	19/30	.210"
2439	1	16	19/29	.103"
2439/2	2	16	19/29	.184"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow.

NO SHIELD—TEFLON* IMPREGNATED FIBERGLASS OVERALL



Daburn Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
2464	1	26	7/34	.040"
2464/2	2	26	7/34	.080"
2465	1	24	19/36	.044"
2465/2	2	24	19/36	.088"
2465/3	3	24	19/36	.096"
2465/4	4	24	19/36	.108"
2465/5	5	24	19/36	.116"
2466	1	22	19/34	.051"
2466/2	2	22	19/34	.100"
2466/3	3	22	19/34	.108"
2466/4	4	22	19/34	.122"
2466/5	5	22	19/34	.131"
2467	1	20	19/32	.058"
2467/2	2	20	19/32	.118"
2467/3	3	20	19/32	.127"
2467/4	4	20	19/32	.144"
2467/5	5	20	19/32	.156"
2468	1	18	19/30	.069"
2468/2	2	18	19/30	.138"
2468/3	3	18	19/30	.148"
2468/4	4	18	19/30	.167"
2468/5	5	18	19/30	.186"
2469	1	16	19/29	.086"
2469/2	2	16	19/29	.172"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—White, 2—Black. 3—Red, 4—Green, 5—Yellow.
Special cable constructions and colors available.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.
96 PRINCE ST., N. Y., N. Y. 10012 • 212 226-4079 — 5833
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

NEW CRT HI-VOLT CORONA RESISTANT TEFLON* CABLE©

Voltage Rating at Sea Level • Voltage Rating at 80,000 feet, approximately 1/3 lower
• Minimum life expectancy: 10,000 hours.



SMALL SIZE:
You do not need bulky, thick, insulation jacketing as used with silicone rubber and polyethylene insulations to get your hi-voltage requirements. Wire used is MIL-SPEC QQ-W-343 and MIL-W-16878D. Insulation used conforms and surpasses MIL-SPEC-W-16878D

AVOID CORONA PROBLEMS:
Corona resistant Teflon construction is specifically designed to retard and prevent corona penetration.
Temperature variations from −60° to +300°C have no life effect on the corona resistant Teflon. In addition, there is no stress or crack failure under severe, adverse conditions including mechanical strain, moisture, corona or chemical conditions.

DESCRIPTION:
Single Conductor, Stranded Silver Plated Copper, Corona Resistant Teflon* Insulation.

TEMPERATURE RATING:
−90°C to +250°C.



VOLTAGE RATING:
Based on insulation thickness.

AVAILABLE COLORS:
White, Black, Red, Green, Yellow, Lt. Blue, Brown, Orange, Gray, Violet. (Also available in tracer colors)

PUT-UP: 250′, 500′, 1000′

*DUPONT

ADDITIONAL SIZES AND VOLTAGES AVAILABLE

DABURN No.	AWG Size	Strand	Voltage Rating AC	Voltage Rating DC	Nom. O.D.
CRT-12-2	12	19/25	2500	10,000	.142″
CRT-12-2.5	12	19/25	3750	12,500	.152″
CRT-12-3	12	19/25	4500	15,000	.162″
CRT-12-3.5	12	19/25	5300	17,500	.172″
CRT-12-4	12	19/25	6000	20,000	.182″
CRT-12-5	12	19/25	7500	25,000	.202″
CRT-12-6.5	12	19/25	10,000	32,500	.232″
CRT-12-8	12	19/25	12,000	40,000	.262″
CRT-12-10	12	19/25	15,000	50,000	.302″
CRT-14-2	14	19/27	2500	10,000	.124″
CRT-14-2.5	14	19/27	3750	12,500	.134″
CRT-14-3	14	19/27	4500	15,000	.144″
CRT-14-3.5	14	19/27	5300	17,500	.154″
CRT-14-4	14	19/27	6000	20,000	.164″
CRT-14-5	14	19/27	7500	25,000	.184″
CRT-14-6.5	14	19/27	10,000	32,500	.214″
CRT-14-8	14	19/27	12,000	40,000	.244″
CRT-14-10	14	19/27	15,000	50,000	.284″
CRT-16-2	16	19/29	2500	10,000	.109″
CRT-16-2.5	16	19/29	3750	12,500	.119″
CRT-16-3	16	19/29	4500	15,000	.129″
CRT-16-3.5	16	19/29	5300	17,500	.139″
CRT-16-4	16	19/29	6000	20,000	.149″
CRT-16-5	16	19/29	7500	25,000	.169″
CRT-16-6.5	16	19/29	10,000	32,500	.199″
CRT-16-8	16	19/29	12,000	40,000	.229″
CRT-16-10	16	19/29	15,000	50,000	.269″
CRT-18-2	18	19/30	2500	10,000	.102″
CRT-18-2.5	18	19/30	3750	12,500	.112″
CRT-18-3	18	19/30	4500	15,000	.122″
CRT-18-3.5	18	19/30	5300	17,500	.132″
CRT-18-4	18	19/30	6000	20,000	.142″
CRT-18-5	18	19/30	7500	25,000	.162″
CRT-18-6.5	18	19/30	10,000	32,500	.192″
CRT-18-8	18	19/30	12,000	40,000	.222″
CRT-18-10	18	19/30	15,000	50,000	.272″
CRT-20-2	20	19/32	2500	10,000	.092″
CRT-20-2.5	20	19/32	3750	12,500	.102″
CRT-20-3	20	19/32	4500	15,000	.112″
CRT-20-3.5	20	19/32	5300	17,500	.122″
CRT-20-4	20	19/32	6000	20,000	.132″
CRT-20-5	20	19/32	7500	25,000	.152″
CRT-20-6.5	20	19/32	10,000	32,500	.192″
CRT-20-8	20	19/32	12,000	40,000	.212″
CRT-20-10	20	19/32	15,000	50,000	.252″
CRT-22-2	22	19/34	2500	10,000	.084″
CRT-22-2.5	22	19/34	3750	12,500	.094″
CRT-22-3	22	19/34	4500	15,000	.104″
CRT-22-3.5	22	19/34	5300	17,500	.114″
CRT-22-4	22	19/34	6000	20,000	.124″
CRT-22-5	22	19/34	7500	25,000	.144″
CRT-22-6.5	22	19/34	10,000	32,500	.174″
CRT-22-8	22	19/34	12,000	40,000	.204″
CRT-22-10	22	19/34	15,000	50,000	.244″
CRT-24-2	24	19/36	2500	10,000	.077″
CRT-24-2.5	24	19/36	2750	12,500	.087″
CRT-24-3	24	19/36	4500	15,000	.097″
CRT-24-3.5	24	19/36	5300	17,500	.107″
CRT-24-4	24	19/36	6000	20,000	.117″
CRT-24-5	24	19/36	7500	25,000	.137″
CRT-24-6.5	24	19/36	10,000	32,500	.167″
CRT-24-8	24	19/36	12,000	40,000	.197″
CRT-24-10	24	19/36	15,000	50,000	.237″
CRT-26-2	26	7/34	2500	10,000	.071″
CRT-26-2.5	26	7/34	3750	12,500	.081″
CRT-26-3	26	7/34	4500	15,000	.091″
CRT-26-3.5	26	7/34	5300	17,500	.101″
CRT-26-4	26	7/34	6000	20,000	.111″
CRT-26-5	26	7/34	7500	25,000	.131″
CRT-26-6.5	26	7/34	10,000	32,500	.161″
CRT-26-8	26	7/34	12,000	40,000	.191″
CRT-26-10	26	7/34	15,000	50,000	.231″
CRT-28-2	28	7/36	2500	10,000	.067″
CRT-28-2.5	28	7/36	3750	12,500	.077″
CRT-28-3	28	7/36	4500	15,000	.087″
CRT-28-3.5	28	7/36	5300	17,500	.097″
CRT-28-4	28	7/36	6000	20,000	.117″
CRT-28-5	28	7/36	7500	25,000	.127″
CRT-28-6.5	28	7/36	10,000	32,500	.157″
CRT-28-8	28	7/36	12,000	40,000	.187″
CRT-28-10	28	7/36	15,000	50,000	.227″

© Copyright Daburn 1968.

© United Technical Publications

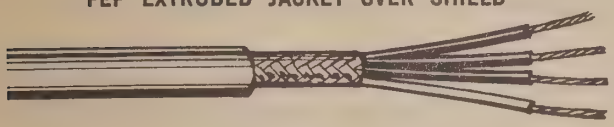
DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

FEP TEFLON* CABLE

FEP EXTRUDED JACKET OVER SHIELD



DESCRIPTION: Each conductor silver plated stranded copper wire, Type E extruded TFE .010″ insulation. Color coded, cabled, braided silver plated copper shield — 90% coverage, FEP white teflon jacket overall.

TEMPERATURE RATING: −65°C to +200°C. **VOLTAGE RATING:** 600 V.

DABURN No.	Conds.	AWG Size	Strand	Nom. O.D.
2480	1	24	19/36	.085″
2480/2	2	24	19/36	.130″
2480/3	3	24	19/36	.135″
2480/4	4	24	19/36	.148″
2481	1	22	19/34	.091″
2481/2	2	22	19/34	.150″
2481/3	3	22	19/34	.158″
2481/4	4	22	19/34	.172″
2482	1	20	19/32	.100″
2482/2	2	20	19/32	.168″
2482/3	3	20	19/32	.178″
2482/4	4	20	19/32	.193″
2483	1	18	19/30	.110″
2483/2	2	18	19/30	.188″
2483/3	3	18	19/30	.207″
2483/4	4	18	19/30	.222″
2484	1	16	19/29	.123″
2484/2	2	16	19/29	.220″

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green *Dupont

STD. PUT-UP: 500 Ft., 1000 Ft.

H FILM KAPTON* WIRE

DALITE™

HIGH TEMPERATURE HOOK-UP AND AIRFRAME WIRE 200°C CONTINUOUS TEMPERATURE RATING (a)



INSULATED WITH DUPONT KAPTON* POLYMIDE FILM WITH TEFLON* — FEP HEAT SEALED COATING CONFORMS TO MIL-W-81381.

CHARACTERISTICS: Dalite™ insulated wire provides high temperature stability, low temperature flexibility, high radiation resistance, resistance to cold flow, impervious to most chemicals, high dielectric strength, low dielectric constant, smaller diameters and lighter weight than any other comparable wire used for continuous operation up to 200°C. This hook-up wire meets the test requirements of MIL-W-16878 for 300 V, 600 V and 1000 V with **smaller wall thicknesses, weight and dimensions.**

(a) Temperature based on lowest temperature rating of materials in the insulation — FEP 200°C. Will pass 96 hour heat age tests at 290°C per MIL-W-16878.

DESCRIPTION: Single conductor, silver plated annealed copper conductors, Type H* Polymide film with Teflon* FEP coating tape wrapped overall.

DABURN No.	Type Designation	Size AWG	Strand	Voltage Rating (rms)	Nom. Wall	Nom. O.D.	Weight Per 1000′ (lbs.)
2490/30	HF 30	30	7/38	600	.0045″	.021″	0.52
2495/30	HHF 30	30	7/38	1000	.006″	.024″	0.57
2490/28	HF 28	28	7/36	600	.0045″	.024″	0.75
2495/28	HHF 28	28	7/36	1000	.006″	.027″	0.83
2490/26	HF 26	26	7/34	600	.0045″	.028″	1.11
2495/26	HHF 26	26	7/34	1000	.006″	.031″	1.21
2490/24	HF 24	24	19/36	600	.0045″	.034″	1.78
2495/24	HHF 24	24	19/36	1000	.006″	.037″	1.90
2490/22	HF 22	22	19/34	600	.0045″	.041″	2.71
2495/22	HHF 22	22	19/34	1000	.006″	.044″	2.86
2490/20	HF 20	20	19/32	600	.0045″	.049″	4.18
2495/20	HHF 20	20	19/32	1000	.006″	.052″	4.35
2490/18	HF 18	18	19/30	600	.0045″	.059″	6.46
2495/18	HHF 18	18	19/30	1000	.006″	.062″	6.67
2490/16	HF 16	16	19/29	600	.0045″	.066″	8.16
2495/16	HHF 16	16	19/29	1000	.006″	.069″	8.39

STD. COLOR: Natural Gold. Striping and solid colors available. Variations of conductor material—to special order.

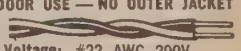
STD. PUT-UP: 1000 Ft.

*DUPONT *KAPTON - DUPONT

UNSHIELDED AUDIO CABLE

SOLID AND STRANDED CONDUCTORS (2 & 3)

Tinned copper, vinyl plastic insulation, color coded, conductors twisted. **FOR INDOOR USE — NO OUTER JACKET**



Operating Temp.: −20°C to +60°C. **Operating Voltage:** #22 AWG 200V, #20 AWG 350V, #18 AWG 400V, #16, #14 AWG 600V.

DABURN No.	Cond.	Size	Strand	Insul. Wall	Nom. O.D.
3004	2	22 Solid	1	.016″	.100″
3004/3	3	22 Solid	1	.016″	.115″
3005	2	20 Solid	1	.016″	.120″
3005/3	3	20 Solid	1	.016″	.140″
3006	2	18 Solid	1	.016″	.145″
3006/3	3	18 Solid	1	.016″	.155″
3007	2	16 Solid	1	.016″	.175″
3007/3	3	16 Solid	1	.016″	.190″
3011	2	22 Stranded	7/30	.016″	.125″
3011/3	3	22 Stranded	7/30	.016″	.140″
3012	2	20 Stranded	10/30	.016″	.145″
3012/3	3	20 Stranded	10/30	.016″	.160″
3013	2	18 Stranded	16/30	.016″	.165″
3013/3	3	18 Stranded	16/30	.016″	.180″
3014	2	16 Stranded	26/30	.016″	.190″
3014/3	3	16 Stranded	26/30	.016″	.210″
3015	2	14 Stranded	41/30	.016″	.220″
3015/3	3	14 Stranded	41/30	.016″	.240″
3016	2	12 Stranded	65/30	.020″	.250″
3016/3	3	12 Stranded	65/30	.020″	.275″

CONDUCTOR COLOR CODE: 1—Brown, 2—Tan, 3—Gray.

STD. PUT-UP: 1000 Ft.

PLASTIC JACKET OVERALL

FOR OUTDOOR USE

Tinned copper, vinyl plastic insulation, color coded, twisted, plastic jacket overall.



Operating Temp.: −20°C to +60°C.

Operating Voltage: #22 AWG 200V, #20 AWG 350V, #18 AWG 400V, #16, #14 AWG 600V.

DABURN No.	Cond.	Size	Strand	Nom. Wall	Jacket	Nom. O.D.
3020	2	22	1	.010″	.020″	.125″
3020/3	3	22	1	.010″	.020″	.130″
3020/4	4	22	1	.010″	.020″	.150″
3021	2	20	1	.016″	.020″	.170″
3021/3	3	20	1	.016″	.020″	.180″
3021/4	4	20	1	.016″	.020″	.200″
3022	2	18	1	.016″	.020″	.185″
3022/3	3	18	1	.016″	.020″	.190″
3022/4	4	18	1	.016″	.020″	.220″
3022/5	5	18	1	.016″	.020″	.235″
3022/6	6	18	1	.016″	.020″	.265″
3027	2	22	7/30	.010″	.020″	.130″
3027/3	3	22	7/30	.010″	.020″	.140″
3027/4	4	22	7/30	.010″	.020″	.165″
3028	2	20	10/30	.016″	.020″	.175″
3028/3	3	20	10/30	.016″	.020″	.185″
3028/4	4	20	10/30	.016″	.020″	.195″
3029	2	18	16/30	.016″	.020″	.195″
3029/3	3	18	16/30	.016″	.020″	.205″
3029/4	4	18	16/30	.016″	.020″	.235″
3029/6	6	18	16/30	.016″	.020″	.290″
3030	2	16	26/30	.016″	.020″	.220″
3030/3	3	16	26/30	.016″	.020″	.245″
3030/4	4	16	26/30	.016″	.020″	.270″
3031	2	14	41/30	.016″	.020″	.260″
3031/3	3	14	41/30	.016″	.020″	.280″

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green, 5—Orange. 6—Blue.

STD. PUT-UP: 1000 Ft.

SPECIAL CONSTRUCTION AVAILABLE

PLASTIC INTER-COM CABLE

Station to station wiring to eliminate cross-talk. Each conductor tinned copper stranded, color coded PVC, T.C. braid, shield where indicated, paired, grey polyvinylchloride jacket overall.



2935 — Suitable for unbalanced systems.

2935/4 — Suitable for balanced systems.

2935/5 — Suitable for coin operated phonographs.

OPERATING VOLTAGE: 350 Volts.

OPERATING TEMPERATURE: −20°C to +60°C.

DABURN Cat. No.	Cond.	Size	Strand	No. Cond. Shield	Nom. Wall	Nom. Jacket	O.D.
2935	3	22	7/30	1	.016″	.020″	.200″
2935/4	4	22	7/30	2	.016″	.020″	.180″x.285″
2935/5	5	22	7/30	3	.016″	.020″	.200″x.300″

CONDUCTOR COLOR CODE: **STD. PUT-UP:** 500 Ft., 1000 Ft.

2935 — White — shielded; Black, Red — unshielded.

2935/4 — Black, White — Shielded; Black, Red — unshielded.

2935/5 — Black, White, Red — shielded; Black, Red — unshielded.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

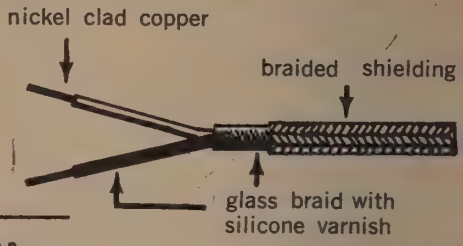
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

NEW DABURN HIGH TEMPERATURE LEAD WIRE

Small Diameters and High Temperature performance make an outstanding combination for these unique constructions. Basic wire conforms to MIL-W-3861 spec. shielding per MIL-N-46026A. 600V RMS.

800°F TEMPERATURE RATING

High temperature aircraft and missile lead wire for operation between 500°F and 800°F. Nickel clad copper conductors with glass braided fiber insulation impregnated with silicone varnish. Multiconductor and shielded construction will be manufactured to customer's specifications.

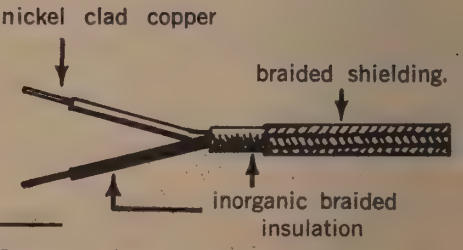


DABURN Cat. No.	Size	Strand	CMA	Nom. O.D.
2497/18	18	19/.010″	755	.085″
2497/20	20	19/.008″	1216	.075″
2497/22	22	19/.0063″	1900	.070″

STD. PUT-UP: 500 Ft., 1000 Ft.

1500°F TEMPERATURE RATING

High temperature radiation resistant aircraft and missile lead wire for operation between 800°F and 1500°F. Nickel clad copper conductors with inorganic braided insulation. Useful up to 1500°F providing moisture resistance is not required. Multiconductor and shielded construction can be made to customer's specifications.

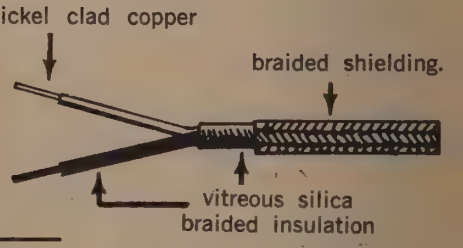


DABURN Cat. No.	Size	Strand	CMA	Nom. O.D.
2498/18	18	19/.010″	755	.085″
2498/20	20	19/.008″	1216	.075″
2498/22	22	19/.0063″	1900	.070″

STD. PUT-UP: 500 Ft., 1000 Ft.

2000°F TEMPERATURE RATING

High temperature radiation resistant aircraft and missile lead wire for operation between 1500°F and 2000°F. Nickel clad copper conductors with vitreous silica braided insulation and a braided shielding. Useful up to 200°F providing no initial moisture resistance or abrasion resistance is required. Multiconductor construction can be made to customer's specifications.



DABURN Cat. No.	Size	Strand	CMA	Nom. Insulation Thickness	Braid Ni. Shield	Nom. O.D.
2499/18	18	19/.010″	755	.025″	16-5-36	.122″
2499/20	20	19/.008″	1216	.025″	24-3-36	.112″
2499/22	22	19/.0063″	1900	.027″	24-3-36	.108″

STD. PUT-UP: 500 Ft., 1000 Ft.

© United Technical Publications

CONTROL AND INSTRUMENTATION CABLE, TYPES F & FF PER MIL-W-16878D PLASTIC, SILICONE RUBBER HOOK-UP WIRE — HIGH VOLTAGE CABLE, UL & CSA HOOK-UP WIRE

MINIATURIZED SHIELDED CONTROL AND INSTRUMENTATION CABLE

PER MIL-W 16878D — TYPE B — 600 VOLT



DESCRIPTION: Each conductor stranded tinned copper, .010" wall high temperature PVC, cabled with a mylar tape wrap, braided tinned copper shield for 90% coverage overall, covered with gray PVC jacket.

Rated: −55°C to +105°C, 600 volt.

Resists acid, alkalis, flame, moisture, oil, solvents, fungus. Used as interconnecting cable for electronic equipment; control and instrumentation cable, telemetry and remote control with sensitive recording instruments.

Daburn No.	Conductor No.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
2550	2	B-28	7/36	.010"	.010"	.120"
2550/3	3	B-28	7/36	.010"	.012"	.130"
2550/4	4	B-28	7/36	.010"	.012"	.140"
2550/6	6	B-28	7/36	.010"	.015"	.170"
2550/8	8	B-28	7/36	.010"	.015"	.175"
2550/10	10	B-28	7/36	.010"	.018"	.210"
2550/12	12	B-28	7/36	.010"	.018"	.215"
2550/15	15	B-28	7/36	.010"	.020"	.230"
2550/20	20	B-28	7/36	.010"	.022"	.260"

STD. PUT-UP: 500 Ft., 1000 Ft.

Additional sizes and constructions to order.

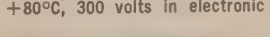
COLOR CODE:

1—White	6—Lt. Blue	11—Blue/Blk	16—Black/Red
2—Black	7—Wh/Black	12—Black/Wh	17—White/Red
3—Red	8—Red/Black	13—Red/White	18—Orange/Red
4—Green	9—Green/Blk	14—Green/Wh	19—Blue/Red
5—Orange	10—Orange/Blk	15—Blue/White	20—Red/Green

SEMI-RIGID BUSINESS MACHINE WIRE — U.L.

300 VOLT 80°C — STYLE 1061

Stranded tinned copper, color coded semi-rigid polyvinlchloride insulation. Has Temperature Rating of −10°C to +80°C, 300 volts in electronic computers or business machines only.



DESCRIPTION: One Conductor stranded tinned copper, semi-rigid PVC.

DABURN No.	Size	Strand	Nom. Ins.-Wall	Nom. O.D.
2660/26	26	7/34	.009"	.039"
2660/24	24	7/32	.009"	.041"
2660/22	22	7/30	.009"	.048"
2660/20	20	7/28	.009"	.056"
2660/18	18	7/26	.009"	.072"

STD. PUT-UP: 500 Ft., 1000 Ft. Available with Solid Conductor.

MIL-W-16878D — TYPES F & FF

TYPE F—600V • TYPE FF—1000V
Single conductor, stranded tinned copper. Extruded silicone rubber overall. Temp. to 200°C.



DABURN No.	MIL Type Designation	Size AWG	Strand	Nom. O.D.
2620/28	F-28	28	7/36	.046"
2622/28	FF-28	28	7/36	.078"
2620/26	F-26	26	7/34	.050"
2622/26	FF-26	26	7/34	.082"
2620/24	F-24	24	19/36	.055"
2622/24	FF-24	24	19/36	.087"
2620/22	F-22	22	19/34	.062"
2622/22	FF 22	22	19/34	.094"
2620/20	F-20	20	19/32	.070"
2622/20	FF-20	20	19/32	.102"
2620/18	F-18	18	19/30	.080"
2622/18	FF-18	18	19/30	.112"
2620/16	F-16	16	19/29	.088"
2622/16	FF-16	16	19/29	.120"
2620/14	F-14	14	19/27	.118"
2622/14	FF-14	14	19/27	.165"
2620/12	F-12	12	19/25	.137"
2622/12	FF-12	12	19/25	.184"
2622/10	FF-10	10	37/26	.205"
2622/8	FF-8	8	133/29	.290"
2622/6	FF-6	6	133/27	.333"
2622/4	FF-4	4	133/25	.390"

COLOR: White. Additional colors, sizes and types to order, thru size 4/0
STD. PUT-UP: 500 Ft., 1000 Ft.

SILICONE RUBBER LEAD WIRE

600 VOLT — 200°C

FLEXIBILITY FROM −104°C TO +400°F

Suitable for high-heat and hi-frequency applications. Resistant to acids, alkali, oil. Retains physical properties under extremes. Low power factor, low dielectric constant. Tinned copper, stranded, silicone rubber insulation, glass braid, lacquered. Color: White. Additional Colors Available.



DESCRIPTION: One conductor, tinned copper strands, silicone rubber insulation, glass braid, lacquered.

STOCK COLOR: White.

DABURN No.	Size	Strand	Nom. Ins. Wall	Nom. O.D.
2625/22	22	7/30	1/32"	.105"
2625/20	20	10/30	1/32"	.121"
2625/18	18	16/30	1/32"	.128"
2625/16	16	26/30	1/32"	.144"
2625/14	14	41/30	1/32"	.165"
2625/12	12	65/30	1/32"	.185"
2625/10	10	65/28	3/64"	.240"
2625/8	8	84/27	1/16"	.320"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

HI-VOLTAGE CABLE

One conductor, stranded copper tinned, rulan — flame retardant — polyethylene insulation, braided tinned copper overall when shielded. Used as hi-voltage leads in electronic equipment to minimize RF radiation in equipment.



DESCRIPTION: One conductor, stranded copper tinned, rulan (flame retarding type) polyethylene insulation. Available white/red tracer. Temp. Rating: 105°C.

Shielded: Same as above with tinned copper braided shield overall. Special construction available to order.

UNSHIELDED

Daburn No.	Size AWG	Strand	Nom. Ins.Wall	Voltage Breakdown AC	DC	Nom. O.D.
2641	22	7/30	.047"	5,000	10,000	.124"
2642	20	10/30	.047"	5,000	10,000	.125"
2643	20	10/30	.068"	10,000	20,000	.168"
2644	18	16/30	.047"	5,000	10,000	.134"
2645	18	16/30	.068"	10,000	20,000	.178"
2648	18	16/30	.095"	16,000	40,000	.235"
2649	18	16/30	.124"	26,000	60,000	.280"

SHIELDED

2652	20	10/30	.095"	16,000	40,000	.252"
2655	18	16/30	.095"	16,000	40,000	.255"
2656	16	26/30	.095"	16,000	40,000	.276"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

PLASTIC HOOK-UP WIRE

600 VOLT UL APPROVED — 105°C (CSA 600V — 90°C) STYLE 1015, CSA TR-32

Resistant to acids, alkalis, oil, flame, fungus and moisture. Temperature Rating: −10°C to +105°C.



DESCRIPTION: One conductor stranded annealed copper tinned, plastic insulation.

STRANDED

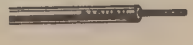
DABURN No.	Size	Strand	Nom. Ins. Wall	Nom. O.D.
2630	22	7/30	.032"	.095"
2631	20	10/30	.032"	.102"
2632	18	16/30	.032"	.112"
2633	16	26/30	.032"	.126"
2633/14	14	41/30	.032"	.142"

SOLID

2635/22	22	1	.032"	.095"
2635/20	20	1	.032"	.102"

COLORS: Black, Red, Green, Yellow, Blue, White, Orange, Gray, Purple.
STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

300 VOLT UL APPROVED — 80°C STYLE 1007, CSA TR-64



DABURN No.	Size	Strand	Nom. Ins. Wall	Nom. O.D.
2628/24	24	7/32	.016"	.057"
2628/22	22	7/30	.016"	.065"
2628/20	20	10/30	.016"	.070"
2628/18	18	16/30	.016"	.080"
2628/16	16	26/30	.016"	.095"

COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple.
STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

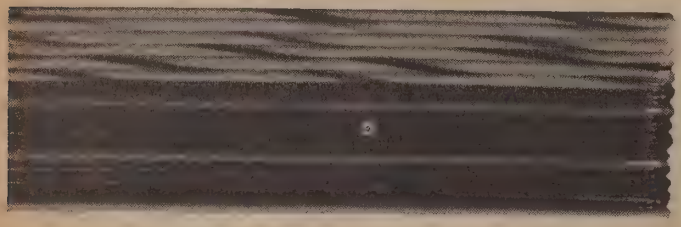
© United Technical Publications

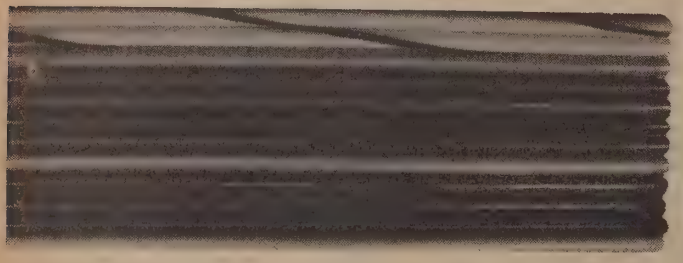
DABURN

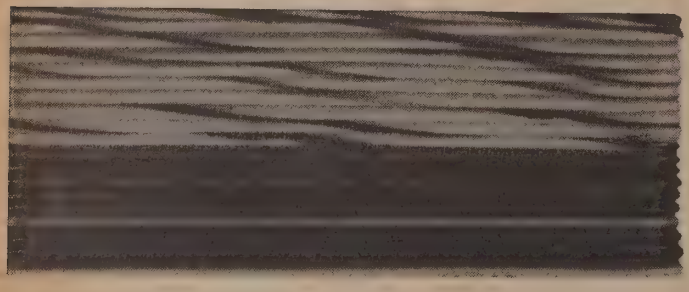
DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

FLAT RIBBON CABLE, TYPES B & C PER MIL-W-16878D













MULTI-CONDUCTOR — POLYVINYLCHLORIDE INSULATION CONDUCTORS
Per MIL-W-16878D — TYPE B — 600 V

DESCRIPTION: Each conductor stranded tinned copper .010" polyvinylchloride insulation bonded to form flat ribbon cable.

Rated: −55°C to +105°C. Voltage Rating: 600 volts. Resists acid, alkalis, flame, moisture, oil, solvents, fungus. Conductors are color coded and separate easily for clean terminations. Saves space, time on circuit and interconnecting assemblies, wiring harnesses, sliding drawers and drop assemblies.

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
1804/4	4	24	7/32	.010"	.043" x .172"
1804/8	8	24	7/32	.010"	.043" x .344"
1804/12	12	24	7/32	.010"	.043" x .516"
1804/16	16	24	7/32	.010"	.043" x .688"
1804/20	20	24	7/32	.010"	.043" x .860"

STD. PUT-UP: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: Same as noted below for C-22 Series.



FLAT RIBBON CABLE
MULTI-CONDUCTOR — POLYVINYLCHLORIDE INSULATION CONDUCTORS
Per MIL-W-16878D TYPE C

VOLTAGE RATING: 1000 VOLTS

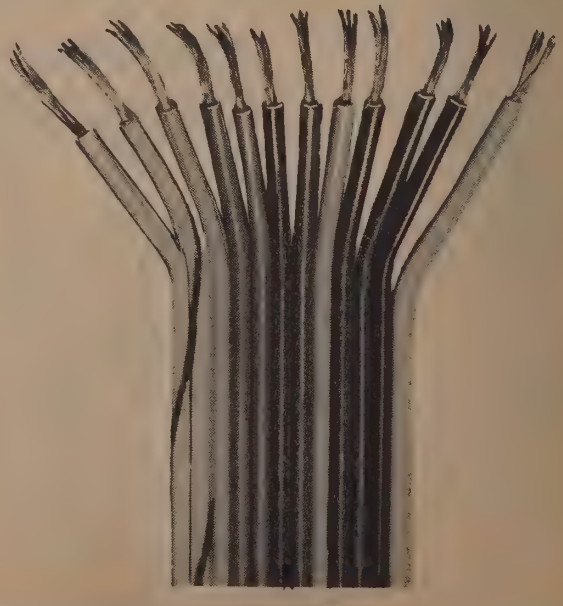
DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
1822/4	4	22	7/30	.016"	.065" x .260"
1822/8	8	22	7/30	.016"	.065" x .520"
1822/12	12	22	7/30	.016"	.065" x .780"
1822/16	16	22	7/30	.016"	.065" x 1.040"
1822/20	20	22	7/30	.016"	.065" x 1.300"

STD. PUT-UP: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE:

1—White	6—Lt. Blue	11—Wh/Black	16—Wh/Brown
2—Black	7—Brown	12—Wh/Red	17—Wh/Orange
3—Red	8—Orange	13—Wh/Green	18—Wh/Gray
4—Green	9—Gray	14—Wh/Yellow	19—Wh/Violet
5—Yellow	10—Violet	15—Wh/Blue	20—Wh/Blk/Red

ADDITIONAL SIZES & TYPES AVAILABLE TO ORDER



© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

PORTABLE CORD, CONTROL CABLES — MIL-C-3432C SERVICE CORD

RUBBER, NEOPRENE & PLASTIC PORTABLE CORD
UL APPROVED — 300 AND 600 VOLT

For power line requirement where rough usage is indicated as for amplifiers, sound systems, speakers, vacuum cleaners, washing machines, trouble lights, refrigerators, etc. Color coded. Underwriters approved. Neoprene and plastic construction recommended for equipment exposed to oil, acids, outdoor use, direct burial, etc.

SUGGESTED OPERATING TEMPERATURE: −20°C to +60°C.
Each conductor, copper conductor, paper separtor, color coded, rubber insulation, filler, (where necessary) separator, tough rubber or neoprene jacket, black.



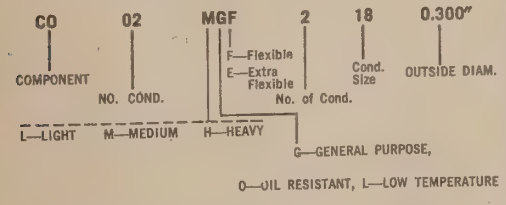
UL TYPE	VOLT RATING
SV, SVO, SVTO	300V
SJ, SJO, SJTO	300V
S, SO, STO	600V

RUBBER Daburn No.	UL Type	NEOPRENE Daburn No.	UL Type	PLASTIC Daburn No.	UL Type	Conds. No.	Size	Amp. Rating	Nom O.D.
2860	SV	2890	SVO	2870	SVTO	2	18	7	.250″
2860/3	SV	2890/3	SVO	2870/3	SVTO	3	18	7	.265″
2861	SJ	2891	SJO	2871	SJTO	2	18	7	.300″
2861/3	SJ	2891/3	SJO	2871/3	SJTO	3	18	7	.330″
2861/4	SJ	2891/4	SJO	2871/4	SJTO	4	18	6	.360″
2862	SJ	2892	SJO	2872	SJTO	2	16	10	.325″
2862/3	SJ	2892/3	SJO	2872/3	SJTO	3	16	10	.365″
2862/4	SJ	2892/4	SJO	2872/4	SJTO	4	16	8	.395″
2863	S	2893	SO	2873	STO	2	18	7	.390″
2863/3	S	2893/3	SO	2873/3	STO	3	18	7	.405″
2863/4	S	2893/4	SO	2873/4	STO	4	18	6	.435″
2864	S	2894	SO	2874	STO	2	16	10	.410″
2864/3	S	2894/3	SO	2874/3	STO	3	16	10	.430″
2864/4	S	2894/4	SO	2874/4	STO	4	16	8	.485″
2865	S	2895	SO	2875	STO	2	14	15	.540″
2865/3	S	2895/3	SO	2875/3	STO	3	14	15	.560″
2865/4	S	2895/4	SO	2875/4	STO	4	14	12	.605″
2866	S	2896	SO	2876	STO	2	12	20	.600″
2866/3	S	2896/3	SO	2876/3	STO	3	12	20	.635″
2866/4	S	2896/4	SO	2876/4	STO	4	12	16	.665″
2867	S	2897	SO	2877	STO	2	10	25	.640″
2867/3	S	2897/3	SO	2877/3	STO	3	10	25	.690″
2867/4	S	2897/4	SO	2877/4	STO	4	10	20	.745″
2868	—	2898	—	—	—	2	8†	35	.700″
2868/3	—	2898/3	—	—	—	3	8†	35	.750″
2868/4	—	2898/4	—	—	—	4	8†	28	.820″
2869	—	2899	—	—	—	2	6†	45	.820″
2869/3	—	2899/3	—	—	—	3	6†	45	.885″
2869/4	—	2899/4	—	—	—	4	6†	36	.975″

Additional conductors and sizes available
† Not listed by UL.
CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Green, 4-Red.
STD. PUT-UP: 250 Ft.

COMPONENT CABLE TYPE SPECIFICATIONS

TYPICAL EXAMPLE:



SPEC MIL-C-3432C SERVICE CORD



DABURN Cat. No.	MIL Type	Spec. Design.	Conds.	Size	Spec. No.	Nom. O.D.
2812	CO-02	MGF	2	18	MIL-C-3432C	.300″
2813	CO-02	HGF	2	18	MIL-C-3432C	.380″
2814	CO-02	LGF	2	18	MIL-C-3432C	.250″
2815	CO-02	HGF	2	16	MIL-C-3432C	.405″
2816	CO-02	MGF	2	16	MIL-C-3432C	.338″
2817	CO-02	MGF	2	14	MIL-C-3432C	.400″
2818	CO-02	HGF	2	14	MIL-C-3432C	.535″
2819	CO-03	MGF	3	18	MIL-C-3432C	.340″
2820	CO-03	MGF	3	16	MIL-C-3432C	375″
2821	CO-03	HOE	3	12	MIL-C-3432C	.635″

Additional Numbers Available From Stock — Your Inquiries Invited

CONTROL CABLE
HEAVY DUTY MULTI-CONDUCTOR
PORTABLE TYPE SO
NEOPRENE JACKETED — 600 VOLT



DESCRIPTION: Stranded bare copper each conductor, rubber insulation color coded, filler where necessary, wrap over conductors, flexible heavy duty black Neoprene jacket overall.

Recommended for outside installation, this heavy duty control cable resists oil, ozone, sunlight, moisture, impact and abrasion. Suitable for remote control automatic equipment, telemetering, signal transmission.

No. 18 AWG-SO CONTROL CABLE

DABURN Cat. No.	Cond.	Size AWG	Strand	Nom. O.D.
3300/5	5	18	16/30	.495″
3300/6	6	18	16/30	.525″
3300/7	7	18	16/30	.525″
3300/8	8	18	16/30	.565″
3300/10	10	18	16/30	.635″
3300/12	12	18	16/30	.665″
3300/14	14	18	16/30	.715″
3300/16	16	18	16/30	.745″
3300/18	18	18	16/30	.775″
3300/20	20	18	16/30	.815″
3300/22	22	18	16/30	.875″
3300/24	24	18	16/30	.895″
3300/26	26	18	16/30	.915″
3300/30	30	18	16/30	.945″
3300/36	36	18	16/30	1.060″
3300/40	40	18	16/30	1.085″

No. 16 AWG-SO CONTROL CABLE

3305/5	5	16	26/30	.525″
3305/6	6	16	26/30	.560″
3305/7	7	16	26/30	.560″
3305/8	8	16	26/30	.605″
3305/10	10	16	26/30	.710″
3305/12	12	16	26/30	.745″
3305/14	14	16	26/30	.760″
3305/16	16	16	26/30	.800″
3305/18	18	16	26/30	.840″
3305/20	20	16	26/30	.890″
3305/22	22	16	26/30	.930″
3305/24	24	16	26/30	1.02″
3305/26	26	16	26/30	1.03″
3305/30	30	16	26/30	1.05″
3305/36	36	16	26/30	1.12″
3305/40	40	16	26/30	1.18″

No. 14 AWG-SO CONTROL CABLE

3310/5	5	14	41/30	.685″
3310/6	6	14	41/30	.745″
3310/7	7	14	41/30	.800″
3310/8	8	14	41/30	.860″
3310/10	10	14	41/30	.875″
3310/12	12	14	41/30	.945″
3310/14	14	14	41/30	1.000″
3310/16	16	14	41/30	1.075″
3310/18	18	14	41/30	1.115″
3310/20	20	14	41/30	1.155″

No. 12 AWG-SO CONTROL CABLE

3315/5	5	12	65/30	.760″
3315/6	6	12	65/30	.810″
3315/7	7	12	65/30	.860″
3315/8	8	12	65/30	.945″
3315/10	10	12	65/30	1.000″
3315/12	12	12	65/30	1.100″
3315/14	14	12	65/30	1.120″
3315/16	16	12	65/30	1.150″
3315/18	18	12	65/30	1.30″
3315/20	20	12	65/30	1.33″

STD. PUT-UP: Cut to Specific Lengths — Min. 100 Ft.
The Color Code for Neoprene Jacket Control Cables Conforms to IPCEA Standards.

MULTI-CONDUCTOR MICROPHONE AND CONTROL CABLE — PLASTIC



Each conductor tinned copper, polyethylene insulation — color coded.
Multi-conductors cabled with fillers, textile wrapped, tinned copper braided shield, gray polyvinyl jacket overall.
OPERATING TEMPERATURE: −20°C to +60°C, 600 Volts.

2782	2	22	16/34	31 MMF	1000 V	.231″
2782/20	2	20	26/34	45 MMF	600 V	.240″
2782/24*	2	24	10/34	38 MMF	1000 V	.190″

DABURN Cat. No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
2783	3	20	26/34	.014″	.030″	.250″
2784	4	20	26/34	.014″	.035″	.260″
2785	5	20	26/34	.014″	.035″	.275″
2786	6	20	26/34	.014″	.035″	.300″
2786/8	8	20	26/34	.014″	.035″	.330″
2786/10	10	20	26/34	.014″	.035″	.375″
2786/12	12	20	26/34	.014″	.035″	.380″
2786/15	15	20	26/34	.014″	.035″	.410″
2786/20	20	20	26/34	.014″	.035″	.455″

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft. *Spiral Tinned Copper Shield.
CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow, 6-Blue, 7-Brown, 8-Orange, 9-Purple, 10-Slate, 11-White/Black, 12-White/Red, 13-White/Green, 14-White/Yellow, 15-White/Blue, 16-White/Brown, 17-White/Purple, 18-White/Slate, 19-Black/Red, 20-Black/Yellow.

© United Technical Publications

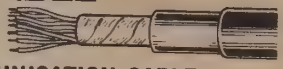
DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

TELEPHONE CABLE

(Meets REA-PE-22)



EXCHANGE AREA — COMMUNICATION CABLE AERIAL, DUCT AND CONDUIT INSTALLATION

DESCRIPTION: Color coded polyethylene insulation over each bare copper conductor. Conductors are paired. Pairs are cabled with non-hygroscopic tape wrap, corrugated aluminum shield, .008" thick and black polyethylene jacket overall.

Minimal cross talk .083 microfarads/mile — average mutual capacitance, 1 KC. This is a tough, long lasting cable — withstands weathering, ultra-violet and is abrasion resistant.

#22 AWG — SOLID CONDUCTORS

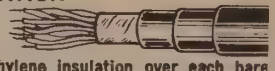
DABURN Cat No.	No. of Pairs	Nom. Jkt. T'kness	Nom. O.D.	Ship. Wt. Lbs. M/Ft.
3510/3	3	.060"	.320"	60
3510/6	6	.060"	.390"	100
3510/12	12	.060"	.475"	145
3510/18	18	.060"	.540"	180
3510/25	25	.060"	.605"	226
3510/50	50	.060"	.775"	412
3510/75	75	.060"	.920"	576
3510/100	100	.070"	1.050"	706
3510/150	150	.070"	1.270"	1095
3510/200	200	.070"	1.455"	1382
3510/300	300	.080"	1.750"	1978
3510/400	400	.090"	1.970"	2600
3510/600	600	.100"	2.365"	3900
#19 AWG — SOLID CONDUCTORS				
3515/6	6	.060"	.490"	145
3515/12	12	.060"	.660"	231
3515/18	18	.060"	.710"	310
3515/25	25	.060"	.790"	391
3515/50	50	.070"	1.060"	716
3515/75	75	.070"	1.290"	1105
3515/100	100	.080"	1.490"	1380
3515/150	150	.080"	1.750"	2045
3515/200	200	.090"	1.990"	2630
3515/300	300	.100"	2.370"	3900

STD. PUT-UP: 100 Ft. and over. **CONDUCTOR COLOR CODE:** Per IPCEA. Cut to specification.

TELEPHONE CABLE

DIRECT BURIAL INSTALLATION

(Meets REA-PE-23)



DESCRIPTION: Color coded polyethylene insulation over each bare copper conductor. Conductors are paired. Pairs are cabled with non-hygroscopic tape-wrap, inner jacket of polyethylene, corrugated .005" copper shield, overall black polyethylene jacket.

Minimal cross talk .083 microfarads/mile — average mutual capacitance 1 KC. Suitable for direct burial. Tough, impervious to moisture and abrasion resistant.

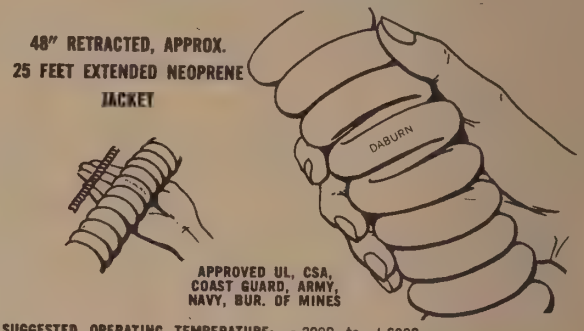
#22 AWG — SOLID CONDUCTORS

DABURN Cat No.	No. of Pairs	Nom. Jkt. T'kness	Nom. O.D.	Ship. Wt. Lbs. M/Ft.
3525/3	3	.040"	.380"	95
3525/6	6	.040"	.455"	145
3525/12	12	.040"	.535"	195
3525/18	18	.040"	.610"	251
3525/25	25	.040"	.675"	305
3525/50	50	.040"	.860"	507
3525/75	75	.040"	.985"	681
3525/100	100	.040"	1.115"	847
3525/150	150	.050"	1.350"	1240
3525/200	200	.050"	1.505"	1557
3525/300	300	.060"	1.810"	2173
3525/400	400	.060"	2.025"	2853
#19 AWG — SOLID CONDUCTORS				
3530/3	3	.040"	.455"	119
3530/6	6	.040"	.500"	206
3530/12	12	040"	.550"	305
3530/18	18	.040"	.675"	406
3530/25	25	.040"	.770"	519
3530/50	50	.050"	.860"	867
3530/75	75	.050"	1.115"	1250
3530/100	100	.050"	1.350"	1575
3530/150	150	.060"	1.505"	2265
3530/200	200	.060"	1.810"	2900
3530/300	300	.060"	2.025"	4042

STD. PUT-UP: 100 Ft. and over. **CONDUCTOR COLOR CODE:** Per IPCEA. Cut to specification.

RETRACTILE

SUPA HEAVY DUTY POWER CORDS



SUGGESTED OPERATING TEMPERATURE: −20°C to +60°C.

Suitable for maintenance of industrial automation equip., refrigerated trucks, mass production, cherry pickers, magnetic cranes, standby power distribution. Wherever a tougher requirement is indicated. Std. Pkg. 6

Retracted length 48" — extends to 25 ft.

DABURN Cat. No.	No. Cond.	Size	Stranding	Nom. Jacket Thickness	Nom. Cord O.D.
960/4	4	16	65/34	7/64"	.535"
961	3	14	41/30	7/64"	.620"
961/4	4	14	41/30	7/64"	.660"
962	3	12	65/30	8/64"	.715"
962/4	4	12	65/30	8/64"	.770"



RETRACTILE COMMUNICATION CORD

PREPARED

Retracted length 12" — extended length 6 feet.

Same as our regular communication cord but each end is prepared, stripped and tinned as indicated.

Daburn No.	No. Cond.	Size & Strand	Coil O.D.	Cord O.D.	PREPARED
966	3	#23-21/36	13/16"	.220"	I END: L'gth 1½". Conductor stripped and tinned. Other end: Total L'gth 1½" jacket removed.
967	4	#23-21/36	15/16"	.250"	I END: Total length 1". Conductors stripped and tinned. Other end: Total lgth 1½" jacket removed.
968	5	#23-21/36	1-1/16"	.285"	I END: Total l'gth 4⅛". Conductors stripped and tinned. Other end: Total l'gth 4⅛" conds. stripped and tinned.

Std. Pkg. 10

AUDIO CABLE — SHIELDED

2 CONDUCTOR SHIELDED

NO OUTER JACKET

Each conductor copper tinned, plastic insulation, color coded, twisted, tinned copper shield. Suitable for sound systems, industrial paging systems, broadcast-audio cable, rack panel wiring, etc.

OPERATING TEMPERATURE: −20°C to +60°C.



DABURN Cat. No.	Conds.	Size AWG.	Strand	Nom. Wall	Nom. O.D.	Nom. Operating Voltage
2902/30	2	30	7/38	.010"	.085"	200V
2902/28	2	28	7/36	.010"	.090"	200V
2902/26	2	26	7/34	.010"	.095"	200V
2902/24	2	24	16/36	.017"	.120"	350V
2902/22	2	22	7/30	.017"	.140"	350V
2902/20	2	20	10/30	.017"	.155"	350V
2902/18	2	18	16/30	.017"	.170"	350V
2902/16	2	16	26/30	.020"	.210"	450V
2902/14	2	14	41/30	.020"	.225"	450V
2902/12	2	12	65/30	.025"	.295"	600V
2902/10	2	10	105/30	.025"	.375"	600V

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—Black, 2—Red.

© United Technical Publications

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

Long Lasting Service — useful wherever cords must change length or position. Extend to approximately six times its retracted length. Returns to its original shape or length when released. Eliminates tangling, twisting or knots. Cords are UL and CSA approved.

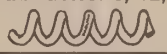
RETRACTILE COILED CORDS

POWER CORDS — RETRACTED LENGTHS: 1, 2, 3 & 4 FT. • EXTENDED LENGTHS: 6, 12, 18 & 25 FT.



UL APPROVED — NEOPRENE JACKETED CORD

Operating Temperature: −20°C to +60°C



DABURN CAT. NOS. RETRACTED LENGTHS 4 Ft.† Length	3 Ft. Length	2 Ft. Length	1 Ft. Length	No. Conds.	Size	Strand	UL* and CSA Type	Amps	Volt Rating	Coil Nom. O.D.	Cord Nom. O.D.
986-4	986-3	986-2	986-1	2	18	41/34	SVO	7	300	7/8"	.250"
986/3-4	986/3-3	986/3-2	986/3-1	3	18	41/34	SVO	7	300	1"	.275"
987-4	—	—	—	2	18	41/34	SVT	7	300	7/8"	.250"
989-4	989-3	989-2	989-1	2	18	41/34	SJO	7	300	1 3/16"	.310"
989/3-4	989/3-3	989/3-2	989/3-1	3	18	41/34	SJO	7	300	1 3/8"	.330"
989/4-4	989/4-3	989/4-2	989/4-1	4	18	41/34	SJO	5.6	300	1 7/16"	.360"
989/5-4	—	989/5-2	—	5	18	41/34	—	5.6	300	1 3/4"	.440"
989/7-4	—	989/7-2	—	7	18	41/34	—	5.6	300	1 7/8"	.500"
990-4	—	—	—	2	18	41/34	SJT	7	300	1 3/16"	.310"
991-4	991-3	991-2	991-1	2	16	65/34	SJO	10	300	1 3/8"	.330"
991/3-4	991/3-3	991/3-2	991/3-1	3	16	65/34	SJO	10	300	1 7/16"	.365"
991/4-4	991/4-3	991/4-2	—	4	16	65/34	SJO	8	300	1 5/8"	.395"
991/5-4	—	991/5-2	—	5	16	65/34	SO	8	600	2"	.540"
991/6-4	—	991/6-2	—	6	16	65/34	—	8	600	2 1/8"	.550"
991/7-4	—	991/7-2		7	6/16 1/14	#16-65/34 #14-41/30	— —	#16-8 #14-12	600	2 1/4"	.600"
993-4	993-3	993-2	—	2	14	41/30	SO	15	600	2"	.535"
993/3-4	993/3-3	993/3-2	—	3	14	41/30	SO	15	600	2 1/8"	.560"
993/4-4	993/4-3	993/4-2	—	4	14	41/30	SO	12	600	2 1/4"	.605"
994-4	994-3	994-2	—	2	12	65/30	SO	20	600	2 1/4"	.605"
994/3-4	994/3-3	994/3-2	—	3	12	65/30	SO	20	600	2 3/8"	.635"
994/4-4	994/4-3	994/4-2	—	4	12	65/30	SO	16	600	2 1/2"	.665"
994/6-4	—	994/6-2		6	2/12 4/18	#12-65/30 #18-41/34	— —	#12-17 #18-6	600	2 1/4"	.605"
994/7-4	—	994/7-2	—	7	12	65/30	—	16	600	2 5/8"	.775"

* Wherever UL type is shown, approved by CSA Testing Laboratories.
† Preferred, Put-up.

Std. Pkg. 5

CONDUCTOR COLOR CODE: 1-Black, 2-White, 3-Green, 4-Red, 5-Blue, 6-Brown, 7-Yellow.

DABURN MINIATURE RETRACTILE COMMUNICATION CORDS



2 Feet Retracted — 10 Ft. Extended

Miniature size. Suitable for compact equipment. Black plastic jacket overall. Operating Temperature: −20°C to +60°C. Std. Pkg. 10

DABURN No.	Conds.	Size	Strand	Coil O.D.	Cond. O.D.
975/28	2	28	19/40 T.C.	1/2"	.135"
977/28	4	28	19/40 T.C.	1/2"	.150"

RETRACTILE TEST LEAD WIRE

Stretch coiled kinkless test lead wire description. 12" coil — stretches to approx. 6 feet. One conductor #20 stranded copper rubber insulation .165 O.D. Colors: Red, Black. Coil O.D. 3/4". Working Voltage: 1000V, 4 Amps.



DABURN No.	Lgth.	Size	Strand	Coil O.D.	Cord O.D.
984 A	12"	20	41/36	3/4"	.165"
984	24"	20	41/36	3/4"	.165"

12" Extends Approx. 6 Ft.
24" Extends Approx. 12 Ft.

Specify Color, Red or Black
Std. Pkg. 6

UL APPROVED RETRACTILE POWER CORD SETS

18" Retracted — Approx. 9 Ft. Extended — 300V — UL Approved

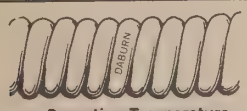


For portable use. Mobile and office equipment. Neoprene jacketed cord sets with molded male plug on one end.
OPERATING VOLTAGE 300 VOLTS

DABURN Cat. No.	Conds.	AWG Size	Strand	Type UL	Coil O.D.	Cord O.D.
980	2	18	41/34	SVO	7/8"	.250"
980/3	3	18	41/34	SVO	1"	.275"
981	2	18	41/34	SJO	1 3/16"	.310"
981/3	3	18	41/34	SJO	1 3/8"	.330"
982	2	16	65/34	SJO	1 3/8"	.330"
982/3	3	16	65/34	SJO	1 7/16"	.365"

CONDUCTOR COLOR CODE: 1-Black, 2-White, 3-Green.

Std. Pkg. 10



RETRACTILE COMMUNICATION COIL CORDS

RETRACTED LENGTHS 2, 3 & 4 FT. — EXTENDED LENGTHS 12, 18 & 25 FT.

Multi-conductors stranded extra flexible #23 AWG 21/36 tinned soft copper for long flex life, Neoprene or "Danyon" plastic jacketed cable for long life. 120 volt working, current carrying capacity 1 ampere. Nom. cond. resist. .022 ohms per linear foot., .185 ohms per retracted foot.
For communication equip. such as ham operations, telephone car carriers, radio equip., head sets, etc.

Operating Temperature: −20°C to +60°C

DABURN CAT. NOS. RETRACTED LENGTHS 4 Ft.*	3 Ft.†	2 Ft.†	No. Conds.	Size	Strand	Nom. Coil O.D.	Nom. Cord O.D.
975-4	975-3	975-2	2	23	21/36	3/4"	.200"
976-4	976-3	976-2	3	23	21/36	13/16"	.210"
977-4	977-3	977-2	4	23	21/36	7/8"	.240"
978-4	978-3	978-2	5	23	21/36	1"	.285"
978/6-4	978/6-3	978/6-2	6	23	21/36	1 1/8"	.305"
978/7-4	978/7-3	978/7-2	7	23	21/36	1 1/4"	.320"

SPECIAL CONSTRUCTION AVAILABLE TO ORDER

DABURN CAT. NOS. RETRACTED LENGTHS 4 Ft.*	3 Ft.†	2 Ft.†	No. Conds.	Size	Strand	Nom. Coil O.D.	Nom. Cord O.D.
978/8-4	—	978/8-2	8	23	21/36	1 11/32"	.360"
978/10-4	978/10-3	978/10-2	10	23	21/36	1 15/32"	.380"
978/12-4	—	978/12-2	12	23	21/36	1 17/32"	.410"
978/15-4	—	978/15-2	15	23	21/36	1 23/32"	.470"
978/37-4	—	978/37-2	37	23	21/36	2 1/32"	.680"

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Red, 4-Green, 5-Blue, 6-Yellow, 7-Brown, 8-Orange, 9-White / Black Tracer, 10-White / Red Tracer, 11-White / Green Tracer, 12-White/Blue Tracer, 13-White/Yellow Tracer, 14-White/Brown Tracer, 15-White / Orange Tracer. *Preferred Put-Up. †Stocked in Danyon. Std. Pkg. 5

SHIELDED RETRACTILE COMMUNICATION CORDS

RETRACTED LENGTHS 1, 2 & 4 FT.—EXTENDED LENGTHS 6, 12 & 25 FT.



Single and multi-cond. Shielded mike cables Neoprene or "Danyon" plastic jacketed shielded conductors are individually shielded. Shield can be pigtailed for soldering. Safe — Reliable.
OPERATING TEMPERATURE: −20°C TO +60°C

DABURN CAT. NOS. RETRACTED LENGTHS 4 Ft. L'gth.*	2 Ft. L'gth.	1 Ft. L'gth.	No. Conds.	Size	Strand	Nom. Coil O.D.	Nom. Cord O.D.	Volt Rating	CAPACITANCE MMF Lin. Ft.	CAPACITANCE MMF Retr. Ft.
995-4	995-2	995-1	1	24 Shielded	41/40	5/8"	.160"	75	56	440
996-4	996-2	996-1	2	1-23 1-24 Shielded	21/36 41/40	7/8"	.210"	#23-120 #24-75	56	450
997-4	997-2	997-1	3	2-23 1-24 Shielded	21/36 41/40	7/8"	.240"	#23-120 #24-75	56	450
999-4	999-2	999-1	2	2-24 Shielded	41/40	7/8"	.210"	75	56	450
998-4	998-2	998-1	4	2-23 2-24 Shielded	21/36 41/40	1"	.270"	#23-120 #24-75	56	460

* Preferred Put-Up

Conductors are Color Coded.

Std. Pkg. 10

SPECIAL CONSTRUCTIONS AVAILABLE TO ORDER

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

HEAVY DUTY TWISTED PAIRS INTERCOM CABLES — (Stranded)

NEW

Where larger conductors are indicated, we suggest these No. 18 gauge cables. Rugged yet flexible — abrasion resistant. Gray vinyl jacket overall.
Standard intercom color coding for paired cables applies **300V.**



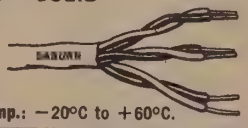
DABURN No.	Pairs	Cond.	Size	Nom. O.D.
3003/3	3	6	18-16/30	.365″
3003/6	6	12	18-16/30	.560″
3003/9	9	18	18-16/30	.650″
3003/15	15	30	18-16/30	.875″

STD. PUT-UP: 500 Ft., 1000 Ft.

PLASTIC INTERCOMMUNICATION CABLES

TWISTED PAIRS — SOLID

Each Cond. #22 **Solid** Tinned Copper, .010″ wall (Operating Temp. −20°C to +60°C). Vinyl plastic insulation, conductors color coded, twisted pairs, cabled, gray vinyl jacket overall. Suitable for outdoor installations.
Operating Voltage: 200 Volts. **Operating Temp.:** −20°C to +60°C.



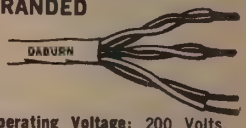
DABURN No.	Pairs	Cond.	Size	Nom. Jacket	Nom. O.D.
3000	1	2	22 Solid	.020″	.130″
3000/2	2	4	22 Solid	.020″	.205″
3000/3	3	6	22 Solid	.020″	.215″
3000/6	6	12	22 Solid	.020″	.275″
3000/9	9	18	22 Solid	.020″	.310″
3000/11	11	22	22 Solid	.020″	.340″
3000/13	13	26	22 Solid	.025″	.385″
3000/15	15	30	22 Solid	.025″	.390″
3000/16	16	32	22 Solid	.025″	.415″
3000/27	27	54	22 Solid	.035″	.505″
3000/31	31	62	22 Solid	.035″	.555″
3000/41	41	82	22 Solid	.035″	.630″
3000/51	51	102	22 Solid	.045″	.735″
3000/76	76	152	22 Solid	.070″	.970″
3000/101	101	202	22 Solid	.080″	1.140″

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft. Other pairs available to order.

PLASTIC INTERCOMMUNICATION CABLES

TWISTED PAIRS — STRANDED

Each Cond. #22 7/30 Tinned Copper, .010″ wall vinyl plastic insulation, conductors color coded, twisted pairs, cabled, gray vinyl jacket overall. Suitable outdoor installations.
Operating Temperature: −20°C to +60°C. **Operating Voltage:** 200 Volts.



DABURN No.	Pairs	Cond.	Size	Strand	Nom. O.D.
3002	1	2	22	7/30	.145″
3002/2	2	4	22	7/30	.210″
3002/3	3	6	22	7/30	.225″
3002/4	4	8	22	7/30	.235″
3002/5	5	10	22	7/30	.245″
3002/6	6	12	22	7/30	.290″
3002/9	9	18	22	7/30	.350″
3002/11	11	22	22	7/30	.365″
3002/15	15	30	22	7/30	.455″
3002/19	19	38	22	7/30	.480″
3002/23	23	46	22	7/30	.530″
3002/27	27	54	22	7/30	.570″
3002/31	31	62	22	7/30	.635″
3002/41	41	82	22	7/30	.710″
3002/51	51	102	22	7/30	.800″

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

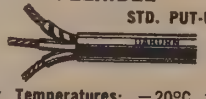
CONDUCTOR COLOR CODE CHART FOR PAIRED INTERCOM CABLES

PAIR NO.	COLOR COMBINATION
1	Black paired with Red
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue
5	Black paired with Brown
6	Black paired with Yellow
7	Black paired with Orange
8	Red paired with Green
9	Red paired with White
10	Red paired with Blue
11	Red paired with Yellow
12	Red paired with Brown
13	Red paired with Orange
14	Green paired with Blue
15	Green paired with White
16	Green paired with Brown
17	Green paired with Orange
18	Green paired with Yellow
19	White paired with Blue
20	White paired with Brown
21	White paired with Orange
22	White paired with Yellow
23	Blue paired with Brown
24	Blue paired with Orange
25	Blue paired with Yellow
26	Brown paired with Orange
27	Brown paired with Yellow
28	Purple paired with Red
29	Purple paired with White
30	Purple paired with Green
31	Purple paired with Blue
32	Purple paired with Brown
33	Purple paired with Yellow
34	Purple paired with Orange
35	Purple paired with Slate
36	Purple paired with Black
37	Slate paired with Red
38	Slate paired with White
39	Slate paired with Green
40	Slate paired with Blue
41	Slate paired with Brown
42	Slate paired with Yellow
43	Slate paired with Orange
44	Slate paired with Black
45	White/Black paired w. Red
46	White/Black paired w. Green
47	White/Black paired w. Blue
48	White/Black paired w. Brown
49	White/Black paired w. Yellow
50	White/Black paired w. Orange
51	White/Black paired w. Purple

MULTI-CONDUCTOR — PLASTIC JACKET

UNSHIELDED AUDIO — FLEXIBLE

Each Cond. #22 7/30 Tinned Copper, stranded, .010″ wall plastic insulation, color coded, twisted, gray vinyl jacket overall. Suitable for signal, P.A. systems, computer cable—for outdoor use.
STD. PUT-UP: 500 Ft.
Operating Voltage: 200 Volts. **Operating Temperatures:** −20°C to +60°C.



DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
3054/2	2	22	7/30	.010″	.020″	.140″
3054/3	3	22	7/30	.010″	.020″	.145″
3054/4	4	22	7/30	.010″	.020″	.170″
3054/5	5	22	7/30	.010″	.020″	.175″
3054/6	6	22	7/30	.010″	.020″	.185″
3054/7	7	22	7/30	.010″	.020″	.190″
3054/8	8	22	7/30	.010″	.020″	.200″
3054/9	9	22	7/30	.010″	.020″	.225″
3054/10	10	22	7/30	.010″	.020″	.235″
3054/12	12	22	7/30	.010″	.020″	.255″
3054/15	15	22	7/30	.010″	.020″	.280″
3054/20	20	22	7/30	.010″	.020″	.310″
3054/25	25	22	7/30	.010″	.020″	.340″
3054/30	30	22	7/30	.010″	.020″	.365″
3054/40	40	22	7/30	.010″	.025″	.425″
3054/50	50	22	7/30	.010″	.035″	.500″
3054/60	60	22	7/30	.010″	.035″	.530″

STD. PUT-UP: From 2 thru 7 cond. 500 ft.; from 8 thru 30 cond. 250 ft.

MULTI-CONDUCTOR COLOR CODE CHART

CONDUCTOR COLOR CODE:

1 — Black	21 — White/Brown	41 — White/Green/Red
2 — Red	22 — White/Orange	42 — White/Green/Green
3 — White	23 — White/Gray	43 — White/Green/Blue
4 — Green	24 — White/Violet	44 — White/Green/Brown
5 — Orange	25 — White/Black/Red	45 — White/Green/Purple
6 — Blue	26 — White/Black/Green	46 — White/Blue/Black
7 — Brown	27 — White/Black/Yellow	47 — White/Blue/Red
8 — Yellow	28 — White/Black/Blue	48 — White/Blue/Green
9 — Violet	29 — White/Black/Brown	49 — White/Blue/Blue
10 — Slate	30 — White/Black/Orange	50 — White/Blue/Brown
11 — Pink	31 — White/Black/Slate	51 — White/Blue/Purple
12 — Tan	32 — White/Black/Purple	52 — White/Brown/Black
13 — Red/Green	33 — White/Black/Black	53 — White/Brown/Red
14 — Red/Yellow	34 — White/Red/Black	54 — White/Brown/Green
15 — Red/Black	35 — White/Red/Red	55 — White/Brown/Blue
16 — White/Black	36 — White/Red/Green	56 — White/Brown/Brown
17 — White/Red	37 — White/Red/Blue	57 — White/Brown/Purple
18 — White/Green	38 — White/Red/Brown	58 — White/Purple/Red
19 — White/Yellow	39 — White/Red/Purple	59 — White/Purple/Green
20 — White/Blue	40 — White/Green/Black	60 — White/Purple/Blue

© United Technical Publications

DABURN ELECTRONICS & CABLE CORP.
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

AUDIO, DATA SHIELDED, MICROPHONE & CONTROL CABLES

AUDIO & DATA SHIELDED CABLE
INDIVIDUALLY ALUMINUM MYLAR FOIL SHIELDED PAIRS

DESCRIPTION: Each conductor **stranded**, copper tinned, hi density polyethylene insulation, color coded, conductors — twisted pairs. #22 **stranded** tinned copper wire. Aluminum foil mylar shield over each pair and copper tinned drain wire. Overall chrome grey PVC jacket. Nom. cap. between conds. of a pair, 25 PF/FT. Capacitance of a single conductor to shield, 45 PF/FT.

Sugg. Working Voltage: 300V.



DABURN Cat. No.	No. of Pairs	No. of Conds.	Cond. Strand	Nom. Wall	Nom. Jkt.	Nom. O.D.
2932/3	3	6	7/30	.010″	.025″	.235″
2932/6	6	12	7/30	.010″	.030″	.320″
2932/9	9	18	7/30	.010″	.035″	.370″
2932/11	11	22	7/30	.010″	.040″	.415″
2932/15	15	30	7/30	.010″	.040″	.485″
2932/19	19	38	7/30	.010″	.050″	.530″
2932/27	27	54	7/30	.010″	.055″	.645″

STD. PUT-UP: 500 Ft., 1000 Ft. **Construction variations to order.**

AUDIO & DATA SHIELDED CABLE
ALUMINUM MYLAR FOIL SHIELD
INDIVIDUALLY SHIELDED MULTIPLE PAIR



This construction reduces the bulk in required cables. Multipaired #22 **solid** tinned copper, vinyl insulated .013″, cabled in pairs. Aluminum foil mylar shield over each pair and drain wire, overall grey vinyl jacket. Nom. Cap. between Conds. 40 MMF/Ft. Nom. Cap. between 1 Cond. and others connected to shield — 77 MMF/Ft.

DABURN Cat. No.	Pairs	Conds.	Nom. Jacket	Nom. O.D.
2930/3	3	6	.030″	.252″
2930/6	6	12	.037″	.345″
2930/9	9	18	.040″	.410″
2930/11	11	22	.040″	.458″
2930/15	15	30	.045″	.510″
2930/19	19	38	.055″	.630″
2930/27	27	54	.070″	.770″

STD. PUT-UP: 500 Ft., 1000 Ft. **Construction Variations Available to Order.**

ALUMINUM MYLAR FOIL SHIELD PLASTIC JACKETED CABLE



Extremely light in weight, provides 100% shield coverage — small diameters. Each cond. tinned copper, stranded color coded polyethylene insulation, twisted, drain wire, aluminum mylar foil shield, gray polyvinylchloride jacket overall. Drain wire provides quick and easy grounding.

OPERATING TEMPERATURE: −20°C to +60°C. **OPERATING VOLTAGE:** 400 Volts.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
2960	2	22	7/30	.015″	.020″	.160″
2960/3	3	22	7/30	.015″	.020″	.185″
2960/4	4	22	7/30	.015″	.020″	.205″
2961	2	20	10/30	.015″	.020″	.185″
2961/3	3	20	10/30	.015″	.020″	.205″
2961/4	4	20	10/30	.015″	.020″	.225″
2962	2	18	16/30	.017″	.020″	.220″
2962/3	3	18	16/30	.017″	.020″	.235″
2962/4	4	18	16/30	.017″	.020″	.255″
2963	2	16	26/30	.017″	.020″	.255″
2963/3	3	16	26/30	.017″	.020″	.275″
2964	2	14	41/30	.017″	.020″	.295″
2964/3	3	14	41/30	.017″	.020″	.305″

STD. PUT-UP: 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green.

SHIELDED CABLE
PLASTIC JACKETED BRAIDED COPPER SHIELD



Suitable for P.A. and sound systems, installation in schools, hospitals and institutions, transmitters, electronic circuits, etc. Construction allows ease of pigtailing. Shield provides additional strength for cable. Each conductor tinned copper, PVC insulation, color coded, twisted, braided T-C shield, gray PVC jacket overall. Suitable for outdoor installations.

OPERATING TEMPERATURE: −20°C to +60°C.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Operating Voltage	Nom. O.D.
2970	2	22	7/30	.017″	.020″	350V	.175″
2970/3	3	22	7/30	.017″	.020″	350V	.195″
2971	2	20	10/30	.017″	.020″	350V	.215″
2971/3	3	20	10/30	.017″	.020″	350V	.235″
2972	2	18	16/30	.017″	.020″	350V	.245″
2972/3	3	18	16/30	.017″	.020″	350V	.255″
2974	2	16	26/30	.017″	.020″	350V	.260″
2974/3	3	16	26/30	.017″	.020″	450V	.290″
2975	2	14	41/30	.020″	.020″	450V	.295″
2975/3	3	14	41/30	.020″	.020″	450V	.235″
2976	2	12	65/30	.020″	.020″	450V	.340″
2976/3	3	12	65/30	.020″	.020″	450V	

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White.
STD. PUT-UP: 500 Ft., 1000 Ft.
CONSTRUCTION VARIATION TO ORDER

SHIELDED PLASTIC MICROPHONE CABLE



Will withstand abuse and is resistant to oil, moisture, aging. Have low capacitance, Hi insulation resistance and low attenuation. Will not strain or mark.

2772 — For hi impedance microphone
2773 — For crystal, ribbon, etc. Mikes all are suitable for hi-fi interconnecting
2774 — For hi impedance lapel mikes.

OPERATING TEMPERATURE: −20°C to +60°C.

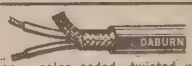
SHIELDED MICROPHONE CABLE ONE CONDUCTOR

Uses tinned copper spiral shield — for ease in soldering — extremely flexible-plastic.

DABURN Cat. No.	Cond.	Size	Strand	Shield	Nom. Cap./Ft. MMF	Sugg. Work Voltage	Nom. O.D.
2770	1	25	7/33	Spiral	23	3000	.159″
2771	1	25	7/33	Spiral	33	1000	.120″
2772	1	20	26/34	Braid	36	4000	.175″
2773	1	25	7/33*	Braid	34	3500	.144″
2774	1	25	7/33*	Braid	23	5000	.190″

*3 strand tinned copper, 4 strand tinned copperweld.

MULTICONDUCTOR MICROPHONE CABLE



Each conductor tinned copper, polyethylene insulation — color coded, twisted with fillers, textile wrap, tinned copper braid shield, gray vinyl jacket overall.
OPERATING TEMPERATURE: −20°C to +60°C, 600 Volts. *Spiral T.C. Shield.

2782	2	22	16/34	31 MMF	1000	.231″
2782/20	2	20	26/34	45 MMF	600	.240″
2782/24*	2	24	10/34	38 MMF	1000	.190″

SHIELDED ULTRA LOW CAPACITY MICROPHONE CABLE
Plastic Jacket — Cellular Foam Polyethylene Insulation BRAIDED SHIELD

DESCRIPTION: Constructed with white foam polyethylene insulation, braided tinned copper shield, chrome gray vinyl jacket. The low loss foam polyethylene construction has lower capacitance and attenuation than standard polyethylene mike cables as much as 50%. This increases the effective length of cable as much as 50% without signal loss.



OPERATING TEMPERATURE −20°C to +60°C.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Cap./Ft.	Nom. Jacket	Nom. O.D.
2690	1	26	7/34*	30MMF	.020″	.114″
2691	1	24	10/34	20MMF	.030″	.180″
2692	1	24	10/34	15MMF	.030″	.220″
2693	2	22	16/34	11MMF	.030″	.295″

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—White, 2—Black.
*3 strands tinned copper, 4 strands tinned copperweld.

PLASTIC JACKETED AUDIO AND MULTICONDUCTOR CABLE
SPIRAL WRAPPED COPPER SHIELD



Suitable for P.A. and sound systems, schools, hospitals, institutions, recording studios, paging and call systems. Each conductor copper tinned, plastic insulation, color coded, twisted, spiral wrapped tinned, copper shield, gray plastic jacket. Temp.: −20 to +60°C. Simplifies pigtailing. Provides almost 100% shielding coverage.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Insul.	Nom. Jacket	Sugg. Working Voltage	Nom. O.D.
2950	2	22	7/30	.017″	.020″	350V	.170″
2950/1	1	22	7/30	.017″	.020″	350V	.115″
2950/3	3	22	7/30	.017″	.020″	350V	.190″
2950/4	4	22	7/30	.017″	.020″	350V	.200″
2950/6	6	22	7/30	.017″	.020″	350V	.235″
2949	2	22	1	.017″	.020″	350V	.170″
2952	2	20	10/30	.017″	.020″	350V	.190″
2952/1	1	20	10/30	.017″	.020″	350V	.129″
2952/3	3	20	10/30	.017″	.020″	350V	.205″
2952/4	4	20	10/30	.017″	.020″	350V	.222″
2952/6	6	20	10/30	.017″	.020″	350V	.260″
2953	2	18	16/30	.017″	.020″	350V	.230″
2953/1	1	18	16/30	.017″	.020″	350V	.133″
2953/3	3	18	16/30	.017″	.020″	350V	.230″
2953/4	4	18	16/30	.017″	.020″	350V	.245″
2954	2	16	26/30	.017″	.020″	350V	.235″
2954/4	4	16	26/30	.017″	.020″	350V	.255″
2954/3	3	16	26/30	.017″	.020″	350V	.245″
2955	2	14	41/30	.020″	.025″	450V	.285″
2955/3	3	14	41/30	.020″	.025″	450V	.292″
2955/4	4	14	41/30	.020″	.025″	450V	.310″
2956	2	12	65/30	.020″	.025″	450V	.325″
2956/3	3	12	65/30	.020″	.025″	450V	.335″

STD. PUT-UP: 250 Ft., 500 Ft., 1000 Ft.
CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green.
CONSTRUCTION VARIATION TO ORDER

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

TEST LEAD WIRE • MINIATURIZATION WIRE & CABLE PHONO & STEREO WIRE & CABLE—HI TENSION CABLE

RUBBER KINKLESS TEST LEAD WIRE



Suitable as Test Lead Wire in analyzers, instruments, oscillators, meters, etc. Wherever extra flexibility and limpness is necessary. Single conductor, extra flexible stranded soft tinned copper, separator, wall color coded rubber, smooth wax finish.

OPERATING TEMPERATURE: −20°C to +60°C. Colors: Red, black

DABURN No.	Size	Strand	Nom. Insul. Wall	Sugg. Voltage	O.D. Nom. •
2715	20	41/36	3/64"	3,000V	.137"
2716	18	65/36	3/64"	5,000V	.145"
*2718	18	65/36	3/64"	5,000V	.145"
2717	18	65/36	5/64"	10,000V	.210"

* Types WS-16/U Black, WS17/U Red Per MIL-W-13169.

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

PLASTIC KINKLESS TEST LEAD WIRE



Soft formulation vinyl maximum flexibility. Temperature stability from −80°C to +115°C. Exceed requirements for MIL-I-3930A Type JP (PVC). Suitable for test leads, etc. Resistant to gasoline and oil. Excellent abrasion Resistance.

DESCRIPTION: One conductor tinned copper stranded, special formulation vinyl insulation — smooth surface.

OPERATING TEMPERATURE: −80°C to +115°C, 5000V rating.

COLORS: Black, Red, Yellow, Green, White, Blue.

DABURN No.	Size	Strand	Ins.	Nom. O.D.
2722/22	22	26/36	.032"	.100"
2722/20	20	26/34	.032"	.104"
2722/18	18	65/36	.032"	.112"
2722/16	16	65/34	.032"	.129"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

MINIATURIZATION HOOK-UP WIRE AND CABLE Conforms to MIL-W-16878D Spec.

UNSHIELDED — ONE CONDUCTOR 105°C — 600V RATING

Used as lead computers, transistor circuits, instruments — where fine sizes are required with high temperature conditions. One conductor stranded tinned copper, 105°C vinyl resin overall.

DABURN No.	Conductor	Size	Strand	Nom. Wall	Nom. O.D.
2670/32	1	32	7/40	.010"	.029"
2670/30	1	30	7/38	.010"	.030"
2670/28	1	28	7/36	.010"	.035"
2670/26	1	26	10/36	.010"	.038"
2670/24	1	24	16/36	.015"	.055"



DESCRIPTION One conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation overall.

STOCK COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange and Purple.

STD. PUT-UP: 500 Ft., 1000 Ft.

SHIELDED HOOK-UP WIRE SUB-MINIATURE • SUPER FLEXIBLE • 600V RATING

One conductor stranded tinned copper, 105°C vinyl resin overall.

DABURN No.	Conductor	Size	Strand	Nom. Wall	Nom. O.D.
2682	1	30	7/38	.010"	.052"
2684	1	28	7/36	.010"	.057"
2686	1	26	10/36	.010"	.060"
2688	1	24	16/36	.010"	.073"



DESCRIPTION One conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation and tinned copper shielded braid overall.

STOCK COLOR: White (Under Shield).

STD. PUT-UP: 500 Ft., 1000 Ft.

MULTI CONDUCTOR CABLE



SUB-MINIATURE • NOT SHIELDED • FLEXIBLE

Tinned Copper Conductors — Conforms to MIL-W-16878D Spec

Suggested Operating Temperature: −55°C to +105°C



TWISTED — NO OUTER JACKET — 600V RATING

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
2672	2	30	7/38	.010"	.058"
2672/3	3	30	7/38	.010"	.064"
2672/4	4	30	7/38	.010"	.072"

COND. COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

TWISTED—CLEAR VINYL JACKET OVERALL—600V RATING

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
2674	2	28	7/36	.010"	.079"
2674/3	3	28	7/36	.010"	.086"
2674/4	4	28	7/36	.010"	.095"

COND. COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

SHIELDED SUB-MINIATURE MULTI-CONDUCTOR CABLE



Tinned Copper Conductors — Conforms to MIL-W-16878D Spec

Suggested Operating Temperature: −55°C to +105°C



TWISTED — SHIELDED — NO OUTER JACKET

1,000V Rating

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
2676	2	24	16/36	.015"	.114"
2676/3	3	24	16/36	.015"	.123"
2676/4	4	24	16/36	.015"	.144"

COND. COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

TWISTER — SHIELDED — CLEAR VINYL JACKET OVERALL

600V Rating

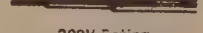
DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
2678	2	28	7/36	.010"	.105"
2678/3	3	28	7/36	.010"	.115"
2678/4	4	28	7/36	.010"	.120"

COND. COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

NOTE: Multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.

TINNED COPPER SHIELDED PHONO WIRE



Suitable where small diameter, limpness and extremely flexibility is necessary as for phono pickups, stereo, etc.

OPERATING TEMPERATURE: −20°C to +60°C.

300V Rating

DABURN No.	Size	Strand	Overall Insul Wall	Nom. O.D.
2737	24	16/36	.010"	.075"
2738	22	7/30	.010"	.080"
COTTON BRAID OVER-SHIELD				
2739	24	16/36	.010"	.095"

STD. PUT-UP: 100 Ft., 500 Ft.

SHIELDED HOOK-UP WIRE



One conductor, tinned copper stranded, polyvinyl-chloride insulation, lacquered glass braid, overall tinned copper shileded braid.

OPERATING TEMPERATURE: −20°C to +60°C.

600V Rating

DABURN No.	Size	Strand	Nom. Wall	Nom. O.D.
2727/22	22	7/30	.016"	.095"
2727/20	20	10/30	.016"	.105"
2727/18	18	16/30	.016"	.125"
2727/16	16	26/30	.016"	.135"
2727/14	14	41/30	.016"	.155"
2727/12	12	65/30	.016"	.175"
2727/10	10	105/30	.025"	.200"

STD. PUT-UP: 1000 Ft.

7MM HIGH TENSION CABLE



#2730 — unshielded one conductor, insulation, cotton braid highly lacquered.

#2731 — same construction as above plus a closely woven tinned copper shielded braid overall.

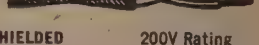
DABURN No.	Size	Strand	Insul.	O.D.
2730	16	19/29	3/32"	.275"
*2731 (Shielded)	16	19/29	3/32"	.295"

STD. PUT-UP: 100 Ft., 500 Ft. *10 amps at 25KV

Suitable for auto and aircraft ignition systems where grounding is indicated.

HI-FI STEREO

Interconnecting Cable — Phono Wire



Extremely flexible. Designed for low hum and noise pickup. Special PVC formulation −40°C to +80°C operation.

200V Rating

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
TWISTED — UNSHIELDED					
2741	1	32	7/40	.010"	.028"
2742	2	32	7/40	.010"	.047"
2743	3	32	7/40	.010"	.053"
2744	4	32	7/40	.010"	.061"
TWISTED — SHIELDED					
2745	1	32	7/40	.010"	.040"
2746	2	32	7/40	.010"	.067"
2747	3	32	7/40	.010"	.072"
2748	4	32	7/40	.010"	.080"
2751 #	2	32	7/40	.010"	.080"

STD. PUT-UP: 500 Ft., 1000 Ft. #2751 Individually Shielded.

CONDUCTOR COLOR CODE: 1—White, 2—Red, 3—Black, 4—Green.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

POWER CORDS • COAXIAL CABLE • ROTOR • SPEAKER CABLE

SERVICE CORD — HEAVY DUTY

UL and CSA approved

Suitable for replacement on machinery, tools, refrigerators, electronic devices



DESCRIPTION: Two and three conductors, stranded bare copper, serve, rubber insulation, filler, wrap, tough black rubber jacket overall. Molded plug one end, free end stripped and tinned — Hanked.

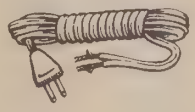
VOLTAGE RATING: 300V

DABURN No.	Cord L'gth.Ft.	Cond.	Size	Strand	Type	Amp Rating	Cord O.D.
1980	8	2	16	65/34	SJ	10	.325″
1980/3	8	3	16	65/34	SJ	10	.355″
1982/3	8	3	18	41/34	SJ	7	.330″
1984	9	2	18	41/34	SV	7	.245″
1984/3	9	3	18	41/34	SV	7	.265″

Std Pkg. 25

UL APPROVED — SERVICE LINE CORD

Use as an all purpose power supply cord for small appliances, lamps, radios, etc.



DESCRIPTION: Two conductors parallel SP-1 (POSJ) with molded-on male plug, double brass blades, conductor end stripped and tinned — Hanked. Available in black and brown. 300V rating.

DABURN No.	Length	Cond.	Size	Strand	Nom. O.D.	Std. Pkg.
1987	6	2	18	41/34	130″ x .235″	50
1988	7½	2	18	41/34	130″ x .235″	50

RG/U COAXIAL CABLE

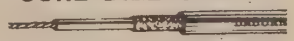
DESCRIPTION: One conductor, polyethylene insulation, copper braid shield, plastic jacket overall.

DABURN No.	Spool	Type	Nom. Imp.	Size	Nom. MMFD/ Ft.	Strand	O.D.
1925	500′	RG-8/U	52	13	29.5	7/21 Bare	.405″
1926	500′	RG-9/U	51	13	30.0	7/21 S	.420″
1927	500′	RG-11/U	75	18	20.5	7/26 Tinned	.405″
1928	1000′	RG-58A/U	50	20	29.0	19/.0068 Tinned	.195″
1929	1000′	RG-58/U	53.5	20	28.5	Solid	.195″
1930	1000′	RG-59/U	73	22	21.0	Solid C.W.	.242″
1931	1000′	RG-62/U	93	22	13.5	Solid	.242″

Additional RG numbers available conforming to MIL-C-17B Specs.

DABURN COAXIAL CABLES WITH HIGH TEMPERATURE TEFLON* CORE DIELECTRIC

Meets MIL-C-17C



These Teflon* Core Dielectric Co-Axial Cables combine both miniaturization and hi-temperature qualities. The Teflon Jackets are weatherproof, resistant to fuels and are extremely flexible. Shield: Silver Covered Copper.

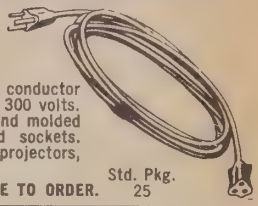
DABURN No.	Military Number RG/U Type	Ohms	Cap. MMFT/ Ft.	Inner Conductor	O.D. Inches	Max. Oper. Volts RMS	Nom. Atten. DB/100′ 400 Mc	RG/U Type
D187A/U	187A/U	75	19.5	7/28 Silvered Copperweld	.110	1200	16.0	187A/U
D188/U	188/U	50	29.0	7/.0067 Silvered Copperweld	.110	1200	16.7	188/U
D188A/U	188A/U	50	29.0	7/.0067 Silvered Copperweld	.110	1200	16.7	188A/U
D195/U	195/U	95	15.0	7/38 Silvered Copperweld	.155	1500	11.0	195/U
D195A/U	195A/U	95	15.0	7/38 Silvered Copperweld	.155	1500	11.0	195A/U
D196/U	196/U	50	28.5	7/38 Silvered Copperweld	.080	1000	28.0	196/U
D196A/U	196A/U	50	28.5	7/38 Silvered Copperweld	.080	1000	28.0	196A/U

STD. PUT-UP: 500 Ft., 1000 Ft. *TEFLON—DUPONT

JKT MTL.: D187A/U Teflon. All others TFE Teflon.

POWER CORD SETS

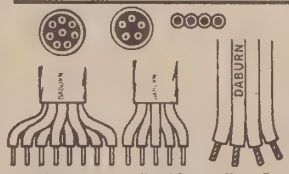
UL and CSA approved



Manufactured for lasting service these 2 and 3 conductor quality black rubber cords are flexible. Rated at 300 volts. One end has molded plastic male plug, other end molded female plug. Will fit conventional plugs and sockets. Useful for business and data machines, projectors, vacuum cleaners, appliances, etc. Std. Pkg. 25

CUSTOM CONSTRUCTION OF POWER CORDS MADE TO ORDER.

Cat. No.	Size & Conds.	Cord Length Ft.	UL Type	Strand	Amp Rating	Nom. O.D.
9-201	2/18	6	SV	41/34	7	.245″
9-202	2/18	9	SV	41/34	7	.245″
9-203	2/18	10	SJ	16/30	7	.300″
9-204	2/18	25	SJ	16/30	7	.300″
9-206	2/16	10	SJ	26/30	10	.325″
9-207	2/16	25	SJ	26/30	10	.325″
9-208	2/16	50	SJ	26/30	10	.325″
9-211	3/18	10	SJ	16/30	7	.330″
9-212	3/18	25	SJ	16/30	7	.330″
9-213	3/18	50	SJ	16/30	7	.330″
9-215	3/16	15	SJ	26/30	10	.365″
9-216	3/16	25	SJ	26/30	10	.365″
9-217	3/16	50	SJ	26/30	10	.365″



#1909 #1908 #1907

ANTENNA CONTROL ROTOR CABLE

#1907 — 4 cond. flat parallel polyethylene plastic insulation — one outer conductor tinned, balance bare copper.
#1908 — 5 cond. twisted, color coded, vinyl plastic jacket overall.
#1909 — 8 cond. twisted, color coded vinyl plastic jacket overall.

DABURN No.	Cond.	Size	Strand	Nom. O.D.
1907	4	20	7/28	.072″ x .390″
1908	5	20	7/28	.180″
1909	8	22	7/30	.205″

CONDUCTOR COLOR CHART

1-Black, 2-White, 3-Red, 4-Green, 5-Yellow, 6-Blue, 7-Brown, 8-Orange.

STD. PUT-UP: 500 Ft., 1000 Ft.

LAMP CORD

Types SP-1 (POSJ-64) — Type SP-1 (POT) UL Approved

An all purpose approved cord both SP-1 (rubber) and SPT-1 (Plastic) for lamps, radios and small instruments and appliances. 300V rating.



DABURN No.	Cond.	Size	Strand	Insul.	Type	UL Type	Nom. O.D.
1990	2	18	41/34	Rubber	SP-1	POSJ	.130″x.235″
1991	2	18	41/34	Plastic	SPT-1	POT	.130″x.225″
1993	2	18	41/34	Pl. Clear	SPT-1	POT	.115″x.215″
1994	2	16	65/34	Pl. Brown	SPT-2	POT	.160″x.300″

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.

COLORS: (Rubber) Brown, Black, White; (Plastic) Brown, Black, Ivory.

PLASTIC SPEAKER CABLE

CLEAR AND COLORED INSULATION



DESCRIPTION: Conductors are parallel, stranded bare copper, color coded and clear polyvinylchloride insulation. Conductors separate quickly when split apart. Suitable for hi-fi speaker cable, miniature juke-box speaker connection, rear auto speaker extension cable. Clear insulation blends with any interior.

TEMPERATURE RATING: −20°C to +60°C. **OPER. VOLTAGE:** 300V

Daburn No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.	Stock Colors
2754	2*	24	7/32	.016″	.057″x.120″	Brn.,Blk.,Wh., Gray, Tan
2755	2*	24	7/32	.016″	.057″x.120″	Clear
2756	2	20	10/30	.016″	.085″x.175″	Brn.,Blk.,Wh., Gray, Tan
2757	2	20	10/30	.016″	.085″x.175″	Clear
2758	2	18	41/34	.032″	.115″x.215″	Brn.,Blk.,Wh., Gray, Tan
2759	2	18	41/34	.032″	.115″x.215″	Clear

* 1 conductor tinned, 1 bare.

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

SPIRAL WRAP FOR HARNESSES • PUSH BUTTON TIES WIRE TIES • TEST LEADS • COMPONENT CLIPS

SPIRAL WRAP — PLASTIC TUBING FOR HARNESSES



Available in four formulations: Polyethylene, Rulan (flame retardant) Polyethylene, Nylon and Teflon. Easily applied. Twists on easily. Can be flexed repeatedly without cracking or breaking. Reusable, bends around sharp corners. Expandable.

Per MIL-P-22692, MIL-I-631D, MIL-P-3803

POLYETHYLENE (Clear) — TEMP. RANGE −105° to +200°F

DABURN Cat. No.	Covers Wire Groups	Outside Diam.	Nom. Wall	Standard Package
605-1/8"	1/16" to 1/2"	1/8"	.031"	100', 500', 1000'
605-3/16"	1/8" to 1"	3/16"	.031"	100', 500', 1000'
605-1/4"	3/16" to 2"	1/4"	.045"	100', 500', 1000'
605-3/8"	5/16" to 3"	3/8"	.058"	100', 500', 1000'
605-1/2"	3/4" to 4"	1/2"	.058"	100', 500', 1000'

RULAN (White) — (Carbon Impregnated Polyethylene) TEMP. RANGE: −10F° to +200°F

606-1/8"	1/16" to 1/2"	1/8"	.030"	100', 500', 1000'
606-1/4"	3/16" to 1 1/2"	1/4"	.058"	100', 500', 1000'
606-3/8"	5/16" to 2"	3/8"	.058"	100', 500', 1000'
606-1/2"	3/4" to 4"	1/2"	.060"	100', 500', 1000'

NYLON

Per MIL-P-17091B, MIL-P-20693 & MIL-M-22096 −212° to +300°F

Cat. No. DABURN	Wire Range Covers	Diam. Outside	Wall Nom.
607-1/8"	1/16" to 1/2"	1/8"	.031"
607-1/4"	3/16" to 2"	1/4"	.058"
607-3/8"	5/16" to 3"	3/8"	.058"
607-1/2"	3/4" to 4"	1/2"	.058"

COLOR: Natural (White). **STD. PUT-UP:** 100 Ft., 500 Ft.

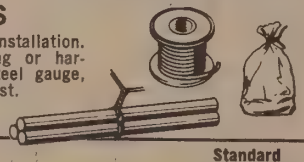
TEFLON

Per MIL-I-22129 −450°F to +500°F

608-1/8"	1/16" to 1/2"	1/8"	.031"
608-1/4"	3/16" to 2"	1/4"	.030"
608-3/8"	5/16" to 2 1/2"	3/8"	.030"
608-1/2"	3/4" to 3"	1/2"	.030"

COLOR: Natural (White). **STD. PUT-UP:** 100 Ft., 500 Ft.

PLASTIC WIRE TIES



Useful for temporary or permanent installation. Can be adapted for immediate bundling or harnessing. Plastic insulated. Has .016" steel gauge, wire reinforcement, 5/32" wide, 30 lb. test.

TEMPERATURE: −20° to +200°F.

DABURN Cat. No.		Standard Package
603	Plastic Wire Ties	100', 500', 1000'

COLORS: White, Blue, Red, Green, Yellow. Additional colors available.

DABURN PUSH BUTTON WIRE TIES



Push button wire ties for harnessing wire. 4 1/2" in length, each tie is adjustable to 30 different diameters. Made of strong polyethylene, it is inert chemically and heat resistant. Breaking strength 45 to 95 lbs. After the tie is placed in hole for anchoring, wires can be replaced or added by loosening tie and pulling tight again. Designed to fit .250" to .265" hole in a .031" to .140" thick panel. Material conforms to Spec. LP590. Temp. to +200°F

DABURN Cat. No.	(Specify Color)	Standard Package
601-4	Red, Blue, Yellow	100, 1000

UL APPROVED — TV POWER SUPPLY CORD



Replacement of damaged or worn out TV cord.

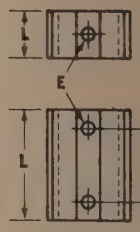
DESCRIPTION: Six foot, 2 cond #18 SP-1 (POSJ) brown cord with molded male plug and TV molded connector on other end.

DABURN No.		Std. Pkg.
9-45	Television Power Supply Cord — 6 feet	25

DABURN COMPONENT CLIPS







Hold and insulate, electrical and electronic components, accessories — spare parts. Holds firmly and still permits fast and easy insertion. Convenient for fastening clips and retainers for transistors, batteries, fuses, capacitors, resistors, lamps, etc. These Daburn clips are made of black vinyl (polyvinylchloride). Has high dielectric strength. Can be mounted with screws, rivets or other fastening means.

MATERIAL: Rigid Vinyl.

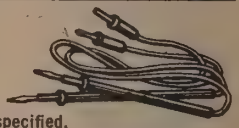
TEMPERATURE RANGE: −20° to +165°F.

STANDARD PACKAGE: 100, 1000.

DABURN Stock No.	D Diam.	H Height	L Length	E Diam. of Hole	F Dist. Bet. Holes
600-1/4"	1/4"	13/32"	1/2"	3/32"	—
600-5/16"	5/16"	15/32"	1/2"	3/32"	—
600-3/8"	3/8"	1/2"	1/2"	3/32"	—
600-7/16"	7/16"	1/2"	1/2"	3/32"	—
600-1/2"	1/2"	5/8"	1/2"	3/32"	—
600-9/16"	9/16"	5/8"	1/2"	3/32"	—
600-5/8"	5/8"	5/8"	1/2"	3/32"	—
600-11/16"	11/16"	3/4"	1/2"	3/32"	—
600-3/4"	3/4"	7/8"	1/2"	3/32"	—
600-7/8"	7/8"	1"	1/2"	3/32"	3/4"
600-1"	1"	1 1/4"	1 1/8"	3/32"	3/4"
600-1 3/8"	1 3/8"	1 15/32"	1 1/8"	3/32"	3/4"

TEST LEADS

NEEDLEPOINT AND SOLDERLESS OVERALL LENGTH 50"

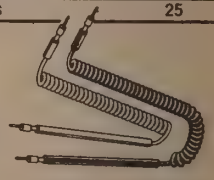


Black and red kinkless test lead wire, handles as specified.

DABURN No.	Description	Standard Package
17-308	Pencil Type Bakelite, 6" Handles	10
17-360	Deluxe Solderless Prod, 5" Handles	25
17-361	Deluxe Needlepoint Prod, 5" Handles	25
17-320	Needlepoint Prods, 4" Handles	25
17-322	Solderless Prods, 4" Handles	25

TEST LEADS

RETRACTILE KINKLESS WIRE RETRACTED LENGTH OF WIRE 9". EXTENDS TO 6 FT. NON-TANGLING.



Black and red wire.

DABURN No.	Description	Standard Package
17-364	Solderless Phone Tip, Retractile Wire, Solderless Prod	10

TEST LEADS

ALLIGATOR CLIP TEST LEADS



Black and red kinkless test lead wire with steel cadmium plated clips at each end.

DABURN No.	Wire Length	Standard Package
17-275	12"	12
17-276	24"	12
17-277	36"	12
17-278	48"	12

TEST LEADS

INSULATED ALLIGATOR CLIPS

Black and red kinkless test lead wire with steel, cadmium plated clips; vinyl plastic boot.

DABURN No.	Wire Length	Standard Package
17-280	12"	12
17-281	24"	12
17-282	36"	12
17-283	48"	12

© United Technical Publications

DABURN

DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

ELECTRONIC LACING CORDS AND TAPES, CABLE CLAMPS & CLIPS

LACING CORD-TAPE TO MEET MIL-T-713C TYPE P* AND MIL-T-43435 COMP. P-TYPE S

NYLON FLAT BRAIDED LACING TAPE

Nylon fiber flat braided impregnated with MW microcrystalline fungicidal wax. Stays flat. Designed to create a wider contact to distribute the stress. Flexible. Won't slip when knotted. Resistant to fungus, flame, abrasion, acids, MIL-T-43435 (new) supersedes MIL-T-713 (old).

Daburn No.	Color	(New) Size	(Old) Class	Nom. Width	Nom. Thickness	Tensile Strength	Standard Put-Up Tubes
2035	Natural White	—	—	.200″	.014″	150 lbs.	500 yd.
2035B	Black	—	—	.200″	.014″	150 lbs.	500 yd.
2036	Natural White	2	1	.120″	.014″	80 lbs.	500 yd.
2036B	Black	2	1	.120″	.014″	80 lbs.	500 yd.
2037	Natural White	3	2*	.090″	.014″	50 lbs.	500 yd.
2037B	Black	3	2*	.090″	.014″	50 lbs.	500 yd.
2038	Natural White	4	3	.065″	.010″	30 lbs.	500 yd.
2038B	Black	4	3	.065″	.010″	30 lbs.	500 yd.
2039	Natural White	5	4	.046″	.010″	15 lbs.	500 yd.
2039B	Black	5	4	.046″	.010″	15 lbs.	500 yd.

DACRON FLAT BRAIDED LACING TAPE

Dacron fiber flat braided impregnated with non-slip fungicidal finish. Will not cut or damage insulation. Stays flat. Has all characteristics of nylon with elongation, better resistance to acids.

DABURN No.	Color	Nom. Width	Thickness Nom.	Strength Tensile	Standard Put-Up Tubes
2041	Natural White	.120″	.014″	80	500 yd.
2041B	Black	.120″	.014″	80	500 yd.
2042	Natural White	.090″	.014″	48	500 yd.
2042B	Black	.090″	.014″	48	500 yd.
2043	Natural White	.060″	.010″	35	500 yd.
2043B	Black	.060″	.010″	35	500 yd.
2044	Natural White	.046″	.010″	25	500 yd.
2044B	Black	.046″	.010″	25	500 yd.

TEFLON* FIBERGLASS FLAT BRAIDED LACING TAPE

Teflon coated fiberglass flat braided lacing tape bonded for high temp. operations (550°F). Stays flat — for strength, stability. Teflon finish increases strength and abrasion resistant surface. Will not cut or damage insulation.

DABURN No.	Color	Nom. Width	Thickness Nom.	lbs. Test	Standard Put-Up Tubes
2045	White	.170″	.025″	150	500 yd.
2046	White	.120″	.020″	90	500 yd.
2047	White	.080″	.020″	70	500 yd.

TEFLON* FLAT BRAIDED LACING TAPE

for high temperature operations (550°F)

DABURN No.	Color	Nom. Width	Nom. Thickness	Test lbs.	Standard Put-Up Tubes
2048	Brown	.100″	.016″	35	500 yd.
2049	Brown	.075″	.010″	15	500 yd.



ROUND TWISTED NYLON LACING CORD

Manufactured to meet MIL-T-713A Type P specification, Composition P, Classes 3, 2, 1. Wax finish — compounded with fungicide to resist mildew. Easy to tie.

PUT-UP ON 1 LB. TUBES

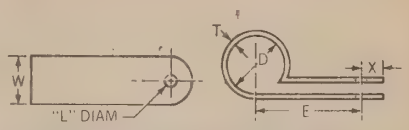
DABURN No.	Color	Class	Tensile Strength	Nom. Diam.	Yds. Per Tube
2070	Natural	1	70 lbs.	.039″	600
2070B	Black	1	70 lbs.	.039″	600
2071	Natural	2	48 lbs.	.029″	800
2071B	Black	2	48 lbs.	.029″	800
2072	Natural	3	32 lbs.	.025″	1140
2072B	Black	3	32 lbs.	.025″	1140
2072/1	Natural	4	20 lbs.	.020″	2400
2072/1B	Black	4	20 lbs.	.020″	2400

ROUND TWISTED LINEN LACING CORD

Manufactured from pure flax treated with microcrystalline wax compounded with fungicide to resist mildew. Classes 1, 2, 3 meet MIL-T-713C Type N specifications.

4 OZ. TUBE DABURN No.	Yds.	8 OZ. TUBE DABURN No.	Yds.	1 LB. TUBES DABURN No. Nat.	DABURN No. Blk.	Yds.	Class	Ply	Diam.	Lb. Test
2073	210	2074	425	2075	2075B	850	—	4	.036″	22
2076	150	2077	300	2078	2078B	600	3	6	.044″	33
2082	115	2083	235	2084	2084B	470	2	8	.051″	50
2079	100	2080	200	2081	2081B	400	—	9	.054″	56
2085	75	2086	150	2087	2087B	300	1	12	.063″	72

NYLON CABLE CLAMPS



MADE OF DU PONT "ZYTEL" 101 NYLON RESIN

Meets MIL-P-26093A and MIL-P-17091A Amend. 2

Light and tough these nylon cable clamps are used as a clamp, strain relief, clip hanger, fastener or strap. Smooth non-abrasive surfaces, rounded edges will not cause shorts or grounds in cable. Insoluble in solvents, gasoline, oils, hydraulic fluids, alcohol, acids, alkalies. Temperature range −60°F to +300°F. Does not support combustion. Inside matte finish. Prevents slippage and is self aligning. Snaps on cable. Meets MIL-P-20693A specs. fungus resistant.

DABURN No.	To Fit Size	D	E	W	T	L	X
625	1/8″	.125	.316	3/8	.050	.177	.227
626	3/16″	.187	.378	3/8	.050	.177	.277
627	1/4″	.250	.409	3/8	.050	.177	.227
628	5/16″	.312	.441	3/8	.050	.177	.277
629	3/8″	.375	.471	3/8	.050	.177	.277
630	7/16″	.437	.519	3/8	.050	.177	.277
631	1/2″	.500	.550	3/8	.050	.177	.277
631A	9/16″	.563	.625	1/2	.060	.177	.227
632	5/8″	.625	.634	1/2	.060	.177	.227
632A	11/16″	.687	.752	1/2	.060	.177	.227
633	3/4″	.750	.718	1/2	.060	.177	.227
634	7/8″	.875	.760	1/2	.060	.177	.227
635	1″	1.000	.802	1/2	.060	.177	.227
636	1 1/8″	1.125	.968	1/2	.062	.204	.250
637	1 1/4″	1.250	1.156	1/2	.062	.204	.250
638	1 1/2″	1.500	1.188	5/8	.070	.204	.250

Std. Pkg. 100, 500, 1000. Also available in Teflon

ETHYL CELLULOSE CABLE CLAMPS

Ethocel recommended for general use. Combines light weight and chemical resistance with excellent shock resisting properties in temp. range from −40°F to +185°F. Approved 7-21-44 Army-Navy Aeronautical AN-742. Also made to meet MIL STD. 242A (Ships). Suitable indoor-outdoor. Std. Pkg. 100, 1000.

DABURN No.	To Fit Size	D	E	W	T	L	X
615	1/8″	.125	.325	1/2	.060	.204	7/32
615A	3/16″	.188	.390	1/2	.060	.204	7/32
615B	1/4″	.250	.421	1/2	.060	.204	7/32
615C	5/16″	.313	.457	1/2	.060	.204	7/32
615D	3/8″	.375	.483	1/2	.060	.204	7/32
615E	7/16″	.438	.531	1/2	.060	.204	7/32
616	1/2″	.500	.562	1/2	.060	.204	7/32
616A	9/16″	.563	.625	1/2	.060	.204	7/32
616B	5/8″	.625	.610	1/2	.060	.204	7/32
616C	11/16″	.688	.666	1/2	.060	.204	7/32
616D	3/4″	.750	.766	1/2	.060	.204	7/32
616E	7/8″	.875	.813	1/2	.060	.204	7/32
617	1″	1.000	.906	1/2	.060	.204	7/32
617A	1 1/8″	1.125	.969	1/2	.060	.204	7/32
617B	1 1/4″	1.250	1.156	1/2	.060	.204	7/32
617C	1 1/2″	1.5	1.0625	5/8	.070	.204	7/32
617D	2″	2.0	1.313	5/8	.070	.204	7/32
617E	2 1/2″	2.5	1.563	5/8	.070	.204	7/32



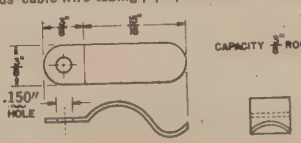
DABURN ALUMINUM CABLE CLAMPS

Made of hard drawn aluminum, light weight. Useful when mounting resonant lines, elements for beams, etc. Strong, durable, rust-proof.

DABURN No.	To Fit Size	Width	Length	Thickness	Clearance Hole For	Std. Pkg.
651A	1/8″	1/2″	1 3/16″	.050″	8	100
651	1/4″	1/2″	7/8″	.050″	8	100
652	5/16″	1/2″	1 5/16″	.050″	8	100
653	3/8″	1/2″	1″	.050″	8	100
654	1/2″	1/2″	1 1/8″	.050″	8	100
654A	5/8″	1/2″	1 1/4″	.050″	8	50
655	3/4″	3/4″	1 3/16″	.090″	10	50
657	7/8″	3/4″	1 5/8″	.090″	10	50
656	1″	3/4″	1 3/4″	.090″	10	50
656A	1 1/8″	3/4″	1 7/8″	.090″	10	50
656B	1 1/4″	3/4″	2″	.090″	10	50

NYLON TENSION CLIPS

Holds cable-wire-tubing-pipe-panels-many and varied uses. Made of nylon, they are insulating, non-corrosive and weather resistant. Easily fastened, easily removed. Strong and elastic.



DABURN Cat. No.	STD. PKG.
641	100, 1000

Natural Color

ESSEX
electronic wire & cable

RG COAXIAL CABLE

Military Number RG/U	ESSEX Number	Armour O.D.	Jacket O.D.	Jacket Type	Shields Outer	Shields Inner	Dielectric O.D. & Type	Center Conductor	V.P. %	Cap. Mmfd. /Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms	Lbs./ 1000 Ft.	Connector Series
5B	21-294	—	.328	IIa	S	S	.181P	16S	65.9	28.5	3000	50	83	N, C
6A	21-330	—	.332	IIa	C	S	.185P	21CW	65.9	20	2700	75	80	N, C
8	21-004	—	.405	I	—	C	.285P	7/21C	65.9	29.5	5000	52	105	N, C, HN, UHF
8A	21-290	—	.405	IIa	—	C	.285P	7/21C	65.9	29.5	5000	52	105	
9	21-005	—	.420	II Grey	C	S	.280P	7/21S	65.9	30	5000	51	128	N, C, HN, UHF
9A	21-231	—	.420	II Grey	S	S	.280P	7/21S	65.9	30	5000	51	128	
9B	21-332	—	.420	IIa	S	S	.280P	7/21S	65.9	30	5000	50	127	N, C, HN, UHF
10A	21-338	.475 Max.	.405	IIa	—	C	.285P	7/21C	65.9	29.5	5000	52	129	N, C, HN, UHF
11	21-007	—	.405	I	—	C	.285P	7/26TC	65.9	20.5	5000	75	92	N, C, HN, UHF
11A	21-296	—	.405	IIa	—	C	.285P	7/26TC	65.9	20.5	5000	75	90	
12A	21-340	.475 Max.	.405	IIa	—	C	.285P	7/26TC	65.9	20.5	5000	75	114	N, C, HN, UHF
13	21-009	—	.420	I	C	C	.280P	7/26TC	65.9	20.5	5000	74	121	N, C, HN, UHF
13A	21-334	—	.420	IIa	C	C	.280P	7/26TC	65.9	20.5	5000	74	121	
14A	21-336	—	.545	IIa	C	C	.370P	10C	65.9	29.5	7000	52	200	N, C, UHF

© United Technical Publications

ESSEX
electronic wire & cable

Note: S—Silvered Copper
SCW—Silver Copperweld
TC—Tinned Copper
TT—Teflon Tape
N-Nichrome
T—Teflon
SST—Semi-Solid Teflon
CW—Copperweld
P—Polyethylene
C—Copper

Military Number RG/U	ESSEX Number	Armour O.D.	Jacket O.D.	Jacket Type	Shields Outer	Shields Inner	Dielectric O.D. & Type	Center Conductor	V.P. %	Cap. Mmfd. /Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms	Lbs./ 1000 Ft.	Connector Series
17	21-013	—	.870	II Grey	—	C	.680P	.188C	65.9	29.5	11000	52	463	N, C, HN, LC
17A	21-298	—	.870	IIa	—	C	.680P	.188C	65.9	29.5	11000	52	460	
18A	21-300	.945 Max.	.870	IIa	—	C	.680P	.188C	65.9	29.5	11000	52	515	N, C, HN, LC
19A	21-303	—	1.120	IIa	—	C	.910P	.250C	65.9	29.5	14000	52	740	LC
20A	21-305	1.195 Max.	1.120	IIa	—	C	.910P	.250C	65.9	29.5	14000	52	800	LC
21A	21-308	—	.332	IIa	S	S	.185P	16N	65.9	29	2700	53	80	N, C
22	21-038	—	.405	I	—	TC	.285P	Two 7/.0152C	65.9	16	1000	95	103	TWIN
22B	21-310	—	.420	IIa	TC	TC	.285P	Two 7/.0152C	65.9	16	1000	95	120	TWIN

© United Technical Publications

ESSEX
electronic wire & cable

RG COAXIAL CABLE

Military Number RG/U	ESSEX Number	Armour O.D.	Jacket O.D.	Jacket Type	Shields Outer	Shields Inner	Dielectric O.D.&Type	Center Conductor	V.P. %	Cap. Mmfd. /Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms	Lbs./ 1000 Ft.	Connector Series
34B	21-792	—	.630	IIa	—	C	.460P	7/.0249C	65.9	21.5	6500	75	224	UHF
35B	21-793	.945 Max.	.870	IIa	—	C	.680P	1045C	65.9	21	10000	75	454	N, C, HN
55B	21-802	—	.206	IIIa	TC	TC	.116P	20S	65.9	28.5	1900	53.5	34	TNC, BNC, BN, C, UHF
57A	21-313	—	.625	IIa	—	C	.472P	7/21C	65.9	15.5	3000	95	241	TWIN
58	21-024	—	.195	I	—	TC	.116P	20C	65.9	28.5	1900	53.5	27	
58A	21-199	—	.195	I	—	TC	.116P	19/.0071 TC	65.9	30	1900	50	27	TNC, BNC, BN, C, UHF, N, PLUG-IN
58C	21-316	—	.195	IIa	—	TC	.116P	19/.0071 TC	65.9	30	1900	50	27	
59	21-025	—	.242	I	—	C	.146P	22CW	65.9	21.5	2300	73	37	TNC, BNC, BN, C, UHF, N, PLUG-IN
59B	21-794	—	.242	IIa	—	C	.146P	.023CW	65.9	21	2300	75	35	
62	21-026	—	.242	I	—	C	.146SSP	22CW	84	13.5	750	93	36	
62A	21-318	—	.242	IIa	—	C	.146SSP	22CW	84	13.5	750	93	35	TNC, BNC, BN C, UHF, N, PLUG-IN
62B	21-771	—	.242	IIa	—	C	.146SSP	7/32CW	84	13.5	750	93	30	
63	21-027	—	.405	I	—	C	.285SSP	22CW	84	10	1000	125	88	N, C, HN, UHF,
63B	21-320	—	.405	IIa	—	C	.285SSP	22CW	84	10	1000	125	84	
71A	21-723	—	.250 Max.	I	TC	C	.146SSP	22CW	84	13.5	750	93	43	TNC, BNC, BN, C, UHF, N, PLUG-IN
71B	21-804	—	.250 Max.	IIIa	TC	C	.146SSP	22CW	85	13.5	750	93	43	

© United Technical Publications

CIC-UAC MANHATTAN

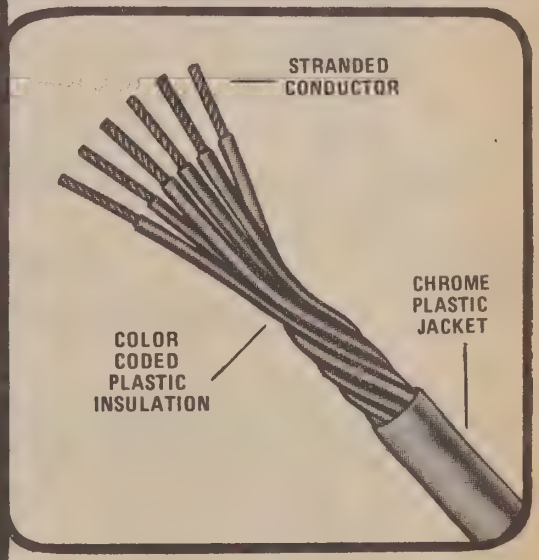
Unshielded Audio Cable

MULTI-CONDUCTOR CABLE—PLASTIC JACKET

APPLICATIONS: Unbalanced intercom and sound systems, interconnecting cables, remote circuit control, telephones and low voltage control cable.

NO. of COND.	NOM. JKT. (In.)	NOM. O.D. (In.)	PART NO.	NO. of COND.	NOM. JKT. (In.)	NOM. O.D. (In.)	PART NO.
No. 22 - 7/30 TC - .010" INSULATION - 200 VOLTS							
2	.020	.135	M3302	19	.025	.320	M3319
3	.020	.145	M3303	25	.025	.350	M3325
4	.020	.170	M3304	30	.030	.385	M3330
5	.020	.175	M3305	35	.030	.415	M3335
6	.020	.185	M3306	40	.035	.445	M3340
8	.020	.200	M3308	45	.035	.475	M3345
10	.020	.235	M3310	50	.040	.510	M3350
12	.020	.255	M3312	60	.040	.550	M3360
15	.020	.280	M3315				
No. 20 - 10/30 TC - .016" INSULATION - 300 VOLTS							
2	.020	.180	M3402	10	.025	.330	M3410
3	.020	.190	M3403	12	.025	.345	M3412
4	.020	.215	M3404	15	.025	.380	M3415
6	.020	.250	M3406	19	.025	.400	M3419
8	.020	.270	M3408				
No. 18 - 16/30 TC - .016" INSULATION - 300 VOLTS							
2	.020	.200	M3502	8	.025	.315	M3508
3	.020	.210	M3503	10	.025	.370	M3510
4	.020	.240	M3504	12	.025	.385	M3512
6	.020	.290	M3506				
No. 16 - 26/30 TC - .020" INSULATION - 400 VOLTS							
2	.020	.240	M3572	6	.025	.350	M3576
3	.020	.265	M3573	8	.025	.380	M3578
4	.020	.290	M3574				
No. 14 - 41/30 TC - .020" INSULATION - 400 VOLTS							
2	.025	.280	M3582	4	.025	.330	M3584
3	.025	.300	M3583	6	.030	.410	M3586

CONDUCTOR: Stranded tinned copper
INSULATION: Color coded PVC (see chart)
CABLING: Conductors twisted
JACKET: CHROME GRAY PVC
VOLTAGE RATING: No. 22 - 200 Volts RMS
No. 20 & No. 18
300 Volts RMS
No. 16 & No. 14
400 Volts RMS
STANDARD PUT-UP: Cut to requirements



COLOR CODE OF CONDUCTORS

1-Black	16-White/Black	31-White/Black/Slate	46-White/Blue/Black
2-Red	17-White/Red	32-White/Black/Purple	47-White/Blue/Red
3-White	18-White/Green	33-White/Black/Black	48-White/Blue/Green
4-Green	19-White/Yellow	34-White/Red/Black	49-White/Blue/Blue
5-Orange	20-White/Blue	35-White/Red/Red	50-White/Blue/Brown
6-Blue	21-White/Brown	36-White/Red/Green	51-White/Blue/Purple
7-Brown	22-White/Orange	37-White/Red/Blue	52-White/Brown/Black
8-Yellow	23-White/Gray	38-White/Red/Brown	53-White/Brown/Red
9-Purple	24-White/Violet	39-White/Red/Purple	54-White/Brown/Green
10-Slate	25-White/Black/Red	40-White/Green/Black	55-White/Brown/Blue
11-Pink	26-White/Black/Green	41-White/Green/Red	56-White/Brown/Blue
12-Tan	27-White/Black/Yellow	42-White/Green/Green	57-White/Brown/Purple
13-Red/Green	28-White/Black/Blue	43-White/Green/Blue	58-White/Purple/Red
14-Red/Yellow	29-White/Black/Brown	44-White/Green/Brown	59-White/Purple/Green
15-Red/Black	30-White/Black/Orange	45-White/Green/Purple	60-White/Purple/Blue

© United Technical Publications

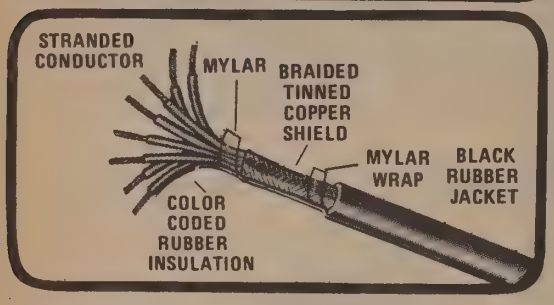
MANHATTAN

CIC-R

Rubber Jacketed Control Cable Shielded and Unshielded

APPLICATIONS: Flexible inside control cable for instruments, automatic equipment, relaying devices, control circuits, microphones, audio, and broadcast studio use.

CONDUCTOR: No. 20-26/34 tinned copper
INSULATION: .020" Color coded rubber
CABLING: Conductor cabled with fillers when necessary, mylar wrap.
SHIELD: Braided tinned copper, mylar wrap over shield.
JACKET: 035" BLACK HEAVY DUTY RUBBER
SUGGESTED WORKING VOLTAGE: 600 Volts RMS
STANDARD PUT-UP: 500 ft. and 1000 ft.



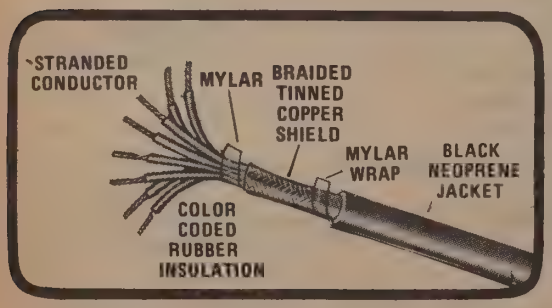
SHIELDED			UNSHIELDED		
NO. of CONDUCTORS	NOM. O.D. (In.)	PART NO.	NO. of CONDUCTORS	NOM. O.D. (In.)	PART NO.
2	.260	M1022	2	.230	M1002
3	.270	M1023	3	.240	M1003
4	.290	M1024	4	.260	M1004
6	.335	M1026	6	.310	M1006
8	.360	M1028	8	.330	M1008
10	.400	M1030	10	.370	M1010
12	.415	M1032	12	.390	M1012
15	.540	M1035	COLOR CODE OF CONDUCTORS (SEE BELOW)		
20	.600	M1040			

CIC-N

Heavy Duty Shielded Neoprene Jacketed Control Cable

APPLICATIONS: Neoprene recommended for outside installation shielded power supply, instrumentation, low impedance application, and audio and broadcast outside use.

CONDUCTOR: Flexible stranded tinned copper.
INSULATION: Color coded rubber.
CABLING: Conductors cabled with fillers when necessary, mylar wrap.
SHIELD: Braided tinned copper, mylar wrap.
JACKET: .040" BLACK RUGGED NEOPRENE
SUGGESTED WORKING VOLTAGE: 600 Volts RMS
STANDARD PUT-UP: Cut to requirements.



No. 18 - 41/34 - .022" INS.			No. 14 - 41/30 - .032" INS.		
NO. of CONDUCTORS	NOM. O.D. (In.)	PART NO.	NO. of CONDUCTORS	NOM. O.D. (In.)	PART NO.
2	.295	M1042	2	.395	M1062
3	.310	M1043	3	.415	M1063
4	.335	M1044	4	.455	M1064
6	.390	M1046	6	.510	*M1066
8	.415	M1048	8	.600	*M1068
10	.440	*M1049	No. 12 - 65/30 - .032" INS.		
12	.450	*M1050	2	.440	M1072
15	.570	*M1051	3	.465	M1073
20	.650	*M1051/20	4	.510	*M1074
No. 16 - 65/34 - .025" INS.			6	.620	*M1076
2	.330	M1052	No. 10 - 105/30 - .032" INS.		
3	.350	M1053	2	.500	*M1082
4	.380	M1054	3	.540	*M1083
6	.450	*M1056	4	.600	*M1084
8	.500	*M1058			

*NEW ITEM

MANHATTAN ELECTRIC CABLE CORPORATION ELECTRONIC DIVISION

© United Technical Publications

CIC-V MANHATTAN

Vinyl Jacketed Shielded Control Cable

APPLICATIONS: Small diameter shielded instrumentation cable for sensing, recording, and monitoring devices, telemetering and high signal isolation. Low capacitance provides low energy loss in video and audio applications.

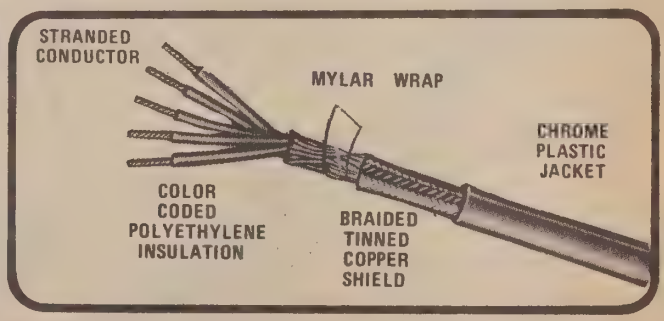
No. 24 - 10/34TC - .012" INSULATION

NO. of COND.	NOM. JKT. THK. (in.)	NOM. O.D. (in.)	PART NO.
2	.020	.160	M1102
3	.020	.165	M1103
4	.020	.180	M1104
5	.020	.195	M1105
6	.020	.210	M1106

CONDUCTOR: Flexible stranded tinned copper
INSULATION: Color coded low density polyethylene insulation.
CABLING: Conductors cabled with fillers when necessary, mylar wrap.
SHIELD: Braided tinned copper shield
JACKET: SMOOTH CHROME PLASTIC (Vinyl)
SUGGESTED WORKING VOLTAGE: 600 Volts RMS
STANDARD PUT-UP: Cut to requirements

No. 22 - 16/34TC - .012" INSULATION

NO. of COND.	NOM. JKT. THK. (in.)	NOM. O.D. (in.)	PART NO.
2	.020	.170	M1112
3	.020	.180	M1113
4	.020	.195	M1114
5	.020	.210	M1115
6	.020	.225	M1116
8	.025	.260	M1118



No. 20 - 26/34TC - .014" INSULATION

NO. of COND.	NOM. JKT. THK. (in.)	NOM. O.D. (in.)	PART NO.
2	.025	.205	M1122
3	.030	.225	M1123
4	.030	.240	M1124
5	.030	.260	M1125
6	.030	.280	M1126
8	.035	.310	M1128
10	.035	.345	M1130
12	.035	.360	M1132

No. 18 - 41/34 TC - .016" INSULATION

NO. of COND.	NOM. JKT. THK. (in.)	NOM. O.D. (in)	PART NO.
2	.030	.245	M1142
3	.030	.255	M1143
4	.030	.275	M1144
6	.035	.335	M1146

COLOR CODE OF CONDUCTORS

1-Black	7-Brown
2-White	8-Orange
3-Red	9-Slate
4-Green	10-Purple
5-Yellow	11-White/Black
6-Blue	12-White/Red

No. 16 - 65/34 TC - .020" INSULATION

NO. of COND.	NOM. JKT. THK. (in.)	NOM. O.D. (in.)	PART NO.
2	.035	.295	M1162
3	.035	.310	M1163
4	.035	.335	M1164

MANHATTAN ELECTRIC CABLE CORPORATION ELECTRONIC DIVISION

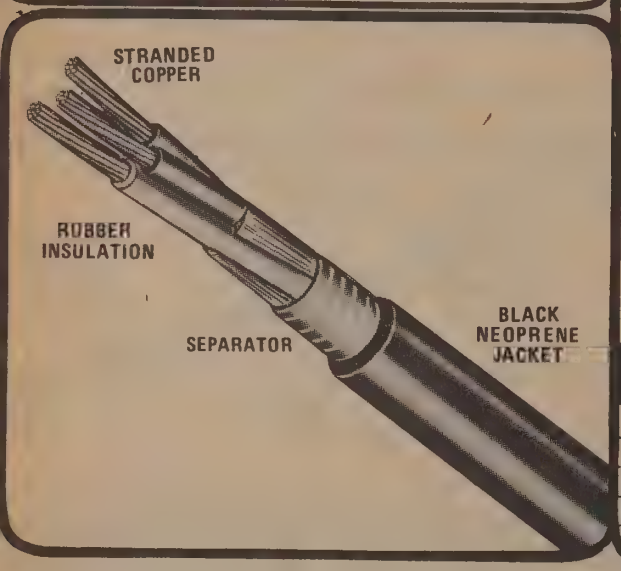
MANHATTAN

CIC-MSO

Neoprene Jacketed Control Cable 600 Volts

APPLICATIONS: Designed for heavy duty use in relay control, power and signal transmission, lighting, motor and turbine control, telemetering, switching control of automatic electronic and electrical equipment, substation operations, traffic control and fire alarm control. Neoprene has exceptional flexibility, mechanical strength and suited for either indoor or outdoor installation.

CONDUCTOR: Stranded bare copper-minimum strands*
INSULATION: Color coded rubber per National Electric Code standards
CABLING: Cabled with fillers when necessary, separator over conductors
JACKET: RUGGED BLACK NEOPRENE
VOLTAGE TEMPERATURE RATING: 600 Volts - 60°C
STANDARD PUT-UP: Cut to requirements.



No. 16 - 26/30 BARE COPPER* - 1/32" INSULATION

NO. of COND.	NOM. JKT. THK. (In.)	NOM. O.D. (In.)	PART NO.	NO. of COND.	NOM. JKT. THK.	NOM. O.D. (In.)	PART NO.
2	.060	.405	M2042	14	.090	.775	M2054
3	.060	.430	M2043	16	.090	.825	M2056
4	.060	.485	M2044	20	.090	.900	M2060
5	.075	.525	M2045	24	.105	1.015	M2064
6	.075	.565	M2046	26	.105	1.020	M2066
7	.075	.605	M2047	30	.105	1.070	M2070
8	.075	.645	M2048	37	.105	1.160	M2077
9	.090	.720	M2049	40	.105	1.235	M2080
10	.090	.725	M2050	50	.120	1.350	M2090
12	.090	.740	M2052	60	.120	1.470	M2100

No. 14 - 41/30 BARE COPPER - 3/64" INSULATION

NO. of COND.	NOM. JKT. THK.	NOM. O.D. (In.)	PART NO.	NO. of COND.	NOM. JKT. THK.	NOM. O.D. (In.)	PART NO.
2	.075	.530	M2102	7	.090	.795	M2107
3	.075	.560	M2103	8	.090	.845	M2108
4	.075	.605	M2104	9	.090	.905	M2109
5	.090	.685	M2105	10	.090	.910	M2110
6	.090	.740	M2106	12	.090	.930	M2112

NO. 18 - 16/30 BARE COPPER* - 1/32" INSULATION

NO. of COND.	NOM. JKT. THK. (In.)	NOM. O.D. (In.)	PART NO.
2	.060	.390	M2002
3	.060	.405	M2003
4	.060	.435	M2004
5	.075	.500	M2005
6	.075	.525	M2006
7	.075	.565	M2007
8	.075	.600	M2008
9	.075	.640	M2009
10	.075	.650	M2010
12	.075	.660	M2012
14	.090	.715	M2014
16	.090	.760	M2016
20	.090	.835	M2020

No. 12 - 65/30 BARE COPPER - 3/64" INSULATION

2	.090	.605	M2142	10	.105	1.020	M2150
3	.090	.635	M2143	12	.105	1.045	M2152
4	.090	.665	M2144	14	.105	1.100	M2154
5	.090	.730	M2145	16	.105	1.155	M2156
6	.090	.800	M2146	20	.105	1.285	M2160
7	.090	.860	M2147	26	.120	1.445	M2166
8	.090	.915	M2148	30	.120	1.525	M2170
9	.105	1.015	M2149				

No. 10 - 105/30 BARE COPPER - 3/64" INSULATION

2	.090	.640	M2182	6	.105	.880	M2186
3	.090	.690	M2183	7	.105	.980	M2187
4	.090	.745	M2184	8	.105	1.050	M2188
5	.090	.815	M2185	10	.105	1.125	M2190

A wide selection of multi-conductor rubber & neoprene jacketed control cable made to MIL-C-3432 available from stock. Contact our offices on individual requirements.

MANHATTAN ELECTRIC CABLE CORPORATION ELECTRONIC DIVISION

© United Technical Publications

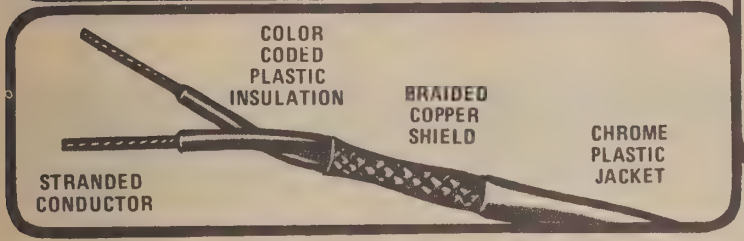
CIC-SAC MANHATTAN

Shielded Audio Cable

BRAIDED COPPER SHIELD - PLASTIC JACKET

APPLICATIONS: Audio and sound systems where severe flexing requires added tensile strength.

CONDUCTOR: Stranded tinned copper
INSULATION: .016" color coded PVC
CABLING: Conductors twisted
SHIELD: Braided copper shield
JACKET: .020" CHROME GRAY PVC
VOLTAGE RATING: 300 Volts RMS
STANDARD PUT-UP: 1000' Reel



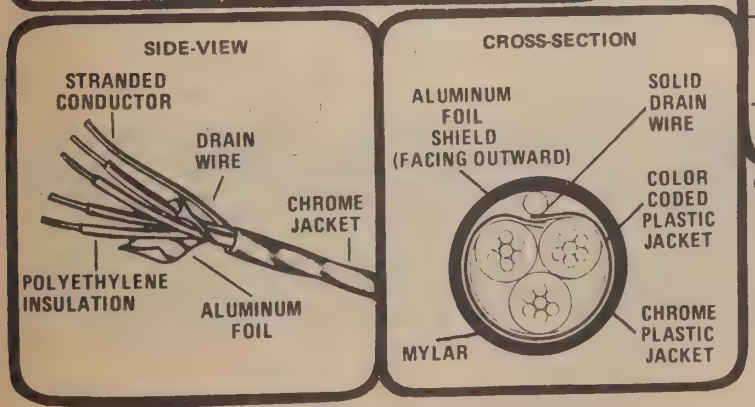
CONDUCTOR SIZE	STRAND	NO. of COND.	NOM O.D. (Inch)	PART NO.
22	7/30	2	.185	M3202
		3	.200	M3203
		4	210	M3204
20	10/30	2	.200	M3206
		3	.220	M3207
		4	.230	M3208
18	16/30	2	.220	M3212
		3	.230	M3213
16	26/30	2	.250	M3216
		3	.260	M3217

COLOR CODE OF CONDUCTORS:
1-Black 2-Red 3-White 4-Green

MYLAR BONDED ALUMINUM FOIL SHIELD - PLASTIC JACKET

APPLICATIONS: A light weight, low cost, small diameter shielded audio and sound systems cable easily terminated with drain wire. Foil shield provides 100% coverage at audio and radio frequencies.

CONDUCTOR: Stranded tinned copper
INSULATION: .016" color coded low density polyethylene
CABLING: Conductors twisted
SHIELD: Mylar bonded aluminum foil shield 100% coverage, wrapped with aluminum foil facing outward, drain wire between foil and jacket for maximum grounding contact.
JACKET: .020" CHROME GRAY PVC
VOLTAGE RATING: 400 Volts RMS
STANDARD PUT-UP: 1000' Reel



CONDUCTOR SIZE	STRAND	NO. of COND.	NOM O.D. (Inch)	PART NO.
24	7/32	2	.170	M3222
		3	.180	M3223
		4	.185	M3224
22	7/30	2	.180	M3226
		3	.195	M3227
		4	.200	M3228
20	10/30	2	.190	M3232
		3	.205	M3233
		4	.210	M3234
18	16/30	2	.215	M3242
		3	.225	M3243
		4	.240	M3244
16	26/30	2	.240	M3247
		3	.250	M3248

COLOR CODE OF CONDUCTORS:
1-Black 2-Red 3-White 4-Green

© United Technical Publications

MANHATTAN

CIC-PT

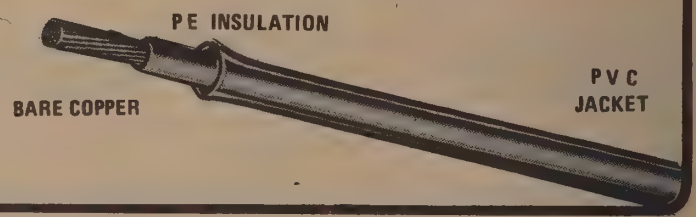
Control Cable-600Volts-90°C

GENERAL PURPOSE—PLASTIC JACKET IPCEA

APPLICATIONS: Small diameter control cable used in process control equipment, remote sub-station operations, signalling and indicating devices, measurement and recording equipment, telemetering and switchgear operating.

CONDUCTOR: Flexible stranded copper
INSULATION: Polyethylene insulation with PVC jacket over primary insulation, color code IPCEA
CABLING: Conductors cabled with fillers when necessary, mylar tape over core
JACKET:- BLACK PVC PLASTIC
VOLTAGE RATING: 600 Volts
TEMPERATURE RATING: 90°C
SPECIFICATION: IPCEA-NEMA S 61-402
STANDARD PUT-UP: Cut to requirements.

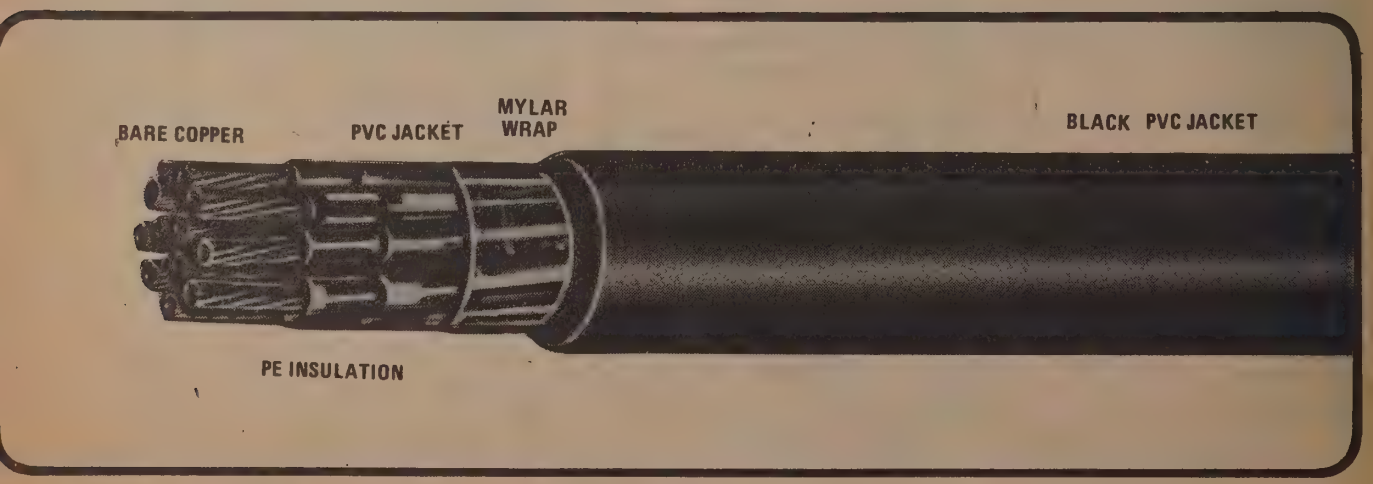
INDIVIDUAL CONDUCTOR



No. 16 - 26/30 BARE COPPER - .015" PE - .010" PVC

NO. of COND.	NOM. JKT. THK. (INCH)	NOM. O.D. (In.)	PART NO.	NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (In.)	PART NO.
2	.045"	NOTE 1	M2242	19	.060	.690	M2259
3	.045"	.350	M2243	20	.060	.730	M2260
4	.045"	.380	M2244	21	.060	.740	M2261
5	.045"	.410	M2245	22	.060	.760	M2262
6	.045"	.440	M2246	24	.060	.810	M2264
7	.045"	.450	M2247	26	.060	.820	M2266
8	.045"	.480	M2248	27	.060	.840	M2267
9	.045"	.510	M2249	30	.080	.900	M2270
10	.060"	.580	M2250	34	.080	.940	M2274
11	.060"	.590	M2251	37	.080	.960	M2277
12	.060"	.600	M2252	40	.080	1.000	M2280
14	.060"	.630	M2254	45	.080	1.050	M2285
15	.060"	.640	M2255	50	.080	1.110	M2290
16	.060"	.660	M2256	55	.080	1.150	M2295
				60	.080	1.190	M2300

NOTE 1 Flat dimension .200" x .310"
NOTE 2 Flat dimension .230" x .370"
NOTE 3 Flat dimension .250" x .400"
NOTE 4 Flat dimension .280" x .450"
NOTE 5 Flat dimension .290" x .480"



© United Technical Publications

CIC-PT

MANHATTAN

Control Cable-600 Volts-90°C

GENERAL PURPOSE - PLASTIC JACKET IPCEA

No. 14 - STRANDED BARE COPPER - .020" PE - .010" PVC

NO. of COND.	NOM.JKT.THK. (Inch)	NOM. O.D. (Inch)	PART NO.	NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (Inch)	PART NO.
2	.045	NOTE 2	M2302	16	.060	.760	M2316
3	.045	.380	M2303	18	.060	.800	M2318
4	.045	.420	M2304	19	.060	.810	M2319
5	.045	.460	M2305	20	.080	.880	M2320
6	.045	.500	M2306	24	.080	.975	M2324
7	.045	.510	M2307	26	.080	1.015	M2326
8	.060	.570	M2308	27	.080	1.036	M2327
9	.060	.610	M2309	30	.080	1.070	M2330
10	.060	.665	M2310	34	.080	1.150	M2334
11	.060	.685	M2311	37	.080	1.160	M2337
12	.060	.690	M2312				
14	.060	.720	M2314				

No. 12 - STRANDED BARE COPPER - .020" PE - .010" PVC

2	.045	NOTE 3	M2372	19	.080	.940	M2389
3	.045	.425	M2373	20	.080	.985	M2390
4	.045	.465	M2374	21	.080	1.030	M2391
5	.045	.510	M2375	22	.080	1.040	M2392
6	.060	.585	M2376	24	.080	1.090	M2394
7	.060	.590	M2377	25	.080	1.130	M2395
8	.060	.635	M2378	26	.080	1.135	M2396
9	.060	.680	M2379	27	.080	1.150	M2397
10	.060	.740	M2380	30	.080	1.190	M2400
12	.060	.765	M2382	34	.080	1.285	M2404
14	.060	.805	M2384	37	.080	1.290	M2407
15	.080	.890	M2385	40	.080	1.335	M2410
16	.080	.900	M2386	50	.080	1.455	M2420
18	.080	.935	M2388	60	.080	1.545	M2430

No. 10 - STRANDED BARE COPPER .020" PE - .010"PVC

2	.045	NOTE 4	M2432
3	.045	.490	M2433
4	.060	.570	M2434
5	.060	.620	M2435
6	.060	.685	M2436
7	.060	.685	M2437
8	.060	.730	M2438
9	.060	.790	M2439
10	.080	.900	M2440
12	.080	.930	M2442
14	.080	.980	M2444
19	.080	1.090	M2449
24	.080	1.270	M2454
26	.080	1.275	M2456
30	.080	1.340	M2460
37	.080	1.450	M2467

No. 9 19/22 BARE COPPER .020" PE - .010" PVC

2	.045	NOTE 5	M2482
3	.045	.520	M2483
4	.060	.600	M2484
5	.060	.650	M2485
6	.060	.710	M2486
7	.060	.715	M2487
8	.060	.770	M2488
10	.060	.950	M2490
15	.080	1.060	M2495

NOTE 1 Flat dimension .200" x 310"
NOTE 2 Flat dimension .230" x 370"
NOTE 3 Flat dimension .250" x 400"
NOTE 4 Flat dimension .280" x 450"
NOTE 5 Flat dimension .290" x 480"

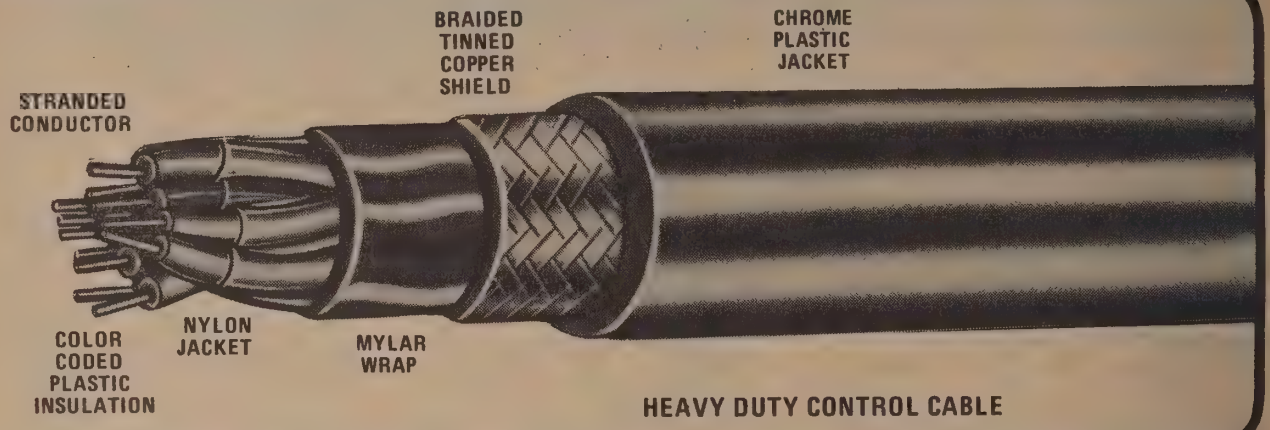
All dimensions are nominal and subject to manufacturing tolerances.

© United Technical Publications

MANHATTAN CIC-MCC

Multi-Conductor Control Cable

SHIELDED—PLASTIC JACKET PER MIL-W-16878D



HEAVY DUTY CONTROL CABLE

MINIATURE SHIELDED CONTROL CABLE - 600 VOLTS
No. 28 - 7/36 TINNED COPPER - .010" 105°C INSULATION - TYPE B

NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (In.)	PART NO.	NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (In.)	PART NO.
4	.013	.135	M1604	14	.021	.215	M1614
5	.014	.140	M1605	16	.022	.225	M1616
6	.015	.150	M1606	19	.024	.245	M1619
8	.017	.170	M1608	27	.028	.280	M1627
10	.018	.185	M1610	37	.031	.325	M1637
12	.020	.200	M1612				

GENERAL PURPOSE SHIELDED CONTROL CABLE - 600 VOLTS
No. 22 - 19/34 TINNED COPPER - .010" 105°C INS. - NYLON JKT - TYPE B/NYLON

NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (In.)	PART NO.	NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (In.)	PART NO.
4	.019	.190	M1644	14	.030	.330	M1654
5	.021	.210	M1645	16	.031	.350	M1656
6	.022	.230	M1646	19	.035	.380	M1659
8	.025	.255	M1648	27	.040	.445	M1667
10	.026	.280	M1650	37	.047	.515	M1677
12	.028	.305	M1652	48	.053	.590	M1687

HEAVY DUTY-SHIELDED CONTROL CABLE - 1000 VOLTS
No. 18 - 19/30 TINNED COPPER - .016" 105°C INS. - NYLON JKT - TYPE C/NYLON

4	.029	.300	M1704	16	.049	.535	M1716
5	.030	.310	M1705	19	.052	.580	M1719
6	.032	.340	M1706	27	.061	.680	M1727
8	.036	.390	M1708	37	.070	.790	M1737
10	.040	.430	M1710	48	.080	.900	M1748
12	.043	.460	M1712	60	.090	1.010	M1760
14	.046	.500	M1714				

No. 16 - 19/29 TINNED COPPER - .016" 105°C - NYLON JKT - TYPE C/NYLON

4	.031	.325	M1764	12	.047	.510	M1772
5	.033	.345	M1765	16	.053	.590	M1776
6	.035	.370	M1766	19	.057	.630	M1779
8	.040	.425	M1768	27	.067	.760	M1787
10	.043	.470	M1770				

MANHATTAN ELECTRIC CABLE CORPORATION ELECTRONIC DIVISION

© United Technical Publications

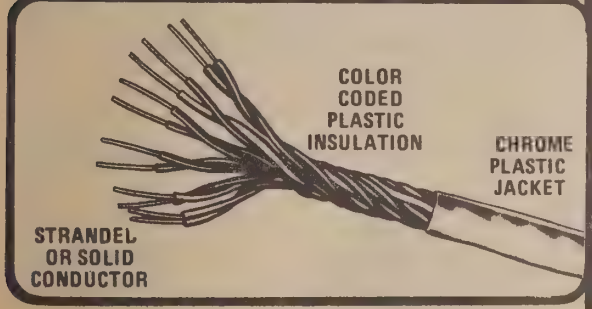
CIC-PIC MANHATTAN

Paired Intercom Cable

UNSHIELDED MULTIPLE PAIRS - PLASTIC JACKET

APPLICATIONS: Multiple speaker and sound cable, balanced intercom systems providing a quiet circuit free from cross talk telephones, hospital call systems, signal and alarm systems.

CONDUCTOR: Solid or stranded tinned copper
INSULATION: Color coded PVC
PAIRED: Conductors paired with short lay for balance and easy identification
CABLING: Pairs cabled with open binder when necessary
JACKET: FREE STRIPING CHROME GRAY PVC
VOLTAGE RATING: No. 22 gauge - 200 Volts RMS
No. 18 gauge - 400 Volts RMS
STANDARD PUT-UP: Cut to requirements



COLOR CODE OF CONDUCTOR PAIRS

PAIR NO.	COLOR COMBINATION	PAIR NO.	COLOR COMBINATION
1	Black prd. w/Red	27	Brown prd. w/Yellow
2	Black prd. w/White	28	Purple prd. w/Red
3	Black prd. w/Green	29	Purple prd. w/White
4	Black prd. w/Blue	30	Purple prd. w/Green
5	Black prd. w/Brown	31	Purple prd. w/Blue
6	Black prd. w/Yellow	32	Purple prd. w/Brown
7	Black prd. w/Orange	33	Purple prd. w/Yellow
8	Red prd. w/Green	34	Purple prd. w/Orange
9	Red prd. w/White	35	Purple prd. w/Slate
10	Red prd. w/Blue	36	Purple prd. w/Black
11	Red prd. w/Yellow	37	Slate prd. w/Red
12	Red prd. w/Brown	38	Slate prd. w/White
13	Red prd. w/Orange	39	Slate prd. w/Green
14	Green prd. w/Blue	40	Slate prd. w/Blue
15	Green prd. w/White	41	Slate prd. w/Brown
16	Green prd. w/Brown	42	Slate prd. w/Yellow
17	Green prd. w/Orange	43	Slate prd. w/Orange
18	Green prd. w/Yellow	44	Slate prd. w/Black
19	White prd. w/Blue	45	White/Black prd. w/Red
20	White prd. w/Brown	46	White/Black prd. w/Green
21	White prd. w/Orange	47	White/Black prd. w/Blue
22	White prd. w/Yellow	48	White/Black prd. w/Brown
23	Blue prd. w/Brown	49	White/Black prd. w/Yellow
24	Blue prd. w/Orange	50	White/Black prd. w/Orange
25	Blue prd. w/Yellow	51	White/Black prd. w/Purple
26	Brown prd. w/Orange		

No. 22 SOLID TINNED COPPER - .010" INSULATION

NO. of PAIRS	NO. of COND.	NOM. JKT. THK. (inch)	NOM. O.D. (Inch)	PART NO.
1	2	.020	.135	M3001
2	4	.020	.190	M3002
3	6	.020	.210	M3003
4	8	.020	.230	M3004
6	12	.020	.275	M3006
9	18	.020	.320	M3009
11	22	.020	.345	M3011
13	26	.025	.380	M3013
15	30	.025	.400	M3015
19	38	.030	.430	M3019
23	46	.030	.480	M3023
27	54	.035	.520	M3027

No. 22 - 7/30 TINNED COPPER - .010" INSULATION

1	2	.020	.145	M3031
2	4	.020	.210	M3032
3	6	.020	.225	M3033
4	8	.020	.240	M3034
6	12	.020	.300	M3036
9	18	.020	.360	M3039
11	22	.020	.370	M3041
13	26	.025	.410	M3043
15	30	.025	.440	M3045
19	38	.030	.460	M3049
23	46	.030	.530	M3053
27	54	.035	.560	M3057
31	62	.040	.595	M3061
37	74	.040	.630	M3067
41	82	.045	.675	M3071
51	102	.050	.750	M3075

No. 18 - 16/30 TINNED COPPER - .016" INSULATION

1	2	.020	.200	M3081
3	6	.025	.330	M3083
6	12	.035	.470	M3086
9	18	.040	.560	M3089
15	30	.050	.700	M3095

© United Technical Publications

MANHATTAN

CIC-SPC

Shielded Paired Communication Cable

MULTIPLE PAIRS INDIVIDUALLY SHIELDED - PLASTIC JACKET

APPLICATIONS: Multiple speaker and sound systems requiring circuit isolation, shielded audio, instrumentation and data cables.

No. 22 - 7/30 TINNED COPPER - .010" PE INSULATION				
NO. of PAIRS	NO. of COND.	NOM. JKT. THK. (Inch)	NOM. O.D. (Inch)	NO.
3	6	.020	.245	M3103
6	12	.025	.330	M3106
9	18	.030	.400	M3109
11	22	.035	.460	M3111
15	30	.040	.515	M3115
19	38	.045	.560	M3119
23	46	.045	.610	M3123
27	54	.050	.700	M3127
31	62	.050	.740	M3131
No. 18 - 16/30 TINNED COPPER - .016" PE INSULATION				
3	6	.030	.360	M3173
6	12	.040	.510	M3176
9	18	.050	.620	M3179
11	22	.055	.680	M3181
15	30	.060	.790	M3185

CONDUCTOR: Stranded tinned copper

INSULATION: Color coded high molecular weight polyethylene

PAIRED: Conductor paired with short lay for balance, free from cross talk, drain wire twisted together

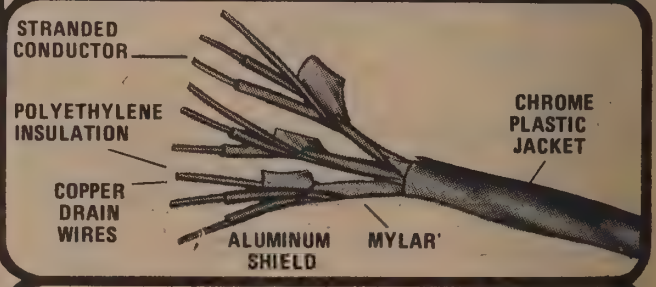
SHIELD: Each pair shielded with aluminum foil, bonded mylar wrap over pair with individual drain in contact with aluminum foil. 100% coverage

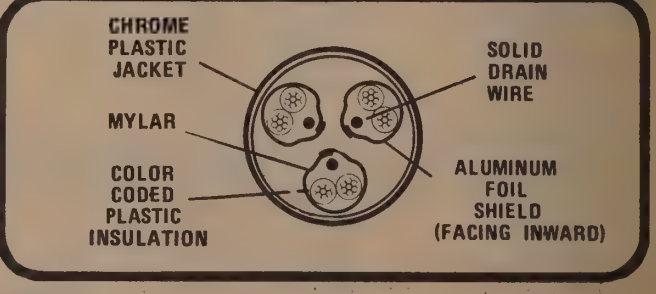
CABLING: Shielded pairs cabled on planetary cabler to eliminate conductor strain and distortion, mylar tape wrap over core

JACKET: SMOOTH CHROME GRAY PVC PLASTIC

VOLTAGE RATING NO. 22 GAUGE - 300 Volts RMS
NO. 18 GAUGE - 600 Volts RMS

STANDARD PUT-UP: Cut to requirements





COLOR CODE OF PAIRS

1-Black/Red
2-Black/White
3-Black/Green
4-Black/Blue
5-Black/Brown
6-Black/Yellow
7-Black/Orange
8-Red/Green
9-Red/White
10-Red/Blue
11-Red/Yellow
12-Red/Brown
13-Red/Orange
14-Green/Blue
15-Green/White
16-Green/Brown
17-Green/Orange
18-Green/Yellow
19-White/Blue
20-White/Brown
21-White/Orange
22-White/Yellow
23-Blue/Brown
24-Blue/Orange
25-Blue/Yellow
26-Brown/Orange
27-Brown/Yellow
28-Purple/Red
29-Purple/White
30-Purple/Green
31-Purple/Blue

MANHATTAN ELECTRIC CABLE CORPORATION ELECTRONIC DIVISION

© United Technical Publications

NATIONAL WIRE & CABLE CORPORATION



MULTIPLE CONDUCTOR CONTROL CABLES

IN STOCK
MIL-SPEC

National Wire & Cable Corporation manufactures a complete line of multiple conductor control cables. Conductors are of tinned copper strand with 1/64" vinyl primary insulation for use up to 105°C per MIL-W-16878D Type C†. Insulated for **1000** volts working voltage. Conductors are color coded using 10 standard basic colors, plus spiral tracers on white per MIL-STD. 122.

All conductors are planetary cabled and contra-helically laid with a Mylar tape serve over the cable bundle. The overall jacket is a 105° C black polyvinyl-chloride thermoplastic, meeting specification MIL-I-631 Class F, or may be Neoprene to MIL-R-6855 Class 2 Grade 60 specification. (Neoprene jackets at added cost.)*

National Multiple Conductor SHIELDED CABLES are to the same specifications as above with addition of tinned copper braided shield over cable complex with 85-90% coverage to MIL-C-7078A. STANDARD PUT-UPS: 500 ft. and 1000 ft. No-deposit reels.

*(Standard put-up for Neoprene jacketed cable is 250 ft.)

†Insulated Conductors are also UL approved under UL type 1007 AWM, and are CSA approved as type TR 64.

TECHNICAL DATA (all cables)

Insulation Breakdown Voltage:	Greater than 8000 volts AC RMS, 60 cps.
Capacitance:	Nominal capacitance from a wire to all else in the cable ranges from 40 to 65 mmfd per ft., @ 1000 cps; dependent on gauge and position.
Insulation Leakage Res.:	200. megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
Sheath Leakage Res.:	10. megohms/1000 ft. min. at 500 VDC from overall shield through sheath to outside world.
Usable Temp. Range:	Suitable for continuous use from +105°C to −55°C.
Cold Bending Capability:	All cables are suitable for flexing to a circle diam. of approx. 6 cable diameters from +105°C to −20°C; Recommended flex diameter should be greater than 20 cable diam. for flexing at −40°C., or for continuous flexing service to −55°C, specify our neoprene sheath, in lieu of plastic sheath.

MULTI-CONDUCTOR STOCK CABLES

Conductor sizes 22, 20, 18, 16, 14 & 12 gauge. 22 AWG is 7 strand. All others 19 strand.

UNSHIELDED

PART NO.	NO. COND.	COND. AWG	JKT. THICK	CABLE O.D.	WEIGHT PER M'
NW-722 J	7	22	.040	.295	40 Lbs.
NW-1222J	12	22	.050	.390	70 Lbs.
NW-1922J	19	22	.060	.460	110 Lbs.
NW-2722J	27	22	.060	.530	160 Lbs.
NW-3722J	37	22	.060	.600	200 Lbs.
NW-4822J	48	22	.060	.670	245 Lbs.
NW-6022J	60	22	.060	.730	300 Lbs.
NW-7222J	72	22	.060	.775	360 Lbs.
NW-8822J	88	22	.060	.835	425 Lbs.
NW-10222J	102	22	.060	.880	485 Lbs.
NW-720 J	7	20	.040	.300	50 Lbs.
NW-1220J	12	20	.050	.400	105 Lbs.
NW-1920J	19	20	.060	.470	160 Lbs.
NW-2720J	27	20	.060	.560	210 Lbs.
NW-3720J	37	20	.060	.610	280 Lbs.
NW-4820J	48	20	.060	.700	360 Lbs.
NW-6020J	60	20	.060	.750	435 Lbs.
NW-7220J	72	20	.060	.840	485 Lbs.
NW-8820J	88	20	.060	.900	580 Lbs.
NW-10220J	102	20	.060	.975	670 Lbs.
NW-718 J	7	18	.040	.350	75 Lbs.
NW-1218J	12	18	.050	.460	135 Lbs.
NW-1918J	19	18	.060	.560	225 Lbs.
NW-2718J	27	18	.060	.650	300 Lbs.
NW-3718J	37	18	.060	.730	390 Lbs.
NW-4818J	48	18	.060	.820	510 Lbs.
NW-6018J	60	18	.060	.900	600 Lbs.
NW-7218J	72	18	.060	1.100	720 Lbs.
NW-716 J	7	16	.040	.370	95 Lbs.
NW-1216J	12	16	.050	.500	155 Lbs.
NW-1916J	19	16	.060	.600	230 Lbs.
NW-2716J	27	16	.060	.700	320 Lbs.
NW-3716J	37	16	.060	.785	430 Lbs.
NW-4816J	48	16	.060	.900	625 Lbs.
NW-6016J	60	16	.060	.980	750 Lbs.
NW-714 J	7	14	.050	.450	150 Lbs.
NW-1214J	12	14	.050	.560	240 Lbs.
NW-1914J	19	14	.060	.675	370 Lbs.
NW-2714J	27	14	.060	.800	515 Lbs.
NW-512 J	5	12	.050	.480	175 Lbs.
NW-712 J	7	12	.050	.525	225 Lbs.
NW-1212J	12	12	.060	.700	375 Lbs.
NW-1912J	19	12	.060	.820	560 Lbs.

OVERALL SHIELDED

PART NO.	NO. COND	COND AWG	T.C. SHIELD	JKT. THICK	CABLE O.D.	WEIGHT PER M'
NW-722 SJ	7	22	No. 36	.040	.320	55 Lbs.
NW-1222SJ	12	22	No. 34	.050	.420	90 Lbs.
NW-1922SJ	19	22	No. 34	.060	.490	145 Lbs.
NW-2722SJ	27	22	No. 34	.060	.560	200 Lbs.
NW-3722SJ	37	22	No. 34	.060	.630	245 Lbs.
NW-4822SJ	48	22	No. 34	.060	.700	300 Lbs.
NW-6022SJ	60	22	No. 34	.060	.760	355 Lbs.
NW-7222SJ	72	22	No. 34	.060	.810	425 Lbs.
NW-8822SJ	88	22	No. 34	.060	.870	500 Lbs.
NW-10222SJ	102	22	No. 34	.060	.915	560 Lbs.
NW-720 SJ	7	20	No. 34	.040	.335	68 Lbs.
NW-1220SJ	12	20	No. 34	.050	.435	125 Lbs.
NW-1920SJ	19	20	No. 34	.060	.500	195 Lbs.
NW-2720SJ	27	20	No. 34	.060	.595	250 Lbs.
NW-3720SJ	37	20	No. 34	.060	.650	325 Lbs.
NW-4820SJ	48	20	No. 34	.060	.735	415 Lbs.
NW-6020SJ	60	20	No. 34	.060	.785	500 Lbs.
NW-7220SJ	72	20	No. 34	.060	.875	555 Lbs.
NW-8820SJ	88	20	No. 34	.060	.935	660 Lbs.
NW-10220SJ	102	20	No. 34	.060	1.010	750 Lbs.
NW-718 SJ	7	18	No. 34	.040	.380	95 Lbs.
NW-1218SJ	12	18	No. 34	.050	.490	170 Lbs.
NW-1918SJ	19	18	No. 34	.060	.590	265 Lbs.
NW-2718SJ	27	18	No. 34	.060	.680	350 Lbs.
NW-3718SJ	37	18	No. 34	.060	.760	445 Lbs.
NW-4818SJ	48	18	No. 34	.060	.850	575 Lbs.
NW-6018SJ	60	18	No. 34	.060	.935	680 Lbs.
NW-7218SJ	72	18	No. 34	.060	1.135	820 Lbs.
NW-716 SJ	7	16	No. 34	.040	.400	125 Lbs.
NW-1216SJ	12	16	No. 34	.050	.535	195 Lbs.
NW-1916SJ	19	16	No. 34	.060	.635	275 Lbs.
NW-2716SJ	27	16	No. 34	.060	.735	375 Lbs.
NW-3716SJ	37	16	No. 34	.060	.820	500 Lbs.
NW-4816SJ	48	16	No. 34	.060	.935	700 Lbs.
NW-6016SJ	60	16	No. 34	.060	1.015	830 Lbs.
NW-714 SJ	7	14	No. 34	.050	.485	180 Lbs.
NW-1214SJ	12	14	No. 34	.050	.600	280 Lbs.
NW-1914SJ	19	14	No. 34	.060	.710	420 Lbs.
NW-2714SJ	27	14	No. 34	.060	.835	575 Lbs.
NW-512 SJ	5	12	No. 34	.050	.515	210 Lbs.
NW-712 SJ	7	12	No. 34	.050	.560	265 Lbs.
NW-1212SJ	12	12	No. 34	.060	.735	430 Lbs.
NW-1912SJ	19	12	No. 34	.060	.850	625 Lbs.

© United Technical Publications

NATIONAL WIRE & CABLE CORPORATION

MULTIPLE PAIR SIGNAL & CONTROL CABLES

IN STOCK
MIL-SPEC

Identical to National's NW-Series Cables except offered as twisted pairs.

National Wire & Cable Corporation manufactures a complete line of multiple pair control cables. Conductors are of tinned copper strand with 1/64" vinyl primary insulation for use up to 105° C per MIL-W-16878D Type C. Insulated for **1000** volts working voltage. Conductors are color coded using 10 standard basic colors, plus spiral tracers on white per table below.

All pairs are planetary cabled and contra-helically laid with a Mylar tape serve over the cable bundle. The overall jacket is a 105°C black vinyl plastic per MIL-I-631; or may be Neoprene to MIL-R-6855 Class 2 Grade 60 specification. (Neoprene at added cost).

SHIELDED CABLES

National Multiple Conductor SHIELDED CABLES are to the same specifications as above with addition of tinned copper braided shield over cable complex with 85-90% coverage to MIL-C-7078A. STANDARD PUT-UPS: 500 ft. and 1000 ft. No-deposit reels.

TECHNICAL DATA (all cables)

Insulation Breakdown Voltage:	Greater than 8,000 volts AC RMS, 60 cps.
Capacitance:	Nominal capacitance wire to wire for a pair ranges from 27. to 40. mmfd/ft. Capacitance from both wires tied together measured to all else in common ranges from 35. to 60. mmfd/ft. dependent on gauge and position. Overall shield has negligible effect on W-W capacitance.
Insulation Leakage Res.:	200. megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
Sheath Leakage Res.:	10. megohms/1000 ft. min. at 500 VDC from overall shield through sheath to outside world.
Usable Temp. Range:	Suitable for continuous use from +105°C to −55°C.
Cold Bending Capability:	All cables are suitable for flexing to a circle diam. of approx. 6 cable diameters from +105°C to −20°C; Recommended flex diameter should be greater than 20 cable diam. for flexing at −40°C., or for continuous flexing service to −55°C, specify our neoprene sheath, in lieu of plastic sheath.

MULTIPLE PAIR STOCK CABLES

UNSHIELDED OVERALL

PART NO.	NO. OF PAIRS	COND. GA.	JKT. THICK	O.D.	WEIGHT
NWP-722 J	7	22	.045	.470	90 Lbs.
NWP-1222J	12	22	.050	.600	150 Lbs.
NWP-1922J	19	22	.050	.700	200 Lbs.
NWP-2722J	27	22	.055	.830	280 Lbs.
NWP-3722J	37	22	.060	.960	370 Lbs.
NWP-4822J	48	22	.060	1.080	470 Lbs.
NWP-6022J	60	22	.060	1.200	560 Lbs.
NWP-720 J	7	20	.050	.520	120 Lbs.
NWP-1220J	12	20	.050	.660	200 Lbs.
NWP-1920J	19	20	.050	.800	290 Lbs.
NWP-2720J	27	20	.060	.960	420 Lbs.
NWP-3720J	37	20	.060	1.100	500 Lbs.
NWP-4820J	48	20	.060	1.240	620 Lbs.
NWP-6020J	60	20	.060	1.380	750 Lbs.
NWP-718 J	7	18	.050	.580	150 Lbs.
NWP-1218J	12	18	.050	.740	290 Lbs.
NWP-1918J	19	18	.060	.920	400 Lbs.
NWP-2718J	27	18	.060	1.080	560 Lbs.
NWP-3718J	37	18	.060	1.240	750 Lbs.
NWP-4818J	48	18	.060	1.400	900 Lbs.
NWP-716 J	7	16	.050	.640	180 Lbs.
NWP-1216J	12	16	.060	.840	300 Lbs.
NWP-1916J	19	16	.060	1.020	430 Lbs.
NWP-2716J	27	16	.060	1.200	720 Lbs.
NWP-3716J	37	16	.060	1.380	1000 Lbs.

MULTIPLE PAIR STOCK CABLES

OVERALL SHIELDED

PART NO.	NO. OF PAIRS	COND. GA.	JKT. THICK	O.D.	WEIGHT
NWP-722 SJ	7	22	.045	.495	135 Lbs.
NWP-1222SJ	12	22	.050	.630	206 Lbs.
NWP-1922SJ	19	22	.050	.730	260 Lbs.
NWP-2722SJ	27	22	.055	.860	358 Lbs.
NWP-3722SJ	37	22	.060	.990	460 Lbs.
NWP-4822SJ	48	22	.060	1.110	570 Lbs.
NWP-6022SJ	60	22	.060	1.230	675 Lbs.
NWP-720 SJ	7	20	.050	.550	170 Lbs.
NWP-1220SJ	12	20	.050	.690	260 Lbs.
NWP-1920SJ	19	20	.050	.830	355 Lbs.
NWP-2720SJ	27	20	.060	.990	510 Lbs.
NWP-3720SJ	37	20	.060	1.130	603 Lbs.
NWP-4820SJ	48	20	.060	1.270	735 Lbs.
NWP-6020SJ	60	20	.060	1.410	880 Lbs.
NWP-718 SJ	7	18	.050	.610	205 Lbs.
NWP-1218SJ	12	18	.050	.770	360 Lbs.
NWP-1918SJ	19	18	.060	.950	487 Lbs.
NWP-2718SJ	27	18	.060	1.110	660 Lbs.
NWP-3718SJ	37	18	.060	1.270	865 Lbs.
NWP-4818SJ	48	18	.060	1.430	1030 Lbs.
NWP-716 SJ	7	16	.050	.670	240 Lbs.
NWP-1216SJ	12	16	.060	.870	377 Lbs.
NWP-1916SJ	19	16	.060	1.050	520 Lbs.
NWP-2716SJ	27	16	.060	1.230	830 Lbs.
NWP-3716SJ	37	16	.060	1.410	1330 Lbs.

COLOR CODING USED ON TWISTED PAIRS

PR #	PAIR COLORS	PR #	PAIR COLORS	PR #	PAIR COLORS	PR #	PAIR COLORS	PR #	PAIR COLORS	PR #	PAIR COLORS
1.	WHITE WITH BLACK	11.	BLACK WITH RED	21.	BROWN WITH GREEN	31.	ORANGE WITH YELLOW	41.	GREEN WITH VIOLET	51.	WHT/BLK WITH GREEN
2.	WHITE WITH BROWN	12.	BLACK WITH ORANGE	22.	BROWN WITH BLUE	32.	ORANGE WITH GREEN	42.	GREEN WITH GRAY	52.	WHT/BLK WITH BLUE
3.	WHITE WITH RED	13.	BLACK WITH YELLOW	23.	BROWN WITH VIOLET	33.	ORANGE WITH BLUE	43.	BLUE WITH VIOLET	53.	WHT/BLK WITH VIOLET
4.	WHITE WITH ORANGE	14.	BLACK WITH GREEN	24.	BROWN WITH GRAY	34.	ORANGE WITH VIOLET	44.	BLUE WITH GREY	54.	WHT/BLK WITH GRAY
5.	WHITE WITH YELLOW	15.	BLACK WITH BLUE	25.	RED WITH ORANGE	35.	ORANGE WITH GRAY	45.	VIOLET WITH GRAY	55.	WHT/BRN WITH BLACK
6.	WHITE WITH GREEN	16.	BLACK WITH VIOLET	26.	RED WITH YELLOW	36.	YELLOW WITH GREEN	46.	WHT/BLK WITH BLACK	56.	WHT/BRN WITH BROWN
7.	WHITE WITH BLUE	17.	BLACK WITH GRAY	27.	RED WITH GREEN	37.	YELLOW WITH BLUE	47.	WHT/BLK WITH BROWN	57.	WHT/BRN WITH RED
8.	WHITE WITH VIOLET	18.	BROWN WITH RED	28.	RED WITH BLUE	38.	YELLOW WITH VIOLET	48.	WHT/BLK WITH RED	58.	WHT/BRN WITH ORANGE
9.	WHITE WITH GRAY	19.	BROWN WITH ORANGE	29.	RED WITH VIOLET	39.	YELLOW WITH GRAY	49.	WHT/BLK WITH ORANGE	59.	WHT/BRN WITH YELLOW
10.	BLACK WITH BROWN	20.	BROWN WITH YELLOW	30.	RED WITH GRAY	40.	GREEN WITH BLUE	50.	WHT/BLK WITH YELLOW	60.	WHT/BRN WITH GREEN

COMPLETE WIRE AND CABLE INVENTORY ALWAYS AVAILABLE FOR IMMEDIATE SHIPMENT

National Wire and Cable Corporation maintains one of the largest and most complete stocks of electronic and aircraft wire and cable in the nation. (TOTAL FOOTAGE OF FLOOR STOCK EXCEEDS 100 MILLION FEET.)

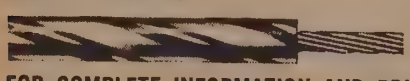
Your immediate source for "MIL" "UL" AND "CSA" WIRES, COAXIAL CABLES AND ALL TYPES OF SLEEVING.

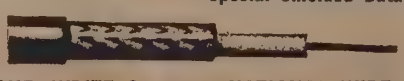
Special Color Coded, shielded and jacketed combinations of hookup wire and multi-conductor cables can be made to your specifications and delivered promptly without delay.

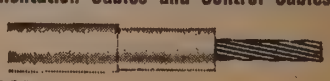
IN STOCK

MIL-W-76B, (MW, HW, LW); MIL-W-16878D (B, BN, C, CN, D, DN); (E, EE, K, KK); MIL-W-5086A MS-25190, U.L. STYLES: 1007, 1010, 1015, 1061, 2343. CSA TYPES: TR-32, TR-64. DIGITAL TRANSMISSION CABLE.

Special Shielded Data and Instrumentation Cables and Control Cables.







FOR COMPLETE INFORMATION AND PRICES, PHONE, WRITE OR WIRE NATIONAL WIRE & CABLE CORP.

© United Technical Publications

NATIONAL WIRE & CABLE CORPORATION



MINIATURE SIGNAL & CONTROL CABLES

IN STOCK
U.L. APPROVED COMPUTER GRADE

National Wire & Cable Corp. manufactures a complete line of MINIATURE low voltage signal and control cable. Available as cabled pairs or cabled singles, with optional overall shield. Conductors are stranded tinned copper with .010" wall of vinyl primary insulation for use up to 105°C. per MIL-W-16878 Type B. Insulated for **600 volts** working voltage. (Also meets U.L. AWM Type 1061; 300 volt, 80°C.) All are coded using 10 standard colors plus stripes on white per MIL-STD-681.

All conductors are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape barrier under shields. Shielded cables have a tinned copper braid overall, of 85–90% coverage per MIL-C-7078; and braid angles below 40° for easy pushback.

The outer jacket is black abrasion-resistant 105°C. vinyl meeting MIL-I-631 Type F. All materials are self-extinguishing and fungus resistant. All items are U.L. APPROVED STYLE 2343 COMPUTER CABLE; rated 300 volt, 80°C. (Higher temp. ratings apply for any non-U.L. service.)

Standard Putups: 500 & 1000 ft. No-deposit reels.

*Denotes U.L. Style 2344.

TECHNICAL DATA (all cables)

Insulation Breakdown Voltage:	Greater than 5000 volts AC RMS, 60 cps.
Capacitance:	Nominal capacitance from a wire to all else in a cable ranges from 45. to 70. pf/ft at 1. kc, depending on gauge and position.
Insulation Leakage:	200. megohms/1000 ft. min. @ 500. VDC from any conductor to all else in cable.
Sheath Leakage:	10. megohms/1000 ft. min. @ 500 VDC from shield or conductor group through sheath to ground.
Temperature Range:	Suitable for continuous use from −40°C. to +105°C. (U.L. Service limited to +80°C.)
Bending Characteristics:	All cables are suitable for flexing to a circle diameter of 6. cable diameters from +105°C. to −20°C. Recommended flex diameter should be greater than 20 cable diameters for flexing at −40°C.

MULTI-CONDUCTOR STOCK CABLES SINGLES

Cond: 22, 24 are 7 strand; 20 AWG is 19 strand

UNSHIELDED CABLES							OVERALL SHIELDED CABLES							
PART NO.	NO. COND.	COND. AWG	COND. O.D.	JKT. WALL	CABLE O.D.	WEIGHT LB/M'	PART NO.	NO. COND.	COND. AWG	COND. O.D	JKT. WALL	SHLD. AWG	CABLE O.D.	WEIGHT LB/M'
NX-524 J	5	24	.045	.062	.220	32 Lbs.	NX-524 SJ	5	24	.045	.062	36	.245	44 Lbs.
NX-724 J	7	24	.045	.062	.250	40 Lbs.	NX-724 SJ	7	24	.045	.062	36	.275	55 Lbs.
NX-1224J	12	24	.045	.062	.300	53 Lbs.	NX-1224SJ	12	24	.045	.062	36	.325	68 Lbs.
NX-1524J	15	24	.045	.062	.330	65 Lbs.	NX-1524SJ	15	24	.045	.062	36	.350	80 Lbs.
NX-1924J	19	24	.045	.062	.340	73 Lbs.	NX-1924SJ	19	24	.045	.062	36	.365	88 Lbs.
NX-2724J	27	24	.045	.062	.390	85 Lbs.	NX-2724SJ	27	24	.045	.062	36	.415	102 Lbs.
NX-3724J	37	24	.045	.062	.420	120 Lbs.	NX-3724SJ	37	24	.045	.062	36	.445	140 Lbs.
NX-4824J	48	24	.045	.062	.470	142 Lbs.	NX-4824SJ	48	24	.045	.062	36	.495	172 Lbs.
NX-6024J	60	24	.045	.062	.510	170 Lbs.	NX-6024SJ	60	24	.045	.062	36	.535	205 Lbs.
NX-522 J	5	22	.050	.062	.200	40 Lbs.	NX-522 SJ	5	22	.050	.062	36	.285	50 Lbs.
NX-722 J	7	22	.050	.062	.270	48 Lbs.	NX-722 SJ	7	22	.050	.062	36	.295	58 Lbs.
NX-1222J	12	22	.050	.062	.330	72 Lbs.	NX-1222SJ	12	22	.050	.062	36	.355	87 Lbs.
NX-1522J	15	22	.050	.062	.350	85 Lbs.	NX-1522SJ	15	22	.050	.062	36	.380	101 Lbs.
NX-1922J	19	22	.050	.062	.370	96 Lbs.	NX-1922SJ	19	22	.050	.062	36	.395	111 Lbs.
NX-2722J	27	22	.050	.062	.430	130 Lbs.	NX-2722SJ	27	22	.050	.062	36	.455	150 Lbs.
NX-3722J	37	22	.050	.062	.480	163 Lbs.	NX-3722SJ	37	22	.050	.062	34	.510	193 Lbs.
NX-4822J	48	22	.050	.062	.530	210 Lbs.	NX-4822SJ	48	22	.050	.062	34	.560	245 Lbs.
NX-6022J	60	22	.050	.062	.570	255 Lbs.	NX-6022SJ	60	22	.050	.062	34	.600	295 Lbs.
NX-520 J	5	20	.057	.062	.275	49 Lbs.	NX-520 SJ	5	20	.057	.062	36	.300	59 Lbs.
NX-720 J	7	20	.057	.062	.290	59 Lbs.	NX-720 SJ	7	20	.057	.062	36	.315	69 Lbs.
NX-1220J	12	20	.057	.062	.360	90 Lbs.	NX-1220SJ	12	20	.057	.062	36	.385	105 Lbs.
NX-1520J	15	20	.057	.062	.390	110 Lbs.	NX-1520SJ	15	20	.057	.062	36	.415	137 Lbs.
NX-1920J	19	20	.057	.062	.410	128 Lbs.	NX-1920SJ	19	20	.057	.062	36	.435	158 Lbs.
NX-2720J	27	20	.057	.062	.490	166 Lbs.	NX-2720SJ	27	20	.057	.062	36	.515	196 Lbs.
NX-3720J	37	20	.057	.062	.520	220 Lbs.	NX-3720SJ	37	20	.057	.062	34	.550	255 Lbs.
NX-4820J	48	20	.057	.062	.580	275 Lbs.	NX-4820SJ	48	20	.057	.062	34	.610	320 Lbs.
NX-6020J	60	20	.057	.062	.640	335 Lbs.	NX-6020SJ	60	20	.057	.062	34	.670	385 Lbs.

MULTI-CONDUCTOR STOCK CABLED PAIRS

UNSHIELDED CABLES							OVERALL SHIELDED CABLES							
PART NO.	NO. PAIRS	COND. AWG	COND. O.D.	JKT. WALL	CABLE O.D.	WEIGHT LB/M'	PART NO.	NO. PAIRS	COND. AWG	COND. O.D.	JKT. WALL	T.C. SHIELD	CABLE O.D.	WEIGHT LB/M'
NXP-524 J	5	24	.045	.062	.330	52 Lbs.	NXP-524 SJ	5	24	.045	.062	No. 36	.355	67 Lbs.
NXP-724 J	7	24	.045	.062	.350	60 Lbs.	NXP-724 SJ	7	24	.045	.062	No. 36	.375	75 Lbs.
NXP-1224J	12	24	.045	.062	.435	90 Lbs.	NXP-1224SJ	12	24	.045	.062	No. 36	.460	115 Lbs.
NXP-1524J	15	24	.045	.062	.485	110 Lbs.	NXP-1524SJ	15	24	.045	.062	No. 36	.510	140 Lbs.
NXP-1924J	19	24	.045	.062	.505	126 Lbs.	NXP-1924SJ	19	24	.045	.062	No. 36	.530	161 Lbs.
NXP-2724J	27	24	.045	.062	.590	167 Lbs.	NXP-2724SJ	27	24	.045	.062	No. 34	.620	211 Lbs.
NXP-3724J	37	24	.045	.062	.660	216 Lbs.	NXP-3724SJ	37	24	.045	.062	No. 34	.690	266 Lbs.
NXP-4824J	48	24	.045	.062	.745	270 Lbs.	NXP-4824SJ	48	24	.045	.062	No. 34	.775	330 Lbs.
NXP-6024J	60	24	.045	.062	.815	325 Lbs.	NXP-6024SJ*	60	24	.045	.062	No. 34	.845	390 Lbs.
NXP-522 J	5	22	.050	.062	.365	56 Lbs.	NXP-522 SJ	5	22	.050	.062	No. 36	.390	77 Lbs.
NXP-722 J	7	22	.050	.062	.390	82 Lbs.	NXP-722 SJ	7	22	.050	.062	No. 36	.415	100 Lbs.
NXP-1222J	12	22	.050	.062	.470	120 Lbs.	NXP-1222SJ	12	22	.050	.062	No. 36	.495	150 Lbs.
NXP-1522J	15	22	.050	.062	.545	145 Lbs.	NXP-1522SJ	15	22	.050	.062	No. 34	.575	185 Lbs.
NXP-1922J	19	22	.050	.062	.550	170 Lbs.	NXP-1922SJ	19	22	.050	.062	No. 34	.580	210 Lbs.
NXP-2722J	27	22	.050	.062	.670	230 Lbs.	NXP-2722SJ	27	22	.050	.062	No. 34	.600	280 Lbs.
NXP-3722J	37	22	.050	.062	.750	300 Lbs.	NXP-3722SJ	37	22	.050	.062	No. 34	.780	357 Lbs.
NXP-4822J*	48	22	.050	.080	.850	375 Lbs.	NXP-4822SJ*	48	22	.050	.080	No. 34	.880	445 Lbs.
NXP-6022J*	60	22	.050	.080	.930	460 Lbs.	NXP-6022SJ*	60	22	.050	.080	No. 34	.960	535 Lbs.
NXP-520 J	5	20	.057	.062	.395	82 Lbs.	NXP-520 SJ	5	20	.057	.062	No. 36	.420	102 Lbs.
NXP-720 J	7	20	.057	.062	.440	108 Lbs.	NXP-720 SJ	7	20	.057	.062	No. 36	.465	123 Lbs.
NXP-1220J	12	20	.057	.062	.540	163 Lbs.	NXP-1220SJ	12	20	.057	.062	No. 34	.570	203 Lbs.
NXP-1520J	15	20	.057	.062	.600	196 Lbs.	NXP-1520SJ	15	20	.057	.062	No. 34	.630	241 Lbs.
NXP-1920J	19	20	.057	.062	.630	235 Lbs.	NXP-1920SJ	19	20	.057	.062	No. 34	.660	280 Lbs.
NXP-2720J	27	20	.057	.062	.745	320 Lbs.	NXP-2720SJ	27	20	.057	.062	No. 34	.775	380 Lbs.
NXP-3720J	37	20	.057	.062	.820	420 Lbs.	NXP-3720SJ*	37	20	.057	.080	No. 34	.850	490 Lbs.
NXP-4820J*	48	20	.057	.080	.950	530 Lbs.	NXP-4820SJ*	48	20	.057	.080	No. 34	.980	605 Lbs.
NXP-6020J*	60	20	.057	.080	1.040	650 Lbs.	NXP-6020SJ*	60	20	.057	.080	No. 34	1.070	735 Lbs.

© United Technical Publications

NATIONAL WIRE & CABLE CORPORATION



MILITARY & U.L. GRADE RFI SHIELDED PAIR CABLES

MEETS U.L. STYLE 2343 OR 2344 FOR COMPUTER USE.

SHIELDED PAIR CABLES

SIGNAL & CONTROL CABLES

National Wire & Cable Corp., manufactures a complete line of flexible multi-pair cables in which each pair is individually twisted, shielded and plastic-jacketed.

Provides a minimum of crosstalk between signal channels, plus complete isolation between shields. Excellent for analog signals. All jackets moisture-proof. Suitable for use in duct, conduit, aerial or burial installations.

Conductors are stranded tinned copper with .010″ vinyl primary insulation, plus .004″ nylon insulation over the vinyl per MIL-W-16878 Type B. Insulation for 600 volts working rating at 105°C. Color coded: White and black (all conductors are 19 strand.)

Shielding is tinned copper braid with 90% minimum coverage per MIL-C-7078, and shield angle below 40 degrees for easy push-back.

Jackets over shields are extruded 105°C white polyvinyl chloride plastic per MIL-I-631, Class F; Color coded with stripes per MIL-STD-681, starting with 9.

All pairs are planetary cabled and contra-helically laid with a mylar tape serve over the cable bundle. The overall sheath is abrasion-resistant black 105°C vinyl thermoplastic per MIL-I-631, Class F.

Optional overall shielding of cabled bundle is 90% minimum coverage of tinned copper braid applied per MIL-C-7078 over the tape serve under sheath.

STANDARD PUT-UPS: 500 & 1000 FT. ON NO-DEPOSIT REELS.

TECHNICAL DATA

Insulation Breakdown Voltage: Greater than 5000 volts RMS, 60 hz.

Capacitance: (mmfd/ft.)

AWG	Wire-Wire	Wire-Shield
22	37	64
20	44	77
16	55	96

Insulation Leakage Resistance: 200 Megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.

Sheath Leakage Resistance: 10 Megohms/1000 ft. min. at 500 VDC from overall shield through sheath to saline bath at 25°C.

Usable Temperature Range: Suitable for continuous use from +105°C to −55°C when stationary. Flexing service: +105°C to −25°C.

Cold Bending Capability: All cables are suitable for bending to a circle diameter of 8 cable diameters from +105°C to −20°C. Recommended flex diameter should be greater than 20 cable diameters at −40°C.

Crosstalk: Common-mode, adjacent pairs: Worst case, −50 db @ 1 mhz; falling to −100 db below 100 khz. (Ref. MIL-C-23437 for test method.) For 100 ft. test length.

STANDARD CONSTRUCTIONS

WITHOUT OVERALL SHIELD

Part No.	No. Pairs	Cond. AWG	Jacket Thick.	Cable O.D.	Weight Per M′
NTP-722J	7	22	.062	.625	260 Lbs.
NTP-1222J	12	22	.070	.820	435 Lbs.
NTP-1922J	19	22	.080	.980	660 Lbs.
NTP-2722J	27	22	.080	1.115	910 Lbs.
NTP-3722J	37	22	.085	1.130	1,200 Lbs.
NTP-4822J	48	22	.090	1.520	1,570 Lbs.
NTP-720J	7	20	.070	.685	300 Lbs.
NTP-1220J	12	20	.080	.890	500 Lbs.
NTP-1920J	19	20	.080	1.065	755 Lbs.
NTP-2720J	27	20	.085	1.270	1,055 Lbs.
NTP-3720J	37	20	.090	1.445	1,400 Lbs.
NTP-716J	7	16	.075	.845	430 Lbs.
NTP-1216J	12	16	.080	1.105	700 Lbs.
NTP-1916J	19	16	.085	1.325	1,075 Lbs.

WITH OVERALL SHIELD

Part No.	No. Pairs	Cond. AWG	Jacket Thick.	Cable O.D.	Weight Per M′
NTP-722SJ	7	22	.062	.650	310 Lbs.
NTP-1222SJ	12	22	.070	.845	500 Lbs.
NTP-1922SJ	19	22	.075	1.005	700 Lbs.
NTP-2722SJ	27	22	.080	1.120	1,000 Lbs.
NTP-3722SJ	37	22	.085	1.355	1,290 Lbs.
NTP-4822SJ	48	22	.090	1.545	1,700 Lbs.
NTP-720SJ	7	20	.070	.710	355 Lbs.
NTP-1220SJ	12	20	.080	.920	570 Lbs.
NTP-1920SJ	19	20	.080	1.090	840 Lbs.
NTP-2720SJ	27	20	.085	1.295	1,155 Lbs.
NTP-3720SJ	37	20	.090	1.470	1,500 Lbs.
NTP-716SJ	7	16	.080	.870	500 Lbs.
NTP-1216SJ	12	16	.080	1.130	795 Lbs.
NTP-1916SJ	19	16	.085	1.350	1,185 Lbs.



MIL-SPEC FOR ROUGH USAGE & EXTREME ENVIRONMENTS

TEFLON®-INSULATED CABLES

SIGNAL & CONTROL CABLES

National Wire & Cable Corp., manfactures a standard line of TEFLON®-INSULATED multi-conductor signal and control cables designed for extreme environments and rough usage.

Construction is widely used in aerospace and industrial applications requiring a near-ultimate in cable physical and electrical performance plus high reliability.

Conductors are stranded silver-plated copper, insulated with .010″ of extruded TFE Teflon®; rated at 600 volts working from −65°C to +260°C per MIL-W-16878 Type E. Conductors are color coded using 10 standard colors plus spiral stripes on white per MIL-STD-681. (All conductors are 19 strand.)

All conductors are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape wrap over the cabled bundle. The outer sheath is abrasion-resistant black Neoprene per MIL-S-6855, Class 2, Grade 60.

Optional overall shield is a 90% coverage tinned copper braid over the tape wrap per MIL-C-7078.

STANDARD PUT-UPS: 250 FT. LENGTHS ON NO-DEPOSIT REELS.

® Trademark, E. I. Dupont Co.

TECHNICAL DATA

Insulation Breakdown Voltage: Greater than 4000 volts RMS, 60 hz.

Capacitance: Nominal capacitance from a wire to all else in cable ranges from 25 to 45 mmfd/ft. dependent on gauge and position in cable bundle.

Insulation Leakage Resistance: 5000 Megohms per 1000 ft.; minimum from any wire to all else in cable.

Sheath Leakage Resistance: 20 Megohms/ft. minimum; from shield through sheath to saline bath after 24 hr. at 25°C.

Usable Temperature Range: Suitable for continuous use from −55°C to +75°C in flexing service or stored.

Cold Bending Capability: All cables are suitable for bending to a circle diameter as small as 4 times their diameter from −55°C to +75°C. Continuous flexing to less than 6 times diameter is not recommended below −40°C.

General Performance: All materials are self-extinguishing after exposure to flame. Non-nutrient to fungus. Highly resistant to ozone, oils, mild acids and bases, high humidity.

STANDARD CONSTRUCTIONS

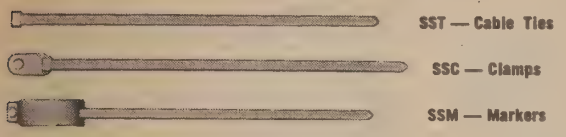
Part No.	No. Cond.	Cond. AWG	Jacket Thick.	Cable O.D.	Weight Per M′
NZ-720J	7	20	.062	.300	70 Lbs.
NZ-1220J	12	20	.062	.365	100 Lbs.
NZ-1920J	19	20	.078	.445	145 Lbs.
NZ-2720J	27	20	.078	.505	210 Lbs.
NZ-3720J	37	20	.093	.590	260 Lbs.
NZ-4820J	48	20	.093	.650	330 Lbs.
NZ-6020J	60	20	.093	.705	400 Lbs.
NZ-716J	7	16	.062	.355	95 Lbs.
NZ-1216J	12	16	.078	.470	160 Lbs.
NZ-1916J	19	16	.078	.540	235 Lbs.
NZ-2716J	27	16	.093	.655	325 Lbs.
NZ-3716J	37	16	.093	.720	435 Lbs.
NZ-4816J	48	16	.093	.805	545 Lbs.

Part No.	No. Cond.	Cond. AWG	Jacket Thick.	Cable O.D.	Weight Per M′
NZ-720SJ	7	20	.062	.325	80 Lbs.
NZ-1220SJ	12	20	.062	.400	115 Lbs.
NZ-1920SJ	19	20	.078	.470	165 Lbs.
NZ-2720SJ	27	20	.078	.535	240 Lbs.
NZ-3720SJ	37	20	.093	.616	300 Lbs.
NZ-4820SJ	48	20	.093	.675	370 Lbs.
NZ-6020SJ	60	20	.093	.730	450 Lbs.
NZ-716SJ	7	16	.062	.380	110 Lbs.
NZ-1216SJ	12	16	.078	.495	190 Lbs.
NZ-1916SJ	19	16	.078	.565	270 Lbs.
NZ-2716SJ	27	16	.093	.680	370 Lbs.
NZ-3716SJ	37	16	.093	.745	485 Lbs.
NZ-4816SJ	48	16	.093	.830	605 Lbs.

© United Technical Publications

PANDUIT® wiring components

PAN-TY® CABLE TIES, CLAMPS & MARKERS



SST — Cable Ties

SSC — Clamps

SSM — Markers

**** Part Number System:**

SST 2 S-M 6

Type · Size · Cross-Section Size · Pkg. Size · Color

STANDARD PKG. OF 100 (C)

**Part Number	Max. Bundle Dia.	Approx. Shpg. Wt. Lbs./1000	Price Per 100 Base Price 100-400	500
SST1M-C	¾″	1	$1.74	$1.39
SST1.5M-C	1¼″	1.2	2.08	1.67
SST1.5I-C	1¼″	1.5	2.26	1.81
SST2I-C	2″	2.3	2.60	2.08
SST2S-C	1¾″	2.6	2.78	2.22
SST2H-C	2″	7	6.94	5.56
SST3I-C	3″	2.6	5.21	4.17
SST3S-C	3″	3.5	6.08	4.86
SST4I-C	4″	4	6.60	5.28
SST4S-C	4″	4.5	6.94	5.56
SST4H-C	4″	12	10.94	8.75
SST8H-C	8″	24	22.50	18.00
SSC2S-C	1¾″	3.2	4.90	3.90
SSC4S-C	4″	5.5	10.80	8.60
SSC4H-C	4″	14	17.00	13.60
SSM2S-C	1¾″	3.3	8.60	6.80
SSM4S-C	4″	6	14.10	11.20

Total quantity per item, shipment and order determines price.
Colors: Standard Color — Natural Nylon White.
Other Colors — 10% additional price.

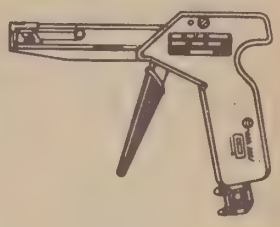
BULK PACKAGING*

These items available in bulk packaging quantities only as designated.

**Part Number	Price Per M (1000) 1M-24.5M	25M-49.5M	50M
SST1M-M	$11.10	$10.55	$10.00
SST1.5M-M	13.35	12.65	12.00
SST1.5I-M	14.45	13.70	13.00
SST2I-M	16.65	15.80	15.00
SST2S-M	17.80	16.85	16.00
SST2H-D	44.45	42.10	40.00
SST3I-M	33.35	31.60	30.00
SST3S-M	38.90	36.85	35.00
SST4I-M	42.25	40.00	38.00
SST4S-M	44.45	42.10	40.00
SST4H-D	70.00	66.30	63.00
SST8H-D	140.00	136.00	126.00
SSC2S-M	30.00	28.50	27.00
SSC4S-M	66.00	62.70	59.40
SSC4H-D	111.80	106.20	100.75
SSM2S-D	55.00	52.25	49.50
SSM4S-D	87.50	83.15	78.25

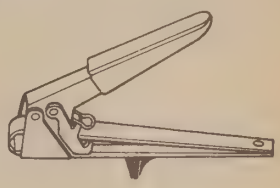
*Bulk packaging quantities indicated by letter suffix in part no. D = 500; M = 1000.
Order by Number of Pieces Required.

Hand Operated Installation Tools



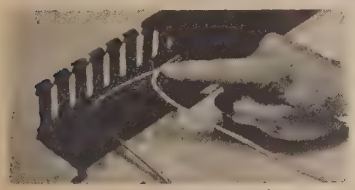
GS2B — Manual $19.00 ea. net. Installs Miniature, Intermediate and Standard Cable Ties. Uniform tensioning and cutoff.

GS4H — Manual $40.00 ea. net. Heavy Duty — Installs Standard and Heavy Cable Ties. Uniform tensioning and cutoff.



TCS TY-CLIPTM Tool — Manual. $5.90 ea. net. Installs Miniature, Intermediate and Standard Cable Ties.

PANDUCT® PLASTIC WIRING DUCT



Type E — Open Slot

PART NUMBER SYSTEM

Channel Only

Example: E 1.5 x 2 LG 6

Type · 1.5″ Wide · 2″ High · Light Gray · 6′ Long

Cover Only

Example: C 1.5 LG 6

Cover · 1.5″ Wide · Light Gray · 6′ Long

Color Code: Dark Gray (DG); Light Gray (LG); White (WH).

PANDUCT® CHANNEL ONLY

Nominal Width x Height (Inches)	Approx. Shpg. Wt. Per 100′	Price/Foot Under 200 ft.	200 to 1999 ft.	2000 to 4999 ft.
.5x.5	11 lbs.	$0.43	$0.34	$0.31
.5x.62	12 lbs.	.45	.36	.34
.5x1	16 lbs.	.49	.39	.37
.5x1.25	16 lbs.	.56	.44	.40
.5x1.75	16 lbs.	.58	.47	.44
.75x.75	14 lbs.	.48	.38	.36
.75x1	16 lbs.	.49	.39	.37
.75x1.5	19 lbs.	.58	.46	.43
.75x2	23 lbs.	.71	.57	.52
1x1	16 lbs.	.49	.40	.37
1x1.5	18 lbs.	.65	.53	.49
1x2	21 lbs.	.69	.55	.51
1x3	31 lbs.	.88	.71	.65
1.5x1.5	20 lbs.	.69	.56	.50
1.5x2	20 lbs.	.75	.60	.55
1.5x3	30 lbs.	.95	.76	.70
1.5x4	40 lbs.	1.21	.97	.89
2x1	18 lbs.	.68	.55	.49
2x2	23 lbs.	.76	.61	.56
2x3	36 lbs.	.98	.78	.72
2x4	48 lbs.	1.26	1.01	.93
2.5x3	41 lbs.	1.04	.83	.77
3x1	20 lbs.	.82	.65	.61
3x2	33 lbs.	.89	.71	.65
3x3	43 lbs.	1.07	.85	.78
3x4	53 lbs.	1.32	1.06	.97
4x1.5	33 lbs.	.94	.75	.70
4x2	38 lbs.	.96	.77	.71
4x3	48 lbs.	1.14	.92	.84
4x4	58 lbs.	1.42	1.13	1.04

CORRESPONDING COVER ONLY

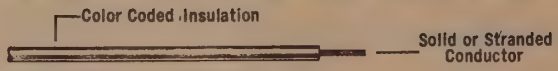
Nominal Width (Inches)	Approx. Shpg. Wt./100′	Price/Foot Under 200 ft.	200 to 1999 ft.	2000 to 4999 ft.
.5	4 lbs.	$0.10	$0.08	$0.07
.75	6 lbs.	.11	.09	.08
1	9 lbs.	.14	.11	.10
1.5	10 lbs.	.16	.13	.12
2	12 lbs.	.20	.16	.14
2.5	14 lbs.	.24	.20	.17
3	17 lbs.	.28	.23	.21
4	22 lbs.	.36	.28	.26

Order by Total No. of Ft. Req'd. (must be multiple of length per part). Standard Mounting Holes: No Charge — Supplied Only if Specified — See Duct Catalog for Dimensions.
NOTE: Standard Length: 6 ft. Standard Color: Light Gray. White and Dark Gray available.
NOTE: Total length of all sizes of duct and cover, ordered for shipment at one time to one location, determines price columns.
NOTE: Type "S" has solid walls and no wire slots or openings.
Delivery: F.O.B. Our plant. Minimum Billing: $25.00 net, each customer-designated shipment. Terms: Cash Discount 2%, 10 net 30. FREIGHT ALLOWED via Panduit routing on domestic shipments of $300.00 or more net billing. All prices subject to change without notice.

PANDUIT CORP.

SAXTON PRODUCTS, INC.

HOOK-UP WIRE



MIL-W-76B HW, MW, LW

DESCRIPTION:
Single conductors — stranded, tinned copper, color coded, (PVC) Polyvinylchloride insulation, with or without nylon jacket.

CHARACTERISTICS:
Temperature rating −80°C. Voltage rating HW = 2500V, +600, MW = 1000V, LW = 300V. Stocked in all 10 colors and stripes. Solid conductor also available.

AWG
30
28
26
24
22
20
18
16
14
12
10
8
6

MIL-W-16878D TYPES B, C, D

DESCRIPTION:
Single conductor, stranded tinned copper, color coded Polyvinylchloride (PVC) insulation, (with or without Nylon jacket).

CHARACTERISTICS:
Temperature rating 105°C. Voltage rating B = 600V, C = 1000V, D = 3000V.

Stocked in all colors and stripes.

AWG
32
30
28
26
24
22
20
18
16
14
12
10
8
6

TYPES E, EE, ET

DESCRIPTION:
Single conductor, stranded silver plated copper, extruded TFE Teflon. Solid available.

CHARACTERISTICS:
Temperature rating −65°C to +200°C. Voltage rating −600V and 1000V.

Stocked in all solid colors, striped combinations available.

AWG
30
28
26
24
22
20
18
16
14
12
10
8

ALL TYPES AVAILABLE WITH SHIELD — MIL-W-16878D, TYPE E AVAILABLE WITH SHIELD AND JACKET

MULTI-CONDUCTOR Unshielded



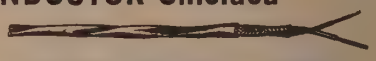
DESCRIPTION:
Tinned copper singles completely color coded, polyvinylchloride insulation, cabled, jacketed with polyvinylchloride outer jacket.

CHARACTERISTICS:
Temperature rating −20°C to +60°C.

MULTICABLES				PAIRED CABLES			
Saxton No.	No. Cond.	Conductor Size	Strand	Saxton No.	No. Pairs	Conductor Size	Strand
3108	2	22	Solid	3120	2	22	Solid
3109	3	22	Solid	3121	3	22	Solid
3110	4	22	Solid	3122	6	22	Solid
3111	2	20	Solid	3123	7	22	Solid
3112	3	20	Solid	3124	9	22	Solid
3113	4	20	Solid	3125	11	22	Solid
3114	2	18	Solid	3126	13	22	Solid
3115	3	18	Solid	3127	15	22	Solid
3116	4	18	Solid	3128	16	22	Solid
3117	2	16	Solid	3129	27	22	Solid
3118	3	16	Solid				
3119	4	16	Solid				

All Construction Available Stranded.

MULTI-CONDUCTOR Shielded



DESCRIPTION:
Tinned copper conductors, singles color coded. Polyvinylchloride insulated, cabled, TC shield braid or wrapped, overall polyvinylchloride jacket.

BRAIDED COPPER SHIELD — TINNED					
Saxton No.	No. Cond.	Conductor Size	Strand	Nom. Wall Thickness	Nom. O.D.
3194	1	22	7/30	.016″	.125″
3195	2	22	7/30	.016″	.185″
3196	3	22	7/30	.016″	.200″
3197	4	22	7/30	.016″	.210″
3198	1	20	10/30	.016″	.135″
3199	2	20	10/30	.016″	.200″
3200	3	20	10/30	.016″	.220″
3201	4	20	10/30	.016″	.230″
3202	1	18	16/30	.016″	.145″
3203	2	18	16/30	.016″	.235″
3204	3	18	16/30	.016″	.245″
3205	4	18	16/30	.016″	.255″
3206	2	16	26/30	.016″	.250″
3207	3	16	26/30	.016″	.255″

Mylar Foil Shield Available Overall or On Individual Pairs.

RUBBER INSULATED CONTROL CABLES AVAILABLE 2-20 COND. 20 WITH AND WITHOUT SHIELD

MIL-W-5086A



UNSHIELDED AIRCRAFT WIRE FOR ELECTRICAL SYSTEMS

Type I — AN-22 thru AN-12 — Single conductor stranded tinned copper, **white** polyvinylchloride insulation, clear nylon, (polyamide) jacket overall.

Type II — AN-22 thru AN-12 — Single conductor stranded tinned copper, **white** polyvinylchloride insulation, white glass braid, clear nylon (polyamide) jacket overall.

Type II — AN-10 thru AN-0000 — Single conductor stranded tinned copper, **white** polyvinylchloride insulation, white glass braid, flame retardant nylon lacquered nylon braid overall.

MIL-C-7078

UNJACKETED NYLON JACKETED SHIELDED CABLE

DESCRIPTION:
Base Wire
MIL-W-5086A

CHARACTERISTICS:
Temperature rating −55°C to +105°C. Voltage rating 600. Resists effects of water, alcohol, dilute acids, alkalis, oil, aircraft fuels, hydraulic fluid, skydral, ethyleneglycol, fungus and abrasion.

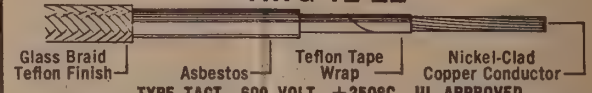
HIGH HEAT RESISTANT POWER CABLE MIL-W-7139B

For use in aircraft, missiles, and other applications where elevated temperatures are encountered. 600 Volt Teflon and glass insulated cable for continuous operation. −200°C or 260°C depending upon conductor class.

Class 1 — Silver coated copper to −200°C (White with blue tracer, tan available with same specifications).

Class 2 — Nickel coated copper to +260°C (White with orange tracer, tan available with same specifications).

AWG 12-22



TYPE TAGT 600 VOLT, +250°C UL APPROVED

TAGT will withstand severe environments such as high humidity, salt spray, alkali, acid, and corrosion. Highly abrasive and cut resistant.

AWG 4/0-24

TINNED COPPER Uninsulated

DESCRIPTION: Pure electrolytic, copper, annealed and tinned for quick soldering.

MIL-W-3861 TYPE S

Saxton No.	Size AWG	Area Circular Mils	O.D.	Saxton No.	Size AWG	Area Circular Mils	O.D.
3506	4	41,704	.204″	3415	22	624.4	.025″
3407	6	26,250	.162″	3416	24	404.0	.020″
3408	8	16,510	.129″	3417	26	254.1	.016″
3409	10	10,380	.103″	3418	28	159.8	.013″
3410	12	6,530	.082″	3419	30	100.5	.010″
3411	14	4,107	.065″	3420	32	63.21	.008″
3412	16	2,583	.051″	3421	34	39.75	.006″
3413	18	1,624	.040″	3422	36	25.00	.005″
3414	20	1,022	.033″	3423	38	15.72	.004″

BUS BAR

DESCRIPTION:
Hard drawn tinned copper wire.

MIL-W-3861 TYPE S

Saxton No.	No.		O.D.
3424	10	Round Tinned	.102″
3425	12	Round Tinned	.081″
3426	14	Round Tinned	.064″
3427	16	Round Tinned	.051″
3428	18	Round Tinned	.040″
3429	20	Round Tinned	.032″
3430	22	Round Tinned	.025″

ANTENNA-AERIAL WIRE

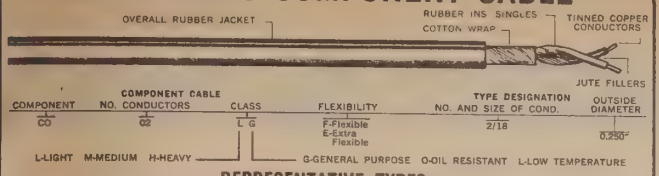
Strand	Material
Solid	#12 AWG Enameled Bare Copper
Solid	#14 AWG Enameled Bare Copper
7/22	Bare Copper
7/22	Bare Copper
7/24	Bare Copper
7/24	Bare Copper
7/26	Bare Copper

STRANDED SILICON BRONZE OR COPPER			
MIL-W-13276		MIL-W-13074	
Conductor Size	Strand	Breaking Strength (Lbs.)	Material
16	7/24	230	Silicon Bronze
14	7/22	420	Silicon Bronze
12	7/20	650	Silicon Bronze
10	7/18	1000	Silicon Bronze
8	7/16	1600	Silicon Bronze
16	7/24		Bare Copper
14	7/22		Bare Copper

MANY OTHER TYPES AVAILABLE ON REQUEST

© United Technical Publications

MIL-C-3432-C COMPONENT CABLE



REPRESENTATIVE TYPES

LIGHT DUTY (L)	MEDIUM DUTY (M)	HEAVY DUTY (H)
CO-02 LGF(2/18)	CO-02 MGF(2/18)	CO-02 HGF(2/18)
CO-03 LGF(3/18)	CO-02 MGF(2/16)	CO-02 HGF(2/16)
CO-03 LOE(3/18)	CO-02 MGF(2/14)	CO-02 HGF(2/14)
CO-04 LOF(4/18)	CO-03 MGF(3/18)	CO-03 HGF(3/18)
CO-04 LGE(4/18)	CO-04 MGF(4/18)	CO-03 HGF(3/16)
CO-04 LOE(4/18)	CO-05 MGF(5/18)	CO-03 HGF(3/14)
CO-05 LGF(5/16)	CO-04 MGF(4/16)	CO-03 HGF(3/12)
CO-02 LLF(2/16)	CO-04 MGE(4/16)	CO-04 HGF(4/18)
CO-02 LGF(2/16)	CO-05 MGE(5/20)	CO-04 HGF(4/16)
CO-04 (2/22-2/22 SI)	CO-05 MGF(5/16)	CO-04 HGF(4/14)
CO-09 LOF (2/22-2/22 SI)	CO-06 MOF(6/20)	CO-19 HGF(19/18)
	CO-03 MGF (3/18 SJ)	CO-19 HLF(19/16)

All gauges and numbers of Conductors Available

MIL-C-5767 PORTABLE ELECTRIC CABLE

#18 through #10 1-7 Conductors
#8 through #4 1-4 Conductors

FLAT T.C. BRAID


Flat Braid


Oval Commercial Braid

DESCRIPTION: MANF to MIL-QQB343
Woven braid, extremely flexible composed of fine, soft annealed, tinned copper wires, braided and rolled flat. Round braid also available.

FLAT WIDTHS AVAILABLE

1⅜" 4 x 24 x 32 x 30
thru
¾" 16 x 3 x 40

MAGNET WIRE

INSULATIONS AVAILABLE

Plain Enamel
Formvar
Polyvinyl Formal
Polyurethane
Soderеze
Teflon
Fiberglass

GAUGES 8-44 AVAILABLE

MICROPHONE CABLE



DESCRIPTION: Rubber or Vinyl.

3280	2	20
3281	3	20
3282	4	20
3283	5	20
3284	2	22
3285	3	22
3286	1	24

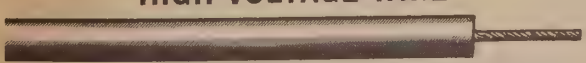
TEST LEAD



DESCRIPTION:
Single conductor, extra flexible, stranded, tinned copper, flexible vinyl insulated.
Rubber insulation also available from stock.

Saxton No.	AWG	Wall Thickness	Voltage Breakdown
3079	20	.040"	5,000
3080	20	.044"	8,500
3081	20	.047"	10,000
3082	18	.047"	12,000
3083	18	.109"	22,000

HIGH VOLTAGE WIRE



DESCRIPTION:
Single conductor, tinned copper, stranded, flame retardent, rulan insulated.
Also available from stock w/overall shield. Other sizes also available.

Saxton No.	AWG	Wall Thickness	Voltage Breakdown
3084	20	.047"	10,000
3085	20	.063"	20,000
3086	18	.079"	20,000
3087	18	.095"	40,000

UL LISTED SERVICE CORDS

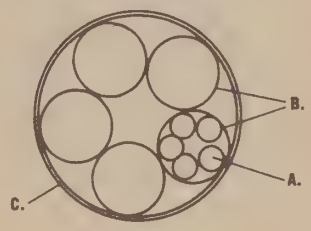


RUBBER	NEOPRENE	THERMOPLASTIC
Type SJ 300 Volt	**Type SJO 300 Volt**	**Type SJT 300 Volt**
18/2-4	18/2-4	18/2
16/2-4	16/2-4	18/3
14/2-4	14/2-4	16/2
		16/3
Type S Heavy Duty 600 Volt	**Type SO Heavy Duty 600 Volt**	
18/2-4	18/2-4	
16/2-4	16/2-4	
14/2-4	14/2-4	
12/2-4	12/2-4	
10/2-4	10/2-4	
8/2-4	8/2-4	
6/2-4	6/2-4	

ALSO AVAILABLE
TYPE ST
PLASTIC 600 V

LITZ WIRE

A. Insulated wire.
B. Twisted wires, without textile insulation.
C. Outer textile insulation over the several groups of twisted wires.



The insulation on the individual wires may be Formvar, Sodereze (Polyurethane), Armored Poly-Thermaleze 2000 or ML. Sodereze is usually preferred because of its solderability. For most applications an over-all insulation of servings of Nylon is available, however, Silk, Cotton, Dacron, Nomex, and Fiber Glass can also be provided. We can provide Types I-V Lite Wire Construction with any gauge wire between 20 and 48.

COAXIAL CABLES



POLYETHYLENE DIELECTRIC			TEFLON DIELECTRIC
RG Type	RG Type	RG Type	RG Type
RG8/U	RG174/U	RG88/U	RG161/U
RG8A/U	RG6A/U	RG122/U	RG178B/U
RG11/U	RG9B/U	RG212/U	RG179B/U
RG11A/U	RG17A/U	RG213/U	RG180B/U
RG58/U	RG19A/U	RG214/U	RG187A/U
RG58A/U	RG22B/U	RG215/U	RG188A/U
RG58C/U	RG34A/U	RG217/U	RG195A/U
RG59/U	RG54/U	RG218/U	RG196A/U
RG59B/U	RG55/U	RG219/U	RG303/U
RG62/U	RG63B/U	RG223/U	RG316/U
RG62A/U	RG71/U		
RG62B/U	RG83/U		

MANY OTHER TYPES AVAILABLE ON REQUEST

Shown here are only a few of the Product Groups which SAXTON regularly stocks. We are a complete source for all types of Commercial and Military Wire and Cable.

Some Additional Specs and Items —

MIL-C-13777	Coil Cords
MIL-C-10392B	Control Cables
MIL-W-16878 Type K	UL Types
MIL-C-915A	Cord Sets

SAXTON PRODUCTS, INC.

© United Technical Publications

NYLON & BUTYRATE CABLE CLAMPS, STRAPPING & STUD BUTTONS

NYLON CABLE CLAMPS

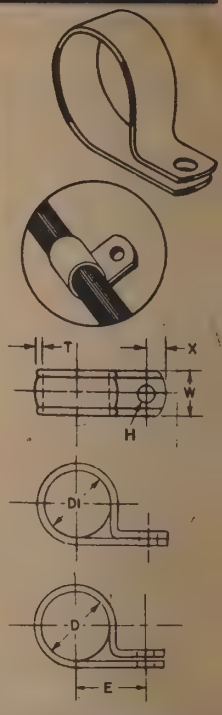
			BLUE LINE		BULK PACK		
			Pkg. of 100 or as shown ( )		Pkg. of 1000		
						1-4	5 or more
D	D_1	E	Part No.	Per Pkg.	Part No.	Per Bag	Per Bag
1/8″	.125	.310	CCN-31-C	3.14	CCN-31-M	26.75	21.15
3/16″	.188	.373	CCN-32-C	3.30	CCN-32-M	28.30	22.40
1/4″	.250	.407	CCN-33-C	3.63	CCN-33-M	30.95	24.50
5/16″	.313	.448	CCN-34-C	2.15	CCN-34-M	34.15	27.05
3/8″	.375	.479	CCN-35-C (50)	2.23	CCN-35-M	35.90	28.45
7/16″	.438	.510	CCN-36-C (50)	2.32	CCN-36-M	38.00	30.05
1/2″	.500	.542	CCN-37-C (50)	1.50	CCN-37-M	40.45	32.00
9/16″	.563	.623	CCN-38-C (25)	1.87	CCN-38-M	49.90	39.50
5/8″	.625	.638	CCN-39-C (25)	1.98	CCN-39-M	58.50	46.30
11/16″	.688	.752	CCN-40-C (20)	1.78	CCN-40-M	63.45	50.25
3/4″	.750	.783	CCN-41-C (20)	1.90	CCN-41-M	69.40	54.95
7/8″	.875	.845	CCN-42-C (20)	2.02	CCN-42-M	75.20	59.50
1″	1.000	.908	CCN-43-C (15)	1.79	CCN-43-M	84.70	67.05

Width: Up to CCN-37, 3/8″. All others are 1/2″. 3/8″ width have .167 mounting hole, 1/2″ width have 13/64″ mounting hole. 3/8″ width are .040 thickness, 1/2″ width are .060 thickness.

BUTYRATE CABLE CLAMPS

			BLUE LINE		BULK PACK		
			Pkg. of 100 or as shown ( )		Pkg. of 1000		
						1-4	5 or more
D	D_1	E	Part No.	Per Pkg.	Part No.	Per Bag	Per Bag
1/8″	.115	.310	CCB-1-C	2.20	CCB-1-M	18.55	14.65
3/16″	.172	.373	CCB-2-C	2.20	CCB-2-M	18.65	14.75
1/4″	.234	.407	CCB-3-C	2.45	CCB-3-M	20.55	16.30
5/16″	.297	.448	CCB-4-C (50)	1.45	CCB-4-M	22.70	17.90
3/8″	.359	.479	CCB-5-C (50)	1.50	CCB-5-M	25.05	18.90
7/16″	.422	.510	CCB-6-C (40)	1.30	CCB-6-M	26.05	20.65
1/2″	.484	.542	CCB-7-C (40)	1.45	CCB-7-M	27.70	21.95
9/16″	.547	.623	CCB-8-C (30)	1.45	CCB-8-M	32.45	25.65
5/8″	.609	.654	CCB-9-C (25)	1.40	CCB-9-M	36.75	29.50
11/16″	.672	.752	CCB-10-C (20)	1.35	CCB-10-M	39.95	31.60
3/4″	.734	.783	CCB-11-C (20)	1.40	CCB-11-M	41.90	33.15
7/8″	.859	.845	CCB-12-C (20)	1.45	CCB-12-M	45.45	35.95
1″	.934	.908	CCB-13-C (15)	1.30	CCB-13-M	48.25	38.20
1-1/8″	1.102	.970	CCB-14-C (15)	1.30	CCB-14-M	48.40	40.80
1-1/4″	1.227	1.062	CCB-15-C (10)	1.50	CCB-15-M	54.45	43.10

Thickness .060. Width 1/2″. Mounting hole 13/64″, 7/32″ from end of clamp.

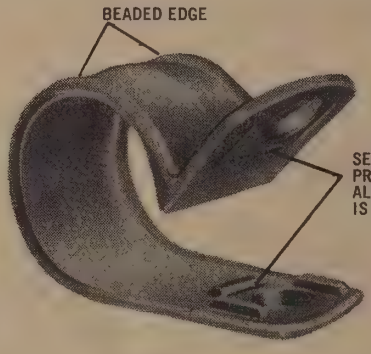


MOLDED NYLON "SELF-ALIGNING" CABLE CLAMPS

These clamps meet military specifications MIL-P-20693, NAS-1397, MIL-STD-242A and 242B. They have the same general characteristics as CCN Series.

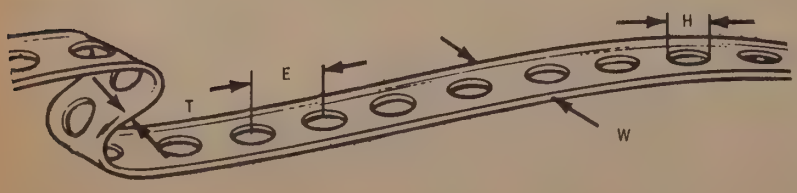
				Net Prices		
Part No.	D	D_1	E	Pkg. of 100 or as shown	1000 to 4999 Per M	5000 or More Per M
CCS-63	5/16	.297	.448	5.00	41.75	33.25
CCS-64	3/8	.359	.479	2.65 (50)	44.30	35.30
CCS-65	1/2	.484	.542	2.90 (50)	48.40	38.60

Width 1/2″! Thickness .060



PERFORATED NYLON STRAPPING

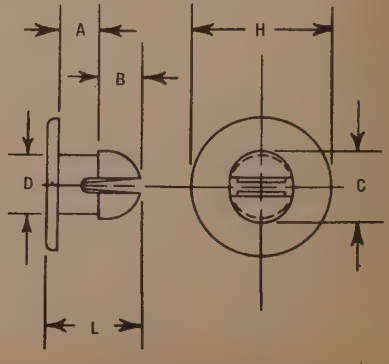
Part No.	W	T	H	E	Average Breaking Load in Pounds	Net Prices 25 ft. Roll	Net Prices 50 ft. Roll	Suggested Fastening and Mounting Methods
NS-932-25	9/32	.032	.096	3/16	23	5.90		SB-4 Stud Button, #2 Machine Screw or 3/32″ Rivet
NS-932-50							10.60	
NS-38-25	3/8	.040	.167	5/16	51	6.45		#8 Machine Screw or SB-5 Stud Button
NS-38-50							12.90	
NS-12-25	1/2	.060	.203	25/64	107	8.30		#10 Machine Screw or SB-6 Stud Button
NS-12-50							14.70	



STUD BUTTONS

Part No.	H	A	B	C	D	L	Net Prices 100-999 Per C	Net Prices 1 M—Over Per M
*SB-4	9/32	.093	.078	.105	.093	.206	1.95	15.15
†SB-5	11/32	.125	.137	.202	.165	.297	4.30	33.70
‡SB-6	15/32	.156	.153	.238	.200	.359	4.45	34.55

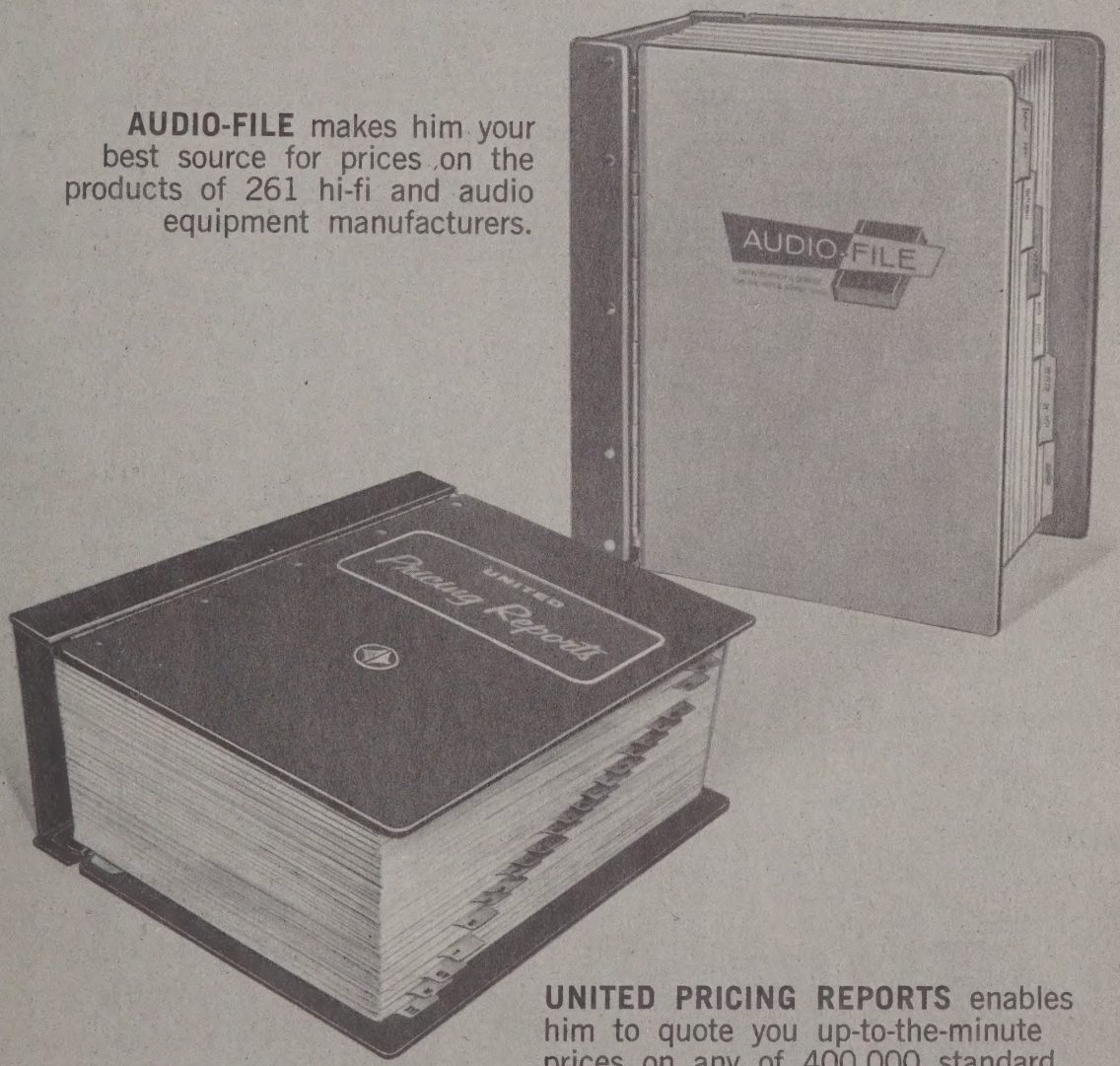
*SB-4 for use with Strapping NS-932 — 25 or 50
†SB-5 for use with Strapping NS-38 — 25 or 50
‡SB-6 for use with Strapping NS-12 — 25 or 50



© United Technical Publications

Your Electronics Distributor Can Serve You Better With These
UNITED TECHNICAL PUBLICATIONS

AUDIO-FILE makes him your best source for prices on the products of 261 hi-fi and audio equipment manufacturers.



UNITED PRICING REPORTS enables him to quote you up-to-the-minute prices on any of 400,000 standard items from 750 manufacturers in the electronics industry.

UNITED TECHNICAL PUBLICATIONS
Division of COX BROADCASTING Corporation
645 Stewart Avenue, Garden City, N. Y. 11530 (516) 248-9700

the largest,
most authoritative catalog
of electronic products
sold through distributors



A UNITED TECHNICAL PUBLICATION